

EXHIBIT A

COUR PERMANENTE D'ARBITRAGE



PERMANENT COURT OF ARBITRATION

**CERTIFICATION OF COPY OF
PARTIAL AWARD ON REMEDIES DATED SEPTEMBER 27, 2021**

**RE: PCA CASE N° 2009-20 – (1) CRESCENT PETROLEUM COMPANY INTERNATIONAL LIMITED
(2) CRESCENT GAS CORPORATION V. NATIONAL IRANIAN OIL COMPANY**

I, Evgeniya Goriatcheva, Senior Legal Counsel of the Permanent Court of Arbitration ("PCA"), which acts as Registry in the above-referenced matter, hereby CERTIFY that the document annexed hereto (Partial Award on Remedies dated September 27, 2021) is a true and authentic copy of the original document kept in the PCA's archives.

Signed, this 13th day of April 2022, at The Hague, the Netherlands:

A handwritten signature in blue ink, consisting of a stylized 'E' followed by a dot and a stylized 'G' with a flourish.

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COUR PERMANENTE D'ARBITRAGE

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**IN AN *AD HOC* ARBITRATION SEATED IN LONDON, BEFORE A TRIBUNAL
CONSTITUTED PURSUANT TO A CONTRACT**

between

**(1) CRESCENT PETROLEUM COMPANY INTERNATIONAL LIMITED
(2) CRESCENT GAS CORPORATION**

and

NATIONAL IRANIAN OIL COMPANY

PARTIAL AWARD ON REMEDIES

27 September 2021

Tribunal

The Honourable Murray Gleeson AC (Chairman)
Sir Jeremy Cooke
The Rt. Hon. The Lord Phillips of Worth Matravers, KG, PC



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LIST OF DEFINED TERMS

ACQ	Annual Contract Quantity
Alchem	Alchem Limited
Alchem GSA	Alchem Gas Supply Agreement, dated 7 July 2004
Anchor Customers	FEWA and SEWA
AP-Platform	The existing platform in Mubarak Complex to which the Riser Platform was linked
Attachment Action	Crescent's application to the Bahraini Court for the pre-award attachment of assets, dated 27 March 2016
Award on Jurisdiction and Liability	Award on Jurisdiction and Liability issued in these proceedings on 31 July 2014
Bahraini Court	Bahrain Court of Urgent Matters
BP	British Petroleum
Caspian Case	ICC Case No. 17533/ARP/ND/MCP, <i>Caspian Oil Resources Limited (Gibraltar) v Naftiran Intertrade Company (NICO) Limited (Malaysia)</i>
CCP 2000	Iranian Code of Civil Procedure of 2000
CCP 1939	Iranian Code of Civil Procedure of 1939
CGC or Crescent Gas	Crescent Gas Corporation Limited, an entity incorporated in the British Virgin Islands; one of the Claimants
CGC-CNGC GSA	Gas Sales and Purchase Agreement between Crescent Gas and CNGC, dated 8 June 2005
Claimants or Crescent	Crescent Petroleum and/or Crescent Gas
CILA	Centre for International Legal Affairs
Civil Code	Iranian Civil Code of 1928
CNGC	Crescent National Gas Corporation Limited, an affiliate of Crescent Gas
Commencement Date	The date on which gas supply under the GSPC was to commence, <i>i.e.</i> , 1 December 2005
Constitution	Constitution of the Islamic Republic of Iran, 1980

Contract or GSPC	Gas Sales and Purchase Contract between Crescent Petroleum and NIOC, dated 25 April 2001, as amended by the First Amendment, the First Side Letter, the Second Side Letter, the Third Side Letter, the Fourth Side Letter, the Fifth Side Letter, the Second Amendment and the Sixth Side Letter
Counterclaim	NIOC's Counterclaim for Declaratory Relief, dated 11 June 2019
Crescent or Claimants	Crescent Petroleum and/or Crescent Gas
Crescent Gas or CGC	Crescent Gas Corporation Limited, an entity incorporated in the British Virgin Islands; one of the Claimants
Crescent Petroleum or CPCIL	Crescent Petroleum Company International Limited, a Bermudan company; one of the Claimants
Dana Gas	Dana Gas PJSC, a public company listed in the UAE; a shareholder of CNGC
CTI	Consolidated Transmission Incorporated
DCQ	Daily Contract Quantity, representing the maximum agreed quantity of daily supply in a gas supply agreement
Delivery Point	Location where title, control and possession of gas would pass from NIOC to Crescent under the GSPC
Delivery Year	As defined in the GSPC, a period of 12 months commencing on the Commencement Date and ending on the same day and month of the succeeding calendar year and each succeeding period of twelve months thereafter during the term of the GSPC
DUGAS	Dubai Natural Gas Company Limited
DUGAS GSA	Gas Sales Agreement between CNGC and DUGAS, dated 3 February 2005
DUSUP	Dubai Supply Authority
DUSUP GSA	DUSUP Gas Sales Agreement (undated and unsigned)
EIBOR	Emirates Inter Bank Offer Rate
Emarat	Emarat General Petroleum Corporation
Emarat MoU	Memorandum of Understanding between CNGC, SEWA, FEWA, UGTC and Emarat, dated 3 January 2006
English Arbitration Act	Arbitration Act 1996 UK

English Court	High Court of England and Wales
Enka v Chubb	<i>Enka Insaat Ve Sanayi AS v OOO Insurance Company Chubb</i> [2020] UKSC 38 dated 9 October 2020
FEWA	UAE Federal Electricity and Water Authority
FEWA GSA	FEWA Gas Supply Agreement, dated 2 April 2003
Fifth Side Letter	Fifth Side Letter to the GSPC, dated 17 March 2003
Final Hearing	Hearing held in this matter from 3 to 7 August 2020
First Amendment	First Amendment to the GSPC, dated 25 April 2001
First Side Letter	First Side Letter to the GSPC, dated 25 April 2001
Fourth Side Letter	Fourth Side Letter to the GSPC, dated 25 April 2001
GHV	Gross Heating Value
GSPC or Contract	Gas Sales and Purchase Contract between Crescent Petroleum and NIOC, dated 25 April 2001, as amended by the First Amendment, the First Side Letter, the Second Side Letter, the Third Side Letter, the Fourth Side Letter, the Fifth Side Letter, the Second Amendment and the Sixth Side Letter
Gulftainer	Gulftainer Company Limited
Hamriyah Steel	Hamriyah Steel Free Zone Company
Hamriyah Steel GSA	Hamriyah Steel Gas Sales Agreement, dated 1 June 2009
ICC	International Chamber of Commerce
IDRC	International Dispute Resolution Centre
Iran	The Islamic Republic of Iran
Jurisdiction and Liability Phase	The phase of this arbitration comprising all jurisdictional and liability issues, including defences
LPG	Liquid petroleum gas, comprising propane and butane
MMBtu	Million British thermal units
MMBtu/d	Million British thermal units per day
MMscf	Million standard cubic feet
MMscfd	Million standard cubic feet per day

Mscf	Thousand standard cubic feet
New Experts	Mr Gerry Lagerberg and Mr Chris Osborne, collectively
NICO	Naftiran Intertrade Company, a wholly owned subsidiary of NIOC
NIGEC	National Iranian Gas Export Company
NIOC or Respondent	National Iranian Oil Company, an Iranian State company, the Respondent in this arbitration
NIOC's Application	NIOC's "Application for an Urgent Order that the Claimants Immediately Cease and Desist From All Pre-Award Attachment Actions," 7 April 2016
Note 2	Note 2 to Article 515 of the Iranian Code of Civil Procedure of 2000
OCP	Oman Chemicals & Pharmaceuticals LLP
OCP GSA	OCP Gas Supply Agreement, dated 9 July 2005
Parties	Claimants and/or Respondent
PCA	Permanent Court of Arbitration
Preclusion Issue	The question of whether Iranian law precludes recovery of lost profits for breach of contract
Referral Request	NIOC's Request for Permission to refer Jurisdictional Questions to the English Court, dated 18 June 2019
Remedies Phase	The phase of this arbitration comprising all issues related to remedies
Remedies Hearing	Hearing held in this matter from 3 to 23 November 2016.
Respondent or NIOC	National Iranian Oil Company, an Iranian State company, the Respondent in this arbitration
Riser Platform	The delivery point under the GSPC, linked by a 50-metre bridge to the AP-Platform in the Mubarak complex, offshore Sharjah
SajGas	Sajaa Gas Private Limited Company
Second Amendment	Second Amendment to the GSPC, dated 17 March 2003
Second Arbitration	A second arbitration commenced by Crescent on 28 June 2018 seeking the recovery of losses flowing from NIOC's breach of the GSPC subsequent to the period which falls within the scope of the Award on Jurisdiction and Liability
Second Side Letter	Second Side Letter to the GSPC, dated 25 April 2001

Second Tribunal	Tribunal in the Second Arbitration
Seller's Obligated Quantity	Seller's Obligated Quantity under Article 11 of the FEWA GSA
SEWA	Sharjah Electricity and Water Authority
SEWA GSA	Gas Supply Agreement between CGC and SEWA, dated 17 January 2004
Side Agreement	Agreement between CGC and CNGC, dated 5 September 2005
Shalco	Sharjah LPG Company
Sixth Side Letter	Sixth Side Letter to the GSPC, dated 7 July 2004
Terms of Reference	Terms of Reference signed by Mr Gerry Lagerberg, Mr Chris Osborne and the Chairman on 26 April 2021, for provision of assistance to the Tribunal with its final calculations.
Third Side Letter	Third Side Letter to the GSPC, dated 25 April 2001
Tribunal's Instructions	Request and Instructions provided by the Tribunal to Mr Lagerberg and Mr Osborne
UAE	United Arab Emirates
UGTC	United Gas Transmissions Company Limited
USD	US Dollars

SELECT PLEADINGS
(in chronological order)

Crescent's Statement of Case	Crescent's Statement of Case, dated 24 December 2009
NIOC's Re-Amended Statement of Defence	NIOC's Re-Amended Statement of Defence and Counterclaim, filed 14 January 2011, amended 24 September 2012
Crescent's Memorial on Remedies	Crescent's Memorial on Remedies, dated 21 May 2015
NIOC's Counter-Memorial on Remedies	NIOC's Counter-Memorial on Remedies, dated 3 February 2016
Crescent's Reply on Remedies	Crescent's Reply Memorial on Remedies, dated 25 April 2016
NIOC's Rejoinder on Remedies	NIOC's Reply Counter-Memorial on Remedies, dated 19 August 2016
Crescent's Skeleton on Remedies	Crescent's Skeleton Argument on Remedies, dated 27 October 2016
Crescent's First Post-Hearing Brief on Remedies or CPHBR1	Crescent's First Post-Hearing Brief on Remedies, dated 28 February 2017
NIOC's First Post-Hearing Brief on Remedies or RPHBR1	NIOC's First Post-Hearing Brief on Remedies, dated 7 June 2017
Crescent's Reply Post-Hearing Submission on Iranian Law or RPHSIL	Crescent's Reply Post-Hearing Submission on Iranian Law, dated 23 August 2017
Crescent's Second Post-Hearing Brief on Remedies or CPHBR2	Crescent's Second Post-Hearing Brief on Remedies, dated 23 August 2017
NIOC's Second Post-Hearing Brief on Remedies or RPHBR2	NIOC's Second Post-Hearing Brief on Remedies, dated 23 August 2017

Crescent's Answers Crescent's Answers to the Tribunal's Questions of 25 May 2020 and 6 November 2019, dated 30 June 2020

NIOC's Answers NIOC's Answers to the Tribunal's Questions dated 6 November 2019 and 25 May 2020, dated 30 June 2020

**WITNESS STATEMENTS AND EXPERT REPORTS
(in alphabetical order)**

Danhash 2	Second Witness Statement of Ahmed Mansoor Danhash, adviser to Sharjah Petroleum Council, dated 21 April 2016, filed with Crescent's Reply on Remedies
Ghaemi 1	First Expert Report of Dr Abolfazl Ghaemi, concerning issues of gas composition and gross heating value, dated 3 February 2016, filed with NIOC's Counter-Memorial on Remedies
Ghaemi 2	Second Expert Report of Dr Abolfazl Ghaemi, concerning gas availability, dated 19 August 2016, filed with NIOC's Rejoinder on Remedies
Haberman 1	Expert Report of Philip Haberman, concerning Crescent's loss of profits claim and providing a model of the cash flows, dated 3 February 2016, filed with NIOC's Counter-Memorial on Remedies
Haberman 2	Expert Report of Philip Haberman, concerning Crescent's loss of profits claim and appropriate model of the cash flows, dated 19 August 2016, filed with NIOC's Rejoinder on Remedies
Katirai 5	Fifth Legal Expert Report of Mahmoud Katirai, concerning Iranian law principles on damages, dated 21 May 2015, filed with Crescent's Memorial on Remedies
Katirai 6	Sixth Legal Expert Report of Mahmoud Katirai, concerning Iranian law principles on damages, dated 25 April 2016, filed with Crescent's Reply on Remedies
King 1	First Witness Statement of Andrew King, concerning the impact of international sanctions, dated 3 February 2016, filed with NIOC's Counter-Memorial on Remedies
Lagerberg 1	First Expert Report of Gerard John Lagerberg of Pricewaterhouse Coopers LLP, concerning Crescent's loss of profits claim, dated 21 May 2015, filed with Crescent's Memorial on Remedies
Lagerberg 2	Second Expert Report of Gerard John Lagerberg of Pricewaterhouse Coopers LLP, concerning Crescent's loss of profits claim, dated 25 April 2016, filed with Crescent's Reply on Remedies
Lagerberg/Haberman Joint Report	Joint Statement of Mr Lagerberg and Mr Haberman, concerning Crescent's loss of profits claim, dated 21 October 2016

Lagerberg/Osborne Joint Report	Joint Expert Reply to the Tribunal's Expert Terms of Reference provided to the Tribunal by Mr Lagerberg and Mr Osborne on 11 June 2021, with updates on 28 June 2021 and 8 July 2021
Luciani 2	Second Expert Report of Professor Giacomo Luciani, concerning aspects of the gas market including demand, pricing and the value chain structure, dated 21 May 2015, filed with Crescent's Memorial on Remedies
Luciani 3	Third Expert Report of Professor Giacomo Luciani, concerning aspects of the gas market including demand, pricing and the value chain structure, dated 21 April 2016, filed with Crescent's Reply on Remedies
Makkawi 4	Fourth Witness Statement of Mohammad Eid Makkawi, a Projects Director of Crescent, dated 19 May 2015, filed with Crescent's Memorial on Remedies
Makkawi 5	Fifth Witness Statement of Mohammad Eid Makkawi, a Projects Director of Crescent, dated 25 April 2016, filed with Crescent's Reply on Remedies
Mehrpour 1	First Legal Expert Report of Professor Hossein Mehrpour Mahamadabadi, concerning Iranian law principles on damages, dated 3 February 2016, filed with NIOC's Counter-Memorial on Remedies
Mehrpour 2	Second Legal Expert Report of Professor Hossein Mehrpour Mahamadabadi, concerning Iranian law principles on damages, dated 19 August 2016, filed with NIOC's Rejoinder on Remedies
Mills 1	First Expert Report of Robin Mills, concerning the energy market in the United Arab Emirates, dated 3 February 2016, filed with NIOC's Counter-Memorial on Remedies
Mills 2	Second Expert Report of Robin Mills, concerning the energy market in the United Arab Emirates, dated 19 August 2016, filed with NIOC's Rejoinder on Remedies
Nazari 1	First Witness Statement of Mr Alireza Nazari, describing the capacity and delay in the construction of NIOC's facilities for the delivery of the gas, dated 3 February 2016, filed with NIOC's Counter-Memorial on Remedies
Rahimi 1	First Witness Statement of Hossein Rahimi, describing various incidents affecting completion of the facilities, dated 3 February 2016, filed with NIOC's Counter-Memorial on Remedies

Rahimi 2	Second Witness Statement of Hossein Rahimi, concerning gas leaks and infrastructure, dated 19 August 2016, filed with NIOC's Rejoinder on Remedies
Ramazani 1	First Witness Statement of Azizollah Ramazani, concerning gas shortages in Iran during the period of Claimants' claim, dated 3 February 2016, filed with NIOC's Counter-Memorial on Remedies
Ramazani 2	Second Witness Statement of Azizollah Ramazani, concerning gas shortages in Iran during the period of Claimants' claim, dated 19 August 2016, filed with NIOC's Rejoinder on Remedies
Smith 1	First Expert Report of Neil Smith, addressing pipeline infrastructure, dated 19 August 2016, filed with NIOC's Rejoinder on Remedies
Stern 1	First Expert Report of Professor Jonathan Stern, addressing issues of gas pricing and gas price reviews, dated 3 February 2016, filed with NIOC's Counter-Memorial on Remedies
Stern 2	Second Expert Report of Professor Jonathan Stern, addressing issues of gas pricing and gas price reviews, dated 19 August 2016, filed with NIOC's Rejoinder on Remedies
Torabi 1	First Witness Statement of Behzad Torabi, describing the impact of international sanctions on NIOC's business and banking relationships, dated 3 February 2016, filed with NIOC's Counter-Memorial on Remedies
Vermeire 1	Expert Report of Jean Vermeire, concerning the gas industry, dated 25 April 2016, filed with Crescent's Reply on Remedies
Watts 5	Fifth Witness Statement of Thomas Stephen Watts, a Projects Director of Crescent, dated 21 May 2015, filed with Crescent's Memorial on Remedies
Watts 6	Sixth Witness Statement of Thomas Stephen Watts, a Projects Director of Crescent, dated 25 April 2016, filed with Crescent's Reply on Remedies
Way 1	First Expert Report of Anthony Way, dealing with Crescent's proposed increases to the contractual volumes, general industry practice regarding lost profits and gas price revision, dated 3 February 2016, filed with NIOC's Counter-Memorial on Remedies

Way 2	Second Expert Report of Anthony Way, dealing with Crescent's proposed increases to the contractual volumes, general industry practice regarding lost profits and gas price revision, dated 19 August 2016, filed with NIOC's Rejoinder on Remedies
Wood 1	Expert Report of Michael Wood, concerning pipeline infrastructure, dated 25 April 2016, filed with Crescent's Reply on Remedies
Wood/Smith Joint Report	Joint Experts' Report of Mr Wood and Mr Smith, concerning pipeline infrastructure, dated 27 October 2016

I. INTRODUCTION

A. THE PARTIES

1. The Claimants in this matter are Crescent Petroleum Company International Limited (“**Crescent Petroleum**” or “**CPCIL**”), a company incorporated under the laws of Bermuda, and Crescent Gas Corporation Limited (“**Crescent Gas**” or “**CGC**”), a company incorporated under the laws of the British Virgin Islands. Crescent Petroleum and Crescent Gas (collectively “**Crescent**” or “**Claimants**”) are part of the Crescent Petroleum group of companies. Crescent Petroleum is a private exploration and production company in the Middle East and is headquartered in Sharjah, United Arab Emirates (“**UAE**”). Crescent Gas is Crescent Petroleum’s wholly owned subsidiary.
2. Crescent is represented by Lord Charles Falconer QC, Ms Penny Madden QC, Ms Sarah Wazen and Ms Rose Naing of Gibson, Dunn & Crutcher LLP in London; Professor Jan Paulsson, Mr Constantine Partasides QC, Dr Georgios Petrochilos QC, Mr Agustin Sanz, Dr Ryan Manton and Ms Nicola Peart of Three Crowns LLP in London, Paris and Washington DC, and Ms Lucy Martinez, Mr Louis Alexis-Bret, Mr Leon Firios and Mr Mushegh Manukyan (formerly of Three Crowns); Mr Ricky Diwan QC of Essex Court Chambers in London; Dr Tariq Baloch of 3 Verulam Buildings in London; Mr Michael Darowski of McDermott Will & Emery UK LLP in London; Mr Moeiz Farhan of 36 Stone in London (formerly of Gibson Dunn); Judge Koorosh Ameli of Ameli International Arbitration in The Hague; Mr Hamid Sabi of Sabi & Associates in London; Mr Jeremy Carver, Consultant to Crescent; and Mr Drazen Petkovich, Ms Amelia Mibus, Ms Maria Scanlan and Mr Nathan Hooper of Crescent in Sharjah.
3. The Respondent is the National Iranian Oil Company (“**NIOC**” or “**Respondent**”, collectively with Crescent, “**Parties**”), a State entity organised under the laws of the Islamic Republic of Iran (“**Iran**”) in 1948 with the objective of exploration, development, production and marketing of Iran’s crude oil and natural gas. The Minister of Petroleum of Iran is the Chairman of NIOC’s Board of Directors.
4. NIOC is represented by Mr David Sellers, Mr Mark Howarth, Ms Nanette Pilkington and Mr Greg Falkof of Eversheds Sutherland LLP in Paris and London; Mr Simon Rainey QC and Mr Ben Gardner of Quadrant Chambers in London; Dr Wolfgang Peter and Mr Konstantin Christie of Peter & Kim in Geneva; and Dr Seyed Asghar Hendi, Dr Zahra Goudarzi and Mr Saeed Alikhani of NIOC in Tehran.

B. THE DISPUTE

5. The dispute between the Parties arises under a Gas Sales and Purchase Contract concluded by NIOC and Crescent Petroleum on 25 April 2001, as amended (“**GSPC**” or “**Contract**”),
 - (1) on 25 April 2001 by the First Amendment (“**First Amendment**”);
 - (2) on 25 April 2001 by the First Side Letter (“**First Side Letter**”);
 - (3) on 25 April 2001 by the Second Side Letter (“**Second Side Letter**”);
 - (4) on 25 April 2001 by the Third Side Letter (“**Third Side Letter**”);
 - (5) on 25 April 2001 by the Fourth Side Letter (“**Fourth Side Letter**”);
 - (6) on 17 March 2003 by the Fifth Side Letter (“**Fifth Side Letter**”);
 - (7) on 17 March 2003 by the Second Amendment (“**Second Amendment**”); and
 - (8) on 7 July 2004 by the Sixth Side Letter (“**Sixth Side Letter**”).
6. Of the six side letters, only the Fourth, Fifth and Sixth remain in force.¹
7. Under the GSPC, NIOC agreed to supply and sell to Crescent Petroleum, and Crescent Petroleum agreed to purchase from NIOC, specified quantities of natural gas, at the price and on the terms and conditions there provided, for a period of 25 years, commencing on 1 December 2005 (“**Commencement Date**”). (The Commencement Date was fixed at 1 December 2005 by the Sixth Side Letter).
8. Crescent claims that, in breach of the GSPC, NIOC failed to deliver gas on 1 December 2005 or at any time thereafter up until 11 September 2018, on which date Crescent says it terminated the GSPC. (Crescent’s claim to have terminated the GSPC on that date was upheld in the second arbitration commenced by Crescent on 28 June 2018 (“**Second Arbitration**”).²

¹ The First and Second Side Letters were superseded by the Fifth Side Letter, and the Third Side Letter was superseded by the Sixth Side Letter. *See* NIOC’s Re-Amended Statement of Defence ¶ 23; Crescent’s Statement of Case ¶¶ 4.5-4.6.

² The Second Arbitration is described at paragraph 116 below.

9. Pursuant to Article 16 of the GSPC, on 26 July 2003, Crescent Petroleum assigned its rights and obligations under the GSPC to CGC before the first delivery of gas was due.³
10. Reference will be made below to the nature of the remedies sought by Crescent.

C. THE ARBITRATION AGREEMENT

11. Article 22 of the GSPC provides:

22.1 Governing Law

This Contract shall be governed by and interpreted in accordance with the Laws of Islamic Republic of Iran.

22.2 Arbitration

The Parties shall use all reasonable efforts to settle amicably within 60 days, through negotiations, any dispute arising out of or in connection with this Contract or the breach, termination or invalidity thereof. Any dispute, controversy or claim arising out of or in relation to this Contract, or the breach, termination or validity or invalidity thereof shall be finally settled by arbitration before three arbitrators, in accordance with a “Procedures for Arbitration” (attached hereto as Annex 2) which will survive the termination or suspension of this Contract. Any award of the arbitrators shall be final and binding upon the Parties. Either Party may seek execution of the award in any court having jurisdiction over the Party against whom execution is sought.

12. Annex 2 to the GSPC sets out the “Procedures for Arbitration”:

1. The Party commencing an arbitration (the “*claimant*”) shall serve a written notice of arbitration on the other Party (the “*respondent*”) stating:
 - (a) the names and addresses of the parties to the arbitration;
 - (b) a brief statement of the nature of the dispute(s), and the relief claimed;
 - (c) the full name and address of the arbitrator appointed by the claimant pursuant to paragraph 4 below; and
 - (d) claimant’s proposed place(s) of arbitration.
2. Within one hundred and twenty (120) days of receiving the claimant’s notice of arbitration the respondent shall serve a written response containing:
 - (a) a confirmation or denial of all or part of the claimant’s claim(s);
 - (b) a brief statement of the nature of any counterclaim(s);
 - (c) the full name and address of the arbitrator appointed by the respondent under paragraph 4 below; and
 - (d) agreement to the claimant’s proposed location(s) of arbitration, or alternative place(s) acceptable to the respondent.

³ Award on Jurisdiction and Liability ¶ 406.

3. The place of arbitration shall be agreed upon by the Parties to the dispute after such dispute arises. The claimant initiating arbitration shall include in the notice of arbitration its proposed place(s), and the respondent shall respond with either its agreement to one of the place(s) proposed by claimant or initiate discussions concerning alternate place(s). In the event that such arbitration place(s) cannot be agreed upon by the claimant and respondent prior to the appointment of the third arbitrator, then the arbitral tribunal shall, as its first act, convene in Tehran, Iran, or an alternative location selected by the arbitrators, to decide upon the place(s) of arbitration.
4. The arbitral tribunal shall be composed of three arbitrators appointed as follows:
 - (a) each the Party [sic] shall appoint an arbitrator, and the two arbitrators so appointed shall appoint a third arbitrator who shall act as chairman of the tribunal whom shall be from a neutral country other than those of which the Parties are nationals;
 - (b) if either Party fails to appoint an arbitrator, within forty (40) days of receiving notice of the appointment of an arbitrator by the other Party, such arbitrator shall at the request of that Party be appointed by the President of the International Chamber of Commerce (ICC), whom shall be from a neutral country other than those of which the Parties are nationals;
 - (c) if the two arbitrators to be appointed by the Parties fail to agree upon a third arbitrator, within twenty (20) days of the appointment of the second arbitrator, the third arbitrator, shall be appointed by the President of the International Chamber of Commerce (ICC) at the written request of either Party, whom shall be from a neutral country other than those of which the Parties are nationals;
 - (d) a prospective arbitrator shall disclose to the Parties any circumstances likely to give rise to justifiable doubts as to his impartiality or independence, a Party who intends to challenge an arbitrator shall send written notice of his challenge (with reasons for his challenge) to the other Party, the challenged arbitrator and the other members of the arbitral tribunal within thirty (30) days after the circumstances giving rise to the challenge become known to that Party. If the challenge is not accepted by the arbitrator or the other Party, a decision on the challenge shall be made within forty (40) days by the International Chamber of Commerce (ICC).
 - (e) should a vacancy arise because any arbitrator dies, resigns, fails to act, refuses to act, is successfully challenged, or becomes incapable of performing his functions, the vacancy shall be filled using the same method by which that arbitrator was originally appointed. When a vacancy is filled the newly established tribunal shall in its discretion determine whether any prior hearing shall be repeated.
5. No later than ninety (90) days after the tribunal has been established in accordance with paragraph 4 above, the claimant shall deliver to the respondent (with copies to each arbitrator) a statement of his case, containing particulars of his claims and submissions in support thereof, together with copies of any documents relied upon.
6. Within one hundred and twenty (120) days of the receipt of the claimant's statement of his case, the respondent shall deliver to the claimant (with copies to each arbitrator) a statement of defense, together with particulars of any counterclaim(s) and copies of any documents relied upon.
7. Within ninety (90) days of the receipt by the claimant of any statement of counterclaim(s) by the respondent, the claimants may deliver to the respondent (with copies to each arbitrator) a reply to the counterclaim(s) together with copies of any additional documents relied upon.

8. The following procedural rules inter alia shall in any event be taken as agreed:
 - (a) the language of the arbitration shall be English;
 - (b) the tribunal may in its discretion hold a hearing and make an award in relation to any preliminary issue at the request in writing of either Party and shall do so at the joint request in writing of both Parties;
 - (c) the tribunal shall hold a hearing(s), in order to determine substantive issues unless the Parties agree otherwise in writing;
 - (d) all hearings shall be held in private;
 - (e) the tribunal shall issue its final award within 60 (sixty) days of the last hearing of the substantive issues in dispute between the Parties, unless the Parties otherwise agree in writing; [this time limit was later abrogated by agreement of the Parties.]⁴
 - (f) any award or procedural decision of the tribunal shall be made by a majority of the arbitrators;
 - (g) the award shall be made in writing and shall be final and binding on the Parties;
 - (h) the award shall state the reasons on which the award is based, unless the Parties agree in writing that no reasons are to be given;
 - (i) each Party shall be responsible for his own costs of litigation. The costs of arbitration shall be equally born [sic] by both Parties, unless the arbitral tribunal otherwise decides.
9. The Parties shall decide on other procedural rules of arbitration, whenever and whatever it deems necessary, by mutual agreement. However, in case of disagreement or gap in such procedural rules of arbitration, the procedural rules of arbitration of the International Chamber of Commerce (ICC) shall apply. Nevertheless, it will not be explicitly or implicitly interpreted as submission to International Chamber of Commerce's authority.
10. Referral of matters in dispute to arbitration by a Party initiating arbitration shall, if necessary, be subject to the obtaining of the approval of the appropriate authority of the initiating Party.

D. THE ARBITRATION PROCEEDINGS

13. These proceedings were commenced by Crescent's Notice of Arbitration dated 15 July 2009. NIOC delivered its Response to the Notice of Arbitration on 12 November 2009.
14. On 25 February 2010, by Procedural Order No. 1, the Tribunal as then constituted ordered the bifurcation of the proceedings between a phase covering all jurisdictional issues and all issues relevant to liability ("**Jurisdiction and Liability Phase**") and a phase covering remedies in the event that liability was established ("**Remedies Phase**").

⁴ See ¶¶ 228-229 below.

15. On 31 July 2014, the Tribunal as then constituted issued an award dealing with issues raised in the former of the above phases (“**Award on Jurisdiction and Liability**”). In 2016, challenges to the Award on Jurisdiction and Liability were rejected by the High Court of England and Wales (“**English Court**”), and ultimately withdrawn.⁵
16. The Award on Jurisdiction and Liability is incorporated by reference in this Award, and repetition will be avoided as far as possible. Abbreviations and definitions used in the Award on Jurisdiction and Liability apply to this Award unless otherwise indicated.
17. Paragraphs 13 to 192 of the Award on Jurisdiction and Liability set out the Procedural History of the matter up to 31 July 2014, including the history of changes in the constitution of the Tribunal. A summary of the course of procedural events since the Award on Jurisdiction and Liability is set out in Section II below. Since the Award on Jurisdiction, the Tribunal issued 19 formal procedural orders and other directions, each containing its own recitals of the successive procedural events and steps to finality. Hearings during the Remedies Phase included an evidentiary hearing in November 2016 (“**Remedies Hearing**”); a hearing for closing submissions in October 2017; and a final hearing before the Tribunal as presently constituted in August 2020 (“**Final Hearing**”).

E. THE ARBITRAL TRIBUNAL

18. As detailed in Section II below, the composition of the Tribunal has changed several times throughout the course of this arbitration. The members of the Tribunal as presently constituted are:

Sir Jeremy Cooke [as of 22 September 2018]
 7 King’s Bench Walk
 Temple, London EC4Y 7DS
 United Kingdom

The Rt. Hon. The Lord Phillips of Worth Matravers, KG, PC [as of 13 October 2019]
 Brick Court Chambers
 7-8 Essex Street
 London WC2R 3LD

The Honourable Murray Gleeson AC (Chairman) [as of 8 February 2019]
 Level 17, 115 Pitt Street

⁵ *National Iranian Oil Company v Crescent Petroleum Company International Ltd and Another* [2016] EWHC 510 (Comm) (4 March 2016); *National Iranian Oil Co v Crescent Petroleum Co International Ltd and Another* [2016] EWHC 1900 (Comm) (18 July 2016).

Sydney NSW 2000
Australia

F. GOVERNING LAW, SEAT OF ARBITRATION AND CASE ADMINISTRATION

19. By Article 22.1 of the GSPC, the Contract is governed by and is to be interpreted in accordance with the Laws of the Islamic Republic of Iran.
20. As appears from paragraphs 15 and 16 of the Award on Jurisdiction and Liability, the seat of the arbitration is London.
21. As appears from paragraphs 18 and 20 of the Award on Jurisdiction and Liability, the Permanent Court of Arbitration (“PCA”) provides administrative services for the case. The Tribunal has been assisted by Ms Judith Levine as Administrative Secretary and Ms Evgeniya Goriatcheva from the PCA.

II. PROCEDURAL HISTORY FOLLOWING AWARD ON JURISDICTION AND LIABILITY

A. AWARD, REMEDIES PROCEDURE, AND PROCEEDINGS IN ENGLISH COURT

22. As at 31 July 2014, the Tribunal was constituted by Dr Gavan Griffith QC (Chairman), Dr Kamal Hossain and Dr Assadollah Noori.
23. On 31 July 2014, the Tribunal issued its Award on Jurisdiction and Liability. As permitted by the Parties' arbitration agreement in Article 8(f) of Annex 2 to the GSPC, the Award was issued by a majority, being Drs Griffith and Hossain. While Dr Noori did not join in signing the Award, it was noted in paragraph 12 of the Award that "all three members of the Tribunal participated in extensive deliberations and shared comments on drafts of the Award". The dispositive part of the Award on Jurisdiction and Liability states:

The Tribunal:

- A. CONFIRMS that it has jurisdiction over the claims presented by Crescent Petroleum Company International Limited and Crescent Gas Corporation Limited against the National Iranian Oil Company in this arbitration;
 - B. DECLARES that the Gas Sales and Purchase Contract entered into by the National Iranian Oil Company and Crescent Petroleum Company International Ltd. on 25 April 2001 ('GSPC') is valid, in effect and binding on the Parties;
 - C. DECLARES that Crescent Gas Corporation Limited is a party to the GSPC by assignment and a competent joint claimant in this arbitration;
 - D. DECLARES that the National Iranian Oil Company has been in breach since 1 December 2005 and remains in breach of its obligation to deliver gas under the terms of the GSPC;
 - E. DISMISSES the National Iranian Oil Company's defences and counterclaims;
 - F. RESERVES all questions concerning costs, fees and expenses, including the Parties' costs of legal representation, for subsequent determination; and
 - G. REQUESTS the Parties to confer regarding the procedural calendar for the next phase of the Arbitration, and report to the Tribunal in this respect within 60 days of receipt of this Award.
24. Dr Noori attached to the Award on Jurisdiction and Liability a statement, in which he indicated his dissent from the majority's findings and holdings and expressed concerns about due process which he said he would elucidate at a later date.
 25. Dr Noori circulated his "Reasons for not Signing the July 2014 Majority Award" on 27 August 2014.

26. On 23 August 2014, NIOC lodged with the English Court a challenge to the Award pursuant to the Arbitration Act 1996 UK (“**English Arbitration Act**”), which was contested by Crescent. The proceedings before the English Court concluded in July 2016.
27. On 25 September 2014, NIOC notified Drs Griffith and Hossain of a further challenge against them continuing to act as arbitrators but requested them to suspend consideration of the challenge until after the English Court ruled on the Award. NIOC also indicated it would be asking for a suspension of the arbitration pending resolution of the English Court proceedings.
28. By letter dated 6 October 2014, Crescent opposed the challenges to the arbitrators.
29. By letters dated 7 and 8 October 2014, the PCA informed the Parties that Drs Griffith and Hossain did not accept NIOC’s challenges to them. Also on 7 October 2014, NIOC sent a letter asking a series of questions to Drs Griffith and Hossain relating to issues raised by Dr Noori in his “Reasons for not Signing the 31 July 2014 Majority Award”. The Claimants objected to that letter.
30. On 14 October 2014, the Chairman communicated that the Tribunal remained constituted and available to address applications from the Parties during the pendency of the challenges before the English Court and the International Chamber of Commerce (“**ICC**”). The ICC, by virtue of Article 4(d) of Annex 2 to the GSPC, serves as the authority deciding arbitrator challenges.
31. On 15 October 2014, NIOC replied to Crescent’s letter of 6 October 2014.
32. On 12 November 2014, NIOC submitted its challenge to Drs Griffith and Hossain to the ICC.
33. On 17 November 2014, Crescent requested the Tribunal to set a timetable for the Remedies Phase.
34. By letter dated 30 December 2014, NIOC reiterated its view that the Tribunal should suspend proceedings pending resolution of the ICC and English Court challenges as well as a criminal proceeding in Iran and formally requested a stay of proceedings.
35. Throughout January 2015, Crescent and each of the three arbitrators submitted comments to the ICC in respect of the challenge to Drs Griffith and Hossain.
36. Crescent opposed a stay of proceedings and sought an interim award on costs.

37. On 23 January 2015, Crescent renewed its request for the Tribunal to issue an interim costs award for the Jurisdiction and Liability Phase. NIOC responded on 29 January 2015 and reiterated its view that the Tribunal should not proceed with the Remedies Phase or costs issues.
38. The ICC rejected the challenges to Drs Griffith and Hossain at its Court session of 29 January 2015, as communicated to the Parties and the Tribunal on 2 February 2015.
39. On 13 February 2015, the Tribunal issued Procedural Order No. 19 on NIOC's stay application. The Tribunal decided, by majority, to refuse Respondent's request for a stay and directed Crescent to file its Memorial on Remedies within 90 days.
40. Also on 13 February 2015, the Tribunal issued Procedural Order No. 20 on costs issues. The Tribunal set a timetable for submissions and stated that "any assessment on amounts of recoverable costs will be addressed at a subsequent stage of the proceedings, to be determined by the Tribunal".
41. The Parties filed submissions on costs issues pursuant to Procedural Order No. 20 on 19 February 2015, 19 March 2015, 30 March 2015 and 13 April 2015.
42. Crescent filed its Memorial on Remedies on 21 May 2015, accompanied by 116 exhibits, two witness statements and three expert reports, each with their own exhibits and authorities appended (**"Crescent's Memorial on Remedies"**).
43. On 4 June 2015, the Tribunal issued Procedural Order No. 21 on costs issues, unanimously deciding "that all legal and factual questions concerning costs, fees and expenses, including the Parties' costs of legal representation, are reserved for subsequent determination in the final orders on the disposition of the second phase of the proceedings, unless the Parties agree otherwise".
44. Following consultation with the Parties, the Tribunal issued Procedural Order No. 22 on 19 June 2015, directing the Respondent to file its Counter-Memorial on Remedies by 23 November 2015.
45. The Tribunal issued its Procedural Order No. 23, containing further directions for the Remedies Phase, on 24 August 2015.
46. Following an extension request by NIOC, which was opposed by Crescent, the Tribunal by majority comprised of Drs Griffith and Hossain, issued its Procedural Order No. 24 on 21 November 2015 in which it: (1) granted NIOC an additional 40 days to file its Counter-Memorial on Remedies, by 2 January 2016; (2) adjusted the schedule for document exchanges;

- (3) moved the date for Crescent's Reply on Remedies to 3 March 2016; and (4) set a schedule for the Parties to exchange proposals for remaining procedural directions.
47. On 23 December 2015, the Chairman advised the Parties that, by a majority comprised of himself and Dr Hossain, the Tribunal granted a request by NIOC for an extension for filing its Counter-Memorial and fixed the hearing to commence on 1 September 2016.
 48. On 30 December 2015, NIOC notified Dr Hossain of a challenge against him serving as arbitrator and requested he recuse himself. Dr Hossain stated on 4 January 2016 that he did not accede to the request to recuse himself.
 49. The Tribunal issued its Procedural Order No. 25 on 31 December 2015, by majority comprised of Drs Griffith and Hossain, formalising the matters set out in the Chairman's communication of 23 December 2015. Also on 31 December 2015, Dr Noori circulated his observations on Procedural Order No. 24 and the Chairman's communication of 23 December 2015.
 50. On 13 January 2016, Crescent forwarded NIOC's challenge of Dr Hossain to the ICC for "prompt dismissal", noting it was the fifth time Dr Hossain had been challenged.
 51. On 28 January 2016, NIOC noted the progress made on its Counter-Memorial on Remedies and sought a brief extension to 3 February 2016. The Tribunal advised, by majority comprised of Drs Griffith and Hossain that it agreed to the extension, on terms that the procedural timetable be otherwise maintained.
 52. NIOC filed its Counter-Memorial on Remedies on 3 February 2016, including documentary exhibits, legal authorities, five witness statements and six expert reports ("**NIOC's Counter-Memorial on Remedies**").
 53. On 10 February 2016, the ICC forwarded the challenge materials to Dr Hossain and sought his comments. NIOC clarified on the same date that it had not in fact filed any challenge against Dr Hossain before the ICC Court and did not in fact seek a determination from the ICC.
 54. Pursuant to Procedural Order No. 25, the Parties exchanged document requests on 15 February 2016.
 55. On 4 March 2016, the Tribunal granted extensions requested by Crescent (for filing its Reply on Remedies) and by NIOC (on document production).

56. In accordance with Procedural Order No. 25, the Parties submitted Redfern Schedules with applications for directions regarding contested documents on 15 March 2016.
57. The Tribunal issued its Procedural Order No. 26 on 29 March 2016, dealing with the timetable. It unanimously directed Crescent to file its Reply on Remedies by 22 April 2016, and by majority composed of Drs Griffith and Hossain, directed NIOC to file its Rejoinder on Remedies by 15 July 2016 and reserved its consideration of NIOC's request to postpone the hearing.
58. The Tribunal also issued Procedural Order No. 27 on 29 March 2016, dealing with document production. On 8 April 2016, the Parties exchanged correspondence relating to the Tribunal's directions regarding document production.
59. At the same time as issuing Procedural Orders No. 26 and 27, the Tribunal requested from the Parties a short update on the status of the English Court proceedings. Crescent responded:

NIOC issued in the English High Court a wholesale challenge and appeal against the Tribunal's Arbitral Award dated 31 July 2014 pursuant to sections 67 and 68 of the Arbitration Act 1996.

Following a two-day hearing in February 2015 before Mr Justice Teare, the Court ordered that there should be a trial of certain preliminary issues, the determination of which would result in the disposal of the bulk of NIOC's Grounds of Appeal ...

A three-day trial of the preliminary issues took place between 23 and 25 February 2016 before Mr Justice Burton. In the lead up to that hearing, NIOC abandoned certain of its appeal grounds. Mr Justice Burton decided all the relevant preliminary issues in favour of Crescent, thereby disposing of the majority of NIOC's Grounds of Appeal, and also awarded Crescent its costs of the trial. The Judgment of Mr Justice Burton was handed down on 18 March 2016

Following the judgment, just two grounds of appeal pursuant to section 68 of the Act remain live:

- (1) Ground III(c): "Defective Decision Making", which is essentially comprised of the allegation that Dr Noori was excluded from the Tribunal's deliberations; and
- (2) Ground III(d): "Failure to Maintain a Proper Atmosphere of Civility and Decorum" by which it is alleged that the Tribunal failed sufficiently to "police" Mr Pollock QC's "aggressive" submissions.

These issues have been listed for hearing in the week commencing 18 July 2016.

Crescent enclosed a copy of the judgment of the English Court, dated 4 March 2016, in which NIOC's challenge to the Award on Jurisdiction and Liability on various grounds under Sections 67 and 68 of the English Arbitration Act was rejected.⁶

B. CLAIMANTS' APPLICATION BEFORE BAHRAINI COURT

60. On 7 April 2016, NIOC filed with the Tribunal an "Application for an Urgent Order that the Claimants Immediately Cease and Desist From All Pre-Award Attachment Actions" ("**NIOC's Application**"). NIOC's Application related to proceedings that Crescent instituted on 27 March 2016 before the Bahrain Court of Urgent Matters (the "**Bahraini Court**"). In those proceedings, Crescent applied to the Bahraini Court for the pre-award attachment of assets allegedly held by NIOC in the Central Bank of Bahrain and three other Bahraini banks, in an amount of at least 13.857 billion US Dollars ("**USD**") ("**Attachment Action**"), on the grounds that this Tribunal will "most likely" rule for this amount in its Award on remedies. NIOC indicated that a summary hearing on the Attachment Action had been scheduled in Bahrain for 10 April 2016 and NIOC submitted that: (1) it would not be able to file a defence on the Attachment Action in time; (2) Crescent "should have brought their action for interim measures to the Tribunal"; and (3) Crescent could not make out the merits of the Attachment Action. NIOC therefore urgently requested the Tribunal to: (1) order Crescent to desist immediately from any pending attachment action in Bahraini or other courts; (2) order Crescent to apply immediately for a postponement of the hearing in Bahrain pending the Tribunal's consideration of NIOC's Application; and/or (3) order Crescent to release immediately any attachments obtained; (4) issue any other order deemed appropriate; and (5) award NIOC costs for the Application.
61. On 8 April 2016, Crescent filed comments urging the Tribunal to reject NIOC's Application.
62. The procedural steps related to NIOC's Application and the Attachment Action were detailed in the respective procedural histories of Procedural Orders No. 27, 28, 29, 30 and 32, the key points of which are recalled below.
63. The Tribunal issued Procedural Order No. 28 on 9 April 2016 in which it stated it considered a hearing appropriate, pending which it ordered Crescent to "desist immediately from any pending action to obtain interim or conservatory measures from the Bahraini courts or from any other

⁶ Crescent's Letter to the Tribunal, 12 April 2016, enclosing *National Iranian Oil Company v Crescent Petroleum Company International Ltd and Another* [2016] EWHC 510 (Comm) (4 March 2016).

judicial authority with a view to obtaining the attachment of assets belonging to NIOC in relation to their claim in this arbitration” and “apply immediately for postponement of the hearing scheduled in Bahrain”.

64. On 11 April 2016, NIOC reported that Crescent had not applied for a postponement as directed and requested the Tribunal to revise or cancel Procedural Order No. 28.
65. By letter of 12 April 2016, NIOC requested the Tribunal to reaffirm Procedural Order No. 28 and direct Crescent “to apply immediately for a postponement of the proceedings in Bahrain”.
66. On 13 April 2016, the Tribunal issued Procedural Order No. 29 in which it fixed a hearing date and ordered Crescent to “make any applications necessary ... to ensure the suspension of the Attachment Action until the Tribunal’s determination of the Application”. By Crescent’s admission, it failed to comply with Procedural Order No. 29 but stated that it had later instructed local counsel to seek an adjournment of the Attachment Action pending the hearing before the Tribunal. Crescent reassured the Tribunal that it would “continue to comply with PO29”.
67. On 18 April 2016, the Tribunal expressed its “dismay as to this continuing situation of non-compliance” and asked for confirmation that the applications before the Bahraini Courts were stayed, suspended or discontinued.
68. Procedural Order No. 30, issued on 20 April 2016, set the schedule and procedure for a 15 May 2016 hearing.
69. Crescent updated the Tribunal that its local counsel had submitted a copy of Procedural Order 29 and an urgent adjournment application to the Bahraini Court on 20 April 2016.
70. On 25 April 2016, NIOC complained about what it said was Crescent’s defiance of the Tribunal’s orders and reiterated its opposition to Crescent’s Attachment Action.
71. Meanwhile, on 25 April 2016, in accordance with Procedural Order No. 26 (as varied), Crescent filed its Reply on Remedies, accompanied by exhibits, legal authorities, three witness statements, and five expert reports (“**Crescent’s Reply on Remedies**”).
72. The Tribunal issued Procedural Order No. 31 on 26 April 2016 in which it ordered Crescent to produce documents in response to one outstanding request.

73. On 5 May 2016, Crescent filed submissions explaining why it considered it appropriate to apply to the Bahraini Court and inappropriate for NIOC to ask the Tribunal to intervene.
74. On 13 May 2016, NIOC indicated that it intended to apply for an extension of time to file its Rejoinder on Remedies.
75. On 15 May 2016, the Tribunal conducted a hearing in The Hague on NIOC's Application and outstanding scheduling issues.
76. On 20 May 2016, the Tribunal issued its reasoned "Decision on NIOC's Application of 7 April 2016 Relating to Crescent's Pre-Award Attachment Action in Bahraini Court and Procedural Order No. 32 on Schedule for Remedies Phase". The Tribunal considered it appropriate to issue in personam orders directing Crescent to take any measures necessary to discontinue and terminate the Attachment Action proceedings in the Bahraini Court forthwith and to report back to the Tribunal by 27 May 2016. The Tribunal also directed that in the event of Crescent's non-compliance, the hearing dates fixed by consent for 28 October 2016 would be vacated. By consent of the Parties, all costs orders arising from NIOC's Application were reserved to final costs orders. The Tribunal adjusted the schedule such that: (1) NIOC would file its Reply Counter-Memorial on Remedies by 19 August 2016; (2) the Remedies Hearing would commence on 28 October 2016; and (3) the Parties would consult on various procedural issues by 8 September 2016.
77. On 27 May 2016, Crescent informed the Tribunal that it had applied to discontinue the Attachment Action in the Bahraini Court and that the judge had closed the case. Crescent also provided an update on the remainder of the English Court proceedings noting that a hearing would take place on 20 to 21 July 2016. In response to the Tribunal's enquiry, Crescent noted that the arbitrators' statements to the ICC in the context of NIOC's challenges had been filed in full with the High Court and that neither party requested further statements from the arbitrators.

C. DISPOSITION OF ENGLISH COURT PROCEEDINGS AND RESIGNATION OF DR NOORI

78. On 28 July 2016, Crescent updated the Tribunal on the English Court proceedings and enclosed the judgment of Mr Justice Burton dated 18 July 2016 in respect of the two grounds of challenge

to the Award on Jurisdiction and Liability that remained extant following the previous judgment of 4 March 2016.⁷ Crescent reported:

[T]he English High Court has definitively dismissed all allegations of misconduct by the majority, and of a failure to maintain an appropriate environment for the hearing. Save in relation to issues of recoverable costs – which NIOC has been ordered to pay on the indemnity basis – the proceedings are now at an end.

The Tribunal will also note from the judgment that NIOC was prevented from seeking to discontinue its High Court challenge shortly before the scheduled hearing in a transparent attempt to keep these grounds of challenge alive to be relied on in later foreign proceedings to enforce the Tribunal's awards; and, therefore, because it was an abuse of the English High Court's process as the supervisory court in this arbitration. [sic]

79. By letter dated 29 July 2016, NIOC presented its version of the conclusion of the English Court proceedings.
80. In July and August 2016, the Parties and Tribunal exchanged correspondence to progress plans for a pre-hearing conference and the Remedies Hearing.
81. On 8 August 2016, Dr Noori circulated a letter of resignation, in which he remarked upon NIOC's unexpected request for discontinuance before the English Court and NIOC's absence from the hearing at that court. He noted that given all the circumstances surrounding this arbitration, he had come to the conclusion that he should step down, and tendered his resignation from membership of the Tribunal with an effective date of 22 August 2016.
82. On 9 August 2016 the PCA conveyed to the Parties a message from the Chairman noting that the 40-day period for NIOC to nominate a replacement arbitrator under Annex 2 to the GSPC would run until 17 September 2016, and encouraging NIOC to make the appointment as soon as possible.
83. NIOC sent a letter on 9 August 2016 expressing its surprise and disappointment to receive news of Dr Noori's resignation.

D. APPOINTMENT OF MR KHAN AND PRE-HEARING PROCEEDINGS

84. NIOC filed its Rejoinder on Remedies, accompanied by exhibits, legal authorities, two witness statements and seven expert reports on 19 August 2016 ("**NIOC's Rejoinder on Remedies**").

⁷ [2016] EWHC 1900 (Comm) (18 July 2016).

85. On 31 August 2016, Respondent nominated as its replacement arbitrator Mr Makhdoom Ali Khan, a national of Pakistan.
86. On 1 September 2016, the PCA informed the Parties that Mr Khan had accepted to serve as arbitrator and confirmed, pursuant to paragraph 4(d) of Annex 2 of the GSPC, that he is impartial and independent of each of the Parties. The PCA communicated that the Tribunal considered itself reconstituted, invited the Parties to send relevant documents to Mr Khan, and advised that the Tribunal wished to fix hearing dates commencing on 3 November 2016 for a period of not more than 20 days.
87. On 5 September 2016, Crescent confirmed its availability for the hearing and NIOC sent Mr Khan an agreed bundle of documents to enable him to read into the case. Throughout September 2016, the Parties exchanged correspondence on procedures for the Remedies Hearing.
88. On 7 October 2016, following further correspondence amongst the Tribunal and the Parties, the Chairman met with counsel in London to finalise remaining logistical issues for the Remedies Hearing. Minutes of that meeting were subsequently circulated.
89. On 28 October 2016, the Parties exchanged skeleton arguments in advance of the Remedies Hearing.
90. In advance of the hearing, the Parties submitted the Remedies Hearing Bundle consisting of the following volumes, which are referenced throughout this Award:

Volume RA – Memorials, Procedural Orders, Transcripts from English Court

Volume RB – Witness Statements

Volume RC – Chronological Bundle

Volume RD – Expert Reports

Volume RE – Skeleton Arguments

Volume RF – Legal Authorities

Volume RG – Award on Jurisdiction and Liability

Volume RH – Remedies Hearing Transcripts

Volume RJ – Reserved for Documents Submitted During Remedies Hearing

E. REMEDIES HEARINGS AND POST-HEARING PROCESS

91. From 3 to 23 November 2016, the Remedies Hearing took place at the Peace Palace in The Hague. The following were in attendance for some or all of the Remedies Hearing:

Tribunal

Dr Gavan Griffith QC
 Dr Kamal Hossain
 Mr Makhdoom Ali Khan

Crescent

Professor Jan Paulsson
 Dr Georgios Petrochilos
 Mr Agustín G Sanz
 Mr Louis-Alexis Bret
 Ms Nicola Peart
 Mr Leon Firios
(Three Crowns LLP)

Mr Kieron O’Callaghan
 Mr Michael Darowski
 Mr Jerome Finnis
 Ms Annabel Maltby
 Mr Mark Orton
 Ms Imogen Walsh
(Hogan Lovells International LLP)

Mr Salim Moollan QC
(Essex Court Chambers)

Mr James Petkovic
(One Essex Court Chambers)

Mr Hamid Sabi
(Sabi & Associates)

Mr Majid Jafar
 Mr Drazen Petkovich
 Ms Amelia Mibus
 Ms Preeta Prahlad
 Mr Tariq Bakheit
 Mr Mohamad Sakr
 Mr Bernard de Wolff
 Mr Ravi Kumar Vennelaganti
(Crescent Petroleum and Crescent Gas)

Mr Jeremy Carver

Ms Sarah Johnson
 Mr Rui Almeida
(PwC)

NIOC

Mr Simon Rainey QC
(Quadrant Chambers)

Mr David Sellers
 Mr William Thomas
 Mr Mark Howarth
 Ms Nanette Pilkington
 Mr Greg Falkof

Ms Alice Allard
 Ms Gillian Forsyth
 Ms Rima Bugaighis
 Ms Christina Mangani
 Mr Jeremy Record
 Mr Alexander Cook
 Ms Margrit Trein
 Mr Kevin Davey
 Mr Aaron Bradley
 Ms Jill Robinson-Rier
(Eversheds LLP)

Dr Seyed Asghar Hendi
 Dr Aliakbar Mahrokhzad
 Dr Seyed Abbas Hashemi
 Mr Saeed Alikhani
 Ms Zahra Ejehi
 Mr Aliakbar Pourebrahimabadi
(National Iranian Oil Company)

Dr M. J. Ghanbari Jahromi
 Mr Mohammad Reza Rahimi
 Mr Younesi
 Ms Sohelia Ebrahimi Louyeh
 Ms Ladan Hariran
 Ms Nasim Zargarinejad
 Mr Siavash Shekarian
 Mr M. Varahcher
 Dr M. Mohebi
 Mr M. Bank
 Mr Zahedin
(Centre for International Legal Affairs)

Mr Hamidreza Atarod
 Mr Hoorijani
 Dr Mohsen Izanloo
 Dr Mahmood Bagheri
 Dr Ebrahim Shoarian Sattari
(NIOC Advisors)

Dr Mansour Amini
(Legal Advisor)

Mr Chris de Goey
(Xodus Group)

Fact Witnesses for Crescent
Mr Ahmed Mansoor Danhash
Mr Mohammad Eid Makkawi
Mr Thomas Stephen Watts

Expert Witnesses for Crescent
Mr Mahmoud Katirai
Professor Giacomo Luciani
Mr Gerard John Lagerberg
Mr Jean Vermeire
Mr Michael Wood

Permanent Court of Arbitration
Ms Judith Levine
Ms Evgeniya Goriatcheva
Mr Domenico Cucinotta
Ms Sarah Castles

Assistant to Dr Hossain
Ms Maherin Islam Khan

Fact Witnesses for NIOC
Mr Andrew King
Mr Alireza Nazari
Mr Hossein Rahimi
Mr Azizollah Ramazani
Mr Behzad Torabi

Expert Witnesses for NIOC
Dr Abolfazl Ghaemi
Mr Philip Haberman
Professor Hossein Mehrpour Mahamadabadi
Mr Robin Mills
Mr Neil Smith
Professor Jonathan Stern
Mr Anthony Way

Court Reporter
Mr Trevor McGowan

Interpreters
Mr Reza Amini
Ms Mina Faress

92. Oral presentations were made for Crescent by Professor Paulsson, Dr Petrochilos, Mr Moollan QC, and Mr Darowski; and for NIOC by Mr Rainey QC, Mr Sellers, Mr Thomas, Mr Howarth, Ms Pilkington, and Mr Falkof.
93. During the course of the hearing, the Parties submitted further documentary and demonstrative exhibits. Eight fact witnesses and twelve expert witnesses were examined. An attempt at conclaveing the Iranian law experts was not fruitful and the Parties considered a conclave of the gas pricing experts to be unworkable.
94. On Day 14 of the Remedies Hearing, the Tribunal granted leave for NIOC to put to Mr Katirai during cross-examination: (1) a court judgment referring to the evidence of Mr Katirai; and (2) two documents entitled “First Legal Opinion of Mahmoud Katirai” and “Second Legal Opinion of Mahmoud Katirai” given in prior ICC arbitrations.
95. At the close of the hearing, the Tribunal and the Parties discussed a schedule for post-hearing procedures, which was confirmed by letter dated 24 November 2016.

96. In accordance with a schedule agreed with the Parties, Crescent submitted its first post-hearing brief on remedies on 28 February 2017, accompanied by 6 annexes and 16 exhibits (“**Crescent’s First Post-Hearing Brief on Remedies**” or “**CPHBR1**”).
97. Following a request by NIOC to make corrections to the transcript due to interpretation issues, and Crescent’s objections to such a process, the Tribunal issued Procedural Order No. 33 on 10 March 2017. The Tribunal denied NIOC’s request to correct the transcript but stated that NIOC may raise any specific issue of interpretation arising from the hearing that is material to its case in its post-hearing brief, following which Crescent would have leave to respond, with the Tribunal resolving contested issues at a subsequent date.
98. On 10 April 2017 the PCA conveyed the Tribunal’s request for a supplementary deposit from the Parties and, at the request of the Parties, provided an updated statement of account.
99. The Tribunal issued Procedural Order No. 34 on 13 April 2017, granting NIOC a final extension until 7 June 2017 to file its First Post-Hearing Brief and setting a new schedule for subsequent procedural steps.
100. Following further consultation with the Parties, the Tribunal issued Procedural Order No. 35 on 28 April 2017 to set the dates for second-round post-hearing briefs, a meeting with counsel and oral closing submissions.
101. On 7 June 2017, in accordance with the timetable fixed in Procedural Order No. 34, NIOC filed its first post-hearing brief on remedies, accompanied by 8 Annexes and 19 Exhibits (“**NIOC’s First Post-Hearing Brief on Remedies**” or “**RPHBR1**”).
102. On 30 June 2017, Crescent applied to the Tribunal to exclude a “significant volume of new material contained in NIOC’s PHB,” to confirm the date for transcript amendments proposed by NIOC in its Post-Hearing Brief and to request an indication from the Tribunal of the process they intended to follow at the 5 July 2017 meeting. By letter of 5 July 2017, NIOC opposed Crescent’s application to exclude allegedly new material contained in NIOC’s proposed transcript amendments.
103. In accordance with Procedural Order No. 35, the Tribunal met with lead counsel of the Parties at the Peace Palace on 5 July 2017 to outline questions and issues to be addressed in the second round of post-hearing briefs. The following were in attendance at that meeting:

Tribunal

Dr Gavan Griffith QC
Dr Kamal Hossain
Mr Makhdoom Ali Khan

Crescent

Mr Gordon Pollock QC
Mr Salim Moollan QC
Mr Ricky Diwan QC
(*Essex Court Chambers*)

Prof Jan Paulsson
Dr Georgios Petrochilos
(*Three Crowns LLP*)

Mr Michael Darowski
(*Gowling WLG*)

Permanent Court of Arbitration

Ms Judith Levine
Ms Evgeniya Goriatcheva
Mr Domenico Cucinotta

Assistant to Mr Khan

Ms Aaminah Qadir

NIOC

Mr Simon Rainey QC
(*Quadrant Chambers*)

Mr David Sellers
Mr Mark Howarth
Ms Nanette Pilkington
Mr Greg Falkof
(*Eversheds LLP*)

Court Reporter

Mr Trevor McGowan

104. Oral presentations were made for Crescent by Mr Pollock QC, Mr Moollan QC and Professor Paulsson; and for NIOC by Mr Sellers.
105. During the meeting, the Tribunal ruled on Crescent's application to exclude "new material" in NIOC's First Post-Hearing Brief and strike out certain parts of NIOC's First Post-Hearing Brief that relied on such new material. The Tribunal (1) rejected Crescent's application to exclude Tabs 1 to 8, 10 to 16 and 19 to 21 of Annex C to NIOC's First Post-Hearing Brief; (2) rejected Crescent's application to exclude Tabs 3, 5, 7 and 20 so long as NIOC filed the underlying Farsi text by 12 July 2017; (3) granted leave to Crescent to respond to those authorities; (4) accepted Crescent's application to strike from the record paragraphs 510 and 511 of NIOC's PHB; and (5) considered it unnecessary to decide on Crescent's application to strike from the record paragraphs 273 and 509 of NIOC's PHB.
106. During the course of the meeting with counsel, the Tribunal presented a draft version of Procedural Order No. 36 containing a list of issues for the Parties to address in their second round post-hearing briefs. Following consultation with counsel, a final version of Procedural Order No. 36 was issued on 5 July 2017.

