International Centre for Settlement of Investment Disputes

Washington, D.C.

Total S.A.

v.

Argentine Republic

(ICSID Case No. ARB/04/1)

Award

Members of the Tribunal

Professor Giorgio Sacerdoti, President

Mr. Henri Alvarez, Arbitrator

Mr. Luis Herrera Marcano, Arbitrator

Secretary of the Tribunal

Ms. Natalí Sequeira

Date of Dispatch to the Parties: 27 November 2013

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ABBREVIATIONS

AFIP (*Administración Federal de Ingresos Públicos*)**:** Argentina's Tax Authority.

APV: Adjusted Present Value (alternative valuation method submitted by Argentina with respect to Transportadora de Gas del Norte "TGN").

Arbitration Rules: ICSID Rules of Procedure for Arbitration Proceedings, as amended effective April 10, 2006.

Argentina Cost Submission: Respondent's Submission on Costs of 26 April 2012.

Argentina PHB: Respondent's Post-Hearing Brief on Quantum of 27 March 2012, accompanied by UBA's Response to PO No. 7.

Argentina QCM: Respondent's Counter-Memorial on Quantum of 2 September 2011, accompanied by UBA's First Valuation Report of 31 August 2011.

Argentina QR: Respondent's Rejoinder on Quantum of 25 November 2011, accompanied by UBA's Second Valuation Report of 23 November 2011.

Argentina Response to PO No. 5: Respondent's Response to Procedural Order No. 5, submitted on 14 December 2011.

Argentina Response to PO No. 8: Respondent's Response to Procedural Order No. 8, submitted on July 2, 2012.

Argentine PPI, also referred to as "**IPIM**" (*Índice de Precios Internos al por Mayor*)**:** Argentine Producer Price Index.

BIT: Bilateral agreement between France and Argentina on reciprocal encouragement and protection of investments of 3 July 1991.

CAMMESA (*Compañía Administradora del Mercado Eléctrico Mayorista S.A.*)**:** Argentina's Electricity Wholesale Market Administrator.

CAPEX: Capital Expenditures.

CAPM: Capital Asset Pricing Model.

Central Puerto: Central Puerto S.A. (power generation company).

CL: Compass Lexecon. Claimant's experts during the *quantum* phase. Compass Lexecon's reports were prepared by Mr. Manuel A. Abdala and Professor Pablo T. Spiller (both formerly affiliated with LECG, LLC).

CL First Report: Compass Lexecon's First Report submitted together with Claimant's Memorial on Quantum of 17 June 2011.

CL Response to PO No. 7: Compass Lexecon's Response to the Tribunal's Procedural Order No. 7, submitted as Annex 2 of the Claimant's Post-Hearing Brief on Quantum of 27 March 2012.

CL Response to PO No. 8: Compass Lexecon's Response to the Tribunal's Procedural Order No. 8, submitted on July 2, 2012.

CL Second Report: Compass Lexecon Second Report submitted together with Claimant's Reply on Quantum of 14 October 2011.

Concession Decree: Decree 214/94 of 15 February 1994.

CVS (*Coeficiente de Variación de Salarios*)**:** Salary Variation Coefficient.

CPI also referred to as **"IPC"** (*Índice de Precios al Consumidor*)**:** Consumer Price Index.

DCF: Discounted Cash Flow.

Decision on Liability: Tribunal's Decision on Liability of 27 December 2010.

Deregulation Decrees: Decrees 1055/89 of 10 October 1989 and 1589/89 of 27 December 1989, issued in conjunction with Decree 1212/89 of 8 November 1989.

EBITDA: Earnings before Interest, Taxes, Depreciation and Amortization.

Emergency Law: Law 25.561/02 of 7 January 2002.

ENARGAS Resolutions: ENARGAS Resolutions 2612/2002 and 2614/2002 of 31 May 2012 and subsequent related resolutions.

ER: Exchange Rate.

Exhibit ALRA-: Argentina's Legal Authority Number.

Exhibit ARA-: Argentina's Exhibit Number.

Exhibit C-: Claimant's Exhibit Number.

Exhibit CL-: Claimant's Legal Authority Number.

FET Standard: Fair and Equitable Treatment Standard.

FONINVEMEM: *Fondo para Inversiones Necesarias que Permitan Incrementar la Oferta de Energía Eléctrica en el Mercado Eléctrico Mayorista*.

Gas Decree: Decree 1738/92 of 18 September 1992.

Gas Law: Law 24.076 of 12 June 1992.

HPDA: Hidroeléctrica Piedra de Águila S.A. (power generation company).

ICSID or Centre: International Centre for Settlement of Investment Disputes.

ILC Articles on State Responsibility: International Law Commission's Articles on the Responsibility of States for Internationally Wrongful Acts.

IPC (*Índice de Precios al Consumidor*), also referred to as "**CPI":** Consumer Price Index.

IPIM *(Índice de Precios Internos al por Mayor),* also referred to as the **"Argentine PPI":** Argentine Producer Price Index.

LECG, LLC: Claimant's experts during the merits phase of the proceeding. LECG's reports were prepared by Mr. Manuel A. Abdala and Professor Pablo T. Spiller (later affiliated with Compass Lexecon).

LECG Damage Report: LECG's Damage Valuation for Total's Investment in Argentina of 15 May 2007, submitted during the merits phase.

LECG Electricity Report: LECG's Report on Assessment of Argentina's Recent Regulatory Conduct in Electricity Generation of 15 May, 2007, submitted during the merits phase.

LPG: Liquefied Petroleum Gas.

OPEX: Operational Expenditures.

PHB: Parties' Post-Hearing Briefs on Quantum submitted on 27 March 2012 together with Compass Lexecon's and UBA's respective responses to the Tribunal's Procedural Order No. 7.

PCIJ: Permanent Court of International Justice.

PO: Procedural Order.

PO No. 1: Procedural Order No. 1 of 27 December 2010.

PO No. 3: Procedural Order No. 3 of 26 September 2011.

PO No. 4: Procedural Order No. 4 of 12 October 2011.

PO No. 5: Procedural Order No. 5 of 7 December 2011.

PO No. 7: Procedural Order No. 7 of 13 January 2012.

PO No. 8: Procedural Order No. 8 of 1 June 2012.

PPI: Producer Price Index.

Reconversion Decree: Decree 2411/91 of 12 November 1991.

SoE: Secretariat of Energy.

SEGBA: Servicios Eléctricos del Gran Buenos Aires S.E.

TCPL: TransCanada Group.

TGN: Transportadora de Gas del Norte S.A. (gas transportation company).

TGN Licence: Decree 2.457/92 of 18 December 1992.

Total Austral: Total Austral S.A. (hydrocarbons exploration and production company).

Total Cost Submission: Claimant's Submission on Costs of 26 April 2012.

Total MM: Claimant's Memorial on the Merits of 8 April 2005.

Total PHB: Claimant's Post-Hearing Brief on Quantum of 27 March 2012, accompanied by Compass Lexecon's Response to PO No. 7.

Total PHB Merits: Claimant's Post-Hearing Brief on the Merits of 11 April 2008.

Total QM: Claimant's Memorial on Quantum of 17 June 2011, accompanied by Compass Lexecon's Report First Report ("CL First Report").

Total QR: Claimant's Reply on Quantum of 14 October 2011, accompanied by Compass Lexecon's Second Report ("CL Second Report").

Total Response to PO No. 5: Claimant's Response to Procedural Order No. 5 of 15 December 2011.

Total RFA: Claimant's Request for Arbitration of 31 October 2003.

Total R Merits: Claimant's Reply on the Merits of 18 May 2007.

UBA: Universidad de Buenos Aires, Facultad de Ciencias Económicas. Respondent's experts.

UBA Response to PO No. 7: Universidad de Buenos Aires Response to Procedural Order No. 7, submitted together with Argentina's Post Hearing Brief on Quantum of March 27, 2012.

UBA Response to PO No. 8: Universidad de Buenos Aires' Response to Procedural Order No. 8 of 2 July 2012.

UBA First Valuation Report: Universidad de Buenos Aires' Valuation Report of 31 August 2011, submitted together with Respondent's Counter Memorial on Quantum of 2 September 2011.

UBA Second Valuation Report: Universidad de Buenos Aires' Second Valuation Report of 23 November 2011, submitted together with Respondent's Rejoinder on Quantum of 25 November 2011.

US PPI: United States Producer Price Index.

WACC: Weighted Average Cost of Capital.

YPF: Yacimientos Petrolíferos Fiscales Sociedad del Estado.

I. INTRODUCTION

A. Procedural Background – Quantum Phase

1. The Decision on Liability in this dispute was dispatched to the Parties on 27 December 2010 (the "Decision on Liability").[1] On the same date the Tribunal issued Procedural Order No. 1 ("PO No. 1"), providing for a timetable for the submission of the Parties' views on the procedure for the *quantum* phase.

2. On 7 and 28 February 2011 and on 23 and 24 March 2011, the Parties submitted short briefs expressing their views and commenting on the other Party's proposals.

3. On 28 March 2011, the Parties and the Tribunal held a procedural hearing on the *quantum* phase at the premises of the International Centre for Settlement of Investment Disputes ("ICSID" or the "Centre") in Washington, D.C. Following the hearing, the Tribunal agreed on a procedural calendar for the Parties' submissions on *quantum* and their respective expert reports.

4. Thereafter, the Parties submitted the following briefs and expert reports on *quantum*:

- Total: Claimant's Memorial on Quantum ("Total QM"), accompanied by the Compass Lexecon Report ("CL First Report") on 17 June 2011; Claimant's Reply on Quantum ("Total QR") and Compass Lexecon Second Report ("CL Second Report") on 14 October 2011.

- Argentina: Respondent's Counter Memorial on Quantum of 2 September 2011 ("Argentina QCM"), submitted together with a Report by the Universidad de Buenos Aires, Facultad de Ciencias Económicas ("UBA"): "Valuation of Total's Claim in Accordance with the Decision on Liability issued by the Tribunal" of 31 August 2011 ("UBA First Valuation Report"); Respondent's Rejoinder on Quantum

[1] The procedural background of the case from its initiation up to the Decision on Liability of 27 December 2010 [hereinafter "Decision on Liability"], including a reference to the Decision on Objections to Jurisdiction of 26 August 2006, is set forth in paras. 1-22 of the Decision on Liability.

of 25 November 2011 together with the "Second Report" prepared by the UBA of 23 September 2011.[2]

5. During this period the Tribunal had to resolve various procedural issues concerning production of documents which had arisen between the Parties. For this purpose the Tribunal issued Procedural Order No. 3 of 26 September 2011 ("PO No. 3") and Procedural Order No. 4 of 12 October 2011 ("PO No. 4").

6. PO No. 4 addressed a dispute between the Parties as to the production of certain documents, particularly agreements executed by Total Austral relating to the sale of natural gas to direct customers. Argentina had requested Total to produce these documents and Total was willing to supply them "subject to the signing by Argentina of a Confidentiality Agreement". The Tribunal noted that "other ICSID tribunals have issued procedural orders under Article 19 of the ICSID Arbitration Rules to ensure confidentiality of documents produced by parties in ICSID arbitral proceedings". The Tribunal considered that such an order, rather than the signing of a Confidentiality Agreement to which Argentina was objecting for reasons of principle, "would be adequate to protect confidentiality as to the documents at issue".[3] The Tribunal annexed such Confidentiality Undertaking to PO No. 4 and decided that "Claimant shall supply to the Respondent such documents within seven days from the date in which the ICSID Secretariat shall confirm to Claimant that Argentina has accepted in writing the annexed Confidentiality Undertaking as stated in the first paragraph of same, attaching copy of such Acceptance". Pursuant to the Tribunal's instructions, Argentina complied with the above-mentioned conditions and Total supplied the documents referred to in the order.

7. In anticipation of the hearing on *quantum*, the Tribunal issued Procedural Order No. 5 of 7 December 2011 ("PO No. 5"), in which it gave directions as to the organisation of the hearing, including a number of "issues of specific interest" which the Tribunal invited the Parties to address. The Tribunal also asked the Parties to submit in advance to the hearing, certain "information and exhibits whose potential usefulness and relevance stems from the

[2] Argentina supplied English translations of its briefs and experts' reports, while Total supplied courtesy translations into Spanish.

[3] The Tribunal recalled in PO No. 4 "the obligation of parties to ICSID arbitration to cooperate with the tribunals in matters of evidence (Article 34.3 of the Arbitration Rules), in conformity of the principle that parties must conduct themselves in good faith in international adjudicatory proceedings".

submissions of the parties and the exhibits they have provided up to now", in order to "make the hearing more fruitful and ensure due process". The Parties complied with the requests of the Tribunal by the due date of 14 December 2011.

8. As previously agreed and decided, the hearing on *quantum* was held at the premises of ICSID in Washington, D.C. from 19 December through 21 December 2011. The Tribunal heard the Parties' counsel and their respective experts on *quantum*; the experts were examined, cross-examined and answered questions posed by the members of the Tribunal. The hearing was concluded with closing statements by the Parties' counsel. Upon consent of the Parties, Dr. Anna De Luca attended the hearing as legal assistant to the President of the Tribunal. The following persons attended the hearing:

On behalf of the Claimant:

Total S.A.:

- Mr. Stephen Douglas
- Mr. Jean-André Diaz
- Mr. Arturo Pera
- Ms. Marisa Basualdo

Freshfields Bruckhaus Deringer, LLP:

- Mr. Nigel Blackaby
- Mr. Noah Rubins
- Ms. Lucy Martinez
- Mr. Ben Love
- Mr. Daniel Chertudi
- Ms. Lindsay Gastrell
- Ms. Cassia Cheung
- Ms. Katherine Ibarra

Abeledo Gotthei Abogados SC

- Mr. Luis Erize
- Mr. Sergio M. Porteiro

Compass Lexecon:

- Dr. Manuel A. Abdala
- Prof. Pablo Spiller
- Mr. Diego Bondorevsky
- Mr. Pablo López Zadicoff
- Mr. Ivan Santilli

- Mr. Andres Ferraris

On behalf of the Respondent:

Procuración del Tesoro de la Nación - Dirección Nacional de Asuntos y Controversias Internacionales

- Dr. Horacio Diez – Subprocurador del Tesoro de la Nación
- Mr. Gabriel Bottini – Director Nacional de Asuntos y Controversias Internacionales
- Mr. Carlos Mihanovich
- Mr. Ignacio Torterola – *Liason* Procuración del Tesoro de la Nación
- Mr. Horacio Seillant
- Mr. Tomás Braceras
- Mr. Nicolás Grosse
- Ms. Verónica Lavista
- Mr. Francisco Oteiza
- Ms. Adriana Cusmano
- Mr. Nicolás Duhalde
- Mr. Braian Joachim

Secretaría de Energía

- Mr. Diego Guichón
- Mr. Javier Gallo Mendoza

PSI Consultants

- Mr. Diego Margulis
- Mr. Alberto Zoratti

ENARGAS

- Mr. Alejandro Hassan

Universidad de Buenos Aires (UBA)

- Ms. Silvia Portnoy
- Mr. César Albornoz
- Mr. Guillermo Cappadoro

9. After the hearing, the Tribunal issued Procedural Order No. 7 of 13 January 2012 ("PO No. 7"), requesting the Parties to submit certain complementary information and calculations "based solely on the documents and evidence already submitted" concerning Transportadora de Gas del Norte S.A. ("TGN"), Electricity and Total Austral. The answers to the questions of the Tribunal were to be submitted within 60 days, later extended by 15 further days "as an annex to a short Post Hearing Brief, summing up the Parties' arguments and setting out in final form their respective detailed "prayer for relief" in these proceedings".

The Parties duly complied with the above requests and directions of the Tribunal and filed their respective costs submissions, as agreed, after their post-hearing briefs.

10. After having received the Parties' post-hearing briefs, the Members of the Tribunal met in person for initial deliberations at the premises of ICSID in Washington, D.C. from 18 to 20 April 2012. Following that meeting the Tribunal issued Procedural Order No. 8 on 1 June 2012 ("PO No. 8"), inviting the Parties to provide additional explanations on their respective answers to PO No. 7, in connection with the indexation of the but-for tariffs of TGN. The Parties duly provided their additional explanations on 2 July 2012.

11. Argentina thereafter asked the Tribunal on 27 August 2012 for authorization to introduce additional documents into the proceeding, consisting of evidence recently submitted in another ICSID arbitration, which Argentina considered relevant for the present case. Total objected to such request arguing both that the request was untimely, and that the materials were irrelevant. On 30 August 2012, the ICSID Secretariat informed the Parties, on behalf of the Tribunal, that no further submission would be admitted.

12. On 10 September 2012, the Tribunal informed the Parties that it rejected Argentina's request to admit the unauthorized submission of 27 August 2012 at such a late stage of the proceedings. The Tribunal noted that the material the Respondent was seeking to submit related on its face to a different dispute between different parties under a different treaty. In view of the Parties' respective experts' extensive written opinions, direct examination and thorough cross-examination at the hearings, the Tribunal in its decision of 10 September 2012 indicated that it had "an adequate basis on which to assess their evidence submitted in the present arbitration and concerning the issues to be decided", which "have been moreover thoroughly debated by the parties until now".

13. On 26 June 2013, the Tribunal declared the proceedings closed in accordance with Arbitration Rule 38(1). On October 22, 2013, pursuant to Arbitration Rule 46, the Tribunal extended the 120 day period to draw up and sign the Award by a further 60 days.

B. General Principles Applicable to the Valuation of Total's Damages

14. The Tribunal recalls that Total's claims concern its investments in Argentina in three distinct sectors (gas transportation, power generation/electricity, and hydrocarbons

exploration and production) made in different forms.[4] In relation to such investments Total complains that a number of different measures adopted by Argentina at the height of the financial and economic crisis of 2001 – 2002 and thereafter, have prejudiced it in breach of various provisions of the bilateral agreement between France and Argentina on reciprocal encouragement and protection of investments of 3 July 1991 (the "BIT"). The negative impact of which Total complains is different for each sector and the valuation criteria Total relies upon as to each investment are also, in part, different. This is due to the specificity of each of the various investments affected and the different impact of each measure found in the Decision on Liability to be in breach of the BIT. These claims and the specific issues raised in respect of each of the above sectors are reviewed in detail in distinct parts of this Award. However, before addressing separately those issues, the Tribunal considers it appropriate to highlight some "general principles" that are relevant to the examination of all claims made by Total in order to determine the *quantum* of damages to which Total is properly entitled under the Decision on Liability.

i. Total's Position on the Calculation of Damages

15. Before setting out its claims for compensation for the measures that the Decision on Liability found to be in breach of the BIT, Total listed a number of basic general principles, which it submits should apply to the calculation of all of its claims for damages in respect of its different investments. It then went on to address the specific application of these principles to the individual claims and their particular circumstances.[5] Argentina challenged a number of the criteria invoked by Total.[6] Thus, the Tribunal will start its analysis with a general review of the relevant applicable principles concerning the determination of damages in this dispute, before addressing, in order, the issues concerning Total's damages as to its investments in: (a) TGN, (b) Electricity Generators (Central Puerto S.A. ["Central Puerto"] and Hidroeléctrica Piedra de Aguila S.A. ["HPDA"]), and (c) Hydrocarbons exploration, exploitation and sales of gas in Argentina and Chile (Total Austral S.A. ["Total Austral"]).

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[4] In gas transportation Total owned an indirect stake of about 19% in TGN; as to electricity, in 2001 Total acquired a majority stake in Central Puerto and HPDA which it sold at the end of 2006; as to hydrocarbons, Total had, through its fully owned subsidiary Total Austral S.A. (hereinafter "Total Austral"), exploration and exploitation concessions and sales of gas, primarily in Argentina and to customers in Chile. For more details, see the Decision on Liability, *supra* note 1, paras. 41-45, 232-236, and 347-363.

[5] Claimant's Memorial on Quantum of 17 June 2011, submitted together with the Compass Lexecon Report First Report [hereinafter "Total QM"], paras. 13 – 68.

[6] Respondent's Counter-Memorial on Quantum of 2 September 2011, accompanied by University of Buenos Aires' First Valuation Report of 31 August 2011 [hereinafter "Argentina QCM"], paras. 1 – 49.

16. In its Quantum Memorial, Total presented the five following "Guiding Principles and Methodology" for the calculation of *quantum*.[7]

a) The determination of compensation owed by the Government to Total is governed by customary international law, and in particular by the "full compensation" principle established by the Permanent Court of International Justice (the "PCIJ") in the *Case Concerning The Factory At Chorzów* (*Claim for Indemnity*) (*Merits*) ("Chorzów Factory"), as confirmed by the International Law Commission's Articles on the Responsibility of States for Internationally Wrongful Acts (the "*ILC Articles on State Responsibility*").

b) Compensation should be based upon the impact of the Treaty Breaches on the "fair market value" of Total's investments in Argentina; fair market value is best assessed by positing a hypothetical sale of the assets in question by a willing seller to a willing buyer in an arm's length transaction.

c) The Discounted Cash Flow ("DCF") methodology is the most reliable way to simulate this kind of hypothetical fair market value sale.

d) To isolate and quantify the effect of Argentina's Treaty Breaches on the fair market value of Total's investments, it is appropriate to use and compare two scenarios (counter-factual or "but-for," and "actual").

e) Total is entitled to an award of interest.

17. Total explains in detail the reasons for which "fair market value" based on a DCF calculation has been generally accepted to determine compensation reflecting the capital value of property taken or destroyed as the result of an internationally wrongful act.[8] Total further elaborates on the application of DCF to calculate the losses resulting from Argentina's treaty breaches, comparing the "actual scenario" (the present value of future cash flows/earnings taking into account the impact that Argentina's measures in breach of the BIT have had on Total's investments) and the "but-for" counterfactual scenario (in the absence of

[7] Total QM, *supra* note 5, para. 13.
[8] Total QM, *supra* note 5, para. 21, quoting from Prof. James Crawford's Commentaries to the ILC Articles on State Responsibility, Exhibit CL-167, p. 225.

breaches). Under this methodology, Total discounts these cash flows, in both scenarios, to their present value[9] at a rate, represented by the Weighted Average Cost of Capital ("WACC") for each company affected, "that takes full account of business risk affecting the relevant companies and their cash flow".[10] Finally, Total explains that the *quantum* of its damages in respect of the loss of value of its equity interest results from subtracting the lower figures of the actual scenario from those of the counterfactual scenario in respect of each investment.[11]

18. As to interest, Total underlines that interest "is an integral component of full compensation under international law" when payment of compensation is delayed. Total claims both "pre-award" interest from the date of valuation for each loss, which corresponds to that of Argentina's relevant breach, and "post-award" interest. The latter is meant to compensate Total for the additional loss incurred from the date of the Tribunal's award to the date of final payment.[12] As to the rate of interest to be applied, Total distinguishes between compensation in relation to investments that Total continues to own (TGN and Total Austral) and those that it does not own anymore (that is, the two electricity generators Central Puerto and HPDA). For the latter, Total proposes in its Post-Hearing Brief a risk-free pre-award interest rate of 3.69 %. Total justifies requesting a higher interest rate in respect of TGN and Total Austral because "Total continues to bear the various risks in connection with these assets, and should be compensated accordingly for having been deprived of associated funds over time".[13] The WACC of TGN and Total Austral (respectively 11.01% and 10.92% p.a.) should be used, according to Total, because "(a) the WACC reflects each company's real cost of raising funds; and (b) Total continues to own and operate these assets, and remains subject to the operational risks inherent in each business".[14]

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[9] The dates used by Total for assessing the fair market values of each of its investments depends on the date in which Argentina's measures have impacted each of them, and will accordingly be examined by the Tribunal in the relevant sections of this Award. See Total QM, *supra* note 5, para. 41.

[10] Total QM, *supra* note 5, para. 43.

[11] *Ibid*., para. 44. In its "Request for Relief" in paragraph 255 of its Quantum Memorial the principal amounts of compensation that Total asks the Tribunal to order Argentina to pay amount to $104.1 million in relation to TGN, $305.3 million in relation to the electricity generators, $150.7 million in relation hydrocarbons, plus reimbursement of certain legal fees and interest as specified therein. Including interest, the overall amount claimed by Total at the end of the *quantum* phase amounts to $1,002.2 million, Claimant's Post-Hearing Brief of 27 March 2012 [hereinafter "Total PHB"], Table Two, p. 44.

[12] Total QM, *supra* note 5, paras. 45 – 67.

[13] *Ibid.*, para. 51.

[14] *Ibid.*, para. 52.

19. Total claims "compound interest" on all pre and post-award interest, explaining that this approach is "consistent with economic reality" and pointing to the fact that "the majority of recent investor-State arbitration tribunals have awarded compound interest on awards of damages, confirming the legitimacy and necessity (in appropriate circumstances) of compounding as an element of full reparation for violations of international law".[15]

ii. Argentina's Position

20. Argentina holds views different from those of Total with respect to the general principles applicable to the determination of the damages in accordance with the holdings of the Decision on Liability. Argentina considers that the "Chorzów standard" of full reparation is not applicable in the present dispute and that "the relevant principles of international law" referred to in Article 8.4 of the BIT call rather, for the calculation of "fair compensation".[16] Argentina further submits that "proportionality of compensation" in relation to the damage must also be considered in this respect. Furthermore, according to Argentina, in order to define the applicable standard of compensation, the Charter of Economic Rights and Duties of States (U.N. General Assembly Resolution 3281-XXIX of 12 December 1974) must be taken into consideration. Finally, in a case of a breach of a BIT obligation, other than the prohibition of expropriation without compensation which is the most serious interference with an investor's ownership right, "the required standard of reparations is different and must necessarily lead to lower compensation".[17] Argentina advocates an "equitable and acceptable outcome", taking into account the behaviour of both Parties.[18]

21. Argentina submits the following:

> *With regard to the issue of fair compensation, the Tribunal must refer to the relevant criteria set forth by the general principles of international law:*
>
> *There must be a close causal link between the damage sustained by Claimant and the violation of international law;*
>
> *Compensation must be reasonable;*

[15] *Ibid.*, paras. 60-63.
[16] Argentina QCM, *supra* note 6, paras. 1-4.
[17] *Ibid.*, para. 14.
[18] *Ibid.*, para. 8.

> *The damage must be certain, not hypothetical or vague;*
>
> *Compensation must cover the period during which the wrongful act took place;*
>
> *The investor is under an obligation to mitigate the damage;*
>
> *There must be no risk of double compensation;*
>
> *The investor must prove the causal link, the amount of the damages sought and the fact that damages are recoverable in accordance with the applicable law; and*
>
> *The damage must be certain enough that there is no doubt that the measures challenged were negative —and not positive—for the person claiming the damage.*[19]

Argentina stresses that the assessed damages must be reasonable also in the light of "the general economic, political and social conditions affecting the country where the measures were taken", and points to the severe nature of the crisis of 2001-2002. Argentina concludes that "the reasonableness of the damages awarded can be more important than the potential mathematical calculation made".[20]

22. Another point made by Argentina is that "(a)ccording to fundamental principles of valuation and finance, international practice, international law and the BIT, the date for valuation of damages in cases of violation of international law must be the date immediately preceding the date on which the measures that were allegedly contrary to the Treaty were adopted. In this regard, we cannot take into account the potentially higher profits that the claimant could have obtained after that date, but only the revenue that was foreseeable at that moment."[21]

23. Finally, Argentina points out that Total acts mostly, in any case as far as TGN is concerned, as a shareholder and not as a direct investor. Argentina accordingly considers that "(t)he shareholders of a company are only entitled to receive dividends for their shareholdings after payment of all of the company's unpaid debts and provided that there are

[19] *Ibid.*, para. 10.
[20] *Ibid.*, para. 22.
[21] *Ibid.*, paras. 37-38.

still liquid profits. Therefore, in order to calculate the value of a share, we only consider the expected flow of dividends after payment of all debts".[22]

iii. Parties' Additional Submissions

24. The positions expressed by the Parties and their experts in their Quantum Memorials have been refined and, in part, modified in the course of the further written exchanges.[23] These submissions have been supplemented by their arguments and the evidence of their expert witnesses at the hearing on *quantum* held on 19-21 December 2011, their written answers to the questions put to them by the Tribunal before and after the hearings[24] and in the Quantum Post-Hearing Briefs. The Tribunal notes that, as to the legal criteria to be applied, Total in its Post Hearing Brief has maintained that:

a) full compensation, as articulated in *Chorzów*, is the fundamental rule of compensation for international wrongful acts, and the "lesser compensation standards" proposed by Argentina have no application;[25]

b) the full reparation principle is also applicable to cases involving breaches of the fair and equitable standard, such as in the present case;[26]

c) the DCF method and future profitability assess fair market value and are the proper criteria to be applied in assessing the compensation due to Total by comparing the actual situation and the "but-for" counterfactual scenario, "where it is assumed that Argentina never breached the Treaty".[27]

25. The Tribunal notes that in the general introduction of its Post-Hearing Brief, in addition to reaffirming its position summarized above, Argentina focused on the issue of the

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[22] *Ibid.*, para. 45.