107. Pursuant to the Tribunal's order of 5 July 2017, NIOC provided the underlying Farsi texts of Tabs 3, 5, 7 and 20 of Annex C to its First Post-Hearing Brief on 12 July 2017.
108. On 20 July 2017, Crescent provided its comments on NIOC's proposed amendments to the hearing transcript, as set out in Annex A to its Post-Hearing Brief. The Tribunal consulted with the Farsi interpreters from Remedies Hearing to resolve the outstanding translation issues and forwarded their suggestions to the Parties on 24 August 2017.
109. In accordance with Procedural Orders No. 35 and 36, on 23 August 2017, the Parties exchanged their second round post-hearing briefs (respectively "**Crescent's Second Post-Hearing Brief on Remedies**" or "**CPHBR2**" and "**NIOC's Second Post-Hearing Brief**" or "**RPHBR2**"). Crescent also submitted an application for leave to include written submissions on remoteness under English law, and a reply submission on Iranian law ("**Crescent's Reply Post-Hearing Submission on Iranian Law**" or "**Crescent's RPHSIL**").
110. In the lead up to the scheduled hearing for closing arguments, a number of procedural applications were made by the Parties. These included (1) an application by Crescent on 11 September 2017 for a July 2017 newspaper report of an interview with Minister Zanganeh to be admitted to the record; (2) an application by Crescent for its 23 August 2017 written submissions on remoteness under English law and accompanying industry practice documents to be admitted to the record; (3) a related application by NIOC for certain new industry and market-related documents to be admitted into the record; (4) an application by NIOC to exclude from the record Crescent's Reply Post-Hearing Submission on Iranian Law; and (5) an application by NIOC to admit to the record two 1999 Majlis transcripts relating to amendments to the Iranian Code of Civil Procedure. The Parties were able to resolve these procedural issues without the Tribunal's formal intervention.⁸
111. The hearing for closing arguments was held from 1 to 5 October 2017 at the Peace Palace in The Hague. Oral arguments were made by Mr Pollock QC, Mr Diwan QC, Professor Paulsson and Dr Petrochilos for Crescent, and by Mr Rainey QC, Mr Sellers, Mr Howarth, and Mr Falkof for NIOC. Present at the hearing were:

Tribunal

Dr Gavan Griffith QC
Dr Kamal Hossain
Mr Makhdoom Ali Khan

⁸ Closing Arguments Tr., Day 1 at 13.

Crescent

Mr Gordon Pollock QC
Mr Ricky Diwan QC
(*Essex Court Chambers*)

Mr James Petkovic
(*One Essex Court Chambers*)

Prof Jan Paulsson
Dr Georgios Petrochilos
Ms Lucy Martinez
Mr Agustín G Sanz
Mr Ryan Manton
Ms Eleonore Gleitz
(*Three Crowns LLP*)

Mr Jerome Finnis
Ms Annabel Maltby
(*Hogan Lovells International LLP*)

Mr Michael Darowski
Ms Elsie Blackshaw
(*Gowling WLG*)

Mr Majid Jafar
Mr Thomas Watts
Mr Mohammad Makkawi
Mr Drazen Petkovich
Ms Amelia Mibus
(*Crescent Petroleum and Crescent Gas*)

Mr Jeremy Carver

Mr Hamid Sabi
(*Sabi & Associates*)

Permanent Court of Arbitration

Ms Judith Levine
Ms Evgeniya Goriatcheva
Mr Amnart Tangkiriphimarn

Assistant to Dr Hossain

Ms Maherin Islam Khan

Assistant to Mr Khan

Ms Aaminah Qadir

Court Reporter

Mr Trevor McGowan

NIOC

Mr Simon Rainey QC
Mr Ben Gardner
(*Quadrant Chambers*)

Mr David Sellers
Mr Mark Howarth
Ms Nanette Pilkington
Mr Greg Falkof
Ms Alice Allard
Mr Alexander Cook
Ms Gillian Forsyth
Ms Rima Bugaighis
Mr Hugh Wilkinson
(*Eversheds Sutherland LLP*)

Dr Seyed Asghar Hendi
Mr Ali Pourkabirian
Mr Saeed Alikhani
Ms Zahra Ejehi
Ms Nahid Vaseghnia
Ms Zohreh Naeimifard
Mr Ali Akbar Pourebrahimabadi
(*National Iranian Oil Company*)

Dr Mohsen Izanloo
Dr Mahmood Bagheri
Dr Hamidreza Saghaifi
Dr Ebrahim Shoarian Sattari
(*NIOC Advisors*)

Mr Mohammad Reza Rahimi
Ms Hamideh Barmakhshad
Mr Alireza Ranjbar
(*Centre for International Legal Affairs*)

112. On 4 October 2017, the Respondent sent a letter informing the Tribunal that, with respect to Crescent's claims for damages/other relief in relation to NIOC's breach of contract up to the date of the Award on Jurisdiction and Liability which are presently before the Tribunal, NIOC does not pursue its defence that Crescent's abandonment of its claim for specific performance of the

GSPC prevents it from recovering such damages or other relief for that period in respect of that breach. This withdrawal was without prejudice to all other defences advanced by NIOC, and without prejudice to the Respondent contending, in any future claims for breach after the Award on Jurisdiction and Liability, that Crescent must first seek specific performance.

113. On 5 October 2017, the final day of the hearing on closing submissions, the Tribunal invited the Parties to give the Tribunal such time as it needs to produce an Award as soon as may be. On this basis, the Parties agreed to dispense with the time requirement for the Award set out in paragraph 8(e) of Annex 2 to the GSPC. Each Party also confirmed that it had had a full and complete opportunity to present its case. The proceedings were declared closed and the Tribunal directed that no further submissions shall be made by the Parties without prior leave of the Tribunal. These items were confirmed in writing by letter from the Tribunal dated 10 October 2017, which also confirmed, as discussed at the 5 July 2017 meeting, that issues of costs were agreed to be held over until after the issuance of the Remedies Award.
114. In accordance with the Tribunal's directions, the Parties exchanged proposed corrections to the transcript, which were reflected in final corrected transcripts circulated by the court reporter on 7 November 2017.
115. As requested by the Parties, throughout the course of the Tribunal's deliberations, the Tribunal provided the Parties with updates on the progress and target for rendering an Award by the end of 2018. The 28 May 2018 update also included a statement of account and a request for a further supplementary deposit to be paid by 27 June 2018.
116. On 29 June 2018, Crescent informed the Tribunal that on 28 June 2018 it had commenced the Second Arbitration seeking the recovery of the losses flowing from NIOC's breach of the GSPC subsequent to the period which falls within the scope of the Award on Jurisdiction and Liability and indicated it would provide a copy of the notice of arbitration to the Tribunal should NIOC consent. NIOC so consented on 13 July 2018, while at the same time noting some objections and reservations.
117. Also on 29 June 2018, in connection with the Tribunal's request of 28 May 2018 for a supplementary deposit, Crescent sent a letter requesting a breakdown of various fees and expenses into monthly summaries. The PCA provided the requested information on 4 July 2018, along with copies of the Chairman's monthly summaries and the Secretary-General's fee determinations for the co-arbitrators. The PCA also conveyed the message from the Chairman

that: “The Tribunal continues actively engaged in the decision-making process, and has held *en face* conclaves at The Hague, and also in April in Sydney, over 9 days since early December, with a further conclave scheduled for September, with expectations for publication of the Award by end 2018, somewhat anxiously, maintained”.

F. RESIGNATION OF DR HOSSAIN, APPOINTMENT OF SIR JEREMY COOKE AND CHALLENGE TO DR GRIFFITH

118. On 2 August 2018, Dr Hossain announced to his colleagues his intention to resign as arbitrator.
119. On 3 August 2018, Crescent sent to the PCA a request for financial information in connection with the 28 May 2018 request for a supplementary deposit.
120. Having ascertained that Dr Hossain’s decision to resign was final, the remaining members of the Tribunal asked the PCA to communicate the resignation to the Parties on 7 August 2018. The remaining members advised that they were “surprised and dismayed by Dr Hossain’s resignation” and expressed the view that they would be disinclined to continue as a truncated tribunal and would suspend the deliberations until a replacement was appointed.
121. Dr Hossain sent a communication to the Parties on 9 August 2018 confirming his decision to resign and providing as reasons: “1. The proceedings have been excessively long; 2. The proceedings have been excessively costly; 3. There have been impermissible failures to discuss or deliberate between members of the Tribunal; 4. The proceedings are fatally flawed; and as a result; 5. I am convinced that a fair and just outcome is not possible”.
122. Crescent requested further information from the remaining arbitrators about the timing of Dr Hossain’s resignation and its communication to the Parties. That requested information was provided on 10 August 2019.
123. On 11 August 2018, NIOC expressed its “extreme surprise and disappointment” at the news of Dr Hossain’s resignation and asked him to reconsider his position as a matter of urgency. NIOC took issue with each of the reasons he provided, and expressed doubts “about the good faith nature of the purported resignation” at a “critical phase late in the deliberations, as well as Crescent’s recent and unprecedented failure to pay its share of the outstanding arbitration costs, its recent letters to the PCA, and its filing of a new Notice of Arbitration”. By letter dated 13 August 2018, Crescent also requested an extension to appoint a replacement arbitrator.

124. On 19 August 2018, the PCA communicated on behalf of Dr Hossain that he declined to reconsider his decision to resign and he requested not to be copied on future correspondence.
125. NIOC agreed on 24 August 2018 to extend the period of time for Crescent to appoint a replacement arbitrator, without prejudice to its position that Dr Hossain's reasons for resignation were "invalid and designed to delay and disrupt the course of the Tribunal's final deliberations and the issuance of the Award".
126. NIOC wrote separately to the PCA on 24 August 2018 requesting that "any payment of fees and expenses that may have been invoiced by Dr Hossain and not paid to date be withheld pending a thorough enquiry into his entitlement to such fees and expenses".
127. On 12 September 2018, Crescent notified NIOC and the Tribunal of a challenge to Dr Griffith under Article 2(d) of Annex 2 to the GSPC, to be decided by the President of the ICC in the event that NIOC and Dr Griffith were not to accept the challenge.
128. On 14 September 2018, pursuant to paragraph 4(b) of Annex 2 to the GSPC, and an extension agreed by Respondent, Crescent appointed Sir Jeremy Cooke, a national of the United Kingdom, to replace Dr Hossain as arbitrator.
129. By a second letter dated 17 September 2018, copied also to the ICC, NIOC characterised the challenge to Dr Griffith as a "dishonest and unethical tactic to disrupt the arbitration proceedings in order to prevent the Tribunal from issuing its award" and to prevent such award from having *res judicata* effect on the Second Arbitration. NIOC added that each of the complaints in the challenge were out of time. NIOC urged Dr Griffith to reject the challenge. By letter of the same date, the PCA informed the Parties that Dr Griffith did not accept Crescent's challenge.
130. On 18 September 2018, the Tribunal invited the Parties to comment on whether the Tribunal, as reconstituted, should resume or suspend deliberations pending the resolution of the challenge to Dr Griffith. The Tribunal also recorded that Hogan Lovells was no longer acting for Crescent in the proceedings.
131. Crescent submitted to the Tribunal on 19 September 2018 that the proper course would be for the Tribunal to suspend proceedings until the challenge to Dr Griffith had been finally resolved. Crescent added that Sir Jeremy should in any event be given sufficient time to read in and develop an understanding of the matter. Crescent also recalled paragraph 4(e) of Annex 2 to the GSPC

“contemplates the possibility of hearings before a newly established Tribunal, a matter on which the Tribunal would wish to hear the Parties before reaching a decision”.

132. By letter copied to the ICC, on 20 September 2018 Crescent rejected the “unwarranted aspersions” cast in NIOC’s letter of 17 September 2018.
133. On 22 September 2018, the PCA conveyed to the Parties Sir Jeremy’s formal statement of acceptance to serve as arbitrator and his confirmation, pursuant to paragraph 4(d) of Annex 2 to the GSPC, that he is impartial and independent of each of the Parties.
134. On 24 September 2018, Crescent formally submitted the challenge to Dr Griffith to the ICC.
135. An agreed bundle of documents was conveyed to Sir Jeremy on 26 September 2018.
136. On 27 September 2018, the Tribunal stayed the proceedings pending the outcome of the challenge before the ICC.
137. After receiving relevant information and invoices from the arbitrators, on 28 September 2018, the PCA provided the financial information requested by Crescent on 3 August 2018.
138. On 8 October 2018, the PCA informed the Parties that Dr Hossain had decided not to submit any further invoices.
139. On 22 October 2018, Sir Jeremy disclosed to the Parties that he had prior connections with certain individuals associated with the liability phase of the case, including Jeremy Carver, Hamid Jafar and John Boreta. He also disclosed prior professional involvement on cases involving entities related both to Crescent and NIOC. NIOC communicated on 1 November 2018 that it had no comments on the issues raised by Sir Jeremy’s disclosure.
140. On 25 October 2018, Crescent sought information from the PCA concerning the circumstances that led to a hearing day rate being applied by Dr Griffith as of 2013 and the circumstances of PCA engagement.
141. On 30 October 2018, the ICC invited comments on the challenge to Dr Griffith to be filed by 9 November 2018.
142. On 7 November 2018, NIOC submitted comments urging the ICC to reject the challenge to Dr Griffith, as “out of time, abusive, and patently without merit”.

143. Dr Griffith submitted comments to the ICC on 9 November 2018, rejecting the challenge and confirming his capacity to complete the reference to finality. Mr Khan also sent comments on 9 November 2018, recounting that all tribunal discussions and deliberations had been “mutual, respectful and exhaustive. No one was ever excluded”. He expressed the view that Dr Hossain’s resignation “could not possibly have been caused by a failure to discuss between members of the Tribunal” and disagreed with Dr Hossain that a “fair and just outcome” was impossible.
144. On 9 November 2018, the PCA provided the Parties with information in response to Crescent’s letter of 25 October 2018 concerning hearing day rates and the history of PCA engagement.
145. Crescent wrote to the ICC on 13 November 2018 submitting that Dr Hossain should be invited to provide comments on the challenge, and also requesting an opportunity to comment on the responses of NIOC and the arbitrators.
146. The ICC explained on 16 November 2018 that as Dr Hossain was no longer acting as arbitrator, the ICC was not in a position to seek his comments under the ICC Rules. Crescent disagreed with the ICC’s position and sought Dr Hossain’s comments directly on 19 November 2018.
147. On 20 November 2018, NIOC recalled ICC practice in previous challenges in this matter had been not to copy or invite comments from resigned arbitrators and urged consistency. NIOC deplored the actions of Crescent taking the matter into its own hands and reserved all rights in the event further comments were submitted.
148. On 22 November 2018, Crescent notified to the Parties and Tribunal a “Supplement to Challenge to Dr Gavan Griffith QC”. Neither NIOC nor Dr Griffith agreed to the Supplement to Challenge, and the ICC invited comments by 26 November 2018.
149. On 25 November 2018, Crescent conveyed a message from Dr Hossain recounting details of the Tribunal’s deliberations and his reasons for resigning. On the same date, NIOC filed with the ICC comments describing the Supplement to Challenge as “patently without merit”, “tactical and abusive ... and designed to delay or disrupt this arbitration at a crucial time”.
150. Dr Griffith responded to the Supplement to Challenge on 26 November 2018, declining to revoke his mandate, addressing each of the new allegations, and recording his disagreement with Dr Hossain’s characterisation of deliberations.
151. In response to an invitation by the ICC, Crescent filed further comments on 29 November 2018.

152. By letter dated 5 December 2018, the ICC informed the Parties and the Tribunal that the ICC Court had decided to accept the challenge to Dr Griffith and stated that it was now closing the case. On the same date Crescent invited Sir Jeremy and Mr Khan to initiate the process for appointment of a replacement chairman of the Tribunal as per Annex 2 of the GSPC.

G. APPOINTMENT OF MR GLEESON AS CHAIRMAN

153. NIOC communicated to the ICC on 7 December 2018 that its decision to accept the challenge to Dr Griffith was “unreasoned, and appears irrational and inexplicable,” and expressed concern about the validity of the ICC’s decision.
154. On 12 December 2018, NIOC wrote again to question the ICC. It expressed concerns about (1) contractual issues (alleging the ICC Court exceeded its powers under the GSPC and the ICC Rules) and (2) public policy issues, including “the extremely late stage of the proceedings at which the challenge was raised, the patently tactical nature of the challenge, the apparent dishonesty of a former arbitrator (who has resigned at a suspiciously late stage of the proceedings) and a number of other factors, such as the delay and disruption and the enormous extra costs and expenses that the decision will entail”.
155. On 19 December 2018, the President of the ICC Court advised that the Court could not provide reasons for its decision in this case, because Article 11 of the Rules of ICC as Appointing Authority provide that “[a]ny request for the communication of reasons must be made in advance of the decision for which reasons are sought”. He also confirmed that the decision was taken by a plenary session of the ICC Court. He denied allegations of impropriety and maintained the ICC Court’s “decision had been made in perfect compliance with the parties’ agreement and the applicable rules”.
156. On 21 December 2018, NIOC expressed its dissatisfaction with the ICC’s response and urged reconsideration. By email of the same date, the President of the ICC Court maintained the terms of his 19 December 2018 letter and recalled that the ICC Court’s work is confidential.
157. Sir Jeremy and Mr Khan reported to the Parties on 19 December 2018 that they were in the process of discussing appointment of a replacement Chairman but requested an extension until 15 January 2019.
158. On 19 December 2018, while continuing to reserve its rights regarding the ICC decision, Crescent’s failure to pay the deposit, the resignation of Dr Hossain and the reconstitution of the

Tribunal, NIOC agreed it was reasonable to extend the deadline but invited Crescent to consider a longer period and to agree on a strike-and-rank method.

159. Crescent informed NIOC on 21 December 2018 that it considered the strike-and-rank procedure to be unnecessary in light of progress being made by the co-arbitrators. It agreed to the appointment deadline being extended to 15 January 2019. Crescent also shared NIOC's repeated concerns that "proceedings should resume as quickly as possible with the minimum wasted time and expense".
160. NIOC confirmed on 23 December 2018 its agreement to the 15 January 2019 deadline, without prejudice to its position as to the validity and effect of the ICC Court's decision. However, on 24 December 2018, NIOC wrote to the co-arbitrators and Crescent to express its view that the Parties' involvement in the process to appoint a replacement Chairman was needed for the legitimacy of the reconstitution of the Tribunal.
161. On 9 January 2019, NIOC reiterated to the co-arbitrators its preference that the Parties be involved in the process of selecting the replacement chair. By email the following day, Crescent confirmed that it trusted the judgement of Sir Jeremy and Mr Khan and was content not to depart from the procedure set out in the GSPC.
162. On 14 January 2019, the co-arbitrators updated the Parties on their efforts to appoint a replacement chair and sought a further extension of the time limit to 31 January 2019. Both Parties agreed to the extension.
163. On 31 January 2019, within the timeframe already agreed, the PCA informed the Parties on behalf of Sir Jeremy and Mr Khan that, in accordance with paragraph 4 of Annex 2 to the GSPC, the two co-arbitrators had agreed to appoint as chair the Honourable Murray Gleeson AC, a national of Australia.
164. Mr Gleeson's statement of acceptance to serve as arbitrator and his confirmation, pursuant to paragraph 4(d) of Annex 2 of the GSPC, that he is impartial and independent of each of the Parties, was circulated to the Parties, along with his *curriculum vitae*, on 8 February 2019. Mr Gleeson made disclosure of his previous professional contacts with Dr Griffith. At Mr Gleeson's request, the PCA provided him with a copy of the Terms of Appointment and an account of current arrangements relating to their administration, a copy of which was also sent to the Parties on 8 February 2019. The Parties agreed on a bundle of case documents to send to Mr Gleeson, who indicated he would require 4 to 6 weeks to read in.

165. On 11 March 2019, the Tribunal requested that Crescent pay its outstanding share of the supplementary deposit requested on 28 May 2018. Further to this request, additional accounting information was provided to the Parties on 20 March 2019.
166. On 22 March 2019, the Tribunal invited submissions from the Parties as to the manner in which the Tribunal should exercise its discretion under paragraph 4(e) of Annex 2 to the GSPC and as to any other matter considered relevant to the procedure to be adopted by the reconstituted Tribunal. In particular, the Parties were invited to address the questions whether and when there should be a further hearing, whether any witness should be recalled, and the possibility of the need for further assistance from the quantum experts.
167. Crescent paid its outstanding supplementary deposit on 29 March 2019.

H. PROCEDURE FOLLOWING TRIBUNAL RECONSTITUTION

168. On 12 April 2019, both Parties filed submissions on various procedural issues for the reconstituted Tribunal. In short, Crescent proposed that the Parties prepare concise ‘roadmaps’ of issues remaining to be determined, following which the Tribunal could decide further steps before closing the proceedings, which might include an in-person case management conference, to consider (1) consultation with quantum experts; (2) specific issues directed in writing to fact witnesses; and (3) a further opportunity for Crescent to put on responsive Iranian law evidence. Crescent also proposed a final opportunity for the Parties to make oral closing submissions that would allow the newly reconstituted Tribunal to ask questions of either party before rendering its final award. NIOC submitted that it was not necessary or practicable to repeat hearings given the documentary record (and audio recordings), and concerns about delay, cost and the availability of some witnesses. With respect to assistance of quantum experts, NIOC confirmed its position expressed in paragraph 50 of its Second Post-Hearing Brief. NIOC also supplied the Tribunal with copies of the notice of arbitration and NIOC’s response from the Second Arbitration.
169. On 27 April 2019, following further correspondence from the Parties, the Tribunal invited the Parties to comment on each other’s submissions of 12 April 2019. The Tribunal also requested Crescent to clarify exactly what it sought “with respect to a ‘full and equal opportunity to provide responsive material’ on the Iranian law materials introduced by NIOC on 7 June 2017”. The Tribunal added that, “for purposes of Section 27(4) of the English Arbitration Act, the Tribunal

as reconstituted has determined that the previous proceedings shall stand, without prejudice to any additional evidence or submissions that the reconstituted Tribunal may require”.

170. On 10 and 11 May 2019, the Parties replied to each other’s procedural submissions. Both Parties noted that it was unlikely that a rehearing of fact and technical evidence would be necessary. Crescent explained the background to its request to supplement the record on Iranian law evidence in response to an alleged recasting of NIOC’s case in 2017 and indicated that “Claimants therefore must be given an opportunity to present responsive documentary evidence, consisting of not more than twenty documents plus a brief commentary to address the Respondent’s recast case on Iranian law”.
171. On 14 May 2019, the Tribunal informed the Parties that it did not consider it necessary to receive new road-maps or to hold an in-person case management conference. The Tribunal informed the Parties that its members would be meeting in late June to decide about any further evidence on Iranian law and how to deal with quantum questions. The Tribunal advised that there would be a hearing of up to five days for oral argument and Tribunal questions.
172. On 28 May, 30 May, 31 May, and 5 June 2019 there was correspondence as to hearing dates.
173. On 11 June 2019, NIOC submitted a Counterclaim for Declaratory Relief (“**Counterclaim**”). The Counterclaim sought declarations that:
 - (1) The Parties referred all disputes relating to NIOC’s liability for any alleged past and future breaches of the GSPC to this Tribunal in the present arbitration reference, thereby giving this Tribunal jurisdiction to decide those disputes;
 - (2) This Tribunal accepted and declared this jurisdiction by its Award on Jurisdiction and Liability dated 31 July 2014;
 - (3) This Tribunal remains seised of the Parties’ disputes as to NIOC’s liability for any alleged past and future breaches of the GSPC and has jurisdiction to determine those disputes, including claims in respect of breaches of the GSPC arising after 31 July 2014; and
 - (4) The claims brought in the arbitration commenced by Crescent on 28 June 2018 are claims over which this First Tribunal has jurisdiction and of which this First Tribunal is seised.
174. NIOC also reserved the right to seek such further relief from this Tribunal and/or the English Court as may be necessary in support of this arbitration, including in particular applications under sections 32 or 67 of the English Arbitration Act for the English Court to resolve this jurisdictional issue. NIOC also stated its intention to advance counterclaims for declaratory relief and damages

relating to Crescent's failure to perform under the GSPC since 2015. The counterclaim revealed that Crescent Petroleum had purported to terminate the GSPC on 11 September 2018, and that Crescent Gas had followed suit on 17 December 2018. NIOC submitted that the purported termination was not valid, and that the question should be determined by this first Tribunal. NIOC also noted that the tribunal in the Second Arbitration ("**Second Tribunal**") was due to issue a decision on jurisdiction by the end of July 2019. NIOC submitted that it was more appropriate that this Tribunal, or the English Court, decide the scope of the reference of the present arbitration.

175. On 18 June 2019, NIOC submitted a Request for Permission to refer Jurisdictional Questions to the English Court ("**Referral Request**"), seeking permission from this Tribunal to apply to the English Court under section 32 of the English Arbitration Act⁹ to resolve the Parties' jurisdictional dispute, framed as follows:

- (1) Did the Parties refer all disputes relating to NIOC's liability for any alleged past and future breaches of the GSPC to the First Arbitration, thereby giving the First Tribunal jurisdiction to decide those disputes?
- (2) Did the First Tribunal accept and declare this jurisdiction by its Award on Jurisdiction and Liability dated 31 July 2014?
- (3) Does the First Tribunal remain seised of the Parties' disputes as to NIOC's liability for any alleged past and future breaches of the GSPC, with jurisdiction to determine those disputes? And
- (4) Are the claims brought in the Second Arbitration claims over which the First Tribunal has jurisdiction and of which the First Tribunal is seised?

176. NIOC reported that Crescent had refused to consent to a proposal by NIOC dated 12 June 2019 to refer the questions to the English Court.

177. On 18 June 2019, further to its request of 11 May 2019 for an opportunity to present further documentary evidence on Iranian law, Crescent referred to the Tribunal an arbitral award rendered in ICC Case No. 17553 ("**Caspian Case**"). It submitted that "special circumstances" necessitated placing this document immediately in the record of the arbitration.

⁹ Section 32 of the English Arbitration Act provides, under the heading "Determination of preliminary point of jurisdiction" that a court may, on the application of a party to arbitral proceedings, "determine any question as to the substantive jurisdiction of the tribunal", if the parties so agree, the tribunal so permits, or the court finds that (1) the determination is "likely to produce substantial savings in costs"; (2) the application was made "without delay"; and (3) there is good reason why the matter should be decided by the court.

178. On 20 June 2019, NIOC responded to Crescent's "unsolicited letter" of 18 June 2019.

179. By letter dated 26 June 2019, the Tribunal:

- (1) invited Crescent's comments on the Counterclaim and the Referral Request;
- (2)
 - (a) invited both Parties to submit references to any judgments, learned commentary, Majlis debates or rulings of the Guardian Council which would bring the information as to the debate about Article 515 Note 2 of the Iranian Code of Civil Procedure 2000 ("**CCP 2000**") ("**Note 2**") up to date from 7 June 2017 to the present;
 - (b) invited Crescent to send the Tribunal a list of the 20 Iranian law documents in contemplation in its 11 May 2019 and 18 June 2019 letters, including the date and a description of the nature of each document;
 - (c) invited NIOC to submit comments in response, noting that should the Tribunal accept Crescent's application, "the Tribunal anticipates that it would accept the Respondent's offer to seek [the consent of the respondent in the Caspian Case] to the disclosure of the opinions and evidence given by Dr Mehrpour in the Caspian [C]ase";
 - (d) invited both Parties to consider whether there has been "any relevant guidance from the Guardian Council, or whether there have been any relevant debates in the Majlis since the year 2000 on legislation or amendments thereto which have reference to loss of profits or loss of benefits".
- (3) proposed that a hearing take place on 11, 12 and 13 October 2019 in London, the main purpose of which would be for the Parties to present further oral argument on such issues as they wish to address. The Tribunal informed the Parties that they should provide a list of topics they intend to address not later than 7 days before the hearing; and that the hearing would also deal with any questions that remained outstanding as to the Counterclaim or Referral Request. The Tribunal further noted that as to matters of quantum, there were unresolved procedural questions as to the most appropriate way of obtaining such further assistance from the Parties' experts as might be necessary and that this would be a matter for discussion at the hearing.

180. On 2 July 2019, the Parties confirmed their availability for the hearing.

181. On 5 July 2019, Crescent sent its further comments on the award in the Caspian Case, and descriptions of the remaining 19 documents it intended to introduce.
182. Crescent submitted its comments on the Counterclaim and Referral Request on 9 July 2019, requesting that the Tribunal reject both applications.
183. On 19 July 2019, NIOC responded to Crescent's 5 July 2019 letter reiterating its view that the Iranian law issues had been fully briefed, but addressing each category of documents proposed by Crescent.
184. By letter dated 22 July 2019, both Parties sent their responses to the Tribunal's invitation for references to new documents in paragraphs 2(a) and (d) of its 26 June 2019 letter. Crescent also added further comments about the Caspian Case.
185. On 25 July 2019, NIOC complained that Crescent's 22 July 2019 response went beyond the scope of what was requested by the Tribunal and reserved the right to respond in full if the Tribunal were to consider that Crescent's letter should not be disregarded and that the Iranian law evidence should be re-opened.
186. On 31 July 2019, NIOC reported that the Second Tribunal had declined to stay its proceedings and had issued a decision upholding jurisdiction over the dispute submitted to it by the Claimants. NIOC enclosed a copy of the Second Tribunal's Decision of Jurisdiction, dated 30 July 2019, and requested this Tribunal's "prompt decision as to whether it permits the Respondent to approach the English court pursuant to a section 32 application, so that these issues can be finally determined as soon as possible".
187. By letter dated 1 August 2019, Crescent noted that the Second Tribunal had ruled, in a final and binding decision, that both Parties had accepted that this Tribunal's mandate was confined to the period up to 31 July 2014. Crescent repeated its request that this Tribunal deny both of NIOC's Counterclaim and Referral Request and award Crescent its full costs of having to address them.
188. On 3 September 2019, the Tribunal (following consultations amongst all three arbitrators), issued Procedural Order No. 37, in which:
 - (1) The Tribunal deferred a decision on the Counterclaim until after the Parties would have had an opportunity to make further brief oral submissions at the hearing scheduled for

October 2019 and the Tribunal had had an opportunity to ask questions of the Parties at the hearing;

- (2) The Tribunal refused the Referral Request for permission to apply under section 32 of the English Arbitration Act, noting that sections 32, 67 and 73 of the Act, as well as considerations of fairness and efficiency, require prompt action and that the delay, in making the application between August 2017 (when the Claimants withdrew their claim for damages post-dating the issuance of the Award on Jurisdiction and Liability in July 2014) and June 2019, was fatal to the application;
- (3) With respect to the award in the Caspian Case, the Tribunal noted references to the Caspian Case in the record of these proceedings to date, recalled that Crescent had indicated that it would argue the award affects the reliability of Dr Mehrpour, and decided to defer ruling on the application until the Parties have had an opportunity to make brief oral submissions at the hearing and the Tribunal has had an opportunity to ask questions. The Tribunal indicated that if NIOC, being on notice of the argument Crescent proposes to make, wished to produce Dr Mehrpour's testimony in the Caspian Case or to take other steps to deal with the challenge to Dr Mehrpour's reliability, it would be given an opportunity to apply to do so at the hearing. The Tribunal further indicated that as presently advised, assuming Dr Mehrpour's testimony would be received, the Tribunal would not receive the evidence of Judge Koorosh Ameli in the Caspian Case as his views on the subject were already on the record in the form of an article.
- (4) As to the remaining 19 documents that Crescent sought to admit, the Tribunal decided to receive two Advisory Opinions and further textbook excerpts, but decided not to receive the remaining documents tendered by Crescent on the basis that they deal with topics remote from issues before the Tribunal.
- (5) With respect to other Iranian law materials proposed by both Parties, in response to the Tribunal's invitation on specific categories of material, the Tribunal agreed to receive the documents listed by the Parties by 20 September 2019 (with English translations), and that each Party could tender responsive material by 1 October 2019.

189. On 6 September 2019, NIOC suggested that it would be helpful if the Tribunal could provide in advance of the hearings a list of issues and questions which the Tribunal wished the Parties to address during the hearing scheduled for October 2019.
190. In accordance with Procedural Order No. 37, on 11 September 2019, Crescent provided copies of the admitted advisory opinions and textbook excerpts, with English translations.
191. Also on 11 September 2019, Crescent advised that it had retained additional counsel who were available for the hearing and indicated that it would respond shortly on NIOC's proposal for a suggested list of questions in advance of the hearing.
192. On 17 September 2019, NIOC requested that the venue for the hearing be moved from London to The Hague.
193. On 20 September 2019, in accordance with Procedural Order No. 37, Crescent filed materials responsive to the Tribunal's invitation for additional Iranian law materials. NIOC sought an extension for the submission of its responsive materials, which the Tribunal granted, and the materials were filed on 23 September 2019.
194. On 23 September 2019, Crescent commented on NIOC's proposals about Tribunal questions for the hearing and the venue.

I. RESIGNATION OF MR KHAN AND APPOINTMENT OF LORD PHILLIPS

195. On 25 September 2019, the PCA wrote to the Parties on behalf of the Tribunal acknowledging receipt of the recent correspondence but informing them that "[u]nfortunately, in an unexpected development, the PCA received late yesterday from Mr Makhdoom Ali Khan a letter addressed to the PCA Secretary-General regretting to inform him that, due to personal reasons, it is not possible for him to continue to act as an arbitrator in this case and tendering his resignation with immediate effect accordingly". A copy of Mr Khan's letter was attached. The PCA informed the Parties that the remaining members of the Tribunal were conferring and would revert as soon as possible about next steps in the proceedings.
196. Later on 25 September 2019, the PCA sent a letter to the Parties communicating that it appeared to the remaining members of the Tribunal that it would be necessary to cancel the hearing scheduled for 11-13 October 2019 and inviting the Parties to submit comments, within seven days, on the steps for reconstitution of the Tribunal.

197. On 25 September 2019, NIOC wrote expressing its surprise and dismay at the news of Mr Khan's resignation, especially just 3 weeks before the final hearing and following all the delay and disruption that had occurred since mid-2018. NIOC urged Mr Khan to reconsider his decision and to retract his resignation, or if he felt unable to do so, to provide the Parties with clarifications that would allow them to understand the reasons for his decision.
198. Crescent wrote to Mr Khan on 26 September 2019 also expressing dismay at his sudden resignation at a late stage of proceedings, and noting the extensive and costly preparations made for the hearing that would need to be postponed. In light of the consequences of the resignation, Crescent asked for specificity as to his reasons for stepping down and urged Mr Khan to reconsider his decision.
199. On 27 September 2019, the PCA conveyed, following consultations with Mr Khan and the remaining members of the Tribunal that, as already noted:

Mr Khan's reasons for resignation are personal. They relate to family and health concerns, on which he does not wish to elaborate further. He regrets the timing of the resignation and the impact it has on [the] proceedings and wishes to clarify that his resignation is not in any way to be interpreted as a complaint about the proceedings or deliberations, in which he has fully participated until now.

200. Crescent wrote again on 27 September 2019 repeating its request to clarify whether the reasons that called for Mr Khan to step down are connected to this matter only, or if they compelled him to resign from other arbitral appointments.
201. On 28 September 2019, having consulted Mr Khan and the remaining members of the Tribunal, the PCA responded that:

It remains Mr Khan's position that he does not wish to elaborate on what he stated before, beyond sharing that he has withdrawn from a number of professional engagements, including another arbitration, and has disclosed these facts and his reasons for the resignation to the other members of the Tribunal. Mr Khan reiterates that his withdrawal has nothing to do with the conduct of the arbitration or of either party and is for private and personal reasons.

202. On 1 October 2019, NIOC sought confirmation that alternatives to Mr Khan's resignation had been considered with the remaining members of the Tribunal and had been found not to be feasible. In the event that no alternatives were feasible, the provisions of paragraph 4(e) of Annex 2 to the GSPC would be applicable, according to which "should a vacancy arise because any arbitrator ... resigns ..., the vacancy shall be filled using the same method by which that arbitrator was originally appointed". Accordingly, NIOC noted it would have a period of 40 days to appoint a replacement arbitrator.

203. Also on 1 October 2019, NIOC wrote in connection with Procedural Order No. 37, which invited NIOC to apply by 1 October 2019 to tender responsive material to deal with the advisory opinions and further textbook extracts submitted by Crescent on 10 September 2019. NIOC referred to translation problems and sought leave to submit responsive material in the form of a short note, with appendices consisting of the materials submitted by Crescent on 10 and 20 September 2019 in marked-up form showing, where necessary, the alleged mistranslation and the correct translation.
204. On 2 October 2019, the PCA provided the confirmation sought by NIOC with respect to whether alternatives to resignation had been explored by Mr Khan with the other members of the Tribunal. The PCA further noted that the remaining members of the Tribunal noted NIOC's application of 1 October 2019.
205. On 2 October 2019, Crescent sent a letter responding to the Tribunal's invitation to comment on "steps for reconstitution of the Tribunal". Crescent proposed asking the ICC Court in its capacity as the appointing authority, to exercise its discretionary power under Article 12(4) of the 1998 ICC Rules and appoint an arbitrator in NIOC's stead, given the "extraordinary circumstances of this decade-long case" which had seen the resignation of four NIOC-appointed arbitrators. Crescent submitted it was pursuing such a course to "safeguard the integrity of the process, given the breakdown of the system for arbitrator appointments provided for in the GSPC". Crescent thus invited NIOC to confirm by 4 October 2019 "that the ICC should exercise its discretion to appoint a replacement arbitrator for Mr Khan pursuant to Article 12(4) of the 1998 ICC Rules as a matter of urgency, and that such arbitrator should be an individual with good availability within this year for the final hearing".
206. On 2 October 2019, the remaining members of the Tribunal confirmed that in light of the Parties' correspondence the hearing that had been scheduled for 11-13 October 2019 was postponed to a date to be fixed following reconstitution of the Tribunal.
207. On 4 October 2019, NIOC indicated that it would respond to Crescent's proposal of 2 October by 7 October 2019.
208. On 7 October 2019, NIOC sent a letter nominating The Rt. Hon. The Lord Phillips of Worth Matravers, KG, PC, for appointment as arbitrator. NIOC noted that Lord Phillips had confirmed his availability and indicated his belief that he would have no conflict of interest and would be

able to commence work promptly. In these circumstances, NIOC stated that it was unnecessary for NIOC to respond to Crescent's proposals of 2 October 2019.

209. On 8 October 2019, the PCA sent a letter to the Parties on behalf of the two remaining arbitrators, in which it acknowledged receipt of NIOC's nomination of Lord Phillips for appointment as arbitrator in this case and indicated that it awaited Crescent's response.
210. On 10 October 2019, Crescent welcomed NIOC's prompt nomination of Lord Phillips and confirmed that it would now refrain from its intended application to the ICC Court. Crescent requested the reconstituted Tribunal to notify the Parties of the earliest date they intended to fix for the postponed hearing.
211. On 13 October 2019, the PCA circulated a *curriculum vitae* of Lord Phillips and his signed statement of acceptance to serve as arbitrator and his confirmation, pursuant to paragraph 4(d) of Annex 2 of the GSPC. The Parties subsequently agreed upon documents to send to Lord Phillips.
212. On 6 November 2019, the PCA informed the Parties that the newly reconstituted Tribunal had determined that, for purposes of Section 27(4) of the English Arbitration Act, the previous proceedings shall stand, without prejudice to any additional evidence or submissions that the reconstituted Tribunal may require. The Tribunal also invited the Parties to confer on possible hearing dates and recalled that the main purpose of the hearing would be for the Parties to present further oral argument on such issues as they wish to address. In response to the suggestion that the Tribunal give advance indication of the topics that might be the subject of questions from the Tribunal, the Parties were provided with a non-exhaustive list of potential topics for questions. The Tribunal further noted that each Party would also be invited, no later than 7 days before the scheduled hearing, to notify the other Party and the Tribunal of the issues on which it wished to present.
213. By letter dated 15 November 2019, the Parties informed the Tribunal that they had identified the period between 30 March and 2 April 2020 as mutually convenient for a possible hearing. On 20 November 2019, the Tribunal confirmed its availability and scheduled a 3-day hearing to commence on 31 March 2020.
214. On 28 November 2019, the PCA sought a supplementary deposit from the Parties and provided up to date financial information.

215. On 19 December 2019, the PCA advised the Parties that Ms Levine had resigned from the PCA but that the Tribunal proposed that she continue in a role supporting the Tribunal as Administrative Secretary in her personal capacity. The Parties agreed to this arrangement.
216. The Respondent updated the Tribunal on 26 December 2019 about delays it was facing in paying the supplementary deposit and its efforts to find solutions. Further correspondence about this matter was exchanged on 8 and 29 January 2020.
217. On 26 February 2020, NIOC wrote to address a number of procedural matters in light of the hearing scheduled for March and developments in the Second Arbitration. First, NIOC withdrew its Counterclaim in the present proceedings and accepted “that the scope of this first reference is limited to breaches by NIOC of the GSPC up to and including 31 July 2014 and their consequences (if any)”. Second, it emphasised that “any and all issues which are now (or may hereafter be) said by Crescent to be the consequences of pre-1 August 2014 breaches by NIOC and over which this Tribunal alone has jurisdiction are fully reserved to this Tribunal”. Third, NIOC proposed that “this Tribunal record in its *dispositif* in suitably worded declarations each of the findings which it makes on each litigated question in dispute between the Parties”. Fourth, NIOC sought to introduce into the record an LCIA Award dated 30 June 2015 which had recently come to NIOC’s attention and which it argued was relevant to Crescent’s position with respect to the effect of U.S. sanctions against Iran.
218. On 2 March 2020, the PCA on behalf of the Tribunal sent a letter setting out logistical arrangements for the hearing which was then scheduled to take place in The Hague from 31 March 2020 to 2 April 2020. The Tribunal stated, under the heading of “Formal Articulation of Relief Requested”: “Noting that certain heads of relief have been abandoned or altered since the outset of the proceedings, the Tribunal request that each side submits a final articulation of relief requested by Tuesday, 24 March 2020”. NIOC was also requested to provide an update on unpaid deposits.
219. On 3 March 2020, Crescent noted NIOC’s withdrawal of its Counterclaim and reserved all rights as to its cost implications. Crescent objected to NIOC’s application to have the LCIA Award admitted into the record of the present case.
220. NIOC provided a further update on its efforts to pay the outstanding deposits on 5 March 2020.
221. On 10 March 2020, the PCA sent a letter to the Parties on behalf of Lord Phillips placing on the record that he knew Lord Falconer from dealings between 2004 and 2007 when Lord Falconer

was the Lord Chancellor and Lord Phillips was Lord Chief Justice. Lord Phillips confirmed that he remained impartial and independent of each of the Parties.

222. On 11 March 2020, the PCA conveyed to the Parties that the Tribunal did not consider the addition to the record of the LCIA award dated 30 June 2015 would be of assistance and accordingly NIOC's application of 26 February 2020 was refused.
223. The PCA on behalf of the Tribunal wrote again to the Parties on 13 March 2020 regarding the scheduled hearing, stating that "[i]n light of the worldwide spread of the COVID-19 coronavirus infection and resulting travel restrictions and constraints," the Tribunal had decided that it would be appropriate for the hearing to be held in London and attended in person only by a limited group, comprised of the members of the Tribunal, counsel making oral arguments, the Administrative Secretary, a staff member of the PCA, and the court reporter, providing none of these individuals presented any symptoms or had travelled from high risk areas in the preceding 14 days. All other participation would be by technical means, including access to a remote live transcript, video-conference or one-way remote live video feed. The Tribunal advised that "should the evolving situation render it impracticable to hold the hearing in the format described," the Tribunal would postpone the hearing. The Tribunal indicated that it had considered other possible alternatives, including a hearing via video only, but that "given the complex history of this matter, the members of the reconstituted Tribunal consider[ed] it important to meet as a tribunal, and to hear and put questions to counsel in person, on at least one occasion before rendering an award".
224. On 16 March 2020, the PCA conveyed to the Parties on behalf of the Tribunal that "[i]n light of shutdowns of offices in France and the Netherlands, impositions on travellers entering and re-entering Australia, recommendations within the United Kingdom to limit contact with others, and the inevitability of such restrictions intensifying in the coming weeks," the Tribunal considered that the only appropriate action at that point was to postpone the hearing until a date and place to be fixed. The Tribunal stated that it would revert to the Parties with respect to possible dates and any steps that may usefully be taken in the interim to advance proceedings and invited the Parties to discuss and offer suggestions on the same.
225. On 20 April 2020, the Tribunal invited the Parties to identify dates for a three-day hearing.

226. On 22 April 2020, Crescent identified available dates. NIOC responded on 27 April 2020 with its available dates, and asked that the Tribunal consider the appropriateness and feasibility of conducting the hearing via video-conference if that should become necessary.
227. By letter dated 2 May 2020, the Tribunal fixed the dates of 3-5 August 2020 for the rescheduled hearing to occur in-person in London, but noted that in light of international travel restrictions the hearing may need to take place by video-conference. The Tribunal also invited the Parties to abrogate the time limit set out in Article 8(e) of Annex 2 to the GSPC.
228. On 12 May 2020, NIOC confirmed its availability for the hearing and consented to the abrogation of that time limit with respect to the issuance of the Tribunal's final award on remedies.
229. Crescent wrote on 20 May 2020 confirming the hearing dates and consented to the abrogation of the time limit in Article 8(e) of Annex 2 of the GSPC with respect to the issuance of the Tribunal's final award on remedies in this case.
230. By letter dated 25 May 2020, the Tribunal agreed to reserve the period of 3-7 August 2020 in the likely event that the hearing would have to take place with at least some participants joining by video-conference. Because of the probable format of the hearing, the Tribunal considered that it would be assisted by receiving from the Parties a joint timetable of material events, as well as written submissions upon the Potential Topics for Tribunal Questions furnished on 6 November 2019, and written responses to further questions articulated in the letter.
231. On 29 May 2020, NIOC confirmed its availability for a five-day hearing by video-conference if necessary. It also took note of the Tribunal's new questions and sought confirmation of its understanding that neither Party should submit any evidence in conjunction with their responses to the questions. By letter of the same date, Crescent also confirmed its availability for the five-day period if a hearing by video-conference was required.
232. By letter dated 1 June 2020, the Tribunal confirmed NIOC's understanding that no further evidence should be submitted in conjunction with the answers to the Tribunal's questions.
233. On 1 June 2020, Crescent agreed in principle that no further evidence should be put before the Tribunal but requested the Tribunal grant permission for evidence of UAE law to be adduced by the Parties in respect of certain of the Tribunal's questions.

234. On 12 June 2020, NIOC applied to the Tribunal to reconsider its directions by removing certain questions from the list of potential topics set out in the Tribunal's letter of 25 May 2020. NIOC also objected to Crescent's application to admit UAE law evidence.
235. On 15 June 2020, NIOC informed the Tribunal that it would be impossible for its party representatives in Iran to travel to London, and that the quarantine requirement in place at the time would also prevent two members of its counsel team from Paris from attending in person. Therefore, "in order to ensure that the Parties are treated on a strictly equal footing, NIOC would request that the hearing be held without the in-person attendance of any representatives of either Party, and that all counsel of both Parties should attend by video-conference only".
236. On 16 June 2020, Crescent confirmed that its counsel and representatives were available to attend an in-person hearing in London, subject to any travel and quarantine restrictions that might make the attendance by those based outside the UK not reasonably practicable.
237. Crescent responded to NIOC's of 12 June 2020 letter on 18 June 2020.
238. On 19 June 2020, the Tribunal declined NIOC's application to restrict its questions. The Tribunal also denied Crescent's application to admit evidence of UAE law. With respect to the conduct of the hearing, the Tribunal agreed that it would be undesirable to hold a hearing with counsel or representatives for one side present in the same location as members of the Tribunal, if those on the other side could only participate by video-conference. It also noted that it had become apparent that due to Australian travel restrictions, the Chairman and the Administrative Secretary would be unable to travel to London for the hearing. With changing quarantine restrictions within Europe, however, it was the preference of the Tribunal to proceed with a hearing attended in person by a limited number of attendees. The Tribunal invited the Parties to make all appropriate arrangements on the basis that:
- (i) If travel and quarantine restrictions allow, the hearing will be physically attended in London by Sir Jeremy and Lord Phillips, counsel from both sides making oral arguments, as well as, to the extent practicable, supporting members of the counsel teams, PCA staff members and the court reporter, with the Chairman, the Administrative Secretary and all other persons who would otherwise be entitled to be present taking part in the proceedings remotely by technical means; and
 - (ii) If travel and quarantine restrictions prevent the hearing from proceeding in the manner envisaged in (i) the hearing will be held fully by video-conference ...
239. On 30 June 2020, the Parties submitted their written responses to the Tribunal's questions of 6 November 2019 and 25 May 2020.

240. Having received an extension from the Tribunal, and being unable to agree on a joint timetable of material events, on 6 July 2020, the Parties submitted their own respective chronologies.
241. On 9 July 2020, the PCA wrote to the Parties regarding logistics for the hearing, noting the recent easing of quarantine restrictions in the UK for visitors from the Netherlands and France, and confirming therefore that the hearing would proceed in accordance with paragraph (i) of the letter of 19 June 2020. The physical hearing would take place at the International Dispute Resolution Centre (“IDRC”) in London (with each participant completing a daily health declaration form), with the other participants joining by Zoom, following a proposed protocol for remote participation.
242. On 16 July 2020, NIOC set out its proposals for allocation of hearing time, provided a list of attendees for the hearing and addressed other logistical matters.
243. Also on 16 July 2020, the Tribunal wrote to the Parties directing attention to six issues that might assist progress at the forthcoming hearing.
244. Crescent provided its proposals for allocation of hearing time, list of attendees, and comments on logistical matters by letter dated 20 July 2020.
245. The Tribunal wrote to the Parties on 21 July 2020 with an outline of the hearing schedule. It also advised the Parties that as it would be impractical for Mr Gleeson, remotely from Sydney, to undertake the functions of actively presiding at a hearing where counsel and the other arbitrators were together in London, Lord Phillips and Sir Jeremy would split those functions while Mr Gleeson would be present by video-link.
246. On 22 July 2020, in response to comments about the Caspian Case in the Tribunal’s 16 July 2020 letter, Crescent invited NIOC to provide Dr Mehrpour’s testimony from that case to the Tribunal.
247. NIOC provided Dr Mehrpour’s written testimony from the Caspian Case on 24 July 2020. At the same time, NIOC withdrew its objection to the admission of the Award from that case. It sought confirmation from the Tribunal that the submission of the testimony would not give rise to any further submissions of evidence.
248. Test calls were conducted with the PCA, the Parties and the IDRC on 21 and 22 July 2020 and the Parties were invited to comment on the proposed Protocol for Remote Participation in the

hearing. A further test call was held with the PCA, the IDRC, the Chairman, the Administrative Secretary and a Sydney-based IT assistant on 28 July 2020.

249. On 27 July 2020, the Parties submitted their respective lists of issues on which they intended to present at the hearing. Crescent asked if its General Counsel may attend the hearing in-person. NIOC objected to that request. Crescent also asked if the transcript of Dr Mehrpour's oral testimony from the Caspian Case could be made available. NIOC provided the transcript on 29 July 2020.
250. On 29 July 2020, the PCA conveyed the Tribunal's decision denying Crescent's request for its General Counsel to attend the hearing in person, in view of the impossibility for NIOC's party representatives to attend the hearing in person and in order to preserve equality between the Parties. The PCA provided a full list of hearing attendees. The Tribunal noted the Parties' issues lists of 27 July 2020 and stated that it would be most interested in the Parties' arguments on issues of law and the topics set out in the PCA's letter of 16 July 2020. The PCA provided a final version of the Protocol for Remote Participation and advised of social distancing measures at the IDRC.

J. FINAL HEARING

251. From 3 August 2020 to 7 August 2020, a final hearing ("**Final Hearing**") was held, with some participants attending in-person at the IDRC in London, and others attending via the video-conferencing platform Zoom or receiving a livestream video feed. All participants had access to a live transcription of the hearing. The following individuals were in attendance:

Tribunal

The Honourable Murray Gleeson AC (Chairman) (remote, from Sydney)
 Sir Jeremy Cooke (at the IDRC)
 The Rt. Hon. The Lord Phillips of Worth Matravers, KG, PC (at the IDRC)

Administrative Secretary

Ms Judith Levine (remote, from Sydney)

Permanent Court of Arbitration

Ms Evgeniya Goriatcheva (at the IDRC)
 Mr Máté Csernus (at the IDRC)
 Ms Gaëlle Chevalier (remote, from The Hague)

Crescent

Lord Falconer of Thoroton (at the IDRC)
 Ms Penny Madden QC (at the IDRC)
 Ms Sarah Wazen (at the IDRC)
 Mr Moeiz Farhan (remote, from London)

NIOC

Mr Simon Rainey QC (at the IDRC)
 Mr Ben Gardner (at the IDRC)
 (*Quadrant Chambers*)

C-NIOC Partial Award on Remedies

Ms Rose Naing (remote, from London)
 Mr Paul Evans (remote, from London)
(Gibson, Dunn & Crutcher LLP)
 Mr Constantine Partasides QC (at the IDRC)
 Dr Georgios Petrochilos (at the IDRC)
 Mr Ryan Manton (at the IDRC)
 Ms Eleonore Gleitz (at the IDRC)
(Three Crowns LLP)

Mr Ricky Diwan QC (at the IDRC)
(Essex Court Chambers)

Mr Tariq Baloch (remote, from Abu Dhabi)
(3 Verulam Buildings)

Mr Michael Darowski (at the IDRC)
 Ms Elsie Blackshaw-Crosby (remote, from London)
 Ms Sophia Khan (at the IDRC)
(Gowling WLG)

Mr Jeremy Carver CBE (remote, from London)
(Independent Legal Consultant)

Mr Hamid Sabi (at the IDRC)
(Sabi & Associates)

Judge Koorosh Ameli (at the IDRC)
(Ameli International Arbitration)

Mr Gerry Lagerberg (remote, from London)
((ex)PWC, Valuation Expert)

Mr Matt Fritzsche (remote, from London)
 Ms Sarah Johnson (remote, from London)
(PWC, Valuation Experts)

Mr Majid Jafar (remote, from London)
 Mr Thomas Watts (remote, from Berkshire)
 Mr Mohamad Makkawi (remote, from Sharjah)
 Mr Mohamad Sakr (remote, from Beirut)
 Mr Drazen Petkovich (remote, from London)
 Ms Amelia Mibus (remote, from Dubai)
 Ms Javeriah Raja (remote, from Dubai)
 Ms Maria Scanlan (remote, from Dubai)
 Mr Nathan Hooper (remote, from Dubai)
(Crescent)

Court Reporter

Mr Trevor McGowan (at the IDRC)

IT Assistant to Chairman

Mr Michael Bourke (remote, from Sydney)

Mr David Sellers (at the IDRC)
 Mr Mark Howarth (at the IDRC)
 Ms Nanette Pilkington (at the IDRC)
 Mr Greg Falkof (at the IDRC)
 Mr Alexander Cook (at the IDRC)
 Ms Gillian Forsyth (at the IDRC)
 Ms Tejas Shiroor (at the IDRC)
 Ms Xhilda Vocaj (at the IDRC)
 Ms Aïssata M'Baye (at the IDRC)
 Ms Eleanne Hussey (at the IDRC)
(Eversheds Sutherland LLP)

Dr Mohsen Izanloo (remote, from Tehran)
 Dr Hamideh Barmakhshad (remote, from Tehran)
 Mr M.H. Zahedin Labbaf (remote, from The Hague)
(Centre for International Legal Affairs)

Dr Seyed Asghar Hendi (remote, from Tehran)
(Legal Adviser to the Minister of Petroleum)

Dr Sayyed Hassan Mousavi (remote, from Tehran)
 Ms Zahra Ejehi (remote, from Tehran)
 Dr Seyed Abbas Hashemi (remote, from Tehran)
 Mr Saeed Alikhani (remote, from Tehran)
 Mr Aliakbar Pourebrahimabadi (remote, from Tehran)
 Dr Mohammad Jafar Ghanbari Jahromi (remote, from Tehran)
 Dr Sohrab Rabiee (remote, from Tehran)
 Dr Ebrahim Shoarian (remote, from Tehran)
 Dr Mohammad Ali Bahmaei (remote, from Tehran)
 Dr Mahmoud Bagheri (remote, from Tehran)
 Dr Alireza Ebrahimgol (remote, from Tehran)
 Mr Hassan Raisi (remote, from Tehran)
 Mr Amir Ghaffari (remote, from Tehran)
 Mr Mojtaba Mahnani (remote, from Tehran)
 Mr Abolfazl Shahin (remote, from Tehran)
(National Iranian Oil Company)

Remote Live Stream Connection

IFS audiovisueel (remote, from The Hague)

252. Oral submissions and responses to the Tribunal's questions were delivered by Lord Falconer, Mr Diwan QC and Dr Petrochilos on behalf of Crescent; and by Mr Rainey QC, Mr Sellers and Mr Howarth on behalf of NIOC.
253. At the close of the hearing, the Tribunal discussed with the Parties the procedure to be followed in relation to consulting the Parties' respective experts on damages, Messrs Haberman and Lagerberg. The Parties agreed that once the Tribunal had reached findings of fact themselves on the basis of evidence already in the record, if those findings gave rise to complex calculations, the Tribunal could invoke the arithmetic assistance of the experts on a confidential basis. The Tribunal also noted that the Parties had already made submissions on the right approach to take in relation to costs.
254. The Tribunal stated that it would be consulting over the next week, and would let the Parties know if any further responses were needed on any matter. Both Parties expressed gratitude to the Tribunal for arranging the Final Hearing in the form in which it was conducted.

K. POST-HEARING PROCEEDINGS AND TRIBUNAL'S ENGAGEMENT OF DAMAGES EXPERTS

255. On 12 August 2020, as requested by the Tribunal, the Respondent provided an update on its efforts to pay the outstanding deposit.
256. On 25 August 2020, the PCA sent a letter to the Parties recalling that the Parties had agreed at the end of the hearing that the Tribunal may, on a confidential basis, without Party engagement, seek mathematical assistance from the Parties' quantum experts to apply determinations made by the Tribunal on the basis of evidence in the record, provided that both experts are instructed by the Tribunal and paid by the PCA from the deposit established by the Parties. In case the Tribunal should require such assistance from the experts, the PCA invited the Parties to provide current contact details for Messrs Lagerberg and Haberman, which they did on 3 and 4 September 2020.
257. In accordance with the Tribunal's directions, on 9 and 10 September 2020, the Parties submitted agreed proposed corrections to the hearing transcript. A final amended transcript was circulated by the court reporter on 17 September 2020.
258. On 11 September 2020, the PCA conveyed a request to both Parties for payment of a supplementary deposit and provided financial information about the deposit. The Respondent was reminded to pay its previously outstanding share of the deposit. The Respondent continued to keep the PCA and the Tribunal informed of its efforts to do so.