[23] Claimant's Reply on Quantum of 14 October 2011 [hereinafter "Total QR"] with the Compass Lexecon Second Report [hereinafter "CL Second Report"] and Respondent's Rejoinder on Quantum of 25 November 2011 [hereinafter "Argentina QR"] with Universidad de Buenos Aires Second Valuation Report of 23 November 2011 [hereinafter "UBA Second Valuation Report"].

[24] See Tribunal's Procedural Order No. 5 of 7 December 2011 [hereinafter "PO No. 5"], Procedural Order No. 7 of 13 January 2012 [hereinafter "PO No. 7"], and Procedural Order No. 8 of 1 June 2012 [hereinafter "PO No. 8"].

[25] Total PHB, *supra* note 11, paras. 5-7.

[26] *Ibid*, para. 8 stating that "This Tribunal accepted in its Decision on Liability that damages for indirect expropriation and breach of the fair and equitable treatment clause should be calculated in the same manner" (with reference to paras. 198 and 342, and fn. 643 therein).

[27] *Ibid*, para. 10.

interst rate on the amount of the compensation that the Tribunal might grant to Total. Argentina maintains that only a risk-free rate must be calculated on any and all amounts of damages, irrespective of whether Total still owns the investment affected by a breach or not. Argentina submits that this is the practice of international tribunals, especially in respect of future damages (lost profits).[28]

iv. The Tribunal's Evaluation

26. As to the legal standard applicable to determine the losses suffered by Total due to the breach by Argentina of the fair and equitable treatment obligation of Article 3 of the BIT, there is no doubt that Total is entitled to monetary compensation equivalent to such losses. This conforms to the customary international law rule that requires a State to provide "full reparation for the injury caused by its internationally wrongful act."[29] The BIT between France and Argentina contains no specific provision concerning reparation in cases of breaches of Article 3. On the other hand, Article 5(2), which deals with "any expropriation or nationalization measures or any other equivalent measures having a similar effect of dispossession", provides that any such measure "shall give rise to the payment of prompt and adequate compensation the amount of which, calculated in accordance with the real value of the investment in question, shall be assessed on the basis of a normal economic situation prior to any threat of dispossession". The Tribunal considers that, since these provisions reflect customary international law principles relating to the obligation of full compensation for wrongful damage, they may guide the Tribunal in determining the compensation due to Total in the circumstances of the present dispute under Article 3 of the BIT.[30] Indeed Article 5(2) of the BIT, in prescribing an "adequate" compensation ("*adecuada*" and "*adéquate*" in the Spanish and French official texts of the BIT, respectively), specifies that this requires a

[28] Respondent's Post-Hearing Brief of 27 March 2012 [hereinafter "Argentina PHB"], paras. 1-19.

[29] ILC Articles on State Responsibility, Article 31.1.1. This standard has been applied in a number of awards in investment disputes in the form of full monetary compensation of the damage suffered by the foreign investor. See explicitly as to disputes concerning Argentina, *Compañía de Aguas del Aconquija S.A. and Vivendi Universal S.A. v. Argentine Republic*, ICSID Case No. ARB/97/3, Award (20 August 2007) [hereinafter "*Vivendi* Award"], para. 8.2.7; *CMS Gas Transmission Company v. Argentine Republic*, ICSID Case No. ARB/01/8, Award (12 May 2005) [hereinafter "*CMS* Award"], para. 410.

[30] Decision on Liability, *supra* note 1, para. 198, where the Tribunal, in rejecting Total's claim that Argentina had also breached Article 5(2) of the BIT in respect of TGN, noted that "damages under the heading of indirect expropriation would not be different from damages due to breach of the fair and equitable treatment standard".

payment "calculated in accordance with the real value"[31] of the investment affected, thus implying compensation amounting to full reparation.

27. The Tribunal is, therefore, called upon to apply the most appropriate methodology in order to determine the losses of Total and to adopt calculations that will ensure the best possible correspondence between the actual losses and the amount of the compensation. In doing so, the Tribunal is mindful that these operations must be based on accepted valuation methodologies, but they do not simply involve a mathematical exercise.[32]

28. The Tribunal notes that both Parties agree, in conformity with generally accepted accounting and damage valuation practice, that the determination of the "fair market value" of a going concern is a basic step to ascertain losses caused to the owner (or to its shareholders *pro rata*). This requires comparing the value of the enterprise in the actual scenario, which reflects the company having been prejudiced by unlawful measures, with the counterfactual scenario, had the company not been so prejudiced. The DCF method, used by Total and its experts, appears to be the method most widely followed. However, this does not relieve the Tribunal from examining the Adjusted Present Value ("APV"), the alternative method submitted by Argentina with respect to TGN. Moreover, since the fair market value is not an absolute value for an asset, but reflects what it is worth in the market, disagreement is often possible as to the basis of its calculation and the correspondence of DCF results with such actual or hypothetical market value.[33]

29. The Tribunal notes that, even assuming that the DCF method is the appropriate one for determining fair market value, and that the losses would in principle be those which result from comparing discounted cash flows in the actual and but-for scenarios using the same approach, this does not lead to uncontested results. Relevant and necessary additional elements (on which Total and Argentina mostly disagree) are the following: the dates to be used to discount future cash flows, considering the dates of the relevant breach; the future tariffs (with respect to TGN) and/or regulated prices (in the electricity sector) on which the

[31] Tribunal's translation. In the French official text of the BIT "*calculé sur la valeur réelle*", in the Spanish official text of the BIT "*calculado sobre el valor real*".

[32] Argentina QCM, *supra* note 6, para. 22: "the reasonableness of the damages awarded can be more important than the potential mathematical calculation made".

[33] See *CMS* Award, *supra* note 29, para. 402 (citing the "International Glossary of Business Valuation Terms", American Society of Appraisers, ASA website, 6 June 2001, p. 4).

calculation of future cash flows should be based in the actual and but-for scenarios; the proper rate of the WACC at which to discount those cash flows for each company; and the future evolution of costs that must be deducted from gross cash flows to obtain net earnings (taking into account in the but-for scenario whether the company would have been able to service its foreign currency debt, which in the actual scenario it had to reschedule due to reduced revenues).

30. All these calculations are based on the future evolution of economic and financial data, future decisions on tariffs and other future measures in regulated sectors which cannot be precisely predicted. Thus, they are necessarily based on assumptions, reflect some uncertainty and involve a margin of discretion in their calculation.[34] Moreover, for calculating the damages suffered in specific instances, Total itself has used methods of calculation different from those explained in its "Guiding Principles and Methodology" on compensation and valuation,[35] whose use Argentina has, however, not challenged in principle. Thus, as to Total Austral's losses, Total bases its calculation of damages on the monthly difference between the prices Total Austral was entitled to receive, and the reduced prices at which Total Austral was obliged to sell gas from 2002 to 2004 (and in part also from 2004 to 2006), due to the requirement imposed by Argentina's authorities that Total Austral redirect certain quantities of gas to the domestic market at less than the contractually agreed prices.[36]

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[34] See *Compañía de Desarollo de Santa Elena S.A. v. Republic of Costa Rica*, ICSID Case No. ARB/96/1, Final Award (17 February 2000) [hereinafter "*Santa Elena* Award"], para. 92, noting that valuation is ultimately a task requiring estimation and the exercise of professional judgment, partly done by the valuers subject to final adjustment by the arbitrators. As to the "future" evolution of prices, costs, tariffs, etc., an additional element of disagreement and uncertainty stems from the fact that the Tribunal is deciding in 2013 while relevant dates of the various breaches which caused the damages to be compensated to be used for DCF purposes, go back to 2002. Thus calculation of lost future revenues under the license of TGN and the concessions of the electricity generators (up to their end, 2027) would have been based almost in full on "future" reasonable expectation, if performed when the present arbitration was initiated. At the time of the Award, instead, actual data are available up to 2011/2012 and they have been submitted and relied upon (in part) by the Parties and their experts for use by the Tribunal. This issue is not unknown in investment arbitration, cf. *Amco Asia Corporation v. Republic of Indonesia*, ICSID Case No. ARB/81/8, Final Award (5 June 1990) [hereinafter "*Amco* Award"], para. 96 (President Judge Higgins), stating that there is no reason not to take into account for the purpose of valuation of damages developments which have occurred after the date of the unlawful expropriation, noting that "(t)he only subsequent known factors relevant to value which are not to be relied on are those attributable to the illegality itself".

[35] Total QM, *supra* note 5, paras. 13 ff.

[36] Moreover, Total has relied on a variation of the DCF method to assess its losses in respect of the electricity generators, by using a "DCF/Transaction method", in view of the fact that it has sold those assets in 2006, see *infra* para. 113.

31. It would not be efficient to address any further issues at this point, as the question of applicable valuation methodologies will be dealt with in detail in respect of each damage calculation made in the appropriate sections of this Award, respectively covering Gas, Electricity and Hydrocarbons. However, the Tribunal will deal in specific paragraphs in Part V of this Award, with the various issues concerning interest (appropriate rate, risk-free or not, pre-awad, post-award, simple or compound rates), since they relate to all of the principal amounts granted irrespective of the investment affected.

32. As a final observation, the Tribunal notes that the uncertainties affecting the valuation of future damages, notwithstanding the use by experts of accepted accounting methodologies, are well known. They have been acknowledged by international tribunals and by both legal and accounting experts in respect of the calculation of damages to companies and their assets affected by international wrongful conduct by host governments.[37] Specifically, the assessment of the "fair market value" of a business is not an exact science, particularly when there is no current market price based on comparable actual transactions, so that the valuation is based on estimations of future revenues and profits which would or might have been earned in a hypothetical scenario (but-for analysis). Different assumptions and methodologies may lead to widely different estimates of damages. This is illustrated in this arbitration by the substantial divergence existing between the results of the same experts when calculating damages for a specific item under two different assumptions and methodologies, which, in principle, are both admissible.[38] This explains why in these matters some discretion is generally accorded to tribunals, which have to use their prudent judgment in order to award damages in a reasonable amount.[39]

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[37] See, for example, the *caveat* found in a recent specialized work: B. Sabahi, *Compensation and Restitution in Investor-State Arbitration*, Oxford 2011, p. 118: "Discounted cash flow (DCF) valuation is the most complex and widespread valuation method, particularly for valuing business…DCF has an extremely broad scope of applicability, which, unfortunately, is offset by the difficulty in accurately performing a DCF valuation. Any DCF model is highly dependent on the assumptions the valuers make. As DCF valuation is not based directly on actual market prices, there is no built-in check against wrong assumptions, which can make the calculated DCF value drastically different from actual fair market value. The arbitrators, however, can and should examine the reasonableness of the assumptions".

[38] In the *quantum* phase Total's experts have submitted two different calculations of the loss suffered by Total in respect of the electricity generators that result in two estimates which are considerably different. The first one is based on the "classic" DCF method and the other one on a variation of the same method, the DCF/Transaction method, leading respectively to an estimate of Total's damages of $176.1 million and $304.9 million in respect of its investments in Central Puerto and HPDA, see *infra* paras. 113-115.

[39] Such an exercise does not result in a tribunal deciding *ex aequo et bono*, which is admissible only with the consent of the parties (Article 42(3) ICSID Convention). See *Técnicas Medioambientales Tecmed, S.A. v.*

II. TOTAL'S CLAIM IN RELATION TO ITS INVESTMENT IN TGN

A. Total's Investment in the Gas Sector

33. Total's investment in the gas transportation industry in Argentina, at the time the Request for Arbitration was filed, was an indirect 19.23% stake in TGN. TGN is one of two gas transportation companies established when, in 1992, the Republic of Argentina privatized Gas del Estado, which had been a State Company until then. At that time, TGN was granted a licence "for the rendering of the public gas transportation utilities"[40] in northern and central Argentina for a term of 35 years, extendable at TGN's option for a further ten years, subject to compliance by TGN of the terms and obligations contained in the licence.[41]

34. In May 1992, Argentina enacted Law 24.076 (the "Gas Law") and Decree 1738/92 (the "Gas Decree"),[42] which established the post-privatization legal framework of the gas sector. After an international bidding process, accompanied by an Information Memorandum of September 1992 prepared by Argentina's financial advisers,[43] the government of Argentina sold a 70% share in TGN to Gasinvest (a consortium of mainly foreign investors[44]) on 28 December 1992.[45] The government of Argentina retained a 25% share in TGN until July 1995, when a second public bidding process took place and resulted in CMS Gas

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United Mexican States, ICSID Case No. ARB(AF)/00/2 Award (29 May 2003) [hereinafter "*Tecmed* Award"], para. 190, for the proposition that an arbitral tribunal may consider general equitable principles when setting the compensation owed to a claimant, without thereby assuming the role of an arbitrator *ex aequo et bono* (with supporting reference to previous case law at footnote 228). Equitable considerations in the application of the law, including in performing calculation of damages, pertain to *aequitas infra legem* to use a Latin expression (equity within what the law admits) and not *aequitas praeter legem* (equity beyond/in lieu of the law), see G. Broggini, *Reflexions sur l'équité dans l'arbitrage international*, Bulletin de l'Association Suisse de l'Arbitrage, 95 ff (1991); P. Mayer, *Le principe de bonne foi devant les arbitres du commerce international*, Etudes P. Lalive, 543 ff (1993). See also the directions on "Achieving Fairness in Determining Damages without Speculating" in the Arbitration Committee of the International Institute for Conflict Prevention and Resolution (CPR), *Protocol on Damages*, reproduced in *Contemporary Issues in International Arbitration and Mediation*, The Fordham Papers 2009, 188 (2010), available at www.cpradr.org.

[40] See Decree 2.457/92 [hereinafter "TGN Licence"], Article 1, Exhibit C-53(1). Further details are set out in the Decision on Liability, paras. 41-45.

[41] See Article 3.1 and 3.2 Basic Rules of the TGN Licence attached to Decree 2.457/92, Exhibit C-53.

[42] Exhibits C-31 and C-48, respectively.

[43] See Information Memorandum, Privatization of Gas del Estado S.E. dated September 1992, Exhibit C-50.

[44] The original members of the Gasinvest Consortium are listed in Claimant's Request for Arbitration of 31 October 2003 [hereinafter "Total RFA"] at fn 95, p. 41.

[45] See Total RFA, *supra* note 44, para. 98 and Claimant's Post-Hearing Brief on the Merits of 11 April 2008 [hereinafter "Total PHB Merits"], paras. 271-272.

Transmission Argentina (an Argentinean Company controlled by CMS Energy, a US company) acquiring such 25% stake in TGN.[46]

35. In March 2000, one of the investors in the Gasinvest consortium, the TransCanada Group ("TCPL"), decided to sell its share. On 30 May 2000, Total agreed to purchase a 19.23% stake in TGN from TCPL for an amount of US$230 million. This transaction was completed, and the shares in TGN were transferred to Total, on 23 January 2001.[47] Total has held its shareholding in TGN continuously since then. However, as a result of TGN's debt restructuring in 2006, Total's stake in TGN decreased from 19.23% to 15.35%.[48]

B. Total's Claims in respect of its Investment in TGN in the Liability Phase and the Tribunal's Findings in the Decision on Liability

36. In relation to its investment in TGN, Total has claimed in this arbitration that Argentina breached various articles of the BIT, by taking a number of measures as of the end of 2001, most of which derived from or followed Law 25.561/02 (the "Emergency Law"). Together with the Emergency Law itself, Total claimed that these measures breached or revoked the commitments made by Argentina upon which Total relied in making its investment. More specifically, Total has claimed that in relation to its investment in TGN these measures include:

- the forced conversion of dollar-denominated public service tariffs into pesos (or "pesification") at a rate of one to one;

[46] On 26 July 2001, the Centre received a Request for Arbitration from CMS against Argentina complaining that Argentina had breached various provisions of the BIT between the US and Argentina through various measures affecting CMS's stake in TGN, principally the pesification of the TGN tariffs, the elimination of the US Producer Price Index [hereinafter "US PPI"] adjustment of tariffs and their subsequent freezing. The award rendered in that matter was submitted in these proceedings, *CMS* Award, *supra* note 29, para. 58, Exhibit CL-82. The CMS tribunal held, differently from the Decision on Liability in this arbitration, that the pesification of TGN's tariffs – and not just the lack of periodic indexation – was also a breach of Argentina's obligations under the applicable BIT. The Tribunal awarded to CMS the principal amount of $133.2 million for the loss suffered in respect of its 29.42% share in TGN.

[47] See Total PHB Merits, *supra* note 45, para. 273, where a diagram explains the corporate structure of Gasinvest and TGN and Claimant's Memorial on the Merits of 8 April 2005 [hereinafter "Total MM"], para. 53.

[48] See Total PHB Merits, *supra* note 45, para. 582. In the calculations relating to the but-for scenario with no debt restructuring of TGN the original percentage must therefore be used. The Tribunal notes that in the *quantum* phase Total and its experts have clarified that Total's exact holding of TGN was 19.19% of TGN (sometimes rounded as 19.2%) from 2000 to 2006. Total QM, *supra* note 5, para. 69, fn. 99. The Tribunal will utilize in this Award therefore the figure of 19.2%.

- the abolition of the adjustment of public service tariffs based on the United States Producer Price Index ("US PPI") and other international indices;

- the "pesification" of dollar-denominated private contracts at a rate of one to one; and

- the freezing of the gas consumer tariff (which is the sum of the: (a) well-head price of gas; (b) gas transportation tariff; and (c) gas distribution tariff).

37. Total argued that these measures: expropriated Total's investment in TGN in breach of Article 5(2) of the BIT; resulted in unfair and inequitable treatment of Total's investment in TGN in breach of Article 3 of the BIT; discriminated against Total's investment in TGN in breach of Articles 3 and 4 of the BIT; and are in breach of Argentina's obligation to respect specific undertakings contrary to Article 10 of the BIT.

38. In its Decision on Liability (at paragraph 184), the Tribunal partially upheld Total's claim in respect of the breach of Article 3 of the BIT (Fair and Equitable Treatment). The Tribunal concluded at paragraph 184:

(i) that Argentina breached its obligation under Article 3 of the BIT to grant fair and equitable treatment to Total by not periodically readjusting TGN's domestic tariffs in force in pesos in January 2002 from 1 July 2002 onwards; and

(ii) that the damages thereby suffered by Total must be compensated by Argentina.

The Tribunal rejected all other claims by Total related to its investment in TGN under Article 3, as well as under other provisions of the BIT, specifically under Article 5.2 (indirect expropriation) and Article 4 of the BIT (non-discrimination).[49]

[49] See Decision on Liability, *supra* note 1, paras. 199 and 217. The Tribunal also rejected Total's claim under Article 10 BIT (specific undertakings), in substance by finding that Argentina had not made any relevant, binding commitments to Total (Decision on Liability, para. 144 ff) and formally, in the final paragraph 485(b): "All other claims by Total, including those under Articles 4 and 5 of the BIT, are rejected".

39. In its Decision on Liability, the Tribunal noted that in so deciding it was only partially granting Total's claim concerning TGN under Article 3 of the BIT. As stated in paragraph 182:

> *The Tribunal has found that some of Argentina's measures challenged by Total were not in breach of Article 3 of the BIT (pesification and suppression of the US dollar link for the semi-annual automatic adjustments), while other measures or aspects thereof are in breach of Argentina's obligations under Article 3 of the BIT (lack of readjustment). Therefore, the Tribunal cannot determine the damages suffered by Total, since the calculations submitted by Total regarding quantum are based on different premises for Argentina's liability. Accordingly, the Tribunal has decided to postpone the quantification of damages to a separate quantum phase.*

40. In deciding that Argentina had breached Article 3 of the BIT by not periodically readjusting TGN's domestic tariffs in force in pesos in January 2002 from 1 July 2002 onwards, the Tribunal laid down certain principles concerning the calculation of the damages ensuing therefrom at paragraph 183 of the Decision on Liability:[50]

> *The Tribunal considers it appropriate at this point to give some general indications concerning the criteria, based on the above findings on liability, according to which those damages should be calculated in the quantum phase, both as to the time period to be considered, and the basis of the calculation. Based on the analysis conducted above the Tribunal considers that the freezing of the tariffs was in breach of the fair and equitable treatment clause as of 1 July, 2002 (i.e., the first 120-day deadline established by Res. 20/2002 for the completion of the renegotiation process). Since Argentina has not remedied this block by any of the renegotiation mechanisms that it introduced after the Emergency Law or by operation of the previous mechanisms that nominally remained in force, the Tribunal believes that a six-month periodic readjustment of the tariff, as provided for in the Gas Regime but based on the evolution of local prices, would be appropriate to calculate the damages caused to Total. The calculation of these damages should take into account the difference between the revenues actually received by TGN (pro-rata according to Total's share) and those which TGN would have obtained if the tariffs in pesos in force on 1 July, 2002 had been readjusted on a semi-annual basis to reflect the variation of prices in Argentina. [footnotes omitted]*

[50] Other statements by the Tribunal, which may be relevant for the *quantum* phase, are found in the Decision on Liability, *supra* note 1, paras. 122, 175 and 198.

C. Total's Claims for Damages in the Quantum Phase in respect of TGN

41. Total submitted a revised calculation of damages "in line with the parameters established by the Tribunal in its Decision" in its Quantum Memorial of 17 June 2011. Together with its Memorial, Total submitted the CL First Report on "Damage Valuation for Total's Investments in Argentina based on the Decision on Liability". This CL First Report, by Total's experts, Dr. Manuel Abdala and Professor Pablo Spiller, revised, on the basis of the Decision on Liability, the damage valuations that the same experts had previously submitted for Total as part of the merits phase of this arbitration ("LECG Reports"). The need for the revision stems first of all from the Tribunal's finding that mandatory pesification did not constitute a breach of the Treaty.[51] This required substantial changes in the assumptions made in the previous experts' reports and calculations submitted on behalf of Total, since those reports were based on the premise that in the but-for scenario the dollar-based post-privatization legal framework of the gas sector would have remained unaltered.

42. Based on the five "Guiding Principles and Methodology" for the calculation of *quantum* that it presented in its Quantum Memorial,[52] Total summarized the key elements of its claims for damages in respect of TGN as follows:

a) the valuation date is 1 July 2002;

b) to calculate damages, the Tribunal must compare the value of Total's stake in TGN in the actual and but-for scenarios;

c) damages should be based on cash flows projected through to the end of TGN's Licence in 2027, then discounted back to 1 July 2002;

d) the but-for scenario should assume tariff adjustments beginning on 1 July 2002; and

e) the value of TGN in the actual scenario, with the tariff freeze in place, is zero.[53]

[51] Decision on Liability, *supra* note 1, para. 164.
[52] See *supra* para. 16 and Total QM, *supra* note 5, paras. 13-68.
[53] Total PHB, *supra* note 11, para. 14.

43. On this basis, Total considers that the damages it has suffered in respect of its investment in TGN due to Argentina's breach of the BIT amount to its *pro rata* stake of the difference between two values (calculated using the DCF method) of TGN:

a) TGN's fair market value as of 1 July 2002, based on TGN's revenues (and its related costs) as they would have been, had the pesified tariffs in force on 1 July 2002 been readjusted on that date according to the previous six-month Argentine Producers' Prices Index in pesos (reflecting the reference in the Gas Regime to the US PPI which is an indexation based on the producers' prices evolution), and henceforth on a semi-annual basis through to the expiry of the Licence in 2027 (the "but-for" scenario); and

b) TGN's value as of 1 July 2002 based on its actual revenues (and its related costs) following Argentina's treaty breach, based on actual data available up to 31 May 2011, then projected to 2027, assuming that TGN's tariffs would increase by 20% in July 2011 and subsequently by wholesale inflation, starting in 2012 (the "actual" scenario).[54]

44. Total assumes that in both the but-for and actual scenarios TGN's tariffs are pesified; TGN's Licence expires in 2027 and is not renewed; and TGN's WACC (as of 1 July 2002) of 12.22% is used as the discount rate to calculate the net present value of TGN's future cash flows (as of 1 July 2002).

45. Total describes its "Key assumptions for the but-for scenario" as follows:[55]

[54] Total QM, *supra* note 5, para. 74, fn. 115. Total proposes a WACC of 12.22%, reflecting the company's real cost of raising funds; see Total QM *supra* note 5, para. 75 and fn. 116, to calculate the net present value of TGN's future cash flows (as of 1 July 2002) under the DCF method relying on the updated calculation of its experts; (see Compass Lexecon Report of 17 June 2011 [hereinafter "CL First Report"], para. 113). Total notes there that "this WACC is broadly consistent with the 11.50% that consultants to recommended as the cost of capital applicable to TGN as of October 2001". Based on the CL First Report, para. 131, Total refers at paras. 95-96 of the Total QM to an internal rate of return for TGN in the but-for scenario of 11.37%. The Tribunal recalls that the higher the rate used to discount future cash flows, the lower is the resulting actualized capital value of a company based on the present value of future flows at the reference date (here the value on 1 July 2002 of the 2002-2027 revenues from the but-for tariff). The tariff increases were based on the US PPI in the pre-Emergency Law Gas Regulatory Framework.

[55] Total QM, *supra* note 5, para. 77.

a) TGN's tariffs are adjusted for the first time on 1 July 2002, taking into account inflation since 1 January 2002;

b) TGN's tariffs are indexed to domestic Argentine prices on a semi-annual and retroactive basis, using the Argentine Producer Price Index (the "IPIM");

c) TGN does not restructure its debt (TGN would have had enough cash flows to avoid the restructuring that took place in the actual scenario since TGN would have been a viable company[56]); and

d) TGN is entitled to cover its costs and earn a reasonable rate of return.

Total's but-for model includes an increase of certain costs only (those "revenue-related") and does not include an increase of investments. As for costs, Total explains that an increase of revenues with no additional transported quantities[57] would not entail an increase of TGN's cost items that do not depend on revenues.[58] As to investments, Total points out that "new investments were not mandatory under the regulatory framework, and would only have been executed if a particular proposed new project or expansion would have generated a return equal to TGN's costs of capital".[59] Total supports this position by explaining that under the Licence, TGN is required to maintain physical assets and hand them back "in good working order and condition" at the end of the concession, but is not obliged "to maintain constant the accounting useful life of the system" nor is there any economic rationale to do so.[60]

46. In respect of the actual scenario, Total takes into account in its Quantum Memorial that tariffs have been frozen from 1 July 2002 to 31 May 2011. Total assumes a tariff increase of 20% in July 2011 and that the Government "will adjust the tariffs in accordance with Argentine PPI on a periodic basis" thereafter.[61] Total also takes into account that due to

[56] CL First Report, *supra* note 54, paras. 12-13 also assumes that in the but-for scenario "TGN's firm contracted capacity for export transport volumes would have been the same as in the actual scenario".
[57] On the contrary, Total takes into account the possibility of a decline in volumes due to the increase in price in the but-for scenario, see CL First Report, *supra* note 54, para. 108.
[58] CL First Report, *supra* note 54, paras. 109 and 125.
[59] Total QM, *supra* note 5, para. 98.
[60] CL First Report, *supra* note 54, para. 126; CL Second Report, para. 18 with reference to Article 5.2 of the TGN Licence, Exhibit C-53.
[61] Total QM, *supra* note 5, para. 99. The above tariff increases had not been granted in 2011. Further dates have been supplied in the CL First Report, *supra* note 54, paras. 122-123.

insufficient revenues to cover its outstanding debts (a large proportion of which had been undertaken in US dollars outside Argentina before the pesification), TGN had to negotiate two debt restructuring agreements with its creditors after having defaulted in 2006 and 2008.[62] In any case, Total's calculation of the actual value of TGN based on the CL First Report concludes that the equity value of TGN for its shareholders is zero since the total firm financial value was less than its total financial debts.

47. On the above premises and assumptions and the calculations of its experts based thereon, Total claims that while TGN had no value in the actual scenario as of 1 July 2002, its equity value would have been $499.9 million at the same date in the but-for scenario, with a corresponding loss as to Total's 19.2% equity stake in TGN of $95.2 million.[63]

D. Argentina's Position as to the Calculation of Damages in respect of TGN

48. As mentioned above at paragraphs 20 to 23, Argentina contests the general principles relied upon by Total to evaluate damages. In relation to the specific parameters to be used to determine the damages suffered by Total in respect of its equity participation in TGN, Argentina objects to several of the assumptions made by Total. Moreover, Argentina points to what it considers to be "inconsistencies" in Total's valuation model. Argentina considers that these inconsistencies are reflected in Total's expert reports of 2011, as they propose a higher firm value for TGN ($104.1 million as of 1 July 2002, including Total's loss as Technical Operator) than in their original quantification of damages of 2007 ($87 million as of 31 December 2001) "notwithstanding the fact that the Tribunal dismissed a significant portion of the measures challenged by Total".[64]

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[62] Total QM, *supra* note 5, para. 100. In the actual scenario, Total's stake in TGN decreased due to the renegotiation with the creditors after the default of 2008 to 15.4% In Total's but-for scenario TGN does not default on its debt and Total's shareholding remains unchanged at 19.2%.

[63] *Ibid*., para. 103, based on the CL First Report, *supra* note 54, Table II at para. 35. This amount of US$95.2 million takes into account that in the actual scenario Total received a cash dividend of US$0.7 million in 2007, see also Universidad de Buenos Aires Valuation Report of 31 August 2011 [hereinafter, "UBA First Valuation Report"], note 144.

[64] Argentina QCM, *supra* note 6, paras. 108 and 132-133. Total's experts justify this result (notwithstanding the fact that Total's experts' report of 2007 assumed that pesification of the tariffs was a breach, while their estimates of 2011 acknowledge that the Decision on Liability rejected that claim), the CL Second Report, *supra* note 23, para. 81. Total's experts explain that the main reason for this discrepancy is that in 2007 they had assumed that tariffs would have increased and had consequently attributed a residual value of $11.7 million to TGN in the actual scenario. In their 2011 valuation, Total's experts have taken into account, instead, that tariffs "are still frozen". Total's experts consider that TGN's residual value in the actual scenario is nil, CL First

49. First, Argentina denies that the first tariff increase to be calculated in July 2002 should reflect retroactively inflation increases as from January 2002.[65]

50. Second, Argentina disagrees with Total and its experts when they suggest using the IPIM as the most appropriate index for making the adjustments indicated by the Tribunal, primarily because the US PPI was referred to in the original Gas Regulatory Framework.[66] Argentina challenges the justification advanced by Total and its experts that wholesale prices, reflected in the PPI, rather than consumer/retail prices, reflected in the Consumer Price Index ("IPC"), are more representative of the costs of an activity such as gas transportation. According to Argentina, this position was rejected by the Tribunal when it stated in the Decision on Liability that a balanced interpretation of the regulatory regime is called for, taking into account that, besides the viability of this public service, consumer protection is one of the primary objectives of the Gas Law. This objective requires that the tariffs be just and reasonable for consumers while ensuring that utilities can earn a reasonable rate of return.[67]

51. Therefore, Argentina suggests that from 2004 forward, domestic price indexes representative of TGN's cost structure, as elaborated by its experts from UBA, be used, weighting the influence of these price indexes according to their ability to represent the main cost items of TGN. On this basis, Argentina proposes the following weighting for the periodic tariff increases in the but-for scenario: IPC 21.40%, IPIM 38.38%, CVS 27.85%, and ER 12.36%.[68] Argentina's experts construe, therefore, the increase of tariffs for TGN up to the end of the concession based on what was referred to as a "blended index". However, with respect to the period of "economic emergency" from 2002-2003, when inflation was in

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Report, *supra* note 54, para. 28; they assume however in their model for the actual scenario that TGN tariffs would be increased by 20% in July 2011 and that the tariffs would thereafter be semi-annually increased by the IPIM (an evolution that apparently has not taken place in reality), CL First Report, *supra* note 54, paras.122-123.

[65] Argentina QCM, *supra* note 6, para. 91.

[66] *Ibid.*, para. 92.

[67] *Ibid.*, para. 95 with reference to the Decision on Liability, *supra* note 1, para. 160.

[68] UBA First Valuation Report, *supra* note 63, para. 71. Where IPC stands for "Consumer Price Index" ("CPI"), IPIM for "Domestic Wholesale Price Index", CVS for "Salary Variation Coefficient", and ER for "Exchange Rate".

double digits and the difficulties for consumers most severe, Argentina suggests using a tariff adjustment based exclusively on the IPC index.[69]

52. As to the other aspects of the but-for scenario proposed by Total in its valuation method, Argentina objects to several of the assumptions made by Total's experts, notably in respect of volumes, evolution of operating costs, the assumptions concerning the need and obligation to make additional investments and the appropriate rate to be used to discount future revenues.[70]

53. With respect to TGN's costs dynamics in the but-for scenario, Argentina's experts propose to apply the various indexes they use for the "blended index", applying the one most appropriate for the kind of expenses involved (such as wages, materials, services and supplies by third parties, etc.)[71]. As for investments in fixed assets, Argentina's experts consider that in the actual scenario "TGN has reduced investments in fixed assets significantly in the last 9 years", with a resulting decrease of the useful life of TGN's fixed assets. This, they say, cannot be accepted in a but-for scenario of higher revenues in light of the terms of the Licence and TGN should have made additional investments in line with its increased revenues.[72]

54. A further disagreement concerns the use of the DCF method to bring the future revenues of TGN to present value and thereby determine the company's value. Argentina submits that the APV based on the calculation of two discount rates, namely the fiscal shield costs and that of the "unlevered capital cost", should be used instead. UBA calculates the

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[69] Argentina QCM, *supra* note 6, para. 101.

[70] Another divergence between the Parties concerns the relevance of the export business of TGN which was ultimately not affected either by the pesification or by the freezing of the domestic tariffs. Total takes into account the existence of export revenues for TGN (which have become proportionally more relevant after the pesification and the freezing of the domestic tariffs) as well as the availability of additional transport capacity for the domestic market due to the early termination of some export contracts, CL First Report, *supra* note 54, para. 108. By contrast, Argentina does not take into account export revenues since they are not relevant for the formulation of the pesified but-for revenues, see UBA Second Valuation Report, *supra* note 23, para. 136. Total's experts challenge this approach because it ignores the existence of export revenues as an additional source of funds to meet TGN's financial obligations included in the but-for scenario and results in reducing the value of TGN's equity in both the actual and but-for scenarios; see CL Second Report, *supra* note 23, paras. 12-16. In response, UBA in its Second Valuation Report, *supra* note 23, para. 140, rectifies its calculation so as to exclude the corresponding part of TGN debt.

[71] UBA First Valuation Report, *supra* note 63, para. 242.

[72] *Ibid.*, paras. 185-190.

latter as the summing of a risk-free interest rate and "an equity risk premium adjusted by the country risk value" in accordance with the Capital Asset Pricing Model ("CAPM").[73]

55. Argentina's experts consider that TGN would have been required to restructure its debt also in the but-for scenario, notwithstanding the higher tariffs resulting from periodic increases. According to Argentina's experts, in 2002 TGN had to pay capital maturities of $122 million and interest payments of $38.5 million for which it did not have adequate financial means. They note also that only 7% of the debt had been incurred with local banks and that 97% was denominated in foreign currency (bearing in mind that also a part of the debt with local banks was in US dollars).[74] In Argentina's experts' analysis, even in the but-for scenario the company's asset value would have been lower than the debt volume so that TGN would not have been able to cover the repayment obligations with its revenues.[75]

56. Argentina agrees with Total that the value of TGN was zero in 2002 in the actual scenario. However, Argentina's experts' assumptions and calculations lead them to conclude that TGN would neither have had a positive value as of 1 July 2002 in the but-for scenario, since TGN's debt was considerably higher than the net value of its assets in that scenario as well.[76] Focusing on Total's position as a minority shareholder in TGN, Argentina concludes that Total had sustained no loss in this capacity since its equity stake had no value in the actual scenario and the tariff adjustments applicable in the but-for scenario would not have reversed this situation. Argentina concludes that the emergency measures did not cause any damage to Claimant.[77]

E. The Tribunal's Evaluation

57. As mentioned above at paragraph 24, the positions expressed by the Parties and their experts in their Quantum Memorials were refined and, in part, modified in the course of the

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[73] See UBA First Valuation Report, *supra* note 63, paras. 41-48 and paras. 219 ff.
[74] *Ibid.*, para. 136.
[75] *Ibid.*, paras. 147-150. In response to Total's criticism that the UBA model does not take into account TGN's export revenues in its UBA Second Valuation Report, *supra* note 23, para. 140, UBA, rather than including export revenues in both scenarios, excluded in its calculation the part of TGN debt that corresponds to the export business, see *supra* note 70.
[76] UBA First Valuation Report, supra note 63, Table, para. 152. UBA's Valuation Report states further at para. 154, that the reason, therefore, "is the indebtedness policy applied by the company. The concentration of maturities, and the risky decision of financing itself with a foreign currency led TGN to its current financial situation."
[77] Argentina QCM, *supra* note 6, para. 125.

further written exchanges.[78] These submissions have been supplemented by their statements and the evidence of their expert witnesses at the hearing on *quantum* held on 19-21 December 2011, their written answers to the questions put to them by the Tribunal before and after the hearings[79] and in the Quantum Post-Hearing Briefs.[80]

58. As mentioned at paragraph 26, in the Tribunal's view there is no doubt that Total is entitled to monetary compensation equivalent to the losses it suffered due to the breach by Argentina of the fair and equitable treatment obligation of Article 3 of the BIT in accordance with the customary international law rule that requires a State to provide "full reparation for the injury caused by its internationally wrongful act"[81]. This principle is applicable in respect of economic damages caused by a wrongful act, irrespective of the content of the obligation breached, which may entail an unlawful expropriation or the violation of a treaty obligation to afford fair and equitable treatment as is the case here.[82]

59. As mentioned above at paragraph 26 the directions and requirements on compensation found in Article 5(2) of the BIT may guide the Tribunal in the instances dealt with here under Article 3 of the BIT.[83]As noted in paragraph 26, Article 5(2) in prescribing an "adequate" compensation (*adecuada, adéquate* in the Spanish and French original texts, respectively) requires a payment "calculated in accordance with the real value"[84] of the investment affected, thus implying compensation amounting to full reparation in conformity with customary principles in this respect.

60. In order to determine the losses of Total and to adopt calculations that will ensure the best possible correspondence between the monetary value of the losses and the amount of the compensation, the Tribunal will base itself on the general principles which have been

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[78] Total QR together with CL Second Report; and Argentina QR together with UBA Second Valuation Report, *supra* note 23.

[79] See PO No. 5, PO No. 7 and PO No. 8, *supra* note 24.

[80] Total PHB, *supra* note 11. As a result of this exercise Argentina has engaged in methodologies for appraising the value of a firm for a shareholder (such as Total's equity stake in TGN) based on the discount of future revenues, rather than insisting that only the amount of dividends is relevant, see UBA Response to Procedural Order No. 7 of 27 March 2012 [hereinafter "UBA Response to PO No. 7"] annexed to Argentina PHB, *supra* note 28.

[81] ILC Articles on State Responsibility, Article 31.1.

[82] See Decision on Liability, *supra* note 1, para. 198.

[83] *Ibid.*, para. 198, where the Tribunal, in rejecting Total's claim that Argentina had breached also Article 5(2) of the BIT in respect to TGN, noted that "damages under the heading of indirect expropriation would not be different from damages due to breach of the fair and equitable treatment standard".

[84] In the French text "*calculé sur la valeur réelle*", in Spanish "*calculado sobre el valor real*".

highlighted above.[85] The Tribunal notes that the Parties agree that in the actual scenario TGN had no value for its shareholders as of 1 July 2002. The default of TGN on its debt in 2002, followed by a further default in 2008, and the subsequent processes of renegotiation with its creditors confirm that in the actual scenario TGN, subject to the freezing of its tariffs, has no equity value. Nevertheless, it has been able to continue operating since the crisis at the end of 2001. In view of the above, the loss suffered by Total as a TGN shareholder, is equivalent, *pro rata* of its shareholding to the value that TGN would have in the but-for scenario.

61. Based on the Decision on Liability, in order to ascertain such but-for value it is necessary to determine on one hand (a) the increased revenues which TGN would have been entitled to receive through periodic semi-annual tariff increases based on domestic inflation, and on the other hand (b) the costs it would have incurred. The principles applicable to these items, flowing from the Decision on Liability, are addressed in the following paragraphs.

62. The relevant date to ascertain the but-for value of TGN is 1 July 2002, since at that date Argentina started breaching its obligation to grant fair and equitable treatment to Total in respect of TGN by not readjusting its tariffs every six months "based on the evolution of local prices".[86] In order to respect these indications, which the Tribunal hereby confirms, and calculate the loss of revenues due to TGN, the TGN domestic tariffs should be readjusted from that day forward to take into account the increase of Argentina's prices in the previous six-month period, and every six months thereafter until the end of TGN's concession in 2027.

63. The approach of Total's experts in this respect is therefore sound. The Tribunal cannot accept the different approach suggested by Argentina that adjustments should not take into account the price variations of the first semester of 2002, this being contrary to the findings and the logic underlying the decision of the Tribunal on the issue.[87] Argentina and its experts make other assumptions that are not in line with the Decision on Liability: such as reducing the future tariff adjustments by an "efficiency factor" and contemplating a five-year periodic

[85] See *supra* paras. 26-32.
[86] Decision on Liability, *supra* note 1, para. 183.
[87] As to the justification for starting the indexation of the pesified tariffs from 2002, see the Decision on Liability, *supra* note 1, para. 175. Total points out that notwithstanding the statement of principle against indexation in 2002, UBA's but-for indexation model on 1 July 2002 takes into account Argentine inflation also over the first months of 2002, based on the CPI index, Total QR, *supra* note 23, para. 111 with reference to UBA First Valuation Report, *supra* note 63, paras. 70 and 152.

tariff adjustment by ENARGAS.[88] Argentina also assumes that TGN is under an obligation under the licence to hand over the material assets (pipelines, etc.) in a condition equivalent to when it first acquired them. The Tribunal concludes, instead, that the obligation of TGN is somehow more limited, as submitted by Total, namely to "maintain material assets in good working order and condition insofar as is necessary for the suitable provision of the licensed services."[89]

64. The Parties also come to completely different results as to the loss suffered by Total in respect of its equity in TGN – around $100 million according to Total and zero according to Argentina. This is due to different assumptions and, in part, different methods of calculation in their but-for models, both as concerns the positive components of TGN (revenues from tariffs) and the negative ones (costs, debt/financial burden). The Tribunal will examine and compare the various relevant methods and data submitted by each Party and compare them as appropriate in order to determine Total's loss.

65. The Parties disagree first of all, as mentioned above, as to the basis for construing TGN's tariffs in the but-for scenario. Total is of the view that the IPIM (that is the Argentine PPI) must be used because this index corresponds to the US PPI, which was used under the Gas Regime when Argentina's currency and tariff were pegged to and expressed in US dollars. Total finds support for its position in paragraph 183 of the Decision on Liability where the Tribunal held that "a six-month periodic readjustment of the tariff, as provided in the Gas Regime but based on the evolution of local prices, would be appropriate to calculate the damages to Total". Argentina objects to Total's position recalling that besides the viability of public service providers, consumer protection is one of the primary objectives of the Gas Law.[90] Argentina acknowledges the findings at paragraph 183 of the Decision on Liability on which Total relies, but points out that at paragraph 160 of the Decision on Liability the Tribunal stated that "a balanced interpretation is called for, taking into account that consumer protection is one of the primary objectives of the Gas Law, which provides that

[88] UBA First Valuation Report, *supra* note 63, paras. 72-77. An overview of UBA's various assumptions is found in the UBA Second Valuation Report, *supra* note 23, paras. 31-56. The Tribunal recalls that the Decision on Liability, para. 183, fn. 196, specifies that through a periodic six-month adjustment of the tariffs taking into account the domestic inflation from the beginning of 2002, the damages suffered by Total by the lack of both ordinary and extraordinary reviews will also be made good.

[89] See TGN Licence, *supra* note 40, Article 5.2, Exhibit C-53(1). See also *supra* para. 46.

[90] See *supra* para. 50.

tariffs shall be just and reasonable for consumers and at the same time shall ensure that utilities can earn a reasonable rate of return."

66. In summary, in deciding how to calculate the "evolution of the local prices", the Tribunal is faced with the existence of various indexes, whose variation is officially determined in Argentina, in order to measure the variation of different classes of prices.[91] The issue is complicated by the fact that the different indexes have had in the relevant period a divergent evolution at various times.[92] The Tribunal considers that the index to be adopted for the but-for evolution of TGN's tariffs from 1 July 2002 must balance and reconcile the various indications contained in the original Gas Regime as stated in the Decision on Liability: on one hand the "principle that gas transportation and distribution activities are to be regulated to ensure just and reasonable tariffs" (Article 2(d) of the Gas Law); and on the other hand the "protection of consumer rights, as the first objective of the Law" (Article 2(a)).[93] In view of the above, the Tribunal does not consider that the transposition of the reference to the US PPI contained in the TGN license[94] to the IPIM is required. The Tribunal is rather of the view that the use of an index that reflects the costs structure of TGN is more adequate for the purpose of ensuring that the hypothetical but-for tariff to be used for semi-annual adjustment be "reasonable". The Tribunal considers that the "blended index" proposed by Argentina as elaborated by UBA ("UBA's Index") ensures such reasonableness. Since this "blended index" is based on the proportion in which the various categories of prices whose indexes are used were reflected in the costs structure of TGN, it also reflects more accurately the evolution which would have taken place had Argentina complied with the Gas Law tariff framework.[95] As explained below, the acceptance of UBA's Index does

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[91] The Tribunal has left open what indices to use in order to calculate the tariff readjustment in the but-for scenario, Decision on Liability, *supra* note 1, para. 183.

[92] Thus UBA First Valuation Report, *supra* note 63, para. 168 sets forth a table showing that the IPIM increased much more than the IPC in 2002. According to CL's calculations, however, the dynamic of the IPIM over the period of the concession is not overall markedly different from that of the UBA blended index, see CL Response to the Tribunal's Procedural Order No. 7 [hereinafter "CL Response to PO No. 7"], para. 6, Graph 2 (annexed to Total PHB, *supra* note 11).

[93] See Decision on Liability, *supra* note 1, para. 49.

[94] The Tribunal has noted that the use of the US PPI for periodic readjustment of the tariff is not found in the Gas Law itself, but rather in the TGN Licence, *supra* note 40, at Section 9.4.1.1, Decision on Liability, *supra* note 1, para. 54.

[95] See UBA First Valuation Report, *supra* note 63, paras. 70-72 pointing out that the proposed weightings (IPC: 21.40%; IPIM: 38.38%; 27.85%; ER: 12.36%) were adopted for the (uncompleted) extraordinary review of 2004 and result from the analysis of Annex H of the 2003 Annual Financial Statements of TGN. Total does not appear to challenge this correspondence while maintaining that it has correctly chosen the IPIM index because "wholesale prices are more representative of producers' costs than consumer prices or other indices", CL First Report, *supra* note 54, para. 20.

not mean, however, that the Tribunal shares all of the other suggestions and assumptions of Argentina and its experts on the application of such an index for the purpose of determining Total's damages in respect of TGN. Specifically UBA's Index, once adopted on the basis of the above reasons, must be used for the entire period of time from 1 July 2002 onwards. Argentina's submission that the IPC should be used if indexation is to be considered at all during the "economic emergency" of 2002-2003, must be rejected since it would negate the very reasons for which the Tribunal has found UBA's Index reasonable.[96]

67. In order to assess the Parties' estimates of TGN's revenues in the but-for scenario based on UBA's Index, the Tribunal asked each Party (in PO No. 7) "to submit an estimate with graph and quantification of an indexation of the 'but-for' tariffs with the first increase on 1 July 2002 based on the 'UBA Index' until the end of the concession" together with their Post-Hearing Briefs on Quantum. In their Response, Total's experts submitted graphs comparing the actual tariff with but-for tariffs based both on the IPIM and on UBA's blended index.[97] Total's experts calculated the net revenue of TGN from tariffs adjusted by the UBA index until the end of the concession, maintaining unchanged all other variables, such as costs, discount rate (WACC) and financial debt, as they had employed them for their valuation based on the IPIM. Using the UBA index, Total's experts determined the present value (as of 2002) of Total's equity in TGN in the but-for scenario as being $92.6 million.[98] The comparable value using the IPIM index was $95.9 million.[99] Since Total's experts assume that TGN has no value in the actual scenario,[100] those amounts would represent the loss of Total in respect of its equity in TGN depending on which index is used.

68. Argentina also responded to the Tribunal's request by submitting a graph presenting the evolution of the blended index UBA had proposed.[101] The evolution of the index submitted by UBA is similar to that of Total's experts, except for the years 2012-2013 where

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[96] Argentina's proposal is set out in Argentina QCM, *supra* note 6, para. 103.

[97] CL Response to PO No. 7, *supra* note 92, pp. 7-8, Graph I and II (annexed to Total PHB, *supra* note 11). The calculation of Total's losses based on the UBA blended index rather than on the IPIM results (*ceteris paribus*) amounts to $92.6 million rather than $95.9 million (*Ibid.*, Table IV, p. 9), before deduction of $0.7 million for dividends received.

[98] See CL Response to PO No. 7, *supra* note 92, para. 7, Table IV.

[99] See CL First Report, *supra* note 54, para. 35, Table II.

[100] This is also the assumption of Argentina's experts, who assume, however, that TGN would also be worthless in the but-for scenario because the value of its debt would be higher than its assets' value (see UBA First Valuation Report, *supra* note 63, para. 33.

[101] UBA Response to PO No. 7, *supra* note 80, pp. 8-9.

the latter estimate a higher rate of inflation, as will be discussed in a subsequent paragraph. The result of UBA Response to PO No. 7 is, however, completely different from that of Total's experts because the assumptions of UBA concerning other variables are quite different from those of Total's experts. As a consequence, UBA's conclusion remains that TGN's value is zero also in the but-for scenario.[102] This conclusion is essentially based on the much lower value attributed by UBA to TGN assets due to the much higher rate used by UBA to discount TGN's future revenues (17.3% as against 12.22% by CL). The picture is not altered by the fact that CL deducts from the value of the assets a higher amount for Financial Debt (valued in its entirety without any post-default reduction), while UBA attributes a lower value to the Financial Debt since UBA considers that TGN would be unable to meet its debt in the but-for scenario as well.[103]

69. Subsequently, in PO No. 8 the Tribunal requested more details concerning the Parties' replies to PO No. 7, especially regarding their respective assumptions as to the future evolution of the price indexes until the end of the concession. The Tribunal's questions were without prejudice to its final determination of the appropriate indexation of TGN's tariffs in the but-for scenario.

70. From the answers provided by the Parties, the Tribunal obtained helpful information on the elaboration of the various indexes used by their experts The respective assumptions and positions of the Parties have thereby been clarified and the differences between them reduced somewhat, but not entirely resolved. One major remaining difference is due to CL using for its calculations much higher inflation forecasts for 2012-2013 than those used by UBA.[104] The Parties also make different assumptions as to the future evolution of the peso/US dollar exchange rate. Higher anticipated inflation means higher increases of the relevant indices, while higher devaluation leads to a lower but-for value of TGN in terms of US dollars. The Tribunal will explain in the following paragraphs how it has resolved these divergences which reflect the difficulty in objectively forecasting the evolution of a national economy such as Argentina's, especially over an extended period of time.

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[102] *Ibid.*, para. 15, Table III.

[103] The conclusions of the experts are found respectively in CL Response to PO No. 7, *supra* note 92, Tables IV and V, and in UBA Response to PO No. 7, *supra* note 80, Tables III, VIII and XIII.

[104] This results clearly by comparing the evolution of the prices proposed by Total and by Argentina which are both reproduced in CL Response to PO No. 7, *supra* note 92, Graph 1. The curve reflecting Argentina's proposed inflation data is found also in UBA Response to PO No. 7, *supra* note 80, p. 8. Specifically in order to clarify the difference the Tribunal has addressed to the Parties further questions in PO No. 8, *supra* note 24.

71. Finally, while Total includes in its calculations the revenues of TGN deriving from exporting gas (both in the actual and in the but-for scenario), Argentina does not consider those revenues. Argentina argues that the decision of the Tribunal that pesified tariffs should have been revalued semi-annually from mid-2002 onwards is not applicable to export prices set in dollars. While the last point is correct, this does not justify excluding any revenues of TGN while deducting all its costs to determine how much the company would have been worth in the but for-scenario. In this respect, the adjustments proposed by Argentina's experts are eminently subjective and ultimately arbitrary.[105]

72. As mentioned above, the determination of the revenues of TGN in the but-for scenario is but one of several steps to determine the value of TGN at the date of 1 July 2002 in this scenario. The next step is to determine the actualization criteria to be used in order to value at that date the future/subsequent flows of those revenues. In this respect, the Tribunal agrees with Total and its experts on the use of the DCF method. This method of calculating the present value of a company on the basis of a reasonable estimation of that company's future cash flows (net revenues), taking into account the risk involved in producing those cash flows and the time value of money, is commonly used. This approach is reflected in the World Bank's 1992 "Guidelines on the Treatment of Foreign Investment" and its definition of DCF[106] as a method to determine adequate compensation based on fair market value. This method has been used by many international arbitral tribunals, including several ICSID tribunals in disputes against Argentina concerning the but-for value of utilities whose future

[105] The Tribunal is not convinced that UBA is able to neutralize this flaw by reducing proportionally the costs and partially allocating TGN debt to the export business in its calculation. The proportion of foreign revenue of TGN varied between 23% (pre-devaluation in 2001) to 46% on average in 2002-2010, see Compass Lexecon's PowerPoint Presentation at the *quantum* hearing, Direct Testimony by Mr. Manuel A. Abdala and Professor Pablo T. Spiller, slide 8. UNIREN stated that "TGN economic equation must be forecasted with all its sales, notwithstanding the fact that the resulting increases in tariffs are applied only to domestic sales", 2005 Report on TGN, Exhibit ARA-167.