259. On 28 October 2020, Crescent applied for leave to introduce into the record the judgment in *Enka Insaat Ve Sanayi AS v OOO Insurance Company Chubb* [2020] UKSC 38 dated 9 October 2020 (“*Enka v Chubb*”), which it said has a direct bearing on the issue of Crescent’s entitlement to interest in this case.
260. On 3 November 2020, the PCA sent to the Parties on behalf of the Tribunal a draft set of terms of reference for the appointment of Messrs Lagerberg and Haberman as experts to assist the Tribunal with its final calculations. The Parties were also invited to submit comments on the *Enka v Chubb* decision.
261. The Parties exchanged further correspondence in November on the relevance of the *Enka v Chubb* decision and their approval of the draft terms of reference for the experts.
262. On 9 December 2020, the PCA advised the Parties that, after they had approved the proposed terms of reference, the PCA contacted Messrs Lagerberg and Haberman to ascertain their views on the draft and their availability to provide assistance to the Tribunal. Mr Lagerberg confirmed he would be pleased to assist the Tribunal if so requested, in a manner in which he and a team would be engaged via PriceWaterhouse Coopers. Mr Haberman, however, on 8 December 2020 advised that his firm had just been acquired and become US-owned and would “therefore fall under US sanctions regulations”. He stated that as a result, “unfortunately, I am unable to accept appointment as expert to the Tribunal in this matter”. The Parties were invited to comment on these developments by 18 December 2020.
263. Following various further communications involving the Claimants’ legal advisers, Mr Haberman, his parent company and their advisers, Mr Haberman informed the Tribunal that his position remained the same. The Tribunal conveyed this to the Parties on 14 February 2021.
264. The PCA confirmed with Messrs Lagerberg and Haberman that the damages models previously submitted to the Tribunal remained available to the Tribunal and to the Parties and their experts for their continued use in these proceedings, regardless of the retained ownership of those models, and subject to the original disclaimers that accompanied those models.
265. On 25 February 2021, the PCA informed the Parties that, having consulted the Parties on the expert procedure to adopt in light of Mr Haberman’s unavailability, the Tribunal had decided to proceed with the option for which the Parties had expressed a preference, namely the appointment by the Tribunal of Mr Lagerberg (via PwC) and a second expert proposed by the Respondent.

266. On 26 February 2021, in response to the Tribunal's request and on the understanding that the Claimants will not object to the engagement of this expert by NIOC in the Geneva Arbitration on the basis that he has been engaged by the Tribunal in this London Arbitration, the Respondent provided the identity and contact details of its new expert, Mr Chris Osborne.
267. On 4 March 2021, the Claimants confirmed that they had no objection to the Tribunal appointing Mr Osborne. They further confirmed they had no objection to his being appointed NIOC's expert in the Geneva arbitration, recalling that his appointment in this matter is a separate and confidential engagement.
268. On 8 March 2021, the Tribunal authorised the PCA to engage Mr Lagerberg and Mr Osborne (together the "**New Experts**"), and to circulate proposed updates to the draft terms of reference that had been approved in November 2020.
269. Throughout March, April and May 2021, various payments were received from both NIOC and Crescent towards the supplementary deposit requested by the Tribunal.
270. On 12 April 2021, the Respondent sought an indication as to the likely timing for issuance of the Award, noting the desirability of enhanced coordination between the tribunals in this arbitration and the Geneva Arbitration. On 16 April 2021, the Tribunal informed the Parties that it would be in a position to provide an estimate of the likely timing for the issuance of the award after the New Experts signed terms of reference and received their instructions.
271. Following approval from the Parties, and consultations with the experts themselves, on 26 April 2021, the Tribunal and Messrs Lagerberg and Osborne signed terms of reference to provide expert assistance to the Tribunal with its final calculations ("**Terms of Reference**"). On the same day, the PCA signed a letter of engagement with PwC setting out the arrangements for the engagement of Mr Lagerberg via PwC. The Terms of Reference included the following description of the tasks for the New Experts:
- 4.1 The Tribunal shall avail itself of the mathematical assistance of the Experts in order to apply determinations made by the Tribunal on the basis of evidence in the record in accordance with the Parties' agreement of 7 August 2020. For the avoidance of doubt, the Tribunal confirms that any determinations will be entirely its own.
 - 4.2 The Experts shall make themselves available to assist the Tribunal if and as required by it from the date of signature of these Terms of Reference and until the end of the case, including by replying in writing to any queries that the Tribunal may have and, upon request, by participating in meetings with the Tribunal, the Tribunal's Administrative Secretary and/or the PCA. At this time, in light of the COVID-19

pandemic, it is envisaged that any such meetings will be held by telephone or video conference.

4.3 When requested to reply in writing to a query from the Tribunal, the Experts shall work together in order to provide a joint reply. Should the Experts have a disagreement in relation to any queries from the Tribunal, they will clearly set out their respective views in their joint reply.

4.4 Shortly after the signature of these Terms of Reference, the Tribunal will provide to the Experts a Request containing Instructions. The Instructions will include determinations that track the specific issues identified in the [Lagerberg/Haberman] Joint Report.

272. Pursuant to the Terms of Reference, on 30 April 2021, the Tribunal provided Messrs Lagerberg and Osborne with a request and instructions (“**Tribunal’s Instructions**”). The PCA provided Mr Osborne with a bundle of documents agreed in advance by the Parties.
273. On 19 May 2021, Mr Lagerberg and Mr Osborne conveyed to the Tribunal a request for clarification on a number of items in their instructions. The Tribunal responded to that request on 27 May 2021.
274. On 11 June 2021, Mr Lagerberg and Mr Osborne provided the Tribunal with their Joint Expert Reply to the Tribunal’s Expert Terms of Reference (“**Lagerberg/Osborne Joint Report**”).
275. On 15 June 2021, Crescent invited the Tribunal to provide an estimate as to the expected timing of rendering the award in this matter. On 21 June 2021, the Tribunal indicated that it was making satisfactory progress with the New Experts and expected an award to be issued before the end of September 2021.
276. On 28 June 2021, the New Experts provided an update to their report, and on 8 July 2021, in response to requests from the Tribunal, the New Experts provided the Tribunal with a further update to their report.
277. On 20 September 2021, the Tribunal advised the Parties that it would be issuing an award on 27 September 2021.

III. ISSUES DETERMINED BY THE AWARD ON JURISDICTION AND LIABILITY

278. The dispositive part of the Award on Jurisdiction and Liability is set out in paragraph 23 above. The Tribunal's rulings at paragraph D and E in the dispositive part are of particular present relevance.
279. Pursuant to Procedural Order No. 1, the first phase of the arbitration, which resulted in the award set out above, covered "all issues relevant to liability". Those issues were defined by the original claims and counterclaims and subsequently further defined by the pleadings and the extensive written and oral arguments of the Parties.
280. A primary issue relevant to liability was Crescent's claim that NIOC was, since 1 December 2005, and remained as at 31 July 2014, in breach of its contractual obligation to supply gas under the GSPC. The evidence established that, save for an immaterial quantity supplied for commissioning purposes in August 2010, no gas was supplied under the Contract. The Contract called for continuing supply, on a daily basis, over the whole of its 25-year term. Accordingly, the breach alleged, and found, was a continuing breach. Up to 31 July 2014, Crescent had never terminated, or purported to terminate, the Contract, and, insofar as the conduct of NIOC was repudiatory, that repudiation had never been accepted.
281. One of the principal grounds upon which NIOC claimed that it was not liable was an allegation that the Contract was tainted by corruption, and was void or unenforceable. The resolution of that issue occupied much time, evidence and argument, and was the subject of extensive consideration in the Award on Jurisdiction and Liability. Its principal continuing relevance is that, in support of its argument that the GSPC was the product of, or affected by, corruption, NIOC contended that the Contract was unreasonable and imbalanced against NIOC's interest in certain particular respects. This contention, and Crescent's contention to the contrary, was analysed in Chapter B of Part XII of the Award on Jurisdiction and Liability. In the Remedies Phase of the arbitration, both Parties to an extent reversed their respective stances on some aspects of this topic. At the stage of quantifying damages for breach, it is in Crescent's interests to demonstrate how favourable the Contract is, and in NIOC's interests to minimise its potential to benefit Crescent.
282. In the Remedies Phase, in the course of evidence and argument as to the quantities of supply which should form the basis of an assessment of damages, NIOC has on occasion advanced arguments which, if correct, would or may have constituted grounds of contractual justification of or excuse for non-delivery. To the extent to which those arguments are inconsistent with

declaration D quoted in paragraph 23 above, and the findings on which it is based, questions of issue estoppel or *res judicata* may arise. For example, NIOC did not, during the Jurisdiction and Liability Phase, raise arguments of frustration, or supervening impossibility of performance, to excuse non-delivery of gas. Some of the evidence in the Remedies Phase relating, for example, to sanctions, or to non-availability or failure of equipment, led in order to diminish the quantities which Crescent would have received had the Contract been performed, may need to be considered in that light.

283. Putting alleged corruption to one side, the principal defences to liability were that the Contract never became due for performance because Crescent was in breach of the GSPC by failing to provide NIOC with certain required security documents, that the contractual provisions as to a location where title, control and possession of gas would pass from NIOC to Crescent (“**Delivery Point**”) were never satisfied, and that an Operation Agreement which was necessary for contractual performance was never finalised. Those defences were rejected, and the issues are not of continuing relevance although some of the evidentiary background may be.
284. Within the Crescent group it was CGC, and not Crescent Petroleum, that was the intended recipient and purchaser of gas, and that contracted to make downstream supplies.¹⁰ In consequence, the claims for damages, or indemnity, are made by CGC. This is why importance attached to the issue referred to in declaration C quoted in paragraph 23 above. That issue was resolved in favour of the Claimants, and the Remedies Phase of the arbitration has gone ahead on that basis. In the events that happened, the role of CGC in marketing downstream was qualified by the interposition of a partly-owned Crescent subsidiary, Crescent National Gas Corporation Limited (“**CNGC**”), a corporation formed under the laws of the British Virgin Islands. Thirty-five percent of the shares in CNGC are held by Dana Gas PJSC (“**Dana Gas**”) a public company listed in the UAE, which was described in correspondence from the Claimants’ lawyers as having tens of thousands of shareholders.¹¹ It was plainly contemplated by the Contract that CGC (as successor to Crescent Petroleum) was purchasing the gas from NIOC for the purpose of re-sale at a profit. The evidence shows that the prospects and profitability of re-sale were topics central to the negotiations for the Contract.¹² However, the contracts of re-sale entered into by CGC were

¹⁰ See, e.g. Crescent’s Memorial on Remedies ¶ 5.

¹¹ Crescent’s letter to the Tribunal dated 28 May 2019.

¹² Crescent’s Memorial on Remedies ¶¶ 36-37, referring to Memorandum of Understanding of 4 February 1999, RC1/p. 152; Third Side Letter.

to only two customers; CNGC and, in the events that occurred, a government-owned utility, Sharjah Electricity and Water Authority (“SEWA”). Notwithstanding the corporate relationship, both Parties approached the calculation of damages on the basis that the contract between CGC and CNGC was at arm’s-length. At the Final Hearing the Respondent made a positive submission to that effect.¹³

285. In NIOC’s counterclaim on liability, it claimed, for the reasons advanced as defences to Crescent’s claim, to have been lawfully entitled to terminate the GSPC.¹⁴ This was rejected in declaration E quoted in paragraph 23 above.

IV. THE CLAIMS FOR RELIEF

A. RELIEF SOUGHT BY THE CLAIMANTS

286. At paragraph 86 of its Memorial on Remedies, Crescent sought the following relief:

- (1) An award in respect of its quantified lost profits and the quantified damages it claims in relation to CNGC’s lost profits between the Commencement Date and the date of the Award by reason of NIOC’s breach of the GSPC in the sum of **US\$13,857 million**, as set out in Section E above.
- (2) Declarations of indemnity in the form set out in paragraph 27¹⁵ above for the liabilities to end-user customers and to CNGC in respect of end-users and service providers, asset out in Section F above.
- (3) An award of interest on any monetary award granted to CGC, pre-Award and post-Award.
- (4) An award in respect of the Claimants’ legal costs and of the costs of the arbitration.
- (5) Any such further or other relief as the Tribunal shall deem just and appropriate.

¹³ Final Hearing Tr., Day 4 at 43.

¹⁴ See Award on Jurisdiction and Liability ¶ 225.

¹⁵ Paragraph 27 set out the following proposed text:

A declaration that NIOC is under an obligation to indemnify CGC with respect to all liabilities incurred by CGC by reason of NIOC’s breach(es) of the GSPC, such including:

- (i) liabilities of CGC to SEWA under the SEWA GSA; and
- (ii) liabilities of CGC to CNGC under the CNGC GSA, including liabilities incurred by CNGC to third party end user customers and service providers because of NIOC’s failure to supply gas under the GSPC and CGC’s resulting failure to supply gas under the CNGC GSA.

The said obligation to indemnify shall include an obligation to reimburse CGC fully for all payments made/costs incurred in discharge of the said liabilities and/or in defending or otherwise dealing with or settling the said liabilities.

287. At paragraph 87 of its Memorial on Remedies, Crescent reserved the “right to amend its claims, and to supplement the requested relief, down to the date of the final award”.

288. At paragraph 250 of its Reply on Remedies, Crescent stated that it sought the following remedies:

- (1) The primary remedies CGC seeks are:
 - (i) An award in respect of its quantified lost profits between the Commencement Date and the Date of the Award by reason of NIOC’s breach in the sum of **US\$4.275 bn.**
 - (ii) An award in respect of all liabilities of CGC to CNGC under the CNGC GSA in respect of CNGC’s lost profits between the Commencement Date and the Date of the Award by reason of NIOC’s breach(es) of the GSPC in the sum of **US\$8.836 bn.**
 - (iii) Declarations of indemnity in the form set out in paragraph 27 of the Claimants’ Memorial on Remedies for the liabilities to end-user customers and to CNGC in respect of end-users and service providers as set out in Section F of the Claimants’ Memorial on Remedies.
- (2) As an alternative to the relief sought in paragraph (1)(ii) above (but, for the avoidance of doubt without prejudice to any of the other of CGC’s claims in sub-paragraphs (1)-(5) of the present paragraph) CGC seeks:
 - (i) An award in respect of its 65% share, qua shareholder, of CNGC’s lost profits between the Commencement Date and the Date of the Award by reason of NIOC’s breach(es) of the GSPC in the sum of US\$5.743 bn and a declaration of indemnity in respect of the remaining 35% in the following form:

“A declaration that NIOC, having had an award made against it in respect of 65% of the liabilities described below, is under an obligation to indemnify CGC with respect to the liabilities of CGC to CNGC under the CNGC GSA in the remaining sum (corresponding to 35% of CNGC’s lost profits between the Commencement Date and the Date of the Award) by reason of NIOC’s breach(es) of the GSPC.

The said obligation to indemnify shall include an obligation to reimburse CGC fully for all payments made/costs incurred in discharge of the said liabilities and/or in defending or otherwise dealing with or settling the said liabilities.”
- (3) An award of interest on any monetary award granted to CGC, pre-Award and post-Award.
- (4) An award in respect of the Claimants’ legal costs and of the costs of the arbitration.¹⁶

¹⁶ Crescent states: “The Tribunal is reminded that pursuant to Procedural Order 21, costs, fees and expenses for the Liability Phase are still to be dealt with. The Claimants submit that it will be most convenient for the questions of costs, fees and expenses (which for the avoidance of doubt the Claimants claim) for both Liability and Remedies Phases to be dealt with at the same time after an award on remedies has been

(5) Any such further or other relief as the Tribunal shall deem just and appropriate.

289. At paragraph 251 of its Reply on Remedies, Crescent reserved “the right to amend its claims, and to supplement the requested relief, until the date of the final award”.

290. At paragraph 781 of its First Post-Hearing Brief, Crescent requested an award of the following:

- (a) The primary remedies CGC seeks are:
 - (i) If the Tribunal accepts that Crescent has made out the factual premises on the basis of which its claim has been quantified:
 - (1) An award in respect of its quantified lost profits between the Commencement Date and 30 April 2015 by reason of NIOC’s breach in the sum of **US\$4.275 bn** plus interest of **US\$0.511 bn** to 31 January 2017;
 - (2) An award in respect of all liabilities of CGC to CNGC under the CNGC GSA in respect of CNGC’s lost profits between the Commencement Date and 30 April 2015 by reason of NIOC’s breach(es) of the GSPC in the sum of **US\$8.836 bn** plus interest of **US\$1.335 bn** to 31 January 2017;
 - (ii) If the Tribunal considers that that any of the factual premises on the basis of which Crescent’s claim has been quantified require amendment:
 - (1) An award in respect of its quantified lost profits between the Commencement Date and 30 April 2015 by reason of NIOC’s breach in the sum resulting from the Tribunal determination of the factual assumptions listed in the template set out in paragraph 72 [of Crescent’s First Post-Hearing Brief] as quantified in consultation with the Parties’ valuations experts in the manner set out in paragraph 73 [of Crescent’s First Post-Hearing Brief];
 - (2) An award in respect of all liabilities of CGC to CNGC under the CNGC GSA in respect of CNGC’s lost profits between the Commencement Date and 30 April 2015 by reason of NIOC’s breach(es) of the GSPC in the sum resulting from the Tribunal determination of the factual assumptions listed in the template set out in paragraph 72 [of Crescent’s First-Post Hearing Brief] as quantified in consultation with the Parties’ valuations experts in the manner set out in paragraph 73 [of Crescent’s First-Post Hearing Brief].
 - (iii) A declaration that CGC is entitled to be compensated in damages in respect of any liability it has incurred to SEWA and to CNGC (beyond CGC’s liability in respect of CNGC’s lost profits) as a result of NIOC’s breaches of the GSPC.

rendered. The Claimants suggest that, given the terms of Procedural Order 21, it would be convenient to have this recorded in a Procedural Order”. Reply n.230.

- (b) An award of interest (accruing at a daily rate of US\$1.86 million) on any monetary award granted to CGC, pre-Award and post-Award.
- (c) An award in respect of [] Crescent's legal costs and of the costs of the arbitration.¹⁷
- (d) Any such further or other relief as the Tribunal shall deem just and appropriate.

291. Crescent has confirmed that it is not seeking what are sometimes called reliance damages, and it is not seeking specific performance of the GSPC. In paragraph 46 of its Second Post-Hearing Brief, Crescent responded to a question from the Tribunal (Procedural Order No. 36, Question 15) as to whether, in the event that the Tribunal finds lost profits unavailable under Iranian law, "Crescent has made any alternative residual claims for losses incurred in reliance on the GSPC ('reliance damages')".
292. Further, in paragraph 217 of its Second Post-Hearing Brief, having been asked to address Respondent's arguments on relevant time periods for the claims, Crescent accepted that "there can be no recovery in this arbitration for damages which have not been caused by breaches occurring up to the date of the [Award on Jurisdiction and Liability], 31 July 2014". Accordingly, at paragraph 218 of the Second Post-Hearing Brief, Crescent stated that its quantified claim for "loss of profits damages running to 31 July 2014 are US\$11.644 billion" plus interest. This represented a reduction from the USD 13.111 billion in quantified damages claimed in its First Post-Hearing Brief (which had been calculated for the period between the Commencement Date of 1 December 2005 and 30 April 2015).
293. In the Answers to Tribunal Questions of 30 June 2020, and in opening submissions at the Final Hearing, Crescent foreshadowed, as an alternative to a loss of bargain claim based on lost profits, a loss of bargain claim based on the value of the undelivered gas. This is a matter to which the Tribunal will return.

B. RELIEF SOUGHT BY THE RESPONDENT

294. At paragraph 567 of the Counter-Memorial on Remedies, and "without prejudice to the reservations and protest" set forth in Part I.B of its Counter-Memorial, NIOC asked the Tribunal:

¹⁷ Crescent states: "The Tribunal is reminded that pursuant to Procedural Order 21 (RA2/tab 3), costs, fees and expenses for the Liability Phase are still to be dealt with. Crescent submits that it will be most convenient for the questions of costs, fees and expenses (which for the avoidance of doubt Crescent claims) for both Liability and Remedies Phases to be dealt with at the same time after an award on remedies has been rendered".

- (1) To hold that it has no jurisdiction with respect to the portion of the Claimants' claim that relates to lost profits allegedly suffered by CNGC.
- (2) Without prejudice to (1) above, to hold that the entirety of the Claimants' claim is inadmissible on the basis that the Claimants have failed first to seek specific performance under the GSPC before making a claim for damages.
- (3) Without prejudice to (1) and (2) above, to dismiss the remainder of the Claimants' claim, on the basis that the following are not available remedies under the applicable Iranian law:
 - (a) Awards of lost profits;
 - (b) Awards of interest;
 - (c) Declarations of indemnity.
- (4) On a subsidiary basis, and without prejudice to (1), (2) and (3) above, to dismiss the entirety of the Claimants' claim relating to lost profits and interest thereon, for failure to substantiate with the requisite degree of certainty the existence and extent of the lost profits said to have been incurred; and
- (5) To dismiss the Claimants' claim for costs, and to award the Respondent the entirety of its legal costs and the costs of the arbitration.

295. At paragraph 881 of the Rejoinder on Remedies, NIOC requested the Tribunal to grant it the following relief:

- (1) To hold that it has no jurisdiction with respect to the portion of the Claimants' claim that relates to lost profits allegedly suffered by CNGC (whether such claim is based on CGC's alleged liability to CNGC for such lost profits or on CGC's shareholding in CNGC).
- (2) Without prejudice to (1) above, to hold that the entirety of the Claimants' claim is inadmissible on the basis that the Claimants have failed first to seek specific performance under the GSPC before making a claim for damages.
- (3) Without prejudice to (1) and (2) above, to dismiss the remainder of the Claimants' claim, on the basis that the following are not available remedies under the applicable Iranian law:
 - (a) Awards of lost profits;
 - (b) Awards of interest;
 - (c) Declarations of indemnity.
- (4) On a subsidiary basis, and without prejudice to (1), (2) and (3) above, to dismiss the entirety of the Claimants' claim relating to lost profits and interest thereon, for failure to substantiate with the requisite degree of certainty the existence and extent of the lost profits said to have been incurred; and
- (5) To dismiss the Claimants' claim for costs, and to award the Respondent the entirety of its legal costs and the costs of the arbitration.

296. At paragraph 882 of the Rejoinder on Remedies, NIOC reserved the right to amend and/or to supplement the relief requested.

297. In Part V of its First Post-Hearing Brief, at paragraph 1837, NIOC requested the Tribunal to grant it the following relief:

- (1) To dismiss the entirety of Crescent's claim on the basis that Crescent has failed first to seek specific performance under the GSPC before making a claim for damages.
- (2) Without prejudice to (1) above, to dismiss Crescent's claims on the basis that the following are not available remedies under the applicable Iranian law and/or are otherwise not appropriate remedies in this case:
 - (a) Awards of lost profits;
 - (b) Awards of interest;
 - (c) Declarations of indemnity.
- (3) To hold in any event that it has no legal basis for making an award with respect to the portion of Crescent's claim that relates to lost profits allegedly suffered by CNGC;
- (4) On a subsidiary basis, and without prejudice to (1), (2) and (3) above, to dismiss the entirety of Crescent's claim relating to lost profits and interest thereon, for failure to substantiate the foreseeability, existence and extent of the lost profits said to have been incurred with the requisite degree of certainty; and
- (5) To dismiss Claimants' claim for costs.

298. At paragraph 1838 of its First Post-Hearing Brief, NIOC reserved the right to amend and/or supplement the relief requested.

299. In its Second Post-Hearing Brief, at paragraph 388, NIOC stated that it "maintains its request for relief as set out in Part V of RPHB".

300. On 4 October 2017, NIOC wrote a letter about its defence concerning specific performance, informing the Tribunal that:

with respect to Crescent's claims for damages / other relief in relation to NIOC's breach of contract up to the date of the [Award on Jurisdiction and Liability] as determined by the Tribunal in that Award which are presently before the Tribunal in this remedies phase, the Respondent does not pursue its defence that Crescent's abandonment of its claim for specific performance of the GSPC prevents it from recovering such damages or other relief for that period in respect of that breach. This is without prejudice to all other defences advanced by the Respondent which are maintained in full.

301. The Respondent reserved its rights in respect of the requirement of Iranian law upon Crescent to seek specific performance before seeking other remedies, noting that the withdrawal of this defence was without prejudice to NIOC's right, "in relation to any future claim whatsoever in respect of any alleged breach of the GSPC by NIOC after the date of the [Award on Jurisdiction and Liability], to contend that Crescent must first seek (or have sought) specific performance of the GSPC as a pre-condition to obtaining damages or other relief"; and was also without prejudice to any claim by NIOC "for specific performance of the GSPC by Crescent in respect of Crescent's failure and/or refusal to perform the GSPC notwithstanding the tender by NIOC of performance of the GSPC".

C. SPECIFIC PERFORMANCE

302. Initially, specific performance was the primary remedy sought by Crescent.¹⁸ NIOC argued originally that specific performance was not available under Iranian law.¹⁹
303. At a hearing on 11 February 2013, Crescent informed the Tribunal that it accepted that specific performance was, in the circumstances of the case, “not an option” and that this aspect of its claim would not be pursued. NIOC responded by letter of 11 July 2014 that by withdrawing their request for specific performance the Claimants had destroyed their right to claim damages. This is referred to at paragraphs 192 and 1383 of the Award on Jurisdiction and Liability. It is unnecessary to deal further with the later development of the issue thus raised, for the reason stated in the next paragraph.
304. As noted at paragraphs 300-301 above, on 4 October 2017 the Respondent withdrew, for present purposes, its defence that Crescent’s abandonment of its claim for specific performance prevents it from recovering damages or other relief for the period up to 31 July 2014.
305. It appears to the Tribunal that, notwithstanding the positions taken by the Parties at various stages of the proceedings, there is a good reason why specific performance was not a viable form of relief. As at 31 July 2014 there was no form of order for specific performance, relating to the gas that was undelivered between the Commencement Date and 31 July 2014, that would have been consistent with the rights and obligations created by the GSPC. The GSPC was a contract for the daily delivery, through a pipeline, of specified quantities of gas at a specified pressure, with take-or-pay obligations on the purchaser. Neither Party was able to indicate a form of order, in respect of past undelivered gas, that would not have involved material changes to the contractual position of the Parties.
306. The unavailability of specific performance as a remedy in respect of the undelivered gas is a matter that has significance in respect of some of the arguments concerning Iranian law. The same may be said in relation to reliance loss. Substantial expenditure was incurred by Crescent in preparing to perform the contract, but as at 31 July 2014 the GSPC remained on foot, and Crescent was demanding future performance, which would have involved using the equipment on which such expenditure had been incurred. If the only remedies provided by Iranian law for

¹⁸ Crescent’s Statement of Case ¶ 9.1(a).

¹⁹ NIOC’s Re-Amended Statement of Defence and Counterclaim, filed 14 January 2011, amended 24 September 2012 ¶¶ 140-141.

NIOC's continuing breach of contract over almost a decade were specific performance and reliance damages then the practical consequence would be that no remedy is available.

V. WITNESSES AND EXPERTS IN THE REMEDIES PHASE

307. In the Remedies Phase, in addition to extensive documentary exhibits, legal authorities and written argumentation, the Parties presented statements from the following fact and expert witnesses.

A. THE CLAIMANTS' WITNESSES AND EXPERTS

308. The Claimants presented the following fact witnesses in the Remedies Phase:

- (1) **Mr Thomas Stephen Watts.** Mr Watts is Crescent Petroleum's Projects Director who was in charge of the GSPC project. In the Remedies Phase he provided his Fifth Witness Statement in these proceedings, dated 21 May 2015 ("**Watts 5**"), filed with Crescent's Memorial on Remedies, in which he recapitulated the drivers underpinning the GSPC and Crescent's efforts to build a market; described the contractual and commercial framework put in place by Crescent for transportation, sweetening and processing the gas and downstream sale of processed gas and denuded liquids; and set out facts underpinning technical assumptions on which the sales quantities of end-user gas and liquids are based. In his Sixth Witness Statement of 25 April 2016, filed with Crescent's Reply on Remedies ("**Watts 6**"), Mr Watts commented on gas volumes, price review, downstream infrastructure, Crescent's ability to achieve sales in the UAE, the composition and Gross Heating Value ("**GHV**") of the gas to be supplied, issues impacting calculation of damages, and issues with NIOC's upstream infrastructure. He also replied to NIOC's expert reports. Mr Watts testified before the Tribunal on 7 and 8 November 2016.
- (2) **Mr Mohammad Eid Makkawi.** Mr Makkawi is a Projects Director at Crescent Petroleum. He was involved with mid- and downstream aspects of the GSPC project, including sale of gas to end-users. In the Remedies Phase he provided his Fourth Witness Statement in these proceedings, dated 19 May 2015 ("**Makkawi 4**"), filed with Crescent's Memorial on Remedies, which gives an overview of the potential claims against Crescent for damage incurred by end-users and service providers. In his Fifth Witness Statement of 25 April 2016, filed with Crescent's Reply on Remedies ("**Makkawi 5**"), he updated the losses suffered by Crescent's various end-users and service providers and responded to

NIOC's Counter-Memorial on Remedies and certain aspects of NIOC's fact and expert reports. He testified before the Tribunal on 8 and 15 November 2016.

- (3) **Mr Ahmed Mansoor Danhash.** Mr Danhash was an adviser to the Sharjah Petroleum Council. In the Remedies Phase he provided his Second Witness Statement in these proceedings, dated 21 April 2016 ("**Danhash 2**"), filed with Crescent's Reply on Remedies, which provided evidence on the gas processing plant of the Sharjah LPG Company ("**Shalco**") and its available capacity. He also addressed claims by NIOC about agreements between Crescent and Shalco, and the attitude of British Petroleum ("**BP**") Sharjah to processing Iranian gas. He testified before the Tribunal on 8 November 2016.

309. The Claimants presented the following expert witnesses in the Remedies Phase:

- (1) **Mr Michael Wood.** Mr Wood is a Technical Director at Gaffney, Cline & Associates with experience in field development planning, cost estimating and project scheduling, specifically in developing oil and gas projects in remote, emerging and otherwise challenging environments. In the Remedies Phase he provided his First Expert Report, concerning pipeline infrastructure, dated 25 April 2016 ("**Wood 1**"), filed with Crescent's Reply on Remedies, evaluating the ultimate allowable capacity of the delivery pipeline between Sirri Island and the Delivery Point, the capacity of the infrastructure, and estimates of the investment costs required to upgrade the production, transportation and gas treatment infrastructure to achieve increased gas flow rate of 1,050 million standard cubic feet per day ("**MMscfd**"). Mr Wood testified before the Tribunal on 10 November 2016.
- (2) **Mr Jean Vermeire.** Mr Vermeire is an independent consultant in commercial matters of the natural gas and LNG industry who has been involved in gas price negotiations and reviews under long-term gas supply agreements and long-term sales contracts. In the Remedies Phase he provided his First Expert Report, concerning the gas industry, dated 25 April 2016 ("**Vermeire 1**"), filed with Crescent's Reply on Remedies, in which he responded to propositions articulated by NIOC's experts on risk, price review and aspects of particular provisions in the GSPC. Mr Vermeire testified before the Tribunal on 11 November 2016.
- (3) **Professor Giacomo Luciani.** Professor Luciani of GL Energy Company Sàrl is an expert on the gas industry, particularly on agreements for the supply and purchase of gas and

commercial aspects of international gas sales transactions. In the Remedies Phase he provided his Second Expert Report in these proceedings, dated 21 May 2015 (“**Luciani 2**”), filed with Crescent’s Memorial on Remedies. The report concerned aspects of the gas market including demand for gas in the UAE, pricing and the value of the gas to Crescent and Crescent’s value chain structure. In his Third Expert Report of 21 April 2016 (“**Luciani 3**”), Professor Luciani addressed gas pricing and the gas market and replied to expert reports provided by NIOC’s experts. Professor Luciani testified before the Tribunal on 15 November 2016.

- (4) **Mr Mahmoud Katirai.** Mr Katirai is a lawyer admitted to practice in Iran and in the District of Columbia, U.S.A. He practiced law in Iran from 1969 to 1980, when he left the country. In the Remedies Phase he provided his Fifth Expert Report in these proceedings, dated 21 May 2015 (“**Katirai 5**”), filed with Crescent’s Memorial on Remedies, in which he set out Iranian law principles on damages, including the obligation to compensate, issues of causation, remoteness, foreseeability, mitigation, standard of proof and compensation, rules applicable to the recovery of lost profits and possibly conflicting provisions of the Iranian Civil Code of 1928 (“**Civil Code**”) and CCP 2000. In his Sixth Legal Expert Report of 25 April 2016, filed with Crescent’s Reply on Remedies, (“**Katirai 6**”), Mr Katirai responded to the first expert report of NIOC’s expert Dr Mehrpour, including as to the applicability of Note 2; the status and relevance of Islamic law and Iranian court judgments; specific performance; and the availability of interest and the types of indemnities sought by Crescent in this arbitration. Mr Katirai testified before the Tribunal on 21 and 22 November 2016.
- (5) **Gerard John Lagerberg.** Mr Lagerberg led the international arbitration practice of the Forensic Services department of PricewaterhouseCoopers LLP and holds governance positions within the firm. In the Remedies Phase he provided his First Expert Report, dated 21 May 2015 (“**Lagerberg 1**”), concerning Crescent’s loss of profits claim, filed with Crescent’s Memorial on Remedies. He calculated the net cash flows (*i.e.*, lost profits) that Crescent Gas and CNGC would have earned “but for” NIOC’s failure to supply the gas during the relevant period. In his Second Expert Report of 25 April 2016 (“**Lagerberg 2**”), filed with Crescent’s Reply on Remedies, Mr Lagerberg provided a revised model which corrected minor errors and adjusted his calculation to reflect some of NIOC’s expert’s approach, which he considers to be similar in approach to his own. Mr Lagerberg testified before the Tribunal on 17 and 18 November 2016.

B. THE RESPONDENT'S WITNESSES AND EXPERTS

310. The Respondent presented the following fact witnesses in the Remedies Phase:

- (1) **Mr Alireza Nazari.** Mr Nazari is the former project director of the Salman development oil & gas offshore project for Petroleum Engineering and Development Company, which acted as NIOC's agent for the development of the Salman oil and gas project. In the Remedies Phase he provided his First Witness Statement in these proceedings, dated 3 February 2016 ("**Nazari 1**"), filed with NIOC's Counter-Memorial on Remedies, which described the capacity of NIOC's facilities for the delivery of the gas and delay in construction. He testified before the Tribunal on 8 November 2016.
- (2) **Mr Hossein Rahimi.** Mr Rahimi is in charge of completion of the Salman gas development project, on behalf of the Iranian Offshore Oil Company. In the Remedies Phase he provided his First Witness Statement in these proceedings, dated 3 February 2016 ("**Rahimi 1**"), filed with NIOC's Counter-Memorial on Remedies, which described various incidents affecting completion of the facilities. In his Second Witness Statement of 19 August 2016, filed with NIOC's Rejoinder on Remedies ("**Rahimi 2**"), he addressed gas leaks and infrastructure. He testified before the Tribunal on 8 and 10 November 2016.
- (3) **Mr Azizollah Ramazani.** Mr Ramazani is the Chairman of the Board of Directors of the National Iranian Gas Export Company ("**NIGEC**") and a member of the Board of the National Iranian Gas Company. In the Remedies Phase he provided his First Witness Statement in these proceedings, dated 3 February 2016 ("**Ramazani 1**"), filed with NIOC's Counter-Memorial on Remedies, which concerned gas shortages in Iran during the period of the Claimants' claim. In his Second Witness Statement of 19 August 2016, filed with NIOC's Rejoinder on Remedies ("**Ramazani 2**"), he replied to certain submissions and witness testimony on behalf of Crescent in respect of the alleged gas surplus and availability of such gas. He testified before the Tribunal on 9 November 2016.
- (4) **Mr Behzad Torabi.** Mr Torabi is an oil and gas contracts advisor at Petropars, in Tehran, and formally occupied various positions at NIOC and its subsidiaries. In the Remedies Phase he provided his First Witness Statement in these proceedings, dated 3 February 2016 ("**Torabi 1**"), filed with NIOC's Counter-Memorial on Remedies, which described the impact of international sanctions on NIOC's business and banking relationships. He testified before the Tribunal on 9 November 2016.

- (5) **Mr Andrew King.** Mr King is the head of letters of credit, cash against documents, and payment section at Naftiran Intertrade Company Sàrl, a Swiss company that provides administrative services to its parent company, Naftiran Intertrade Company (“**NICO**”), which is wholly owned by NIOC. In the Remedies Phase he provided his First Witness Statement in these proceedings, dated 3 February 2016 (“**King 1**”), filed with NIOC’s Counter-Memorial on Remedies, which concerned the impact of international sanctions on NICO’s relationship with banks worldwide, and the effect of sanctions on sales revenues. He testified before the Tribunal on 10 November 2016.

311. The Respondent presented the following expert witnesses in the Remedies Phase:

- (1) **Mr Neil Smith.** Mr Smith is the Global Process and Facilities Lead at Xodus Group Limited, with experience in the upstream oil and gas industry. In the Remedies Phase he provided his First Expert Report, concerning pipeline infrastructure, dated 19 August 2016 (“**Smith 1**”), filed with NIOC’s Rejoinder on Remedies. In his report he explained key technical factors relevant to capacity, provided views on the terms of the Second Amendment Letter, and specific modifications proposed in Mr Wood’s expert report, and their likely feasibility, cost and effect. Mr Smith testified before the Tribunal on 10 and 11 November 2016.
- (2) **Professor Jonathan Stern.** Professor Stern chairs the Natural Gas Research programme at Oxford Institute of Energy Studies and holds several academic posts and advisory positions in the gas sector. In the Remedies Phase he provided his First Expert Report, dated 3 February 2016 (“**Stern 1**”), filed with NIOC’s Counter-Memorial on Remedies, in which he addressed issues of gas pricing, gas price review mechanisms and the trigger criteria under the GSPC. In his Second Expert Report of 19 August 2016 (“**Stern 2**”), filed with NIOC’s Rejoinder on Remedies, Professor Stern responded to Crescent’s submissions and witnesses on the price review mechanism in the GSPC, including as to the market conditions in the region, the operation of Article 10.7 and the Sixth Side Letter to the GSPC. Professor Stern testified before the Tribunal on 14 November 2016.
- (3) **Dr Abolfazl Ghaemi.** The late Dr Ghaemi was founder of Tehran Energy Consultants, an independent geo-science and petroleum-engineering consultancy. In the Remedies Phase he provided his First Expert Report, concerning issues of gas composition and GHV calculations, dated 29 January 2016 (“**Ghaemi 1**”), filed with NIOC’s Counter-Memorial on Remedies. In his Second Expert Report of 19 August 2016 (“**Ghaemi 2**”), filed with

NIOC's Rejoinder on Remedies, Dr Ghaemi responded to the reservoir simulation models and calculations by Crescent's witness, Mr Watts. Dr Ghaemi testified before the Tribunal on 15 November 2016.

- (4) **Mr Robin Mills.** Mr Mills is an energy consultant based in Dubai with a background as a geologist. In the Remedies Phase he provided his First Expert Report, dated 3 February 2016 ("**Mills 1**"), filed with NIOC's Counter-Memorial on Remedies. In his report he dealt with the energy market in the UAE, in particular the availability and pricing of gas and other energy supplies, and disputed whether the end-user pricing strategy described by Mr Watts would be achievable. In his Second Expert Report of 19 August 2016 ("**Mills 2**"), filed with NIOC's Rejoinder on Remedies, Mr Mills responded to Crescent's role as a "market maker", addressed the "but-for" scenario, the effect of the Sixth Side Letter and other points regarding strategy for transporting, marketing and selling the GSPC gas and related products in the downstream market. Mr Mills testified before the Tribunal on 16 November 2016.
- (5) **Mr Anthony Way.** Mr Way is an Executive Director of the Energy Contract Company, a commercial consultancy to the global energy industry, and a director of TWC Oil & Gas Co Ltd in the UK. In the Remedies Phase he provided his First Expert Report, dated 3 February 2016 ("**Way 1**"), filed with NIOC's Counter-Memorial on Remedies. His report concerned Crescent's claims about contractual volumes; industry practice on the exclusion of lost profits as a remedy; and whether the use of the price revision clause would have been justified. In his Second Expert Report of 19 August 2016 ("**Way 2**"), filed with NIOC's Rejoinder on Remedies, Mr Way responded to certain matters within his industry expertise that were relevant to quantification of damages. Mr Way testified before the Tribunal on 16 and 17 November 2016.
- (6) **Dr Professor Hossein Mehrpour Mahamadabadi.** Dr Mehrpour has been a professor and dean of the Shahid Beheshti University in Tehran, a judge of the Justice Department, Jurist of the Guardian Council and an adviser to the President and Minister of Foreign Affairs of Iran. In the Remedies Phase he provided his First Expert Report, dated 3 February 2016 ("**Mehrpour 1**"), filed with NIOC's Counter-Memorial on Remedies, in which he addressed Iranian law principles of contractual remedies, disputed the approach of Mr Katirai, and stated that Crescent's claim for lost profits, interest and declaratory judgments for indemnification do not conform to Iranian law. In his Second Expert Report of 19 August 2016 ("**Mehrpour 2**"), filed with NIOC's Rejoinder on Remedies,

Dr Mehrpour addressed the applicability of the CCP 2000, the role of Islamic law, the proper interpretation and effect of Article 515 Note 2 of the CCP 2000, the availability of interest, declaratory judgments and indemnities, the correct approach to compensation and specific performance as a pre-condition to the award of damages. Dr Mehrpour testified before the Tribunal on 22 and 23 November 2016.

- (7) **Mr Philip Haberman.** Mr Haberman is a senior partner of Haberman Ilett, which provides accounting and financial expertise in the context of disputes. In the Remedies Phase he provided his First Expert Report, dated 3 February 2016 (“**Haberman 1**”), filed with NIOC’s Counter-Memorial on Remedies. In his report he pointed to issues in Mr Lagerberg’s calculation, assumptions and data, and offered an alternative approach to calculating hypothetical losses, with “low” and “high” scenarios. In his Second Expert Report of 19 August 2016 (“**Haberman 2**”), filed with NIOC’s Rejoinder on Remedies, Mr Haberman provided a new model incorporating corrections and Mr Lagerberg’s requirements and adding functionality, and noting problems and uncertainties with Mr Lagerberg’s revised model and Mr Watts’ gas pricing model. He considered he could agree on a common model with Mr Lagerberg. Mr Haberman testified before the Tribunal on 18 November 2016. As described at paragraphs 262 to 266 above, Mr Haberman withdrew from the case, and the Respondent nominated Mr Chris Osborne to replace him.

C. JOINT EXPERT REPORTS

312. Paragraph 12(b) of Procedural Order No. 1 of 25 February 2010 contemplated that “should the Parties appoint experts with corresponding areas of specialism, those experts shall prepare and present to the Tribunal ... a joint list of agreed and contentious issues”.
313. Pursuant to the Tribunal’s instructions, the Parties presented joint expert reports in connection with two areas of specialisation, namely damages and pipeline infrastructure:
- (1) **Joint Statement of Mr Gerard John Lagerberg and Mr Philip Haberman (“Lagerberg/Haberman Joint Report”).** Following a conclave on 27 September 2019, the two damages experts produced a joint statement in which they report on their respective assessments of Crescent’s lost profits by using Excel models to calculate Crescent’s estimated cash flows based on a series of assumptions. They recalled that Mr Lagerberg’s approach was to present a single calculation of losses using a model that can flex each of the key inputs that drive the calculation of loss, and that Mr Haberman’s approach was to

present a range of lost profits under three different scenarios. They further recalled that their models have been constructed such that individual, or combinations of, inputs can be changed so as to model different scenarios. They noted that this exercise was based on some contemporaneous documentation but mostly on conclusions of other witnesses, and additionally that Mr Haberman had opined on the original bargain and risk and reward profile of Crescent, the price formula, the gas processing model and whether Mr Lagerberg's calculations make sense in the context of the agreed bargain and the wider commercial world. The joint expert report sets out both experts' conclusions on lost profits. The experts agree that from a quantification perspective and subject to legal arguments, there are five major factors that drive the quantification of Crescent's lost profits: (1) volumes; (2) end user customers and prices; (3) product profits; (4) the price that Crescent would have paid to NIOC; and (5) the period over which Crescent would have suffered losses. For each of these five factors, the Lagerberg/Haberman Joint Report sets out areas of agreement and disagreement. They identify other factors on which key decisions of the Tribunal may affect losses, including (1) whether CNGC profits can be included in Crescent's claim; (2) whether profits derived from supply to SEWA should be allocated to CGC or to CNGC; (3) the mechanics of the allocation of profits between CGC and CNGC for particular calculations; (4) the gas composition and processing model; (5) the availability factor and operational days; and (6) the transmission, processing and other costs. Mr Haberman does not include interest in his assessment but confirms the arithmetical accuracy of Mr Lagerberg's interest calculations.

- (2) **Joint Experts' Report of Michael Wood and Neil Smith ("Wood/Smith Joint Report")**. The two infrastructure experts met in London on 4 October 2016 and produced a joint report dated 27 October 2016. It referred to a new document prepared by Mr Wood with additional analysis, data, documents and figures, which was submitted with, but did not form part of, the joint report. The joint report highlighted the experts' respective positions on four areas. The first was techniques of analysis (including debottlenecking, hydraulic analysis, re-rating of the pipeline and safety issues). The second was NIOC's facilities and capacity (including the definition of "ultimate allowable capacity of Pipeline and associated facilities," capacity of the Sirri-RP Pipeline, the capacity of Sirri facilities, capacity of the Salman/Dalan infrastructure, and throughput capacity of the NIOC facilities running from Salman/Dalan via Sirri to the Riser Platform). The third aspect was Crescent's facilities and capacity (including modifications to Crescent's facilities to allow for increased supply, and landfall compression). Fourth, the experts addressed cost issues,

including methodology, facilities necessary for NIOC to supply and for Crescent to receive 1050 MMscfd, and time required for installation). This process resulted in some adjustments to figures included in their original reports. They did not agree on the availability factor of gas.

314. As noted above at paragraphs 256 to 271, following consultations with the Parties, the Tribunal jointly engaged Mr Lagerberg and Mr Chris Osborne (the new expert nominated by the Respondent following the withdrawal of Mr Haberman) to provide “mathematical assistance ... in order to apply determinations made by the Tribunal on the basis of evidence in the record”. The New Experts and the Tribunal signed Terms of Reference on 26 April 2021 and the PCA also signed an engagement letter with PwC on the same date. The Tribunal provided a set of instructions to the New Experts on 30 April 2021 which included determinations relevant to the “five major factors that drive the quantification of Crescent’s loss profits” that had been identified in the Lagerberg/Haberman Joint Report (as summarised in paragraph 313(1) above). On 27 May 2021 the Tribunal sent the New Experts their requested Clarifications on a number of issues, including the use of the Watts model for gas processing, the method for calculating SEWA’s and Oman Chemicals & Pharmaceuticals LLP’s (“OCP”) contractual allocations of gas, and items relevant to the penalties clause in the UAE Federal Electricity and Water Authority (“FEWA”) contract. On 11 June 2021, Mr Lagerberg and Mr Osborne replied with the Lagerberg/Osborne Joint Report, which included calculations of volumes of gas available to Crescent for resale during the damages period, value of damages before any penalties are considered, and values of damages taking into account penalties payable. An update to the Lagerberg/Osborne Report was provided to the Tribunal on 28 June 2021 on the issue of allocation of profits as between CNGC and CGC. On 8 July 2021, in response to requests from the Tribunal, the New Experts provided a further update with a breakdown of supply allocations to certain end-users per delivery year.

VI. CRESCENT'S LOSS OF BARGAIN CLAIM – FACTUAL ISSUES

315. The Respondent disputes the legal admissibility of all of Crescent's claims and denies that the remedies sought are available. In order to address the legal issues raised by the Respondent it is necessary to consider how Crescent quantifies its claims and to identify the factual issues involved, without at this stage seeking to resolve those issues. It is convenient, for this purpose, to refer principally to the arguments advanced in the Parties' respective First Post-Hearing Briefs.
316. In what Crescent described as its "loss of bargain" claim, Crescent claimed USD 13.1 billion plus interest of USD 1.845 billion (calculated to a certain date) as damages for the historic losses it suffered as a result of NIOC's failure to deliver gas under the GSPC between 1 December 2005 (the Commencement Date) and 30 April 2015, when the Remedies Phase of the proceedings commenced.²⁰ The Parties now accept that the relevant terminal date for the purpose of the exercise should be 31 July 2014, the date of the Award on Jurisdiction and Liability, not 30 April 2015.²¹ While that change of date led to a downward adjustment of the amounts claimed to USD 11.644 billion plus interest,²² it does not affect the principles according to which the claim has been calculated.
317. An aspect of the calculation of the above claim to be kept in mind is that the "Crescent" referred to in the calculation or estimation of losses includes CNGC. Consequently, some deconstruction will be necessary in identifying and quantifying the harm suffered by CGC.
318. Crescent's claim is for what are sometimes called 'expectation damages'. As noted above, although there is evidence to the effect that Crescent or its affiliates incurred capital expenditure in the order of hundreds of millions of dollars, in establishing facilities for the purpose of processing and supplying gas, it makes no claim for what is sometimes called reliance loss.²³ As at 31 July 2014 the GSPC remained in force and Crescent was demanding performance.

²⁰ CPHBR1 ¶¶ 48, 57.

²¹ CPHBR2 ¶ 217; RPHBR1 ¶ 941.

²² CPHBR2 ¶ 218.

²³ CPHBR2 ¶ 46. *See also* Liability Hearing, Opening Statements (11 February 2013), Tr., Day 1 at 36-37 ("on both sides this was going to require a very considerable degree of capital investment ... hundreds of millions of dollars. On our side a riser platform, if we were going to use a riser platform, getting the pipeline into Sharjah, and the processing plant, again, is a lot of money"); Lagerberg 1 ¶¶ 3.33-3.34 ("In each of the contracts, the transmission and processing entities were ultimately responsible for any capital expenditure required to build the pipelines and processing plants"); Haberman 1 ¶ 8.17 n.209 (estimating

319. Crescent summarises the loss of bargain claim as follows:

- (1) NIOC failed to deliver gas it had undertaken to deliver.
- (2) From the outset of the GSPC negotiations NIOC knew that the gas was not for Crescent's own use but was for resale in the UAE.
- (3) Crescent did in fact enter into contracts of resale on terms which, except as to price, largely mirrored the GSPC.
- (4) As was known to NIOC, in the event that NIOC did not perform its obligations under the GSPC, there was no available source of gas which Crescent could access.
- (5) In the face of NIOC's failure to deliver gas under the GSPC, Crescent was unable to perform its sub-sales.
- (6) As a matter of causation NIOC's breaches meant that Crescent was unable to earn the profits represented by the difference between the cost of gas under the GSPC [plus the costs of processing it] and its earnings under its sub-sales.²⁴

320. The only two contracts of sub-sale made by CGC were the gas sale and purchase agreement between CGC and CNGC of 8 June 2005 ("**CGC-CNGC GSA**")²⁵ and the gas sale and purchase agreement between CGC and SEWA of 17 January 2004, amended on 30 June 2004 ("**SEWA GSA**").²⁶ However, in the quantification of the claim, sub-sales by CNGC are brought into account. The exercise is said to be one of determining the historic revenues that Crescent would have earned from the sale of processed gas and other products derived from the raw gas purchased by NIOC and deducting the total costs that would have been incurred in order to make those product sales.²⁷ This exercise is being performed after 31 July 2014. Because, in the events that occurred, no gas flowed, elements of estimation and uncertainty were involved, but it is said there is no occasion for speculation as to events or circumstances ahead of the date on which, or by reference to which, the quantification was made.²⁸

Crescent's "upfront capital investment" as USD 223 million, comprising "capital expenditure of USD 128 million for SajGas and USD 95 million for the riser platform and pipeline at UGTC"); Remedies Hearing Tr., Day 1 at 143-144 (Crescent's counsel confirming it is not seeking compensation for reliance loss).

²⁴ CPHBR1 ¶ 47.

²⁵ RC4/88.

²⁶ RC3/1; RD5A/13B.

²⁷ CPHBR1 ¶ 50.

²⁸ CPHBR1 ¶ 64.

321. The quantification process begins with the contention that from 1 December 2005 NIOC would have sold specified volumes of raw, rich, unprocessed, sour gas up to a maximum quantity of 1,050 MMscfd from 1 January 2010. Crescent would have transported, sweetened and processed that raw gas (incurring costs in doing so), before selling: (1) the resulting sweet, processed sales gas to its end-user customers under contracts that already had been, or would have been, entered into and (2) the denuded liquids to known buyers in international markets.²⁹
322. This is a convenient point at which to note that, while quantities under the GSPC and the CGC-CNGC GSA are expressed in terms of MMscfd, quantities under the contracts of sub-sale to end-users are expressed in million British thermal units (“**MMBtu**”). The former measure is volumetric. The second is calorific (related to energy content). The heating value of gas determines the relationship. Under Article 2 of the CGC-CNGC GSA, CGC was obliged to deliver a Daily Contract Quantity (“**DCQ**”) of 600 MMscfd.
323. What was described as the valuation exercise was said to come down to the following equation: Damages = Gas revenues (thermal quantities of gas supplied multiplied by end user sale price) plus liquid revenues (quantities of condensate, liquid petroleum gas (“**LPG**”) and sulphur multiplied by respective market price) less costs.³⁰
324. Gas revenues were quantified on the basis of the following sales:³¹
- (1) The Gas Supply Agreement between CPCIL and FEWA dated 2 April 2003 (“**FEWA GSA**”),³² under which deliveries were scheduled to commence on first gas availability. The gas was for power generation plants in the Northern Emirates. The term was 12 years, with a DCQ of 270,000 MMBtu. Prices began at USD 1.225/MMBtu and were adjusted according to a formula. The price was subject to a ceiling of USD 1.6/MMBtu, which it is said FEWA would have agreed to remove from the eighth contract year.
 - (2) The SEWA GSA dated 17 January 2004 and its amendment dated 30 June 2004, under which deliveries were scheduled to commence on 1 January 2006.³³ The gas was for power

²⁹ CPHBR1 ¶ 51.

³⁰ CPHBR1 ¶ 61.

³¹ CPHBR1 ¶ 52.

³² RC2/31.

³³ RC3/1; RD5A/13B.

generation in Sharjah and the Northern Emirates. The term was 25 years. The quantities commenced at 200,000 MMBtu rising to 250,000 MMBtu. The price was USD 1.25/MMBtu, which was adjusted according to a formula from the eighth year.

- (3) The Gas Supply Agreement between CNGC and Alchem Limited (“**Alchem**”) dated 7 July 2004 (“**Alchem GSA**”),³⁴ under which deliveries probably would have commenced on or around 1 January 2009. The gas was for use as feed-stock in a gas-to-liquids plant in the Hamriyah Free Zone. The term was 22 years. The quantities began at 50,000 MMBtu rising to 150,000 MMBtu. The price began at USD 1.28/MMBtu adjustable after 5 years.
- (4) The Gas Supply Agreement between CNGC and OCP dated 9 July 2005 (“**OCP GSA**”),³⁵ under which deliveries would have commenced on or around 1 January 2007. The gas was for feed-stock for an intended urea and ammonia plant in the Hamriyah Free Zone. The term was 24 years. The DCQ was 46,000 MMBtu. The price was USD 1.5/MMBtu to be adjusted according to a formula after 6 years.
- (5) The Gas Sales Agreement between CNGC and Dubai Natural Gas Company Limited (“**DUGAS**”) dated 3 February 2005 (“**DUGAS GSA**”),³⁶ which would have been in place for a year until other end-users required delivery. The DCQ was up to 50,000 MMBtu. The price was USD 1.26 MMBtu.
- (6) The undated and unsigned Gas Supply Agreement between the Dubai Supply Authority (“**DUSUP**”) and CGC (“**DUSUP GSA**”).³⁷ The terms were finalised and the agreement would have been signed if gas had flowed. The DCQ was 50,000 MMBtu at a price of USD 0.90 MMBtu.
- (7) The Gas Supply Agreement between CNGC and the Hamriyah Steel Free Zone Company (“**Hamriyah Steel**”) dated 1 June 2009 (“**Hamriyah Steel GSA**”),³⁸ with deliveries to commence in 2009. The gas would have been used as fuel for a steel plant in the Hamriyah

³⁴ RC3/413.

³⁵ RC4/183.

³⁶ RC3/589.

³⁷ RC3/581.

³⁸ RC5/308.

Free Zone. The DCQ for 24 years was 6,000 MMBtu. The price was related to the Henry Hub price.

325. The total of the above quantities amounts to about 80% of the 1050 MMscfd that Crescent contends NIOC was obliged to supply. The balance of the volumes not sold under the above contracts would have been sold, at substantially higher prices, to “Other End-Users”. From 2010, Crescent says it would have sold up to 200 MMscfd to DUSUP at a price related to the price of LNG.³⁹
326. Crescent says it also lost substantial revenues from the sale of products (LPG, condensate and sulphur) that would have been extracted from the raw GSPC gas through processing at Shalco and DUGAS facilities.⁴⁰
327. In addition to the unit cost of gas under the GSPC, Crescent says it would have incurred costs under the following agreements to get the gas and liquids to market:⁴¹
- (1) The Gas Transmission Agreement between CNGC and United Gas Transmissions Company Limited (“UGTC”) dated 7 November 2004⁴² to transfer raw gas from the Delivery Point to Sharjah.
 - (2) The Memorandum of Understanding between CNGC, SEWA, FEWA, UGTC and Emirat General Petroleum Corporation (“**Emarat**”) dated 3 January 2006 (“**Emarat MoU**”),⁴³ relating to a proposed joint venture for a pipeline from the Shalco processing plant to customers.
 - (3) The Heads of Agreement between CNGC and Consolidated Transmission Incorporated (“**CTI**”) dated 6 June 2005⁴⁴ relating to the transmission of gas to the DUGAS plant in Dubai for processing and onward supply.

³⁹ CPHBR1 ¶ 53.

⁴⁰ CPHBR1 ¶ 54.

⁴¹ CPHBR1 ¶ 55.

⁴² RC3/491.

⁴³ RC4/415.

⁴⁴ RC4/84.

- (4) The Gas Sweetening Agreement between CNGC and Sajaa Gas Private Limited Company (“**SajGas**”) of 2 July 2004⁴⁵ concerning a gas sweetening and sulphur recovery plant at Sajaa.
 - (5) The Processing Agreement between CNGC and DUGAS dated 3 February 2005 relating to sweetening and processing raw gas destined for sale to DUGAS and DUSUP.⁴⁶
 - (6) The Shalco processing agreement. It is said that if gas had flowed, Crescent would have entered into a gas processing agreement with Shalco, under which Shalco would have received sweetened gas from the SajGas plant for processing and denuding any entrained liquid content.⁴⁷
 - (7) The Export Sulphur Transportation Agreement between CNGC and Gulftainer Company Limited (“**Gulftainer**”) dated 21 November 2005 and the Liquid Sulphur Transportation Agreement between CNGC and Gulftainer of the same date.⁴⁸
328. The revenues less costs were quantified (to 30 April 2015) by Crescent’s expert Mr Lagerberg at USD 13,111 million.⁴⁹
329. The Respondent made detailed criticisms of the steps in the reasoning and calculation process by which the above figures were attained. The Respondent’s expert on quantification was Mr Haberman. However, before getting into such detail, the Respondent says that the claim is self-evidently exorbitant and disproportionate.⁵⁰ Under the claim scenario, NIOC (the resource owner) receives an average revenue equivalent to USD 1.51 per thousand standard cubic feet (“**Mscf**”) of gas while Crescent receives an average revenue of USD 6.61 per Mscf. Crescent claims for an average unit profit of USD 4.70 per Mscf, which is three times NIOC’s average unit revenue. Crescent’s claimed profits of USD 13.1 billion are to be compared to NIOC’s revenues of USD 4.2 billion.⁵¹ Mr Haberman, in his second report, asserted that the estimated

⁴⁵ RC3/374.

⁴⁶ RC3/589.

⁴⁷ CPHBR1 ¶¶ 448-451 *referring to* Watts 1 ¶ 92; Danhash 2 ¶ 9.

⁴⁸ RC4/264; RC4/316.

⁴⁹ Lagerberg 2 ¶ 3.3. As noted above, this sum was adjusted to USD 11,644 million in CPHBR2 ¶ 218.

⁵⁰ RPHBR1 ¶ 1067.

⁵¹ RPHBR1 ¶ 1067.

profits were between 65 and 175 times those which the negotiations and the terms of the GSPC suggest the parties expected, and the Implied Rate of Return on the project if Crescent's calculations were correct was completely out of line with comparables.⁵² Mr Lagerberg's calculations, he said, equate to a return of more than Crescent's capital expenditure, every year.⁵³ As will appear, the matter takes on a somewhat different complexion if attention is confined to CGC's loss of profits, which were largely (although not entirely) based on resale of the gas under its contracts with CNGC and SEWA. However, for the present it is convenient to pursue Crescent's claim as quantified by Mr Lagerberg.