[106] See World Bank Guidelines on Treatment of Foreign Investment, 7; ICSID Rev. 295, 1992, p. 304, Exhibit CL-49. The free cash flow to be discounted is, in any given year, the residual cash earned by a company after meeting all its operating and investment (capital) expenses and taxes, but before debt repayment and other financial payments which are calculated separately and deducted from the asset value calculated based on the DCF methodology, CL First Report, *supra* note 54, para. 31, fn. 38. DCF is also endorsed in the ILC Articles on State Responsibility cit., Commentary to Article 36 (Compensation), paras. 26-27, as a recognized method of calculating damages in international law, Exhibit CL-23.

revenues have been curtailed by measures found to be in breach of the relevant BIT's provisions.[107]

73. The Tribunal cannot agree with Argentina that the amount of these flows cannot be calculated *a priori* because they are too "uncertain" or "speculative". It is possible to reasonably determine the but-for projection of future revenues stemming from tariffs based on regulations and concessions and, in fact, in response to PO No. 7 Argentina's experts provided calculations in that respect.[108] Of course, a calculation using the DCF method, and any other method, requires careful appraisal of the relevant parameters concerning future developments, especially if extended over time. That said, such a calculation using the DCF method permits a reasonable valuation of the losses suffered by an investor, measured at a given point in time (past or current) due to a decrease of the future income of its investment. As to the alternative APV method submitted by Argentina, the Parties' arguments, evidence and debate at the *quantum* hearing have confirmed that this method "is a variation of the general discounted cash flow method", as stated by UBA.[109] Under this method the present value of a company's business represents the sum of two present values: (a) the present value of the company's free cash flow, assuming that the company is exclusively financed with its own equity, calculated by discounting future flows at a Ku rate (the unlevered equity cost), and (b) "the tax saving ["shield"] derived from the utilization of the financial debt as a funding source for its business".[110]

74. The discussions and evidence referred to above have convinced the Tribunal that *in casu* reliance on the DCF model rather than on the APV model is more appropriate for various reasons. First of all, factoring in tax savings, as in the APV model, appears to be problematic. UBA itself is of the opinion that TGN would have not been profitable also in

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[107] See *Phillips Petroleum v. Iran* (1989), para. 112, Exhibit CL-29; *ADC & ADMC Management Limited v. Republic of Hungary*, ICSID Case No. ARB/03/16, Award (2 October 2006), para. 501 ff, Exhibit CL-173. As to cases involving Argentina, the DCF method has been used in the *CMS* Award, *supra* note 29, para. 411 ff, Exhibit CL-82, and more recently in awards issued after the hearing on *quantum*. See *El Paso Energy International Company v. Argentine Republic*, ICSID Case No. ARB/03/15, Award (31 October 2011) [hereinafter "*El Paso* Award"], Exhibit CL-253, and *EDF International S.A. v. Argentine Republic*, ICSID Case No. ARB/03/22, Award (11 June 2012) [hereinafter "*EDF* Award"].

[108] See *infra* note 121.

[109] See UBA First Valuation Report, *supra* note 63, para. 41; T. Copeland, T. Koller, J. Murrin, *Valuation: Measuring and Managing the Value of Companies* (2000), pp.131-132, Exhibit C-765.

[110] UBA First Valuation Report, *supra* note 63, paras. 43 – 48. As clarified at para. 51 of this First Report, UBA's model projects cash flows on an annual basis up to 2027, as established by the Gas Industry Regulatory Framework, exactly as in the CL DCF model.

the but-for scenario to the point of being unable to meet its financial obligations. In the absence of profits, the relevance of a tax shield is, therefore, not apparent. Secondly, as explained by UBA in the Annex to its Valuation Report concerning TGN,[111] the APV model requires making assumptions whose application by UBA to TGN appear debatable. This is the case especially in respect of the Beta factor ("sensitivity of the share regarding market yield"). In order to determine its value, UBA uses, "due to the absence of comparable companies at a local level", estimates based on a group of utilities operating in the North American market, which include companies engaged in activities different from that of TGN. The appropriateness of such a reference appears questionable and cannot be verified by the Tribunal. In fact, the comparability of the sample used by UBA was disputed by Total's experts since the industries referred to include both natural gas distributors and electric utilities.[112] Similarly, the Tribunal is not persuaded of the soundness of UBA's premises for including in its proposed discount rate additional 0.50% for the "incremental risk which would have derived from Argentina's inaction in the face of the crisis" contributing to the high discount rate of 17.30% proposed by UBA.[113]

75. Having determined that the "classic" DCF method is appropriate, the Tribunal must now address the WACC proposed and used by Total and challenged by Argentina.[114] The Tribunal recalls that it is undisputed that the WACC reflects the cost of raising funds from shareholders and lenders for a typical company operating in a given industry.[115] The experts for Total have calculated the WACC for TGN as of 2002 to be 12.22% and have used this discount rate to calculate the net present value of TGN's future cash flows as of 1 July

[111] *Ibid.*, paras. 219-241.
[112] CL Second Report, *supra* note 23, paras. 53-57 and 69-78.
[113] UBA First Valuation Report, *supra* note 63, para. 241.
[114] The calculation of the relevant WACC under the DCF method is preferable to the calculations of the "cost of the unlevered equity capital" under the APV model (which UBA determines to be 17.30%, as mentioned in the preceding paragraph) where the appropriateness of certain figures and adjustments are difficult to evaluate as mentioned in the text. For example, "the incremental risk which would have derived from Argentina's inaction in the face of the crisis", valued by UBA at 0.50%, UBA First Valuation Report, *supra* note 63, para. 241. See also in the CL Second Report, *supra* note 23, paras. 47-50 the criticism of UBA's proposed methodology based on the ENARGAS cost of capital findings. In the Parties' respective Responses to PO No. 7, the Parties supplied the figures resulting from using the Claimant's WACC of 12.22% and the Respondent's estimated WACC under the APV model of 17.30%.
[115] Damage Valuation for Total's Investment in Argentina by Manuel A. Abdala and Pablo T. Spiller, LECG, LLC of 15 May 2007 [hereinafter "LECG Damage Report"], para. 36, submitted during the merits phase, explains that the "WACC is computed as the weighted average of the cost of debt and the cost of equity, with the weighting of the two based upon the optimal balance of debt and equity financing for the industry in question".

2002.[116] Total points out that this WACC is "broadly consistent" with, and even somewhat higher (thus resulting in a lower actualized value of the firm) than "the 11.50% that consultants to ENARGAS recommended as the cost of capital applicable to TGN as of October 2001".[117] On the basis of this evidence and the relevant arguments submitted, the Tribunal is of the view that the 12.22% discount rate proposed and used by Total is appropriate, while the rate of more than 17% proposed by UBA is not justified.[118]

76. Having thus dealt with the "positive" components of TGN's business in the but-for scenario, we now turn to examine the "negative" components, namely capital expenditure (CAPEX), operating expenditures (OPEX) and financial costs required to meet the financial debt of TGN.

77. The Tribunal has set forth above the different positions of the Parties on these items.[119] According to Total, in the but-for scenario of higher TGN revenues most expenses would remain unchanged and there would be no economic need, nor legal requirement to increase investment expenditures. On the contrary, according to Argentina, the most appropriate of the various indexes contained in its proposed "blended index" should be applied to the different categories of expenses. As to investments in fixed assets, the use of UBA's blended index is advocated by Argentina considering that TGN has not been able to maintain required investment in the real scenario due to lack of resources.

78. The Tribunal believes that Argentina's position is partially justified in light of the totality of the evidence concerning the operation of TGN in the actual scenario. TGN has had to operate in a difficult situation due to insufficient revenues since 2002. TGN has been unable to service and repay its financial debt (as evidenced by the defaults and rescheduling of 2002 and 2008-2009) and was able to remunerate equity by paying dividends to its shareholders in 2007 only. As recognized and complained of by Total itself, due to the

[116] The underlying calculations are found in Appendix D to the LECG Damage Report, *supra* note 115,"Cost of Capital Methodology and Computation".
[117] Total QM, *supra* note 5, fn 116. The data supplied in Tables XLVIII and XLIX of Appendix D, referred to in the previous footnote, indicate that the capital structure of TGN was in line with that of other "*transportadoras*" and that the WACC has not been affected by the pesification of 2002 contrary to UBA's statements. See also CL First Report, *supra* note 54, para. 131 and Total QM, *supra* note 5, paras. 95-96 making further comparisons with slightly lower rates of TGN's internal rate of return and other relevant WACCs (ranging between 10% and 11%).
[118] *Ibid*.
[119] See *supra* paras. 44 and 53.

severe reduction in revenues, TGN has also been compelled to reduce operating expenses and to save on the maintenance of its infrastructure to the point of risking that its licence be revoked by ENARGAS.[120]

79. However, had TGN benefited from an increase in tariffs based on bi-annual revaluations in line with price increases, TGN revenues would have increased substantially (up to double in 2003). In such a scenario it is reasonable to believe that not all the additional revenues would have been used to remunerate equity and financial debt.

80. Rather, the Tribunal considers that in such a but-for scenario of reasonable domestic tariffs and revenues derived therefrom, enabling it to operate normally, TGN would have been able to meet all reasonable operating and capital expenses. TGN would have been able to meet the costs required for maintaining the equipment in proper operating conditions in accordance with the term of the Licence, before remunerating financial creditors and shareholders. The Tribunal concludes in this respect that in the but-for scenario the evolution of OPEX and CAPEX to be used is the one proposed by Argentina in paragraphs 242-246 of the UBA First Valuation Report. In order to obtain the relevant figures of TGN's net revenue applying Argentina's approach, the Tribunal asked both Parties in PO No. 7 to submit graphs and resulting data, using, in addition to the index/increase proposed by Total, also the one based on the above hypothesis of UBA. The Tribunal has taken note of the ensuing results, set forth for Total at Table V of CL Response to PO No. 7 and for Argentina at Table 4 of UBA Response to PO No. 7. The Tribunal considers that the calculations by Total's experts set forth the correct results where they apply UBA's proposed rate of increase for costs and investments, in order to determine future but-for revenues at the appropriate WACC of 12.22%. In their calculations, Argentina's experts apply the same price increases to the cost as Total's experts, but use for the positive components (TGN's revenues) the approach discussed above that the Tribunal considers not well founded. Therefore, the result reached by UBA's experts cannot be accepted by the Tribunal. [121]

[120] See Total PHB, *supra* note 11, paras. 466 and 469: "Argentina's Measures destroyed the economic equilibrium of the Licence and reduced TGN's revenue to a level insufficient to cover its costs let alone to earn a reasonable rate of return."

[121] The Tribunal notes that where UBA uses for calculations the same approach as Total's experts, UBA's valuation of TGN (and hence of Total's equity) in the but-for scenario is not so different from that of Total's experts. In fact, the latter value Total's equity at $80 million (down from their initial conclusion of $95.9

81. Before drawing its overall conclusions, the Tribunal must address the divergence between the Parties as to the ability of TGN to meet its financial obligations in the but-for scenario. The Tribunal recalls that Total's experts considered that TGN would have been able to do so, in the but-for scenario, as a consequence of reasonable tariffs resulting from periodic inflation-linked increases of the tariffs.[122] However, according to Argentina, based on UBA's model, TGN would have defaulted in the but-for scenario for lack of adequate revenues. The reason, therefore, according to Argentina, is that TGN was over indebted and, specifically, had an unreasonably high *ratio* of debt in US dollars when its domestic tariffs became pesified at the beginning of 2002. Since this situation was due to a risky financial policy by TGN, Argentina submits that the ensuing negative effects cannot be "charged" to Argentina.[123]

82. The Tribunal put specific questions to the Parties on this issue in PO No. 7.[124] After having examined the answers, the Tribunal is of the view that TGN was not over-indebted in comparison with similar utilities in Argentina and that the share of debt incurred in US dollars outside Argentina, while high, was not unreasonable.[125] Since the Tribunal has found that the pesification does not give rise to liability on the part of Argentina under the BIT, any imbalance in the actual scenario due to the fact that most revenues of TGN have been pesified is not legally attributable to Argentina. However, Total has demonstrated that in the but-for scenario, periodically adjusted tariffs would have allowed TGN to service its foreign denominated debt notwithstanding the pesification. A contrary hypothesis by UBA would

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million), when using UBA's proposal for CAPEX and OPEX (CL Response to PO No. 7, *supra* note 92, Table V). Based on the same assumptions, UBA arrives at a value of $88.1 million (UBA Response to PO No. 7, *supra* note 80, Table IV). UBA's calculations exclude, however, the export business, "proportionally adjusting" costs, expenses and investments, an approach that the Tribunal has rejected as not accurate, see *supra* para. 71.

[122] In CL's but-for model, TGN would have faced a transitory shortage of funds in 2002, but would have been able to obtain a rollover of the amounts due in that year thanks to the foreseen adequacy of its cash flows in all subsequent years, see CL Response to PO No. 7, supra note 92, para. 14 and fn. 14, referring to the discussion on this issue at the *quantum* hearing.

[123] UBA Second Valuation Report, *supra* note 23, para. 52. Total's experts attribute instead the lack of adequate funds for TGN to service its debts in UBA's model to a faulty construction of UBA's model, because it does not include, in full or in part, in TGN's cash flows, the revenues from its export business.

[124] See para. I (iii): "the Tribunal invites the Parties to specify the amount of the financial debt of TGN before its default in 2002, the percentage that was pesified (domestic debt) and the percentage that remained in US dollars (debt due to foreign creditors). Furthermore, the Tribunal asks the Parties to specify the level of indebtedness of TGN and the proportion between foreign and domestic financial debt, both compared to similar operators in Argentina (to which the Parties referred to in the proceeding)".

[125] See CL Response to PO No. 7, supra note 92, para. 16-19, Table VI (37% pesified debt as compared to 63% non-pesified debt based on TGN's pre-default financial statements in 2002).

mean that a default in the but-for scenario would be attributable to an inadequate adjustment of the domestic tariffs rather than to a risky financial policy by TGN.

83. In any event, the Tribunal fails to see the relevance of Argentina's arguments on this issue since they do not appear to support Argentina's thesis that Total exaggerates the damages it has suffered in respect of TGN. If, as Total submits for purposes of the but-for model, TGN would be able to fully comply with its financial debt, the value of this debt would be higher than under the hypothesis suggested by UBA where the financial debt is reduced as a result of renegotiations because of the impossibility for TGN to service its debt (default). A higher value of TGN's debt in the but-for scenario reduces TGN's net value and, therefore, would reduce the amount of Total's loss.[126] Under Argentina's hypothesis, Total's equity value in TGN would be higher rather than lower and, therefore, the damages to TGN to be made good by Argentina would also be higher.

84. In conclusion, the Tribunal considers that a proper valuation of TGN in the but-for scenario, based on the revenues that TGN would have obtained but for the lack of readjustments of the tariffs in breach of the BIT, must include:[127]

- A periodic semi-annual domestic tariff adjustment based on UBA's index of price increases in Argentina, starting from 1 July 2002 up to the end of TGN's concession in 2027;

- Use of the DCF method to discount those future revenues using a WACC rate of 12.22%;

- Taking into account TGN's revenues from its export business;

- Deduction of operative and capital expenses (OPEX and CAPEX respectively) applying the various domestic prices indices as proposed by Argentina; and

[126] This is noted in CL First Report, *supra* note 54, fn. 20: "Assuming that a similar debt restructuring would take place also in the but-for scenario would only increase damages".
[127] By properly including all relevant parameters of the but-for tariff as discussed above, the hypothesized tariff would also comply with the overall requirement (Decision on Liability, *supra* note1, para. 122) that it allow the concessionaire "to recover its costs, amortize its investments and make a reasonable rate of return over time" as emphasized by Total QM, *supra* note 5, para. 92.

- Full service of TGN's financial debt.

85. Such valuation has been supplied by Total in CL Response to PO No. 7, estimating Total's equity participation of 19.19% in TGN at $80.3 million (lower than CL's initial valuation of $95.9 million).[128] Argentina's experts in their Response to PO No. 7 supplied a number of tables on the basis of the various alternative assumptions referred to by the Tribunal in PO No. 7 whose results did not match those of Total's experts. As mentioned above, the Tribunal asked the Parties for supplementary information in PO No. 8 in order to clarify the divergent results reached by the Parties' experts in their Responses to PO No. 7. Specifically the Tribunal asked them to explain the basis of their respective projections of the price indexes from 2011 through 2027 which diverged markedly. The Parties' experts explained the main inputs, sources and methodologies that they used. By comparing the information, graphs and tables supplied by the Parties it was clarified that as clearly stated in Argentina's experts' response, the difference stems mainly from the different estimates of Argentina's inflation in 2012 and 2013 made by the experts.[129] While Total's experts estimate an inflation rate around or even exceeding 20% p.a. in those years, on the basis of the sources mentioned in their response, UBA adopts the price projections used in Argentina's National Budget, which are around 10%.[130] Both Parties anticipate a decrease after 2014, but Argentina estimates a higher future value of the peso in dollar terms than Total. As a result, Total's experts maintained in their Response to PO No. 8 the but-for value of Total's equity in TGN they had submitted in their Response to PO No. 7, that is $80.3 million. However, if UBA's projections were used, the value of Total's TGN equity would amount instead to about $70 million.[131]

86. Faced with this divergence, the Tribunal considers that the basis of Total's experts' projections are sounder, and rejects UBA's rectification proposals. In this regard, in addition to the reasons previously stated, the Tribunal notes that the inflation hypothesis of Total's experts, matches their tariff increase hypothesis for 2012-2013, and are thus "internally"

[128] As results from CL Response to PO No. 7, *supra* note 92, Table V.
[129] See CL Response to the Tribunal's Procedural Order No. 8, submitted on July 2, 2012 [hereinafter "CL Response to PO No. 8"], paras. 3-6; UBA's Response to Procedural Order No. 8, submitted on 2 July 2012 [hereinafter "UBA Response to PO No. 8"], paras. 9-33.
[130] UBA Response to PO No. 8, *supra* note 129, para. 28.
[131] This results from comparing CL Response to PO No. 8, *supra* note 129, p.10, Table II with UBA's Response to PO No. 8, *supra* note 129, Table 7.

consistent.[132] Further, the evidence as to the actual inflation in Argentina in 2012-2013, available when the Parties filed their submissions, supports Total's experts' calculations.[133] Accordingly, the Tribunal determines Total's loss in respect of its share in TGN – to be compensated by Argentina - to be **$80.3 million** as of 1 July 2002. Total has claimed interest up to the date of the Award on the amount of compensation, as well as post-award interest until full payment. The Tribunal has explained in paragraph 31 above that all issues concerning interest on the compensation granted to Total are dealt with together in Part V of the present Award. Interest on the above amount from 1 July 2002 to payment shall be therefore based on the principles spelled out in Part V hereunder dealing with interest in general.[134]

F. Total's Claim for Damages as Technical Operator of TGN

87. In the *quantum* phase Total has claimed specifically, as a part of its claim concerning its losses in respect of TGN, "damages based on the reduced technical operator fees that it received from TGN as a result of the Government's measures."[135] Total states that it had set forth this specific claim in its Claimant's Reply on the Merits of 18 May 2007 after the jurisdictional phase and had submitted a detailed valuation of its damages in this respect in the merits phase.[136]

88. As to the premises and *quantum* of this claim, Total explains that when it acquired a stake in TGN, it became a party to the Technical Assistance Agreement under which it

[132] Total's experts' hypothesis for inflation in 2012-2013 (around 20%) is consistent with Total's hypothesis of a similar increase in the domestic tariffs of TGN in 2011, as recalled at paras. 43(b) and 46 and at *supra* note 64. The fact that Total has assumed in the actual scenario an increase of tariffs from 2011/2012 onwards avoids the risk of double recovery that might arise (in the absence of such an assumption) from Total being awarded damages for its stake in a company worth zero while retaining the ownership of its stake, should the value of TGN recover due to an actual increase in tariffs.

[133] In UBA Response to PO No. 8, *supra* note 129, para. 28, UBA refers not only to the projections used in Argentina's National Budget projections, but also generically to "projections presented by the International Monetary Fund" for retail inflation in Argentina (around 10%). No evidence, however, was supplied in that respect. On the contrary, the position publicly taken by the IMF, already before the submission by UBA and widely known, concerning doubts as to the accuracy of Argentina's official data on inflation, points in the opposite direction, see *Statement by the IMF Executive Board on Argentina*, Press Release No. 12/30, 1 February 2012.

[134] As to the entitlement of Total to interest from the dates it suffered the damages attributable to Argentina until payment on all principal amounts of compensation therefor under international law, generally, and specifically in accordance with Article 5(2) of the BIT, see *infra* paras. 251-252.

[135] Total QM, *supra* note 5, paras. 105-113.

[136] Claimant's Reply on the Merits of 18 May 2007 [hereafter "Total RM Merits"], para. 691; LECG Damage Report, *supra* note 115, paras. 153 and 288-293.

participated (with other shareholders) in the technical management of TGN for a yearly fee. In the actual scenario, however, TGN did not pay the full amount of the fees due to Total, resulting in a shortfall of US $4.2 million for 2002-2005. Total's experts have explained that the technical operators waived their rights for the remaining fees concerning that period. In 2006, a new agreement was reached providing for Total's fees under a certain scale until 2017. However, a cap to the payments was introduced by a covenant added pursuant to the 2006 restructuring of TGN's debt. Moreover, TGN stopped paying the management fee from 2008 onwards.[137]

89. In the but-for scenario Total assumes that TGN would have been able to pay the amount of the fees as agreed in 2006 for the period 2006-2017. The fees lost by Total are estimated by its experts as the difference between the fees Total would have earned in the but-for scenario and those earned in the actual situation. In this respect, the Tribunal notes a difference between the calculations made in the LECG Report on Damages of 2007 from that submitted in the CL First Report of 2011 in the *quantum* phase. In both reports the fees in the but-for scenario are valued at $8.9 million. However, in the actual scenario, fees earned by Total are valued at $2.7 million in the 2007 report, while in the 2011 report the experts do not mention any management fee payment. As a consequence, the 2007 report values the loss of Total at $6.1 million ($8.9 million minus $2.7 million, presumably rounded), while in the 2011 report the loss is valued in the full amount of $8.9 million.[138] The 2011 report acknowledges however that TGN suspended the payment of the fees at the end of 2008 (implying that some fees had been paid until then). The net figure of $6.1 million appears therefore to the Tribunal to be the correct one, since it takes into account the fees which Total's experts acknowledge TGN paid to Total as technical operator from 2006 to 2008.

90. In the *quantum* phase, Argentina objected in principle to Total's claim for lost revenues as technical operator of TGN, submitting that this claim is a "…new issues that bear no relation to the Decision on Responsibility," for which, moreover, Argentina submits it has not been held liable in the Decision on Liability.[139] Argentina also objects on the basis that

[137] For this description, see LECG Damage Report, *supra* note 115, paras. 288-291; CL First Report, *supra* note 54, paras, 29-32; and Exhibit C-726.
[138] Compare LECG Damage Report, *supra* note 115, paras. 153, 291-293 with CL First Report, *supra* note 54, paras. 32-33.
[139] Argentina QCM, *supra* note 6, paras. 50 and 135.

the obligation of shareholders who had acquired shares in TGN in accordance with the bidding terms to provide for technical assistance had expired in 2000.[140]

91. The Tribunal first addresses the procedural exception raised by Argentina that Total's claim concerning its losses as technical operator of TGN was not timely submitted in these proceedings and are thus inadmissible. The Tribunal first notes that the ICSID Convention does not provide for a defined final step in the proceedings or moment in time by which a claimant must submit all its claims in detail.[141] Article 46 of the ICSID Convention provides that a "Tribunal shall, if requested by a party, determine any incidental or additional claims or counterclaims arising directly out of the subject-matter of the dispute" without specifying a time limit for submitting them. Rule 40 of the Arbitration Rules, concerning Ancillary Claims, provides however that "(a)n incidental or additional claim shall be presented not later than in the reply unless the Tribunal, upon justification by the party presenting the ancillary claim and upon considering any objection of the other party, authorizes the presentation of the claim at a later stage in the proceeding." Thus it is not necessary for a claimant to articulate in detail all its claims and relief sought (such as the amount of damages sought) in the Request of Arbitration or in its first brief (such as the "memorial" mentioned in Rule 31) after a tribunal has been constituted.

92. In any case the Tribunal does not consider that Total's claim for its fees as technical operator is a "separate" claim that may be termed ancillary, incidental or additional to the claim submitted for its losses in respect of its stake in TGN. Rather, it is an integral part of that principal claim.[142] The right of Total to earn fees as a Technical Operator of TGN derives directly from Total's position as an investor which has made a direct investment in TGN.[143] This was acknowledged by the Tribunal in the Decision on Liability, and has been

[140] Argentina PHB, *supra* note 28, para. 78, based upon UBA First Valuation Report, *supra* note 63, para. 243, which, however, does not address the merits of Total's experts' calculations.

[141] This contrasts with rules on the matter found in other arbitration rules, such as the requirement in the ICC Rules of Arbitration, Article 23 that an arbitral tribunal draw up, at an early stage of the procedure, "Terms of Reference" that must include "a summary of the parties' respective claims".

[142] For definitions of these types of claims under the ICSID Convention and Arbitral Rules, see C. Schreuer "The ICSID Convention, A Commentary", 2nd Edition, p. 740 ff.

[143] The Preamble to the Technical Assistance Contract, Exhibit C-726, states that the original contract of 28 December 1992 was made "pursuant to a legal condition imposed in the framework of privatization" ("*como condición legal impuesta en el marco de la privatización*").

indirectly recognized by Argentina's experts themselves.[144] As to the timing of Total's submitting this claim, the Tribunal considers that due to the "bifurcation" of these proceedings after Argentina had raised its objections to jurisdiction, Total articulated its claim in a timely manner. Total did so in the first brief on the merits it was required to file in the proceedings after the Tribunal affirmed its jurisdiction in its Decision on Objections to Jurisdiction of 25 August 2006. Such first brief was Total's Reply of 18 May 2007, where Total set out its claim for Technical Operator fees, supported by its experts' detailed statements and calculations.[145]

93. The Tribunal considers immaterial the fact that this claim is not specifically mentioned in the Decision on Liability, considering that the role of Total as technical operator was explicitly recognized therein.[146] This claim is covered by the Tribunal's statements in paragraph 182: "The Tribunal thus only partially upholds Total's claim concerning TGN under Article 3 of the BIT". The claim is further covered by paragraph 184 containing the findings as to TGN, which is referred to in turn in the final paragraph of the Decision on Liability (paragraph 485(a)). The Tribunal concluded in paragraph 184(i) that Argentina breached its obligation under Article 3 of the BIT "…by not periodically readjusting TGN's domestic tariffs…" and further concluded in paragraph 184(ii) that "the damages thereby suffered by Total must be compensated by Argentina".

94. The losses suffered by Total as TGN technical operator are part of the damages that flow from Argentina's breach of the BIT. Total's claim for fees lost as technical operator is the result of TGN's inability to pay the contractually agreed amounts after 2008. Based on the evidence submitted by Total and its experts referred to above, the Tribunal finds that this inability was directly related to the insufficient revenues of TGN as result of Argentina's freezing of the domestic tariffs in breach of the BIT. Therefore, Total is entitled to recover as damages, the fees it would have received absent the breach, less fees actually received.

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[144] See Decision on Liability, *supra* note 1, para. 191: "Before discussing the legal issues, the Tribunal considers it appropriate to recall the evidence concerning Total's position as a major shareholder of TGN and its role as 'Technical Operator' "; UBA First Valuation Report, *supra* note 63, para. 244, fn. 58, recalls that according to TGN's Comptroller "the payments under the category of Technical Operator from 2002 onwards have merely been concealed dividend payments, even when the Transporter was in default".

[145] See *supra* note 136 and the description of the proceedings in the Decision on Liability, *supra* note 1, paras. 9-10.

[146] See Decision on Liability, *supra* note 1, para. 191 quoted at *supra* note 144.

95. As to the amount of the loss, based on the comparison between the calculations of Total's experts in 2007 and in 2011 discussed above, the Tribunal determines that this loss amounts to US$6.1 million. However, the Tribunal considers that in order to avoid a double recovery, the amount of operator fees awarded needs to be reduced by Total's proportionate ownership in TGN (19.2%).[147] This is because the payment of the fees would have increased the operating costs of TGN and reduced *pro rata* the net profits of TGN based on which Total's loss has been calculated above. Therefore, the Tribunal awards to Total the amount of **$4.9 million** as damages suffered in its position as TGN's Technical Operator with interest from 1 March 2006.[148]

III. TOTAL'S CLAIMS AS TO ITS INVESTMENTS IN THE ELECTRICITY AND POWER GENERATION SECTOR

A. Total's Investments in Power Generation

96. As set forth in more detail in the Decision on Liability at paragraphs 232-236, in the power generation (electricity production) sector Total had invested in two major power generation companies, Central Puerto and HPDA.

97. Central Puerto is a large dual fuel electricity generator, having the capacity to produce 2,165 megawatts, which represents 9.5% of Argentina's total installed capacity. Central Puerto was created in 1992 as part of the privatization of Servicios Eléctricos del Gran Buenos Aires S.E. ("SEGBA"). In July 2001, Total acquired all of the shares in Central Puerto held by Gener, a Chilean company, representing 63.79% of the total stock of Central Puerto. Total says it paid approximately US$255 million and subscribed to US$120 million of debt to acquire those shares.[149]

98. HPDA is said to be the largest private hydroelectric generation company in Argentina. It was created in 1993, as part of the privatization of Hidroeléctrica Norpatagónica S.A., a state-owned hydroelectric generation company. At the time of privatization in 1993, a

[147] 19.19% rounded to 19.2%, see *supra* note 48.
[148] 1 March 2006 is the relevant date (and not 1 July 2002, as indicated by Total's experts and properly claimed by Total for its other damages in respect of TGN) because Total's experts explain that lost payments claimed would have accrued to Total from 2006 to 2017 under the amended Technical Operator Agreement which is dated February 2006, Exhibit C-726, CL First Report, *supra* note 54, para. 31.
[149] See Exhibit C-70 for a diagram of Total's shareholdings in Central Puerto and Exhibit C-44 for a copy of an extract from Central Puerto's share register.

number of foreign investors created an Argentine company, Hidroneuquén S.A., which acquired 59% of HPDA's shareholding. In September 2001, Total, through Total Austral, acquired 70.03% of Hidroneuquén from Gener for the payment of US$72.5 million plus the acquisition of approximately US$57 (or US$50.42) million of subordinated debt in the form of bonds.[150] As a result, Total indirectly owned a 41.22% shareholding in HPDA.[151] According to Total, HPDA's four hydroelectric units have an aggregate installed capacity of 1,400 megawatts and represent 6.13% of Argentina's installed electricity capacity.

99. Thus, in 2001, Total spent a total of US$327.45 million to acquire shares in Central Puerto and HPDA.[152] In November 2006, while the arbitration was pending, Total sold its investments in Argentina's power generation sector to an Argentinean private investor receiving US$35.0 million for its 63.79% equity stake in Central Puerto and US$145.0 million for its 41.22% equity stake in HPDA.[153]

B. Total's Claims in respect of its Investment in Power Generation in the Liability Phase

100. In the Decision on Liability, the Tribunal provided a detailed overview of the complex legal regime governing Argentina's power generation sector after its privatisation in 1992, based on the Parties' submissions and evidence and on the reports prepared by the Parties' experts.[154] The Tribunal will not repeat that lengthy explanation here, considering it incorporated by reference in this Award.

101. In the merits phase, Total alleged that a number of measures taken by Argentina breached or revoked the commitments, contained in the Electricity Law (especially Article 36), granted to attract investment in the power generation sector and upon which Total had relied in making its investments.[155] The measures complained of by Total are the Emergency Law (Article 8) and a number of Resolutions adopted by the Secretariat of Energy ("SoE"), some of which were specifically based on, and others which simply followed, the Emergency

[150] See Total PHB Merits, *supra* note 45, pp. 44-45, fn. 87.
[151] See Total RFA, *supra* note 44, paras. 158-160 and Exhibit C-72, a diagram showing Total's participation in HPDA, and Exhibit C-44, a copy of HPDA's share register.
[152] Total PHB Merits, *supra* note 45, para. 98.
[153] See LECG Damage Report, *supra* note 115, p. 66, para. 133.
[154] See Decision on Liability, *supra* note 1, paras. 237-278.
[155] See Total MM, *supra* note 47, para. 33. Law 24.065 which entered into force on 16 January 1992, Exhibit C-84, and implementing Decree 1.398/92, Exhibit C-35.

Law. According to Total, through the Emergency Law and these SoE Resolutions, Argentina altered the basic principles of the electricity legal regime in such a manner as to breach the fair and equitable treatment clause in the BIT.

102. Total has also complained that these measures were in breach of Argentina's law, namely the Electricity Law (Article 36), which remains in force, because they did not respect the fundamental promise of remuneration to generators at a uniform rate, based on the economic cost of the system and which takes account of the cost of unsupplied energy.[156] On the contrary, the regulations adopted by the SoE during and after the state of emergency

> *resulted in: (a) generators no longer receiving a uniform rate; (b) prices no longer reflecting the economic cost of the system; and (c) prices no longer reflecting the cost that unsupplied energy represents for the community, i.e., no longer encouraging investment in capacity to satisfy peak demand, and no longer promoting long-term investment to satisfy future demand.*[157]

103. Total has identified the measures (and their effects), that it describes as "radical alterations" of the existing power generation regime in breach of the BIT, as follows:[158]

> *(i) the pesification of the spot price, and any other payments to which power generators were entitled, specifically the capacity payments and the payment of unsupplied energy, at a one to one rate; (ii) the alteration of the uniform marginal price mechanism in the power generation market through violation of the uniform rate rule and the introduction of a fixed price cap; and (iii) the "refusal" to pay power generators their dues even at the dramatically reduced values resulting from the measures*[159]*, followed by the 'forced' conversion of Total's existing and future receivables (that CAMMESA*[160] *is not able to pay) into participations in new power plants. (i.e., "Fondo para Inversiones Necesarias que Permitan*

[156] See Total PHB Merits, *supra* note 45, para. 880.
[157] *Ibid*., para. 881.
[158] For a full description of Total's complaints and arguments see Decision on Liability, *supra* note 1, paras. 279-296.
[159] This list is contained in Total MM, *supra* note 47, para. 33. A more detailed description of the measures complained of and their specific impact is found in Total RFA, *supra* note 44, paras. 103-116, 135-140, and 180-198.
[160] CAMMESA was established in Decree 1.192/92 as the Compañía Administradora del Mercado Eléctrico Mayorista S.A. [hereinafter "CAMMESA"], a not-for-profit company in which the main actors of the Wholesale Electricity Market participate together with the State.

Incrementar la Oferta de Energía Eléctrica en el Mercado Eléctrico Mayorista", hereinafter also "FONINVEMEM").[161]

104. Total claimed that the fair and equitable treatment obligation of Article 3 of the BIT was breached by the measures discussed, since the obligation to provide such treatment protects investors against fundamental alterations of the regulatory framework on which they legitimately relied in making their investment. Moreover, according to Total's Request for Arbitration, through the various measures complained of by Total, Argentina also failed to observe the obligation not to take measures equivalent to expropriation without prompt, adequate and effective compensation in breach of Article 5(2) of the BIT and that of refraining from discriminating against Total (Article 4).[162]

C. The Tribunal's Holdings in the Decision on Liability in respect of Total's Claims as to Power Generation.

105. The Tribunal's relevant holdings in the Decision on Liability are the following:

> *312 (…) The Secretariat of Energy appears to have broader powers to regulate the electricity sector under the law than ENARGAS has for the gas sector. In light of the legal principles on which the Tribunal relied with respect to the TGN claim above, the changes made in the pricing structure, including specific parameters, are not per se in breach of promises or legitimate expectations of the investors.*
>
> *313. This does not mean that any change or alteration of the regime, negatively affecting the operations of the private generators and their economic equilibrium, is shielded from the application of the fair and equitable treatment standard guaranteed by the BIT. The respect for economic equilibrium principle entails that, in normal situations and from a long term perspective, the private generators are able to cover their costs and make a return on their investment, while providing their services to the market and consumers as required under the Electricity Law.*
>
> *328. It cannot be disputed however, that the pricing system the SoE progressively put in place after 2002 is at odds with those principles as spelled out in the Electricity Law, even leaving pesification out of consideration. After 2002, the market has been characterized by unreasonably low tariffs. These, in turn, have massively reduced the returns of the generators, barely permitting them to cover their*

[161] Decision on Liability, *supra* note 1, para. 286.
[162] See Total RFA, *supra* note 44, paras. 229-232 and 233-238, respectively.

variable costs, contrary to sound economic management principles for power generators operating within a regulated system of public utilities. […]

330. The Tribunal considers that this situation, brought about by the SoE with full awareness of its negative impact on affected generators operating under sound economic principles, cannot be reconciled with the fair and equitable treatment standard of Article 3 of the BIT. As a consequence, the Tribunal finds that Argentina has violated the BIT in this respect.

333. (…) the fair and equitable standard has been breached through the setting of prices that do not remunerate the investment made nor allow reasonable profit to be gained contrary to the principles governing the activities of privately owned generators under Argentina's own legal system…

106. As to FONINVEMEM, the Tribunal held as follows:

338 This scheme must be considered as a kind of forced, inequitable, debt-for-equity swap (…). As such, in the view of the Tribunal it represents a clear breach of the fair and equitable treatment obligation of the BIT for which Argentina is liable to pay damages. (…) The determination of the value of these shares is relevant to the valuation of damages and will have to be taken into account in the quantum phase.

339 (…) the quantum phase shall deal with the determination of the losses suffered by Total because of the negative impact of Argentina's actions on HPDA and Central Puerto that have been found to be in breach of the BIT. [Footnote: 458 This includes determining the proper "but for scenario", the actual scenario and the possible influence of both the purchase price paid by Total in 2001 and the sale price of its equity stakes in Central Puerto and HPDA at the end of 2006.]

107. Based on the above the Tribunal concluded as follows in respect of Total's claims regarding Power Generation:

346 The Tribunal, based on the above reasoning and findings,

- concludes that Argentina has breached its obligations under Article 3 of the BIT to grant to Total fair and equitable treatment, in respect and as a consequence of:

(a) the alteration of the uniform marginal price mechanism, as specified in the preceding paragraphs;

(b) the non-payment of receivables arising from energy supplied in the spot market by HPDA and Central Puerto and the conversion of such receivables into shares in new generators under the FONINVEMEM scheme.

- *concludes that the damages thereby suffered by Total must be indemnified/compensated by Argentina in the amount to be determined in a separate quantum phase of these proceedings;*

- *rejects all other claims by Total related to its investment in HPDA and Central Puerto under Articles 4 and 5 of the BIT;*

- *defers the determination of the above damages to the quantum phase; and*

- *rejects any other plea and defences by Argentina, including those premised on the "state of necessity".*

D. Total's Claims of Damages in the Quantum Phase in respect of Power Generation

108. In the *quantum* phase Total submits that it is entitled to full compensation for all damages arising out of the government's treaty breaches recognized in the Decision on Liability, specifically the loss in fair market value of Total's shares in Central Puerto and HPDA, the loss of "technical operator" fees in relation to HPDA, and interest.[163] As to the loss in fair market value, Total considers that based on the Decision on Liability it is entitled to damages corresponding to the difference between:

a) the fair market value of Total's stake in Central Puerto and HPDA as it would have been on 31 December 2006, had Argentina: (i) observed the "economic cost of the system" principle and not altered the uniform marginal price mechanism; and (ii) paid receivables arising from energy supplied in the spot market by Central Puerto and HPDA (this being the "but-for" scenario, calculated using a DCF model);[164] and

b) the value of its stakes in Central Puerto and HPDA in late 2006 when Total sold them (the "actual" scenario). Total submits that 31 December 2006 is the appropriate valuation date for determining the fair market value of Total's investments in Central Puerto and HPDA (and the decline in this value due to Argentina's treaty breaches) because it is the closest year-end date to Total's

[163] Total QM, *supra* note 5, paras. 134-135.
[164] *Ibid*., paras. 141-150. See also CL First Report, *supra* note 54, para. 47.

> divestment of those stakes which took place in November 2006, when Total's losses up to the date of divestment effectively crystallised.[165]

109. In order to calculate the revenues of the two generators under the assumptions of the but-for scenario referred to above, and to discount them as at the end of 2006, Total explains that its experts have developed a but-for model that assumes that Central Puerto and HPDA would have been able to cover their costs and make a reasonable return on the investment based on those "main assumptions".[166] Total explains in further detail[167] that its experts "project the path that the electricity spot prices would have taken in the absence of Argentina's treaty breaches, using the complex dispatch simulation procedure normally used by the electricity pool administrator, CAMMESA" by using the Lestard Franke electricity dispatch model that simulates/replicates CAMMESA's model. This is "consistent with the Parties' agreement that the damages analysis … must be made using a dispatch model that would appropriately reflect the characteristics of the Argentine market".[168]

110. The assumptions of Total's experts are that in the but-for scenario Argentina would not have modified the basic rules for price formation, which established that electricity spot prices were to be: (i) uniform; (ii) determined by the level of hourly demand; and (iii) determined by the marginal plant called for dispatch.[169] To reflect these premises, Total's experts updated the model used for their LECG Damage Valuation of 2007 to obtain but-for energy spot prices to compare with actual spot prices.[170] They assume in the but-for scenario that "consistent with the Decision":

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[165] In the original fn. 231 at para. 136 of Total QM, *supra* note 5, Total writes: "Argentina appears to concede this. See Argentina PHB (n 28), ¶ 603 ("TOTAL sold its interest in HPDA in December 2006. Upon selling its interest, it would be logical that the damages would remain fixed at that time")".

[166] CL First Report, *supra* note 54, paras. 46-49, and in more detail at paras. 133-143.

[167] Total QM, *supra* note 5, para. 142.

[168] In fn. 242 at para. 142 of Total QM, *supra* note 5, Total refers to Argentina's Comments on Claimant's Submission on Quantum Procedure of 28 February 2011, para. 85.

[169] CL First Report, *supra* note 54, paras. 38-39 referring to the Decision on Liability, *supra* note 1, para. 325. In the but-for scenario CL assumes (as in the actual situation) that "contractual pesification as of 2002 affecting HPDA's debt and HPDA and Central Puerto's contractual sales" is in accordance with the Decision on Liability's finding that pesification was not in breach of Total's rights under the BIT, CL First Report, *supra* note 54, para. 46.

[170] See Total QM, *supra* note 5, para. 143 and the graph with actual vs. but-for prices at para. 144. More details as to CL's assumptions are found in the CL First Report, *supra* note 54, paras. 41-42 and Appendix B thereto, paras. 135-142. See also fn. 67 at para. 42 of the CL First Report, *supra* note 54, referring to paras. 255-267, 313, 327-329, and 333 of the Decision on Liability as the basis of the various assumptions.

a) neither Resolution 240/03(a) nor ARS$120 cap would be in effect, implying uniform prices in the electricity market;

b) natural gas wellhead prices are actual market prices for 2002-2006;

c) natural gas transportation tariffs would be the but-for tariffs proposed for TGN, that is increased semi-annually starting in July 2002; and

d) capacity payment would be set in pesos at ARS$12/MWh as in the actual scenario.[171]

Total's experts' model assumes furthermore that "Electricity demand volumes reflecting actual demand up to end of 2006 and growing at a rate of 5.5% per year from 2007 onwards, are consistent with the average historical growth over the period 1993-2006".[172] They assume also that the FONINVEMEM scheme is not in place in the but-for scenario, since it was found in the Decision on Liability to represent a breach of the BIT.[173]

111. In order to obtain the value of the two firms under the but-for scenario, CL estimates[174] the higher dividends that an equity holder such as Total would have been able to collect in 2002-2006 in the but-for scenario, due to higher revenues based on the above assumptions.[175] As from 2007 onwards until the end of the respective concessions, CL estimates annual cash flows, discounting them back to 31 December 2006 "at 13.77%, the estimated WACC for power generators in Argentina", assuming that Total would have kept the investment in the but-for scenario.[176]

112. Based on the above assumptions and calculations, Total submits a but-for valuation for Central Puerto at $564.6 million in 2006 ($304.7 million after adding accumulated cash

[171] See CL First Report, *supra* note 54, Annex B, para. 135(d).
[172] *Ibid.*, para. 136(c) referring to LECG Damage Report, *supra* note 115, para. 251(b) which in turn refers to growth data of CAMMESA 1993-2006, Exhibit C-602.
[173] CL First Report, *supra* note 54, para. 47. See Decision on Liability, *supra* note 1, para. 338.
[174] CL First Report, *supra* note 54, paras. 48-51. The use of estimated dividends until 2007 and of estimated cash flow thereafter reflects the fact that the CL First Report of 2011 is based on the LECG Damage Report submitted in 2007 for the merits phase.
[175] CL First Report, *supra* note 54. CL acknowledges, however, that Total would not have actually collected dividends in the but-for scenario (as it did not in the actual scenario) "as additional cash-flows generated during this period would have been used to reduce debt obligations in both companies", CL First Report, *supra* note 54, para. 49 and fn. 80.
[176] *Ibid.*, para. 51. Future revenues are projected until the end of the generators' concessions (2023 for HPDA and 2030 for Central Puerto), see Total QM, *supra* note 5, para. 41(b) and Total QR, *supra* note 23, para. 148.

and deduction of the financial debt), resulting in a valuation of Total's 63.79 % share at $194.4 million. The values for HPDA are $762.5 million for the whole firm ($706.5 million after adding accumulated cash and deduction of financial debt), resulting in a net equity value for Total's 41.22 % share at $291.2 million.[177] Together, Total's shares in the two generators would have been worth, according to Total, $485.6 million, as results from adding $291.2 million (HPDA) and $194.4 million (Central Puerto).[178]

113. In order to determine its losses caused by Argentina's treaty breaches, Total deducts from these figures the actual value of Total's stake in the two generators at the end of 2006. In this respect, Total's experts submit two different sets of figures based on two different methods of calculation. Under the first method, the actual value of the two generators is the price which Total received for them on their sale in November 2006, namely $35.1 million for Central Puerto and $145.5 million for HPDA, in total $180.6 million. Based on this comparison of the but-for DCF value versus the actual transaction price,[179] Total claims damages amounting to the difference between the two figures, namely $159.2 million for Central Puerto and $145.7 million for HPDA, totaling $304.9 million as at the end of 2006.[180] Total defines the method based on this comparison as the "DCF/transaction" method because DCF is used in the but-for scenario to establish the value the investment would have had if the impugned measures had not been put in place, while in the actual scenario the investment is valued at the actual sale price obtained when it divested.[181] Total explains that it is appropriate to base the actual value of the generators on the sale price of 2006 because "[t]he 2006 transaction was an arm's length transaction to an independent third party, and the sales price thus reflected what market participants believed to be the fair market value of these assets, as late at 2006".[182]

[177] Total QM, *supra* note 5, para. 165; CL First Report, *supra* note 54, paras. 53-54. The figures submitted by LECG Damage Report, *supra* note 115, para. 130, assuming no pesification in the but-for scenario, were for Central Puerto: total value $626.5 million, and equity value for Total, $297 million. As for HPDA: $830.1 million and $358.6 million respectively.
[178] The Tribunal recalls that Total had bought these shares in 2001 for $327.45 million, see *supra* para. 99.
[179] Total QM, *supra* note 5, paras. 151-153; CL First Report, *supra* note 54, paras. 54-57 referring to LECG Damage Report, *supra* note 115, paras. 42-46 (Section II.3 "The Transaction Approach").
[180] Total QM, *supra* note 5, Tables XVI and XVII at para. 165.
[181] *Ibid*., para. 153.
[182] Total QR, *supra* note 23, para.162.

114. Total's experts have also performed a different, alternative calculation for determining Total's losses based on what they call the "pure DCF approach".[183] This approach is based on the DCF method to calculate the value of the two generators both in the but-for scenario and in the actual scenario.[184] Also under this methodology as in the DCF/transaction method, the but-for and actual values of the two generators are compared as of 31 December 2006 and the difference indicates the loss suffered by Total due to the measures found to be in breach of the BIT. However, under this methodology, while the but-for values of the generators are the same as in the DCF/transaction method (since they are in both cases calculated according to the DCF method), the actual values are different as a result of being calculated based on the DCF method instead of on the actual sale price. Under this pure DCF approach also Central Puerto's and HPDA's *actual* values are, therefore, based on the discounted present (2006) value of their future cash flow. In this regard, Total's experts note that Total collected no dividends in 2002-2006 and discount future cash flows in the actual scenario at the same WACC rate of 13.77% as in the but-for scenario, assuming that Total would have continued to hold its stakes in the actual scenario as well.[185]

115. According to Total's experts, under the pure DCF method the actual value of Central Puerto is $323.6 million, resulting in a net value of $149.9 million after having added accumulated cash and having deducted financial debt. The actual value of HPDA is set under the same method at $709.2 million, resulting in a net value of $518.8 million after having added cash and deducted financial debt. Thus, the value to Total of its respective equity shares amount to $95.6 million for Central Puerto and $213.8 million for HPDA (in total

[183] CL First Report, *supra* note 54, para. 46. While Total does not submit formally in its *quantum* briefs and prayers for relief a request of damages based on its experts' alternative "pure DCF" method, Total does recognize this alternative approach as submitted by its experts; see Total QM, *supra* note 5, fn. 236: "In addition to this "DCF/transaction approach" and consistent with the approach taken during the liability phase, Dr. Abdala and Professor Spiller also calculate Total's damages in relation to Central Puerto and HPDA by using a "pure" DCF approach, which uses a DCF model to calculate fair market value in both the "but-for" and "actual" scenarios."

[184] CL First Report, *supra* note 54, paras. 46-52 and Tables III and IV at para 53. In both but-for and actual scenarios, using the DCF method, Total and its experts assume that "the Treaty breaches affecting spot prices would cease at the end of 2011 – a conservative assumption given that the Government has given no indication that it intends to lift the Spot Price Cap or repeal any of the other electricity pricing measures", Total QM, *supra* note 5, para. 146 with reference to CL First Report, *supra* note 54, para. 55.

[185] See CL First Report, *supra* note 54, paras. 49 and 51 based on the LECG Damage Report, *supra* note 115, paras. 121-128. The assumptions on the future evolution of the actual prices are found in the graph at para. 144 of Total's QM, *supra* note 5. Total's experts assume, as noted above, that spot prices would be increased in 2011, assuming, as set forth by Total at para. 146, that "the Treaty Breaches affecting spot prices would cease at the end of 2011", although "the Government has given no indication that it intends to lift the Spot Price Cap or repeal any other electricity pricing measure".

$309.4 million). As a result, the difference in respect of their but-for value, that is Total's damages in respect of the two generators, would amount under the "pure DCF" method to $176.1 million ($485.6 million minus $309.4 million, rounded).[186] The damages to Total under the "pure DCF" method are thus considerably lower than under the DCF/transaction method ($176.1 million versus $304.9 million). This is due to the fact that the actual value of the two generators under the pure DCF method is significantly higher than the price at which Total sold the investments (for Central Puerto and HPDA respectively: DCF value equal to $95.6 million and $213.8 million – for a total for both of $309.4 million; against transaction sale prices of $35.1 million and $145.5 million – for a total for both of $180.6 million). In other words, Total sold in 2006 at a price of $180.6 million assets which according to the DCF method would have been worth $309.4 million.

116. The calculations made by Total's experts are best shown by reproducing their Tables:[187]

Table III Damages to Total's Investments in Central Puerto (DCF Approach)

	Pure Valuation	Actual Valuation	Total Damages
In MM US$ of December 31, 2006			
Forward Looking Damage			
+ Total Firm Value	564.6	323.6	
+ Accumulated Cash	2.1	13.6	
- Total Financial Debt	262.0	187.3	
Equity Value to Shareholders	304.7	149.9	
TOTAL share	*63.8%*	*63.8%*	
Equity Value to TOTAL	194.4	95.6	98.7
Damages in Million US$ as of December 31, 2006			98.7
Damages in Million US$ as of May 31, 2011			115.9

Source: Central Puerto Damage Valuation Model as per Decision (C-761).
Note: Damages related to FONINVEMEM included in the above calculation are US$ 1.9 MM in US$ of May 31, 2011.

[186] See CL First Report, *supra* note 54, para. 53, Tables III and IV.
[187] CL First Report, *supra* note 54, pp. 33-34 and 36.

Table IV Damages to Total's Investments in HPDA (DCF Approach)

	Full Firm Valuation	Partial Valuation	Total Damages
In MM US$ of December 31, 2006			
Forward Looking Damage			
+ Total Firm Value	762.5	709.2	
+ Accumulated Cash	167.6	3.7	
- Total Financial Debt	223.6	194.1	
Equity Value to Shareholders (Dec 06)	706.5	518.8	
TOTAL share	*41.2%*	*41.2%*	
Equity Value to TOTAL	291.2	213.8	77.4
Value as Technical Operator	3.0	2.5	0.5
Damages in Million US$ as of December 31, 2006			77.8
Damages in Million US$ as of May 31, 2011			91.4

Source: HPDA Damage Valuation Model as per Decision (C-762).
Note: Damages related to FONINVEMEM included in the above calculation are US$ 21.9 MM in US$ of May 31, 2011.

Table V Damages to Total's Investments in Central Puerto (DCF/Transaction Approach)

	Enegor	Actual	Total Damages
In MM US$ of December 31, 2006			
Forward Looking Damages			
Total Firm Value	564.6		
Plus: Accumulated Cash	2.1		
Less: Total Financial Debt	262.0		
Equity Value To Shareholders	304.7		
Total Share	*63.8%*		
Equity Value To Total	194.4	35.1	159.2
Damages in Million US$ as of December 31, 2006			159.2
Damages in Million US$ as of May 31, 2011			186.9

Source: Central Puerto Damage Valuation Model as per Decision (C-761).

Table VI Damages to Total's Investments in HPDA (DCF/Transaction Approach)

	Enegor	Actual	Total Damages
In MM US$ of December 31, 2006			
Forward Looking Damages			
Total Firm Value	762.5		
Plus: Accumulated Cash	167.6		
Less: Total Financial Debt	223.6		
Equity Value To Shareholders	706.5		
Total Share	*41.2%*		
Equity Value To Total	291.2	145.5	145.7
Value As Technical Operator	3.0	2.5	0.5
Damages in Million US$ as of December 31, 2006			146.1
Damages in Million US$ as of May 31, 2011			171.5

Source: HPDA Damage Valuation Model as per Decision (C-762).

117. Before concluding its review of the methodology and *quantum* of Total's claims, the Tribunal notes that Total does not submit any distinct claim for damages in respect of the

FONINVEMEM scheme although the Tribunal found in its Decision on Liability that this scheme represented a breach of the BIT by Argentina.[188]

118. This is so because under both methods submitted by Total to calculate its damages in in the electricity sector (DCF/transaction and pure DCF methods), the loss suffered by Total due to the forced conversion of receivables in FONINVEMEM shares is ultimately immaterial for the calculation of damages. Total has in fact not included nor added in its valuation of the losses a distinct figure for those due to the FONINVEMEM scheme under either of the above valuation methods, although a separate calculation of those damages has been submitted by Total.[189] The issue of FONINVEMEM is irrelevant under both methods because of the following reasons: Under both methods, in the but-for scenario the FONINVEMEM scheme obviously would not exist: On the other hand in the actual scenario, under the DCF/transaction method the actual sale price is taken into account, whereas in the pure DCF method the actual value is measured by the discounted cash flow of future revenues, so that the actual existence of the scheme has no impact. As a consequence, the dispute between the Parties as to the value of the FONINVEMEM shares, currently or in the future, is of no relevance to the assessment of the damages suffered by Total and the Tribunal does not need to analyze it further.