330. A major element in the quantification of Crescent's claim is the volume of gas which is to be taken to have been supplied by NIOC in what both Parties have described as "the but-for scenario":
- (1) There is a dispute between the Parties as to the extent of NIOC's contractual obligation to supply. This involves issues as to the construction of the GSPC, but for the present it is sufficient to indicate their nature. Paragraphs 7 and 8 of the Second Amendment to the GSPC are relevant. NIOC's contention is that under paragraph 7 Crescent had the option to increase the DCQ from 330 MMscfd to 500 MMscfd from mid-2008 but had no right to increase the amount above 500 MMscfd. NIOC says that paragraph 8 of the Second Amendment, which could have given a further option, was not engaged. The option was to increase the amount up to the ultimate allowable capacity of the Pipeline and associated facilities and was subject to availability.⁵⁴ These contentions raised issues of law and fact that were extensively canvassed in evidence and argument.
 - (2) NIOC disputes that Crescent would have been able to take the amount of gas it has assumed would be available during the claim period. Issues as to the availability of facilities and their capacity were debated, as well as the need to allow for contingencies. NIOC says that, at the Commencement Date, Crescent had no agreement in place with Shalco, and no tie-in of the SajGas plant had occurred, as the SajGas plant had not been commissioned. It says that on the Dubai side, no agreements had been finalised with CTI (the pipeline

⁵² Haberman 2 ¶¶ 8.13-8.29.

⁵³ Haberman 2 ¶ 8.26.

⁵⁴ RPHBR1 ¶¶ 1297-1435.

owner), DUGAS (the processor) or DUSUP (the purchaser).⁵⁵ A major item of uncertainty, according to NIOC, was whether concerns about US sanctions would have prevented agreements for the use of the Shalco plant, which was operated by BP and in which BP was a shareholder.⁵⁶

- (3) NIOC says that, had gas flowed, there would have been a major interruption to supply because of defects in the Khuff Production Platform-Sirri Island pipeline.⁵⁷

331. Another major element in quantification concerned the assumed price at which gas would have been obtained from NIOC over the ten-year period.

332. The GSPC contains a price review clause and there was evidence and argument as to its potential application. The arguments were not entirely consistent with those that had been advanced in the Jurisdiction and Liability Phase, at a time when NIOC was concerned to demonstrate the unfairness of the Contract, and Crescent was concerned to rebut that suggestion. There was a major (although by no means steady) increase in oil prices after the execution of the GSPC in 2001. According to NIOC, this was the main reason for the extraordinary profits that Crescent assumes it would have made on the re-sale of gas and the sale of products, and this would have triggered a price review that would have restored the balance of advantage contained in the original bargain.⁵⁸ NIOC says (and Crescent denies) that Crescent's assumption that the price under the GSPC would not have changed is invalid and the prospect of price revision is at least an important factor of uncertainty. NIOC said the Tribunal should consider what would have been the effect of a reasonable price revision on any losses.⁵⁹ Crescent says, among other things, that NIOC never applied for price review under the GSPC and the price was never in fact reviewed; the contract price remained in force.

333. There was also disagreement about the assumptions as to obtainable prices for gas and products made in Mr Lagerberg's calculations, supported by evidence from other witnesses. According to NIOC, the only potentially relevant purchasers for volumes up to 500 MMscfd were SEWA, FEWA, and perhaps OCP and Hamriyah Steel, and their respective prices were subject to their

⁵⁵ RPHBR1 ¶¶ 1160, 1161.

⁵⁶ RPHBR1 ¶ 1185.

⁵⁷ RPHBR1 ¶ 1522.

⁵⁸ *See, e.g.*, RPHBR1 ¶¶ 1065, 1623, 1722-1725.

⁵⁹ RPHBR1 ¶ 1735. *See also* Closing Arguments Tr., Day 1 at 162; Day 3 at 142, 167, 222, 273.

contracts.⁶⁰ It is important to note that the corollary of NIOC's argument is that, up to 31 July 2014, all the gas that should have been delivered under the GSPC had been re-sold before the due dates for delivery and the (daily) breaches of contract.

334. Because CNGC is not only a separate legal entity, but also one in which 35% of the shares are held by a publicly listed company which itself is said to have thousands of shareholders, it appears to the Tribunal that there is no legal basis, as a matter of either Iranian or English law, upon which it can simply be assimilated by the Claimants for the purpose of calculating profits lost in consequence of NIOC's breach of contract.
335. The evidence demonstrated that, if gas had flowed, it would have been CNGC, not CGC, that would have supplied gas and products to other customers. There was a special position with respect to SEWA that will be explained below. Subject to that, all the actual or projected contracts of supply to parties outside the Crescent group were to be undertaken by CNGC.⁶¹ Although the Claimants were concerned to deny that Crescent's role in the project was merely that of a "middle-man",⁶² that may not be an unfair description of the role of CGC itself.
336. As appears from paragraph 290 above, putting interest to one side, the award sought in respect of CGC's lost profits (which requires some revision because the claim is taken up to 30 April 2015 rather than 31 July 2014) is USD 4.275 billion. There is also an award sought in respect of all liabilities of CGC to CNGC under the CGC-CNGC GSA in respect of CNGC's lost profits and those lost CNGC profits are quantified (up to 30 April 2015) at USD 8.835 billion. The latter, however, is not a claim by CGC for loss of profits. That is of some relevance to the potential application of a provision of Iranian law which, as will be seen below, is said by NIOC to preclude any claim for damages to compensate for loss of profits. The claim for damages to compensate for loss of profits is that of CGC which, subject to an adjustment by reason of the cut-off date, is USD 4.275 billion, and is calculated by reference to two specific contracts, the SEWA GSA and the CGC-CNGC GSA.

⁶⁰ RPHBR1 ¶ 1538.

⁶¹ See the contracts listed in paragraph 324 above.

⁶² CPHBR1 ¶¶ 694-695.

337. As to that part of Crescent's claim for damages which is based upon CNGC's lost profits, and CGC's alleged liability to CNGC in respect of those lost profits, when it comes to quantifying the lost profits the same general issues as described above arise.
338. Furthermore, that part of the claim raises issues as to the putative liability of CGC to CNGC. The liability is said to arise out of the CGC-CNGC GSA. That is a contract governed by the laws of the UAE (Article 21). There is no evidence on the record as to the law of the UAE,⁶³ and Crescent relied upon the assumption that it is the same as the law of the place of arbitration, that is, England. NIOC successfully resisted an attempt by Crescent to lead evidence of UAE law late in the proceedings, but did not seek to lead evidence of UAE law itself. The Tribunal will act on the basis that there is no practical difference between UAE law and English law.
339. So far as appears from the evidence, there has never been any liability of CGC to CNGC established by a decision of a court or an arbitral award, or any formal claim, or any formal admission of liability. There is no evidence of any entry in the accounts of either CGC or CNGC relating to such a liability.⁶⁴ There is an assertion by Crescent of an "understanding" that CGC will compensate CNGC.⁶⁵ NIOC says there is nothing in respect of which the Tribunal could award damages whether under Iranian or English law.⁶⁶
340. NIOC contends that:
- (1) no legal liability on the part of CGC to CNGC can be assumed and none has been proved;
 - (2) the amount of any putative liability is unknown and unknowable; and

⁶³ See the Parties' response to the Tribunal's Questions 32 and 33 in Procedural Order No. 36, at CPHBR2 ¶¶ 134-143, RPHBR2 ¶¶ 241-250. *See also* Closing Arguments Tr., Day 2 at 51-53, 60-61 (with possible exception for treatment of the issue of interest); Day 3 at 67-69, 70.

⁶⁴ See Crescent's explanation in CPHBR1 ¶ 770 that "it is undesirable to express in formal terms the liability that CNGC has vis-à-vis CGC," as a claim "made formally ... would have to appear in CGC's accounts with the consequence that CGC's auditors would be obliged to opine that CGC was insolvent".

⁶⁵ CPHBR1 ¶ 770. *See also* Remedies Hearing Tr., Day 1 at 161; Crescent's Reply on Damages ¶¶ 67-68, 247-248; Crescent's Skeleton on Remedies ¶¶ 55, 59-60, Closing Arguments Tr., Day 2 at 2, 23ff, 138.

⁶⁶ RPHBR1 ¶ 1753. *See also* Remedies Hearing Tr., Day 2 at 165, 245ff, 256; Closing Arguments Tr., Day 3 at 42ff.

- (3) it was unforeseeable to NIOC, at the time of contracting, that it might be held liable in respect of CGC's lost profits, and also for alleged liabilities of CGC under a contract of which it had no knowledge and to a party of which it had no knowledge.⁶⁷

⁶⁷ RPHBR1 ¶¶ 1755-1766.

VII. CRESCENT'S CLAIM FOR DECLARATORY RELIEF

341. CGC has raised the matter of liability to SEWA and to CNGC beyond CGC's liability in respect of CNGC's lost profits. Such liability may, for example, be by reason of claims against CNGC by third parties arising out of the fact that the gas did not flow.
342. There have been some references in evidence to legal proceedings against CNGC by third parties and a reference in correspondence to two "significant" judgments against Crescent by the Sharjah courts in favour of OCP and Emarat,⁶⁸ but no attempt has been made to establish the facts that would be relevant to establishing or quantifying potential liabilities of those companies to particular third parties.
343. NIOC makes the arguments as set out in paragraph 340 above in respect of this claim.

⁶⁸ Crescent's letter to the Tribunal dated 28 May 2019; Crescent's Memorial on Remedies, *referring to* Letter from SEWA to Crescent Petroleum, RC5/p. 8; Letter from CPCIL to NIGEC attaching a letter from SEWA dated 23 November 2006, RC5/p. 19; Letter from CPCIL to NIGEC attaching a letter from SEWA dated 21 March 2008, RC5/p. 242; Letter from CPCIL to NIOC attaching a letter from SEWA dated 10 November 2008, RC5/p. 287; Letter from SEWA to CPCIL RC5/300; Makkawi 4 ¶¶ 30-33, 36-50, 59. *See also* Final Hearing Tr., Day 2 at 98-99.

VIII. IRANIAN LAW ISSUES

A. GOVERNING LAW

344. The governing law of the GSPC is the law of Iran (Article 22.1). Section 46(1) of the English Arbitration Act requires that the dispute shall be decided in accordance with that law.
345. The Civil Code and the CCP 2000 are the codes of principal relevance to this dispute. Article 221 of the Civil Code is relied on by the Claimants as the primary source of their right to claim damages.⁶⁹
346. Article 1 of the CCP 2000 states that it is to be applied in all civil and commercial suits by all courts, including the Supreme Court of Iran, and other authorities which are required to observe it.⁷⁰ Its terms reflect the fact that most of the provisions of the Code are procedural, not substantive. There is a part of the Code (Part Seven) dealing with arbitration and containing a special set of rules on that topic.
347. Further, or alternatively, the Claimants rely upon:
- (1) Article 26 of the GSPC;
 - (2) the doctrine of *lazarar*; and
 - (3) tortious principles.⁷¹
348. Article 26 of the GSPC entitles the Buyer, in a case such as the present, to refer “any arising loss or claim” to arbitration and so, it is said, entitles the Buyer to claim lost profits.⁷² The significance of this provision, either standing alone or taken in conjunction with Article 221, will need to be considered in connection with the argument described further below that Article 515 of the CCP 2000 precludes an award of damages for lost profits.

⁶⁹ CPHBR1 ¶¶ 735-736.

⁷⁰ RPHBR1 ¶ 696.

⁷¹ CPHBR1 ¶ 736(b).

⁷² CPHBR1 ¶ 736(b), Iranian Law Annex ¶¶ 119-120.

349. The doctrine of *lazarar* was the subject of consideration in the Award on Jurisdiction and Liability.⁷³ It is a doctrine that provides a remedy where a party exercises a right abusively for a collateral purpose. The Claimants have invoked this doctrine here, and in a number of other contexts, as if it were some kind of universal remedy. In the view of the Tribunal, the doctrine has no application in this, or any of the other contexts in which it has been invoked.
350. It was said that the tortious principles relating to *etlaaf* (destruction) and *tasbib* (causation) also entitle CGC to recover its lost profits. The Claimants said that, since a contractual right is property, someone who causes loss to that right is responsible to compensate for lost profit in the same way as under the rule of tort in Article 320 of the Civil Code.⁷⁴
351. There is a dispute as to whether, before the year 2000, Article 221 of the Civil Code, standing alone, would have supported a claim of the kind made by CGC. It is common ground, however, that from 1939 to 2000, Article 221, together with Article 728 of the Iranian Code of Civil Procedure of 1939 (“**CCP 1939**”), would have supported at least some kinds of claim for damages for lost profits resulting from a breach of contract.⁷⁵
352. The Respondent contends that, since the year 2000, there is now a substantive provision of Iranian law (Note 2 to Article 515 of the CCP 2000) which precludes the recovery of damages for loss of profits resulting from the Respondent’s failure to deliver gas to CGC in breach of the GSPC.⁷⁶ There are other issues of Iranian law. There are, for example, issues as to the purpose of an award of damages for breach of contract, the existence of rights of indemnity in respect of liability to third parties, and the availability of interest. There was also an issue as to the remedy of specific performance, and the consequences for any claim for damages of the Claimants’ failure to pursue that remedy, but, as noted at paragraphs 303-304 above, that issue has not been pursued.
353. The Claimants do not accept that the CCP 2000 applies to this arbitration, or that Article 515 is substantive, or that Article 515 and specifically Note 2, means what the Respondent says it means. The Claimants contend that the principal sources of the Tribunal’s power to award damages to

⁷³ Award on Jurisdiction and Liability ¶¶ 434-446.

⁷⁴ CPHBR1 ¶ 736, Iranian Law Annex ¶¶ 126-128; CPHBR2 ¶¶ 111-112.

⁷⁵ See RPHBR1 ¶¶ 354, 401-429.

⁷⁶ See, e.g., RPHBR1 ¶¶ 355, 463-714.

CGC for its lost profits are Article 221 of the Civil Code and section 48 of the English Arbitration Act.⁷⁷

B. PROCEDURAL DEVELOPMENTS CONCERNING IRANIAN LAW

354. In Crescent's Memorial on Remedies, CGC's claims against NIOC were stated to include:

- (1) The loss of profits suffered by CGC in respect of its supply contract with its midstream and marketing subsidiary CNGC, and its supply contract with its customer SEWA.⁷⁸

355. That claim was quantified at USD 4,375 million.⁷⁹

356. Exhibits to Crescent's Memorial on Remedies included the fifth expert report of Mr Katirai.

357. That report, dated 21 May 2015, referred to Article 221 of the Civil Code, to be read with Articles 220 and 225. Dealing with "Compensation for Lost Profits", he said that some confusion has been caused by Article 515 of the CCP 2000.⁸⁰ He said that Note 2 to Article 515 has been interpreted, not as debarring a claimant from recovering lost profits generally, but as debarring claimants from recovering speculative profits, *i.e.*, profits which are not realizable.⁸¹ In paragraph 39(c), he cited a commentator who says what may not be demanded is "damages from damages", *i.e.* damages caused by the loss of profits (consequential loss). At paragraph 39(f), he cited another commentator who says the critical distinction is between "realizable profits" and "speculative profits".

358. In the Respondent's Counter-Memorial on Remedies of 3 February 2016, NIOC said that the claim in (1) above is not an available remedy under Iranian law. The Counter-Memorial included a first report of Dr Mehrpour dated 3 February 2016. That report demonstrated, it was said, that claims for compensation for lost profits in the event of breach of contract are expressly prohibited under Iranian law, specifically, by Note 2 to Article 515 of the CCP 2000.⁸² Where the Civil Code

⁷⁷ CPHBR1 ¶¶ 744, 745.

⁷⁸ Crescent's Memorial on Remedies ¶ 8.

⁷⁹ Crescent's Memorial on Remedies ¶ 17(a).

⁸⁰ Katirai 5 ¶ 35.

⁸¹ Katirai 5 ¶ 36.

⁸² NIOC's Counter-Memorial on Remedies ¶ 150.

allows for payment of compensation for breach of contract, compensation is limited to reasonable costs and expenses incurred.⁸³

359. Dr Mehrpour's report said in paragraphs 26 and 28, after having referred to the primacy of the remedy of specific performance, that, in Islamic law, the ultimate sanction for failure to perform an obligation is termination of the contract by the non-breaching party and restoration of the situation as it existed before the conclusion of the contract. He went on to explain the legislative history and purpose of Note 2 to Article 515 of the CCP 2000. He denied that Article 221 of the Civil Code treated loss of profits as potentially compensable damage and said that position had been achieved only by Article 728 of the CCP 1939, which was repealed in 2000 at the same time as Article 515 was enacted. He said that some religious scholars, like many present day legal scholars, believe that recovery of damages for lost profits can be justified, but the prevailing opinion is to the contrary and is reflected in Article 515 Note 2. Some professors of law have tried to interpret and downplay Note 2, but their views are unacceptable.⁸⁴ Other writers and scholars give Note 2 its literal meaning, even if with some regret.⁸⁵
360. In Crescent's Reply on Remedies of 25 April 2016, which was accompanied by the sixth expert report of Mr Katirai, of the same date, there was an argument that Article 515 of the CCP 2000 was irrelevant, and that the availability of remedies was determined by sections 48 and 49 of the English Arbitration Act, having regard as necessary to Iranian law, such as Article 221 of the Civil Code. Article 515 Note 2 is a procedural bar preventing a claimant in domestic Iranian court proceedings from demanding lost profits. In any event, it was said, Note 2 does not mean what the Respondent says it means. It means that "speculative profits in the nature of damages *upon damages* may not be recovered".⁸⁶
361. In Mr Katirai's sixth report of 25 April 2016 itself, which was accompanied by some 300 pages of materials, he said that Article 515 of the CCP 2000 is procedural (the substance being dealt with by Article 221 of the Civil Code) and says nothing about substantive rights or domestic or international arbitration.⁸⁷

⁸³ NIOC's Counter-Memorial on Remedies ¶ 163.

⁸⁴ Mehrpour 1 ¶¶ 54, 55.

⁸⁵ Mehrpour 1 ¶¶ 58-61.

⁸⁶ Reply on Remedies ¶ 84 [emphasis in original].

⁸⁷ Katirai 6 ¶ 16.

362. On legal interpretation generally, Mr Katirai cited an authority on the need to read laws consistently with one another.⁸⁸ He said that if Article 515 means what the Respondent says,⁸⁹ it creates a number of anomalies in the legal system.
363. Mr Katirai said that “the Note only debars a plaintiff from seeking speculative damages or damages upon damage”.⁹⁰ He supported this by reference to a cognate provision, Article 267 of the CCP 2000 (dealing with loss resulting from an expert’s breach of duty). His views and his references to commentary were accompanied by linguistic analysis, including reference to the difference between “loss” and “damage” on the one hand and “damages” on the other.
364. The Respondent’s Counter-Memorial on Remedies of 19 August 2016 was accompanied by the second report of Dr Mehrpour of the same date.
365. The Respondent argued that substantive Iranian law determines whether or not lost profits are compensable and whether or not one can be compensated by an award of damages in respect of losses not yet suffered. Sections 48 and 49 of the English Arbitration Act are irrelevant.⁹¹
366. As to the lost profits allegedly suffered by CGC, the Respondent said that Article 515 Note 2 is controlling.⁹²
367. Prior to the Remedies Hearing of 3-23 November 2016, Mr Katirai, on 13 October 2016, supplemented his references to Iranian law authorities. On 7 November 2016, the Respondent submitted additional Iranian law authorities. Included in the additional authorities submitted by Mr Katirai was an extract from Dr Katouzian’s text on “General Principles of Contracts” which discussed what the author referred to as “the ‘lost profit’ debate”.⁹³
368. Towards the conclusion of the cross-examination of Mr Katirai at the Remedies Hearing, Mr Katirai was questioned about previous opinions he had given on Iranian law which the

⁸⁸ Katirai 6 ¶ 51.

⁸⁹ Katirai 6 ¶ 96.

⁹⁰ Katirai 6 ¶ 99.

⁹¹ RPHBR1 ¶¶ 647-648, 783.

⁹² RPHBR1 ¶ 751.

⁹³ Dr Nasser Katouzian, *General Principles of Contracts*, vol. 4, *Performance of Contract* (2008), items 822, 834, 865; RD1C/16 and RPHBR1 Annex C/9 and Crescent’s RPHSIL Annex D/9.

Respondent said were more consistent with the case for the Respondent than with the case for the Claimants.⁹⁴

369. On 28 February 2017, the Claimants filed their First Post-Hearing Brief on Remedies, which included submissions on Iranian law and supporting material.
370. On 7 June 2017, the Respondent filed its First Post-Hearing Brief on Remedies, which was accompanied by extensive material concerning Iranian law.
371. The Claimants protested, and sought rejection of the Respondent's further material, which it was said went beyond the scope of the Tribunal's directions. On 5 July 2017, the Tribunal rejected the Claimants' application, but gave the Claimants leave to file responsive material in their second post-hearing brief. On 23 August 2017, the Claimants filed a second post-hearing brief with responsive material on Iranian law. On the same day, the Respondent filed its second post-hearing brief consisting mainly of answers to written questions from the Tribunal.
372. There was a further hearing on 1-5 October 2017 to hear arguments, at the conclusion of which both Parties confirmed they had had a full and complete opportunity to make submissions.⁹⁵
373. Additionally, as recounted above at paragraphs 188-193, pursuant to Procedural Order No. 37, the Parties have had further opportunities to update the Tribunal with additional materials on Iranian law.
374. On 6 November 2019 and 25 May 2020, the Tribunal addressed to the Parties questions on Iranian law and received written responses on 30 June 2020. The responses included references to some materials that had not previously been before the Tribunal. The Respondent, for example, referred to two 2019 decisions of the Tehran Court of Appeal.
375. Crescent applied to introduce into the record an award in ICC Case No. 17533 (the Caspian Case), a case governed by Iranian law in which a claim for lost profits was allowed. In that case an affiliate of NIOC was the respondent. Counsel included some of NIOC's counsel in the present case and the respondent's expert witness on Iranian law was Dr Mehrpour. In fact the award had been referred to briefly in evidence at the previous Remedies Hearing,⁹⁶ although neither party

⁹⁴ Remedies Hearing Tr., Day 14 at 10-18.

⁹⁵ Closing Arguments Tr., Day 5 at 210-211.

⁹⁶ Remedies Hearing Tr., Day 14 at 66-67.

had developed any argument based on its reasoning. An article by the expert on Iranian law called by the claimant in the Caspian Case, written after the award and referring to it, had also been before the previously constituted Tribunal in the present case. Dr Mehrpour's written and oral testimony in the Caspian Case was put before the currently constituted Tribunal to rebut an assertion that it was in some way inconsistent with his evidence in this arbitration. After the Tribunal allowed Dr Mehrpour's testimony to be introduced into the record, NIOC withdrew its objection to the introduction of the Caspian Case award into the record. Although the applications concerning that award may have been procedurally unnecessary, they served to direct attention to the Caspian Case, which will be discussed further below.

376. In its May 2020 questions, the Tribunal invited the Parties to address Iranian law, before and after 2000, on the remedies available to a buyer of goods in the case of non-delivery by a seller. As to the time following 2000, the Tribunal invited particular reference to the part of Article 515 of the CCP 2000 referring to market value, or quantum meruit, in the case of non-delivery of the subject matter of the claim. The submissions of the Parties in response are discussed in the Tribunal's analysis of the "Preclusion Issue" below.

C. ASCERTAINMENT OF IRANIAN LAW

377. On the question of damages for loss of profits, both Parties have, by extensive evidence and argument, advanced positive cases on the content of Iranian law. The Respondent alleges that Iranian law precludes the recovery of damages of the kind claimed. That allegation is denied by the Claimants. This raises an issue to be determined, on the evidence, by the Tribunal (the "**Preclusion Issue**").
378. There is disagreement between the Parties as to the operation of a default principle as to the application of English law in the event that the Tribunal is left in a position where it cannot resolve the issue identified in the previous paragraph.⁹⁷ There is also disagreement as to the onus of proof.⁹⁸ In the event it has not proved necessary to resolve these issues.
379. Each side called an expert witness to support its case on Iranian law. As would be expected, there is a substantial area of common ground. Iran is a civil law country. Written laws, typically in the form of codes, provide the answer to most legal questions. Custom and usage may be relevant.

⁹⁷ CPHBR1 ¶¶ 41-45; RPHBR1 ¶¶ 129-154.

⁹⁸ CPHBR1 ¶ 45; RPHBR1 ¶ 132.

There is no system of binding judicial precedent. The writings of learned commentators can play an important role in legal interpretation. The role of Islamic law and its relationship to the civil law was discussed by the experts. The differences on that point appeared to be more a matter of emphasis than of conflict.⁹⁹ One matter that received particular consideration in the evidence was the significance of the Islamic Revolution of 1979 upon the content of law and upon law-making. It seems clear that, whatever the exact meaning of Note 2 to Article 515, it followed intervention by a body known as the Guardian Council, which, pursuant to the Iranian Constitution, has a responsibility of monitoring new laws, and is a guardian of the faith.¹⁰⁰

380. Neither side relied solely upon the evidence of its expert witness. Both sides relied upon evidence, including learned commentary, and upon argument, going beyond the materials advanced by the experts.
381. The issue raised by CGC's lost profits claim is a subject upon which there has been scholarly debate in Iran. Dr Katouzian, in 2008, referred to "the 'lost profit' debate".¹⁰¹ The Respondent said on 7 June 2017 that "the debate as to Article 515 Note 2 continues to this date".¹⁰² The Respondent characterizes it as a debate about what the law should be rather than a disagreement about what the law is.¹⁰³ When the Claimants' expert, Mr Katirai, first raised the matter, he spoke of "confusion".¹⁰⁴ The Tribunal invited the Parties to inform it of any material contribution to the debate since June 2017 and received further material. It is not suggested that, whatever the compass of the debate may be, it has been resolved.

D. IRANIAN CONSTITUTION

382. The Constitution of the Islamic Republic of Iran, 1980 ("**Constitution**") contains the following provisions:

(1) Article 4:

⁹⁹ CPHBR1 ¶ 732; RPHBR1 ¶¶ 226-251.

¹⁰⁰ Constitution, Articles 72, 91, RD6A/2.

¹⁰¹ Dr Nasser Katouzian, *General Principles of Contracts*, vol. 4 (5th ed., Enteshar, 2008), items 822, 834, 865, RD1C/16 and RPHBR1 Annex C/9 and Crescent's RPHSIL Annex D/9.

¹⁰² RPHBR1 ¶ 577.

¹⁰³ RPHBR1 ¶¶ 600, 605.

¹⁰⁴ Katirai 5 ¶ 35.

All laws and regulations including civil, criminal, financial, economic, administrative, cultural, military, political or otherwise, shall be based on Islamic principles. This article shall apply generally on all the Articles of the Constitution and other laws and regulations. It shall be decided by the Islamic jurists [*Faqihs*] of the Guardian Council whether or not such laws or regulations conform to this Article.

(2) Article 72:

The *Majlis* [The Islamic Consultative Assembly] may not enact laws contrary to the principle and rules of the official faith of the country or the Constitution. This matter shall be decided by the Guardian Council in the manner set forth in Article 96.

(3) Article 94:

All legislation passed by the *Majlis* shall be sent to the Guardian Council. Within a maximum of ten (10) days from the date of its receipt, the Guardian Council shall be required to examine the same to ensure that it conforms to the principles of Islam and the Constitution. If the Guardian Council finds any inconsistency in the legislation it shall return it to the *Majlis* for review. Otherwise the said legislation will be enforceable.

(4) Article 96:

The majority of *Faqihs* of the Guardian Council shall decide whether or not the legislation passed by the *Majlis* is in conformity with the precepts of Islam. The majority of all members of the Guardian Council shall decide whether or not the same complies with the provisions of the Constitution.

(5) Article 167:

A judge shall be required to try to find out the verdict of every lawsuit in codified laws; if he fails to find out, he shall render a verdict on the matter under consideration based on authoritative Islamic sources or authoritative Fatwas. He may not refrain from dealing with the case and rendering a judgment on the pretext of silence, inadequacy or brevity of or contradictions in codified laws.¹⁰⁵

E. IRANIAN CODES

383. The following provisions of Iranian Codes were in effect at the date of the GSPC and, unless otherwise indicated below, remain in force:

¹⁰⁵ RD6A/2.

(1) *Civil Code, 1928*

- (a) Except for what appears under (f) below, what follows is from a translation provided for the purposes of the hearing on jurisdiction and liability.¹⁰⁶
- (b) Part 2 of the Code is headed “Regarding Contracts, Transactions and Obligations”.
- (c) Chapter 1 of Part 2 is headed “Contracts and Obligations in General”.
- (d) Article 183 in Chapter 1 of Part 2 provides:

Article 183 – A contract is made when one or more persons make a mutual agreement with another one or more persons, on a certain thing, and that agreement is accepted by the latter person.
- (e) Article 185 defines a binding contract, and Article 190 states the essential conditions for validity.
- (f) Section 3 of Chapter 1 of Part 2 is headed “Regarding the Effect of Contracts”. It includes Article 221 which, in a translation adopted by Dr Mehrpour, provides:

Article 221 – If any party undertakes to perform or refrain from performing any act, he is liable to pay compensation to the other party in the event of his failure to fulfil this undertaking, provided the compensation for losses incurred by such a failure is specified in the contract or is understood as being specified in accordance with custom or provided such compensation is stipulated by law¹⁰⁷

A translation adopted by Mr Katirai provides:

Article 221 – If one undertakes to perform an act or to refrain from an act, in case of default, he shall be responsible for the damages sustained by the other party, provided however that compensation for such damage is specified in the contract, or, by virtue of custom and usage, it is understood to be included in the contract as if it was included therein, or payment of such compensation is required by law.¹⁰⁸

- (g) Section 3 also includes Articles 222, 224, 225 and 226 which provide:

Article 222 – If an undertaking is not fulfilled, the court may, with due regard to the preceding article, permit the party for whose benefit such undertaking was made, to carry out the undertaking himself and hold the party who has defaulted responsible for the payment of the costs.

Article 224 – The wording of a contract shall be read according to the meaning understood by customary law.

¹⁰⁶ Volume J of the hearing bundle in the Jurisdiction and Liability Phase.

¹⁰⁷ RD6B/3.

¹⁰⁸ RD1A/2 and RD1B/10.

Article 225 – If certain points that are customarily understood in a contract by customary law or practice are not specified therein they are nevertheless to be considered as mentioned in the contract.

Article 226 – In the event of non-fulfilment of an undertaking by one party, the other party cannot claim damages for loss sustained, unless a special period was fixed for fulfilment of the undertaking and that period has expired. If no period was fixed for the fulfilment of the undertaking a party can only claim damages if the power for fixing the period for such fulfilment was vested in him and if he proves that he asked for the fulfilment of the obligation.

Article 228 – If the object of an agreement consists of the payment of a sum in cash, the judge can, subject to the terms of Article 221, convict the debtor to pay compensation for losses incurred through delay in the payment of his debt.

- (h) Chapter 3 of Part 2 deals with “Special Types of Contracts,” including sales.
- (i) Chapter 3 also deals with “Partnerships”, including profit-sharing partnerships.

(2) *Criminal Procedure Code, 1999*

- (a) The Criminal Procedure Code 1999, which came into force some months before Article 515 of the CCP 2000, contained Article 9:

9. The party who has sustained damages and has acquired a right ... is called plaintiff or complainant. The damages which could be demanded are as follows:

- 1. Financial damages resulted from the criminal offense (sic).
- 2. Realizable profits plaintiff has been deprived from due to the criminal offense.¹⁰⁹

- (b) In 2014 the Criminal Procedure Act included Article 14, which the evidence showed was intended to restrict the recoverability of “realizable profits”. It provided:

Plaintiff may demand compensation for financial and moral loss and damages as well as loss of realizable profits resulting from the criminal offence.

[...]

Note 2:

Realizable profits are confined to the instances where destruction is applicable. [...] ¹¹⁰

- (c) It was the 1999 version that was in force when Article 515 of the CCP 2000 was enacted, and for 14 years thereafter. The significance of the restriction is said to be

¹⁰⁹ RD1A/12. The Criminal Procedure Code was revised in 2014.

¹¹⁰ Crescent’s RPHSIL, Annex B.

that it reflects “the Islamic concern” about awarding compensation (here, to victims of crime) for loss of profits. The precise nature of that concern is of importance to the construction of Article 515 of the CCP 2000.

(3) *Code of Civil Procedure, 2000* (CCP 2000)

(a) (i) Article 515 of the CCP 2000 provides:

Article 515 – In the petition plaintiff files with the court, during the court proceedings or independently, plaintiff may seek damages resulting from the court proceedings or delay in performance of, or failure to perform, an obligation which he has sustained, or will sustain, due to the defendant’s fault in discharging the obligation or defendant’s refusal to do so, as well as the market value due to [defendant’s] failure, or delay in delivering the relief sought, on the ground of destruction or causation. If a special agreement concerning damage has been entered into between the parties, it shall be applied accordingly.

Note 1: In other instances where the claim for seeking damage is filed independently or after the trial is closed, seeking damages referred to in the present article requires filing a claim.

Note 2: Damages resulting from loss of profits may not be demanded and damages for delay in payment are authorized when provided by law.

(ii) The above translation of Article 515 was used by Crescent at the Final Hearing. It was initially provided by Mr Katirai.¹¹¹ In his evidence, Dr Mehrpour provided the following English version of part of Article 515:

Article 515 – The Claimant has the right, when submitting the statement of claim or in the course of proceedings and/or independently, to request compensation for damages arising out of the proceedings or from delay in the performance of the obligation or its non-performance which he has incurred or will incur, due to the respondent’s fault in performing the obligation or refraining therefrom; the claimant may also claim from the respondent the quantum meruit for non-delivery or delay in delivery, under the heading of causation and destruction.

[...]

Note 2: The damages resulting from loss of profit cannot be claimed and late payment damages can be claimed in those cases defined by law.¹¹²

(iii) At the Final Hearing the Respondent referred to commentary by Dr Fasihzadeh which rendered the expression translated in the former version as “in delivering the relief sought” as “[in] delivery of the subject of

¹¹¹ RD1B/1.

¹¹² RD6A/5.

the claim”.¹¹³ Counsel for Crescent accepted that translation, which seems easier to follow.¹¹⁴

(b) Article 1 states that it is to be applied in all civil and commercial suits by all courts, including the Supreme Court. It reflects the fact that most of the Code’s provisions are procedural.¹¹⁵

(c) Article 3 provides:

Article 3 – Judges of courts are required to take cognizance of the cases in accordance with the provisions of law and render appropriate judgments and resolve disputes. If the statutory law is not complete or explicit or consistent or there is no law on the issue, they are required to render a judgment on the case by virtue of credible Islamic sources or credible religious decrees or principles of law which are not inconsistent with religious standards ...¹¹⁶

(d) Article 267 provides:

Article 267 – If one of the litigating parties has sustained a loss as the result of a violation by the expert, he may, if the expert’s violation was the main cause giving rise to such loss, demand compensation from the experts Damage (sic) arising from the loss of profit cannot be demanded.¹¹⁷

(e) Article 477 provides:

Article 477 – In the proceedings and the award, the arbitrators are not subject to the provisions of the [CCP 2000], but they must apply the provisions concerning arbitration.¹¹⁸

(f) Article 529 provides:

Article 529 – From entry into force of this Code, the 1939 Code of Civil Procedure and its amendments or additions and Articles 18, 19, 21, 23 and 31 of the 1993 Law for Formation of Public and Revolutionary Courts, and other inconsistent laws and regulations are abrogated.¹¹⁹

¹¹³ Final Hearing Tr., Day 3 at 155, *referring to* Dr Fasihzadeh, “Loss of profit and the basis for liability arising therefrom,” Law Journal of the Faculty of Law of Tehran University, No. 3, pp. 262-263, RD6A/18.

¹¹⁴ Final Hearing Tr., Day 5 at 61.

¹¹⁵ RD14J/3/p. 575.

¹¹⁶ RJ2E/44.

¹¹⁷ RJ2E/44.

¹¹⁸ RD1A/7.

¹¹⁹ RD6B/34.

- (4) Although no longer in force, the meaning of the following two articles from the CCP 1939 featured in discussion, as noted further at paragraph 436 below:¹²⁰

- (a) Article 727 of the CCP 1939 provided:

Article 727 – In lawsuits the subject matter of which is not cash money, and the plaintiff as part of his claim demands payment and indemnity for non-delivery of the relief; and in the same manner where a lawsuit is instituted independently for recovery of payment or indemnity arising from non-delivery or delay in delivery, the court shall determine the extent of the indemnity after having taken cognizance of the case and pass a judgment thereon.

- (b) Article 728 of the CCP 1939 provided:

Article 728 – In respect of the foregoing Article the court shall pass a judgment for recovery of damages only in cases where the claimant of indemnity establishes that losses have been inflicted on him as the direct result of non-fulfilment of obligation or delay in the same or non-delivery of the judgment debt. The losses could be the result of loss of property or loss of profits which could have been derived from the performance of the obligation.

- (5) All of the above provisions were the subject of evidence and argument and there was disagreement both as to historical context and, in some cases, accuracy of translation.

- (6) For example, the Parties have disagreed on the use of the following Iranian terms and expressions:

- (a) *adam ol nafa* or *adam ol naf* (as in Article 515 Note 2 of the CCP 2000);
 (b) *manaqfe'e momken ol hossoul* (as in Article 9(2) of the Code of Criminal Procedure, 1999); and
 (c) *tafveet e manfa'at* or *fot shodane manfa'at* (as in Article 728 of the CCP 1939).¹²¹

- (7) According to Crescent, the expression *adam ol nafa*, composed of *nafa* (profit) and *adam* (loss), does not have a settled meaning that covers all loss of profit, but rather is often used by jurists to refer only to speculative loss of profit or only to the distinct concept of realizable loss of profit. *Inter alia*, this means that *adam ol nafa* may have been used, in context, to refer solely to speculative loss of profit in Note 2. At the same time, the words *nafa* and *manaqfe'e* (plural of *manfa'at*) can be interchangeably used to mean “profit”,

¹²⁰ RD14I/2/p.462.

¹²¹ RD14I/2/p. 462. See additional translations at RD1A/4, RD1B/3, RD6A/4 and RD6B/39.

while the words *tafveet*, *adam ol*, and *fot shodane* can be interchangeably used to mean “loss”. *Momken ol hossoul* is one of the terms used as a qualifier of the degree of certainty of profit (realizable or speculative).¹²² For example, Crescent translates *manaafe’e momken ol hossoul* in Article 9 of the Code of Criminal Procedure, 1999 as “realizable profits”.¹²³

- (8) NIOC submits that, to the contrary, a distinction must be made between *adam ol nafa* and the other two expressions, as they aim “at different matters”. *Adam ol nafa* is “a concept related to any and all economic or financial profits which may be earned or derived by a person, and in particular those which may be derived from the performance of a contractual obligation,” whereas *manaafe’e momken ol hossoul* and *tafveet e manfa’at* express a concept “broadly related to the benefit/use or fruits of property or a person”.¹²⁴ Thus, for NIOC, Article 9 of the Code of Criminal Procedure, 1999 is correctly understood as referring not to realizable profits, but to the benefits/use of property.¹²⁵
- (9) In preparing the glossary of Iranian legal terms in advance of the Remedies Hearing, the interpreters engaged by the PCA following consultation with the Parties agreed that *adam ol nafa* can be translated as “loss of profit”, but indicated that whether to translate *manaafe’e momken ol hossoul* and *tafveet manfa’at* as loss of profit or benefit “is a matter of interpretation of the law”.
- (10) One result of the Parties’ linguistic dispute is that when translating the Iranian law materials, Crescent sometimes translates as “realizable profits” terms that NIOC translates as “benefits” or “uses”. Other implications of this dispute are addressed where relevant below.

F. LEGISLATIVE HISTORY OF ARTICLE 515 OF THE CCP 2000

384. The legislative history of Article 515 is considered in the Tribunal’s analysis of the Preclusion Issue below.

¹²² Crescent’s RPHSIL ¶¶ 12-17.

¹²³ CPHBR1 ¶ 82.

¹²⁴ RPHBR1 ¶¶ 368-376.

¹²⁵ RPHBR1 ¶¶ 374, 522.

G. EXPERT EVIDENCE

385. Two expert witnesses testified: Mr Katirai for the Claimants and Dr Mehrpour for the Respondent.

1. Mr Katirai

386. Mr Katirai had previously testified in the Jurisdiction and Liability Phase. He practised law in Iran from 1969 to 1980, when he left the country for the United States of America. In the Award on Jurisdiction and Liability, the Tribunal accepted his expertise and his evidence and relied upon his evidence in a number of respects.

387. In his fifth expert report, which was his first report in the Remedies Phase, Mr Katirai said, in substance:

- (1) Under Iranian law, a party which breaches or fails to perform a contract is liable in damages to its counterparty. Subject to rules of causation, remoteness and mitigation, the aim of an award of damages is to compensate the aggrieved party for its losses and place it so far as possible in the position it would have been in had the contract been performed.
- (2) This is recognised in Article 221 of the Civil Code, where the reference to custom and usage is a reference, not to some specific trade customs but to what is normal and commonly understood, or what a reasonable person would do or expect.
- (3) Prior to 2000, if loss of profit could be proved, with a reasonable degree of certainty, as what would have been earned in the normal course of business had the contract been performed, then the loss was recoverable.
- (4) An interpretation of Note 2 to Article 515 that would debar a plaintiff from recovering any lost profits would render commercial contracts meaningless. Hence it has been interpreted as debarring claimants from recovering speculative profits as opposed to profits that are appropriately characterized as realizable (compare Criminal Procedure Code 1999, Article 9).
- (5) Some commentators have treated Note 2 as debarring claims for damages from damages *i.e.*, damages caused by loss of profits.

- (6) If Article 515 Note 2 applies, (which Mr Katirai did not accept), it only prevents recovery of speculative profits; *i.e.*, damages from damages or loss of profits which would not have been realized with a reasonable degree of certainty.

388. In his sixth expert report, Mr Katirai said, in substance:

- (1) Article 221 of the Civil Code is the relevant source in Iranian law for a contractual claim for loss of profits as damages.
- (2) That Article 221 had that effect when it was enacted in 1928 is consistent with other legislation at around the same time, e.g. Article 48 of the 1931 Law for Registration of Inventions and Trademarks, and Article 24 of the 1939 Law Concerning Experts.
- (3) Article 515 of the CCP 2000 expressly protects a specific agreement concerning damages made by the parties. Where the compensation is recognized under custom and usage, no different position applies.
- (4) The rule of *lazarar*, which provides an additional basis for a claim of lost profits, must be reconciled with Article 515 Note 2.
- (5) Article 221 of the Civil Code was not altered or affected by the Islamic Revolution of 1978-1979.
- (6) Article 133 of the 1969 Law Amending Parts of the Commercial Code (Joint Stock Companies Act), specifically providing for loss of profit, continued after 1979 as did other legislation referred to in Mr Katirai's fifth report.
- (7) To interpret Article 515 Note 2 as the Respondent contends creates numerous anomalies in the legal system.

389. In his reports, Mr Katirai also dealt with the topic of interest, which he said was claimable.

390. In his reports, Mr Katirai made extensive reference to legal commentary which he said supported his opinions.

391. During cross-examination, Mr Katirai was referred to evidence he had given in 1985, in *Basch v Westinghouse Electrical Corporation Basch* (777F 2d 165),¹²⁶ where he was reported thus:

The district court's holding was based, in part, on a statement in Katirai's April 13, 1984 memorandum that the majority of Islamic judicial experts considered lost profits unavailable under Islamic law. Katirai pointed out, however, the Article 728 [of the Civil Procedure Code] marked a change in Iranian law. He explained that, prior to the enactment of Article 728, Iranian courts did not award any damages on a claim for loss of profits. According to Katirai, with the enactment of [Article 728], lost profits may be recovered if directly caused by the breach.¹²⁷

392. This was relied on by the Respondent as being consistent with its case that Article 221 of the Civil Code did not allow recovery of lost profits, that such recovery was only available upon the enactment of Article 728 of the CCP 1939, and that Article 728 was repealed in 2000 and replaced by Article 515 Note 2 which restored the pre-1939 position.

393. During cross-examination, Mr Katirai was also referred to evidence he had given in a 2004 arbitration¹²⁸ where he said:

9. Under Iranian law, compensation for lost profits is not allowable. This has been specified in the Iranian Civil Procedure Act of 2000. Article 267 of this Act, in its pertinent part provides:

“Damages resulting from loss of profits may not be demanded”.

Furthermore, note 2 under Article 515 of this Act in its pertinent part, provides:

“Damages resulting from loss of profits may not be demanded”.

10. The reason for the enactment of Article 167 (sic) and note 2 under Article 515 is that under Islamic law, the award of damages for loss of profits is not authorised.

394. He was also referred to evidence he had given in the same matter which appeared to contradict what he said in this case about interest.¹²⁹

395. As to lost profits, the Respondent said that Mr Katirai's 2004 opinion was substantially to the same effect as Dr Mehrpour's opinion in this case.¹³⁰

¹²⁶ Remedies Hearing Tr., Day 14 at 10.

¹²⁷ RJ2E/53.

¹²⁸ Remedies Hearing Tr., Day 14 at 20-34.

¹²⁹ Remedies Hearing Tr., Day 14 at 30-32.

¹³⁰ RPHBR1 ¶ 535.

396. The Respondent submits that Mr Katirai offered no plausible explanation for his alleged changes of opinion or for his failure to refer, in his evidence in this matter, to his earlier opinions.

2. Dr Mehrpour

397. Dr Mehrpour is a Professor of Law and the Dean of the Faculty of Law at Shahid Beheshti University. He is a qualified attorney at law and teaches at the University of Tehran. He has had experience in the Iranian judiciary. From 1980 to 1992 he was a jurist member of the Guardian Council and for eight years after that was Adviser to the President of Iran and Chairman of the Board for the implementation of the Constitution.

398. In his first expert report, Dr Mehrpour said, in substance:

- (1) The binding effect (“sanctity”) of contracts is recognized by Islamic law and in the Civil Code.
- (2) Under Islamic law, the main and primary purpose of a contract is specific performance of the obligation. In the case of failure to perform an obligation the beneficiary of the obligation should first resort to the court and seek specific performance.
- (3) “In Islamic law, the ultimate sanction for failure to perform an obligation is termination of the contract by the non-breaching party and restoration of the situation of the parties to the situation as it existed before the conclusion of the contract”.¹³¹
- (4) Neither Islamic law nor religious precedents support a view that a party in breach of contract should provide compensation that places the other party in the situation it would have been in had the contract been performed.
- (5) Article 221 of the Civil Code, as promulgated in 1928, in accordance with religious opinion, did not treat loss of profit as damage. Subsequently, in a change of direction, Article 728 of the CCP 1939 treated lost profits as compensable harm. This change was consistent with minority religious opinion but contrary to majority religious opinion.

¹³¹ Mehrpour 1 ¶ 26.

- (6) The 2000 amendments to the code of civil procedure, repealing Article 728 and including Article 515 Note 2, which resulted from the Guardian Council's intervention in the drafting process, restored the effect of the majority religious view.
- (7) Note 2 absolutely prohibits claims for loss of profits. If earlier legislation is inconsistent with that prohibition, then the later prohibition prevails.

399. In his second expert report, Dr Mehrpour said, in substance:

- (1) The prohibition in Article 515 Note 2 on the recoverability of lost profits is absolute and is not limited to uncertain lost profits.
- (2) The fact that certain authors and commentators regret the change to the law made in 2000 and have proposed that the change be modified or reversed does not affect the question of what the law is, but only indicates differing views on what the law should be.
- (3) Reliance damages may be available under Iranian law for breach of contract, but not loss of bargain damages, and particularly not loss of profits.

H. DOES ARTICLE 515 OF THE CCP 2000 APPLY TO THIS ARBITRATION?

400. One contention of the Claimants has been that, whichever of the competing views as to the meaning and effect of Article 515 prevails, that provision does not apply to this arbitration. The Respondent contends that the provision applies and, further, that whichever of the competing views prevails, it precludes CGC's claim for lost profits. It is the issue as to application that is presently addressed.

401. Each side has contended for a meaning of Article 515 Note 2 which, if correct, gives it the substantive effect of precluding some claims for damages. There are other provisions of the CCP 2000 that have substantive effect. Article 728 of the CCP 1939 had substantive effect.¹³² A note in a code of civil procedure may seem an unlikely place to find a major qualification to the civil code, but the conclusion that Article 515, including Note 2, has substantive effect, seems inescapable.

¹³² See paragraph 439 below.

402. Part Seven of the CCP 2000, dealing with Arbitration, includes Article 477, which is reproduced at paragraph 383(3) above and provides that, in the proceedings and in the award, the arbitrators are not subject to the civil procedure code, but they must apply the provisions concerning arbitration. This must be a reference to procedural, rather than substantive provisions.
403. Article 36.1 of the 1997 Iranian International Commercial Arbitration Law provides that arbitration of international commercial disputes shall be exempt from the arbitration provisions stipulated in the code of civil procedure.¹³³ This is understandable, but Article 515 is not an arbitration provision of the kind referred to. What is meant is that the procedure for international commercial arbitrations is not covered by the rules relating to domestic arbitrations.
404. Article 515 applies to this arbitration.

I. GSPC ARTICLE 26.1

405. Article 26 of the GSPC is headed “Termination” and includes the following provision:

In addition to causes for termination set forth in Articles 12 and 13 hereof, if for a total of 60 Days during a Delivery Year for reasons other than Force Majeure and Agreed Repairs and Maintenance, Seller fails to deliver the quantity of Gas required under terms and conditions hereof, Buyer may serve written notice on Seller to the effect that Seller should adhere to the delivery obligations hereunder within one month from the date of serving said notice. Failure by Seller to so adhere to the delivery obligations hereunder within one month from the date of serving said notice. Failure by Seller to so adhere will entitle Buyer to terminate this Contract or refer any arising loss or claim to arbitration under Article 22 hereof.

406. Crescent contends that this constitutes an agreement between the Parties within the meaning of Article 221 of the Civil Code (and, presumably, Article 515 of the CCP 2000 if applicable), upon a remedy for breach of contract which comprehends the present claim.¹³⁴ It is common ground that an agreement upon a specific remedy will be given effect by Iranian law. So, for example, if the Parties had agreed that, in the event of non-delivery of gas, NIOC would compensate Crescent for loss of profits on re-sale, such an agreement would be given effect.¹³⁵
407. The Tribunal is unable to accept that Article 26.1 has this meaning or effect. It enables Crescent, in the event of non-delivery, to refer any loss or claim to arbitration (as it has done), but it does

¹³³ RD14J/9.

¹³⁴ Final Hearing Tr., Day 2 at 17; CPHBR1 Annex A ¶¶ 119-20.

¹³⁵ Final Hearing, Tr., Day 2 at 17-18.

not mean that any form of actual or claimed loss is compensable by the arbitral tribunal notwithstanding the law applicable to the determination of the merits of the dispute. It does not qualify Article 22 of the GSPC, and in particular Article 22.1 as to the governing law. It empowers Crescent to invoke the procedure of arbitration in certain circumstances, but it does not have substantive effect on the outcome of the arbitral process.

J. THE PRECLUSION ISSUE

1. Introduction

408. In its First Post-Hearing Brief on Remedies, NIOC submitted that “Crescent has taken every point it can to avoid the failure of its claim for loss of profits, having chosen to frame its claim for damages for breach of contract in that way”.¹³⁶ Crescent had, indeed, framed its claim as one for “loss of profits”,¹³⁷ this being the difference between the price that Crescent had agreed to pay for the raw gas and the price or prices that Crescent alleged it would have been paid for the processed gas, including products derived from that gas, on re-sale, less the costs of processing.
409. The Preclusion Issue is whether the claim that Crescent has chosen to formulate as one for “loss of profits”, falls within the scope of the Farsi phrase “*adam ol naf*” that has been translated as “loss of profits” in respect of which damages are stated to be unrecoverable under Iranian law in Note 2. In short, does Note 2 bar Crescent’s claim?
410. Part of the difficulty in resolving the Preclusion Issue lies in the fact that there is more than one word in Farsi that has been translated into the English word “profit” but these Farsi words do not, or may not, bear precisely the same meaning one to another and are capable of embracing matters that do not fall within the natural meaning of “profit” in the English language.
411. Frequently the Farsi word that has been translated as “profits” has been used in a context where it means “pecuniary *earnings*” so as, for instance, to describe the earnings of a labourer, as opposed to “pecuniary *gains*” in the sense of the difference between outlay and income received.

¹³⁶ RPHBR1 ¶ 356 (emphasis added).

¹³⁷ Crescent’s Memorial on Remedies ¶ 8(3): “CGC claims against NIOC as follows: (i) The loss of profits suffered by CGC in respect of its supply contract with its midstream and marketing subsidiary CNGC, and its supply contract with the customer SEWA. (ii) Damages for the loss of profits suffered by its subsidiary CNGC, for which CGC is liable by reason of its inability to supply gas to CNGC” (emphasis added).

412. The Tribunal proposes first to consider the meaning of Note 2, for this is the principal issue between the Parties. The Tribunal will then turn to consider the nature of the loss in respect of which Crescent claims in order to decide whether it is subject to the embargo on recovery imposed by Note 2.

2. The Relevant Context

413. Counsel for NIOC submitted that the context in which Note 2 was enacted was important and, for this reason, it was necessary to consider the legislative history leading up to the enactment of Note 2. Dr Mehrpour's reports dealt with this and formed the basis of lengthy submissions by NIOC. The Tribunal agrees with NIOC that the context in which Note 2 was enacted is important.

(i) The position prior to 1928

414. The record includes no detailed evidence as to the Iranian legal system prior to 1928. The impression given by Dr Mehrpour, is that there was no codified law of contract but the law was administered in accordance with principles of Islamic law, or *fiqhhi* rules, reflecting custom. These principles could be discerned from the writings of Islamic scholars, or *Faqhis*.
415. In his first report, Dr Mehrpour emphasised the sanctity of contracts under Islamic law and the fact that the primary remedy provided by the courts was specific performance. His report did not distinguish clearly between the position prior to the enactment of the 1928 Civil Code and the position under the Code. His evidence was that, in general, there was no difference between the two, although in places the Civil Code drew on principles of foreign law, including the French Civil Code. Apart from the remedy of specific performance, he stated that the sanction or remedy for failure to perform the obligation was termination of the contract. There might sometimes be a claim for compensation, but that sanction only arose on demonstration that attempts to have the contract performed had proved futile.¹³⁸
416. Crescent does not challenge the proposition that a claimant's primary remedy for breach of contract was to seek specific performance. It is Crescent's case that according to custom, where specific performance was not available, compensation could be recovered in respect of the loss of the bargain.¹³⁹ As to that, in his second report, Dr Mehrpour commented that he was seriously

¹³⁸ Mehrpour 1 ¶ 22.

¹³⁹ CPHBR1 ¶ 47.

in doubt as to whether custom, especially at the time of drafting the Civil Code, considered as damage the loss of profit arising from a breach of contract, where that loss represented a gain expected from performance of the contract.

(ii) The 1928 Civil Code

417. Dr Katouzian, who is considered the foremost authority on Iranian law, recorded that at the time of the drafting of the Civil Code Islamic jurisprudence did not include any discussion on the liability resulting from the non-performance of contracts.¹⁴⁰
418. Mr Rainey invited the Tribunal to consider the Civil Code as a whole, in order to see, in context, the provisions that are of particular relevance in this case¹⁴¹ and the Tribunal has done so. Dr Mehrpour stated that most of the Articles of the Civil Code, and in particular those contained in the sections on specific types of contract, were derived from Islamic principles (“*Imamieh fiqqh*”), although some Articles were derived from foreign laws.¹⁴²
419. The provisions of the Civil Code, and in particular those that relate to specific types of contract, reflect an agrarian rather than an industrial society. Many Articles deal with the *exploitation* of land or other property, the product of which is often described as “profit”.
420. Some provisions of the Civil Code that relate to contracts are of particular relevance. Articles 221 and 222,¹⁴³ which appear in the Section “Regarding the Effect of Contracts”, are in a sub-section setting out “General Rules”. A number of relevant provisions are set out under the heading “Regarding Sales”.
421. This section relating to sales does not contain any provisions giving a right to recover damages for the loss of benefits consequent upon a seller failing to supply goods in accordance with the contract of sale. In general, non-performance, in whole or in part, gives the buyer a right to cancel the contract but not to recover expectation damages. Thus, if a buyer cancels the contract because the goods tendered do not accord with the contractual quantity, Article 386 of the Civil Code

¹⁴⁰ Dr Nasser Katouzian, *Civil Law, General Rules of Contracts*, vol. 4 (3rd ed., 2001), ¶ 812, RD1A/19 and Crescent’s RPHSIL, Annex E/4.

¹⁴¹ Final Hearing Tr., Day 4 at 9.

¹⁴² Mehrpour 1 ¶ 16.

¹⁴³ Articles 221 and 222 are reproduced in paragraph 383 above.

entitles him to a refund of the price and “any costs of the contract and reasonable expenses incurred by the buyer”.

422. Article 427 of the Civil Code is, however, of particular relevance. Article 422 deals with defective goods. It gives the buyer the option of taking the goods and receiving compensation for the defect. Article 427 specifies how the compensation is to be calculated. The current value of the goods, (1) undamaged and (2) in their damaged state, is determined by experts. The proportion by which the value of the goods is reduced as a result of the damage is then applied to the price. The seller has to hand back to the buyer that proportion of the price “by way of compensation”. Thus the buyer is entitled to the partial return of his payment, but is not entitled to compensation in respect of the loss of current value caused by the defect.
423. Thus, those provisions of the Civil Code that, according to Dr Mehrpour, reflected pre-existing law did not make provision for the recovery of loss of bargain damages in the event of a breach of contract. The buyer was entitled to terminate the contract and recover reliance damages, but no more.
424. Article 221 of the Civil Code was not, however, founded on Islamic principles.
425. Each party’s expert has provided his own translation of this Article.¹⁴⁴ Each is to the same effect and in the interests of clarity the Tribunal will adopt an amalgam of the two:

If any party undertakes to perform or refrain from performing any act, he is liable to pay compensation for damage to the other party in the event of his failure to fulfill the undertaking, provided however that compensation for such damage is specified in the contract or, by virtue of custom and usage, it is understood to be specified in the contract as if it was included therein, or payment of such damages is required by law.

426. The first part of this Article, down to the proviso, is a translation of Article 1142 of the French Civil Code. That Article provided:

Any obligation to perform an act or to refrain from performing that act, gives rise to damages in the event of a breach by the obligor.¹⁴⁵

¹⁴⁴ RD1A/1; RD6A/3.

¹⁴⁵ RD6A/33.

427. Article 1149 of the French Civil Code provided:

Damages due to the creditor are, in general, for the loss he has sustained and the profit of which he has been deprived, subject to the exceptions and modifications set out below.¹⁴⁶

428. These provisions clearly reflect the principle that exists under French law, and indeed under the laws of most countries, that the contract breaker is normally liable to pay such damages as will place the other party in the same position as he would have enjoyed had the contract been performed – *i.e.*, to pay loss of bargain damages, sometimes called “expectation damages”.

429. The Tribunal is in no doubt that those drafting the 1928 Civil Code intended, by copying Article 1142 of the French Civil Code, to incorporate into the Civil Code a liability in principle on the part of a contract breaker to pay expectation damages.

430. What of the second part of Article 221 of the Civil Code, and of the fact that the Iranian Civil Code does not copy Article 1149 of the French Civil Code? The Tribunal has concluded that Dr Katouzian provides the answer:

the drafters of the Civil Code noted that in Islamic jurisprudence the only discussion of non-contractual liability concerns destruction or usurpation of another’s property and no discussion was made about the liability resulting from the non-performance of contracts. Thus, in order to find a reliable basis for contractual liability, they had to attribute it to “contract” and the conditions implied in a contract ...¹⁴⁷

431. This is a reference to the Islamic concept of “*shart*” and the idea that the parties should be seen as agreeing to the damages recoverable.

432. What, then, was the effect of Article 221? The Parties were vigorously at odds about this. Crescent argued that Article 221 itself gave rise to the right to recover compensation for loss of benefits caused by a breach of contract:

(a) under its own express terms ... the Iranian Civil Code provides the legal basis for a contracting party’s right to recover damages for breach of contract which include every type of customary damage.

(b) the Judge’s task is to decide whether a certain loss is customary or not.¹⁴⁸

¹⁴⁶ RD6A/33.

¹⁴⁷ Dr Nasser Katouzian, *Civil Law, General Rules of Contracts*, vol. 4 (3rd ed., 2001), ¶ 812, RD1A/19 and Crescent’s RPHSIL, Annex E/4.

¹⁴⁸ CPHBR1 ¶ 53.

433. NIOC argued that Article 221 had no substantive effect at all. It merely provided a “gateway” leading to the right to recover compensation in respect of damage caused by breach of contract *provided that* one of three conditions was satisfied: (1) the contract provided *expressly* for the payment of such compensation; (2) there was a custom under which such compensation was paid that was so strong that it was an *implied* term of the contract that such compensation was payable; or (3) there was a law expressly providing that such compensation should be payable.
434. The Tribunal does not need to resolve the question of whether it was open to Iranian judges under Article 221 to award loss of bargain damages for breach of contract on the basis that this was customary. The problem with Article 221 was that, without the cooperation of the judges it would not result in the recovery of the compensation for which it made provision in principle. Whether there was a custom that compensation should be paid for the consequences of a breach of contract was a matter of fact for the judges. If the judges were in sympathy with the right to recover compensation for loss of contractual benefits, they might perhaps be generous in finding that a custom existed that such compensation should be paid. But, as Dr Katouzian stated:

the evidence of custom has to be so strong that the parties’ silence in that respect would be considered as an implicit agreement of the application of the rule of custom.¹⁴⁹

435. Iranian judges do not appear to have considered that they were empowered by Article 221 to award loss of bargain damages for breach of contract. It was in these circumstances that Article 728 of the CCP 1939 was enacted in order to clarify the situation or make good any perceived deficiency.

(iii) Article 728 of the CCP 1939

436. Although the CCP 1939 was a procedural code, the Tribunal is in no doubt that Article 728 of that Code had substantive effect.¹⁵⁰
437. Article 728 of the CCP 1939 needs to be read in the context of the preceding Article. The two together provided as follows:

727. In lawsuits the subject matter of which is not cash money, and the plaintiff as part of his claim demands payment and indemnity for non-delivery of the relief; and in the same manner where a lawsuit is instituted independently for recovery of payment or indemnity arising from non-delivery or delay in delivery, the court shall determine

¹⁴⁹ Dr Nasser Katouzian, *Civil Law, General Rules of Contracts*, vol. 4 (3rd ed., 2001), ¶ 812, Crescent’s RPHSIL, Annex E/4.

¹⁵⁰ See paragraph 401 above.

the extent of the indemnity after having taken cognizance of the case and pass a judgment thereon.

728. In respect of the foregoing Article the court shall pass a judgment for recovery of damages only in cases where the claimant of indemnity establishes that losses have been inflicted on him as the direct result of non-fulfillment of obligation or delay in the same or non-delivery of the judgment debt. The losses could be the result of loss of property or loss of profits which could have been derived from the performance of the obligation.¹⁵¹

The Farsi word that has been translated as “profits” in Article 728 is “*manfa’at*”. The word translated as “relief” in the second line of Article 727 is capable of meaning the subject matter of the action.

438. There has been a lively debate between the Parties, which the Tribunal does not need to resolve, as to whether Article 728 was merely clarifying the effect of Article 221 of the 1928 Civil Code, as Crescent contends, or whether it created novel rights in respect of the recovery of damages, as NIOC contends. Each party relied on the explanation given by Dr Daftari, who had been an architect of the CCP 1939, in his work on “Civil and Commercial Rules of Procedure 1955”, volume 2.¹⁵²
439. Dr Daftari stated that it had been necessary to include in the CCP 1939 substantive provisions dealing with deficiencies in the 1928 Civil Code. In particular the Civil Code did not define “damages”, with the result that:

our courts, in pursuit of the statement of the majority [of Faghihs] that “loss of profit (“adam ol nafa”) is not a loss” had, with respect to deciding the amount of damages, a restrictive approach and this is not compatible with the contemporary school of thought and economic principles and one cannot satisfy the parties to the transactions only with receiving the price of the undelivered property and deprive them of the profits (“*manfa’at*”) they could have gained from the sale. We found it necessary to rectify this problem by the Civil Procedure Code and Article 728 has removed the deficiency in the Civil Code. This Article contains an important principle by providing that “damages may arise from loss of property or loss of the profits which would have been gained from performing the obligation”.¹⁵³

440. It seems clear from this that those drafting the Codes had hoped that the 1928 Civil Code would open the door to the recovery of damages in respect of benefits lost as a result of breach of contract, but that in practice the terms of Article 221 of the 1928 Civil Code did not, of

¹⁵¹ RD14I/2/p.462. See additional translations at RD1A/4, RD1B/3, RD6A/4 and RD6B/39.

¹⁵² (Tehran University Publications, 1955), RD6C/12 and Crescent’s RPHSIL Annex E/2.

¹⁵³ Dr Ahmad Matin-Daftari, *Civil and Commercial: Rules of Procedure*, vol. 2 (Tehran University Publications, 1955), RD6C/12 and Crescent’s RPHSIL Annex E/2, ¶ 244.

themselves, produce this result. Article 728 of the CCP 1939 rectified the position and satisfied the proviso in Article 221 in that “payment of such damages” became “required by law”. As Mr Rainey put it, the object of Article 728 was to enable claimants to recover in respect of the loss of expectation benefits.¹⁵⁴

441. Article 727 of the CCP 1939 provided for payment of compensation for the “non-delivery” or “delay in delivery” of “the relief”. Article 728 specified that the losses “could be the result of loss of property or loss of profits which could have been delivered from the performance of the obligation”.
442. Article 728 expressly required that the damages claimed should be “directly” caused by the breach of contract. Dr Katouzian explained in his work on “Civil Law, General Rules of Contract”:

Direct damages resulting from breach of contracts are of two types:

1. Natural and normal damages [damages reasonably and naturally arising in the normal or usual course of things] which could have been contemplated by the parties ...
2. Exceptional and unusual damages, which could not have been foreseen in the normal or usual course of things.

There is not any doubt that the first type of damages must be recovered.¹⁵⁵

That first type is sometimes referred to as “realizable loss of profits”.

443. Both Parties relied upon an example of this type of loss given by Dr Imami:

A merchant purchases 20 tractors from a factory for ... 20,000 Toumans, to be delivered on the first day of fall at Khoramshar Port. One month expires and the factory does not deliver the tractors. The merchant therefore terminates the contract. If the tractors had been delivered in time, the merchant, after deducting the costs, would have made a profit of 2,000 Toumans ... in the sale of each tractor, which would have amounted to a total of 40,000 Toumans ... With due regard to the price at which such tractors are sold in the market, such amount is certainly and definitely realizable profit that the said merchant has been deprived from due to non-performance of the obligation. Therefore, the merchant can seek the amount from the factory as damages resulting from non-performance of the obligation.¹⁵⁶

¹⁵⁴ Final Hearing Tr., Day 4 at 19.

¹⁵⁵ Dr Nasser Katouzian, *Civil Law, General Rules of Contracts*, vol. 4 (3rd ed., 2001), p. 250, RD1A/19 and Crescent’s RPHSIL, Annex E/4.

¹⁵⁶ Dr Hassan Imami, *Civil Law*, vol. 1 (1971) p. 244, RD1A/21.

444. Mr Rainey emphasized the width of the losses in respect of which Article 728 gave a right of recovery:

It's the benefits that would have been derived from the performance of the obligation, *les gains manqués*'. Not just profits as Lord Phillips was putting to me this morning, i.e., the actual profits on a sub-sale or an on-sale, but just the benefits and that would include any benefits.¹⁵⁷

He accepted that, had Article 728 remained in force, it would have permitted Crescent to advance its claim for loss of profits.

445. There was, however, an issue as to the ambit of recovery permitted by Article 728, the significance of which is dealt with below. In its May 2020 questions, the Tribunal asked, *inter alia*, whether, prior to 2000, Iranian law was the same as English law in treating the difference between contract price and market value as being the loss directly and naturally resulting from a seller's failure to deliver the goods the subject of a contract of sale.¹⁵⁸ Crescent responded asserting that Iranian law was the same as English law.¹⁵⁹ NIOC asserted that a claim could not be brought based simply on the value of property that a seller had failed to deliver.¹⁶⁰

446. The basis of NIOC's submission was, essentially, that such a claim was unknown under Iranian law. Whilst a claimant could go out into the market and buy a replacement for the property not delivered and recover the cost of so doing (see Article 222 of the Civil Code which specifically so provided), he could not sit on his hands and make a claim based on the market value of such property:

[N]o one ever claims the market value in Iranian law because you have the right to go out into the market and you must exercise it, and that's your real claim ...¹⁶¹

¹⁵⁷ Final Hearing Tr., Day 3 at 84.

¹⁵⁸ This question led to a protest by NIOC that it opened ground not explored by the experts and that the Tribunal should not entertain any claim for loss based on the alleged market value of the gas. No such claim has been pursued and NIOC has made it plain that it carried out an exhaustive investigation of Iranian law in response to the Tribunal's questions. No application was made to introduce additional evidence and the Tribunal is satisfied that it is in a position fairly to deal with this question on the basis of the material on the record.

¹⁵⁹ Crescent's Answers ¶¶ 2-10.

¹⁶⁰ NIOC's Answers ¶¶ 174-176.

¹⁶¹ Final Hearing Tr., Day 3 at 112.

There is absolutely no support for that in Iranian law, or any text or commentary.¹⁶²

If one is looking at direct, certain, real losses, that's not a concept which one finds in any Iranian case or commentary ... When your question was asked, we scoured the commentaries ...¹⁶³

the pre-2000 position is that there was no recovery of market value where you did not go out and buy in, and there is not one commentary or text or case or writing which supports recovery of that measure.¹⁶⁴

447. Article 222 of the Civil Code expressly gave a right to a claimant to obtain permission from the court to perform the contractual obligation that the defendant should have performed and recover the cost of so doing from the defendant, which, if applied to a case of non-delivery would mean obtaining the non-delivered goods himself and claiming any additional cost from the defendant (equivalent to the contract/market price differential). It would appear to follow, as a matter of logic, that this remedy could be claimed when the defendant was not in a position to comply with an order for specific performance (see paragraph 415 above). It is hard to envisage its application in relation to failure to deliver under a contract of sale where replacement goods are available in the market for, in those circumstances, specific performance would be possible, unless the seller had to obtain the goods himself and did not have the finances to do so.
448. The Tribunal does not accept that, in order to obtain relief, a claimant was under a duty to go out into the market and purchase substitute goods, rather than simply claim damages for the non-performance. No authority was cited to support this proposition and it seems doubtful whether Article 222 of the Civil Code was drafted with sale of goods in mind. Where the duty to mitigate required a claimant to buy a replacement for goods not delivered the Tribunal understands that this could be done without the permission of the court and a claim made in respect of the cost of so doing.¹⁶⁵
449. In the course of the Final Hearing, the Tribunal drew attention to the latter part of Article 728 of the CCP 1939:

¹⁶² Final Hearing Tr., Day 3 at 116.

¹⁶³ Final Hearing Tr., Day 3 at 57.

¹⁶⁴ Final Hearing Tr., Day 4 at 27.

¹⁶⁵ Dr Nasser Katouzian, *Civil Law, General Rules of Contracts*, vol. 4 (3rd ed., 2001), p. 250, RD1A/19 and Crescent's RPHSIL, Annex E/4.

The losses could be the result of loss of property or loss of the profits (“*manfa’at*”) which could have been derived from the performance of the obligation.

It asked whether “loss of property” embraced the loss experienced as a result of a failure to deliver property in breach of a contract of sale. The buyer would in such circumstances not receive the property which the seller was obliged to supply in performance of the contract. Mr Rainey’s response was that “loss of property” only applied to property already owned by the claimant. It would apply, for instance, if a roofer failed to repair a roof, with the result that profits were lost.¹⁶⁶ So far as a contract of sale was concerned, a claim could be based on the value of property that should have been delivered under the contract if, but only if, the title to that property had already passed to the buyer.¹⁶⁷

450. This submission, if correct, produces bizarre results. It means that Article 728 entitled a claimant to damages in respect of the loss of the profit that would have been derived from the resale of goods that had not been delivered, even though property in them had never passed to the claimant,¹⁶⁸ yet there was no redress for the failure to receive the goods themselves by reference to the market value of such goods.
451. The Tribunal does not accept that this was the effect of Article 728 of the CCP 1939. It can see no justification for restricting the meaning of “loss of property” to “loss of property owned by the claimant”, to the exclusion of “loss of property that would have been received had the contract been performed”. Alternatively, the failure to receive the benefit of property having a higher value than the purchase price can readily fall within the meaning of loss of “*manfa’at*”, giving that word its wider meaning of “benefit”.
452. Mr Rainey was not correct in his assertion that there are no texts that recognise the right to recover damages in respect of loss of value. It is true that the record contains remarkably sparse material in relation to claims in contract for non-delivery of goods and very little indeed on the availability of compensation for a buyer who is not buying to re-sell. This may reflect the fact that the Iranian is under a religious duty to honour an agreement and that, before claiming damages, a claimant

¹⁶⁶ Final Hearing Tr., Day 3 at 79. This example ignored the fact that Articles 427 and 428 were concerned with non-delivery”.

¹⁶⁷ Final Hearing Tr., Day 3 at 78-79.

¹⁶⁸ There is no suggestion in Dr Imami’s example that the merchant had become the owner of the 20 tractors that had not been delivered to him.

has to seek specific performance. There are, however, in the record texts that recognise the right to claim damages in respect of the value of goods not delivered in breach of a contract of sale.

453. One was pointed out by Mr Diwan in argument.¹⁶⁹ Dr Katouzian, when dealing with Article 728 of the CCP 1939, treated it as axiomatic that a claim could be based on the value of the goods undelivered, without any indication that this was only where the property in them had passed to the buyer:

One may seek compensation for non-performance of the obligation when the original obligation may, for some reason, not be performed. The creditor may not collect compensation from the debtor when the original obligation may be performed ... As a matter of principle, specific performance must have priority and, when such action turns out to be hopeless, compensation may be sought. For instance, if a seller who is obliged to deliver ten tons of concrete fails to fulfill such obligation, the purchaser may not seek the value of the concrete before demanding specific performance or proving its impossibility.¹⁷⁰

454. Judgments of the Iranian courts do not normally provide assistance in interpretation of Iranian law, for they are not usually reasoned, and they are certainly not authoritative. An exception was a judgment of the Chief Justice of Civil Court 1 of Iran dated 15 June 1987, exhibited by Mr Katirai to a legal opinion given in other proceedings.¹⁷¹ In the case in question the claimant obtained an order for specific performance of equipment that should have been delivered under a contract of sale, but was refused damages for delay in its delivery, consisting of costs of funding the payment for the equipment. The judge gave a detailed exposition of the law of damages for breach of contract, including the effect of Article 728 of the CCP 1939. Each party relied on this judgment, though not on the passage that has subsequently caught the attention of the Tribunal:

in order to seek compensation it must be established that damages have been sustained and such damages have directly and immediately resulted from the obligor's default. Thus, possible damages lack legal grounds. For instance when someone agrees to deliver certain commodities to another at a price, if the commodities are not delivered at the maturity date and if the party in whose benefit such obligation has been made purchases the same commodities at a higher price, he may only claim the difference between the two prices, which constitutes the direct damage sustained by the party in whose benefit the commitment was made ... Likewise, if someone agrees to deliver provender to a cattleman at certain time but fails to fulfill his commitment at the maturity date, the direct damage sustained by the cattleman consists of the difference between the stipulated price and the price of provender at the maturity date. If, due to the lack of delivery of the provender some of [his] sheep die, he is not entitled to demand damages, because such damages are indirect and the cattleman

¹⁶⁹ Final Hearing Tr., Day 4 at 70.

¹⁷⁰ Dr Nasser Katouzian, *Civil Law, General Rules of Contracts*, vol. 4 (3rd ed., 2001), p. 237, RD6B/74 and Crescent's RPHSIL, Annex E/3 (emphasis added).

¹⁷¹ Third Legal Opinion of Mr Mahmoud Katirai dated 29 January 2004, ICC Case No 9076/JK, RJ2E/54.

is required to reduce his damages to the minimum by adopting the necessary solutions. The law has granted him only the right to claim direct and immediate damages.¹⁷²

455. Dr Ahmadvand in his 2004 work on “The Consequences and Rules of Determining Damages Resulted from Delay or Non-Performance of Obligations in Iranian Law” gives this example when discussing Article 728:

a merchant has purchased a certain amount of a factory’s products the retail price of which in the market is 50 Toman higher than the factory price. Such products were supposed to be delivered two months after the transaction was concluded. However, the factory fails to carry out its obligation for delivery of the goods. Here, since the merchant has been deprived of a certain realizable profit [*manfa’at mohaghagh*], he can seek damages.¹⁷³

456. These passages support what appears to the Tribunal to be the natural meaning and effect of Article 728. The Tribunal is satisfied that Article 728 entitled the buyer to compensation by reference to market price or value for goods not delivered in breach of a contract of sale, whether the title to the goods had passed to the buyer or not, and whether he was purchasing the goods for resale or not. The buyer was not obliged to go out into the market to purchase substitute goods, before claiming the differential in value between the contract price and what he would have had to pay to obtain the goods elsewhere. In addition, Article 728 entitled a claimant to recover pecuniary loss that resulted directly and in the normal course of events from the breach of the contract of sale.
457. Article 728 of the CCP 1939 thus gave practical effect to the principle of entitlement to recover expectation damages for breach of contract, which had been introduced by Article 221 of the Civil Code. This effect persisted for over sixty years, up to the time of the introduction of the CCP 2000. By then, few in Iran can have remembered a time when this was not the law.

(iv) The body of Article 515 of the CCP 2000

458. By Article 529, the CCP 2000 abrogated the CCP 1939, and with it Article 728. The Tribunal has seen nothing to suggest that, before the intervention of the Guardian Council, those who drafted the CCP 2000 intended to alter the substantive effect of Article 728, which had given practical effect to the right to recover expectation damages for breach of contract under Iranian law. On

¹⁷² Third Legal Opinion of Mr Mahmoud Katirai dated 29 January 2004, ICC Case No 9076/JK, RJ2E/54, p. 7 n.18 (emphasis added).

¹⁷³ Dr Vali-Ollah Ahmadvand, “The Consequences and Rules of Determining Damages Resulted from Delay or Non-Performance of Obligations in Iranian Law, with Comparative Study of British Law”, vol. 53 (2004), p. 21, RD1A/25 and RPHBR1 Annex C/6/2.

the contrary, it appears clear that Article 515 was included in the original draft of the CCP 2000 in order to preserve the effect of Article 728, as Mr Rainey accepted.¹⁷⁴

459. The original draft of what was to become Article 515 of the CCP 2000 was Article 501.¹⁷⁵ This survived consideration by the Guardian Council, but subject to the addition of Note 2. Thus, the immediate context in which Note 2 falls to be considered is the proposal of the legislature, in the form of the Islamic Consultative Assembly, to enact what was to become the substantive part of Article 515 (“the body of Article 515”). Surprisingly, until this Tribunal raised questions about the meaning of the body of Article 515 in its questions of May 2020, this appears to have been almost wholly ignored.
460. Dr Mehrpour makes passing reference to the body of Article 515 in his first report¹⁷⁶ but then goes on to focus on Note 2 without further reference to the provisions that it qualifies. The meaning of the body of Article 515 was not explored, or even considered, at the Remedies Hearing.
461. In NIOC’s First Post-Hearing Brief on Remedies the first stage of identifying the meaning of Note 2 is said to be placing it in its context:

The aim is to identify why the provision was introduced and what it was meant to achieve. That sheds valuable light on the language which was subsequently used.¹⁷⁷

However the immediate context of Note 2, the body of Article 515 that it qualified, is ignored, both when considering Note 2’s legislative history and Note 2’s interpretation. Note 2 is treated as if it were a free standing legislative provision, which, as a note to the body of Article 515, it cannot be.

462. Only in the Final Hearing did counsel for NIOC acknowledge the importance of the body of Article 515:

The provision which now applies is Article 515. Before you even get to Note 2, Article 515 is a provision which says you can get compensation for damages, and other sorts of relief, for breach of contract. I don’t really know why Crescent haven’t embraced 515 and said “We

¹⁷⁴ Final Hearing Tr., Day 3 at 52-53.

¹⁷⁵ Initial and amended texts of Articles 267 and 515 of the CCP 2000 and Letter No. 78/21/4911 dated 29 June 1999 setting out the opinion of the Guardian Council, RD6A/13/p. 174.

¹⁷⁶ Mehrpour 1 ¶ 34.

¹⁷⁷ RPHBR1 ¶ 464.

sue under 221 and 515” ... The ordinary way in which Crescent should now be seeking to prosecute this claim is: this is a claim under 221 and 515. That’s the only way through for them.¹⁷⁸

463. He remarked a little later:

this case is not about custom. It was at the last hearing: societal customs expatiated on at great length, but now it’s about 515. And the slight wrinkle still in their case is that they still can’t bring themselves to say “We’re suing under 515”, because this sort of muscle memory of an argument that it’s not a substantive provision.¹⁷⁹

464. The Tribunal agrees with NIOC that, if Crescent is entitled to a remedy, this must be pursuant to the body of Article 515 and not Article 221 of the 1928 Civil Code alone. Thus, the meaning of Article 515 has a primary importance in its own right, quite apart from being the critical part of the context within which Note 2 falls to be interpreted.

465. Article 515 provides (with numbering as Parts 1 and 2 added by the Tribunal):

[1] In the petition plaintiff files with the court, during the court proceedings or independently, plaintiff may seek damages resulting from the court proceedings or delay in performance of, or failure to perform, an obligation which he has sustained, or will sustain, due to defendant’s fault in discharging the obligation or defendant’s refusal to do so, [2] as well as the market value due to [defendant’s] failure, or delay, in delivering the relief sought on the ground of destruction [*“tasbib”*] or causation [*“etlaaf”*].¹⁸⁰

466. The translation of this Article has given rise to difficulty and both Dr Mehrpour and Mr Katirai have provided alternative translations. An alternative translation to “market value” is “quantum meruit” and “relief sought” can be translated as the “subject of the claim”.

467. The body of Article 515 falls into two parts, as indicated by the numbers [1] and [2] inserted by the Tribunal. Part 1 is in general terms. It entitles the plaintiff to seek damages for fault of the defendant in delay in performing or failure to perform an obligation. Part 2 entitles the plaintiff to seek “as well” the market value, due to the defendant’s failure, or delay, in delivering the “relief sought”.

468. As Mr Rainey recognized,¹⁸¹ the same issues arise in respect of Parts 1 and 2 of Article 515 of the CCP 2000 as arose in respect of Article 728 of the CCP 1939: what claims are permitted

¹⁷⁸ Final Hearing Tr., Day 3 at 52-53.

¹⁷⁹ Final Hearing Tr., Day 5 at 85-86. Although it is correct that Crescent’s primary case was that Article 515 had no application, it is right to observe that their counsel submitted that the remedies that Crescent was seeking were all available under Article 515. *See* Final Hearing Tr., Day 1 at 132-133.

¹⁸⁰ RD1A/7.

¹⁸¹ Final Hearing Tr., Day 3 at 78.

under Parts 1 and 2 and, in particular, can a claim be made on the basis of loss of value of the property not delivered?

469. The Tribunal included in its questions of May 2020 a question about the meaning of Article 515 and, in particular of “quantum meruit” in Part 2. NIOC replied at some length. NIOC submitted that Part 1 dealt with compensation for damage caused by a breach of contract, including the failure to deliver property ownership of which had passed to the claimant and that Part 2 did not deal with this. Part 2 entitled the claimant to damages in respect of the loss of benefits that accrued to property, such as the fruit of a tree.¹⁸²
470. At the Final Hearing NIOC’s position remained that Part 1 conferred a general right to recover compensation for damage caused by breach of contract.¹⁸³ This covered expectation loss in general.¹⁸⁴ Mr Rainey accepted that, but for Note 2, Crescent could have advanced a claim under Part 1 of Article 515 provided that it was advanced as a claim for loss of economic benefit.¹⁸⁵ A claim simply for the value of goods not delivered, if recognized by Iranian law (which it was not) would also fall within Part 1 and would be struck down by Note 2¹⁸⁶ because the note caught any economic benefit which would have been received under the contract. The note was apt to preclude all expectation losses.
471. As for Part 2, if this referred to property that should have been delivered under a contract of sale, it only referred to property in respect of which ownership had passed to the claimant. This followed from the reference to “destruction” (“*tasbib*”) and “causation” (“*etlaaf*”).¹⁸⁷
472. There was discussion at the Final Hearing about the significance of the phrase translated by Mr Katirai in paragraph 383(3)(a) above as “on the ground of destruction or causation”. Other translations, including that of Dr Mehrpour, translated this phrase as “under the headings of *tasbib* and *etlaaf*”. These are tortious remedies under Articles 328 and 331 of the Civil Code. Mr Rainey submitted that these tortious remedies were incorporated into Part 2.¹⁸⁸ They only applied to

¹⁸² NIOC’s Answers, ¶¶ 192-193.

¹⁸³ Final Hearing Tr., Day 3 at 103.

¹⁸⁴ Final Hearing Tr., Day 5 at 84.

¹⁸⁵ Final Hearing Tr., Day 3 at 106.

¹⁸⁶ Final Hearing Tr., Day 3 at 107-108.

¹⁸⁷ Final Hearing Tr., Day 3 at 105-107.

¹⁸⁸ Final Hearing Tr., Day 3 at 99.

property ownership of which had become vested in the claimant. The Tribunal does not consider this a plausible suggestion. If a remedy in tort already existed it is hard to see the point of incorporating it into Part 2. The points made at paragraph 450 above in relation to Article 728 of the CCP 1939 as to the irrationality of making compensation dependent on the passing of property apply equally here.¹⁸⁹

473. The significance of the reference to *tasbib* and *etlaaf* was discussed by the members of the Guardian Council, when considering what was then draft Article 501. The most senior of them,¹⁹⁰ Mr Alizadeh, advised his colleagues to disregard the words:

This phrase, “due to destruction and causation” is a general phrase stated by the Assembly because the Majlis wanted to convince us to approve it. It wants to say that claiming such damages is due to destruction and causation. Since one party has not fulfilled an obligation or has delayed in fulfillment of the obligation, he has caused damage to the other party and as a result this damage is claimable.¹⁹¹

474. This is a rare passage in the transcript of the discussion of the Guardian Council that is readily understandable. The Tribunal considers that Part 2 of Article 515 allowed a claimant to make a claim based on market value in respect of goods not delivered under a contract of sale on the same basis as a claim in respect of destruction of goods. The reference to “destruction and causation” was merely by way of analogy. By delaying delivery or failing to deliver, the seller acted in such a way as temporarily or permanently to deprive the buyer of the goods he should have had, in much the same way and with similar effect to the direct or indirectly destruction of the goods.
475. Even if that view of Part 2 is not correct, the Tribunal is satisfied that a claim based on loss of value could have been brought under the general provisions of Part 1, although the express reference to “non-delivery” and to “market value” or “quantum meruit” in Part 2, leads the Tribunal to conclude that it is Part 2 which is specifically directed to the consequences and recoverability of loss for this kind of breach.

¹⁸⁹ The Tribunal notes that in Dr Fasihzadeh, “Loss of Profit [Tafit Manfaat] and the Basis for Liability Arising Therefrom”, Law Journal of the Faculty of Law of Tehran University No 3, pp. 262-263, RD6A/18, Dr Fasihzadeh in drawing a distinction between “loss of profit” and “loss of benefit”, affords some support to Mr Rainey.

¹⁹⁰ Final Hearing Tr., Day 3 at 126.

¹⁹¹ Transcripts of Guardian Council meetings relating to the Bill of Public and Revolutionary Courts Procedure for Civil Affairs, 23 May and 9 June 1999, Documents filed by NIOC pursuant to Procedural Order No. 37 on 23 September 2019, item 50.

476. Thus the Tribunal can see no reason to give the positive rights conferred by the body of Article 515 of the CCP 2000 a different interpretation to those previously conferred by Article 728 of the CCP 1939,¹⁹² which it was replacing. On the contrary, the reasoning which has led the Tribunal to reject NIOC's case on the interpretation of Article 728 applies with equal or greater force in the case of Article 515 because of the specific wording used to which the Tribunal has drawn attention.
477. The Tribunal is satisfied that, before Note 2 was added, the draft that was to become Article 515 of the CCP 2000 reproduced the rights afforded by Article 728 of the CCP 1939 in relation to sale of goods, namely entitlement to damages in respect of the value of goods that should have been delivered under a contract of sale, assessed by reference to market prices, together with any direct pecuniary losses that would have occurred in the normal course of events.

3. The Meaning of Note 2

478. After this lengthy and detailed analysis of the effect of Article 515 of the CCP 2000 without Note 2, the Tribunal comes to the core of the Preclusion Issue – what does Note 2 mean?
479. It is relevant to consider the intention of those involved in the drafting of Article 515 in order to identify the mischief that Note 2 was designed to rectify. In particular, it is relevant to consider the nature of the concern of the Guardian Council, at whose instigation Note 2 was added to the Article.
480. By the Final Hearing Crescent's case had simplified. It was that the Guardian Council was concerned by the fact that the general wording of the draft Article 501 was wide enough to permit recovery of speculative loss of profits, something that had never been recoverable under Iranian law.¹⁹³
481. NIOC's case was unchanged. The Guardian Council wished to reverse the fundamental change that had been made to the Iranian law of contract by Article 728 of the CCP 1939 some sixty years before, so that once again damages for breach of contract would be restricted to reliance damages. This was in circumstances where there was no religious ground for objecting to

¹⁹² See ¶¶ 442-445 above.

¹⁹³ Final Hearing Tr., Day 3 at 122-123.

recovery of expectation damages.¹⁹⁴ The cause for concern was simply that these had never been recoverable under traditional Shari'a law.¹⁹⁵

482. A transcript was kept of the Guardian Council's discussion of draft Article 501 on 9 June 1999.¹⁹⁶ This demonstrates a degree of confusion on the part of the Council as to the interpretation of the draft Article. The discussion recorded in relation to this is also confused and no commentator has been able to reach a firm conclusion as to the precise nature of the concern of the Guardian Council in relation to the recovery of what was described as "damages resulting from loss of profit".
483. It does not follow from this that nothing of value is to be gleaned from the discussion. The broad issue is whether the Guardian Council was concerned to use the enactment of the new CCP as a vehicle for making a fundamental *restriction* on the recovery of expectation damages that had been permitted under Iranian law for some 60 years or whether it was concerned that the draft Article 515 permitted an *expansion* of the right to recover damages where previously this had not been permitted.
484. Consideration of the record of the Guardian Council's discussion leaves little scope for doubt as to the answer to this issue. The Tribunal does not consider it credible that, if the Guardian Council was bent on achieving a fundamental reform of Iranian law, this would not have been apparent from the record of its discussions. It is plain that this was not the concern of the Council.
485. NIOC's counsel himself identified the concern of the Guardian Council:

If you take Note 2 away you will have a general provision which allows any compensation for any loss sustained. This is what the Guardian Council did not like ...¹⁹⁷

¹⁹⁴ Final Hearing Tr., Day 3 at 75. In Dr Mohaghegh Damad, Dr Isa Tafreshi and Dr Seyed Hassan Vahdati, *The Scope of Liability Arising from Breach of an Obligation*, (2009), RPHBR1 Annex C/13/2A, p. 188. Drs Damad, Tafreshi and Shabiri explain that "payment of an amount as compensation for loss of profit is, however, not forbidden ipso facto so that a stipulation to pay such amount would be considered against the will of god".

¹⁹⁵ Dr Mohaghegh Damad, Dr Isa Tafreshi and Dr Seyed Hassan Vahdati, *The Scope of Liability Arising from Breach of an Obligation*, (2009), RPHBR1 Annex C/13/2A, p. 38.

¹⁹⁶ Transcripts of Guardian Council meetings relating to the Bill of Public and Revolutionary Courts Procedure for Civil Affairs, 23 May and 9 June 1999, Documents filed by NIOC pursuant to Procedural Order No. 37 on 23 September 2019, item 50.

¹⁹⁷ Final Hearing Tr., Day 3 at 112.

486. The Guardian Council was concerned that the generality of the wording of the body of Article 515 might open the door to particular claims that were contrary to Shari'a principles. "Late payment damages" was one such head of damage; "loss of profit" was another. It was to prove a misfortune for the clarity of the Iranian law of contract that the precise meaning of the latter phrase was not clear.

487. On 29 June 1999, the Secretary of the Guardian Council wrote to the Speaker of the Islamic Consultative Assembly, expressing the following view of the Council about the draft Article 501 (which became Article 515):

The absolute application of Article 501 which includes late-payment damages and loss of profits is contrary to Shari'a precepts.¹⁹⁸

488. On 14 December 1999, the Consultative Assembly responded by adding Note 2 to the draft Article. Mr Mousa Ghorbani, the Legal and Judicial Affairs Commission Reporter, gave the following explanation:

Because, it might occasionally happen that a person brings a claim for damages against the other one seeking the profits he would have earned in the amount of, say, 5000 Toomans per day if the car, taken by another person, had remained at his disposal or if the car transacted upon had not been delivered to him in due time. Consequently, I have, for instance, sustained loss ("zarar") to the x amount of money after the passage of two months. The esteemed Guardian Council does not accept these cases arguing that these cases are loss of profit ("adam-ol-naf") and that the loss of profit ("adam-ol-naf") cannot be claimed as loss and damage ("zarar va zian"). Accordingly, this note has been added so that the right to seek damages ("khesarat") cannot include loss of profit ("adam-ol-naf").¹⁹⁹

489. Thus the concern of the Guardian Council was advanced as being objection to the recovery of *consequential loss* flowing from deprivation of property as a result of either delict or breach of contract. This was presented as being a loss that might be claimed "occasionally", not a loss occurring in the normal course of events. The addition of the Note to the Article was presented as effecting a specific exclusion from the right to seek damages granted by the Article, not as the removal of the right to seek loss of bargain damages altogether.

490. No one considering Article 515 as a whole could reasonably conclude that Note 2 precluded all rights to compensation in respect of loss of any form of benefit as a consequence of breach of contract, as NIOC's counsel suggested. Such an effect would render the body of the Article nugatory. There is no indication in the debate that ensued as to the meaning of Note 2, or in court

¹⁹⁸ RK2A/2/p. 109.

¹⁹⁹ RK2A/2/p. 120.

judgments and arbitral awards after it took effect, that loss of bargain damages had ceased to be recoverable in Iran as a result of Note 2.

491. There has been, however, intense and protracted debate as to the meaning of “*adam ol naf*” in Note 2. On its natural meaning “*adam ol naf*” did not embrace the non-pecuniary benefits of the ownership of property. Nor did it embrace the benefit of receiving property with a higher value than the price paid for it. Jurists distinguished between property, to which Note 2 did not apply, and pecuniary earnings derived from property, to which it might. The difficulty was in deciding what implied limitations, if any, fell to be placed on the “loss of profits” in respect of which Note 2 precluded compensation. The resulting maelstrom of views is well described in a recent work on civil liability by Dr Iraj Babaei:

In addition to damages arising from the destruction, defectiveness or deficiency of the property *per se* or the benefit of the property and the costs incurred by the injured party (the victim of a tort), there is a wide range of pecuniary damages which fall outside these two categories. For these kinds of damages different descriptions such as loss of profit, realizable benefit, loss of use have been used in the statutes and judicial decisions as well as the legal and jurisprudential doctrine, without any precise definition being given for these expressions. In the legal literature, the term “loss of profit” has been used more than the other above expressions and it has been widely written upon by the legal commentators. Generally speaking, loss of profit (“*adam ol naf*”) refers to such pecuniary interests that the injured party could have benefited from in the normal course of events had the detrimental act not occurred ... As to the recoverability of these damages, the statutes have laid down certain rules using different expressions. This very confusion in the use of terms and rules has itself resulted in perplexity in the Iranian legal system. According to paragraph 2 of Article 9 of [the 1999 Code of Criminal Procedure] the realizable benefit arising from the crime is said to be recoverable; however, just a few months later, damages arising from loss of profit were recognized as non-recoverable, as stipulated in Note 2 of Article 515 of the Civil Procedure Code passed in the same year 1999 ...

These inconsistencies in terminology and rules have resulted in considerable problems in reconciling the above-mentioned statutes with each other and in determining the proper rule applicable to loss of profit and realizable benefit, and this in turn has led to diverse opinions in the legal doctrine regarding this issue and the real intent of the legislature.²⁰⁰

492. If “*adam ol naf*” were to be given the unrestricted meaning of applying to all pecuniary benefits, the effect of Note 2 on the Iranian law of contract would be extreme. Recovery could no longer be made for pecuniary loss that flowed directly and in the normal course of events from a breach of contract. All expectation damages would be excluded, despite the terms of the body of Article 515, which NIOC accepts would allow such recovery in the absence of Note 2. Such an effect would divorce the Iranian law of contract from that prevailing in most other countries. Very few

²⁰⁰ Dr Iraj Babaei, *The Law of Civil Liability*, vol. 1 (Institute of Judiciary Publications, 2018), p. 54, Documents filed by NIOC pursuant to Procedural Order No. 37 on 23 September 2019, item 49. Dr Babaei is a member of the Academic Board of Allameh Tabatabai University.

jurists were enthusiastic about this result. There was an understandable tendency among jurists and others to read the phrase as bearing a restricted meaning.

493. Suggestions included: (1) The phrase only applied to pecuniary gain that would have been derived from the benefits of which the claimant had been deprived (“damages on damages”). (2) The phrase only applied to loss of pecuniary benefit that would have been speculative or uncertain and not to loss of pecuniary benefit that that would have flowed in the normal course of events. (3) The phrase only applied to future loss of pecuniary benefit, not to loss of benefits that had already occurred by the time of the judgment. (4) The phrase only applied to consequential pecuniary loss and not to loss that flowed directly from the breach of contract. (5) The phrase did not apply to pecuniary benefit that was an attribute of property that was destroyed, or not delivered – *e.g.*, the earnings derived from a farm or a taxi.
494. Each of these different restrictions on the meaning of Note 2 had its own group of juristic supporters. In addition, there was a significant group that concluded, reluctantly, that the meaning of “*adam ol naf*” was plain and unrestricted. Note 2 precluded recovery in respect of all and any pecuniary benefits lost as the result of a breach of contract.
495. In these circumstances any party to litigation in which the meaning of Note 2 is in issue can muster jurists whose views support its case, and any expert witness can point to jurists who support his opinion. The Tribunal turns to the views expressed by the expert witnesses in this case.
496. The Tribunal has summarised the evidence given by the experts in this case at Section VIII.G above. The Tribunal has derived little assistance from the views of Mr Katirai on the meaning of Note 2. In summary these were:

The Note only debars a plaintiff from seeking speculative damages or damages upon damage.²⁰¹

497. These are, in fact, two different interpretations of Note 2, based on an eclectic selection from the many commentaries on the subject. They are in conflict with Opinions given by Mr Katirai on earlier occasions.

²⁰¹ Katirai 6 ¶ 99, *citing* Katirai 5 ¶¶ 28-42.

498. Although those representing Crescent had originally advanced both meanings they had, by the end of the Final Hearing, ceased to rely on the submission that Note 2 was simply referring to damages upon damages.
499. This arbitration is not the first in which Dr Mehrpour has given evidence in relation to the effect of Note 2. He gave expert evidence in the Caspian Case. The respondent in that case was a wholly owned subsidiary of NIOC and the case involved a swap agreement under which the claimants agreed to provide crude oil at the Caspian port of Neka in exchange for crude oil that the respondent would deliver at Kharg in the Persian Gulf. The contract had been terminated prematurely as a consequence of the repudiation by the respondent and the relevant issue was whether the claimant's recovery of damages in respect of the profit it would have earned from the swap was precluded by Note 2. The award in that arbitration, together with two reports that Dr Mehrpour prepared for it and a transcript of the evidence that he gave have been included in the record of this case.
500. In his first report in that case, Dr Mehrpour emphasized the difference between loss of property and loss of future profits, as evidenced by the following extracts:
- (i) In the opinion of the *Imamate* (jurisconsults), the legitimacy of the claim for damages for loss of profits ("*khessarat adam ol naf*") which, in reality, cannot be interpreted as a loss of assets, has always been considered with high suspicion.²⁰²
 - (ii) ... this group of *Faqihs* does not consider that profits which would possibly be gained in the future, however strong this possibility may be, constitute damages or a loss of profits, and they therefore do not subject such profits to the rules providing for the liability of the person having destroyed property or caused actual damage.²⁰³ This is also what has influenced the *Faqihs* of the Guardian Council.
 - (iii) On the subject of loss of profits ("*adam ol naf*"), that is to say loss of hypothetical future benefits ...²⁰⁴

501. In cross-examination in the Caspian Case, Dr Mehrpour distinguished between profits that had been realized, or were certain to accrue, and profits that were expected to accrue in the future. The former were treated as property, and damages could be recovered in respect of their loss. The latter were unrecoverable by reason of Note 2. His evidence merits citation at a little length:

The main problem in connection to loss of profit that cannot be claimed, the main problem that you cannot claim the loss of profit is that nothing has happened, nothing has been

²⁰² Expert Report of Professor Hossein Mehrpour Mahamadabadi in the Caspian Case, 9 January 2012 ¶ 72.

²⁰³ Expert Report of Professor Hossein Mehrpour Mahamadabadi in the Caspian Case, 9 January 2012 ¶ 78.

²⁰⁴ Expert Report of Professor Hossein Mehrpour Mahamadabadi in the Caspian Case, 9 January 2012 ¶ 107.

realized, and it is not clear that anything would be realized. Just because it is possible and even the possibility is very great, that a profit may happen, it has been said according to the law that you cannot condemn the person to pay the loss of profit. And this is what in Fiqh it has been said is not allowed/permissible. But there are some profits which are realizable. Maybe this is absolute profit, existent profit, and that's what we have referred to here. Since it is absolutely realizable, so if somebody would destroy that profit then one can claim it. In the Advisory Opinions of the Legal Office, you have seen this referred to the benefits of the subject itself, such as trees which have fruits. It is true that the fruits have not yet become ripe yet, but the profit is absolutely realizable; or a labourer who has a contract, and the contract has been breached. So it is not being said that he has already the benefit of the profit in hand but it is realizable certainly. But if there is a contract that someone has a possible profit, even a very high possibility of profit exists there, they say that profit cannot be claimed.²⁰⁵

502. In his report Dr Mehrpour condemned the claim in the following terms:

The Claimant's Request for Arbitration makes no mention of the loss of certain realizable profits. What is invoked ... is the deprivation from commercial activities in the Caspian Sea (Paragraph 19 RA) which, if proven, were expected to bear benefits. As jurists say, the only point on which all Iranian legal scholars agree and accept is that loss of hypothetical profits or loss of hypothetical benefits is not considered as damages and cannot be claimed.²⁰⁶

503. The evidence of Dr Mehrpour in the Caspian Case indicated that the claim was objectionable because it was for hypothetical profits that would have been received in the future, after the date of termination of the contract. Loss of profits that had already accrued or were certain to accrue was recoverable.

504. The relevant paragraph of the award in Caspian Case summarised the conclusions of the tribunal as follows:

In the light of the foregoing discussion, the Tribunal comes to the conclusion that Iranian law does not exclude lost profits as a matter of principle. Future lost profits in civil matters are generally not recoverable, except in limited circumstances where such profits would certainly have been realised but for the breach of contract. Indeed, it arises from the analysis set out above that the key test for recovering lost profits is certainty. Despite the wording of Article 515, Note 2, the record suggests that Article 515, Note 2 is not interpreted as a blanket exclusion of lost profits in general or of all future lost profits in particular. Iranian courts may decide to award lost profits for which the cause of existence has been provided and which would certainly have been realised had the contract not been breached.²⁰⁷

505. This Tribunal is satisfied that these findings were consistent with the evidence given in that case by Dr Mehrpour. The Tribunal notes that in the Caspian Case the Tribunal included Judge Kalkhoran, appointed by NICO. He had been a member of the Iranian Supreme Court and sat on

²⁰⁵ Evidentiary hearing held in the Caspian Case on 2 June 2012, Transcript at 155.

²⁰⁶ Expert Report of Professor Hossein Mehrpour Mahamadabadi in the Caspian Case, 9 January 2012 ¶ 105.

²⁰⁷ Caspian Case, Award, Document filed by Crescent on 18 June 2019, ¶ 503.

the Iran-United States Claims Tribunal. He was the Senior Legal Advisor to the Minister of Justice on civil matters from 1998 to 2002, during which period the CCP 2000 was enacted.²⁰⁸

506. In his first report in the present arbitration, Dr Mehrpour returns to the theme of the difference between loss of property in respect of which damages are recoverable and loss of future profits falling within the embargo imposed by Note 2, whether in contract or tort. Thus he states:

according to the majority of *faqihs*, deprivation of a profit that may be realized in the future is not considered as loss or destruction of property which can be recovered under the *fiqhi* rule of destruction and causation. Such prevailing opinion resulted in the [2000] amendments to the Code of Civil Procedure, according to which loss of profit is not recoverable.²⁰⁹

507. Dr Mehrpour goes on to explain²¹⁰ that property is deemed to include the benefit (“*tavfit manfaat*”) that goes with it. Thus dispossession of a house entitles the owner to recover damages for deprivation of the benefit of living in it. The loss of benefit that is an attribute of property is not treated as “loss of profit” and can be the subject of an award of damages.

508. Dr Mehrpour summarises the position as follows:

it can definitely be opined that according to the existing legal texts in the Iranian legal system, claiming damages from a party who has not performed its obligations, when the damage is qualified as not earning profits or as loss of profits which were expected to be gained by the performance of the contract, is not permitted and is legally groundless.²¹¹

509. Both in the Caspian Case and in this one Dr Mehrpour’s evidence drew a distinction between loss of profits that had already been sustained, or was certain to be sustained, and loss of profits that might have been earned in the future, but were not certain. The former were recoverable, the latter were not.

510. The Tribunal turns to the Advisory Opinions of the Judicial Legal Department to which Dr Mehrpour referred in the Caspian Case. These are considered as persuasive authorities by the Iranian courts.²¹² From time to time over the period that has elapsed since Note 2 was enacted the Legal Bureau has given Opinions dealing with the interpretation of Note 2. A number of these Opinions have dealt with the recoverability of “loss of profits” in both tort and contract. The

²⁰⁸ Final Hearing Tr., Day 2 at 2.

²⁰⁹ Mehrpour 1 ¶ 37 (emphasis added).

²¹⁰ Mehrpour 1 ¶ 41.

²¹¹ Mehrpour 1 ¶ 49 (emphasis added).

²¹² Final Hearing Tr., Day 1 at 130.

recurrent theme of these Opinions has been that, both in tort and contract, where “profits” were lost which would certainly have been earned but for the tort or breach of contract (“realizable loss of profits”) they were recoverable, whereas if the profits were uncertain they were not recoverable.

511. An example of the former which recurred in many of the Opinions and which was also referred to in the Caspian Case was the fruit that would have been produced from a tree in bloom. Whilst the production of fruit was not inevitable, there was a sufficient degree of certainty of the development of it from the existence of blossom on the tree to put the fruit into the category of realizable loss of profits. An example of the latter was the income that a baker might have earned from the sale of pastries that he would have made from the flour that had not been delivered. The principle was summarised as follows:

The difficulty of a claim for loss of profits is proving the certainty (“mosallam”) of the profits, had the obligation been carried out, and it cannot be found on the basis of ordinary course of events.²¹³

512. Thus an individual injured by crime or tort could claim loss of earnings if he had been in work, but not if at the time of his injury he was unemployed.²¹⁴ The former constituted loss of “realizable profits” (“*manafea’ momken ol-hosoul*”) and was recoverable pursuant to Article 9(2) of the CCP 2000; the latter, loss of “speculatively realizable profits” (“*adam ol nafa*”), was the subject of the embargo on recovery placed by Note 2.
513. The Tribunal has referred above to the different interpretations that the jurists have given to Note 2.²¹⁵ The most significant difference between the jurists is as to whether Note 2 applies to all “loss of profits” or only to “speculative loss of profits”, permitting recovery in respect of the loss of profits that would have occurred in the normal course of events (“realizable loss of profits”). NIOC is in the former camp, Crescent in the latter.
514. Although league tables have been prepared showing the number of jurists supporting these rival views in respect of Note 2, the Parties sensibly did not invite the Tribunal to determine that issue on the basis of strength of numbers. Reliance was placed by both Parties on the Opinions of the

²¹³ Advisory Opinion, No. 7/7904, 10 January 2005, Documents filed by Crescent pursuant to Procedural Order No. 37 on 10 September 2019.

²¹⁴ Judicial Legal Department Advisory Opinion No. 7/94/2591, 20 December 2015, Documents filed by Crescent pursuant to Procedural Order No. 37 on 20 September 2019, item 20.

²¹⁵ See ¶¶ 491-495 above.

Legal Bureau, which appear to attract general respect. Apart from this, each of the Parties placed weight on the views expressed by Dr Katouzian.

515. Dr Katouzian was one of the draftsmen of the Iranian Constitution. Each of the Parties have treated him as a jurist of the highest authority. On 24 August 2000, he gave a press interview to Etetiaat Newspaper that expressed a “fundamental criticism” of Note 2. This was on the basis that it prohibited the recovery of all “loss of profits”, without distinguishing between “realizable loss of profits” and “speculative loss of profits”. NIOC relies on this as giving a clear indication of Dr Katouzian’s view of the true meaning of Note 2. It is NIOC’s case that, to the extent that Dr Katouzian may subsequently appear to have departed from this view he was merely expressing an opinion of what the law ought to be. Crescent has relied on a number of passages in the 3rd edition of Dr Katouzian’s work on “The General Rules of Contract”. This was, however, published in 2001 and it is not clear to what extent it considered the effect of the CCP 2000. It made the following statement of principle:

Direct damages resulting from breach of contract are of two types:

1. Natural and normal damages [damages reasonably and naturally arising in the normal course of things] which could have been contemplated by the parties
2. Exceptional and unusual damages, which could not have been foreseen in the normal or usual course of things.

There is no doubt that the first type of damages must be recovered.²¹⁶

516. In the 5th edition of this work, published in 2008,²¹⁷ Dr Katouzian deals expressly with the effect of Note 2 on the recovery of damages. After drawing a distinction between “profits “that were certain to be realized and “profits” whose realization was uncertain, he gives an example of each which involves the non-delivery of property subject to a contract of sale. In the first case the property is ice that should have been delivered by an ice factory and the profits are those that would have been earned by the on-sale of the ice, described as “certainly realizable profits”. In the second the property is sugar and the profits are those that would have been earned by the sale of pastries made using the sugar, suggested by Dr Katouzian to be uncertain. He ends his analysis:

²¹⁶ Dr Nasser Katouzian, *Civil Law, General Rules of Contracts*, vol. 4 (3rd ed., 2001), p. 250, RD1A/19 and Crescent’s RPHSIL, Annex E/4.

²¹⁷ Dr Nasser Katouzian, *General Principles of Contracts*, vol. 4 (5th ed., Enteshar, 2008), RD1C/16 and RPHBR1 Annex C/9 and Crescent’s RPHSIL Annex D/9.

However, Note 2 pronounces that “The damages resulting from loss of profit are not recoverable ...” but for co-ordinating the legal system, the jurisprudence can consider the [said] loss of profit as not including the profits whose loss in the ordinary course of events is certain.²¹⁸

Crescent relied on this as representing the considered conclusion of Dr Katouzian. NIOC submitted that it was Dr Katouzian’s view of what the law ought to be.

517. The Tribunal has given careful consideration to all the juristic discussion that has been placed on the record. Some of the jurists, in the majority, who are of the view that Note 2 only precludes recovery in respect of loss of speculative profits, support this view on the ground that this avoids any conflict between Note 2 and Article 9 of the Code of Criminal Procedure, 1999. The former precludes recovery of speculative profits. The latter permits the recovery of realizable profits.
518. Some of those who take the view that Note 2 precludes recovery in respect of all loss of profits reconcile the two provisions by suggesting that Article 9 of the Code of Criminal Procedure, 1999, which speaks of “*manaqfe*”, is permitting recovery of “benefits” that attach to property, which are not considered as “*nafa*” or “profits” to which Note 2 relates. The oft-used example of the fruit of a tree in bloom is cited as being such a benefit.
519. If jurists are confused at the meaning of Note 2, the same would seem to be true of judges. A large volume of decisions in which Note 2 has been found to apply has been placed on the record. Happily these are not authoritative, for Note 2 is frequently cited in judgments without explanation, rhyme or reason. Very few of them concern sale of goods, and the Tribunal has derived no assistance from them.

4. The Tribunal’s Conclusions as to the Meaning of Note 2

520. It is easier to identify what falls outside the definition of *adam ol naf* in Note 2 than what falls within it. *Adam ol naf* does not describe the loss of the direct benefit derived from a contract as opposed to some form of consequential loss. The submission that Note 2 was enacted to remove the right to recover compensation for loss of bargain (“expectation losses”) that had been part of Iranian law for over half a century could only credibly be advanced if Note 2 was considered in isolation from the substantive part of Article 515 that it qualified. Nor does consideration of the proceedings of the Guardian Council, and the Majlis, which led to the enactment of Note 2 lend

²¹⁸ Dr Nasser Katouzian, *General Principles of Contracts*, vol. 4 (5th ed., Enteshar, 2008), item 822, RD1C/16 and RPHBR1 Annex C/9 and Crescent’s RPHSIL Annex D/9.

any credence to the submission that it was concern about this fundamental principle of Iranian law that motivated those concerned in the enactment of the CCP 2000 to add Note 2. Almost all who have considered the meaning of Note 2 have proceeded on the premise that the concern of those responsible for Note 2 was limited to indirect pecuniary benefits that would have been enjoyed as a consequence of performance of the contract.

521. The Tribunal is in no doubt that it is right to impose this initial limitation on the meaning of *adam ol naf* in Note 2.
522. The majority of jurists placed a further limitation on the scope of the loss described as *adam ol naf*. They adopted a purposive approach to interpretation of the phrase, identifying uncertainty as the concern that had resulted in the restriction of the ambit of Article 515 by the addition of Note 2. Accordingly they further restricted the meaning of *adam ol naf* by concluding that the phrase did not apply to “profits” that were certain to accrue, or which would accrue in the normal course of events, or which were an attribute of an individual or of property, which was, perhaps, another way of describing profits that would accrue in the normal course of events. All of these came under the general description of “realizable loss of profits”. Note 2 did not apply to this. The loss to which Note 2 applied was “speculative loss of profits”.²¹⁹
523. The Tribunal endorses this majority view, which was one to which it is satisfied that Dr Katouzian subscribed, after he had given the matter mature consideration. Counsel for NIOC submitted that the Tribunal would find no commentary that suggested that the legislative intent of the changes made under the CCP 2000 was business as usual and merely the tidying up of Article 728 of the CCP 1939.²²⁰ It seems to the Tribunal that this is to ignore the opinion of the many jurists, including Dr Katouzian, that Note 2 did not apply to profits that would be earned in the normal course of events. This opinion accords with what the Tribunal has concluded was the intention of the Guardian Council – to ensure that the apparently unrestricted meaning of the body of Article 515 of the new CCP did not open the door to recovery in respect of loss of profits in circumstances wider than those permitted by Article 728 of the CCP 1939.

²¹⁹ The Tribunal also notes the continued existence of Article 133 of the Commercial Code (Joint Stock Companies) Act 1969, which in amended form provides for recovery of loss of profits for breach of duty by a director of such a company. The very existence of this provision, together with Article 9 of the Criminal Code, (with its 2014 amendment) demonstrates the validity under Iranian law and Islamic principles (as perceived in Iran) of damages claims for some lost profits within defined limits as opposed to a total bar on recoverability altogether.

²²⁰ Final Hearing Tr., Day 3 at 87.

524. Thus the Tribunal concludes that from 1939 to this day the Iranian law of contract has permitted recovery of “realizable lost profits”, these being lost “profits” that were direct, foreseeable and would have been realized in the normal course of events.
525. The next step is to consider whether the losses claimed by Crescent are recoverable, whether as lost profits or otherwise.

IX. RECOVERABILITY OF THE LOSSES CLAIMED BY CRESCENT

A. THE LOSS NORMALLY RECOVERABLE FOR BREACH OF A SELLER’S DUTY TO DELIVER GOODS

526. Normally where a seller agrees to sell generic goods there will be a market in which such goods are bought and sold. In these circumstances the market value of the goods in question will normally determine the amount of the loss suffered by the buyer if the goods are not delivered. This will be the market value of the goods at the time that they should have been delivered less the price that the buyer had agreed to pay for them. This can be explained by the fact that the buyer can go into the market and buy, at the market price, replacement for the goods that he should have received from the seller.
527. This will be the normal measure of loss whether or not the buyer has resold the goods before the date of delivery. This can be explained in two ways: (1) the buyer can go into the market and buy in the goods at the market price that he requires to satisfy his obligations under the onward sale; (2) if he does not do so, the customer to whom he made the onward sale can do so. Thus, in that case, the buyer’s loss will be (1) the profit that he would have made on the onward sale to his customer plus (2) his liability to his customer, which will be the difference between the price of the onward sale and the market price that his customer had to pay to replace the goods.

B. UNUSUAL FEATURES

528. In the present case the picture relevant to the assessment of damages is complicated for a number of reasons.
- (1) The goods sold by NIOC consisted of raw gas. This would have had to be processed before it was marketed so, in calculating the profit that Crescent lost, the costs that would have been incurred in processing have to be deducted.

- (2) Processing would have produced (1) sweet gas that could be used as a feedstock or as fuel to generate power and (2) by-products, in particular liquid petroleum gas (LPG) and sulphur.
- (3) There was no market from which alternative supplies of raw gas could have been obtained by Crescent, and thus no “market value” of the raw gas.
- (4) There was no market from which alternative supplies of sweet gas could have been obtained by Crescent, and thus no “market value” of the sweet gas.
- (5) In contrast to (4) there were markets in which the by-products of the raw gas could be bought and sold and, in consequence, market values for these products.
- (6) Although there was no market in which sweet gas was bought and sold, there were ready potential purchasers of this gas, some of whom were prepared to enter into forward contracts to buy this. In particular, there were the so-called “anchor customers”, FEWA and SEWA, who were keen to purchase the gas as a fuel for the generation of electricity that would be cheaper than the alternatives used by those two authorities (“**Anchor Customers**”).
- (7) NIOC and Crescent contracted on the basis that the gas purchased from NIOC would be processed and sold on to these end-users. Crescent was obliged to have in place a forward contract of sale to an end-user (SEWA) to provide security for Crescent’s payment obligations to NIOC.
- (8) Instead of itself processing the raw gas and on-selling the sweet gas to end-users, and the products in the relevant markets, CGC entered into a contract with an associated company, CNGC to do these. The price of the essentially back-to-back supply contract between CGC and CNGC exceeded the price that CGC would pay NIOC for the gas and thus secured a trading profit for CGC. That price left it open to CNGC to make a profit in its turn out of on-sales of sweet gas to end-users and sales of products in the relevant markets.

C. CGC'S CASE ON ITS RECOVERABLE LOSSES**1. The Nature of the Claim**

529. Using the term “Crescent” in the wider sense mentioned above (at paragraph 1), the Claimants contend:

- (1) The project was for NIOC to supply gas for resale and consumption in the UAE market. NIOC assumed the obligation to produce and sell the gas to Crescent and Crescent committed to purchase on a long-term take-or-pay basis and to undertake both the burden of downstream investment and the risk of market prices and demand.
- (2) Crescent established the market, lined up major (“anchor”) buyers, satisfied NIOC of the existence of those buyers and entered into binding contracts with them. This was foreseen at the time of the GSPC and, in the case of the sale to SEWA, was the subject of provisions in the GSPC. The contracts with Anchor Customers were entered into before 1 December 2005, the date for commencement of deliveries.
- (3) NIOC knew that Crescent would need to construct, or to procure the construction or availability of off-shore and on-shore pipelines together with on-shore treatment and distribution facilities.
- (4) NIOC knew that Crescent would enter into long-term contracts both for the onward sale of gas and the provision of necessary transport and treatment services.
- (5) NIOC knew that Crescent would also sell liquids extracted from the gas purchased.
- (6) When NIOC failed to supply gas Crescent was unable to obtain alternative supplies.
- (7) Crescent was therefore unable to fulfil the gas supply contracts which it had entered into or to make other supply contracts.
- (8) Crescent therefore inevitably lost any profits it would have made from on-selling the gas and the denuded liquids.²²¹

²²¹ CPHBR1 ¶ 20.

2. The Formulation of the Claim

530. Over time Crescent advanced its case on damages in a number of different formulations. Initially, adopting a broad approach that treated CGC and CNGC as a single entity, Crescent made a global claim based on the difference between the price that NIOC would have been paid by CGC for the gas and the various prices that Crescent alleged would have been obtained on resale by CNGC of the sweet gas and products, after allowance for processing costs.
531. More recently Crescent has claimed the loss allegedly suffered by CGC as falling into two categories: (1) the profit that CGC would have made on its on-sale contract with CNGC and (2) its liability to CNGC in respect of the losses that CNGC sustained in respect of onward sales to end users.²²² Damages in respect of each category are alleged to be recoverable under Iranian law as being in respect of direct and foreseeable loss of the type to be expected in the normal course of events.
532. In its submissions before and at the Final Hearing Crescent advanced, pursuant to the Tribunal's questions of May 2020 and for the first time, a new formulation of the nature of the loss suffered by CGC. Crescent submitted that the direct loss in respect of which CGC claimed was the failure to receive the gas. The value of the gas was the measure of that loss. The claim advanced by CGC reflected the value of the gas. The various forward sale transactions established that value. Adopting the example of the tree and its fruit, Crescent's loss was the equivalent of the tree.²²³ It was this submission that raised the issue of whether a claim based on the value of goods not delivered was recognised under Iranian law.²²⁴
533. The Tribunal proposes first to consider the claim advanced by Crescent as described at paragraph 531 above. It is right to say that Crescent has placed this approach to damages at the forefront of its claim.