E. Argentina's Position

119. In its Counter-Memorial on Quantum of 2 September 2011 ("Argentina QCM"), Argentina opposes on various grounds both the methodologies submitted by Total to calculate the damages resulting from the measures found in breach of the BIT and the *quantum* figures proposed by Total. Pointing out that Total sold in 2006 the investments made in 2001, Argentina suggests that "compensation should only be awarded for the period during which Total's investment was affected by the measures for which Argentina was held liable"; that is, from Resolution 240/03 in August 2003 to the date of the sale.[190] Based on this assumption, Argentina submits that Total, as a shareholder, can only complain in respect of the loss of potential dividends from the companies in question. However, no dividends were paid to Total in the actual scenario nor could they have been distributed in the but-for

[188] See Decision on Liability, *supra* note 1, paras. 337-339.
[189] See CL First Report, *supra* note 54, para. 52 estimating a loss of $24 million as of 2011.
[190] See Argentina QCM, *supra* note 6, para. 146.

scenario due to the existing debt covenants. Argentina therefore concludes in this respect that "the mechanism imposed by the Secretariat of Energy, despite altering the uniform marginal price mechanism, did not cause any harm to Total".[191]

120. Argentina further relies on its experts on *quantum*, namely on the UBA First Valuation Report that shows that "the generators covered their costs at all times and achieved a positive EBITDA that is higher than the one obtained by averaging out the EBITDA for 130 American utility companies".[192] Since a positive EBITDA shows that the operating margins of the two companies in the period were positive, UBA concludes that the generators were profitable and the price mechanism was adequate to remunerate them. Higher prices would have simply generated higher profits. Based on the above, Argentina submits that a different conclusion would be inconsistent with the Tribunal's statements regarding the concept of reasonable profitability in the sector.[193]

121. UBA reviews in detail the evolution of electricity prices, both to the end user and paid to the generators,[194] and points out "two different periods, one tending towards a significant fall in electricity power prices between 1993 and 2001, and another evidencing a rise in power prices from 2002 to date" and analyses the variations in the remuneration of the generators which occurred after 2002.[195]

122. Specifically as to the EBITDA,[196] UBA concludes from its analysis that "from 2003 to 2006, [the] period in which the damage caused by the breach of the BIT is to be calculated, the actual EBITDA was higher than the one obtained in the shareholding purchase year (denominated in ARS), updated to maintain its purchase power. Thus, based on the fact that

[191] *Ibid*., paras. 150-152; UBA First Valuation Report, *supra* note 63, paras. 255-256.
[192] See Argentina QCM, *supra* note 6, para. 151-152, based on UBA First Valuation Report, *supra* note 63, para. 336 and referring to the Decision on Liability, *supra* note 1, paras. 327 and 333.
[193] Argentina QCM, *supra* note 6, para. 152.
[194] *Ibid*., fn. 182. Argentina observes: "We must draw a distinction between the prices paid to the generators for the electricity power and the tariffs paid by users, since they are not directly related to one another", suggesting that the Tribunal may have overlooked this distinction at para. 328 of the Decision on Liability. To the contrary, the Tribunal wishes to point out that the Decision on Liability clearly makes this distinction in analysing in detail the mechanism under which generators were paid for dispatched and non-dispatched energy (spot price and capacity payments) at pp. 110-126, paras. 239-274 of the Decision on Liability, *supra* note 1). There is, however, a link between the two prices, as recalled by the Tribunal at para. 294 of the Decision on Liability: "from September 2003, CAMMESA was unable to pay generators for the electricity that they were supplying, since the tariffs paid by the consumers were not adequate to cover the payments owed by electricity distributors to the generators".
[195] UBA First Valuation Report, *supra* note 63, para. 283.
[196] *Ibid.*, para. 327.

EBITDA was reasonable at the time Total purchased shares in HPDA and in Central Puerto, Argentina concludes that, between 2003 and 2006, there was no damage from the alleged breach of Article 3 of the BIT in accordance with the terms of paragraph 346(a) of the Decision on Liability. This would be so because in that period, EBITDA was higher than that which would have resulted from updating the 2001 EBITDA purchase power. Furthermore, Argentina points out that in 2006 EBITDA denominated in USD was equal to 2001 EBITDA in USD.[197]

123. In addition to the arguments based on the lack of dividends and on the positive EBITDA in 2003-2006, Argentina makes a different argument based on the purchase and sale prices of the generators in 2001 and 2006 respectively. Argentina submits that "[i]n this regard, it may be convenient to draw a comparison between (i) the value of the share capital in the but-for scenario, that is, the value that such share capital would have had, in accordance with investors' expectations, right before the adoption of the measures that allegedly violated the Treaty; and (ii) the value of the share capital in the actual scenario, that is, the value that such share capital has, taking into consideration what actually happened."[198]

124. Argentina submits that the purchase price that Total paid was a "completely inflated price," because it was based on the pre-crisis expectations which can be taken into account only as a ceiling on the value of the shareholdings in the but-for scenario.[199] As for the sale price in 2006, Argentina considers that Total decided to sell its stake "at a bad time", namely when the prices were low, while thereafter, "[i]n addition to the favourable situation of the country, which has experienced a sustained growth, the power sector has recorded steady increases in the power generation price."[200] Argentina submits that Total should suffer the cost of its decision of selling the shares at a relatively low price and that it "should not take

[197] *Ibid.*, paras. 355-356.
[198] Argentina QCM, *supra* note 6, para. 161.
[199] UBA First Valuation Report, *supra* note 63, para. 143 appears to be more cautious in this respect. According to the UBA First Valuation Report, *supra* note 63, paras. 341-347, Total had paid the stakes in the generators 5.12 (at para. 341) or 6.45 (at para. 347) times the EBITDA and has resold them at 3.45 times the EBITDA. Total challenges this data, see CL Second Report, *supra* note 23, para. 96. UBA concludes in its report at para. 347 that Total would have obtained US$70 million more than the purchase price, had it sold the generators in 2006 based on the 2001 EBITDA of 6.45. According to UBA, under normal circumstances the reasonable rate for this kind of company is between 4 and 6 times. The UBA First Valuation Report concludes at para. 341 as follows: "However, taking into account the emergency situation in which the domestic economy, in general, and the electric power industry, in particular, were immersed when this operation was performed, it would be reasonable to believe that TOTAL could have utilised a lower ratio and, thus, paid a lower price". For the position of the Tribunal as to this issue see the Decision on Liability, *supra* note 1, paras. 322-324.
[200] Argentina QCM, *supra* note 6, para. 169.

advantage of the short period in which it was involved in the sector to earn the same return as a long-term investor under ordinary circumstances."[201]

125. At the same time, Argentina argues that "the value to be calculated in the actual scenario should reflect the value of the business and, therefore, the present value of the shares, as the power plants are still operating and the users are still paying for the electricity generated by them".[202] Argentina submits that under this approach the purchase price of $327.45 million should be compared with the but-for price calculated by Total's experts under the pure DCF method as being $309 million, resulting in a loss for Total of about $18 million.[203]

F. The Tribunal's Evaluation

126. In conducting its assessment, the Tribunal has carefully reviewed all the arguments of the Parties summarized above, their respective expert reports and evidence submitted in writing and at the hearings, the various pleadings filed by the Parties and their Post-Hearing Briefs, as well as the Parties' and their experts' Responses to PO No. 7.[204]

127. The Tribunal wishes first to confirm its findings, reasoning and conclusions set forth in the Decision on Liability, according to which Argentina has breached its obligations of fair and equitable treatment under Article 3 of the BIT in relation to Total's investments in HPDA and Central Puerto due to "the pricing mechanism the SoE progressively put in place after 2002".[205] The fact that the generators had a positive EBITDA, or that they would have paid no dividends also in the but-for scenario, does not exclude the existence of damages, as

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[201] *Ibid.*, para. 168.
[202] *Ibid.*, para. 167.
[203] *Ibid.*, para. 174. Argentina insists, in any case, that Total suffered no damage based on the other methodologies submitted by it. Argentina further argues that Total's experts are wrong in estimating the damages as of 2006 and not as of 19 August 2003, the date preceding the adoption of Resolution 240/2003 through which the Tribunal found Argentina to have "breached its obligations under the treaty by modifying the uniform marginal price", *Ibid.*, paras. 175-177.
[204] In PO No. 7, *supra* note 24, the Tribunal asked the Parties to specify, as part of their Post-Hearing Briefs, the percentage of the financial debt of Central Puerto and HPDA that was pesified (domestic debt) and the percentage that remained in US dollars due to foreign creditors as well as total amounts thereof. Furthermore, the Tribunal asked the Parties to specify the level of indebtedness of Central Puerto and HPDA and explain the impact of pesification, if any, on the debt burden of each generator.
[205] Decision on Liability, *supra* note 1, paras. 325-333, specifically at para. 328, and conclusions at para. 346(a). The Tribunal recalls that the SoE had already enacted several changes affecting wholesale spot electricity prices before Resolution 240/2003, Exhibit C-79, such as Resolution 8/2002, Exhibit ARA-99 and Resolution 1/2003, Exhibit C-77. See also Total QM, *supra* note 5, para. 141, fn. 239.

explained below, and in any case does not affect the Tribunal's conclusions in the Decision on Liability as to the existence of breaches by Argentina of Total's treaty rights in respect of the electricity sector. As explained in the Decision on Liability, this was because the new pricing regime to which the generators owned by Total were subjected from 2002 on did not remunerate them adequately, "barely permitting them to cover their variable costs, contrary to sound economic management principles for power generators operating within a regulated system of public utilities",[206] besides being also in "disregard of the basic principles of the Electricity Law".[207] It is therefore the task of the Tribunal to ascertain the damages suffered by Total based on the most appropriate methodologies and assumptions, and calculations.

a) *Correctness of the DCF approach in general*

128. The Tribunal considers that the general approach adopted by Total for the valuation of damages relating to power generation is sound: the Tribunal has already explained in the paragraphs on General Principles applicable to the valuation of Total's damages and in respect of the TGN claim why this approach is correct to establish damages concerning going concerns which have been affected in their profitability by objectionable governmental measures. By comparing the relevant but-for future cash flows with the actual future cash flows using the DCF method and applying an appropriate WACC in order to discount those flows to the relevant date, the lost profits can be determined and hence the decrease in market value of the equity affected that must be indemnified.[208] This method has been approved and followed by economic and accounting experts and by regulatory authorities,[209] and has been routinely applied by arbitral tribunals in investment disputes to determine the fair market value of a going concern in different contexts, both hypothetical and real.[210] The Tribunal

[206] Decision on Liability, *supra* note 1, para. 328.
[207] *Ibid.*, para. 331.
[208] The Tribunal has taken note that, in conformity with standard valuation practice, Total's experts have obtained the companies' equity in both scenarios by subtracting the financial debt from the firms' value (based on the firm's overall discounted cash flows), CL Response to PO No. 7, *supra* note 92, annexed to Total PHB, *supra* note 11, para. 42.
[209] See ENARGAS 2001 Annual Report, p. 40, Exhibit C-727.
[210] The Tribunal acknowledges that there have been cases in which due to the specific circumstances and/or the content of the claim for damages other methods have been followed. Such is the case of the LG&E award: in that award the historical losses due to the non-payment of dividends to the claimant was the basis of the damages calculation (as requested by the claimant) since the investment had not been permanently impaired by the measures in question and, on the contrary, had even rebounded in value. That tribunal noted further that "In fact, the loss of the capital value has not crystallized. Had LG&E sold its investment, as did other foreign investors, for a depressed value resulting from the measures, capital value would become a practicable basis for determining compensation", *LG&E Energy Corp, LG&E Capital Corp and LG&E International Inc. v.*

has already referred to this method in the Decision on Liability and here above when discussing valuation principles in general.[211]

129. The Tribunal does not see why this method cannot be employed here simply due to the fact that Total sold its investment in the generators while this arbitration was pending in 2006. There are no elements in the record to indicate that Total somehow made a short term, "speculative" investment in Argentina in 2001, such as to render inappropriate the DCF method based on the long term expected stream of revenues from a utility.[212] Limiting the calculation of damages to the dividends lost while the equity was held by the investor and concluding that if dividends would not have been paid in the but-for scenario (just as they were not paid in the actual scenario) then there has been no loss, is not an acceptable way to measure damages caused to the capital value of equity. Dividends are not equivalent to profits; likely future profits, properly derived from expected cash flows, must be taken into account to determine the but-for value of an investment at the relevant date. This value can then be compared to the actual value to determine the difference and the measure of damages.

130. The other method suggested by Argentina, based on the EBITDA of the two utilities does not appear relevant and acceptable as an alternative to the DCF approach. This is so because the EBITDA measures the profitability of companies, specifically the operational profitability of the business based on their present assets. A positive EBITDA is not an indicator of the capital value of a firm, nor *per se* implies that the business generates enough cash to pay its liabilities.[213] The fact that the EBITDA of the generators was positive in the actual scenario is consistent with the uncontested fact that they had a positive value (which is not the case for TGN) as evidenced by Total's ability to sell its stake in them in 2006 for more than $180 million. Nor has Argentina supplied data of a possible but-for EBITDA to

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Argentine Republic, ICSID Case No. ARB/02/1, Award (25 July 2007) [hereinafter "*LG&E* Award"], para. 47, Exhibits CL-186 / ALRA-341.

[211] See Decision on Liability, *supra* note 1, para. 339 and fn. 458. See also English Transcript of the procedural hearing on *quantum*, of 28 March 2011, 123:1-125.13, where the Tribunal asked each Party to build its own "damage model" for each sector, in order to provide the Tribunal with "full, complete sets of calculations" including but-for electricity prices.

[212] From the evidence on the record and the arguments made by Total before the sale it does not appear that the sale had been anticipated.

[213] A positive EBITDA indicates only that a company is able to cover its variable costs, but does not say anything as to the coverage of interest, taxes, depreciation and amortization, and hence to the ability of the company to make profits. In fact, it is uncontested that the generators were unable to pay their long term debt in the actual scenario. See the Decision on Liability, *supra* note 1, para. 325, and as to the details of their restructuring process, see CL Response to PO No. 7, *supra* note 92, para. 33.

compare with the actual situation in order to support its conclusion that Total suffered no loss. In other words, Argentina has not supplied any persuasive arguments to support this method for determining the negative effects of the measures in breach of Article 3 of the BIT on the value of the generators (and Total's stake therein), nor data that would allow the measurement of such impairment.

131. The Tribunal must therefore assess the damages suffered by Total by comparing the but-for value of the generators with their actual value in accordance with the DCF approach, on the basis of the evidence, assumptions and calculations in the record, as submitted by the Parties, essentially by the Claimant. As noted above, Argentina has not submitted an acceptable alternative benchmark in the *quantum* phase (nor in the merits phase before, as noted in the Decision on Liability[214]). This does not, of course, relieve the Tribunal from verifying whether the approach and calculations submitted by Total in the *quantum* phase are accurate and respect the criteria laid down in the Decision on Liability.

b) *Specific issues as to construing a proper but-for scenario in the electricity sector*

132. Before examining the but-for scenario used for this claim, a preliminary remark and a caveat are appropriate. Determining the but-for value of HPDA and Central Puerto is more complex than in the case of TGN. The parameters of the but-for or contra-factual scenario are more complex for the power generators than for TGN because, unlike the transportation and distribution of gas, electricity generation was not regulated as a tariff-based sector.[215] The measure challenged in the case of gas transportation was the elimination of semi-annual readjustments of the gas transportation tariff from 1 July 2002. Thus, the but-for scenario as to that sector has been construed by the Tribunal assuming regular semi-annual increases based on the evolution of the indexes of the domestic prices.

133. The measure challenged in the electricity sector consists instead of the imposition of a new pricing mechanism which, in contrast with the previous one, did not reflect the economic cost of the system and made it impossible for generators to operate with a reasonable margin and to cover their investment costs. This was the result of "the alteration of the uniform marginal price system", that is, "the abandonment of the uniform spot price based on the

[214] See Decision on Liability, *supra* note 1, para. 327.
[215] See, for these differences, *ibid.*, para. 248.

variable costs of the marginal unit" with the additional introduction of a fixed cap of ARS$120/MWh replacing the previous variable price mechanism.[216] The alternative scenario cannot be based on a hypothetical tariff as the revenues of the generators were based on a complex system of variable spot prices and capacity payments in which no fixed tariff was applicable.[217] The Tribunal has acknowledged that since the system in place in 2002 was not subject to specific promises by Argentina, it could have been changed without breaching the BIT if a new system had "equally respected the principle of economic equilibrium allowing generators to cover their costs and make a reasonable return on their investments."[218] This, however, was not the case. In fact, the Tribunal concluded in the Decision on Liability that a but-for situation, respectful of Argentina's BIT obligation of fair and equitable treatment, "would have been met had the spot price been fixed on the basis of the costs of the marginal unit (uniform marginal price mechanism) without a cap of ARS$120, according to the principles in force in 2001."[219]

134. The damage model (but-for scenario) submitted by Total's experts conforms to the findings of the Decision on Liability since it assumes but-for spot prices for electricity that would correspond to the average system marginal price without the cap introduced by Resolution 240/2003, taking into account the 2002 pesification and using actual natural gas prices.[220] Total's experts' elaboration, based on CAMMESA's data, shows that "the price that would have resulted in the absence of SE Resolution 240/2003 or what is called the system marginal cost…exceeded spot prices 70% of the time. While the average spot price for this period was US$14.7 per MWh, the average system marginal cost was US$41.3 per MWh".[221] The model considers capacity payments (whose mechanism was changed in 2003)

[216] *Ibid.*, para. 325.
[217] *Ibid.*, paras. 267-268.
[218] *Ibid.*, para. 327, with reference to para. 313.
[219] *Ibid.*
[220] See CL First Report, *supra* note 54, paras. 46- 47 and Total QM, *supra* note 5, para. 143. At para. 48, CL explains that the actual scenario valuation of the LECG Damage Report of 2007, *supra* note 115, has remained unchanged since it has not been affected by the Decision on Liability, *supra* note 1. The but-for scenario has been updated by CL to take into account the Tribunal's decision that pesification did not represent a breach of the BIT, but the approach to the construction of the but-for scenario has not changed either.
[221] LECG's Report on Assessment of Argentina's Recent Regulatory Conduct in Electricity Generation by Manuel A. Abdala and Pablo T. Spiller of 15 May 2007 [hereinafter "LECG Electricity Report"], para. 56 and Graph IV. CL has updated the figures to take into account the evolution from 2007 to 2010 (which is relevant for the construction of but-for future revenues), CL First Report, *supra* note 54, paras. 141-142 and CL Second Report, *supra* note 23, para. 98. CL has assumed there that the gap would end in 2011 through the Government lifting the effect of Resolution 240/2003 and related measures, CL First Report, *supra* note 54, paras. 137-138. In the LECG Report on Electricity of 2007 the experts assumed instead that the gap would converge at the end

by constructing the but-for monomic price (the average per MWh overall remuneration from spot transactions) in accordance with the pre-2003 system. Total's experts compare the but-for monomic price with the price under the actual system where "the monomic price has become meaningless in representing what the average generator obtains" due to specific reimbursements to less efficient generators depending on their costs, which in turn depend in great part on the fuel they burn.[222] As a result, Total's experts submitted that "as of 2006, there is a US$11/MWh gap between the actual and but-for monomic prices".[223]

c) *The choice between the "DCF method" for both the but-for and actual scenarios (the "pure DCF Method"), and the "DCF/Transaction method" (DCF for the but-for value and using the actual sale price for the actual scenario)*

135. The Tribunal believes that before reviewing the methodology of the but-for calculations submitted by Total and the data in support thereof, it is appropriate to discuss the two alternative methods that Total's experts have set forth for determining the actual scenario.[224] The first one ("DCF/transaction method"), which is the one formally advocated by Total,[225] identifies the actual fair market value of the two generators with the price at which Total sold them in 2006 (US$180.6 million). The second one ("pure DCF method"), which has been explained and submitted as an alternative by Total's experts, is based on a DCF analysis to ascertain the actual fair market price of the two generators when Total sold them at the end of 2006, leading to a value of US$309.4 million. For clarity, the various tables set forth by Total's experts to calculate the damages of each of the two generators under the two methods, pure DCF and DCF/Transactions, have been reproduced above at paragraph 116. As to the relevant date at which to determine the damages, the Tribunal agrees with Total that under both methodologies this is the date when Total sold its stake,

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of 2007 leading to a higher estimate of the difference between but-for and actual price, see CL First Report, *supra* note 54, para. 139.

[222] *See* LECG Electricity Report", *supra* note 221, paras. 59-64, updated in CL First Report, *supra* note 54, paras. 137-143, with reference to the mechanism introduced by SoE Resolution 240/03, Article 1.2, Exhibit C-79. As to the "monomic price", see Decision on Liability, *supra* note 1, para. 268.

[223] LECG Electricity Report, *supra* note 221, p. 63, para. 61 and Graph VI show a 2006 average but-for monomic price of about US$41/MWh against an actual price of US$30/MWh. The Tribunal notes that the LECG Electricity Report states *inter alia* at para. 63 that "[s]ince SE Res. 240/2003 makes spot prices relatively insensitive to movements in crude oil prices…large users' demand for electricity becomes insensitive to the raise in crude oil price, when the efficient response should be to reduce demand when the economic cost of the system increase".

[224] See *supra* paras. 114-117 with reference to the relevant parts of Total's briefs and expert reports (Table V and VI reproduced at para. 116).

[225] See *supra* para. 113, Total PHB, *supra* note 11, p. 43, Table One: "Total's Damage Claim: Principal v. Interest".

namely the end of 2006. This date is the relevant one because, as a result of the divesture, from that date Total ceased to sustain any risks and derive any benefit from the HPDA and Central Puerto businesses, so that any loss crystallized at that date. The end of 2006 is therefore also the date from which to calculate interest accruing to Total on the damages it has suffered.

136. As recalled above, Total explains that it is appropriate to base the actual value of the generators on the sale price of 2006 because, "[t]he 2006 transaction was an arm's length transaction to an independent third party, and the sales price thus reflected what market participants believed to be the fair market value of these assets, as late as 2006."[226] This statement has to be verified against the background of the arguments repeatedly made by Total that "full compensation for Total's losses resulting from Argentina's Treaty Breaches must be based on an assessment of the fair market value of the affected investments."[227] Total consistently advocates the DCF method as "the most appropriate way to determine fair market value in this case" and submits that even Argentina and its experts agree "that the calculation of the present value of projected future cash flows is the most widely accepted way to determine the fair market value of a going concern, and therefore the basis on which to assess economic harm for the owners of such an enterprise, at the relevant date of valuation."[228] The Tribunal has already stated that it accepts generally this approach and has explained the reasons therefor.[229]

137. In order to support its argument that the actual sale price rather than the DCF value should be used in the actual scenario, Total argues "that the 2006 sale price is relevant for this purpose, because it was the result of an arm's length transaction, involving the assets directly at issue in this arbitration, conducted at precisely the relevant time, taking into account the full impact of the Government's Treaty Breaches."[230] Total adds that the Tribunal should adopt the 2006 sale price because "[t]his sale price represents the market's perception of the

[226] Total QR, *supra* note 23, para. 162.
[227] Total QM, *supra* note 5, para. 20. See fn. 21 there. See Total RM Merits, *supra* note 136, paras. 650-653, 655-659, 667-668, and the authorities cited therein, including The World Bank, *Guidelines on the Treatment of Foreign Direct Investment*, 7 ICSID Review, 295, 303 (1992), Exhibit CL-49, "Compensation will be deemed 'adequate' if it is based on the fair market value of the taken asset"
[228] Total QM, *supra* note 5, paras. 27 and 29.
[229] See *supra* para. 128.
[230] Total QM, *supra* note 5, para. 151.

impact of the Treaty Breaches on the value of Total's shares, based on an arm's-length transaction concluded between sophisticated parties."[231]

138. The Tribunal recalls that the DCF method is considered a *reasonable* method to ascertain the market value of a going concern, that is the "amount that a willing buyer would normally pay to a willing seller after taking into account the nature of the investment, the circumstances in which it would operate in the future and its specific characteristics."[232] The fact that "normally" a willing buyer and a willing seller would carry out a transaction based on the DCF value of an enterprise does not mean that each and every transaction will be so based. If it were correct that "[p]rojections of future costs and revenues are used because a buyer or seller in the market would invariably calculate the company's present value on the basis of a reasonable assessment of the company's future cash flows, taking into account the risk involved in generating those cash flows and the time value of money",[233] then the substantial difference between the DCF actual valuation and the sale price of the two generators would be inexplicable and contradictory. The Tribunal notes, moreover, that neither Party has claimed, nor proved, that there was a "market", characterized by a number of transactions, and a current price for electricity generators in Argentina in 2006.[234] Such a situation is unlikely to occur generally, since there are usually few electricity generators operating in a given market and sales transactions are infrequent, in view of their high price, the capital and technology needed by an investor to acquire and operate them and regulatory requirements.

139. Based on the evidence and the arguments of the Parties, the Tribunal is not convinced that the 2006 sale transaction can be taken as representative of the "market value" of the generators, in the absence of an actual market and of specific evidence that the parties to that transaction had based themselves on an objective evaluation of the "fair market value" of the generators, or on competitive biddings, in order to determine the agreed price.[235] On the

[231] Total PHB, *supra* note 11, para. 46.
[232] World Bank, *Guidelines on the Treatment of Foreign Direct Investment*, Section IV, para. 5, Exhibit CL-49.
[233] As stated in Total QM, *supra* note 5, para. 31.
[234] Central Puerto is listed in the stock exchange, but the LECG Damage Report, *supra* note 115, para. 30, fn. 4, explains that "[a]lthough stock market information is available for Central Puerto, it is not reliable as the liquidity of this stock has been extremely weak".
[235] Such an objective determination could be that of an independent valuation by a consultant or appraiser jointly appointed by the seller and the buyer. The sales contracts (Exhibits C-585 and C-586) contain no elements as to how the price was determined. Competitive bidding has been resorted to by Argentina's authorities in the privatization of generators, thus justifying that arbitral tribunals have considered this feature as the starting point

contrary, Argentina's post-crisis context and the specific features of the regulation of the electricity market, which led to the reduction of the revenues of generators (with the effect *inter alia* of Central Puerto and HPDA having paid no dividends since 2001), and the uncertainty of their future evolution, could explain that Total might have decided to get out of the Argentina electricity market and divest, selling its stakes even at a price considerably less than their "normal" fair market value.[236]

140. The Tribunal recalls that in this case, as advocated by the Claimant and not denied in principle by the Respondent, the DCF method has been generally employed to ascertain long-term damages suffered by Total as to its investments in enterprises in Argentina, comparing homogeneous DCF but-for values with DCF actual values. The Tribunal is therefore reluctant to accept another method in the absence of specific evidence to support the appropriateness of such a choice in respect of the generators. The Tribunal concludes, therefore, that the sale price of the generators is not a reliable basis to ascertain their actual value at the end of 2006 and, as a result, accepts for this purpose the DCF method set forth by Total's experts as an alternative.[237]

d) *Calculating the but-for revenues of the generators: but-for prices and but-for quantities*

141. Once the methodology to determine but-for prices has been established, various further calculations must be made in order to derive the cash flows that HPDA and Central

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of their valuation analysis (such as in *Azurix Corp. v. Argentine Republic*, ICSID Case No. ARB/01/12, Award (14 July 2006), paras. 38-41 and 427, and *EDF* Award, *supra* note 107, para. 1223. Such an approach has not been advocated by either Party in the present dispute, nor has Total as claimant introduced any evidence that the transaction price reflected an effective market price for the generators when it sold them in 2006.

[236] See, for example, the complaint by Total that in other sectors prices were permitted "to rise freely in accordance with market forces, while energy prices on the whole were strictly pesified and frozen at 2001 levels. In this way, Argentina transferred wealth directly from TGN, Total Austral, Central Puerto and HPDA (as well as from other energy companies) to local industrial commercial and residential gas users", favouring manufacturers for export as well, Total MM, *supra* note 47, paras. 37-38.

[237] Total has referred to other awards in investment disputes with Argentina where the arbitral tribunals have taken into account the price at which the investor had sold its stakes in the energy sector, Total PHB, *supra* note 11, para. 47, referring to the *National Grid PLC v. Argentine Republic*, UNCITRAL and *Enron Creditors Recovery Corporation and Ponderosa Assets, L.P. v. Argentine Republic*, ICSID Case No ARB/01/3 decisions. The different facts of each case and type of claims do not allow preferring the approach of these tribunals to that of others. The Tribunal notes that in the recent *EDF* Award, *supra* note 107, the tribunal did not rely on the fact that the claimants, Electricité de France and other investors, had sold their stake in a generator for a symbolic price, to the point of holding the investors responsible of contributory negligence, at paras. 1286 ff. This case is mentioned here as a further factual example, without drawing any conclusion from it, since it was not addressed by the Parties in their arguments and the circumstances of the sale appear quite different. The Tribunal does not take any position as to whether Total sold its stake at "a bad time" (as Argentina suggests, Argentina QCM, *supra* note 6, para.169, any judgment thereon not being required to decide the issue.