D. PROFITS LOST ON SALES TO CNGC

534. The Tribunal proposes to address at the outset two discrete defences raised by NIOC to Crescent's claim for loss of profit.

²²² Final Hearing Tr., Day 1 at 130-132.

²²³ Final Hearing Tr., Day 1 at 130-132.

²²⁴ See ¶ 445 above.

1. Custom of the Trade

535. NIOC sought to establish, by evidence, that, in long-term oil and gas contracts, trade usage is to exclude liability for lost profits in the case of non-delivery. The evidence of Mr Way was said to support this,²²⁵ but it did not go that far.

536. Crescent points out that:

- (1) exclusion clauses are ordinarily employed because, in their absence, a liability would be likely to be incurred;
- (2) there is no relevant exclusion clause in the GSPC; and
- (3) in any event, the evidence rose no higher than showing that lost profits are sometimes excluded, not that there is a trade usage to that effect,²²⁶ and that such exclusions are likely to be in a contract of supply to a consumer.

537. NIOC sought to reinforce its argument by contending that the evidence in the Jurisdiction and Liability Phase demonstrated that the Parties considered that gas supply was plentiful in the region and there were many supply options.²²⁷ The same assumption, it is said, was reflected in other gas sales contracts in the UAE at the time, where the only remedy for non-delivery specified in such contracts (as with the GSPC) was a reduction in the buyer's take-or-pay obligations.²²⁸ However, it is clear that, at the time of the breaches, there was no available market for the gas.

538. The Tribunal accepts Crescent's submissions on this issue and rejects NIOC's contention that the Contract was subject to a custom of the trade that excluded any right to claim damages for loss of profit.

2. Reservation of the Value of the Products

539. A substantial part of the profits said to have been lost by CNGC was based on the revenues that would have been obtained from sales of the products.²²⁹ NIOC strongly resisted the conclusion

²²⁵ RPHBR1 ¶¶ 1028-1030, *referring to* Way 1 ¶¶ 89-93; Way 2 ¶¶ 57-72.

²²⁶ CPHBR1 ¶ 35.

²²⁷ RPHBR1 ¶¶ 1019-1027.

²²⁸ RPHBR1 ¶ 1025.

²²⁹ *See above* ¶¶ 320, 326, 335, 408, 528; and *below* ¶¶ 658, 667, 739-741, 756.

that Crescent was entitled to the benefits of such sales and contended that, in the price negotiations for the GSPC, it was accepted that NIOC would receive the full value of the entrained liquids. However, as noted below, the Btu formula in the GSPC was the mechanism agreed by the Parties. NIOC's postulated price review was the suggested method by which this contractual position could have been overcome. There was no price review, and, for reasons given below, none should be assumed in the "but-for" analysis adopted by the Parties.

3. Conclusions

540. All the gas that NIOC was obliged to deliver to CGC under the GSPC over the period the subject of the claim had been re-sold by CGC before the due dates for delivery. There were two contracts governing such re-sale: one for sale to SEWA and the other for sale to CNGC. For reasons that will appear, the sale to SEWA should be treated as subsumed in the sale to CNGC.²³⁰
541. The price CNGC agreed to pay to CGC sets an upper limit upon CGC's claim for lost profits, whether this be expressed as a claim for loss of realizable profit or loss of the benefit of receiving gas that would have had a higher value than its purchase price.
542. This loss is of a kind which resulted directly and naturally from NIOC's breach of contract. It falls within the substantive provisions of Article 515 of the CCP 2000 and recovery of damages for the breach is not precluded by Note 2 of Article 515. Article 515 of the CCP 2000 is a law which falls within the concluding words of Article 221 of the Civil Code.
543. The loss was plainly foreseeable.
544. NIOC is liable to pay damages to compensate for the loss.

E. LIABILITY TO CNGC

545. Crescent says that CNGC would have made profits from the on-sale of gas and liquids; that CGC is liable to compensate CNGC for the loss of those profits; that CGC's liability is a form of damage for which CGC is liable to be indemnified by NIOC; and that an award of damages to cover the extent of that liability should be made.²³¹ Crescent does not seek declaratory relief in

²³⁰ See ¶¶ 659-662 below.

²³¹ CPHBR1 ¶¶ 759-777, 781.

respect of this claim; it says the amount of the claim has been quantified and an award of damages in the quantified amount is sought.

1. The CGC-CNGC GSA

546. The Tribunal turns to consider CGC's claim for an indemnity in respect of liability under the CGC-CNGC GSA. That contract is dated 8 June 2005. The governing law is the law of the UAE (Article 21). Neither party has set out to make a positive case as to the relevant content of that law. It is not suggested that, in respect of CGC's potential liability to CNGC, the law is materially different from the law of England.
547. The contract recites that the parties have entered into various gas sales (off take) agreements with end-users in Dubai, Sharjah and the Northern Emirates under which they are obliged to deliver processed gas, that CNGC has entered into gas sweetening and processing agreements, and that CNGC has entered into gas transmission agreements (Recital A).
548. The duration of the contract is 25 full delivery years, with potential for an agreed extension of three years (Article 12). The Commencement Date is 1 December 2004 (with a possible extension to 1 March 2006) (Article 5).
549. According to Crescent the CGC-CNGC GSA is essentially a back-to-back contract with the GSPC.²³² There are, however, some differences between the two. One difference is that CGC agreed to supply somewhat greater quantities of gas to CNGC than it was entitled to receive from NIOC under the GSPC.²³³
550. The liability alleged by CGC is a liability in damages for the loss sustained by CNGC of the profits that it would have made by on-selling the sweet gas and the products derived from raw gas that should have been supplied to it by CGC under the CGC-CNGC GSA. CGC can only claim in respect of such liability insofar as its failure to supply CNGC was caused by a failure on the part of NIOC to honour its supply obligations under the GSPC.

²³² See CPHBR1 ¶ 760.

²³³ See CGC-CNGC GSA, Article 2.3.

2. Objections of Principle by NIOC

551. NIOC has advanced a number of objections of principle in answer to Crescent's claim for an indemnity:²³⁴

- (1) Damages can only be recoverable under Iranian law in respect of losses whose size or extent was foreseeable at the time that the contract was concluded. The losses claimed by Crescent greatly exceed any that could have been foreseen and these losses are, in consequence, irrecoverable.
- (2) The Tribunal has no jurisdiction to resolve issues between CGC and CNGC.
- (3) CNGC has no viable claim for damages against CGC because it was and is open to CGC to invoke the "Force Majeure" clause in the CGC-CGNC GSA.
- (4) It was not reasonably foreseeable that CGC would insert CNGC into the contractual chain. It follows that no claim can be based on the contract between CGC and CNGC.
- (5) No claim for damages has been advanced by CNGC against CGC and, in consequence, no right to an indemnity has arisen.

3. Foreseeability of the Size of Loss

552. Subject to one qualification, the evidence as to Iranian law, and the arguments of the Parties, on questions of foreseeability and assumption of responsibility substantially reflected English law as stated in *Hadley v Baxendale*,²³⁵ *Transfield Shipping Inc v Mercator Shipping Inc (The Achilles)*²³⁶ and *Siemens Building Technologies F.E. Ltd v Supershield Ltd*.²³⁷ The qualification is that, according to NIOC, in Iranian law the extent as well as the type of damage enters into the consideration of what is foreseeable and required to be compensated.²³⁸ Crescent, relying on a passage from Dr Katouzian, says that what must be foreseen is "the scope and importance" of the

²³⁴ See, e.g., RPHBR1 ¶¶ 742-755.

²³⁵ [1854] EWHC J70.

²³⁶ [2009] AC 61, RF2/46/p. 127.

²³⁷ [2010] 2 All ER (Comm) 1185, RE2/7/p. 126.

²³⁸ RPHBR1 ¶ 889.

loss.²³⁹ NIOC contends that it could not have foreseen the magnitude of the damages claimed by Crescent.²⁴⁰

553. A significant part of the damages claimed by Crescent is founded on allegations that NIOC was obliged to supply to CGC large quantities of gas in excess of the 500MMsfed that constituted NIOC's basic supply obligation under the Contract. This surplus would have been sold to end-users, so Crescent contends, at high prices. As will appear in subsequent sections of this Award the Tribunal does not accept that part of Crescent's claim.
554. So far as concerns the initial 500MMsfed that NIOC agreed to supply, the Tribunal has, for reasons that appear below, concluded that these would have been supplied to Anchor Customers, FEWA and SEWA, at relatively modest prices. These sales were not merely foreseeable, they were foreseen and, so far as SEWA was concerned, contractually required. For this reason the Tribunal rejects NIOC's defence based on lack of foreseeability of the extent of the losses.

4. Jurisdiction

555. The Respondent raised a jurisdictional argument to the effect that this Tribunal has no capacity to resolve any dispute between CGC and CNGC. The CGC-CNGC GSA contains an arbitration clause which, so far as the evidence shows, has never been invoked and is materially different from the arbitration clause applicable to the dispute between NIOC and Crescent.²⁴¹ However, CGC is not inviting the Tribunal to resolve any dispute between CGC and CNGC. In the context of a dispute between CGC and NIOC, CGC is inviting the Tribunal to reach a conclusion that CGC is liable to CNGC in a certain amount, and to award damages against NIOC to compensate CGC for that liability. The argument advanced by NIOC is misconceived.

²³⁹ CPHBR1, Annex A ¶ 116, *referring to* Dr Nasser Katouzian, *General Principles of Contracts*, vol. 4, *Performance of Contract* (2008), items 822, 834, 865, RD1C/16 and RPHBR1 Annex C/9 and Crescent's RPHSIL Annex D/9.

²⁴⁰ RPHBR1 ¶¶ 1066-1157.

²⁴¹ NIOC's Counter-Memorial on Remedies ¶¶ 30-31.

5. Force Majeure

556. NIOC points out that the CGC-CNGC CSA contains a force majeure clause (see paragraph 557 below) that is different from that in the GSPC and, in particular, that force majeure events affecting third parties' facilities are considered as force majeure.²⁴²

557. Article 13, dealing with force majeure, provides:

13 Force Majeure

13.1 In the event that either Seller or Buyer is rendered unable wholly or in part by Force Majeure (being, subject to what is hereinafter provided, any event or circumstance beyond the reasonable control of the Party affected such as but not limited to acts of God, and/or acts of nature, lockouts, wars declared or undeclared, blockades, insurrections, terrorist acts, epidemics, landslides, earthquakes, fire, storms, floods, washouts, explosions, unavoidable accidents) to carry out their obligations under this Contract, other than to make payments due or serve notices due hereunder and includes, without limiting the generality of the foregoing, events and circumstances set out in Clause 13.3 below), it is agreed that, upon written notice by such Party giving full particulars of such Force Majeure circumstances to the other Party as soon as possible after the discovery of the occurrence of said circumstances which constitute Force Majeure, the obligations of the Party giving such notice, so far as they are affected by such Force Majeure, shall be suspended during the continuance of any inability so caused, and the Party so affected shall not be deemed to be in breach of this Contract.

However, such circumstances constituting Force Majeure shall, as far as possible, be remedied with all reasonable dispatch.

Seller or Buyer shall give notice and reasonably full particulars of any Force Majeure in writing delivered by telefax to the other Party within 6 working days after such Force Majeure occurs. The Party claiming relief on account of Force Majeure shall as soon as practicable give detailed written notice to the other Party, all information available about the relevant Force Majeure circumstances, the relevant facts and consequences, and a statement of steps and time believed necessary to remedy the Force Majeure situation and shall reasonably afford access to its facilities for a site inspection if desired by the other Party, at the expense and risk of said other Party who makes such inspection. Each Party shall use its reasonable efforts to minimize the effect of any Force Majeure situation.

13.2 Should it be foreseen that circumstances of Force Majeure and/or the effects thereof may exceed a continuous period of 6 Months, the Parties shall negotiate and endeavour, in good faith, to find a solution acceptable to both Parties. If the Parties do not find an acceptable solution within the said 6 Month period, the Party not affected by Force Majeure may terminate this Contract by giving a 6 Month written notice to the other Party. Such notice shall take effect on the date that it is served, provided that:

- (a) the written notice referred to above shall not take effect if prior to the 6 Month period the Party affected by Force Majeure has resumed performance of all of its obligations under this Contract; and

²⁴² RPHBR1 ¶ 750

- (b) until the written notice referred to above takes effect, the Parties shall meet together so as to endeavour in good faith to agree upon alternative arrangements (including timetable) for the delivery and taking of Gas.

13.3 Without in any way restricting the generality of the term 'Force Majeure' as set out in Clause 13.1, the following events shall be considered 'Force Majeure':

- (a) such events affecting the Gas Processors' plants, the LPG plant located at Sharjah which processes Gas supplied by Seller, the pipelines and related facilities of Transmission Companies, the facilities of End Users, that constrain or prevent Buyer from taking delivery of Gas at the Delivery Point, provided that, in any case the person whose facilities are affected by such event has claimed, and has been granted relief (or if not granted relief, is subsequently established by a competent court or arbitral authority to have been justified in claiming force majeure) from its obligations pursuant to the force majeure provisions in its contract with Buyer (or Seller where Buyer's offtaker is Seller), or
- (b) such events affecting the Upstream Facilities or gas supplier under the GSPC or other gas suppliers that constrain or prevent Seller from tendering Gas at the Delivery Point, provided that in any case, the person or whose facilities are affected by such event has claimed, and has been granted relief (or if not granted relief, is subsequently established by a competent court or arbitral authority to have been justified in claiming force majeure) from its obligations pursuant to the force majeure provisions in the GSPC or other contracts with sellers of Gas.

558. NIOC made an argument based on Article 13 of the CGC-CNGC GSA to the effect that CGC could, and should, have invoked force majeure by reason of its inability to obtain supplies from NIOC. There is evidence that at least some consideration was given to that in relation to the SEWA GSA. The contention is that CGC was rendered unable to carry out its obligations under the contract by an event or circumstance beyond its control.

559. Crescent argued that a claim for force majeure by CGC in the case of non-supply by NIOC would have required that there had been a valid claim of force majeure by NIOC under the GSPC.²⁴³ That is the effect of Article 13.3 in respect of any event affecting NIOC that in turn constrains or affects CGC's ability to deliver gas to CNGC, and there was no relevant declaration of force majeure by NIOC.

560. The Tribunal finds that NIOC's failure to make gas available under the GSPC did not, of itself, constitute an event of force majeure under Article 13.1. Events that prevented NIOC from supplying gas might or might not have been capable of amounting to force majeure, but subject to the proviso in Article 13.3(b). In the event NIOC never asserted that it was prevented from supplying gas to CGC as a result of force majeure.

²⁴³ CPHBR1 ¶ 775.

6. Foreseeability of CNGC's Involvement

561. In this case, in Crescent's development of the project to supply Iranian gas to the UAE, Crescent interposed CNGC, a company in which 35% of the shares were owned by Dana Gas, a publicly listed company with "thousands of shareholders" including local interests, as the buyer of all the gas supplied by NIOC to CGC.
562. NIOC says that it had no knowledge of or involvement in the dealings between CGC and CNGC, much less the actual or projected dealings between CNGC and its customers. It says that the circumstance that a seller of goods knows that the purchaser intends to on-sell them at a profit (which would apply in almost all cases of a sale of goods by a wholesaler to a retailer) does not mean that the seller assumes responsibility to compensate the buyer for all profits lost by the buyer, especially if the process of on-selling is to extend over 25 years in market conditions that are potentially subject to manifold factors of uncertainty. It was not obliged to underwrite CNGC's business for the next 25 years.
563. Crescent says that in the oil and gas business it is common to have a chain of entities between producer or first buyer and the ultimate consumer or end user and that some of those entities might be connected or under common ownership.²⁴⁴ That is consistent with the evidence and the experience of the Tribunal. The Tribunal finds that the possible interposition of CNGC was foreseeable by NIOC.
564. Although it is common ground that the CGC-CNGC GSA was an arms-length agreement, the part that CNGC agreed to play was essentially that of a member of a group of companies playing a particular role in a group venture. CNGC was interposed for corporate purposes, which appear to have involved breaking the direct link with Iran, and the interposition of CGNC did not affect the amount of profits to be derived by the group from on-selling the gas supplied by NIOC and from the sale of products derived from the gas. From NIOC's point of view this had the consequence of dividing the profits on re-sale of the gas and sale of products between CGC and the subsidiary. The subsidiary undertook the role of processing, transporting and marketing the gas and the products and shared in the profits of the sales that were envisaged by the GSPC. This was, or should have been, a matter of indifference to NIOC.

²⁴⁴ CPHBR1 ¶ 20(9).

565. There is another way of looking at the matter. The value that the gas would have on delivery by NIOC was foreseeable. This was the value of the sweet gas and of the products after the costs of processing. So far as the sweet gas itself was concerned this was not the market value, for there was no market. It was the amount that the end-users, notably FEWA and SEWA, were prepared to pay for the gas. So far as the products were concerned this was market value.
566. CGC's claim is, in effect, for the value of the gas that should have been delivered by NIOC. The interposition of CGNC has not affected that claim.

7. No Claim for Damages Advanced by CNGC

567. NIOC submits that the absence of evidence of any claim made by CNGC upon CGC is fatal to CGC's claim that NIOC is liable to indemnify CGC in respect of its liability to CGNC.²⁴⁵
568. The Claimants do not seek to establish such liability by pointing to a court judgment or arbitral award which declares or recognises its existence. Nor is there evidence of any formal admission of liability by CGC, or any recognition of such liability in the financial accounts of CGC. In asserting that it would be naïve to expect there to be any formal recognition of such liability, Crescent said that, if it were made, it would amount to a declaration of insolvency.²⁴⁶ Mr Watts referred to an "understanding" that CGC would compensate CNGC, but it was pointed out in argument during the Remedies Hearing that there is a difference between an admission of liability and an informal agreement to pass on to CNGC the benefit of any award of damages on this account obtained by CGC.²⁴⁷ Crescent relies on "the obvious factual situation that CGC failed to deliver under its contract ... and as a result incurred liabilities to CNGC".²⁴⁸
569. Crescent submits that although there is no judgment or award or agreement by reference to which the Tribunal can determine the amount of CGC's liability to CNGC, the evidence is sufficient for the Tribunal to quantify CNGC's lost profits and thus to determine the extent of CGC's liability. CGC is acknowledging, and in fact asserting, its liability to CNGC in these proceedings.²⁴⁹

²⁴⁵ RPHBR1 ¶¶ 742-749.

²⁴⁶ CPHBR1 ¶ 770.

²⁴⁷ Remedies Hearing Tr., Day 1 at 262.

²⁴⁸ CPHBR1 ¶ 770.

²⁴⁹ CPHBR1 ¶¶ 770-777.

570. This issue is governed by Iranian law. NIOC has not cited any provision of Iranian law that deals expressly with a claim for an indemnity in respect of liability incurred by the Claimant to a third party as a result of the Respondent's breach of contract. The Tribunal has determined that CGC's claim for loss of profits is validly brought by reason of the provisions in the body of Article 515 of the 2000 CCP, which replaced Article 728 of the 1939 CCP which, in its turn, clarified or extended the scope of Article 221 of the Civil Code. Do these provisions also provide for recovery in respect of CGC's liability to CNGC on the facts of the present case?
571. The first part of Article 515 is in general terms. It permits a plaintiff to recover "damages resulting from ... failure to perform an obligation which he has sustained or will sustain, due to the defendant's fault in discharging the obligation". In addition Iranian law requires the damage to be both direct and foreseeable. Liability to a third party will fall within the damage in respect of which recovery can be made provided that the liability is proved to have been caused as a direct result of the breach, and was foreseeable. The Tribunal sees no basis for placing any restriction on the manner in which the liability has to be proved.

8. Conclusions

572. As to CGC's putative liability to CNGC under the CGC-CNGC GSA, and UAE law, which is assumed to be the same as English law, it is a case of a seller's liability to a purchaser for failure to deliver goods (the unprocessed gas). The loss suffered by CNGC was the natural and ordinary consequence of non-delivery and there is nothing in the sales contract which relieves the seller from such liability. The processing of the gas for re-sale, which in turn would have resulted in valuable products available for sale was not only foreseeable but was an integral part of the commercial project for which the GSPC came into existence. Without the interposition of the Crescent subsidiary, the CNGC profits would have been derived by CGC. The loss of profit on the sales to end-users and the product sales would have been recoverable as certain, direct and foreseeable losses. Although there has not been a formal claim, a finding or admission of liability, as between CGC and CNGC, CGC does not appear to have any answer to a contention that it is liable for damages for non-delivery. Such a liability is no mere technicality since CNGC, although a Crescent subsidiary, has important minority shareholdings.
573. For these reasons the Tribunal finds that CGC has proved that NIOC's failure to supply gas to CGC resulted in the liability that CGC alleges that it has incurred to CNGC, subject to quantification that the Tribunal is about to address.

574. As to NIOC's liability to indemnify CGC, which is a matter governed by Iranian law, the liability of CGC is harm directly resulting from NIOC's failure to discharge its obligation to deliver unprocessed gas. The gas was sold by NIOC to CGC for the purpose of re-sale. To be re-sold it had to be processed and transported to end-users. The processing would result in valuable products. The likely outcome of sale of processed gas and of products was a key element in the negotiation of the GSPC and the viability of the project of supplying Iranian gas to the Northern Emirates.
575. What is involved is not, as NIOC has suggested, an indeterminate amount. Because of the manner in which Crescent's loss of profits has been quantified from the outset, the Tribunal has before it the evidence necessary to determine what CNGC's loss of profit would have been. The fact that CNGC has not claimed against CGC does not alter the position in circumstances where there is no doubt as to the inter-company liability. This is not a case where, to use Dr Mehrpour's words (referring to Article 84(9) of the CCP 2000) "damage is not definite and absolute, but is merely probably or conjectural".²⁵⁰ It is not a conjectural or speculative claim.
576. For these reasons the Tribunal holds that CGC's claim against NIOC in respect of liability incurred to CGNC is made out, subject, once again, to quantification.

²⁵⁰ Mehrpour 1 ¶ 82.

X. FACTORS IN CALCULATION OF CGC AND CNGC LOSSES

A. GSPC SUPPLY OBLIGATION

577. Article 23 of the GSPC, which dealt with DCQ, was amended by the Second Amendment of 17 March 2003, and provided for a gradual increase from 198 MMscfd up to 500 MMscfd over seven years.

578. The Commencement Date of the GSPC was ultimately set by the Sixth Side Letter on 1 December 2005. Delivery year meant a period of 12 months commencing on the Commencement Date and repeated for each succeeding period of 12 months during the term of the contract (“**Delivery Year**”). The Second Amendment (dated 17 March 2003) altered Article 2.3 to provide:

Seller undertakes and guarantees to make available for delivery and sale to Buyer, during the term of the Contract a [DCQ] of 500 MMscf/Day except during:

- (i) the first Delivery Year and the first 4 months of the second Delivery Year when the DCQ shall be 198 MMscf/Day;
- (ii) the latter 8 months of the second Delivery Year and the subsequent third Delivery Year when the DCQ shall be 330 MMscf/Day;
- (iii) the fourth Delivery Year when the DCQ shall be 350 MMscf/Day;
- (iv) the fifth Delivery Year when the DCQ shall be 450 MMscf/Day.

Notwithstanding the foregoing the DCQ may be increased pursuant to Clause 7 hereof.

579. The periods dealt with were as follows: (1) 1 December 2005 to 31 March 2007; (2) 1 April 2007 to 1 December 2008; (3) 1 December 2008 to 1 December 2009; (4) 1 December 2009 to 1 December 2010.

580. Paragraphs 7 and 8 of the Second Amendment contained two options for the Buyer to accelerate and increase volumes. They were as follows:

- 7. During the period from the second Delivery Year through to and including the sixth Delivery Year, Buyer (upon six months written notice) may elect to increase the DCQ, as referred to in Article 2.3(ii), from 330 MM scf/Day to any quantity up to 500 MM scfd/Day, on the same terms and conditions of the Contract ...
- 8. Buyer shall have the option (subject to the availability of Gas) to further increase the DCQ under the existing terms and conditions of the Contract beyond 500 MM scf/Day up to the ultimate allowable capacity of the Pipeline and associated facilities. In the event Buyer wishes to further increase the DCQ beyond the ultimate allowable capacity of the Pipeline and associated facilities, such increased DCQ shall be made available upon separate terms and conditions to be agreed by the Parties; provided that Gas is available. In the event that the DCQ is increased pursuant to the terms of

this Clause 8, then the actual date for delivery of such incremental Gas shall be reasonably agreed upon by the Parties.

581. There was disagreement between the Parties as to:

- (1) the meaning of the expression “subject to the availability of Gas”;
- (2) the meaning of “the ultimate allowable capacity of the Pipeline and associated facilities”;
- (3) the requirement of agreement on new terms and conditions in the event that significant expenditure was required to increase the capacity of NIOC’s facilities in order to supply volumes over 500 MMscfd irrespective of whether those volumes would be within the capacity of the Pipeline; and
- (4) the meaning of paragraph 7.²⁵¹

582. On 7 October 2004, Crescent requested that NIOC supply 500 MMscfd from 1 May 2008 and 800 MMscfd from 1 May 2009.²⁵²

583. On 7 November 2004, NIOC responded, stating that it may not be possible to supply more than 500 MMscfd from the Salman (Dalan) field, and that it was too early to be able to decide whether supplies could be accelerated to 500 MMscfd from May 2008 before gas came onstream.²⁵³

584. On 28 February 2005, Crescent wrote to NIOC requesting deliveries of 500 MMscfd from the Commencement Date (1 December 2005) and 800 MMscfd from 1 March 2009.²⁵⁴

585. NIOC neither accepted nor rejected the above request.²⁵⁵

²⁵¹ Although the Second Amendment uses the term “clause”, the Tribunal refers to its parts by paragraph numbers, as did the Parties in their submissions.

²⁵² RC3/p. 464.

²⁵³ RC3/p. 516.

²⁵⁴ RC4/p. 1.

²⁵⁵ CPHBR1 ¶ 277(n).

586. Mr Watts testified that if gas had flowed, Crescent would again have triggered the paragraph 8 option to increase the DCQ to 1050 MMscfd (said by Crescent to be the ultimate allowable capacity of the Pipeline and associated facilities) from 1 January 2010.²⁵⁶

587. Crescent quantified its claim on the basis that NIOC had the following supply obligations:

from 1 December 2005 to 28 February 2009	500 MMscfd
from 1 March 2009 to 31 December 2009	800 MMscfd
from 1 January 2010 to 30 April 2015	1050 MMscfd ²⁵⁷

588. The Respondent contends that it was neither contractually obliged nor practically able to supply 500 MMscfd on the Commencement Date; that the earliest date from which it was obliged to supply 500 MMscfd was 1 June 2008; that it was not bound to deliver volumes that required additional expenditure on its part in the absence of new terms and conditions; that there was insufficient gas available to NIOC; that the capacity of the Pipeline and associated facilities did not exceed 500 MMscfd; and that no date for delivery of additional supplies was ever agreed.²⁵⁸

589. It will be noted that, if NIOC's supply obligations never rose above 500 MMscfd, that would not have met the DCQ under the CGC-CNGC GSA (which was 600 MMscfd).

590. The Claimants contend that, in the circumstances, which included Crescent's preparations to perform its GSPC obligations and its undertaking obligations of downstream supply, Crescent's request of 28 February 2005 and NIOC's failure to respond resulted, as a matter of Iranian law, in the conclusion that NIOC must be treated as having consented to deliver volumes of 500 MMscfd from the Commencement Date. This conclusion is said to be supported by the doctrine of *lazarar*.²⁵⁹

591. Alternatively, the Claimants argue that, on the true construction of the paragraph 7 option, NIOC's obligation to deliver 500 MMscfd took effect no later than 1 April 2007.²⁶⁰

²⁵⁶ Watts 5 ¶ 37.

²⁵⁷ CPHBR1 ¶ 279.

²⁵⁸ RPHBR1 ¶¶ 1297-1299.

²⁵⁹ CPHBR1 ¶¶ 287-297.

²⁶⁰ CPHBR1 ¶¶ 315-317.

592. The Respondent says that on 7 November 2004, it had written to Crescent making clear that the paragraph 7 option could not be exercised prior to the start of deliveries and notes that on 11 June 2007, Crescent wrote to NIOC asserting that the increase to 500 MMscfd was to take place as from 1 May 2008.²⁶¹
593. At the Final Hearing, Crescent identified, as a key issue, whether the date from which NIOC was obliged to deliver 500 MMscfd was 1 December 2005, 1 April 2007 or 1 June 2008.²⁶²
594. In support of its contention that the date was 1 December 2005, Crescent relied upon the effect of conduct and representations by NIOC, and invoked the doctrine of *lazarar*, which was discussed in the Award on Jurisdiction and Liability. It points out that almost 500 MMscfd had been sold pursuant to contracts with Crescent's customers and said the evidence showed that the Parties in their dealings acted on the basis that, if gas had been supplied, NIOC was going to supply 500 MMscfd from the commencement. Crescent said that, under Iranian law, parties can assume and vary contractual obligations by conduct.²⁶³ The Tribunal does not consider that there is a basis, either in Iranian law or in fact, for departing from the terms of the GSPC.
595. The date of 1 April 2007 is the date of the beginning of the second of the periods specified in Article 2.3, which is the period during which the primary quantity was 330 MMscfd.
596. The date of 1 June 2008 is arrived at, by the Respondent, by contending that the notice called for by the paragraph 7 option cannot be given until the end of the second Delivery Year and takes effect six months after that. (It is only one month different from the date specified by Crescent on 7 October 2004).
597. The second Delivery Year commenced on 1 December 2006, but the amount of 330 MMscfd, which could potentially be increased to 500 MMscfd, only took effect during that year. Paragraph 7 requires the Buyer to give six months' written notice of its elected increase, but there is no apparent commercial reason why the notice of election should not be given in advance, or why a notice seeking more than the Buyer is entitled to should not have an effect limited to its entitlement. The expression "from the second Delivery Year" does not mean "after the end of the second Delivery Year". It denotes the period during which the election to increase takes effect.

²⁶¹ RPHBR1 ¶¶ 1310-1311.

²⁶² Final Hearing Tr., Day 2 at 29-31.

²⁶³ Final Hearing Tr., Day 2 at 29-30.

The earliest date during the second Delivery Year from which Crescent's election of 28 February 2005 could have taken effect was 1 April 2007. The Tribunal considers that was the date from which there was an obligation to supply 500 MMscfd. Damages are to be quantified on the basis of how much NIOC contracted to deliver; not on the basis of how much, over 25 (or 10) years, it would have been motivated to deliver.

598. As to the paragraph 8 option, there was extensive evidence relating to availability of gas, the ultimate allowable capacity of the Pipeline and associated facilities, and the likely cost to NIOC of putting itself in a position to supply quantities in excess of 500 MMscfd.

599. As to availability of gas:

- (1) Crescent contends that the meaning of paragraph 8 is that "if NIOC has gas at its disposal that is able to be offered for sale to another party or used for any other new purpose for which it is not already being used or committed, it is 'available' within the meaning of the paragraph 8 option and NIOC would be obliged to supply it to Crescent at the latter's request".²⁶⁴
- (2) The evidence showed that Iran has extensive gas reserves and that, between 2003 and 2010, it had sought major gas supply contracts with a number of other countries. The scale of Iran's gas export ambitions was addressed in the evidence of Professor Luciani. Even though Iran experiences gas shortages in various locations, these shortages result not from the inability to produce sufficient gas but from deficiencies in transport arrangements. Large quantities of gas are flared.²⁶⁵
- (3) The Respondent relied upon the evidence of Mr Ramazani, an expert on the Iranian gas industry, and Mr Way, an expert on the international gas industry.
- (4) Both these witnesses said that their understanding, reflecting industry practice, of availability was that it was not simply a reference to reserves, but connoted the presence

²⁶⁴ CPHBR1 ¶ 375.

²⁶⁵ Luciani 3 ¶¶ 106-121; Remedies Hearing Tr., Day 5 at 61; RC5/p. 214; RC6/p. 370.

of existing facilities for production, transportation and processing and required consideration of the seller's competing requirements.²⁶⁶

- (5) Mr Ramazani gave evidence of Iran's gas resources and needs. Although Iran had extensive reserves, it was forced to import gas, to reduce gas exports and to burn more expensive liquid fuels in power stations because cheaper gas was not available.²⁶⁷ Iran has fallen behind year on year with its production plans, with many projects being delayed due to the effect of sanctions.²⁶⁸

600. Crescent stressed that, during the negotiations between the Parties concerning amendments to the GSPC over the years before the Commencement Date, referred to in the Award on Jurisdiction and Liability as reflecting the fact that the GSPC provided NIOC with an opportunity to market a resource that would otherwise be wasted by flaring or migration, it was repeatedly said by NIOC that it was anxious to sell as much gas to Crescent as possible and that all the volumes required by Crescent could be made available either from the Salman/Dalan field or, if necessary, from other extensive Iranian gas reserves. Crescent also stressed that it was the joint contemporaneous understanding of the Parties that, if gas had been delivered, the volumes required by Crescent up to 1050 MMscfd would have been supplied, and that NIOC itself sought other buyers.²⁶⁹ There is, however, a difference between a capacity and a willingness to make gas available for export, notwithstanding domestic shortages, on suitable financial terms, including recovery of costs of additional infrastructure, and an actual availability of gas without regard to economic and other factors, including national priorities. NIOC's case was that the former is what is presently relevant and that availability refers to gas available for this contract and ready to use.²⁷⁰ If availability means no more than that there were sufficient reserves under the sea-bed to satisfy Crescent's needs the function of the proviso is unclear. The existence of such reserves was apparent.

601. As to the cost to NIOC of putting itself in a position to supply quantities in excess of 500 MMscfd, the Parties' experts, Messrs Wood and Smith, agreed that NIOC would have had to incur

²⁶⁶ RPHBR1 ¶¶ 1410, 1412.

²⁶⁷ RPHBR1 ¶ 1415.

²⁶⁸ RPHBR1 ¶ 1419.

²⁶⁹ CPHBR1 ¶¶ 213-214, 383.

²⁷⁰ RPHBR1 ¶ 1396.

significant capital expenditure to meet such supply obligations. According to the experts, the cost to NIOC of the expansion required to upgrade the Salman/Dalan facilities to produce 1,050 MMscfd would have been in the range from USD 552 million (Mr Wood) to USD 696 million (Mr Smith).²⁷¹ Crescent says that the evidence as to expected markets and market prices demonstrates that such additional expenditure would clearly have been in NIOC's interests and the cost should not be regarded as an obstacle to availability.²⁷² This, however, reflects the economic considerations that are relevant to a decision to make gas available.

602. The Tribunal does not accept that availability is satisfied merely by the existence of reserves not committed to some other party or purpose. As noted above, if that were all that was meant by "available" the proviso served no purpose. Furthermore, it would not have made commercial sense for NIOC to have committed to the expenditure of the kind established by the evidence to exploit the reserves. The gas in question was not physically available without substantial additional expenditure. It was not available for this contract and ready to use.
603. As to the capacity of the Pipeline and associated facilities, the Claimants say the ultimate allowable capacity of the Pipeline and associated facilities was at least 1,050 MMscfd.²⁷³
604. The Respondent says the relevant ultimate allowable capacity is 520 MMscfd.²⁷⁴ The evidence of Mr Nazari was that the facilities were designed and developed to deliver 500 MMscfd and according to Mr Smith, the ultimate allowable capacity of the facilities that were supposed to be in place was 510-520 MMscfd.²⁷⁵
605. The Pipeline runs from Sirri Island (the Measurement and Testing Centre) to the Riser Platform in the Mubarak complex.²⁷⁶
606. The Parties' experts, Mr Wood and Mr Smith, say that the Pipeline could safely deliver 1050 MMscfd, but this would entail an arrival pressure of about 70 bar instead of the

²⁷¹ Wood/Smith Joint Report, p. 21.

²⁷² CPHBR1 ¶¶ 413-416.

²⁷³ CPHBR1 ¶¶ 336-366.

²⁷⁴ RPHBR1 ¶ 1328.

²⁷⁵ Nazari 1 ¶¶ 4, 14; Smith 1 ¶¶ 2.2.2, 2.3, 5.7.4.

²⁷⁶ CPHBR1 ¶ 339; RPHBR1 ¶ 1354.

contractually designed pressure of 90.6 bar.²⁷⁷ The GSPC gives the Buyer a discretion to accept off-specification gas (referred to as Deficient Quality Gas) (Article 3.5.1). Mr Watts said Crescent would have exercised this discretionary right.²⁷⁸ The Respondent says that it would be curious to assess the allowable capacity of the Pipeline on the assumption that the Seller continually supplied Deficient Quality Gas which the Buyer could, as it pleased and from time to time, choose to accept or reject.²⁷⁹

607. A major point of difference between the approaches of Mr Wood and Mr Smith was the identification of associated facilities. Mr Smith regarded these as the facilities necessary for the supply of gas through the Pipeline.²⁸⁰ He considered that the ultimate allowable capacity of such facilities was more correctly stated as 510-520 MMscfd.²⁸¹ He listed the facilities in his report, including what he called the Sirri Island facilities. Those facilities comprise a purpose-built gas plant to receive, treat, compress and meter the gas from the Salman/Dalan field, and separate the condensable stream, ready for onward transmission by the pipeline. The plant also includes all necessary safety systems.²⁸² The Sirri Island facilities were designed to carry 530 MMscfd of inlet gas in order to produce a DCQ of 500 MMscfd net for export.²⁸³ Compression, Mr Smith said, is at the heart of the plant, and in turn dictates maximum throughput.²⁸⁴ He explained the effect on capacity of the compressors at Sirri.²⁸⁵ He estimated the ultimate allowable capacity of the Sirri Island facilities at 540 MMscfd.²⁸⁶ He concluded that the only way for NIOC to be able to supply gas volumes up to 1050 MMscfd taking into account the ‘ultimate allowable capacity’ of all components in the chain from Salman/Dalan field to the nominated delivery point, and allowing for ‘condensate removal, fuel gas usage and a realistic plant operating margin, would

²⁷⁷ Wood/Smith Joint Report, p. 17.

²⁷⁸ CPHBR1 ¶¶ 340-345.

²⁷⁹ RPHBR1 ¶ 1332.

²⁸⁰ Smith 1 ¶ 4.3.

²⁸¹ Smith 1 ¶ 5.7.4.

²⁸² Smith 1 ¶ 5.3.1.

²⁸³ Smith 1 ¶ 5.3.2.

²⁸⁴ Smith 1 ¶ 5.3.4.

²⁸⁵ Smith 1 ¶¶ 5.3.5-5.3.7.

²⁸⁶ Smith 1 ¶ 5.3.

be for NIOC to make significant additional investments to undertake extensive new developments.²⁸⁷

608. The Claimants' approach, reflected in the evidence of Mr Wood, is that "associated facilities" means equipment physically connected with the Pipeline within its physical limits.²⁸⁸ It is accepted that the term does not have a technical meaning in the industry.²⁸⁹ The Claimants contest the approach that the Sirri Island facilities were associated facilities.²⁹⁰ They say the expression applies only to facilities that are Pipeline-specific.²⁹¹
609. Mr Smith accepted as a difficulty with his approach the fact that the facilities at Sirri Island were not dedicated exclusively to the GSPC supply and that it was open to NIOC, by its unilateral decision, to impose constraints on those facilities.²⁹² The Claimants argued that this was at odds with the nature of the GSPC as a non-reservoir-specific supply contract. On the other hand, Mr Wood accepted that none of what he regarded as the associated facilities imposed any constraint on the ultimate allowable capacity of the Pipeline and he was at a loss to understand why there was any reference to associated facilities in paragraph 8.²⁹³
610. The Claimants rely on the evidence of the joint expectations of the Parties as to ultimate volumes that could be supplied in the event that gas deliveries were made. This is said to be inconsistent with the meaning attributed to paragraph 8 by NIOC. However, Mr Smith pointed out that, commercially, it would be expected that if NIOC were required to undertake material additional investment to deliver increased quantities of gas, new contract terms would be required.²⁹⁴
611. As to paragraph 8's reference to terms and conditions, in what might be described as the second option in the paragraph, that is, the potential for a further increase in the DCQ beyond the ultimate allowable capacity, the increase is predicated upon both availability and separate terms and conditions to be agreed. This no doubt reflects the fact that such increase would be likely to

²⁸⁷ Smith 1 ¶¶ 5.7.1 to 5.7.5.

²⁸⁸ CPHBR1 ¶ 349.

²⁸⁹ CPHBR1 ¶ 350.

²⁹⁰ CPHBR1 ¶ 355ff.

²⁹¹ Final Hearing Tr., Day 1 at 53.

²⁹² CPHBR1 ¶¶ 359-366.

²⁹³ RPHBR1 ¶ 1361.

²⁹⁴ Smith 1 ¶ 4.5.1.

involve very substantial cost. Furthermore, the final sentence of paragraph 8 reflects the likely substantial time element involved in necessary additional construction work. It may be assumed that the arbitration clause could be invoked in the case of a dispute about new terms and conditions, or about time. However, the Claimants do not rely upon the second option. They say that the only option that concerns the Tribunal is the first option in paragraph 8.²⁹⁵ They say the last sentence of paragraph 8, as to time, applies to both options.²⁹⁶

612. The Claimants point to the second option in order to contrast it with the first option. Since new terms and conditions are required only for supplies over and above the capacity of the Pipeline and associated facilities, the inference is that the Parties envisaged that the Pipeline and existing facilities could supply volumes above that figure and intended that Crescent could oblige NIOC to supply them even if additional cost were involved.²⁹⁷ The opposite inference, proposed by NIOC, is that the Parties envisaged that a requirement for substantial investment in additional work and facilities in order to make gas available would bring the second option into play.²⁹⁸
613. There is an element of circularity involved in seeking to derive the meaning of “the ultimate allowable capacity of the Pipeline and associated facilities” from the structure of paragraph 8, as there is also to Crescent’s reliance on Article 4.4. The reference to “associated facilities” must have been made for a purpose, and the Sirri Island facilities referred to by Mr Smith, for the reasons he gave, were associated with the Pipeline and modified the capacity to deliver gas without substantial additional capital investment. It is true, as the Claimants point out, that the first option appears to contemplate a significant increase beyond 500 MMscfd, and not merely, say 520 MMscfd, but it also contemplates an increase that does not warrant further agreement as to terms and conditions.
614. The Tribunal accepts NIOC’s contention as to availability and ultimate allowable capacity. While, on the ultimate allowable capacity of 520 MMscfd, volumes could have been increased beyond 500 MMscfd at least to that number, the Tribunal accepts that NIOC did not allocate more than 500 MMscfd and in any event could not have done so without significant additional expenditure. Because of the condition as to availability, the Claimants did not effectively invoke paragraph 8 to increase volumes beyond 500 MMscfd to 800 MMscfd. Nor could Crescent, as

²⁹⁵ CPHBR1 ¶ 327.

²⁹⁶ Final Hearing Tr., Day 5 at 20.

²⁹⁷ CPHBR1 ¶ 328.

²⁹⁸ RPHBR1 ¶ 1319.

foreshadowed by Mr Watts, have relied on paragraph 8 to increase volumes to 1050 MMscfd from 1 January 2010.

B. ARE THE CONTRACTUAL SUPPLY OBLIGATIONS CONTROLLING?

615. Under English law, the ordinary measure of a party's liability to pay damages for a breach of contract is the party's contractual obligations. The evidence does not reveal any different position in Iranian law. Crescent has argued that, in the but-for analysis relevant to an assessment of damages, it should be assumed that, if NIOC had performed the Contract, its own interests would have led it to supply the maximum possible volumes and therefore, even if it were not contractually obliged to do so, it would have supplied at least 1050 MMscfd from 1 January 2010.²⁹⁹
616. The Tribunal does not accept the approach for which Crescent contends. NIOC was in continuing breach of the GSPC from 1 December 2005 to 31 July 2014. That was established by the Award on Jurisdiction and Liability. Crescent claims damages based on the loss directly and naturally resulting in the normal course from the breach. The breach was the failure to deliver certain quantities of gas. The quantities are established, in accordance with the reasoning set out above, by reference to the terms of the GSPC and in light of the events that occurred (such as, for example, the paragraph 7 election). The objective is to put Crescent in the same position as if NIOC had complied with its contractual obligations; it is to give effect to Crescent's contractual entitlements. A contracting party's legal rights are not necessarily co-extensive with its commercial expectations. Although the latter may be reasonable, it is the former that are vindicated by an award of damages.
617. For reasons given above, in relation to paragraph 8, the evidence that but for NIOC's breach, Crescent would have elected to increase volumes to 1050 MMscfd, does not advance Crescent's case.

C. CRESCENT'S CAPACITY TO RECEIVE

618. NIOC contends that, even if it had performed its contractual obligations, there are major elements of uncertainty as to whether Crescent would have been able to sell and process the gas delivered.

²⁹⁹ CPHBR2 ¶¶ 78-80.

619. It is said that at the Commencement Date, Crescent was not in a position to sell and process gas. It had no agreement in place with Shalco, no tie-in of the SajGas plant had occurred and the SajGas plant had not been commissioned. On the Dubai side, no agreements had been finalised with CTI (the pipeline owner), DUGAS (the processor) or DUSUP (the purchaser).³⁰⁰ However, in the Award on Jurisdiction and Liability, the Tribunal found that “Crescent acted prudently in refraining from any additional expenditures, effectively mitigating its damages”.³⁰¹
620. It is said by NIOC that, in the light of US opposition to the sale of any Iranian gas to the UAE, there was uncertainty as to Crescent’s ability to finalise agreements with BP/Shalco or Dubai.³⁰²
621. Furthermore, NIOC says, the increasing pattern and effect of sanctions at and following the Commencement Date meant that ability to implement the GSPC depended upon many third parties including contractors, banks, insurance companies, processors and transporters and end-users. All this, it is said, created “multiple uncertainties as to whether the GSPC could have been performed as Crescent asserts”.³⁰³
622. Much of the suggested uncertainty, for example, as to the ability to secure buyers for all the gas to which Crescent says it was entitled, disappears when it is concluded that NIOC’s supply obligations were as found above, and that, for the period presently in question the gas to be supplied had been on-sold to Crescent’s customers before delivery by NIOC to CGC was due. The evidence of Mr Watts, Professor Luciani and Mr Mills supported the argument that Crescent would have been able to find buyers for all gas made available under the GSPC, but CGC had in effect on-sold to SEWA and CNGC all the gas NIOC was obliged to supply, and the Anchor Customers SEWA and FEWA (government instrumentalities whose goodwill was of practical importance) between them accounted for almost all the quantities required to be made available.
623. As to sanctions, and their direct and indirect effect, there was debate in evidence and argument about the practical availability of the Shalco facility, in which BP had a substantial interest. It was contended that BP, being sensitive to the effect of sanctions, would never have permitted the facility to be used to process Iranian gas.³⁰⁴ The counter-argument was that, if it became

³⁰⁰ RPHBR1 ¶¶ 1160-1161.

³⁰¹ Award on Jurisdiction and Liability ¶ 521.

³⁰² RPHBR1 ¶¶ 1170-1222.

³⁰³ RPHBR1 ¶¶ 1224-1296.

³⁰⁴ RPHBR1 ¶¶ 1185-1214; Final Hearing Tr., Day 3 at 31.

necessary, local interests would not have permitted BP to stand in the way of a project of major importance to the region.³⁰⁵ Considerations such as this may have been relevant to the interposition of CNGC but, however that may be, the Tribunal accepts that the strategic importance of the project to the region would have resulted in the Shalco plant's availability.

624. There is, however, a more fundamental problem with NIOC's reliance on the suggested effect of sanctions. There is a finding, in the Award on Jurisdiction and Liability, that NIOC was in breach of its obligations to deliver gas from 1 December 2005 to 31 July 2014. If, as a result of sanctions, the GSPC had been unable, for a period, to be put into effect by either party, then that would have been an answer to Crescent's case on liability in respect of that period. It is not open to NIOC, at this stage of the arbitration, to rely upon sanctions as making it impossible for NIOC, or Crescent, to perform.

D. THE AVAILABILITY FACTOR AND OPERATIONAL DAYS

625. Crescent's claim is quantified on the basis that, having determined the volume of gas that NIOC was obliged to supply, the Tribunal must then decide what availability factor is to be applied. Although the Parties contracted to supply the contractual volumes on the basis of daily supplies, in practice the Parties provide for downtime for maintenance and repairs. Mr Haberman used the 97% availability factor proposed by Mr Lagerberg as a working assumption, but NIOC nevertheless argues that 97% would only account for planned maintenance, whereas to account for unplanned maintenance, an appropriate availability factor would be 90 to 92%.³⁰⁶
626. In their joint report, Messrs Lagerberg and Haberman noted that, when modelling planned maintenance, Mr Lagerberg adopted an availability approach while Mr Haberman adopted an operational day approach. They agreed that the Tribunal should determine which of the two is the appropriate method to apply for modelling the shutdown on NIOC's facilities for planned maintenance and repairs. For consistency, while maintaining the operational day approach is preferable, Mr Haberman adopted the other approach. Mr Lagerberg considered the difference did not have a significant impact on Crescent's lost profits.³⁰⁷

³⁰⁵ CPHBR1 ¶¶ 454-456; Final Hearing Tr., Day 5 at 25-26.

³⁰⁶ RPHBR1 ¶¶ 1503-1506. *See also* Joint Lagerberg-Haberman Report ¶¶ 53-56.

³⁰⁷ Lagerberg/Haberman Joint Report ¶¶ 53-56.

627. The Tribunal accepts that the availability factor is the appropriate method, and that 97% is appropriate. This is supported by the evidence of Mr Watts.³⁰⁸ For the month of December 2005, both experts agree that the availability factor should be 80% “to account for commissioning and start-up activities”.³⁰⁹
628. A particular issue that may conveniently be discussed under the heading of availability concerns the problems with the KPP-Sirri Pipeline that were encountered in 2010 when there appeared to be a likelihood that supply might commence. As Crescent correctly submits, there are two reasons why this does not provide NIOC with a ground for reducing the assumed volumes in calculating damages.³¹⁰ First, the operation of that pipeline was NIOC’s responsibility; secondly, if it had been a force majeure event it would have given NIOC a defence to part of the case on liability, and it is foreclosed by the findings of breach made in the Award on Jurisdiction and Liability.

E. GAS COMPOSITION AND OTHER TECHNICAL INPUTS

629. In order to determine the price payable by CGC to NIOC it is necessary to make assumptions as to the source, composition and energy value of the gas supplied by NIOC. This subject was addressed by the evidence of Mr Watts and Dr Ghaemi.
630. Mr Watts also estimated factors associated with the processing of the inlet gas for sale to end-users, including gas shrinkage, product recoveries and outlet gas heating value. The estimates were addressed by Mr Haberman for NIOC.
631. As to the composition of gas to be supplied by NIOC, each of Mr Watts and Dr Ghaemi submitted two models, refining their points of difference.³¹¹ Paradoxically, Dr Ghaemi’s primary criticism of Mr Watts’ original model was that it overestimated the GHV values of the Iranian gas and, consequently, the price that would be payable to NIOC, thus underestimating Crescent’s profits. Ultimately, the key difference became that Dr Ghaemi, in his second report, said that the Dalan reservoir would experience condensate dropout as pressure declined and Mr Watts had not allowed for this. The existence of this drop-out would affect the liquid content of the raw gas supplied by NIOC. Mr Watts took the view that condensate drop-out would not have had a

³⁰⁸ Watts 5 ¶¶ 106-107, Watts 6 ¶¶ 160-165.

³⁰⁹ Lagerberg 1 ¶ 4.8(g); Haberman 1 ¶ 3.16; Lagerberg 2 ¶ 5.23.

³¹⁰ Final Hearing Tr., Day 1 at 25.

³¹¹ Watts 6, Annex 2; Ghaemi 2 ¶¶ 76-85.

material effect. Crescent comments in its submissions that this issue was not raised by Dr Ghaemi in his first report and also that condensate drop-out in the Dalan reservoir is not mentioned in significant NIOC documents where reference to it might be expected to be found.³¹²

632. Crescent submits that the existence of condensate drop-out in the Dalan reservoir is unproven and that the Tribunal should accept Mr Watts' final compositional model, which was not tested in cross-examination, and which has a conservative impact on the quantum of Crescent's claim.³¹³ The Tribunal accepts that submission. It should be added, however, that insofar as the modelling is affected by assumptions as to volumes which NIOC was obliged to supply, the Tribunal's findings in that regard are referred to above.
633. As to what Mr Haberman described as the modelling of UAE-side processing,³¹⁴ which produces the composition and properties of the gas during and after processing by Crescent, and the amounts of product available for sale, the competing models were those of Mr Watts and Mr Haberman. In paragraph 52 of their joint report, Messrs Lagerberg and Haberman agreed that the different processing models do not have a significant impact on Crescent's lost profits.

F. PRICES PAYABLE TO NIOC BY CGC

634. The formula for calculating price is set out in Article 10 of the GSPC.
635. For the first seven years, the price (in USD per volume of gas supplied in Mscf) was 48 cents for gas with a heating value of up to 1000 BTU/scf, plus an additional amount for gas above the 1000 BTU/scf threshold related to the heating value and average crude oil prices in a given year. From year eight onwards, the formula was different, although based on the same inputs of crude oil prices and heating value, as the price of gas with a heating value of up to 1000 BTU/scf was also indexed to crude oil prices. Mr Lagerberg said:

4.26 The formula results in a significant change to the price paid to NIOC from 2013 onwards. The price increases from \$0.97 per M scf in 2012 to \$3.39 per M scf in 2013.³¹⁵

³¹² CPHBR1 ¶ 521.

³¹³ CPHBR1 ¶ 525.

³¹⁴ Haberman 2 ¶ 6.2.

³¹⁵ Lagerberg 1 ¶ 4.26.

636. The price formula in the CGC-CNGC GSA followed a similar pattern save that in both years 1 to 7 and years 8 to 25 the number 48 was replaced by 95. Mr Lagerberg said:

4.27 The contractual prices paid to NIOC in the first seven years effectively allow for ... Crescent Gas to make a fixed margin of \$0.47 per Mscf on the price paid to NIOC. The margin from the eighth year onwards is \$0.47 per Mscf of gas supplied, with an uplift/discount based on any increase/decrease in crude oil prices from a base price of \$18 per barrel. The average of Dubai and Oman crude oil prices in 2012 was \$109 per barrel, meaning that the margin increased to \$2.85 per Mscf of gas supplied in the eighth delivery year (2013).³¹⁶

637. The contrast between the figure of USD 18 per barrel as the base price for crude oil in the pricing formula and the figure of USD 109 per barrel as the level that oil prices had actually reached in 2012 is a significant part of the background to several aspects of the present dispute. The fairness of the pricing provisions of the GSPC was a subject of extensive debate and consideration in the Jurisdiction and Liability Phase. The dissatisfaction of Iranian authorities with the GSPC price was alleged by Crescent to have been the substantial reason for NIOC's failure to perform its contractual obligations.³¹⁷

638. For the purposes of the Remedies Phase, the escalation in crude oil prices was said to be of particular significance in relation to the matter of price revision.

639. There is a price review mechanism in Article 10.7 of the GSPC. There is a separate and additional price review mechanism in the Sixth Side Letter. It is Article 10.7 that is of immediate concern. It provides:

10.7 Price Revision

If at any time the circumstances of the energy market in the region, beyond the control of the Parties significantly change (as compared to what the Parties reasonably expected at the Effective Date) then either Party may notify the other Party in writing to enter into negotiations to revise the Contract price formulae. The Party making such request shall provide details to substantiate such Contract Price formulae revision. The Parties shall use their best endeavours to reach a reasonable revision of the Contract Price formulae.

In the event the Parties are unable to agree a Contract Price formulae revision within a period of 8 months from the date of serving the said notice then the dispute shall be referred to arbitration under Article 22 hereof. Until an agreement is reached on the Contract Price

³¹⁶ Lagerberg 1 ¶ 4.27.

³¹⁷ See the Tribunal's finding in the Award on Jurisdiction and Liability that "NIOC was unwilling to take any steps in furtherance of the GSPC until steps had been taken that would assuage the discontent on the Iranian side with the Contract's price and exclusivity provisions ... NIOC undoubtedly used the communication of written consent to the assignment as a bargaining chip to persuade Crescent to negotiate away its contractual entitlements such as the Gas price and exclusivity provisions agreed in the Third Side Letter" (¶¶ 425-426).

formulae revision or until an arbitral award has been issued the provisions of the Contract shall remain in force.

640. The Respondent says that, in a contract for the supply of gas for 25 years, a provision for price review is central to the bargain between the parties and that the extraordinary increase in the price of crude oil after the GSPC was made was the very kind of significant change in circumstances which Article 10.7 envisaged.³¹⁸
641. In fact, the Respondent invoked Article 10.7 on 28 February 2005,³¹⁹ but it did not pursue that process. It refused to perform the GSPC. It now says, however, that in the but-for scenario with which the Tribunal is presently engaged, it would produce a totally unreal outcome to assess lost profits disregarding price revision. The Respondent further says that disregard of price revision is fundamental to what it characterises as the extraordinary difference between the profits Crescent now claims to have lost and the projections as to likely profitability discussed between the Parties at the time of negotiation of the GSPC.³²⁰ According to the Respondent, it is Crescent's case that their apparent (estimated) super-profits are explained largely by reference to changes in the oil market.³²¹ The Respondent says those changes would have resulted in a price revision aimed at restoring the economic balance contemplated in the original bargain.³²² In the Jurisdiction and Liability Phase, Mr Watts referred to oil prices that "nobody dreamed of" and Professor Luciani spoke of changes for which "there could have been no prediction".³²³
642. The Tribunal does not accept the approach to the but-for analysis which underlies NIOC's arguments on price revision. The GSPC remained in force as at 31 July 2014. It had not been terminated, and Article 10 applied. The contract price had not been revised. NIOC at one point initiated a price review, but it was not pursued. NIOC's breach of contract by non-delivery did not render the price review mechanism inapplicable. There is no warrant for calculating damages on the basis that, but for NIOC's breach of contract, it could and would have obtained a variation of the price through the price review mechanism. In the event, it did not do so. The rights of the parties therefore remained as provided in the GSPC.

³¹⁸ RPHBR1 ¶¶ 1716-1721.

³¹⁹ Letter from Mr Javadi (NIGEC) to Mr Hamid Jafar (CPCIL), RC4/p. 3.

³²⁰ RPHBR1 ¶ 1605ff.

³²¹ RPHBR1 ¶ 1619.

³²² RPHBR1 ¶ 917.

³²³ RPHBR1 ¶ 1614, *referring to* Watts 3 ¶ 72; Luciani 1 ¶ 74.

643. In any event, any price review would have been conducted on the basis of NIOC's supply obligations which, for the reasons given earlier, did not exceed 500 MMscfd. As a result, the "super-profits" which would have been relied upon as one of the principal justifications for the hypothetical review did not exist. The prices obtained from the sales to customers, particularly SEWA and FEWA, did not reflect a material departure from what NIOC asserted was the contemplated commercial balance to be maintained by the price review mechanism.
644. The Tribunal does not accept that the evidence, which was considered in the Award on Jurisdiction and Liability, justified a conclusion that Crescent was a relatively fixed-margin middleman. It took major risks, especially in its 70% of volume take-or-pay obligations, and its market development strategy was vital to the project of introducing Iranian gas (albeit perhaps "de-Iranianised" to an extent) to an important locality.
645. NIOC placed particular reliance on its price revision hypothesis in respect of the profits CNGC would have made on sales of products from processing. Although this point is relevant to CGC's claim in respect of its liability to indemnify CNGC for CNGC's lost profits, it is convenient to refer to that matter here. It also is governed by the consideration that the GSPC price was not in fact revised. In addition, the pricing formula in the GSPC was subject to an adjustment (the BTU adjustment) that affected the value of liquids that might be extracted by Crescent from the gas supplied by NIOC. NIOC for its part could determine the quality and heating value of the gas it supplied. Exchanges between the Parties as to NIOC's receipt of "full value" for the liquids do not alter the effect of the formula that was agreed to deal with the question.

G. GAS SALES ASSUMPTIONS

1. Gas Sales Contracts

646. In Part VI above, the general nature of the main factual issues raised in respect of CGC's loss of bargain damages claim were outlined, noting the lost profits were quantified by reference to "Crescent" including CNGC. CGC's own lost profits resulted from only two contracts; its contracts with CNGC and SEWA. Both contracts had been entered into before the commencement date for deliveries under the GSPC, and remained in force as at 31 July 2014. Some of the factual issues raised concerning "Crescent's" lost profits either narrow or disappear if attention is confined to CGC's profits.

647. CGC's contracts with SEWA and CNGC are to be understood in the wider context of Crescent's proposed transportation, processing and on-sale. Not only was it contemplated by the GSPC that the gas supplied by NIOC would be re-sold; the GSPC contained provisions designed to assure NIOC that Crescent had established a market for such re-sale. As NIOC was aware, that proposed market included certain "anchor customers", including two State-owned energy utilities (SEWA and FEWA) (the Anchor Customers),³²⁴ as well as OCP, Alchem and DUGAS/DUSUP. Crescent's case was that such customers would be supplied in quantities and at prices that largely covered Crescent's risk (in particular its take-or-pay obligations), and that the highest returns would be derived from sales to other, smaller customers. This is reflected in the projected prices in Mr Lagerberg's calculation of lost profits.³²⁵
648. The First Side Letter to the GSPC required Crescent to secure the end-user gas market for the quantity to be taken under the GSPC within a certain time, failing which NIOC could withdraw. This was superseded by the Fifth Side Letter, which envisaged a long-term supply contract between CGC and SEWA, and required SEWA's payment obligations under that contract to be hypothecated to NIOC as security for CGC's obligations to NIOC. This is why, although CNGC was interposed between CGC and Crescent's other customers, a different arrangement had to be made in the case of SEWA. That will be explained below. For present purposes what is significant is that not only was re-sale to SEWA contemplated by the GSPC; the payment obligations of SEWA were to be security for CGC's obligations to NIOC. Although some repetition is involved, it is convenient here to refer to the terms of the sales.
649. The SEWA GSA between CGC and SEWA was entered into on 17 January 2004. Its Commencement Date was 1 August 2005, later altered to 1 January 2006. It was for a term of 25 years. It was a sale of processed gas to be delivered at Sajaa. The DCQ (Seller's daily maximum supply commitment) was 200,000 MMBtu in the first Contract Year, and 250,000 MMBtu thereafter. SEWA's take-or-pay commitment was 105,000 million British thermal units per day ("MMBtu/d") in years 1 and 2 increasing to 175,000 MMBtu/d. The Contract Price was USD 1.25/MMBtu for the first seven years following which the price would be adjusted by reference to an oil reference price of USD 18/barrel based on Dubai/Oman crude oil prices. This pricing scheme corresponded with that of the GSPC and the CGC-CNGC GSA.

³²⁴ Watts 5 ¶ 39.

³²⁵ Lagerberg 1 ¶¶ 3.21-3.22.

650. The FEWA GSA was entered into by CPCIL and FEWA on 2 April 2003, and novated to CNGC on 15 March 2005. It was a sale of processed gas to be delivered at Sajaa. It was to commence on the first gas availability to CGC. It was to continue until the end of the 12th Contract Year and to extend for a further 12 years unless either party withdrew. It provided for a DCQ (a daily maximum quantity by reference to which the Buyer was to make nominations for delivery) of 270,000 MMBtu. The DCQ represented a total annual quantity of about 98.5 million MMBtu. The contract provided for a minimum annual quantity of 55 million MMBtu equivalent to 150,685 MMBtu/d. The same amount was fixed as the Seller's Obligated Quantity in Article 11 of the FEWA GSA ("**Seller's Obligated Quantity**"). The Contract Price was USD 1.225/MMBtu in the first Contract Year, rising annually to USD 1.375/MMBtu in the seventh year, following which the price would be adjusted by reference to an oil reference price of USD 18/barrel based on Dubai crude oil prices subject, however, to a floor price of USD 1.2/MMBtu and a ceiling of USD 1.6/MMBtu. This cap on the adjusted price produced an outcome from year 8 that was much lower than the SEWA price in those years.
651. The FEWA GSA was typical insofar as the Seller was CNGC, not CGC. The sale price to FEWA in the first 7 years was approximately similar to the price at which CGC was selling to SEWA. As in the case of all the other actual or projected on-sales the Crescent profits were divided between CGC (in its sale to CNGC) and CNGC.
652. The Alchem GSA was entered into between CNGC and Alchem on 7 July 2004. It was a sale of processed gas to be delivered in the Hamriyah Free Zone. It was for 22 years and delivery would have begun on 1 January 2009.³²⁶ It provided for a DCQ of 50,000 MMBtu for the first Contract Year, and 150,000 MMBtu from the Second Contract Year. The price was USD 1.28/MMBtu for the first five Contract Years with a price adjustment thereafter by reference to an oil reference price of USD 18/barrel based on Dubai/Oman crude oil prices.
653. The DUGAS GSA between CNGC and DUGAS was entered into on 3 February 2005. It was for an extendable term of one year. The DCQ was 50,000 MMBtu. The price was USD 1.26/MMBtu. There was a separate processing agreement with DUGAS. The gas was to be delivered at the DUGAS plant.
654. The DUSUP GSA was never signed.

³²⁶ Crescent's PHB1 ¶ 52(c).

655. The OCP GSA between CNGC and OCP was entered into on 9 July 2005 with a Commencement Date of 1 January 2007. It was for 24 years. The DCQ was 46,000 MMBtu. The MAQ for the first contract year was for 50% of the Annual Contract Quantity (“ACQ”), increasing to 80% in the second contract year, 85% in the third, and up to 90% as from the fourth contract year. The price was USD 1.5 MMBtu for the first 6 years with a price adjustment thereafter by reference to both crude oil and ammonia prices. It was a sale of processed gas to be delivered in the Hamriyah Free Zone.
656. The Hamriyah Steel GSA was entered into on 1 June 2009 for 24 years. It provided for a DCQ of 6,000 MMBtu. The Contract Price was limited by reference to a hub price.
657. The CGC-CNGC GSA, which is in many respects back-to-back with the GSPC, was entered into on 8 June 2005. It was for a term of 25 years. It was intended to be the contract under which all the gas supplied by NIOC to CGC would be sold by CGC to CNGC for processing, transportation and re-sale to Crescent’s customers, including the Anchor Customers. Under Article 2, CGC was obliged to deliver a DCQ of 600 MMscfd. The Buyer had an option to increase that amount, but it was subject to gas being made available by the gas suppliers of the Seller. In the events that occurred, up to 31 July 2014 no such gas was made available. The price formula followed a similar pattern to that of the GSPC allowing in effect, during the first seven years, for CGC to make a fixed margin of USD 0.47 per MMscfd on the price paid to NIOC and thereafter USD 0.47 with an uplift or discount by reference to an oil price base. The delivery point was on the Riser Platform in the Mubarak complex.
658. Notwithstanding the corporate relationship between CGC and CNGC, the Respondent did not contend that the pricing arrangements between the two companies should be disregarded. On the contrary, counsel for the Respondent said there was no basis for treating the CGC-CNGC price as other than an arm’s-length price.³²⁷ One commercial motivation for the interposition of a midstream company with a minority shareholding that included local interests appears to have been to “de-Iranianise the gas”.³²⁸ The CGC-CNGC GSA has consequences for a number of aspects of the claim. CNGC was to transform the raw gas into finished products and effect their sale and distribution to end users in the UAE.

³²⁷ Final Hearing Tr., Day 4 at 43.

³²⁸ Final Hearing Tr., Day 4 at 43.

659. The CGC-SEWA GSA gives rise to a complication noted by Messrs Lagerberg and Haberman, in attributing or allocating profits on the SEWA contract as between CGC and CNGC. Mr Watts said:

The SEWA GSA was originally signed by CGC although it was envisaged that it would be assigned to CNGC after the expiry of the SEWA letter of credit, which was arranged in favour of CGC back-to-back with the CGC 2005 Letter of Credit in favour of NIOC. CGC and CNGC entered into an interim agreement dated 5 September 2005 under which CNGC committed to supply gas to CGC to enable it to fulfil its supply obligations under the SEWA GSA. The assignment did not ultimately take place and CGC remains the party to the SEWA GSA.³²⁹

660. The transportation and processing of the gas CGC was committed to supply SEWA would have been done by CNGC. At the Final Hearing, counsel for Crescent, referring to the above evidence of Mr Watts, said the letter of credit referred to would have been for four years, so the SEWA GSA would probably have remained with CGC for four years and would have been assigned after four years. He said the way to treat it was “first four years, a CGC contract; subsequently a part of the CNGC contract with end users”.³³⁰
661. The agreement between CGC and CNGC of 5 September 2005 (the “**Side Agreement**”)³³¹ was analysed by the Respondent in its Answers of 30 June 2020³³² and in the course of argument at the Final Hearing.³³³ The Side Agreement provided for the CGC-SEWA contract to be novated to CNGC on 31 March 2008 (although this never happened).³³⁴ The purpose of the Side Agreement was to enable CNGC, pending novation, to ensure the fulfilment of CGC’s obligations to SEWA, with CNGC, which under the CGC-CNGC GSA received all volumes from NIOC, delivering back to CGC, at the SEWA delivery point, the volumes necessary to supply SEWA.³³⁵ However, the Side Agreement specified no price for the gas to be delivered back by CNGC to CGC. The implication, it was said, was that “there would be a simple pass-through, whereby all profits or losses in connection with the SEWA GSA would go to CNGC”.³³⁶ This

³²⁹ Watts 5 ¶ 47.

³³⁰ Final Hearing Tr., Day 5 at 32.

³³¹ RC4/242.

³³² Respondent’s Answers ¶¶ 66-76.

³³³ Final Hearing Tr., Day 4 at 44-49.

³³⁴ Side Agreement, Article 2.

³³⁵ Side Agreement, Article 3.

³³⁶ Respondent’s Answers ¶ 71.

was said to be reinforced by the preamble to the Side Agreement which said it was “on the basis that all risks and rewards vested in [CGC] under the [SEWA GSA] shall henceforth vest in [CNGC]”, and by Articles 6 and 7 of the Side Agreement.³³⁷

662. Accordingly, the issue has narrowed to the first four years. Prior to the intended novation, it was CGC that was to receive the revenues from SEWA; indeed, that entitlement was to be security for NIOC. However, as between CGC and CNGC, the purpose of deferring the novation was only to enable CGC to comply with its security obligations to NIOC. Recital (f) and clauses 3, 6, 7 and 9 of the Side Agreement indicate that pending novation, CNGC was to have the benefit, and fulfil the obligations of, the SEWA contract. The Tribunal considers that, as between CGC and CNGC, profits from gas supplied to SEWA should be allocated during the first four years in the same way as they would have been allocated following novation. For the whole of the period in question the source of the processed gas supplied to SEWA would have been the gas sold by CGC under the CGC-CNGC GSA, in which CGC obtained a margin over the price it paid to NIOC, and the profits over and above that margin, like the profits on the gas supplied to FEWA, should be allocated to CNGC.

2. Available Volumes of Gas for Sale to End-User Customers

663. Having identified the volumes that NIOC was obliged to supply to Crescent and at what price, and the gas sales contracts that were entered into by Crescent, the Tribunal turns next to consider which end-user customers would have been supplied, from what date, and with what amount.³³⁸
664. The Experts agreed that the issues of volume and sale prices are interlinked, and that the Tribunal’s findings on volumes of gas that Crescent would have purchased “affects the amount of gas that Crescent would have had available to sell to its end users and, in turn, who those customers might have been and the price that Crescent might have obtained from its customers”.³³⁹
665. The evidence, in particular the evidence of Mr Watts, establishes that Crescent would have requested its maximum entitlement under the GSPC, that is 198 MMscfd for the period from 1 December 2005 to 31 March 2007; and 500 MMscfd thereafter to 31 July 2014. These figures

³³⁷ Respondent’s Answers ¶¶ 69-70.

³³⁸ Lagerberg/Haberman Joint Report ¶ 23.

³³⁹ Lagerberg/Haberman Joint Report ¶ 21.

require some adjustment to determine the maximum sales volumes that Crescent could have made available for on-sale to its end-user customers.

666. This is first done by multiplying the volumes by the availability factor, which the Tribunal has determined (at paragraph 627 above) to be 80% for the first month, and 97% for the remaining period. This results in 158.4 MMscfd for the month of December 2005; 192.06 MMscfd for the period 1 January 2006 to 31 March 2007; and 485 MMscfd for the period from 1 April 2007 up to 31 July 2014.
667. These volumes would then further decrease after taking into account the processing of the gas and removal of products. As noted above, the precise amounts to be removed would vary depending on the composition of the gas. For the Iran-side processing (which produces the composition and properties of the gas Crescent would have purchased from NIOC), Mr Watts and Dr Ghaemi prepared models to calculate the amounts. For the UAE-side processing (which produces the properties of the gas during and after processing by Crescent, and the amounts of product available for sale), Mr Watts and Mr Haberman prepared models to calculate the amounts. The Respondent, at the Final Hearing, was prepared to apply assumptions on the basis of Mr Watts' later set of calculations.³⁴⁰ For purposes of calculating the volumes available for sales by Crescent to end-user customers, the Tribunal has decided to adopt the processing models of Mr Watts (see paragraph 632). In any event, Messrs Lagerberg and Haberman agreed that "the different gas processing models do not have a significant impact on Crescent's lost profits".³⁴¹ Finally, the resultant volumes are then to be converted from million standard cubic feet ("MMscf") to MMBtu, using the sales gas GHV.
668. The Tribunal instructed the New Experts to perform the adjustments described above, then to indicate, in a table, the volumes available to Crescent for resale during the damages period. The New Experts provided the following figures to the Tribunal in the Lagerberg/Osborne Joint Report, expressed in MMBtu for the period in question:

Delivery Year	Period	Volumes available to Crescent for resale (MMbtu)
1	Dec 05	4,344,858
1	Jan 06 to Nov 06	56,804,038
2	Dec 06 to Mar 07	20,576,920
2	Apr 07 to Nov 07	106,914,494
3	Dec 07 to Nov 08	159,934,357
4	Dec 08 to Nov 09	159,938,651

³⁴⁰ Watts 6. *See also* RPHBR1 ¶ 1790. Final Hearing Tr., Day 4 at 138 (Slide 40).

³⁴¹ Lagerberg/Haberman Joint Report ¶ 52.

5	Dec 09 to Nov 10	159,947,498
6	Dec 10 to Nov 11	159,926,663
7	Dec 11 to Nov 12	159,908,837
8	Dec 12 to Nov 13	159,929,917
9	Dec 13 to July 14	106,476,814
	Total	1,254,703,047

669. An approximate daily average taken from those figures would be as per the right column below for each of the periods in question:

Delivery Year	Period	# days	Volumes to be supplied to Crescent by NIOC (as found by Tribunal) (MMscfd)	Volumes (after availability factor of 97% [80% in Dec05]) (MMscfd)	Volumes after processing, available to Crescent for resale (as calculated by New Experts) (MMbtu)	Volumes after processing, available to Crescent for resale (expressed as daily average) (Mmbtu/d)
1	Dec 05	31	198	158.4	4,344,858	140,157
1	Jan 06 to Nov 06	334	198	192.06	56,804,038	170,072
2	Dec 06 to Mar 07	121	198	192.06	20,576,920	170,057
2	Apr 07 to Nov 07	244	500	485	106,914,494	438,174
3	Dec 07 to Nov 08	366	500	485	159,934,357	436,979
4	Dec 08 to Nov 09	365	500	485	159,938,651	438,188
5	Dec 09 to Nov 10	365	500	485	159,947,498	438,212
6	Dec 10 to Nov 11	365	500	485	159,926,663	438,155
7	Dec 11 to Nov 12	366	500	485	159,908,837	436,909
8	Dec 12 to Nov 13	365	500	485	159,929,917	438,164
9	Dec 13 to July 14	243	500	485	106,476,814	438,176

670. The figures in the table at paragraph 669 above are sufficient for the purpose of in-principle decisions by the Tribunal as to allocation of available gas. Those in-principle decisions are reflected in the Instructions given by the Tribunal to the New Experts and, as was contemplated by the Lagerberg/Haberman Joint Report, those Instructions were then applied for purposes of calculation by the New Experts on the basis of their models.

3. Allocation of Available Gas to End-User Customers

671. It is common ground, and the evidence leaves no doubt, that Crescent could have sold all of the volumes of available gas set out at paragraph 668.³⁴² The Parties disagree, however, as to how the available gas would have been allocated among the end-user customers, especially during periods when the total demand from all the contracted buyers would exceed the gas available.

672. Mr Watts described SEWA and FEWA as the Anchor Customers “who would be responsible for the largest overall sales volumes”.³⁴³ Crescent’s marketing strategy involved SEWA and FEWA

³⁴² See, e.g., Remedies Hearing Tr., Day 9, 15 November 2016, at 236-237 (Professor Luciani); Day 10, 16 November 2016, at 13, 34, 39 (Mr Mills).

³⁴³ Watts 5 ¶ 39.

taking around 50% of GSPC volumes, with the balance going to end-users with contracts like OCP and Alchem and smaller end-users (the so-called ‘cream’) who would pay higher prices and accept interruptible supplies.³⁴⁴ Crescent set out its gas sales assumptions in a chart at paragraph 171 of its First Post-Hearing Brief on Remedies. The chart was premised on volumes available in line with what Crescent alleged were NIOC’s supply obligations.

673. In those Crescent gas sales assumptions, the sales to SEWA were said to be calculated as the higher of:³⁴⁵

- (1) SEWA’s actual demand for gas (calculated from published data about its historic electricity generation and gas demand levels);³⁴⁶ and
- (2) the MAQ under the SEWA GSA.

Sales to SEWA would be capped at the level implied by the DCQ. Furthermore, as Mr Lagerberg noted, in 2006 the MAQ was higher than the actual demand, due to an existing, declining supply available from the Sajaa field which SEWA would have used in preference to the Crescent gas.³⁴⁷

674. Both Mr Lagerberg and Mr Haberman relied on PwC’s analysis of SEWA’s and FEWA’s projected levels of demand,³⁴⁸ with some subsequent adjustments³⁴⁹ and the Tribunal accepts these figures.

³⁴⁴ CPHBR1 ¶ 172 “Crescent conservatively assumes that most of the gas supplied by NIOC under the GSPC would have been sold to the contracted end-users, with only the balance of available volumes being sold to the Other End-Users at premium prices [the ‘cream’].

³⁴⁵ Lagerberg 1 ¶ 4.47; Lagerberg/Haberman Joint Report ¶ 22(a). For SEWA demand data, *see* Lagerberg 1 ¶¶ 4.47-4.54, Appendix 4.2.1; Haberman 1 ¶ 3.45, n. 78, Appendix 8. *See also* Lagerberg/Haberman Joint Report ¶ 22.

³⁴⁶ Lagerberg 1 ¶¶ 4.47-4.50, Appendices 4.2, 4.3, 4.5.

³⁴⁷ Lagerberg 1 ¶ 4.46.

³⁴⁸ Lagerberg 1 ¶¶ 4.47, 4.57, Appendices 4.2, 4.3, 4.5. Haberman 1 ¶ 3.45 (“Based on ... PwC’s analysis of SEWA’s and FEWA’s levels of demand, there would have been insufficient residual volumes to supply any other customers (as set out in Appendix 8)”. Haberman 1, n. 78 states: “In the absence of further information, the level of SEWA and FEWA demand is currently based on PwC’s calculations. The PwC analysis of SEWA and FEWA demand has been done on limited data and ... there is a lot of uncertainty around these figures ...”). As noted by Mr Haberman in Appendix 8, the volume figures are taken directly from the SEWA and FEWA contracts and, in the case of nominated quantities above MAQ/obligated quantity, calculated using the assumptions in the PwC Model, with some adjustments discussed in Appendix 16.

³⁴⁹ *See* Lagerberg 2 ¶¶ 6.20-6.22, Appendix 8.3; and Haberman 2, Appendix 7 ¶¶ A7.15 to A7.17.

675. The Tribunal accepts that SEWA, a Sharjah state entity, was the top priority customer. Mr Watts described SEWA as “an important customer” having “top priority” for GSPC gas supplies.³⁵⁰ The Tribunal finds that sales to SEWA would have been first priority from the date of commencement of the SEWA contract. As noted above, the revenues from the SEWA contract were hypothecated as security for NIOC.
676. As for the price that SEWA would have paid, the Tribunal recalls NIOC argued that, from year 8, the SEWA price was excessive and SEWA would have re-negotiated the price and/or relied on imported electricity. This suggestion was supported by Mr Mills and opposed by Professor Luciani. The Tribunal considers that the SEWA GSA should be applied as it was written, and assumes no renegotiation of its terms.
677. In respect of supplies to FEWA, under the FEWA GSA:
- (1) There is a DCQ of 270,000 MMBtu (Article 6.1(a)).
 - (2) Article 8 requires FEWA to purchase a MAQ of 55 million MMBtu, *i.e.*, 150,685 MMBtu/d.
 - (3) Article 11 binds the Seller to an obligated quantity in the same amount as (b). This was referred to as Seller’s Obligated Quantity.
678. As appears from paragraph 172(b) of Crescent’s First Post-Hearing Brief, in Crescent’s sales assumptions, FEWA is assumed to receive the Seller’s Obligated Quantity (150,685 MMBtu/d, which is the same as the daily rate under the MAQ),³⁵¹ not its DCQ (270,000 MMBtu) or any intermediate amount. Mr Lagerberg said that his model can be flexed to account for the Tribunal’s determinations on FEWA’s volumes (minimum contractual volume or maximum up to demand/DCQ) and price (whether or not to apply the price cap from year 8).³⁵²

³⁵⁰ Watts 5 ¶¶ 41, 92; *see also* Watts 6 ¶ 199 (noting FEWA’s sensitivity for being prioritized behind SEWA). *See also* Makkawi 4 ¶¶ 11, 13; Mills 1 ¶¶ 2.1.5, 2.1.6, 2.1.7, 4.8.3; Haberman 1 ¶ 5.31 (noting the pressure to be expected from SEWA and FEWA to be supplied ahead of non-government customers) and ¶ 5.32 (noting the large payment guarantees provided “suggest that SEWA was to be Crescent’s primary customer”).

³⁵¹ FEWA GSA, Articles 8.1, 11.1.

³⁵² Lagerberg 2 ¶ 5.52; FEWA GSA, Article 9.1 (8).

679. The Tribunal accepts that, given the structure of the FEWA GSA and the relatively low minimum supply level of approximately 55% under that contract, Crescent had some flexibility to modulate supplies to FEWA from month to month. Mr Watts pointed out that, while Crescent might have received some UAE pressure in relation to FEWA, the FEWA GSA gave CNGC strong leverage over quantities. This meant that, provided that Crescent met the Seller's Obligated Quantity, it could divert the FEWA gas to higher value users if the opportunity arose.³⁵³ This 'optimisation' strategy notwithstanding, even the minimum quantities under the FEWA GSA would have accounted for a large proportion of Crescent's gas sales. As noted by Mr Watts, FEWA had no alternative gas supplies and would have sought to purchase as much gas from Crescent as it was willing to make available, in order to avoid high liquid fuel costs.³⁵⁴
680. As to the price cap, Crescent argued that, if gas had flowed, the FEWA price would have been re-negotiated to achieve a price comparable to the contemporaneous SEWA price. This is said to be a reasonable commercial assumption supported by evidence of Mr Watts and Mr Makkawi. Mr Watts said in his written evidence that if FEWA did not agree then "we would have diverted all available gas to SEWA at a higher, uncapped price".³⁵⁵ He also gave oral evidence about the matter.³⁵⁶
681. The price cap appears to have reflected an approach to gas and oil prices similar to that which informed the original price provisions of the GSPC. There is no justification in the "but-for" scenario for departing from the application of the relevant contracts as they were written, including the FEWA price cap.³⁵⁷ As with the SEWA GSA, the Tribunal applies the contract according to its terms and assumes no renegotiation of its terms.
682. Although Mr Watts in his evidence ranked FEWA as a lower priority than SEWA, he described the two as the Anchor Customers and they were both government entities with strategic importance. Their contracts were, as Mr Haberman observed, the only signed contracts in place with supply due on or near the commencement of supply under the GSPC.³⁵⁸

³⁵³ Watts 5 ¶¶ 41, 53.

³⁵⁴ Watts 5 ¶¶ 40-41; Watts 6 ¶¶ 197-198.

³⁵⁵ Watts 5 ¶ 53.

³⁵⁶ Remedies Hearing Tr., Day 3, at 28-29.

³⁵⁷ This is in line with Haberman 2 ¶¶ 2.14, 5.43; and contrary to the position taken by Lagerberg 1 ¶ 4.56.

³⁵⁸ Haberman 1 ¶ 3.45.

683. In his fifth witness statement, at paragraphs 36 to 41, Mr Watts set out Crescent's marketing strategy. He returned to the same topic in his sixth witness statement at paragraphs 189 to 212. He assumed availability of gas in accordance with Crescent's case, which was far in excess of what the Tribunal has found to be NIOC's obligations, or the Haberman High Case advanced by NIOC. Some of the basic principles adopted in his approach (especially in relation to SEWA and FEWA) remain applicable to lower volume availability, but his evidence does not address its consequences in relation to all the various end-users he had in mind. As to the end-users with long-term contracts, which he said would have been honoured, apart from SEWA and FEWA on the Tribunal's finding as to availability there would not have been sufficient (or even nearly sufficient) gas to honour them all. In fact, there would not have been sufficient gas to honour CGC's obligation to CNGC.
684. In their Joint Report, Messrs Lagerberg and Haberman recalled that Mr Lagerberg had adopted a model using "separate prices for SEWA and FEWA as defined in their respective sales contracts".³⁵⁹ In Mr Haberman's opinion the supply profile between FEWA and SEWA is "uncertain". He explained that is because it "depends on decisions that Crescent would have taken as to whether to seek the highest sales price or seek to avoid contractual penalties, with both being balanced against the bargaining power of the customers". As a result, Mr Haberman applied a weighted average of the contractual sales prices. However, Messrs Lagerberg and Haberman agreed that this disagreement between them does not have a significant impact on the damages owed Crescent. The Tribunal has opted for Mr Lagerberg's approach of using the separate prices for SEWA and FEWA.
685. As will be seen, in the first two Contract Years (up to 1 April 2007, excluding December 2005), when GSPC purchase volumes were 198MMscfd, the combination of SEWA's demand and the Seller's Obligated Quantity under the FEWA GSA alone would have exceeded the available gas. It is reasonable to conclude that these two state-owned utilities would have been supplied with all the available gas. As between SEWA and FEWA, having regard to SEWA's top priority, it is reasonable to assume that SEWA's demand would be met even when this left available for FEWA less than the Seller's Obligated Quantity.

³⁵⁹ Lagerberg/Haberman Joint Report ¶ 26 (*citing* Lagerberg 1 ¶¶ 4.45-4.49; Haberman 1 ¶ 3.47).

686. Furthermore, the Tribunal notes that although there was a one-year contract with DUGAS, the difference between SEWA and FEWA prices on the one hand, and the DUGAS prices on the other, is small.³⁶⁰
687. It is only after April 2007, when the GSPC purchase volumes increase to 500MMscfd (and available volumes for sales to end-users were approximately 438,000 MMBtu/d), that the question of allocation to other end-users arises, and the issue of FEWA's entitlement to its demands over the Seller's Obligated Quantity have a more significant impact.
688. For volumes up to 500 MMscfd, potentially relevant purchasers are SEWA, FEWA, OCP, Alchem and Hamriyah Steel.³⁶¹ Reference has earlier been made to the dates when contracts with these end-users took effect.
689. As will appear, there was scope to allocate quantities of gas to OCP from April 2007 (at higher prices than obtainable from FEWA).³⁶²
690. As to Alchem and Hamriyah Steel, which only become relevant from Delivery Year 4,³⁶³ the Tribunal has concluded that it is not reasonable to assume that they would have been allocated supplies. In the case of Alchem, the available supplies would have fallen well short of what Alchem was contractually entitled to,³⁶⁴ involving permanent and gross undersupply. Additionally, the project was subject to finance and involved complex processing issues. As to Hamriyah Steel,³⁶⁵ the contractual quantities involved were small and, having regard to the importance of FEWA as an anchor customer and the contractual obligations to OCP, the evidence

³⁶⁰ RPHBR1 ¶ 1487 (noting that “no contracts were finalised for such sales and the facilities did not exist to allow such sales to take place. In any event, even if they were included, such sales would not materially change the total, because they are assumed by Crescent to have taken place only in the first year (when Crescent only had a supply commitment to SEWA”). As noted above, the price under the DUGAS contract was USD 1.26/MMBtu. Under the SEWA GSA, the price was USD 1.25/MMBtu. The FEWA price for the first year was USD 1.225/MMBtu.

³⁶¹ See RPHBR1 ¶ 1538.

³⁶² Watts 5 ¶ 41.

³⁶³ CPHBR1 ¶ 52(c).

³⁶⁴ RC3/409, Articles 6.1, 8.1, 9.1(1).

³⁶⁵ RC5/308, Article 9.1(2) (Henry Hub prices in the relevant period were significantly higher than USD 1.3. See Mills 1 ¶ 3.4.3, Figure 12, p. 30, 4.14.2.1, 4.14.2.3, 4.17.6.6; Lagerberg 1 ¶ 4.60, Appendix 4.5, p. 60; Haberman 1 ¶ 5.46).

indicates to the Tribunal that they would have been given priority over Hamriyah Steel, especially where the alternative was making interruptible supplies to Hamriyah Steel.

691. Bearing in mind the above considerations, the terms of the various contracts and the data used by Messrs Lagerberg and Haberman, and subsequently by the New Experts, and what is said in paragraph 670 above, the Tribunal makes the following findings on gas sales assumptions for each contract delivery year under the GSPC. The applicable prices are as specified in the relevant contracts.³⁶⁶

GSPC Delivery Year 1: December 2005 to November 2006

692. During the first month of the GSPC, December 2005, when both Experts apply an 80% availability factor “to account for commissioning and start-up activities”,³⁶⁷ and the date for delivery under the SEWA GSA had not yet arrived, Crescent would have sold all of the available gas (4,344,858 MMBtu, on average 140,157 MMBtu/d) to FEWA.
693. For the period from January 2006 (when the SEWA GSA commenced) until the end of the first GSPC Delivery Year (30 November 2006), all of the available gas would have been sold to SEWA and FEWA. During this period, NIOC was bound to supply 198 MMscfd (which, after applying the availability factor (97% as of January 2006), and accounting for processing and product removal, converts to 56,804,038 MMBtu, or on average 170,072 MMBtu/d).
694. During this period SEWA’s actual demand would have been 23,254,706 MMBtu (or on average, 69,625 MMBtu/d), being the difference between actual demand and what was available from Sajaa.³⁶⁸
695. The remaining gas, over and above SEWA’s demand, would have gone to FEWA.
696. SEWA’s estimated demand for this period (which, in accordance with the Tribunal’s view that SEWA would have top priority, would have been met) is less than its contractual MAQ. Under Article 8 of the SEWA contract, if Crescent had enforced take-or-pay obligations in respect of this period SEWA, in later periods would have been entitled to a make-up quantity free of charge. The effect on revenues would have been related to time of payment rather than amounts. The

³⁶⁶ See SEWA GSA, Article 9; FEWA GSA, Article 9; OCP GSA, Article 9. See also ¶ 324 above.

³⁶⁷ Lagerberg 1 ¶ 4.8(g); Haberman 1 ¶ 3.16.

³⁶⁸ Haberman 2, Appendix 2.1 “Gas Demand”. See also Lagerberg 1 ¶ 4.47, Appendix 4.2.1, n. 5; Haberman 1 ¶ 3.45, Appendix 8. SEWA GSA Article 8.1; First Amendment, Article 3.

Tribunal considers (and instructed the New Experts accordingly) that it is unnecessary to allow for the (remote) possibility that Crescent, despite its own supply constraints and its commercial interest, would have enforced the take-or-pay obligations.

697. The quantity that Crescent would have supplied to FEWA is less than the SOQ under Article 11 of the FEWA GSA. If gas had been supplied, shortfalls would have given rise to penalties which, during the first contract year, are more substantial and calculated on a different basis. The Tribunal requested the New Experts to calculate the putative penalty, referring them to the evidence relevant to an application of Article 11.2(2) of the FEWA GSA. The New Experts calculated the penalty at USD 150.19 million on the assumptions as to supply allocations made above.³⁶⁹ They expressed their calculations of CNGC's lost profits both before and after deducting the penalty.
698. The question then arises whether the penalty thus calculated should be deducted from CNGC's profits on re-sale of gas in the "but-for" analysis which is being applied. In this respect it is to be kept in mind that the Tribunal is concerned with CGC's claim to be indemnified by NIOC in respect of CGC's liability to compensate CNGC for CNGC's lost profits on the gas NIOC should have supplied. There is another claim, referred to later in this Award, for CGC to be indemnified by NIOC in respect of CGC's liability to compensate CNGC in respect of CNGC's liabilities to end users (including FEWA) in consequence of CNGC's failure to supply them with gas. As will appear, the Tribunal does not at present have before it the material necessary to deal with the latter claim and proposes to defer it for future consideration. The question of CNGC's liability to FEWA for having failed to deliver any gas and the potential relevance of the comparison between CNGC's supply obligations to FEWA and NIOC's supply obligations to CGC, will be a matter to be examined in that context. The Tribunal does not consider it to be a matter to be taken into account in the present context as a deduction from CNGC's lost profits. If and when this does

³⁶⁹ See FEWA GSA Article 11.2(2). The Experts agreed that applying the Tribunal's determinations on supply priorities, there would be a shortfall of supply to FEWA in the first delivery year and that this results in a penalty payable to FEWA of USD 150.19 million. The Experts made the following key assumptions in respect of calculating that amount: (1) The Experts assume that LPG is an appropriate alternative fuel (Watts 5 ¶¶ 54, and 71); (2) The Experts have based prices for propane and butane on the \$/tonne Saudi Arabian contract price (Exhibit PH-10 and Watts 5 ¶ 71); (3) Given there is no information on the mix of propane and butane in the LPG that FEWA would have taken, the Experts adopt a simple average of the monthly price of propane and butane (noting that the difference between propane and butane prices is small); (4) To convert a price per tonne into a price per MMBtu, the Experts use a conversion factor of 47.7 MMBtu per tonne for propane and 46.6 MMBtu for butane (Watts 5 ¶ 71); (5) The penalty cap is equal to the MAQ for Dec 05 to Feb 06. The penalty cap amounts to 13.56 million MMBtu; (6) The Experts calculated a penalty for each month until the penalty cap is reached.

fall to be considered it will also be necessary to have regard to the fact that, by preferring SEWA to FEWA, Crescent would have avoided a possible claim by SEWA for short delivery.

699. There would have been no gas available to supply DUGAS during the first Delivery Year. Accordingly, potential sales to DUGAS should be disregarded.

GSPC Delivery Year 2: December 2006 to November 2007

700. The Tribunal has found that for the period from 1 December 2006 until 31 March 2007, NIOC was bound to supply 198 MMscfd (which, after applying the availability factor, accounting for processing and product removal, converts to 20,576,920 MMBtu for the period, or on average 170,057 MMBtu/d).
701. During December 2006 (the final month of the first year under the SEWA GSA), SEWA again would have been supplied with its estimated demand of 69,625 MMBtu/d.³⁷⁰ The remainder of the available gas, over and above SEWA's demand, would have gone to FEWA.
702. From 1 January 2007 to 31 March 2007, SEWA's demand from Crescent would have increased to 134,510 MMBtu/d.³⁷¹ That demand would have been met. The remainder would have been allocated towards meeting the Seller's Obligated Quantity under the FEWA GSA (150,685 MMBtu/d). There would be no gas available at that stage to meet the OCP GSA, under which deliveries were due to have commenced by 1 January 2007.³⁷²
703. The situation changes after 1 April 2007, from which point the Tribunal has found that NIOC was bound to supply 500 MMscfd (which, after applying the availability factor, accounting for processing and product removal, converts to 106,914,494 MMBtu for the period in question, or on average 438,174 MMBtu/d).
704. For the period 1 April 2007 to 30 November 2007, SEWA would have received 34,820,425 MMBtu (or 134,510 MMBtu/d).

³⁷⁰ Haberman 2, Appendix 2.1 "Gas Demand".

³⁷¹ SEWA's overall demands having increased and the available gas from Sajaa having decreased. Haberman 2, Appendix 2.1 "Gas Demand".

³⁷² RC4/183, Article 4.1.

705. After supplying SEWA, there would be sufficient residual volumes to supply both FEWA with its Seller's Obligated Quantity of 150,685 MMBtu/d, and OCP with its contractual entitlement of 46,000 MMBtu/d.³⁷³

706. After that, there would be available supplies of on average 106,979 MMBtu/d, which would be sold to FEWA.

GSPC Delivery Year 3: December 2007 to November 2008

707. For the period December 2007 to November 2008, the Tribunal has found that NIOC was bound to supply 500 MMscfd (which, after applying the availability factor, accounting for processing and product removal, converts to 159,934,357 MMBtu for the period in question, or on average 436,979 MMBtu/d).

708. In the month of December 2007 (still part of SEWA's second contract year), SEWA's demand would have been 134,510 MMBtu/d.

709. After supplying SEWA, there would be sufficient residual volumes to supply both FEWA with its Seller's Obligated Quantity of 150,685 MMBtu/d, and OCP with its contractual entitlement of 46,000 MMBtu/d.

710. The residual supplies of on average 105,784 MMBtu/d would be sold to FEWA.

711. For the period January 2008 to November 2008, SEWA would have purchased 187,834 MMBtu/d.³⁷⁴

712. After supplying SEWA, there would be sufficient residual volumes to supply both FEWA with its Seller's Obligated Quantity of 150,685 MMBtu/d, and OCP with its contractual entitlement of 46,000 MMBtu/d.

713. After that, there would be available supplies of on average 52,460 MMBtu/d. This would be sold to FEWA.

³⁷³ RC4/183, Arts 6.1, 9.1. According to Professor Luciani, the OCP price was about what customers other than the two Anchor Customers (SEWA and FEWA) might be expected to pay (USD 1.45/MMBtu as compared with USD 1.25/MMBtu and USD 1.225/MMBtu). *See* Remedies Hearing Tr., Day 9, at 216-217.

³⁷⁴ *See* demand figures in Lagerberg 1, Appendix 4.2; Haberman 1, Appendix 8.

GSPC Delivery Year 4: December 2008 to November 2009

714. For the period December 2008 to November 2009, the Tribunal has found that NIOC was bound to supply 500 MMscfd (which, after applying the availability factor, accounting for processing and product removal, converts to 159,938,651 MMBtu for the period in question, or on average 438,188 MMBtu/d).
715. In the month of December 2008 (still part of SEWA's third contract year), SEWA's demand would have been 187,834 MMBtu/d.
716. After supplying SEWA, there would be sufficient residual volumes to supply both FEWA with its Seller's Obligated Quantity of 150,685 MMBtu/d, and OCP with its contractual entitlement of 46,000 MMBtu/d.
717. After that, there would be available supplies of on average 53,669 MMBtu/d. This would be sold to FEWA.
718. For the period January 2009 to November 2009, SEWA would have purchased 218,819 MMBtu/d.³⁷⁵
719. After supplying SEWA, there would be sufficient residual volumes to supply both FEWA with its Seller's Obligated Quantity of 150,685 MMBtu/d, and OCP with its contractual entitlement of 46,000 MMBtu/d.³⁷⁶ That would leave on average 22,684 MMBtu/d in residual supplies, which would be sold to FEWA.

GSPC Delivery Year 5: December 2009 to November 2010

720. For the period December 2009 to November 2010, the Tribunal has found that NIOC was bound to supply 500 MMscfd (which, after applying the availability factor, accounting for processing and product removal, converts to 159,947,498 MMBtu for the period in question, or on average 438,212 MMBtu/d).

³⁷⁵ See demand figures in Lagerberg 1, Appendix 4.2; Haberman 1, Appendix. 8.

³⁷⁶ RC4.183, Article 9.1. According to Professor Luciani, the OCP price was about what customers other than the two Anchor Customers (SEWA and FEWA) might be expected to pay (USD 1.45/MMBtu as compared with USD 1.25/MMBtu and USD 1.225/MMBtu). See Remedies Hearing Tr., Day 9, at 216-217.

721. In the month of December 2009 (still part of SEWA's fourth contract year), SEWA's demand would have been 218,819 MMBtu/d.
722. After supplying SEWA, there would be sufficient residual volumes to supply both FEWA with its Seller's Obligated Quantity of 150,685 MMBtu/d, and OCP with its contractual entitlement of 46,000 MMBtu/d.³⁷⁷ The residual supplies would be sold to FEWA.
723. For the period January 2010 to November 2010, SEWA would have purchased 250,000 MMBtu/d.³⁷⁸ This would leave insufficient volumes to meet all the quantities Crescent was obliged to sell to FEWA (150,685 MMBtu/d) and OCP (46,000 MMBtu/d).
724. Consistent with its findings above, the Tribunal would allocate to SEWA first, followed by the Seller's Obligated Quantity to FEWA. The remainder (on average 37,527 MMBtu/d) would be sold to OCP.

GSPC Delivery Year 6: December 2010 to November 2011

725. For the period December 2010 to November 2011, the Tribunal has found that NIOC was bound to supply 500 MMscfd (which, after applying the availability factor, accounting for processing and product removal, converts to 159,926,663 MMBtu for the period in question, or on average 438,155 MMBtu/d).
726. In the month of December 2010 (still part of SEWA's fifth contract year), SEWA would have purchased 250,000 MMBtu/d. As with Contract Year 5, the total demands of contracted customers would exceed available supplies for December 2010. After supplying SEWA, Crescent would have supplied FEWA with its Seller's Obligated Quantity of 150,685 MMBtu/d. The residual supplies of on average 37,470 MMBtu/d would be sold to OCP.
727. For the period from January 2011 to November 2011, SEWA would continue to purchase 250,000 MMBtu/d. Available supplies would again not meet all of the contractual demands. After supplying SEWA, FEWA would receive the Seller's Obligated Quantity of 150,685 MMBtu/d, and the residual volumes would be provided to OCP.

³⁷⁷ RC4.183, Article 9.1. According to Professor Luciani, the OCP price was about what customers other than the two Anchor Customers (SEWA and FEWA) might be expected to pay (USD 1.45/MMBtu as compared with USD 1.25/MMBtu and USD 1.225/MMBtu). *See* Remedies Hearing Tr., Day 9, at 216-217.

³⁷⁸ *See* demand figures in Lagerberg 1, Appendix 4.2; Haberman 1, Appendix 8.

GSPC Delivery Year 7: December 2011 to November 2012

728. For the period December 2011 to November 2012, the Tribunal has found that NIOC was bound to supply 500 MMscfd (which, after applying the availability factor, accounting for processing and product removal, converts to 159,908,837 MMBtu for the period in question, or on average 436,909 MMBtu/d).
729. In the month of December 2011, SEWA would have purchased 250,000 MMBtu/d. Available supplies would again not meet all of the contractual demands. FEWA would receive the Seller's Obligated Quantity of 150,685 MMBtu/d. The residual volumes (on average 36,224 MMBtu/d) would be sold to OCP.
730. From January 2012 to November 2012, SEWA would continue to purchase 250,000 MMBtu. FEWA would then receive the Seller's Obligated Quantity of 150,685 MMBtu/d and any residual volumes (on average 36,224 MMBtu/d) would be sold to OCP.

GSPC Delivery Year 8: December 2012 to November 2013

731. This year is one of substantial rises in the GSPC price, as well as the prices in the SEWA and OCP contracts.
732. For the period December 2012 to November 2013, the Tribunal has found that NIOC was bound to supply 500 MMscfd (which, after applying the availability factor, accounting for processing and product removal, converts to 159,929,917 MMBtu for the period in question, or on average 438,164 MMBtu/d).
733. In the month of December 2012 the total demands of contracted customers would exceed available supplies. SEWA would purchase 250,000 MMBtu/d. FEWA would then receive its Seller's Obligated Quantity of 150,685 MMBtu/d, and this being the start of its eighth year, the new price formula and cap in Article 9.1(8) of the FEWA GSA would apply. The residual supplies would be sold to OCP.
734. From January 2013 to November 2013, SEWA would continue to purchase 250,000 MMBtu/d but this now being the start of the eighth year of the SEWA GSPA, the price would significantly increase to that provided in the oil-referenced price formula at Article 9.1(2). Next, FEWA would be entitled to its Seller's Obligated Quantity of 150,685 MMBtu/d. The residual volumes would

be sold to OCP. Being the start of the seventh year of the OCP GSA, the price would increase in accordance with the oil-referenced formula at Article 9.1(2) of the OCP GSA.

GSPC Contract Year 9 (to Award on Jurisdiction and Liability): December 2013 to July 2014

735. For the period December 2013 up until the date of 31 July 2014 (the date of the Award on Jurisdiction and Liability), the Tribunal has found that NIOC was bound to supply 500 MMscfd (which, after applying the availability factor, accounting for processing and product removal, converts to 106,476,814 MMBtu for the period in question, or on average 438,176 MMBtu/d).
736. As with Delivery Year 8, the total demands of contracted customers would exceed available supplies for December 2013. In the month of December 2013, SEWA would have continued to purchase 250,000 MMBtu/d. FEWA would be entitled to receive the Seller's Obligated Quantity of 150,685 MMBtu/d. OCP would then receive any residual volumes.
737. From January 2014 to July 2014, SEWA would continue to purchase 250,000 MMBtu/d at the increased rate under the oil-referenced price formula at Article 9.1(2). FEWA would then receive its Seller's Obligated Quantity of 150,685 MMBtu/d. OCP would receive the residual volumes priced according to the formula in the OCP GSA.

H. TRANSMISSION, PROCESSING AND OTHER COSTS

738. The Experts said that to avoid unnecessary disagreement, they adopted the same models on this subject.³⁷⁹ The Tribunal accepts these as reasonable.

I. PRODUCT SALES

739. The products of processing, which would have been available for sale by CNGC, would have produced substantial revenues. NIOC would already have taken out primary condensate before the Delivery Point, but treatment of gas it would have supplied would have produced marketable condensate, LPG and sulphur. The market prices of those products are publicly available. The evidence of Mr Watts demonstrated how they would be marketed.³⁸⁰ This was also addressed by

³⁷⁹ Lagerberg/Haberman Joint Report ¶ 57.

³⁸⁰ Watts 5 ¶¶ 73-76.

Professor Luciani.³⁸¹ There is no reason to doubt the capacity to sell these marketable products at the prices assumed by Crescent.

740. The price formula under the GSPC included a base price and a variable component related to the calorific value of the gas (the Btu formula). If NIOC delivered gas below that calorific value, the variable component did not come into play. If it delivered gas above that calorific value, it received remuneration for the value of the entrained liquids. NIOC argued that the Btu formula was inadequate to remunerate NIOC for the “full value” of the entrained liquids and postulated a price review that would have resulted in a change in the Btu formula. What is said above as to price review is relevant to that calculation also. There was no price review. Furthermore, as Crescent submitted, the Btu formula as agreed in the GSPC was the mechanism the Parties adopted to deal with the value of entrained liquids and there is no warrant for denying CNGC the revenues from product sales. The gas composition and processing models referred to above are used in the estimation of those revenues.
741. The Lagerberg/Haberman Joint Report refers to a disagreement as to how, if product profits were attributed to NIOC through a mechanism of price review, those profits would be calculated having regard to the GSPC price formula, but that issue does not arise.³⁸² It was CNGC that was entitled to the revenues of product sales, and the relevant product profits are those revenues less the cost to CNGC of obtaining the products.

J. UNCERTAINTIES

742. The Respondent refers to a series of events which it says would have delayed completion of NIOC’s facilities and restricted or denied its capacity to meet its supply obligations.³⁸³ These include events of force majeure, which may have been relevant at the liability phase of the arbitration. This Award is made upon the premise that NIOC was in daily breach of its delivery obligations from 1 December 2005 to 31 July 2014.
743. Crescent’s capacity to accept gas, up to the contractually required volumes (relevantly, up to 500 MMscfd) is questioned by NIOC. There was delay in the completion of a new Emarat

³⁸¹ Luciani 2 ¶¶ 67-72.

³⁸² Lagerberg/Haberman Joint Report ¶ 33.

³⁸³ RPHBR1 ¶¶ 1499-1530.

pipeline, but Mr Watts gave evidence, which the Tribunal accepts, that it would have been in place by November 2006 if gas had flowed, and the existing gas pipeline grid in the Northern Emirates was sufficient to satisfy SEWA and FEWA.³⁸⁴

744. There was evidence and argument as to the willingness of Shalco to process the gas to go to the Northern Emirates.³⁸⁵ BP Sharjah was a minority shareholder and there was evidence that it had particular concerns related to sanctions about being involved in processing gas of Iranian origin.³⁸⁶ However, this was a project of major local importance involving supplies to state-owned instrumentalities. As noted in paragraph 623 above, the Tribunal accepts that, in practice, it would not be likely to have been frustrated by BP's objections.
745. As to sanctions more generally, Mr Haberman referred to various stages at which sanctions might impede Crescent from performing its obligations (in particular its payment obligations) under the GSPC.³⁸⁷ Mr Watts explained how those impediments could have been circumvented.³⁸⁸ Moreover, if sanctions would have made it impossible for Crescent to have performed its obligations under the GSPC that is an issue that could have been raised at the liability phase of the arbitration.

³⁸⁴ Watts 5 ¶ 86.

³⁸⁵ Danhash 2 ¶ 9; RPHBR1 ¶¶ 1185-1189; Haberman 2 ¶¶ 4.24, 7.44.

³⁸⁶ Danhash 2 ¶¶ 13-14.

³⁸⁷ Haberman 1 ¶¶ 4.18-4.21.

³⁸⁸ Watts 6 ¶ 222.

XI. CALCULATION OF QUANTUM

746. Messrs Lagerberg and Haberman each quantified the losses suffered by CGC and CNGC on the basis of various factual assumptions. In the Lagerberg/Haberman Joint Report they identified the findings required to be made by the Tribunal in order to enable them to arrive at a joint conclusion on the issue. The Tribunal made such determinations and provided them to the New Experts so that they could provide mathematical assistance in calculating the quantum of damages.
747. For the reasons given above, the re-sale by CGC to CNGC of the gas it would have acquired from NIOC (in which its sales to SEWA are subsumed) provides the measure of the direct loss suffered by CGC in consequence of the non-delivery of the gas.
748. The remaining loss, in respect of on-sales of processed gas, and product sales, is loss suffered by CNGC and that loss, in turn provides the measure of CGC's liability to indemnify CNGC.
749. For the purpose of calculating the amounts of the losses suffered by CGC and CNGC, in accordance with the methodology underlying the Lagerberg/Haberman Joint Report, the Tribunal made findings expressed by reference to that joint report. These findings were articulated in the Tribunal's Instructions to the New Experts, in the following terms:

A. VOLUMES

Lagerberg/Haberman Joint Report Paragraph 17

750. The first set of findings required to be made is in relation to volumes, as stated in paragraph 17 of the Lagerberg/Haberman Joint Report as follows:

The Experts agree that the key decisions that the Tribunal should make in relation to volume include:

- (a) What were the maximum volumes that Crescent was entitled to request and NIOC was obliged to supply under the terms of the GSPC during the claim period, including:
 - (i) When was the earliest date that volumes of 500 MMscf/d would have been supplied under paragraph 7 of the Second Amendment to the GSPC; and
 - (ii) Whether, under paragraph 8 of the Second Amendment to the GSPC, volumes over 500 MMscf/d would have been supplied; if so from when; and whether any increased volumes would have been subject to the terms and conditions of the GSPC.
- (b) Would NIOC have been willing and able to supply volumes of 500 MMscf/d from December 2005, and if so, should these volumes be considered in the claim.

751. The Tribunal finds:

- (1) The maximum volumes that Crescent was entitled to request and NIOC was obliged to supply under the terms of the GSPC were 198 MMscfd from 1 December 2005 to 31 March 2007; and 500 MMscfd thereafter to 31 July 2014.
 - (i) 1 April 2007
 - (ii) No. Volumes above 500MMscfd are irrelevant.
- (2) The claim is to be measured by reference to NIOC's supply obligations under the GSPC as set out in 3(a) above.

Lagerberg/Haberman Joint Report Paragraph 18

752. In paragraph 18 of their joint report, Messrs Lagerberg and Haberman agreed that they could calculate lost profits based on different volume scenarios and stated that if the Tribunal wishes to consider the effect of any volumes that are different from those currently modelled by Messrs Lagerberg and Haberman, it will be necessary to reconsider gas composition and re-run the gas processing models for updated inputs into the models.

753. The Tribunal assumed, and the New Experts confirmed, that the volume scenario the subject of its Instructions, was within the scope of those currently modelled. The New Experts confirmed that this could be done without the need for third-party assistance to generate the gas inputs to their damages models, although the model had not previously been run for the volumes specified by the Tribunal. The Tribunal also clarified that the New Experts were to adopt Mr Watts' gas processing model.

B. END-USER CUSTOMERS AND PRICES

Lagerberg/Haberman Joint Report Paragraph 23

754. The next set of findings required to be made is in relation to the interlinked issues of end-user customers and sale prices. Paragraph 23 of the Lagerberg/Haberman Joint Report stated:

Based on the Tribunal's decisions as to the maximum volume limit under the GSPC, the Experts agree that the key decisions that the Tribunal should make include:

- (a) what volumes would Crescent have requested up to this limit;

- (b) which end user customers would have been supplied, from what date, and with what amount; and
- (c) at what price(s) would these sales have been made by Crescent.

755. For purposes of answering paragraph 23(a) of the Lagerberg/Haberman Joint Report, the Tribunal finds that Crescent would have requested the maximum it was entitled to request, as set out in paragraph 751(a) above.

756. On the basis that NIOC's supply obligations under the GSPC were 198 MMscfd for the period from 1 December 2005 to 31 March 2007 and 500 MMscfd from 1 April 2007 to 31 July 2014; and that those obligations would have been requested by CGC to be met and would have been met by NIOC then, the Tribunal understands that, in order to decide the volumes of gas available for sale for purposes of addressing paragraph 23(b) of the Lagerberg/Haberman Joint Report:

- (1) An availability factor is to be applied (as to which, see paragraphs 770-771 below);
- (2) The volumes would decrease after taking into account the processing of gas and the removal of products (as to which see paragraph 667);
- (3) MMscfd is to be converted to MMBtu/d.

757. As the Tribunal explained to the New Experts, based on the table in paragraph 15 of the Lagerberg/Haberman Joint Report and Table 3.6 of Haberman 1, for purposes of making in-principle decisions as to allocation of available gas in answer to paragraph 23(b) of the Lagerberg/Haberman Joint Report, the Tribunal prepared indicative figures in a table which the Tribunal invited the New Experts to complete. As recounted above at paragraph 668, the New Experts made the calculations as requested, and provided the following figures for volumes available for resale in the relevant periods:

Delivery Year	Period	Volumes available to Crescent for resale (MMbtu)
1	Dec 05	4,344,858
1	Jan 06 to Nov 06	56,804,038
2	Dec 06 to Mar 07	20,576,920
2	Apr 07 to Nov 07	106,914,494
3	Dec 07 to Nov 08	159,934,357
4	Dec 08 to Nov 09	159,938,651
5	Dec 09 to Nov 10	159,947,498
6	Dec 10 to Nov 11	159,926,663
7	Dec 11 to Nov 12	159,908,837
8	Dec 12 to Nov 13	159,929,917
9	Dec 13 to July 14	106,476,814

	Total	1,254,703,047
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758. As noted above at paragraph 669, the approximate daily average taken from those figures would be as per the right column below for each of the periods in question:

Delivery Year	Period	# days	Volumes to be supplied to Crescent by NIOC (as found by Tribunal) (MMscfd)	Volumes (after availability factor of 97% [80% in Dec05]) (MMscfd)	Volumes after processing, available to Crescent for resale (as calculated by New Experts) (MMbtu)	Volumes after processing, available to Crescent for resale (expressed as daily average) (Mmbtu/d)
1	Dec 05	31	198	158.4	4,344,858	140,157
1	Jan 06 to Nov 06	334	198	192.06	56,804,038	170,072
2	Dec 06 to Mar 07	121	198	192.06	20,576,920	170,057
2	Apr 07 to Nov 07	244	500	485	106,914,494	438,174
3	Dec 07 to Nov 08	366	500	485	159,934,357	436,979
4	Dec 08 to Nov 09	365	500	485	159,938,651	438,188
5	Dec 09 to Nov 10	365	500	485	159,947,498	438,212
6	Dec 10 to Nov 11	365	500	485	159,926,663	438,155
7	Dec 11 to Nov 12	366	500	485	159,908,837	436,909
8	Dec 12 to Nov 13	365	500	485	159,929,917	438,164
9	Dec 13 to July 14	243	500	485	106,476,814	438,176

759. The Tribunal finds that it is reasonable, on the evidence, to assess lost profits on the basis that Crescent would have requested volumes up to the limit available and would have allocated gas for on-sale as follows, in response to paragraphs 23(b) and (c) of the Lagerberg/Haberman Joint Report:

(i) *December 2005*

All available gas would have been sold to FEWA.

(ii) *1 January 2006 to 30 November 2006*

All available gas would have been sold to SEWA and FEWA.

Here, and throughout the remainder of the period, sales to SEWA (the higher of SEWA's estimated annual demand for gas and the MAQ that SEWA was obliged to purchase from Crescent, capped at SEWA's DCQ)³⁸⁹ would have first priority.

³⁸⁹ Sales to SEWA were in fact capped at the level implied by the maximum daily quantity under the contract with SEWA ("DCQ"). The quantity described as SEWA's estimated demand reflects a theoretical demand for gas based on SEWA's aggregate electricity requirements, including those met by imports, which is higher than the level implied by the DCQ from January 2010 onward. Neither expert in fact allocated to SEWA any volumes in excess of SEWA's DCQ. The Tribunal confirmed to the New Experts supplies to SEWA should be capped at the contractual DCQ, and the Tribunal so confirmed.

The prices for SEWA and FEWA would be as defined in their respective gas sales contracts. This would continue to be the case throughout the whole of the period (*i.e.*, no change either to the SEWA contract price provision or the FEWA contract price provision). Thus, for purposes of paragraph 25 of the Lagerberg/Haberman Joint Report, the Tribunal instructed the New Experts that the assumption should be that the FEWA price cap applies in line with the contractual terms (*i.e.*, paragraph 25(b)).

(iii) *December 2006*

As with (ii).

(iv) *1 January 2007 to 31 March 2007*

As with (ii).

(v) *1 April 2007 to 30 November 2007*

Sales to SEWA on the above basis would have first priority.

Second priority would be sales to meet the Seller's Obligated Quantity to FEWA.

Third priority would be sales to meet the contractual entitlement (*i.e.* the DCQ) to OCP at OCP's contract price (OCP's contract begins on 1 January 2007, but it is assumed no supply is made until 1 April 2007 because prior to that there is not enough to meet the FEWA Seller's Obligated Quantity).

Any available gas over and above the foregoing would be sold to FEWA.

(vi) *1 December 2007 to 30 November 2008*

As with (v).

(vii) *1 December 2008 to 30 November 2009*

As with (v).

(viii) *December 2009*

As with (v).

(ix) *1 January 2010 to 31 July 2014*

Over this period sales to SEWA on the above basis would have first priority, then sales to meet FEWA's Seller's Obligated Quantity, then sales to OCP.

Because of the assumed increase in SEWA's demand there would be insufficient volumes to meet the whole of the contractual obligation to OCP, so there would be no surplus after sales to OCP.

C. PRODUCT PROFITS

Lagerberg/Haberman Joint Report Paragraphs 29-33

760. At paragraphs 29 to 33 of the Lagerberg/Haberman Joint Report, Messrs Lagerberg and Haberman agreed that the amount of product profits from sales to end customers is substantial but disagreed on how the product profits should be credited. The Tribunal determined that the product profits belong to CNGC and should not be credited to NIOC.

D. THE PRICE PAYABLE TO NIOC

Lagerberg/Haberman Joint Report Paragraph 36

761. At paragraph 36 of the Lagerberg/Haberman Joint Report, Messrs Lagerberg and Haberman agreed that the key decisions with respect to price to be determined by the Tribunal include:

- (1) Whether there would have been a price revision under Article 10.7 of the GSPC;
- (2) If there would have been a price revision, the objective and effect of this price revision and how it would have impacted on the lost profits calculations.

762. The Tribunal answered as follows:

- (1) No.
- (2) Does not arise.

E. PERIOD OF LOSS**Lagerberg/Haberman Joint Report Paragraph 43**

763. At paragraph 43 of the Lagerberg/Haberman Joint Report, Messrs Lagerberg and Haberman agreed that their calculations of losses were based on an assumption that gas would have flowed throughout the period from 1 December 2005 to 30 April 2015. They further agreed that the Tribunal needs to decide:

- (1) if there would have been a delay to the start date of first gas;
- (2) if there would have been a stoppage of supply during the loss period;
- (3) if the period during which gas would have been supplied would have terminated early.