Puerto would have obtained under the but-for scenario and ultimately the but-for value of the generators. The items to be determined are the following: (i) the specific prices that HPDA and Central Puerto would have obtained, absent the 2002-2003 changes in the system of remuneration of the generators; (ii) the quantity (volumes) of electricity that the generators would have dispatched, both until 2006 and thereafter;[238] (iii), figures for but-for revenues, which are obtained by applying the prices (i) to the quantities (ii); and finally (iv) these figures have to be discounted by the appropriate WACC to obtain the but-for fair market value of the generators at the end of 2006. The Tribunal has encountered difficulties in finding in the Claimant's briefs and in the experts' reports the assumptions concerning the volume of electricity that the two generators would have dispatched and the revenues they would have obtained (steps (i) and (ii) above).[239] The relevant data assumed for steps (i) and (ii) are not apparent in the many tables with explanations included in the relevant briefs of Total and in the reports of its experts.[240]

142. Nevertheless, the Tribunal has been able to locate relevant information and data as to Total's experts' hypothesis for (i) and (ii) in Exhibits C-784 and C-785 which present in Excel electronic spread sheets the Central Puerto and HPDA "Damage Valuation Models as per Decision, updated as of September 2011", respectively.[241] The Tribunal has especially examined the Revenues but-for sheets that indicate for each generator the volumes of energy sold in past years and those expected to be sold in future years, the respective prices and the income which results or would result therefrom. The Free Cash Flow but-for sheets therein show *inter alia* the resulting assumed overall revenues. The Tribunal notes that the corresponding figures for the actual scenario are also set forth in distinct actual Revenues and Free Cash Flow spread sheets in the same exhibits.

143. These data are not easy to analyze and reconcile. In any case the Tribunal understands that the prices, shown in the sheets, that each generator would have charged in

[238] The end date of the concessions is 2030 for Central Puerto and 2023 for HPDA, Total QM, *supra* note 5, párr. 41(b).
[239] The Tribunal recalls that the pre-2003 regime used for the but-for scenario includes capacity payments not correlated to energy dispatched, see Total Decision on Liability, *supra* note 1, paras. 268-271.
[240] See Total QM, *supra* note 5, para. 150. CL First Report, *supra* note 54, paras. 137-143 (updating the LECG Electricity Report, *supra* note 221), though titled "Appendix B – Central Puerto & HPDA: Main Valuation Assumptions" focuses exclusively on the "dispatch model" and FONINVEMEM.
[241] As described in fn. 33 and 34 of CL Response to PO No. 7, *supra* note 92, attached to Total's PHB, *supra* note 11, and referenced there for the purpose of analyzing the different issue of the level of indebtedness of the two generators.

the but-for scenario, are those resulting from the price structure described above based on the pre-2003 electricity pricing system. As expected, the but-for prices are in Total's experts' model substantially higher than in the actual scenario: thus for HPDA the but for "average energy prices" compared to actual prices in the years from 2003 to 2006 are (US$/MWh) as follows:

- in 2003: 11.1 v. 7.7;
- in 2004: 18.2 v. 9.6;
- in 2005: 28.3 v. 13.1; and
- in 2006: 19.8 v. 17.6.

Actual prices would start to approach but-for prices according to Total's experts' model as of 2013.[242] The volumes set forth by Total's experts for electricity sales are, however, exactly the same in the two scenarios.[243] Multiplying in the two scenarios the same volumes of electricity by those different unitary prices results, evidently, in much higher revenues and cash flows in the but-for scenario than in the actual scenario for the various years.[244] In other words, the model rests on the hypothesis that HPDA would have been able to sell the same volumes of electricity notwithstanding the much higher prices assumed in the but-for scenario. The assumptions for Central Puerto are similar.[245]

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[242] See Exhibit C-785, HPDA "Damage Valuation Models as per Decision, updated as of September 2011", Revenues actual and but-for Spread Sheets.

[243] See Exhibit C-785, HPDA "Damage Valuation Models as per Decision, updated as of September 2011", Revenues actual and but-for Spread Sheets, actual Total Energy Generation/ Total Spot sales compared to But-For Total Spot Sales. As recalled at *supra* para. 110: "Total's experts' model assumes furthermore that 'Electricity demand volumes reflecting actual demand up to end of 2006 and growing at a rate of 5.5% per year from 2007 onwards, consistent with the average historical growth over the period 1993-2006'", CL First Report, *supra* note 54, Annex B, para. 135(c) based on LECG Damage Report, *supra* note 115, para. 251, fn. 228, which in turn refers to actual "average historical growth rate" data (that is actual data, not but-for estimates) of CAMMESA 1993-2006, Exhibit C-602.

[244] See Exhibit C-785, HPDA "Damage Valuation Models as per Decision, updated as of September 2011", Free Cash Flow actual and but-for Spread Sheets.

[245] As to Central Puerto, whose data presents a different, more complex structure, the volumes in the but-for scenario are below those of the actual scenario by about 3% in 2003, 18% in 2004, 15% in 2005 and 2006, are almost the same in 2007, higher in 2008 and 2009, below by 15% in 2011. Thereafter, but-for volumes are similar (just slightly higher by about 2%), than actual anticipated volumes, in accordance with Total's experts' assumption that actual prices will increase by 2012, CL First Report, *supra* note 54, para. 138. See Exhibit C-784, Central Puerto "Damage Valuation Models as per Decision, updated as of September 2011", Revenues actual and but-for Spread Sheets. The same sheets include the prices for the electricity produced by Central Puerto from various sources setting forth generally higher prices (as expected) in the but-for scenario. The resulting total revenues set forth in the same sheets are much higher in the but-for scenario, except for 2003 and 2006. The Tribunal notes that UBA First Valuation Report, *supra* note 63 at paras. 408-413, states that Total's experts' model, contrary to their own premises, does not assume full convergence between but-for and actual prices from 2012 on, thus resulting in an "unjustified" increase of estimated future damages in UBA's view.

144. This conclusion has to be scrutinized carefully in respect of the issue of cross-elasticity between electricity consumption and the price thereof. The assumption of Total's experts of lack of cross-elasticity, or a very limited cross elasticity, is difficult to reconcile with the evidence submitted by the Parties and the arguments made by Total that (i) actual post 2003 price in Argentina as set by the SoE " were since 2002 on average 50% below what they would have been absent of the measure"…" being subject to price interference in the natural gas market and a hard and binding cap";[246] and that (ii) the low electricity price had caused demand for electricity to soar.[247]

145. As to (i) the Tribunal has already acknowledged in the Decision on Liability that due to the measures that altered the price mechanism established with the Electricity Law "After 2002, the market has been characterized by unreasonably low tariffs",[248] as a consequence of Argentina's disregard of "the principle of the economic equilibrium allowing generators to cover their costs and make a reasonable return on their investments".[249] The increase of price hypothesized for the but-for scenario by Total and its experts in order to model the higher prices that would comply with the above requirement is thus quite substantial. According to the position expressed by Total, quoted in paragraphs 134 and 144, the but-for prices should have been the double of actual prices in order to reflect the economic costs of the system and allow generators to cover costs and make a reasonable profit. Even without accepting fully that position, it is a fact that Total in its Quantum Memorial has advocated but-for spot prices that for 2004 would have been about 40% higher than the actual ones, for 2005 the double, for 2006 about 50% higher, and for 2007-2011 about 30% higher than actual prices.[250]

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[246] See Total QM, *supra* note 5, para. 145 quoting the LECG Electricity Report, *supra* note 221, para. 5(c) and (d). In detail, the LECG Electricity Report, at para. 59, fn. 64, sets forth an even bigger gap between the prices in their but-for model and actual spot prices: in 2002 US$ 14.33 vs 5.82 /MWh; in 2006: US$ 32.44 vs. 20.35 / MWh.

[247] Total MM, *supra* note 47, para. 47.

[248] See Decision on Liability, *supra* note 1, para. 328 and fn. 449. The 2004 average price of residential electricity in Argentina was a fraction of prices in all industrial countries, around 20% of those in Germany, Japan, Italy; less than one third of those in France and the U.K.; and less than half of those in the US. In this regard, see Total PHB Merits, *supra* note 45, para. 133 and table therein from Energy Information Administration, 2007, Exhibit C-706. Total emphasizes that the price of electricity in Argentina was already one of the lowest in the world in 2001: new investments in the sector since 1992 had more than doubled installed capacity, had eliminated power shortages and had brought the prices steadily down to the benefit of consumers, see Total PHB, *supra* note 11), paras. 831-833 and tables therein.

[249] See Decision on Liability, *supra* note 1, paras. 327-328, with reference to para. 313.

[250] See Total QM, *supra* note 5, graph at para. 144, corresponding to Graph II of CL First Report, *supra* note 54, para. 137, where actual spot prices for 2006-2011 are around AR$/MWh 24 against but-for prices around 35. A comparison between the curves submitted there by Total for the actual and but-for scenarios show an even

146. As to (b), that is the increase of electricity consumption due to very low prices, Total has explained in the merits phase that "Reduced gas prices translate directly into electricity prices, causing demand for electricity to soar. Demand increased by 30% more in the first quarter of 2004 than it had in the first quarter of 1998, long before the advent of any economic difficulty",[251] adding that "The minimal electricity tariff has generated a substantial increase of demand for electricity, mainly from industries".[252] The Tribunal has acknowledged in the Decision on Liability, based on the evidence and the statements by the Parties that electricity consumption in Argentina after 2002 increased massively due to very low prices that did not cover the costs of generation.[253]

147. If the reduction of prices and their ensuing low levels have substantially increased consumption, it is reasonable to assume that demand is elastic. A substantial increase of prices in the but-for scenario (amounting to almost 50% on average between 2004 and 2011) should therefore lead to lower consumption. Therefore, revenues and cash flows for generators would be lower, including for Total's two generators, contrary to what is set forth in Total's but-for model.[254] In view of above mentioned evidence to the contrary and Total's own statements regarding the effect of increases of prices on the demand for electricity, the Tribunal is not convinced by Total's experts' arguments that electricity demand is "inelastic", so that a wholesale electricity price increase "would imply only a minimal reduction in average residential and commercial demand".[255] Nor does the Tribunal believe that a reduction in demand would have hit in the but-for scenario only the less efficient generators,

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bigger difference in 2005 (the but-for curve being about 100% higher) and 2006 (about 50% higher). For the period after 2011 Total projects an increase of actual prices, assuming that "Resolution 24/2003 would end by the end of 2011", CL First Report, *supra* note 54, para. 138, so that but-for prices would approach actual prices.

[251] Total MM, *supra* note 47, para. 47.

[252] *Ibid.*, para. 221.

[253] See Decision on Liability, *supra* note 1, paras. 326 and 328.

[254] See also to the contrary the LECG Electricity Report, *supra* note 221, para. 63, stating that "the efficient response should be to reduce demand when the economic cost of the system increase."

[255] CL Second Report, *supra* note 23, paras. 133-135 in response to UBA First Valuation Report, *supra* note 63, para. 398. The arguments omit reference to industrial consumers to which Claimant refers instead in the Total MM, *supra* note 47, para. 221, cited above: "The minimal electricity tariff has generated a substantial increase of demand in electricity, mainly from industries" (referring to Exhibit C-250). Total's experts argument is contradicted by the very paper to which they refer, Cont & Navajas, "*La Anatomía Simple de la Crisis Energética en Argentina*" (2004), Asociación Argentina Económica Política, available at www.aaep.org.ar, Exhibit C-488. In the paper, one can read statements such as: "Que las elasticidades-precio de la demanda de energìa no son cero o insignificantes es una evidencia largamente documentada en la Argentina (ver, por ejemplo Banco Mundial 1990; FIEL, 1995a) y, desde luego, a nivel mundial (Pydyick, 1979; Donelly, 1987; Bacon 1992)", p. 4, see also p.17. Publicly available studies confirm that "a rise in electricity prices, *ceteribus paribus*, should lead to a fall in the quantity demanded", World Bank Report, "Meeting the Electricity Supply/Demand Balance in Latin America & the Caribbeans" (2010), para.106 "the demand for electricity is positively correlated with income and negatively correlated with price".

while HPDA and Central Puerto would have escaped the effect of the general reduction in consumption.[256] This would not be in line with the approach of the Decision on Liability that a but-for system where the spot price would have been fixed on the basis of the marginal unit without a cap of ARS$120 is not the only mechanism that could respect the paramount requirement of economic equilibrium "allowing generators to cover their costs and make a reasonable return on their investments"[257] The ensuing corrections to Total's evaluation of the damages will be dealt with hereunder at paragraph 150. As to operation (iii) listed in paragraph 141, Total's experts derive the figures for but-for and actual revenues by applying in each scenario the electricity prices to the estimated quantities for the relevant number of years.[258] For the purpose of discounting future revenues (operation (iv) also described above at paragraph 141), Total's experts explain that "[a]nnual cash flows from 2007 onward are discounted back to 31 December 2006 at 13.77%, the estimated 2006 WACC for power generators operating in Argentina, to obtain the firm valuation in the but-for and actual scenarios."[259] Claimant's experts have not provided details explaining on what basis they have found that 13.77% was the WACC "for electricity generation companies" at the end of 2006.[260] Nevertheless, the Tribunal considers that this rate is reasonable, noting that it has not been challenged by Argentina and that it is similar to the one proposed and justified by Total in respect of gas transportation.[261]

148. The final data as to the amount of damages resulting from the above valuation process submitted by Total's experts under the DCF method ("pure DCF method"), have been recalled above at paragraph 115.[262] Those damages estimated by Total's experts amount to $98.7 million for Central Puerto and $77.4 million for HPDA, for a total amount of $176.1 million, this being the difference between the but-for valuation of Total's stakes ($194.4 million and $213.8 million respectively, in total $485.9 million) and the actual DCF valuations ($95.6 million and $213.8 million respectively, in total $309.4 million).

[256] Total's experts assume that both HPDA and Central Puerto are efficient generators that benefit from Electricity Law original scheme fixing the uniform price at the higher costs of the marginal unit. While Argentina experts also recognize that HPDA as a hydroelectric power plant is highly efficient, they dispute that the same holds for Central Puerto, considering that some of the latter's units have been in operation for a very long period of time, see UBA First Valuation Report, *supra* note 63, para. 401.
[257] See Decision on Liability, *supra* note 1, para. 327, referring back to para. 313.
[258] See Exhibits C-761 and C-762, updated by Exhibits C-764 and C-765.
[259] CL First Report, *supra* note 54, para. 51.
[260] LECG Damage Report, *supra* note 115, para. 128.
[261] See *supra* para. 85.
[262] See the reproduction of Tables III and IV in CL First Report, *supra* note 54, para. 53.

149. As previously discussed, in the Tribunal's view the but-for values (and hence the difference with the actual scenario, which represents the damages), appear to be over-estimated since the but-for valuation of the revenues assumes that the energy sold by the two generators would be basically the same in the but-for as in the actual scenario, notwithstanding the higher electricity prices assumed in the but-for scenario. As mentioned in paragraph 147 above, this assumption cannot be accepted by the Tribunal because of the evidence to the contrary confirming the existence of a definite cross-elasticity between price and demand (sales) of electricity. As stated above, there is abundant evidence on record and statements of the Parties, particularly by Total, that electricity prices in Argentina have been unreasonably low in Argentina since 2002, both in respect of costs, as well as compared to the prices in other countries, thus fuelling a massive growth in demand.[263] Considering the evidence of the reduced income of a great part of the population caused by the crisis of 2001,[264] the Tribunal cannot but conclude that electricity consumption would have declined substantially had the prices been those assumed by Total's experts in the but-for scenario.

150. In the light of these considerations relating to the actual scenario, the Parties' arguments concerning the low prices for electricity, the ensuing over-consumption, the reduction of income of the population throughout the crisis and the Tribunal's own findings and conclusions in the Decision on Liability, the Tribunal concludes that the but-for value of the generators under the DCF model submitted by Total's experts ($485.6 million) has been overestimated. This has led in turn to an excessive valuation of the but-for losses which Total's experts have valued as a result at $176.1 million. The amount of damages should therefore be reduced by an appropriate percentage. In order to determine such reduction the Tribunal relies on the evidence supplied by the Parties as to the existence of cross elasticity between the evolution of prices in electricity and its impact on the demand.[265] Comparing available data and estimates, the Tribunal considers that an increase of the electricity prices

[263] See Decision on Liability, *supra* note 1, para. 328; Total MM, *supra* note 47, para. 47: "demand for energy in Argentina has risen out of control, due to the artificially low prices that the government has imposed"; UBA First Valuation Report, *supra* note 63, graph at para. 273, which shows an abrupt increase of electricity demand from 2003 following a substantial decline from 1998 to 2002.

[264] See the Indices on poverty, indigence and unemployment from 2000 to 2003 and the data on the decrease of salaries from 2001 to 2003, Argentina's Counter-Memorial on the Merits of 26 January 2007, paras. 79-82. Income is also a variable influencing the demand of electricity, see the World Bank report referred to at *supra* note 255.

[265] See the references at *supra* notes 254 and 255.

for the period 2004 – 2011 in excess of 40%, as estimated by Total for the but-for scenario,[266] would have led to a reduction of sales and revenues of about 30%, *ceteribus paribus*, in view of the price/demand elasticity for electricity which can be prudently deduced from available evidence.[267] Therefore, the Tribunal ascertains, the damages under the "pure DCF method" to be granted by Argentina to Total in respect of its investments in the electricity sector to amount to **$123.3 million** (rounded). The relevant date of the loss for purposes of the calculation is the end of 2006, this being the date when the loss crystallised with the divesture of Total from the electricity generators.[268] In reaching this conclusion, the Tribunal resolves the difficulties concerning the assessment of the damages undoubtedly suffered by Total in respect of its investments in the electricity sector. In so doing, the Tribunal makes use of the inherent discretion that arbitral tribunals enjoy in this respect, especially when different methodologies and different, equally reasonable assumptions do not lead to an unequivocal amount, as explained above at paragraph 32.[269]

e) *The irrelevance of the 2001 acquisition price for establishing damages in 2006 and its use for comparison purposes*

151. The Tribunal notes that both Parties do not consider a valuation method based on the price paid by Total for the generators in 2001 as relevant.[270] However, they reach this

[266] See the references at *supra* note 250 and related text.
[267] For the electricity prices / demand elasticity in Argentina see Exhibit C-488, referred to at *supra* note 255, Table 5.1 (limited to the years 2001-2004) and especially the World Bank Report, referred to at *supra* note 255, "Meeting the Electricity Supply / Demand Balance in Latin America & the Caribbean" (2010), at Annex 2 "Price and Income Elasticity of Demand", and Table 6 at p. 47, para. 105, which puts the coefficient at 78% (one dollar increase in price would result in a drop of demand of about 78 cents, so that a 40% increases x 0.78 = a 31.2% decrease).
[268] The end of 2006 is therefore also the date from which to calculate interest on the principal amount of the damages suffered by Total in respect of the generators. The determination of the interest payable on this sum is dealt with in Part V hereunder, together with all other issues concerning interest.
[269] An alternative approach for reducing the but-for value of the generators would have been to proceed first to reduce the "Total Firm Value" estimated by Total's experts to take into account the reduced but-for revenues/cash flows due to the Tribunal's estimate of the smaller quantities of electricity that the generators would have been able to sell at the higher prices of the but-for scenario, and thereafter to deduct the financial debt. This more analytical approach would have required performing analytical calculations, also in respect of the level of indebtedness of the generators which the Parties have addressed in their answer to a specific question contained in PO No. 7 that the Tribunal is not in the position to make. The Tribunal believes that the more straight forward approach adopted in the text leads to correct, equivalent results as to the ultimate determination which it must make, namely that of a reasonable assessment of the amount of damages.
[270] At para. 339 of the Decision on Liability, *supra* note 1, the Tribunal stated that "the quantum phase shall deal with the determination of the losses suffered by Total because of the negative impact of Argentina's action on HPDA and Central Puerto that have been found to be in breach of the BIT", adding in fn. 458 there: "This includes determining the proper "but for scenario", the actual scenario and the possible influence of both the purchase price paid by Total in 2001 and the sale price of its equity stakes in Central Puerto and HPDA at the end of 2006".

conclusion for different reasons. Total submits that the 2001 transaction could have no relevance to the contra-factual valuation because of the substantial difference of prevailing business and power market conditions "in the but-for world" in 2006 from those actually prevailing in 2001.[271] In any event, Total asked its expert to calculate damages also using the Net Capital Contribution ("NCC") approach" explaining that "[t]his takes into account the theoretical value of HPDA and Central Puerto to Total as of December 2006, using the 2001 acquisition price as a base, increased over time by the expected profitability at that date".[272] Total shares the view of its experts that the ensuing results (damages of $460.9 million in respect of Central Puerto and none in respect of HPDA) "reflect the weakness of the NCC methodology which, given its theoretical nature can show opposite results for two assets which were negatively impacted by the same set of treaty breaches".[273]

152. Argentina takes into account the purchase price, though not as a basis for determining whether Total has suffered damages due to its measures. Argentina submits that Total had paid a "highly exaggerated" or "completely inflated price" since it was based on a series of macroeconomic assumptions and expectations that turned out to be different from the subsequent performance of the main variables affecting the revenues and costs of companies.[274] Argentina considers, rather, that the purchase price should be considered as "a ceiling price" for any calculation. Argentina insists on its different methods referred to above (such as the EBITDA method) for concluding that Total suffered no damage due to the measures that the Tribunal has found in breach of Argentina's treaty obligations.

153. The Tribunal is satisfied by the Parties' different, but ultimately concurring, explanations that using the purchase price to measure Total's damages would be inappropriate. Nevertheless, the Tribunal believes that there is some value to be derived by taking into account on the one hand the price paid by Total for the purchase of HPDA and Central Puerto stakes in 2001 ($327.45 million), and, on the other hand, the but-for and actual values five years later, in 2006, of those same stakes under the various methods discussed above. These values are the *but-for value* without the measures in place calculated by Total's experts under the "pure DCF" method ($485.6 million), the *actual value* based also on DCF

[271] Total QM, *supra* note 5, paras. 154-156.
[272] Total QM, *supra* note 5, para. 158, referring to CL First Report, *supra* note 54, paras. 58-69.
[273] CL First Report, *supra* note 54, paras. 67-68.
[274] Argentina QCM, *supra* note 6, paras. 163-165, with reference to CL First Report, *supra* note 54, para. 59. See also *supra* paras. 124-125.

($309.4 million), and finally the *actual sale price* ($180.6 million). Comparisons between the initial price paid by Total in 2001, before the pesification, the economic crisis and the alteration of the electricity price mechanism, on the one hand, and the above mentioned 2006 values and prices, on the other hand, may have some relevance as a kind of "reality check" or double check of the conclusions reached by the Tribunal as to the *quantum* of damages.[275]

154. The Tribunal recalls that Total bought the stakes in the two generators before the economic crisis, considering as negligible the risk of complete upheaval of the existing currency dollar-peg system and of the electricity regime.[276] The price paid in 2001 was a total of $327.45 million. In comparison, Total and its experts have estimated using the DCF method that those same stakes would have been worth $485.6 million in 2006 in the but-for scenario. The Tribunal recalls that this scenario would incorporate pesification, the ensuing crisis and actual changes in the fuel prices, but not the alteration of the electricity price mechanism affecting the revenues of the generators.

155. The reduction by 30% of the damages claimed by Total, from $176.1 million to $123.3 million, that is by $52.8 million, as determined by the Tribunal above, is somehow equivalent to reducing the but-for value of the generators from $485.6 to a $422.8 million. This determination appears justified since the figure of $485.6 million would correspond to an increase of value of Total's shares in the generators, in respect of the purchase price, of more than 50% in five years (from $327.45 million to $485.6 million), notwithstanding the pesification and the crisis that are assumed also in the but-for scenario. On the basis of all the information gathered in the proceedings such an increase seems to the Tribunal not to be in line with those assumptions and thus excessive. Even more so considering that Argentina's electricity regime was organized in a way that generators would receive a rate "based on the economic cost of the system", in the expectation that "competition would drive costs down", while "protecting adequately the right of users".[277] As explained in the Decision on Liability, the pricing mechanism was such as to establish a stable pricing system and ensure reasonable revenues to the electrical generators (so as to encourage private investment therein), while

[275] According to the UBA First Valuation Report, *supra* note 63, paras. 341-342, Total paid for the stakes in the generators 5.12 or 6.45 times the EBITDA and resold them at 3.45. According to UBA under normal circumstances, the reasonable rate for this kind of company is between 4 and 6 times.
[276] See Decision on Liability, *supra* note 1, para. 324 and fn. 445 there, as well as Argentina QCM, *supra* note 6, para. 164 ("no one was aware of how severe the ensuing crisis would be").
[277] See Article 2 of the Electricity Law of 1992 and the description by the Parties of its basic principles in the Decision on Liability, *supra* note 1, paras 241-250.

safeguarding at the same time consumers from excessive prices.[278] A fifty per cent increase in the value of the generators from 2001 to 2006 in a but-for scenario of higher electricity prices incorporating pesification and the economic crisis does not appear in line with the statutory objective of safeguarding consumers from excessive electricity prices.

156. This conclusion is confirmed by the following considerations. In the actual scenario Total was able to sell its stakes only at $180.6 million, well below the DCF actual value estimated by its experts to be $309.4 million as recalled in paragraph 115 above. Whatever the reasons for this difference (the Tribunal recalls that Total considers that the transaction was an arm's length transaction, while according to Argentina it was carried out at a depressed price because of the decision of Total to divest at a "bad moment"), Total is being granted in the present Award as damages $123.3 million because of the depressing effect that Argentina's measures have had on its equity in breach of the BIT. Thus Total will have obtained for its stakes in the generators a sale price of $180.6 million and damages for $123.3 million. The resulting total amount of $303.9 million is what Total will ultimately obtain for its stakes in the generators sold in 2006, which Total acquired in 2001 for the price of $327.45 million. Leaving aside the effect of Total's subjective business choices of buying and selling the stakes in the generators at those points in time, the lower 2006 figure (sale price plus damages) reflects two elements. First, (i) the depressing effect of the crisis and the pesification which occurred in the meantime (and which is not attributable to Argentina under the Decision on Liability), and secondly (ii) the alteration of the electricity price mechanism. The latter is attributable to Argentina instead and is made good by the awarding of damages. It seems to the Tribunal that such a result ($327.45 million in 2001 versus $303.9 million in 2006) reflects the evolution on Argentina's economy and of its electricity sector in the period under consideration. The reasonableness of the Tribunal's approach and of the result is further confirmed by the fact that the sum of the sale prices and the amount of damages calculated by the Tribunal ($303.9 million), broadly conforms to the 2006 actual value of Total's stakes in the two generators under the DCF method (US$ 309.4 million). The Tribunal believes that these considerations confirm the soundness of the Tribunal's determination of damages in the amount of $123.3 million in respect of Total's investments in the electricity generators.

[278] See Decision on Liability, *supra* note 1, paras. 251-276; Electricity Law, Article 2(f).