764. The Tribunal finds with respect to paragraph 43:

- (1) No.
- (2) No.
- (3) No, but lost profits should be calculated only up to 31 July 2014.

765. Accordingly, the Tribunal instructed the New Experts that the claim period commences 1 December 2005 and ends 31 July 2014 for purposes of paragraph 44 of the Lagerberg/Haberman Joint Report.

F. OTHER FACTORS**Lagerberg/Haberman Joint Report Paragraph 45**

766. At paragraph 45, Messrs Lagerberg and Haberman agreed that the key decisions to be determined by the Tribunal with respect to CGC and CNGC profits are:

- (1) whether CNGC profits can be included in Crescent's claim;
- (2) whether profits derived from supply to SEWA should be allocated to CGC or to CNGC.

767. With respect to paragraph 45, the Tribunal finds:

- (1) CGC and CNGC profits are to be calculated separately and are relevant to different aspects of CGC's claim;

- (2) Profits derived from supply to SEWA (*i.e.*, revenue from SEWA less cost of purchase of gas by CNGC from CGC and other costs of making gas available to SEWA) should be allocated to CNGC.

Lagerberg/Haberman Joint Report Paragraph 49

768. At paragraph 49, Messrs Lagerberg and Haberman agreed that, with respect to the gas composition and processing model, the Tribunal should determine which of Mr Watts's and Dr Ghaemi's assumptions should be adopted, so that calculations could then be amended as required.
769. With respect to paragraph 49, the Tribunal finds that the assumptions of Mr Watts (*i.e.*, the latest iteration of his gas processing model, see paragraphs 50-51 of the Lagerberg/Haberman Joint Report) should be adopted.

Lagerberg/Haberman Joint Report Paragraph 54

770. At paragraph 54, Messrs Lagerberg and Haberman agreed that the Tribunal should determine whether the availability factor or operational day approach is the appropriate method to apply for modelling the shutdown of NIOC's facilities for planned repairs and maintenance.
771. With respect to paragraph 54, the Tribunal finds that the availability factor is appropriate—80% for the first month and 97% for the remaining period.

Lagerberg/Haberman Joint Report Paragraph 57

772. At paragraph 57, Messrs Lagerberg and Haberman indicated that they had adopted the same models for transmission, processing and other costs to avoid unnecessary disagreement.
773. The Tribunal accepts these models as reasonable.

G. CONCLUSIONS ON CALCULATION OF QUANTUM

774. Based on the determinations above, the New Experts were requested to calculate CGC's and CNGC's lost profits incurred between 1 December 2005 and 31 July 2014 following NIOC's failure to supply natural gas to the Claimants pursuant to the GSPC.
775. The New Experts agreed that the value of damages based on the Tribunal's Instructions is **USD 2,429.97 million**.

776. The New Experts further agreed that the split of damages between CGC and CNGC is as follows: USD 1,344.70 million (CGC) and USD 1,085.27 million (CNGC).
777. The Tribunal accepts the New Experts' calculations of damages and that the calculations have been performed in accordance with the Tribunal's determinations, instructions and subsequent clarifications.
778. The damage that CGC suffered in the form of the loss of the profit that CGC would have made from on-sale of gas over the relevant period is USD 1,344.70 million.
779. The damage that CGC suffered in the form of its liability to CNGC for losses that CNGC sustained in respect of sales of gas and products to end-users over the relevant period is USD 1,085.27 million.

XII. CGC'S CLAIM FOR INTEREST

780. Crescent seeks an award of interest on any monetary award granted to CGC, pre-Award and post-Award. Specifically, if the Tribunal accepts that Crescent has made out the factual premises on the basis of which its claim has been quantified, Crescent seeks pre-award interest of USD 1.979 billion and post-award interest accruing at a daily rate of USD 1.166 million.³⁹⁰
781. NIOC requests that the Tribunal dismiss Crescent's claims on the basis that awards of interest are not available remedies under the applicable Iranian law and/or are otherwise not appropriate remedies in this case.³⁹¹

A. THE CLAIMANTS' POSITION

782. According to Crescent, the Tribunal can award interest under section 49 of the English Arbitration Act either (1) independently of Iranian law or (2) under Iranian law at such rates, for such periods, and on such basis as it deems fit on the basis of Article 221 of the Civil Code. According to Crescent, the Islamic prohibition on usury concerns interest on loans, not late payment damages, which are recoverable. Alternatively, Crescent argues that Article 26.1 of the GSPC and the doctrine of *lazarar* provide a basis for an award of interest.³⁹²

1. Availability of Interest under Section 49 of the English Arbitration Act

783. Section 49 of the English Arbitration Act provides:
- (1) The parties are free to agree on the powers of the tribunal as regards the award of interest.
 - (2) Unless otherwise agreed by the parties the following provisions apply.
 - (3) The tribunal may award simple or compound interest from such dates, at such rates and with such rests as it considers meets the justice of the case—
 - (a) on the whole or part of any amount awarded by the tribunal, in respect of any period up to the date of the award;
 - (b) on the whole or part of any amount claimed in the arbitration and outstanding at the commencement of the arbitral proceedings but paid before the award was made, in respect of any period up to the date of payment.
 - (4) The tribunal may award simple or compound interest from the date of the award (or any later date) until payment, at such rates and with such rests as it considers meets

³⁹⁰ CPHBR2 ¶ 218.

³⁹¹ RPHBR1 ¶ 1837.

³⁹² CPHBR1 ¶ 739, Annex A ¶ 132.

the justice of the case, on the outstanding amount of any award (including any award of interest under subsection (3) and any award as to costs).

- (5) References in this section to an amount awarded by the tribunal include an amount payable in consequence of a declaratory award by the tribunal.
- (6) The above provisions do not affect any other power of the tribunal to award interest.

784. According to Crescent, section 49 is a free-standing rule which affords the Tribunal unfettered discretion to order simple or compound interest.

785. Crescent relies on the decision of the House of Lords in *Lesotho Highlands v Impregilo SpA*,³⁹³ and says that “section 49 ... is in very wide terms” and “gives to arbitrators the power to compensate the successful party for the delay in receiving and enjoying the use of money awarded”.³⁹⁴ Crescent points to Merkin’s commentary to the English Arbitration Act, discussing *Lesotho Highlands* as follows: “Their Lordships concluded that the statutory default powers [under section 49 of the Act] are not ousted simply because the substantive contract is governed by an applicable law which does not recognise interest”.³⁹⁵

786. According to Crescent, this Tribunal’s power to award interest does not depend on the existence of a substantive right to interest under Iranian substantive law, which in any case Crescent argues exists.³⁹⁶ Section 49 thus stands in contrast to the position under section 48, which does require the existence of a substantive right under the *lex causae*. Crescent argues that NIOC does not take this distinction into account.³⁹⁷

787. Crescent argues it is entitled to interest regardless of whether the question of the award of interest is characterised as substantive or procedural. According to Crescent, if the question is procedural, then English law applies, and if it is substantive, then the Tribunal still has the freestanding power under section 49(3) to award interest. Iranian law is thus irrelevant on this point.³⁹⁸

³⁹³ *Lesotho Highland Development Authority v Impregilo SpA and others* [2006] 1 AC 221, RF2/41/41, RF2/42/65.

³⁹⁴ CPHBR1 ¶ 747.

³⁹⁵ CPHBR1 ¶ 750.

³⁹⁶ CPHBR1 ¶ 747.

³⁹⁷ CPHBR1 ¶ 750; Crescent’s PHB2 (Iranian law) ¶ 128; D4/129/6.

³⁹⁸ Closing Arguments Tr., Day 4 at 132.

788. Furthermore, according to Crescent, Article 11.8(b) of the GSPC itself specifically, and in some detail, provides for late-payment interest in connection with late payments under the contract.³⁹⁹
789. Following the decision by the UK Supreme Court in *Enka v Chubb* on 9 October 2020, Crescent submitted that the judgment (at paragraph 89) confirms its position that “the Tribunal has a free-standing and unfettered procedural power and discretion under section 49 of the Arbitration Act 1996 to order interest as it considers meets the justice of the case, regardless of the Parties’ choice of Iranian law as the substantive law”.⁴⁰⁰

2. Availability of Interest under Iranian Law

790. Crescent’s submission on the position in Iranian law with respect to interest on a contractual debt (as opposed to usurious interest on a loan) is similar to Crescent’s submission on the Iranian law position on lost profits. According to Crescent, the source of a party’s right to such interest or late payment damages is Article 221 of the Civil Code. Article 221 permits the recovery of the same where this accords with custom or usage, which Crescent contends exists with respect to international contracts.⁴⁰¹ In support of this proposition, Crescent cites several cases referred to by Mr Katirai, including *Insurance Fund v Topix Company*, *Insurance Fund v Amitex*, and *International Company v Dasht Company*.⁴⁰²
791. Crescent recalls that NIOC attacked Mr Katirai’s testimony by reference to an apparently contradictory 2004 opinion from an ICC arbitration. Crescent asserts that the 2004 opinion was produced by way of ambush, and stemmed from a case involving partners in a joint venture that included an Iranian legal entity. Mr Katirai stated in 2004 that late-payment damages could be claimed under Article 221 of the Civil Code only if a custom could be established but that he was then unaware of any applicable custom in that case. Crescent contends that this position is consistent with the one that he expressed in his testimony before this Tribunal.⁴⁰³ Crescent

³⁹⁹ Closing Arguments Tr., Day 1 at 100.

⁴⁰⁰ Crescent’s letters to the Tribunal 28 October 2020, 16 November 2020, 17 November 2020.

⁴⁰¹ CPHBR1 Annex A ¶ 129; Crescent’s RPHSIL ¶ 129; Closing Arguments Tr., Day 1 at 99.

⁴⁰² Crescent’s RPHSIL ¶ 129, referring to *Insurance Fund v Topix Company from Serbia*, 6 August 2010, in Selected Arbitral Awards of Arbitration Center of Iran Chamber, vol. 2 ¶ 166, RD1B/47/p. 325; *Insurance Fund v Almitex*, 4 July 2010, in Selected Arbitral Awards of Arbitration Center of Iran Chamber, vol. 2 ¶¶ 174-181, RD1B/47/p. 326; *International Company v Dasht Company*, 21 November 2006, in Selected Arbitral Awards of Arbitration, Center of Iran Chamber, vol. 2. ¶¶ 397-415, RD1B/47/p. 327.

⁴⁰³ Crescent’s RPHSIL ¶ 131.

submits that the custom relevant here is not a general one, but rather a specific custom in international contracts as found in the cases mentioned above, which is not inconsistent with Mr Katirai's 2004 opinion.⁴⁰⁴

792. In this respect, Crescent refers to a Tehran court judgment, No. 126 of 15 June 1987, which involved a claim for interest. The court looked to international trade custom in that specific area because it raised questions of indirect instead of direct loss.⁴⁰⁵ Crescent argues that looking to international custom would similarly be appropriate in this case where the interest claimed is a form of indirect loss.⁴⁰⁶
793. According to Crescent, the general rule of Article 221 is supplemented by specific provisions (Articles 226 to 230 of the Civil Code entitled "Losses incurred through non-fulfilment of contracts"), which include a provision dealing with the recovery of late-payment damages on liquidated debts (Article 228). Article 228 is implemented by Article 522 of the CPC. According to Crescent, it is common ground that Article 522 only covers awards of interest (late-payment damages) on liquidated debts in Iranian Rials, and further that, as confirmed during the cross-examination of Dr Mehrpour, the existence of this specific implementation of Article 221 does not abrogate or otherwise limit the general rule under Article 221.⁴⁰⁷ Crescent states that the right to claim late-payment damages on a liquidated debt under Article 228 of the Civil Code is irrelevant to the present case.⁴⁰⁸
794. Crescent's claim for interest as a form of late-payment damages under Iranian law therefore rests on the general application of Article 221, not the specific application of Article 228 or Article 522, which are inapplicable to its claim. Crescent further states that it is making its claim for interest pursuant to Article 221 of the Civil Code, so that NIOC's arguments related to Article 515 Note 2 of the CCP 2000 are irrelevant.⁴⁰⁹ Crescent further cites jurists who have similarly

⁴⁰⁴ Closing Arguments Tr., Day 4 at 132.

⁴⁰⁵ RJ2E/55/A; RJ2E/54.

⁴⁰⁶ Crescent's RPHSIL ¶ 40; Closing Arguments Tr., Day 5 at 161.

⁴⁰⁷ CPHBR1, Annex A ¶ 131.

⁴⁰⁸ CPHBR2 ¶ 173.

⁴⁰⁹ Crescent's RPHSIL ¶ 132; CPHBR2 ¶ 173; Closing Arguments Tr., Day 1 at 100.

expressed the view that late-payment damages are recoverable as being an example of realizable loss of profit.⁴¹⁰

795. Crescent argues that any “public policy” in Iran that might preclude an award of interest is limited to loans, not interest, as is the prohibition against *riba* (usury).⁴¹¹ Dr Mehrpour is said by Crescent to have conceded this in cross-examination.⁴¹²
796. According to Crescent, there is no evidence before the Tribunal as to any distinction as a matter of Iranian law between pre- and post-award interest. Thus both are available under Iranian law if they meet the test of custom.⁴¹³

3. Calculation of Interest

797. Crescent calculates and claims compound interest on the damages amount using a one percentage point margin on the Emirates Inter Bank Offer Rate (“EIBOR”) for 12-month deposits (EIBOR + 1%).⁴¹⁴
798. Crescent submits that EIBOR is an appropriate reference rate for an award of interest. Relying on Mr Lagerberg, Crescent argues that EIBOR is the reference rate most commonly used by borrowers and lenders in Dubai and the surrounding Emirates, and Crescent’s financial and economic risks are more closely correlated to those in the UAE than those in London (hence, not LIBOR). Mr Lagerberg applied the 1% mark-up on EIBOR to represent a reasonable compensatory interest rate. Crescent argues that the current practice of the English High Court is to award a 1% mark-up on base rate or LIBOR as a reasonable compensatory rate on damages. Crescent notes that the Parties also themselves agreed a mark-up in the rate to apply to unpaid invoices under the GSPC (LIBOR + 3.5%), indicating that a 1% mark-up is reasonable.⁴¹⁵

⁴¹⁰ Crescent’s RPHSIL ¶ 130.

⁴¹¹ CPHBR1 ¶¶ 747-748.

⁴¹² CPHBR1 Annex A ¶ 130 (*citing* Mehrpour XX/15, pp. 160/18-164/18).

⁴¹³ CPHBR2 ¶ 171.

⁴¹⁴ CPHBR1 ¶ 59 (at the time of the submission, EIBOR + 1% was 3.10%). The submission refers to a “21-month” period but this was evidently a typographical error. Mr Lagerberg referred to EIBOR for a twelve-month deposit period in both of his reports (Lagerberg 1 ¶¶ 4.84-4.87; Lagerberg 2 ¶ 5.88). *See also* Closing Arguments Tr., Day 1 at 192; CPHBR2 ¶ 177.

⁴¹⁵ CPHBR2 ¶ 175-177; Closing Arguments Tr., Day 5 at 200.

799. Alternatively, if the Tribunal considers the EIBOR rate inappropriate for any reason, Crescent notes that Mr Lagerberg's second report sets out other options for the choice of an interest rate, including a UAE risk-free rate, a cost-of-debt approach, and a LIBOR + 2% rate based on the Parties' agreement in the Sixth Side Letter to use this rate for any amounts awarded as part of a Sixth Side Letter price review.⁴¹⁶

B. THE RESPONDENT'S POSITION

800. According to NIOC, the question of the availability of interest is a matter of substantive Iranian law. NIOC submits that Iranian law prohibits interest and allows late-payment damages only in certain limited circumstances that do not apply in this case.⁴¹⁷ NIOC claims that because of the unavailability of interest under Iranian law, Crescent is attempting to recast its claim for interest as a claim for late-payment damages, which is not a valid method for claiming interest and does not apply here in any case.⁴¹⁸

1. Unavailability of Interest under Iranian law

801. According to NIOC, Crescent's position has shifted during the pleadings from a claim for interest under Iranian law to a claim for interest as a form of debt or late-payment damages. NIOC argues that this signifies a tacit recognition that Iranian law does not permit an award of interest. Furthermore, compensatory damages to Crescent for NIOC's non-performance do not constitute a debt, nor is Crescent's claim for compensation for lost profits in any way analogous to late payment by NIOC in breach of some contractual payment obligation.⁴¹⁹

802. NIOC observes that Crescent is unable to rely on any Iranian legislative provision that allows for the recovery of interest on damages for breach of contract. NIOC argues that Article 221 of the Civil Code provides no such basis, either under an express term of the GSPC or as a custom which binds Crescent and NIOC.⁴²⁰ Article 228 of the Civil Code deals solely with late payments

⁴¹⁶ CPHBR2 ¶ 178, *citing* Lagerberg 2 ¶¶ 5.95 to 5.114.

⁴¹⁷ RPHBR1 ¶ 46.

⁴¹⁸ Closing Arguments Tr., Day 3 at 72-73.

⁴¹⁹ RPHBR1 ¶¶ 784-788.

⁴²⁰ RPHBR1 ¶¶ 789-794, 799.

of damages and not interest.⁴²¹ Finally, Article 522 of the 2000 Civil Procedure Code is, as the Iranian Courts have held, a substantive, not merely procedural, provision of Iranian law but does not create a relevant right of recovery of interest.⁴²²

803. NIOC concludes that there is no basis under Iranian law for any claim for interest on damages as advanced by Crescent.⁴²³ First, the late-payment damages regime does not apply to Crescent's claim, and Crescent cannot rely on Article 228 of the Civil Code or Article 522 of the CCP 2000, directly or by analogy.⁴²⁴ Second, the only circumstances in which interest can be recovered in Iranian law are under those two provisions: the addition of Note 2 to Article 515, in 2000, excluded any recourse to Article 221 (even if it were otherwise applicable in accordance with its terms).⁴²⁵ Third, according to NIOC, even if recourse could be had by Crescent to Article 221, Crescent has failed to establish any custom sufficient for Article 221 purposes.⁴²⁶ Fourth, Crescent's claim is one for damages on damages which are irrecoverable on Crescent's own case as to Article 515 Note 2 of the CCP 2000.⁴²⁷
804. NIOC notes that Article 522 of the CCP 2000 permits the recovery in limited circumstances of late-payment damages (not interest) only where there is a delay in the payment of a liquidated debt and where the contractual obligation in question which is not performed is the payment by the defendant to the claimant of a specific sum of money in the national currency.⁴²⁸ There is no outstanding or liquidated debt, but simply a claim in USD.⁴²⁹
805. According to NIOC, the doctrine of *lazarar* also does not provide a route to an award of interest. NIOC submits that Mr Katirai's attempt to make this argument confuses the exercise of a right with the breach of an obligation.⁴³⁰

⁴²¹ RPHBR1 ¶¶ 795-796.

⁴²² RPHBR1 ¶¶ 797-798.

⁴²³ RPHBR1 ¶ 800.

⁴²⁴ RPHBR1 ¶¶ 801-818.

⁴²⁵ RPHBR1 ¶¶ 819-857.

⁴²⁶ RPHBR1 ¶¶ 858-867.

⁴²⁷ RPHBR1 ¶¶ 789, 868-874.

⁴²⁸ RPHBR2 ¶ 282.

⁴²⁹ RPHBR1 ¶ 1834.

⁴³⁰ RPHBR1 ¶ 281.

806. NIOC argues that, given the lack of statutory basis for its claim, Crescent's case on interest falls under the 1987 Tehran court case in which the court looked to international custom according to the procedure under Article 27 of the Iranian Law on International Commercial Arbitration. This law is inapplicable here, and therefore the reference to international custom is inapt.⁴³¹
807. NIOC points to Mr Katirai's own position in an expert report he gave in ICC Case No. 9076 from 2004.⁴³² In that report, Mr Katirai opined that interest on damages for breach of contract was not recognised under Iranian law and cited judgments and commentary to that effect. This is also the position shared by Dr Mehrpour.⁴³³ According to NIOC, Mr Katirai adopted the opposite position in the current case, treating interest on damages for breach of contract as if it were a debt, opining that Iranian law and custom recognise the ordinary and routine recovery of interest, and stating that Article 522 is not substantive Iranian law and does not seek to limit the right to recover interest and would not be so regarded in Iranian law.⁴³⁴ NIOC submits that Mr Katirai failed on cross-examination to give a convincing explanation for why his position changed between 2004 and now.⁴³⁵ NIOC points further to the strong evidence supporting Dr Mehrpour's position that interest is not available under Iranian law.⁴³⁶
808. NIOC agrees that Iranian law draws no distinction between pre- and post-award interest, but states that is because interest is prohibited under both circumstances.⁴³⁷

2. Unavailability of Interest under Section 49 of the English Arbitration Act

809. According to NIOC, the English Arbitration Act does not confer the power to award interest on the Tribunal, and Crescent misreads the Act and *Lesotho Highlands* (and later, *Enka v Chubb*).⁴³⁸
810. Where the *lex causae* does not confer or recognise a substantive right either (1) in respect of a compensable head of loss as damages or (2) in respect of interest as a concept of recognised

⁴³¹ Closing Arguments Tr., Day 5 at 92.

⁴³² RJ2E/55.

⁴³³ RPHBR1 ¶¶ 173-174.

⁴³⁴ RPHBR1 ¶¶ 175, 830-857.

⁴³⁵ RPHBR1 ¶¶ 185-89, 197, 857.

⁴³⁶ RPHBR1 ¶¶ 204-207.

⁴³⁷ RPHBR1 ¶¶ 279-280.

⁴³⁸ RPHBR1 ¶¶ 777-779, *see also* Respondent's Submissions on *Enka v Chubb*, 16 November 2020.

compensation (and indeed where the *lex causae* actually prohibits such recovery), the only relevant question according to NIOC is whether sections 48 and 49 respectively trump the *lex causae*.⁴³⁹ NIOC argues the position is the same as regards section 49 (powers as to interest) and section 48 (general relief-based powers). Neither section trumps section 46 (which provides for the Tribunal “to decide the dispute in accordance with the law chosen by the parties as applicable to the substance of the dispute”). Just as section 48 does not confer a right where none exists under the applicable substantive law (which NIOC contends is common ground), so too section 49 and the power to award interest depends on whether interest is recoverable under the applicable substantive law.⁴⁴⁰

811. NIOC argues that *Lesotho Highlands* does not support Crescent’s position. According to NIOC, *Lesotho Highlands* turned on the nature of the section 68 question in that case; no substantive law against the recoverability or recognition of interest was in issue. NIOC observes that *Lesotho Highlands* did not consider the question whether section 49 by itself trumps the position under the substantive law applied by section 46, even if section 48 does not.⁴⁴¹ NIOC further cites the Merkin & Flannery commentary to the English Arbitration Act in support of the statement that interest should be determined by construing the contract in light of its governing law.⁴⁴²
812. Furthermore, NIOC notes that the situation in *Lesotho Highlands* was the reverse of the present case, in that the applicable law there did permit the recovery of interest. The House of Lords simply ruled that if the substantive law provides for interest, that does not oust the additional powers that the court has under section 49. NIOC submits that this reasoning does not apply in the present case where substantive law forbids interest.⁴⁴³
813. The Respondent reiterates its view that where the substantive law governing the contract prohibits the award of interest (as Iranian law does), the procedural power contained in section 49 of the

⁴³⁹ RPHBR1 ¶ 776.

⁴⁴⁰ RPHBR1 ¶¶ 778-780.

⁴⁴¹ RPHBR1 ¶ 781.

⁴⁴² RPHBR1 ¶ 782.

⁴⁴³ Closing Arguments Tr., Day 5 at 90.

1996 Act cannot be used to award interest contrary to that prohibition. It submits that “Nothing in *Enka v Chubb*, or in *Lesotho Highlands* ... affects that analysis”.⁴⁴⁴

814. Alternatively, if the Tribunal does find that it has the power to award interest under section 49, NIOC argues that the Tribunal should exercise its discretion to decline to do so. Here the Parties chose Iranian law to govern the dispute in GSPC, but agreed to London as the seat of arbitration well after they signed the GSPC. Therefore, the Parties did not contract on the basis of a section 49 power to override the substantive non-interest position which their choice of Iranian substantive law entailed. NIOC contends that London was selected as the seat of arbitration due to logistical considerations and not out of a preference for its law.⁴⁴⁵
815. NIOC further argues that a distinction should be drawn between interest on lost profits claimed by Crescent against NIOC and those that CNGC might seek against Crescent, should the Tribunal find NIOC liable under either of Crescent’s theories. According to NIOC, the only party that could be entitled to interest in respect of CNGC’s alleged lost profits would be CNGC itself, as an accessory to a claim for damages against CGC. Therefore, Crescent can assert no claim for interest on any sums which it recovers in respect of CNGC’s loss.⁴⁴⁶

3. Calculation of Interest

816. NIOC notes, “[f]or the sake of completeness only,” that Crescent’s interest calculations are not only based on false premises (such as, e.g. claimed amounts and the claim period), but are also misstated and miscalculated. According to NIOC, Crescent refers to a 21-month EIBOR rate when no such rate exists and misstates the daily rate of interest which it alleges is accruing.⁴⁴⁷
817. NIOC submits there is no reason why any mark-up should be applied to any basic reference rate if the Tribunal does award interest.⁴⁴⁸

⁴⁴⁴ Respondent’s Submissions on *Enka v Chubb*, 16 November 2020 ¶ 2. The Respondent also points out that the dispute in *Enka v Chubb* concerned the identification of the law governing an arbitration agreement and the Court was not called upon to decide whether section 49 confers an unfettered power to award interest irrespective of the content of the law governing the contract (¶¶ 6-11).

⁴⁴⁵ RPHBR1 ¶¶ 875-879.

⁴⁴⁶ RPHBR1 ¶ 771.

⁴⁴⁷ RPHBR1 ¶ 1836 (as to the 21-month rate being a typographical error, *see* n.414 above).

⁴⁴⁸ RPHBR2 ¶ 289.

818. While Mr Haberman was instructed not to calculate interest,⁴⁴⁹ he did make some comments on Mr Lagerberg’s treatment of interest, including that “no justification has been provided for the 1% uplift” and that “By 2014, when EIBOR is around 1%, this is effectively doubling the interest rate”.⁴⁵⁰

C. TRIBUNAL ANALYSIS

1. Introduction

819. The Parties are at odds both as to whether an award of interest under section 49 of the English Arbitration Act would conflict with the law of Iran and whether, if this is the case, the Tribunal cannot or should not make such an award.⁴⁵¹

820. Interest reflects the value of the use of money. Contracts may make express provision for the payment of interest as consideration for the loan of money, or compensation for the deprivation of money. Even where there is no such provision, courts in many jurisdictions are empowered by statute to award interest to a claimant to reflect the damage suffered as a result of being deprived of the use of money, whether this is as a result of the defendant’s failure to pay a debt or the deprivation of the financial benefits that would have flowed from performance but for the defendant’s breach. In such circumstances the interest awarded is determined not by reference to the actual financial consequences of the defendant’s breach of contract but by reference to the cost of borrowing the amount of the debt or damages in the money market.

821. Crescent invokes the power of the Tribunal to award interest conferred by section 49 of the English Arbitration Act.⁴⁵² The object of that power is to enable the Tribunal to award compensation for loss of the use of money that the claimant should have received but for the respondent’s breach of contract. NIOC asserts that this power cannot, or should not, be exercised, because it is in conflict with Iranian substantive law,⁴⁵³ which the Parties have agreed should govern the contract.

⁴⁴⁹ Haberman 1 ¶ 3.57.

⁴⁵⁰ Haberman 1, Appendix 15 (“PwC Model – comments on assumptions and calculations”).

⁴⁵¹ CPHBR1 ¶ 739; RPHBR1 ¶¶ 874-879, 1837(2)(b).

⁴⁵² CPHBR1 ¶ 739.

⁴⁵³ CPHBR1 ¶ 739; RPHBR1 ¶¶ 875-879, 1837(2)(b).

822. Crescent has also invoked the doctrine of *lazarar*.⁴⁵⁴ The Tribunal does not consider that this doctrine has any bearing on the issue of interest.⁴⁵⁵ Nor does the Tribunal accept that Article 26.1 of the GSPC as a basis for an award of interest.⁴⁵⁶

2. Iranian law

823. Crescent asserts that, under Iranian law, Crescent would be entitled to recover interest pursuant to Article 221 of the Civil Code.⁴⁵⁷ That Article entitles a claimant to compensation for damage caused by breach of a contractual undertaking if, inter alia, the recovery of such compensation is established by custom or usage. Two issues arise: (1) does the type of damage in respect of which Crescent claims fall within the scope of Article 221? If so, (2) does Iranian law recognise that compensation for such damage can be afforded by an award of interest? Crescent asserts that each question should be answered in the affirmative;⁴⁵⁸ NIOC asserts that each question should be answered in the negative.⁴⁵⁹

3. The Scope of Article 221

824. The primary claim that Crescent brings is for the profits that it would have made had NIOC delivered gas in accordance with the GSPC. A claim for interest under Article 221 would be a claim in respect of damage resulting from the loss of use of these profits. As such, the claim would be one for indirect damage.

825. Prior to 2000 a claim under Article 221 would only lie for damage directly caused by a breach of contract. This was made clear by the CCP 1939. Article 713 of this provided that “[d]amages resulting from damages cannot be claimed”. Article 728 provided that damages could only be recovered in respect of loss inflicted on the claimant “as a direct result of non-fulfilment of obligation”.

⁴⁵⁴ CPHBR1 ¶ 739, Annex A ¶ 132.

⁴⁵⁵ CPHBR1 ¶ 739, Annex A ¶ 132. *See also* the Tribunal’s comments on *lazarar* at ¶ 349 above.

⁴⁵⁶ CPHBR1 ¶ 739, Annex A ¶ 132. *See* the Tribunal’s comments on Article 26.1 at ¶¶ 407.

⁴⁵⁷ CPHBR1, Annex A ¶ 129.

⁴⁵⁸ CPHBR1 ¶¶ 735-736, Annex A ¶ 38, 49-53.

⁴⁵⁹ RPHBR1 ¶¶ 434-462.

826. These provisions demonstrated that a claim for damage sustained as a result of loss of use of the profits that should have been derived from a contract would be outside the scope of damages recoverable under Article 221.
827. Mr Katirai asserted that the deletion of Article 713 by the CCP 2000 amounted to “authorizing collection of damages for delay in payment of damages”.⁴⁶⁰
828. This startling proposition disregards Article 515 of the CCP 2000, which requires the court to dismiss a claim for damages unless it is demonstrated that these are in respect of loss that has directly resulted from the defendant’s failure to perform the obligation. It also disregards Crescent’s case, based on Mr Katirai’s own evidence, that Note 2 prohibits the recovery of damages on damages.⁴⁶¹
829. The Tribunal is satisfied that it has always been a requirement of Iranian law that damages for breach of contract can only be recovered in respect of damage that has been directly caused by the breach. For this reason alone damage suffered as a result of loss of use of profits that should have been derived from performance of the contract does not give rise to a claim for damages under Iranian law.

4. Interest as Damages for Late Payment

830. It is common ground between the experts that usury (“*Riba*”) is prohibited under Islamic law and the Constitution of Iran. The issue is whether payment of interest by way of compensation for delay in receiving money offends against that prohibition.⁴⁶²
831. Because Iranian law does not permit the recovery of compensation for delay in receiving damages, this issue cannot arise in that context. Where it does arise is in the context of an award of damages in respect of the late payment of a debt. Article 228 of the Civil Code provides:

If the object of an obligation consists of the payment of a sum in cash, the judge can, subject to the terms of Article 221, convict the debtor to pay compensation for losses incurred through delay in payment of the debt.

832. Article 719 of the CCP 1939 provided:

⁴⁶⁰ Katirai 6 ¶ 145.

⁴⁶¹ CPHBR1 ¶ 733; RPHBR1 ¶¶ 789, 868-874.

⁴⁶² Mehrpour 1 ¶ 72; Katirai 6 ¶ 129.

In lawsuits where the subject matter is cash ... the late payment damages shall be 12% per annum of the judgment debt.

833. Article 725 of the CCP 1939 provided:

Late payment damages do not require to be proved, and the mere delay in payment is sufficient for it to be claimed and awarded.

834. Thus, under these provisions, interest was payable in respect of late payment of a debt, regardless of what damage, if any, the claimant had actually suffered as a consequence of the late payment.

835. It was Dr Mehrpour's evidence that the Guardian Council considered that these provisions offended against the prohibition of *Riba* and advised the High Judicial Council that they were against the *Sharia* and not enforceable.⁴⁶³ Ultimately, in 2000, these two Articles were replaced by Article 522 of the CCP 2000, which provides, in respect of a failure to pay a debt in Rials, that the creditor can recover the amount necessary to compensate for fall in the value of the Rial between the time that the payment was due and the time when it was ultimately made.⁴⁶⁴

836. Note 2 to Article 515 of the CCP 2000 provides that damages for delay in payment are authorised when provided for by law. It is Dr Mehrpour's evidence that Article 228 of the Civil Code, as qualified by Article 522 of the CCP 2000, currently constitutes the only relevant legal provision for the payment of damages for delay in paying a debt.⁴⁶⁵

837. Mr Katirai disagrees. He asserts that Article 522 is not dealing with damages for late payment at all, but with an adjustment of the initial obligation to have regard to the effects of inflation.⁴⁶⁶ The Iranian court remains free to award damages for delay in payment where authorised by law and such damages can consist of the award of pre-judgment interest.⁴⁶⁷

838. Other passages in this section of Mr Katirai's sixth report are in conflict with these propositions. He goes on to state that damages for late payment are assessed on the basis of the rate of inflation

⁴⁶³ Mehrpour 2 ¶ 93.

⁴⁶⁴ Mehrpour 1 ¶¶ 77-78.

⁴⁶⁵ Mehrpour 2 ¶ 96.

⁴⁶⁶ Katirai 6 ¶ 152.

⁴⁶⁷ Katirai 6 ¶ 154.

in the case of Rials, but according to the discretion of the court in other cases⁴⁶⁸ and that the purpose of damages for delay in payment is to account for the lost value of money.⁴⁶⁹

839. The Tribunal prefers the evidence of Dr Mehrpour to that of Mr Katirai. While interest rates reflect the strength of the currency to which they relate, interest is usually exacted as reflecting the value of the use of money. As such, it was seen by the Guardian Council as offending against Islamic law. The fact that Iranian law no longer permits interest to be awarded as compensation for late payment reflects the fact that this is considered to offend against the prohibition of usury.
840. The Tribunal observes that the GSPC itself makes provision for the payment of interest. Article 11.8 provides that Crescent is to pay interest at the 12-month LIBOR rate plus 3.5% on late payments. Paragraph D of the Sixth Side Letter provides for the payment of interest at LIBOR plus 2% on payments due in arrears by either Party as a consequence of a price revision. Neither Party has made any submission as to the significance of these provisions in relation to the issue of the legality of the payment of interest in respect of late payment under Iranian law. In particular, NIOC proffered no explanation as to the circumstances in which it had agreed to provisions that were in conflict with Iranian law. The Tribunal observes that these provisions would not have appeared objectionable prior to the legislative changes in 2000. The implications of the changes that were made to this area of the law appear to have been overlooked. The provisions appear to be unenforceable, although this was not the contention of either Party.
841. Mr Katirai referred to three awards rendered in international arbitrations held at the Arbitration Centre of Iran Chamber. Crescent relied on these as demonstrating the existence of a recognised custom in Iran that interest on damages could be recovered in international commercial disputes.⁴⁷⁰
842. The first two cases, *Insurance Fund v Topix Company from Serbia* and *Insurance Fund v Altimex* (2010) were claims in debt by sellers of commodities who had not been paid for them. In each case the tribunal awarded, in addition to the purchase price of the commodities, interest by way of damages for delay in payment at LIBOR rates, this being stated to be in accordance with the

⁴⁶⁸ Katirai 6 ¶ 153.

⁴⁶⁹ Katirai 6 ¶ 154.

⁴⁷⁰ Katirai 6 ¶ 157; Crescent's RPHSIL ¶ 129.

custom of international commercial arbitration. In the latter case it appears that the contract provided that “the pertinent commercial custom” should govern.⁴⁷¹

843. The third case, *International Company v Dasht Company* (2006) involved a claim for loss of profits as a result of a failure to deliver a consignment of pickles. The tribunal held that the respondent was liable to pay damages in respect of the loss of profits pursuant to Articles 221 of the Civil Code and Articles 515 and 520 of the CCP 2000.

844. The proceedings were subject to the Law of International Commercial Arbitration of 1977, which gave effect to the UNCITRAL Arbitration Rules. The award stated that, according to paragraph 4 of Article 27 of this law:

The arbitration panel is required to apply the content of the agreement and commercial custom in addition to the governing substantive law, which is Iranian law in this case. Seeking damage for delay in payment and payment of such damage is authorized both under Iranian law and established international custom. Therefore, the panel orders the Respondent to pay the Claimant damage for delay in payment.

845. The tribunal did not explain why it was appropriate to describe interest on damages for loss of profit as “damage for delay in payment” nor what provision of substantive Iranian law made provision for this.

846. This Tribunal does not consider that these three awards establish a custom recognised by Iranian law that interest should be paid on damages awarded in international commercial disputes. The Tribunal finds that interest on the damages suffered by Crescent could not be recovered under Iranian substantive law because (1) such recovery would not be in respect of damage directly caused by NIOC but in respect of damage on damage and (2) the award of interest is not permitted under Iranian law because it constitutes *Riba*, which is forbidden by Islamic law.

5. Does Section 49 of the English Arbitration Act Trump Iranian Substantive Law?

847. Section 49 of the English Arbitration Act provides that the parties are free to agree on the powers of the tribunal as regards the award of interest and that, “unless otherwise agreed by the parties”, the tribunal may award simple or compound interest on the amount awarded by the tribunal in

⁴⁷¹ Katirai 6 ¶ 157 (g) *referring to Insurance Fund v Altimex* in Selected Arbitral Awards of Arbitration Center of Iran Chamber, Vol. 2, 4 July 2010, ¶¶ 174-181.

respect of the period up to the award (section 49(3)) and in respect of the period running from the date of the award until payment (section 49(4)).

848. The provisions of the English Arbitration Act fall into two categories; those that are mandatory and those that are not mandatory. Section 49 falls into the latter category. Section 4(5) provides:

The choice of law other than the law of England and Wales or Northern Ireland as the applicable law in respect of a matter provided for by a non-mandatory provision of this Part is equivalent to an agreement making provision about that matter.

849. Crescent submits that in this case section 49 of the English Arbitration Act gives a free-standing right to interest on damages that is not affected by Iranian substantive law.⁴⁷² NIOC submits that section 49 does not permit an award of interest where this is not permissible under the substantive law of Iran.⁴⁷³ It is common ground that this is an issue governed by English law. As to this, Crescent relies on the decision of the House of Lords in *Lesotho Highlands*.⁴⁷⁴ Since the Final Hearing new light has been thrown on that decision by the decision of the Supreme Court in *Enka v Chubb*.⁴⁷⁵ The Parties have been given an opportunity to comment on this decision, and the Tribunal admits it to the record.

850. *Lesotho Highlands* was a case about an arbitration where the parties had agreed that the contract should be subject to the substantive law of *Lesotho*. That law provided that the claimants were entitled to interest on their claim. The arbitrators did not award interest under that provision, but under section 49 of the English Arbitration Act. The Court of Appeal held that they should not have done so. The claimant's substantive right to interest displaced the discretionary power that the arbitrators would otherwise have had under section 49.⁴⁷⁶ An oddity of this case is that the reports do not disclose in what respect the substantive right to interest under the law of *Lesotho* differed from the basis on which it was awarded by the arbitrators.

851. The House of Lords reversed this decision. The leading speech was that of Lord Steyn and the other members of the Committee, including one member of the present Tribunal, agreed with his decision on interest. Lord Steyn considered provisions in the contract for the payment of interest

⁴⁷² CPHBR1 ¶ 747-748; RPHBR1 ¶ 772.

⁴⁷³ RPHBR1 ¶ 783.

⁴⁷⁴ CPHBR1 ¶ 747.

⁴⁷⁵ *Enka Insaat Ve Sanayi AS v OOO Insurance Company Chubb* [2020] UKSC 38.

⁴⁷⁶ *Lesotho Highlands Development Authority v Impregilo SpA and others* [2003] EWCA Civ 1159, ¶ 48.

but concluded that they did not apply to the claim advanced by the claimants.⁴⁷⁷ The inference is that had they done so he would have accepted that this was “an agreement to the contrary” under section 49 of the Act.

852. He then considered whether the agreement that the contract should be governed by the law of *Lesotho* was capable of constituting “an agreement to the contrary” under section 49, but concluded that it could not as section 5 required such an agreement to be in writing and “the law of Lesotho is not an agreement to the contrary in writing”.
853. No mention was made of the possibility that the agreement that the contract should be governed by the law of *Lesotho*, which law made provision in respect of interest, might amount to an agreement displacing the non-mandatory provision of section 49 by reason of the provisions of section 4(5) of the English Arbitration Act. In two decisions Courts subsequently held that section 4(5) did not apply to a general choice of law clause but only to a choice of law clause that specifically related to the particular matter to which the non-mandatory provision of the English Arbitration Act would otherwise have applied.⁴⁷⁸
854. In *Enka v Chubb* the Supreme Court was concerned with the principles that determined the law that governed an arbitration agreement, as opposed to the substantive law of the contract or the law of the seat of the arbitration. The Court held that the two decisions referred to above were erroneous:

The notion that section 4(5) applies only where parties have specifically excluded a non-mandatory provision of the Act by the terms of their arbitration agreement cannot, in our view, be accepted. It is not consistent with the language of section 4(5). The words “in respect of a matter provided for by a non-mandatory provision” require only that the matter governed by the foreign law should be a matter provided for by a non-mandatory provision of the Act.⁴⁷⁹

855. The Court attributed to Lord Steyn the following reason for making no mention of section 4(5):

Because section 49(3) is procedural, the choice of the law of Lesotho to govern substantive contractual rights was not in respect of a matter provided for by section 49(3) and therefore did not engage section 4(5).⁴⁸⁰

⁴⁷⁷ *Lesotho Highlands Development Authority v Impregilo SpA and others* [2005] UKHL 43, ¶ 36.

⁴⁷⁸ *C v D* [2008] 1 Lloyd’s Law Rep 239; Burton J’s decision in relation to the present proceedings *National Iranian Oil Company v Crescent Petroleum Company International & Anor* [2016] EWHC 510 Comm.

⁴⁷⁹ *Enka Insaat Ve Sanayi AS v OOO Insurance Company Chubb* [2020] UKSC 38, ¶ 88.

⁴⁸⁰ *Enka Insaat Ve Sanayi AS v OOO Insurance Company Chubb* [2020] UKSC 38, ¶ 89.

856. This interpretation of the reasoning of Lord Steyn is perhaps generous. A simpler explanation for the failure to refer to section 4(5) might be that the appellants did not rely on this. Equally in the present case, NIOC does not invoke section 4(5). In its submissions in respect of *Enka v Chubb* it states:

NIOC does not contend that the parties have chosen to contract out of section 49, but rather that the procedural power to award interest under section 49 is inapplicable where the applicable substantive law prohibits such an award ... Thus paragraph 89 of *Enka v Chubb* provides no guidance on the question whether the procedural power under English curial law to award interest can circumvent a prohibition on awarding interest under the Iranian substantive law that governs, *inter alia*, the remedies available for breach of contract pursuant to section 46. The answer to that question is ... interest cannot be awarded in these circumstances.⁴⁸¹

857. The difficulty in relation to this issue arises because of the classification of the power to award interest granted by section 49 as a procedural power. The power is classified as procedural because it is not reflective of any substantive right on the part of a claimant but is discretionary and exists only as an incident of legal proceedings.⁴⁸² But the exercise of the procedural power to award interest has the same effect as the exercise of a substantive right to receive interest. Where the substantive law agreed between the parties does not afford this right the issue is whether it is a proper exercise of discretion to exercise the procedural power to grant it.

858. The statutory power to award interest was introduced into English law precisely because the common law did not recognise a right to be paid general damages, by way of interest or otherwise, for the late payment of money.⁴⁸³ If the position were that Iranian law simply did not recognise the right to such compensation there would be much to be said for exercising the discretionary power granted by section 49 to provide compensation for the delay in receiving damages for NIOC's contractual breaches. But that is not the position.

859. Although the Iranian law of contract does not expressly prohibit the recovery of interest by way of compensation for delay in the payment of debt or damages, such a remedy would be contrary to the well recognised principle of Islamic law that prohibits the payment of interest. The parties agreed that the GSPC should be governed by Iranian law and one of those parties was an Iranian State entity. Only subsequently did the parties agree that the seat of the arbitration should be England.

⁴⁸¹ Respondent's submissions on *Enka v Chubb* filed by NIOC on 16 November 2020, ¶¶ 5, 10.

⁴⁸² *Lesotho Highlands Development Authority v Impregilo SpA and others* [2003] EWCA Civ 1152, ¶ 47.

⁴⁸³ *Lesotho Highlands Development Authority v Impregilo SpA and others* [2003] EWCA Civ 1152, ¶ 47.

860. In these circumstances the Tribunal has decided that it would not be just to make a discretionary award of interest to compensate Crescent for delay in receiving damages up to the date of the Award. The Tribunal notes that in the Caspian Case, the tribunal was faced with the same issue and reached the same conclusion, observing that this accorded with international arbitration practice.⁴⁸⁴
861. Different considerations apply to any delay that may occur in complying with this Award after it has been made. It is plainly desirable that there should be a sanction against, or compensation for, delay in honouring an award of damages made by a court or arbitral tribunal.⁴⁸⁵ This is essentially a procedural matter to be governed by the law of the seat of the proceedings rather than the substantive law of the contract, indeed the same considerations apply whether the dispute arises out of a contract or tort. For these reasons, the Tribunal considers it just to exercise its powers under section 49(4) of the English Arbitration Act.
862. The Tribunal has noted the substantial quantity of evidence in relation to the matter of sanctions and has observed the practical consequence of sanctions in relation to payments from time to time by NIOC on account of its deposit in this arbitration. Some potential delay on account of sanctions should be allowed for and the Tribunal in its orders will fix a time for payment of the amounts awarded against NIOC of three months from the date of the award. That also will be the date from which interest will commence to run.
863. Accordingly the Tribunal orders NIOC to pay post-award interest on the sums awarded by way of damages, to accrue as from three months after the date of this Award up to the time that these sums are paid.

6. Calculation of Post-Award Interest

864. Having determined that NIOC is liable to pay post-award interest, it is necessary to fix the appropriate interest rate.
865. Section 49(4) of the English Arbitration Act grants the tribunal broad discretion to “award simple or compound interest from the date of the award (or any later date) until payment, at such rates

⁴⁸⁴ Caspian Case, Award, Document filed by Crescent on 18 June 2019, ¶¶ 699-707.

⁴⁸⁵ See Departmental Advisory Committee on Arbitration Law Report on the Arbitration Bill, RF/26/384, ¶ 236.

and with such rests as it considers meets the justice of the case, on the outstanding amount of any award”.

866. The Parties’ submissions on interest focused more on the availability of interest as a matter of law, rather than the appropriate rate itself. As noted above, Mr Haberman was instructed not to calculate interest at all.⁴⁸⁶ The Respondent did not engage with the Claimants’ contentions on the appropriate rate, beyond submitting there was no justification for a mark-up which, Mr Haberman observed, would effectively double the rate.⁴⁸⁷
867. The Claimants’ submissions on the appropriate interest rate were directed primarily at *pre-award* interest. Mr Lagerberg’s explained his view why EIBOR plus 1% for 12 month deposits was a “reasonable rate of interest to use for pre-award interest”.⁴⁸⁸ This rate was intended to represent a reasonable compensatory interest rate. EIBOR, he explained, is the “reference rate most commonly used by borrowers and lenders in Dubai and the surrounding Emirates”. He selected EIBOR as the benchmark, rather than a more commonly used benchmark such as LIBOR, “because Crescent is a UAE-based company and its financial and economic risks are more closely correlated to those in the UAE than those in London”.⁴⁸⁹
868. While the Claimants’ written submissions did not specifically address post-award interest, at the Final Hearing, the Claimants submitted that an “award of interest here is particularly justified in circumstances where NIOC has raised every conceivable argument and employed every conceivable delaying tactic in order to prolong the proceedings and avoid facing the consequences of its many, many years of breach”,⁴⁹⁰ adding that the expectation that “these tactics will continue ... and that Crescent will face a host of new, expensive hurdles in enforcing any award” are “plainly considerations that should apply in the amount of interest -- particularly post-award interest -- that the Tribunal awards”.⁴⁹¹

⁴⁸⁶ Haberman 1 ¶ 3.57.

⁴⁸⁷ RPHBR2 ¶ 289; Haberman 1, Appendix 15 (“PwC Model – comments on assumptions and calculations”).

⁴⁸⁸ Lagerberg 2 ¶ 5.88.

⁴⁸⁹ Lagerberg 2 ¶¶ 5.90-5.91.

⁴⁹⁰ Final Hearing Tr., Day 5 at 30-31.

⁴⁹¹ Final Hearing Tr., Day 5 at 30-31 [emphasis added]. *See also* Crescent’s Reply Memorial on Remedies ¶ 244.

869. The Tribunal agrees that EIBOR is an appropriate rate in the present matter, given the Claimants, although incorporated in Bermuda and the BVI, are UAE-based. EIBOR is a commonly used reference rate by borrowers and lenders in Dubai and the surrounding Emirates. Although the award is in USD, in the Tribunal's experience, it is not unusual for EIBOR to be awarded as the reference rate on USD awards. The Tribunal also considers it appropriate to include the requested mark-up of 1% on the EIBOR 12-month rate to meet the justice of the case. In this regard, the Tribunal notes that the Parties themselves contemplated a mark-up on reference rate for post-award interest in connection with arbitral awards arising out of any gas price review arbitration under the Sixth Side Letter to the GSPC.⁴⁹² While that clause specified LIBOR as the reference rate, the Tribunal is aware that LIBOR is being phased out as from the end of the year.⁴⁹³ The Tribunal understands that the Central Bank of the UAE, which regulates EIBOR, has put in place governance measures in light of recent challenges to the LIBOR system.⁴⁹⁴

⁴⁹² GSPC, Sixth Side Letter, paragraph D.(d).

⁴⁹³ See December 2020 "Consultation on Potential Cessation" published by ICE Benchmark Administration Limited at: https://www.theice.com/publicdocs/ICE_LIBOR_Consultation_on_Potential_Cessation.pdf. See also Joint Statement by the UK Financial Conduct Authority (FCA) and the Bank of England (13 May 2021), <https://www.fca.org.uk/markets/libor>.

⁴⁹⁴ Central Bank of the U.A.E. "Regulations Regarding Emirates Interbank Offered Rate (EIBOR) Submissions (Amended May 3, 2020)" available at: https://centralbank.ae/sites/default/files/2020-04/CBUAE_EIBOR_Regulations_20.04.2020_Track_changes_mode.pdf.

XIII. CGC'S CLAIM FOR DECLARATORY RELIEF CONCERNING ITS LIABILITY TO INDEMNIFY THIRD PARTIES

A. NATURE OF THE CLAIM

870. The Claimants say that Crescent has incurred liabilities to SEWA and other third parties as a result of NIOC's failure to deliver gas. Consistently with the contractual pattern, the liability to SEWA would be that of CGC, and the liability to other third parties would be that of CNGC, which in turn would be reflected in a liability of CGC to CNGC.

871. In their First Post-Hearing Brief on Remedies, the Claimants say:

779. Crescent accepts that in contrast to CNGC's lost profits, the Tribunal does not have the necessary material to reach a final quantified conclusion on this aspect. Crescent also accepts that there is limited scope for declarations at this stage. Given the issues of principle which have been raised Crescent would suggest that it would be useful if the Tribunal were now to declare:

That CGC is entitled to be compensated in damages in respect of any liability it has incurred to SEWA and to CNGC (beyond its liability in respect of CNGC's lost profits) as a result of NIOC's breaches of the GSPC.

780. The determination of the amount of these liabilities would thus have to be stood over to a further hearing. It follows that the Tribunal will not, at this stage, be issuing a final award in relation to all damages, and will have to remain in existence to deal with this outstanding matter. How that matter will come forward remains to be seen. It may be that there will have been a settlement between CNGC and third parties, and between CGC and SEWA, or it may be that there will have been proceedings between them.⁴⁹⁵

B. APPLICABLE LAW

872. Crescent invokes, as the bases for the declaratory relief it seeks, the doctrine of *lazarar* and Article 26.1 of the GSPC. It also points out that, if applicable, Article 515 of the CCP 2000 empowers Iranian courts to award compensation for a loss a party "will sustain".⁴⁹⁶

873. NIOC says that the evidence does not establish a liability to the third parties in question or, with a small number of exceptions, even the existence of a claim. Any liability is purely conjectural and speculative. It is not a case where it has been shown or can be shown that loss or damage will be incurred. Applying Articles 84(a) and 515 of the CCP 2000, an Iranian court would not grant

⁴⁹⁵ CPHBR1 ¶¶ 779-780.

⁴⁹⁶ CPHBR1 ¶ 740.

declaratory relief, and the doctrine of *lazarar* is irrelevant. An English court would also not grant declaratory relief.⁴⁹⁷

C. TRIBUNAL ANALYSIS

874. The Tribunal has some limited information as to some claims that have been made by third parties in consequence of non-delivery of gas, the original cause of which was non-delivery to CGC by NIOC, as well as two judgments said to have been rendered in favour of OCP and Emarat.⁴⁹⁸
875. While there is no basis for excluding the possibility that such liability exists, the evidence, even in respect of the cases where claims have been made and judgments are said to have been rendered, does not enable the Tribunal to reach any conclusion as to nature or extent of such liability. For example, questions of potential defences (including force majeure) or quantification or mitigation of damages, are beyond the scope of the evidence.
876. The Parties have debated the alternative courses open to the Tribunal. The Tribunal considers that the appropriate course is to defer the claim for declaratory relief for further consideration at a time to be fixed. The Tribunal will order that CGC's claim for declaratory relief concerning liabilities to indemnify third parties is deferred for further consideration, and either Party may make an application to the Tribunal for directions in relation to further consideration of this claim as it may be advised.

⁴⁹⁷ *Freight Connect Pte Ltd v Paragon Shipping Pte Ltd* [2016] 1 Singapore Court of Appeal 184, RF2/56/293.

⁴⁹⁸ Crescent's letter to the Tribunal dated 28 May 2019.

XIV. COSTS

877. Paragraph 8(i) of Annex 2 of the GSPC, dealing with “Procedures for Arbitration”, provides that “each Party shall be responsible for his own costs of litigation. The costs of arbitration shall be equally born[e] by the Parties, unless the arbitral tribunal otherwise decides”.

878. In Procedural Order No. 21 of 4 June 2015, the Tribunal set out the arguments of the Parties with respect to the costs of the Liability Phase of the arbitration and, without expressing a view on those arguments, reserved all costs issues, including the Parties’ costs of legal representation, for subsequent determination in the final orders on the disposition of the remedies phase of the proceedings.

879. There was, and remains, an issue as to whether the Tribunal has power to make an award dealing with the Parties’ own legal or other costs, in the light of paragraph 8(i) of Annex 2 of the GSPC and the provisions of the English Arbitration Act, particularly section 60. The Parties agree that the second sentence of paragraph 8(i) grants a discretion in respect of the costs to which it refers, although they disagree as to what those costs are.

880. In Crescent’s Answers of 30 June 2020, in response to a question from the Tribunal as to the procedure that should be followed with respect to costs issues, it was said:

103. Crescent submits that it would be most convenient for questions of costs, fees and expenses for both the Liability and Remedies Phase to be dealt with at the same time after an award on remedies has been rendered. A timetable will need to be agreed for the Parties to make further submissions (to the extent necessary) in respect of costs, fees and expenses that post-date the Liability Award.

881. In NIOC’s Answers of 30 June 2020 (“**NIOC’s Answers**”), it was proposed that any procedure with respect to costs should take place in stages. NIOC had submitted, in its First Post-Hearing Brief, that the question of costs is expressly regulated by the GSPC, that paragraph 8(i) of Annex 2 deprives the Tribunal of power to make an award with respect to the Parties’ own legal and other costs, that it is not overridden by section 60 of the English Arbitration Act, and that the only discretion in the Tribunal is that relating to the “costs of arbitration”, which do not include the Parties’ own legal and other costs. The latter are a Party’s “own costs of litigation”. NIOC said:

123. It would therefore seem logical for the Tribunal to determine in its own Remedies Award the question of whether the terms of the GSPC settle the matter and, if it decides they do not, for the parties to be invited to make costs submissions thereafter in two stages. Firstly on the principle of whether either Party can be awarded its costs

of *litigation*, and in the event that the Tribunal concludes that it can, submissions on the quantum of such costs claimed.

882. Section 60 of the English Arbitration Act provides that “[a]n agreement which has the effect that a party is to pay the whole or part of the costs of the arbitration in any event is only valid if made after the dispute in question has arisen”. Because the arbitration is seated in London it is plainly at least arguable that section 60 applies. It is also at least arguable that the first sentence of paragraph 8(i) is an agreement that has the effect referred to in section 60. Accordingly, in relation to the Tribunal’s power to make an award as to who is to bear the “costs of litigation”, the terms of the GSPC do not “settle the matter”.
883. The Tribunal does not accept an argument of the Claimants summarized in paragraph 11 of Procedural Order No. 21, that is, that the first sentence of paragraph 8(i) does not mean that the Parties must ultimately bear their “costs of litigation” but simply that they are responsible for funding such costs until allocation thereof by the Tribunal pursuant to the second sentence. If that were all that was meant by the first sentence it would be almost a statement of the obvious. It is a meaning that is not supported by the text or by the context.
884. Whatever the precise ambit of the expressions “costs of litigation” and “costs of arbitration”, they refer to different subject matters and are dealt with differently by paragraph 8(i).
885. There is a substantial measure of agreement as to the procedure that the Tribunal should follow as to costs. The Tribunal considers that it is appropriate for the Parties to deal first with any submissions, or additional submissions, they wish to make on all matters relating to costs except matters of quantum. After that, if it becomes necessary, questions of quantum can be addressed. In the first stage it will be appropriate for the Parties, as they may be advised, to deal with any particular orders that have been made during the course of the arbitration and that may require further disposition.
886. In its orders the Tribunal will make a direction to give effect to the above.

XV. AWARD

887. For these reasons, and in the light of the Award on Jurisdiction and Liability of 31 July 2014, the Tribunal makes the following declarations, orders and directions:

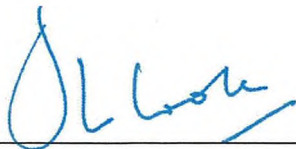
- A. It is DECLARED that the National Iranian Oil Company (“NIOC”) is liable to pay damages to Crescent Gas Corporation (“CGC”) for NIOC’s breaches of the Gas Sales and Purchase Contract of 25 April 2001 (“GSPC”) up to 31 July 2014 in the following amounts:
 - (1) USD 1,344.70 million in respect of CGC’s loss of profits from on-sale of gas that should have been supplied under the GSPC; and
 - (2) USD 1,085.27 million in respect of CGC’s liability to CNGC in respect of CNGC’s loss of profits from on-sale of gas and sale of products.
- B. It is ORDERED that NIOC pay to CGC, within three (3) months of the date of this Partial Award, the amount of USD 2,429.97 million.
- C. It is ORDERED that NIOC pay to CGC post-award interest on the amount referred to in B. at the rate of 12 month EIBOR + 1 percentage point, compounding annually, commencing from three (3) months from the date of this Partial Award until date of payment.
- D. The Claimants’ claim for pre-award interest is dismissed.
- E.
 - (1) The Claimants’ claim for declarations of indemnity in respect of liability to end-users and to CNGC in respect of its liability to end-users and service providers is deferred for further consideration.
 - (2) The Parties may apply for directions in respect of the matter referred to in E.(1) within three (3) months of the date of this Partial Award.
- F.
 - (1) The Tribunal reserves for subsequent determination all questions concerning costs fees and expenses, including the Parties’ costs of legal representation.

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- (2) The Claimants are directed to file, within eight (8) weeks of the date of this Partial Award, any submissions they wish to make on the matters referred to in F.(1) except as to quantum.
- (3) The Respondent is directed to file, within a further eight (8) weeks, any submissions it wishes to make on the matters referred to in F.(1) except as to quantum.
- G. The Tribunal reserves jurisdiction in respect of the matters referred to in E. and F. above.
- H. The Respondent's claims for relief, save insofar as they relate to the matter of declarations of indemnity and questions of costs, are dismissed.

Dated: 27 September 2021

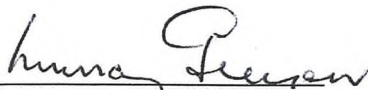
Seat of Arbitration: London, United Kingdom



Sir Jeremy Cooke



The Rt. Hon. The Lord Phillips of
Worth Matravers, KG, PC



The Hon. Murray Gleeson AC