G. Total's Claim as Technical Operator of HPDA

157. In its Quantum Memorial, Total submits a distinct claim for damages in respect of its position as management/technical operator of HPDA, explaining that "[d]uring the liability phase, Total sought damages based on the reduced management/technical operator fees it received from HPDA as a result of the Government's measures. [279] Total claims that it would have received these fees in full from HPDA as per agreement, absent Argentina's alteration of the uniform marginal price mechanism. Total complains that as a direct consequence of the Government's treaty breaches it received substantially less fees. Total's experts estimate the amount that Total would have received as technical operator in each of the two scenarios (*but-for* and *actual*) and determine the difference, that is the loss for Total, to be $500,000.[280]

158. Argentina objects to this claim on procedural grounds. Argentina submits that Total had not submitted this claim in the merits phase and that the submission of new claims in the *quantum* phase is too late and hence inadmissible, so that it should be rejected because of this procedural reason alone. Argentina also submits that the Tribunal did not hold Argentina liable in this respect in the Decision on Liability.[281]

159. The Tribunal notes that the Parties have made similar arguments as to the procedural admissibility of the claim made by Total for lost fees as technical operator in respect of TGN. A difference between the two claims is that in the Decision on Liability the Tribunal did not mention nor address Total's claim based on its status as technical operator of HPDA while such a mention was made as to Total's claim in respect of TGN.[282]

160. The Tribunal is guided here by the same principles it has applied to the procedural objection raised by Argentina in respect of the technical operator fees to which Total was entitled under its contract with TGN.[283] In respect of that claim, the Tribunal recalls that it has rejected Argentina's position, holding that Total timely articulated this claim in its Reply

[279] See Total QM, *supra* note 5, paras. 161-162, referring in fn. 277 to para. 720 of Total RM Merits, *supra* note 23 and to the LECG Damage Report, *supra* note 115, paras. 122,127,131,153, and 288-298. Paras. 153 and 288-293 do not relate, however, to Total's position as technical operator of HPDA, but to its position as technical operator of TGN.
[280] CL First Report, *supra* note 54, para. 50.
[281] Argentina QCM, *supra* note 6, paras. 57-60 and 182.
[282] See *supra* paras. 88-94 and Decision on Liability, *supra* note 1, para. 191.
[283] Exhibit C-721.

of 18 May 2007.[284] However, as to Total's claim as technical operator of HPDA, unlike in the case of TGN, the Tribunal considers that Argentina is correct and that it cannot be said that Total did "set out" this claim, not even in general terms, in the merits phase. The only mention or reference to this item is found in paragraph 720 of Total's Reply, in parenthesis, in the following terms: "To this amount [the difference between the but-for valuation of HPDA and the sale price in 2006] are then added the historical losses that Total has suffered as cash flow reductions from 2002 until the November 2006 sale (i.e. in respect of dividends and management fees)". Such a mere mention of management fees (in a parenthesis), whose legal basis and calculation of *quantum* are not explained either in Total's Reply at paragraph 720 or in the LECG Report paragraphs referred to there, does not meet in the Tribunal's view the minimum requirement for a claim to be "presented", as required by Article 40 of the ICSID Arbitration Rules. [285] Therefore, the Tribunal rejects on this ground the claim of Total for losses suffered in respect of fees due by HPDA to Total as management/technical operator.

IV. TOTAL'S CLAIM IN RELATION TO ITS INVESTMENT IN EXPLORATION AND PRODUCTION OF HYDROCARBONS (OIL AND GAS)

A. Total's Investments in Oil and Gas Exploration and Production

161. As explained in detail in the Decision on Liability, Total made investments in Argentina in the oil and gas sector in and around the Austral Basin in Tierra del Fuego. The terms of Total's investment were set out in Contract 19.944 of 1978 between Yacimientos Petrolíferos Fiscales Sociedad del Estado ("YPF") and Total Exploration S.A. and the other Consortium members who had been successful in the competitive bidding process for the contract.

162. Contract 19.944 was approved by Decree 2853/78 pursuant to Article 98(g) of the *Ley de Hidrocarburos*, Law No. 17.319, adopted on 23 June 1967, which governed the sector at

[284] See *supra* para. 93.

[285] While the LECG Damage Report, *supra* note 115, paras. 153, 288-293 includes detailed calculations and tables concerning the loss of Total as technical operator of TGN, the same Report at paras. 122,127, 131 and Table XVII contains only brief statements on Total's position and losses as operator of HPDA without any supporting evidence, estimating Total's loss at $2.4 million at that time. Only in Total QM, *supra* note 5, para. 162 has Total mentioned that it was entitled to a fee of 1.5% of HPDA revenues based on an Agreement to which it became party when it acquired a share in HPDA, Exhibit C-721.

the time. Another relevant feature of the legal regime applicable to Contract 19.944 was Law 19.640 of 2 June 1972, which exempted exports from Tierra del Fuego from export taxes by making it a Tax Free Zone.[286]

163. In 1989, Argentina undertook a process of reform and privatization of many aspects of its economy. Argentina sought to increase private investment in the exploration, production and distribution of hydrocarbons through: privatization of YPF; the divestment of a number of YPF's concessions; the break-up and privatization of Gas del Estado; and the creation of a concession system that provided for the production of hydrocarbons by private enterprises. Among several legislative measures adopted for implementing this program, reviewed and discussed in the Decision on Liability, Decree 1212/89 called for the renegotiation of existing contracts between foreign investors and YPF.

164. Decree 1212/89 was intended to increase production of hydrocarbons and to support progressive deregulation; replace State intervention with free market mechanisms and the principle of free disposal of crude petroleum and its derivatives; permit the prices for hydrocarbon products of national origin to reflect international prices; and replace rules that limited the free commercialization of crude oil and its derivatives. Two other decrees, referred to collectively by the Claimant as the "Deregulation Decrees", issued in conjunction with Decree 1212/89, were Decrees 1055/89 and 1589/89.[287]

165. Pursuant to the Deregulation Decrees, in 1991 Argentina adopted Decree 2411/91 (the "Reconversion Decree") which authorised YPF to renegotiate its service contracts that had been adopted under the previous legislative regime, including Contract 19.944, and to convert these into new agreements consisting of two parts: exploration permits and exploitation concessions.

166. In 1993, on the basis of the Reconversion Decree and after lengthy negotiations, Total and Argentina reached agreed terms for the conversion of Contract 19.944 into the new concession agreement regime. On 23 November 1993, Total (also on behalf of the other Consortium members) and YPF signed an "*Acta Acuerdo*" which set out the parties' agreement for the reconversion of Contract 19.944. The terms of the *Acta Acuerdo* were

[286] See Decision on Liability, *supra* note 1, paras. 347-349.
[287] *Ibid.*, paras. 351-354.

specifically referred to, approved and adopted in Decree 214/94 (the "Concession Decree") adopted on 15 February 1994.

167. Following the adoption of the Concession Decree, Total (through its fully owned subsidiary Total Austral) expanded its exploration and hydrocarbon production activities in Argentina. Total also made a number of investments in several exploration areas in order to locate new reserves. Total entered into long-term contracts with local distributors for the sale of natural gas and also into export contracts for natural gas with Chilean customers, which were approved by the Argentine authorities. This reflected the fact that production in the Argentine market for natural gas had increased significantly, such that Argentina became a regional exporter of natural gas.[288]

168. Total was also active in the LPG ("Liquefied Petroleum Gas") sector. Total freely agreed sales contracts with its customers on both the domestic and international markets.

169. Total's crude oil production came primarily from the Hidra field in Tierra del Fuego. Pursuant to the terms of Law 19.640 of 1972, crude oil exports from Tierra del Fuego remained exempt from export taxes.

170. Total explains that by the end of 2001, its share of overall production of natural gas in Argentina was approximately 22%. Among the exploration and production companies operating in Argentina, Total had the highest percentage of its production (in energy equivalent terms) in gas. Of its total production, the large majority (82%) was natural gas and the remainder (18%) represented crude oil and LPG. Of Total's gas production, the majority was sold in the domestic market to distribution companies and large industrial customers, including power generation plants. Total also entered into a significant number of long-term export contracts for the sale of natural gas, primarily to purchasers in Chile.[289]

[288] *Ibid.*, paras. 358-361.
[289] *Ibid.*, paras. 362-363.

B. Total's Claims in respect of its Investments in Oil & Gas Exploration and Production in the Liability Phase and the Tribunal's Holdings in the Decision on Liability

171. In the liability phase, Total submitted a number of distinct claims, alleging the breach by Argentina of Article 3 of the BIT due to a series of specific measures affecting various rights relating to its investment in oil and gas exploration and production. According to Total, Argentina's measures (listed and described in the Decision on Liability), severely affected its rights under the relevant legal framework, frustrated Total's legitimate expectations with respect to its investments and breached Argentina's obligation to treat Total fairly and equitably under the BIT.[290] The rights invoked by Total are those to which it understood it was entitled as a holder of a production concession: full property rights over the hydrocarbons produced, including the right freely to dispose of all of those hydrocarbons set out in Article 6 of the Concession Decree, Article 6 of the Hydrocarbons Law, Decree 1589/89 and Article 5 of Decree 2411/91 (the so-called Reconversion Decree); and the right to be compensated by the government for limitations of those rights pursuant to Article 8 of the Concession Decree.

172. The Decision on Liability sets out in detail the Tribunal's findings on Total's various claims. The following summary focuses on the claims which were upheld in whole or in part in the Decision on Liability and in respect of which the assessment of damages was deferred to this Award.[291] Following this summary, the Tribunal addresses separately the *quantum* of each claim.

173. With respect to the elimination of the Tierra del Fuego Tax Exemption granted by Law 19.640 of 1972, Total complained that, by way of Resolution 776/06,[292] Argentina retroactively eliminated, from the time of the enactment of the Emergency Law at the beginning of 2002, the exemption from export customs duties that was applicable to production in Tierra del Fuego. On this claim, the Tribunal concluded, based on the evidence and arguments provided by the Parties and its analysis, that Argentina's measure requiring

[290] *Ibid.*, paras. 364-380, listing the measures complained of by Total.
[291] *Ibid.*, paras. 364-405. In the Decision on Liability, *supra* note 1, the Tribunal denied Total's claims relating to the pesification of domestic oil contracts and prices (para. 431), the pesification of Total's private gas contracts and of the gas tariff (para. 447), the export taxes on oil (para. 436), and the price mechanism introduced by the LPG Law (para. 479). The Tribunal also denied all claims by Total under the non-discrimination clause of Article 4 of the BIT (para. 481).
[292] See Exhibit C-575.

Total to pay back taxes under Resolution 776/06 was in breach of the obligation to accord fair and equitable treatment in Article 3 of the BIT.[293] In this regard, the Tribunal held as follows in paragraph 444 of the Decision on Liability:

> *In view of the above, the Tribunal concludes that the retroactive elimination of the Tierra del Fuego tax exemption effected by Argentina through the enactment of Resolution 776/06 is in breach of the fair and equitable treatment clause of the BIT. Consequently, any Argentine authorities' request of payment of export taxes addressed to Total for its exports from Tierra del Fuego concerning the period from 2002 to the entry into force of Law 26,217 in 2007 would be in breach of the BIT.*[294]

174. Total also complained of the subsequent express elimination of the exemption granted in Law 19.640 of 1972 by Law 26.217 in 2007. However, the Tribunal denied that claim, holding that the 1972 Tierra del Fuego exemption could be revoked by a later statutory enactment that explicitly so provided. The Tribunal therefore concluded that the 2007 elimination was not in breach of Total's rights under the BIT.[295]

175. In respect of the domestic sale of natural gas, Total claimed in the liability phase that Argentina's freezing of the gas tariffs was in breach of Total's rights under the BIT. Total contended that Argentina, by fixing the well-head price component of the Consumer Gas Tariff from June 2002 to August 2004 (ENARGAS Resolution 2612/02 of 24 June 2002 and subsequent Resolutions), acted contrary to the Gas Law[296] and Total's rights under the relevant concession. According to Total, this breach started with "Argentina's decision in May 2002 to freeze the maximum reference price that natural gas distributors could charge to consumers for gas at the 2001 pesified levels".[297] Total argued that those measures prevented it from negotiating the price of natural gas with its domestic customers and fixed the gas price

[293] See Decision on Liability, *supra* note 1, paras. 441-442.
[294] See also *ibid.*, para. 442: "…if Argentina's authorities enforce Resolution 776/06 and obtain from Total Austral the payment of the export taxes from 2002 to 2007 (i.e., as of the date of entry into force of Law 26.217) through domestic litigation or otherwise, Argentina would thereby commit an additional breach of Total's rights under Article 3 of the BIT. In such an event, Total would be entitled to recover, as damages, whatever amount Total Austral would have been compelled to pay and any costs incidental thereto."
[295] *Ibid.*, para. 440.
[296] See Total PHB, *supra* note 11, para. 696.
[297] See Decision on Liability, *supra* note 1, para. 388 with reference in fn. 539 to the relevant ENARGAS decisions.

at such a low level as to be unsustainable and incapable of allowing producers to receive an acceptable rate of return.[298]

176. In this respect Total referred specifically to Article 6 of Decree 1589/89 that addressed the situation where restrictions were imposed by the government on the "free availability" of gas. As stated in paragraph 454 of the Decision on Liability:

> *The provision states, however, in this case, that "the price of ONE THOUSAND CUBIC METERS (1000 m3) of gas at NINE THOUSAND THREE HUNDRED KILOCALORIES (9,300 kilocalories) shall not be inferior to THIRTY FIVE PERCENT (35%) of the international price for a cubic meter of Arabian Light at 34° API. In applying this rule, the gas prices fixed by Argentina should not have been below (35%) of the international price for a cubic meter of Arabian Light at 34º API.*[299]

177. The Tribunal held as follows in the Decision on Liability:

> *455. The Tribunal understands that the 35% of the international price per cubic meter of Arabian light oil, 34° API was precisely a guarantee to producers of a given minimum price in case of future restrictions. Nevertheless, while invoking the 35% of the international price per cubic meter of Arabian light oil, 34° API as a benchmark for compensation in case restrictions are imposed, Total does not submit any evidence enabling the Tribunal to gather that the price resulting from the measures was below 35% of the international price per cubic meter of Arabian light oil, 34° API. Nor does Argentina give any indication to the Tribunal that the price resulting from the measures was above this benchmark. In the light of the analysis above, the Tribunal considers that, in so far as Argentina has fixed the domestic price of gas below the relevant benchmark without providing for compensation to Total as required by Article 6 of Decree 1589/89, Argentina has breached the fair and equitable treatment standard of the BIT. This would constitute an unfair and unreasonable interference with Total's rights under Articles 6 and 8 of the Concession.*
>
> *456. If this is, in fact, the case, Total is entitled to damages for this breach of the fair and equitable treatment standard amounting to the difference between the actual price and the benchmark price. Argentina's breach of the fair and equitable treatment - subject to*

[298] See Total PHB, *supra* note 11, para. 705; Decision on Liability, *supra* note 1, paras. 448 and 453.
[299] See Decision on Liability, *supra* note 1, para. 454 setting forth the arguments of Total. The original text there reads: "…THIRTY PERCENT (35%)…", due to a typing error as made clear by the Spanish text and other references to the provision in the Decision on Liability (see para. 354 quoting Article 6 of Decree 1589/89).

> *evidence showing that domestic gas prices resulting from the enacted measures were below 35% of the international price per cubic meter of Arabian light oil, 34° API - took place from June 2002 to April 2004. This is because of the Price Path Recovery Agreement agreed between the government and gas producers (Total included) that was signed on 2 April 2004.*[300] *The Price Path Recovery Agreement provided for progressive increases by the Secretary of Energy of the well-head price of natural gas applicable to industrial consumers between May 2004 and July 2005, with the aim of liberalising the well-head prices for industrial consumers as of August 2005. It set out a different recovery regime for prices for residential consumers, providing for the liberalisation of those prices as of January 1, 2007.*[301]

178. Total has also complained in the liability phase that since Argentina had breached the "Price Path Recovery Agreement" that was signed in 2004, Total is also entitled to the difference between the actual prices and the benchmark price during the period in which this Agreement was in force, with respect to quantities that were not covered by the Agreement. Total has explained that the breach it complains of, consists of having been required by Argentina to redirect gas it had destined for sale on the free (export) market (to Chilean customers), to the internal Argentinean market where Total had to sell it at the reduced domestic price set in the Price Path Recovery Agreement.[302] In the Decision on Liability, the Tribunal concluded in respect of this claim as follows:

> *457. There is no reason for the Tribunal to consider that Total has not validly agreed to the recovery system described above by signing the Price Path Recovery Agreement with Argentina's authorities. Total has not challenged the validity of this Agreement. […] The Tribunal, therefore, concludes that Total's right to invoke the 35% of the international price per cubic meter of Arabian light oil (34° API) standard of compensation concerns the period from June 2002 to April 2004. Further details, including the relevance, if so, of Argentina not having fully implemented the Price Path Recovery*

[300] Original fn. 633 of the Decision on Liability, *supra* note 1: The Price Path Recovery Agreement that had as an object "*la Implementación del Esquema de Normalización de los Precios del Gas Natural en Punto de Ingreso al Sistema de Transporte…*" to be completed by 31 December 2006, was concluded on 2 April 2004 and then approved by the Ministry of Federal Planning, Public Investments and Services with Resolution 208/04 dated 21 April 2004, Exhibit C-208.
[301] Original fn. 634 of the Decision on Liability, *supra* note 1: "See Total's Memorial, paras. 159-160; Total's Reply, para. 242 (as to the *Acta Acuerdo* see also Total's Post-Hearing Brief, paras. 705-709)."
[302] See Total PHB, *supra* note 11, paras. 705-709.

> *Agreement, as Total complains, should be left to the quantum phase.*[303]

179. As to the two claims made by Total concerning Argentina's limitations of gas exports, the Tribunal rejected the first one concerning Total's complaint of the negative effect on its revenue due to the introduction by Argentina of natural gas export taxes.[304] However, the Tribunal upheld Total's other claim concerning Argentina's interference with Total's export contracts, concluding that: "It is the Tribunal's view that once an export contract had been duly authorised pursuant to the domestic applicable legal regime, the subsequent withdrawal of those contractual rights at least constitutes unfair treatment as Total has argued."[305]

180. In this respect the Tribunal concluded as follows at paragraphs 460-461 of the Decision on Liability:

> *Total is entitled in any case to be compensated by Argentina for its loss of reasonably expected profits under these contracts since this loss is due to Argentina's interference with Total's export contracts in breach of the fair and equitable treatment clause of the BIT. In respect of the above-mentioned breach, Total's damages should be based on the difference between the domestic prices it received for the gas redirected and sold in the domestic market and the export prices agreed in export contracts.*[306] *As to the duration of Total's export contracts, the relevant period will have to be determined in the quantum phase based on the evidence that the parties submit.*
>
> *[…] the Tribunal concludes that the measures by which Argentina has specifically interfered with Total's gas export contracts that had been duly authorised by Argentina's authorities are in breach of Total's rights under the BIT.*

C. Total's Claims in the Quantum Phase

a) *Retroactive Elimination of the Tierra del Fuego Tax Exemption*

i. Total's Claims

[303] Original fn. 636 of the Decision on Liability, *supra* note 1: "See paras 371, 390 above and Total's Post-Hearing Brief, paras. 708-709. The Price Path Recovery Agreement was later extended by another agreement (Resolution SoE 599/07 dated 14 June 2007, Exhibit ARA 269)."
[304] Decision on Liability, *supra* note 1, paras. 458-459, referring to Total PHB, *supra* note 11, paras. 722-726.
[305] *Ibid.*, para. 460.
[306] Original fn. 645 of the Decision on Liability, *supra* note 1: "In any case, the exact calculation of Total's damages and its basis will have to be dealt with in the quantum phase, avoiding any double recovery."

181. Total states that "[b]ased on the Decision, Total is entitled to recover all duties actually paid by Total Austral pursuant to Resolution 776/06 for its exports of LPG, crude oil and natural gas from Tierra del Fuego for the period between 2002 and January 2007 (the date of entry into force of Law 26,217/2007)".[307] As explained in detail in the CL First Report, the total taxes requested from and actually paid by Total Austral on those exports amount to $7,828,000.[308]

182. Total has further stated in its Quantum Memorial that after the conclusion of local proceedings in Argentina concerning the tax request at issue, the Argentine Tax Authorities ("AFIP") notified Total Austral in December 2010 of a request for additional taxes potentially amounting to $45 million due under the same Resolution 776/06 for exports from Tierra del Fuego between 2002 and 2006.[309] Total relies on the holdings at paragraphs 444 and 468 of the Decision on Liability for opposing such additional request as being in breach of the BIT, and adds: "While Total does not currently seek any relief from the Tribunal in this regard, it reserves the right to request an order directing Argentina to indemnify Total Austral for the full amount sought by AFIP, plus interest (if any). Total also reserves the right to seek interim relief from the Tribunal in relation to future attempts by the Argentine Government to enforce Resolution 776/06."

183. Finally, "based on the Decision, and in particular the reference to incidental costs, Total understands that it is entitled to recover reasonable expenses and fees incurred in connection with the legal proceedings in Argentine courts relating to Resolution 776/06." Based on these premises, Total requests an additional US$77,826.43 as compensation equivalent to "the amount spent to date on costs and fees incurred in connection with proceedings in Argentina between 12 October 2006 and 25 November 2010."[310]

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[307] Total QM, *supra* note 5, para. 173.
[308] CL First Report, *supra* note 54, paras. 77 and 151 and Table XVI, relying on Exhibit C-758 (document of the *Aministración Federal de Ingresos Públicos,* Argentina's Tax Authorities [hereinafter "AFIP"] listing all tax requests/ invoices as set forth in Table XVI) and Exhibit C-763. The dates of the various payment requests as listed in Table XVI and shown on each tax liquidation go from 25 October 2006 to 8 January 2007, but actual payment appears to have been made for all the requests on 31 May 2011, the date appearing on Exhibit C-758. This is in accordance with the statements of Total (Total QM, *supra* note 5, paras. 174-175) that the domestic judicial challenge by Total Austral which had suspended the payment (as mentioned in para. 442 of the Decision on Liability, *supra* note 1) had been rejected at the last resort on 9 November 2010.
[309] Total QM, *supra* note 5, paras. 176-177.
[310] *Ibid.*, para. 178.

ii. Argentina's Position

184. Argentina argued in respect of Total's claim for recovery of retroactive tax payments that Total has suffered no damage from the withholding tax, because Total was able to pass on these taxes to third parties, specifically to the Chilean buyers.[311] Argentina submits that such a transfer is common practice in the relations between Argentinean producers and Chilean buyers, as evidenced by contracts made by other producers in Argentina with their Chilean clients. Total therefore should not have suffered any damage. Argentina also relies on the general obligation for Total to mitigate any damages it may have suffered. In respect of this issue, the Tribunal notes that in its Quantum Reply, Total replied that it has been able to pass through only a small part of the withholding tax imposed on natural gas exports to Chile, that is $200,000 pursuant to an agreement with Methanex.[312] Total has reduced its claim to recovery of tax paid retroactively under Resolution 776/2006 accordingly.

185. In respect of Total's claim for costs and procedural expenses of the domestic proceedings instituted to challenge the request of retroactive taxes, Argentina submits that, although the costs had been incurred before the Decision on Liability, Total did not make this claim during the merits phase but only in the *quantum* phase. This claim is therefore inadmissible as having been made too late in the proceedings.[313]

iii. The Tribunal's Evaluation

186. The Tribunal considers that Total's claim to recover $7,828,000 from Argentina, corresponding to the amount of taxes retroactively imposed on and paid by Total Austral on hydrocarbon exports from Tierra del Fuego, is correctly based on the holding of the Tribunal in paragraph 444 of the Decision on Liability.[314] This amount results from the tax documents submitted by Total as identified above.[315]

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[311] Argentina QCM, *supra* note 6, paras. 206-215, relying on Exhibits ARA-292 ARA-309 and C-748, concerning Total, but not related to Tierra del Fuego.
[312] See Total QR, *supra* note 23, paras. 192-195; Exhibit C-722; and CL Second Report, *supra* note 23, para. 139.
[313] See Argentina QR, *supra* note 23, para. 156, where Argentina notes, moreover, that the bills submitted by Total (Exhibit C-759) are addressed to the Consortium, not just to Total.
[314] Para. 444 of the Decision on Liability, *supra* note 1, is reproduced at *supra* para 173.
[315] See *supra* note 308, Exhibit C- 758.

187. As to the exact amount of the claim to be granted, based on the evidence and arguments by the Parties, including those at the *quantum* hearing, the Tribunal is persuaded that Total was only able to pass on $200,000 of the taxes imposed to the buyers. The retroactive imposition of the tax at issue is different from the case of other, later, export contracts, where the issue of who had to bear withholding tax burdens could have been addressed at the time of making the relevant contract. Since the taxes in question here were imposed retroactively in respect of past supplies, it appears that Total could only have transferred this burden by way of an *ex post facto* arrangement subject to the agreement of the purchasers. In the Tribunal's view, this was not likely to occur and, therefore, Total is entitled to damages in the amount of $7,628,000 for this claim.

188. In the Tribunal's view, Total's claim to recover expenses and legal costs incurred, in whole or in part, by Total Austral relating to the latter challenge of the retroactive taxation before Argentina's domestic courts, should fail for two reasons. First, this claim is new and comes too late since it was not submitted in the liability phase.[316]

189. Further, this claim is not covered by the finding in paragraph 442 of the Decision on Liability, where the Tribunal held that should Argentina obtain the additional back taxes it was claiming (and whose payment had been suspended at the time), "Total would be entitled to recover, as damages, whatever amount Total Austral would have been compelled to pay and any costs incidental thereto."[317] The Tribunal, at paragraph 443 of the Decision on Liability, rejected moreover Argentina's defence based on the "fork in the road" argument that Total, having chosen to pursue its claim before Argentina's courts, was barred under Article 8(2) of the BIT from submitting the "same" claim in arbitration proceeding under the BIT. The Tribunal has found that the two claims have a different object such that Total's claim under the BIT is not precluded by the different claim to a tax refund by Total Austral under Argentina's laws before local courts. Based on the same principle, costs incurred in the domestic proceedings pursued by Total Austral cannot be recovered by Total here.

[316] Such a claim should have been introduced before the *quantum* phase, see *supra* para. 92 (in relation to Total's claim as technical operator of TGN), and paras. 160-161 (in respect of Total's claim as technical operator of HPDA).
[317] See the full quotation at *supra* note 294. By "incidental costs" the Tribunal refers to costs incidental to the taxes themselves.

190. Finally, Total has raised the issue, as mentioned in paragraph 182 above, of an additional request or threat thereof by Argentina's tax authorities for retroactive taxes on exports from Tierra del Fuego based on Resolution 776/06. The Tribunal confirms its holding in paragraphs 442 and 444 of the Decision on Liability that any such request is or would be in breach of Article 3 of the BIT. In its Quantum Memorial, Total stated that "it reserves the right to request an order directing Argentina to indemnify Total Austral for the full amount sought by AFIP, plus interest (if any). Total also reserved the right to seek interim relief from the Tribunal in relation to future attempts by the Argentine Government to enforce Resolution 776/06."[318] The Tribunal cannot, for procedural reasons, accept such potential or future requests. Once this Tribunal has issued the present Award, it will have concluded its task and will cease, "*munere suo functus*". Accordingly, it will be without jurisdiction to entertain any further claims or requests.[319]

191. Based on the reasons set out above and the Decision on Liability, the Tribunal grants to Total and declares Argentina liable to pay to Total the amount of **$7,628,000**[320] as compensation for withholding taxes on exports in the period of 2002-2006 from Tierra del Fuego, imposed retroactively in breach of Article 3 of the BIT and paid by Total Austral under Resolution 776/2006.[321] The Tribunal also declares that further requests for such additional taxes, if any, would also be in breach of Article 3 of the BIT. Should Total S.A. or Total Austral be compelled to pay any such taxes to Argentina's tax authorities, Claimant Total S.A. would be entitled to recover any such amount with interest (as determined in Part V here after) under this Award. The Tribunal denies any other claim and defence concerning the issue of retroactive withholding taxes on exports from Tierra del Fuego for the period 2002-2006.

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[318] See Total QM, *supra* note 5, para. 177.

[319] Subject to the power of a tribunal upon request of either party to rectify or interpret its award pursuant to Articles 49(2) and 50 of the ICSID Convention.

[320] The Tribunal has noted some confusion in the figures submitted by Total and its experts in the *quantum* phase. In Total QM, *supra* note 5, para. 173, Total has identified the "duties actually paid" and which it is asked to recover as amounting to $7,800,000, which corresponds to the figures of the CL First Report and to the total of the invoices, Exhibit C-758. Total also included interests on this amount, at the WACC of Total Austral, arriving at the figure of $8.1 million as of 31 May 2011. In CL Second Report, *supra* note 23, Total's experts updated the amount of principal and interest as of 30 September 2011 to $8.4 million, reducing it thereafter to $8.2 million, to take into account the transfer of $200,000 to Methanex discussed at *supra* para. 186. In Total PHB, *supra* note 11, table two, annexed to its PHB, Total claims, however, the amount of "$8.3 million ($4.8 million plus pre-award interest from the date of loss, at WACC)". In view of the above, the Tribunal considers that 4.8 is a typo, an error instead of the correct figure of 7.8.

[321] Interest on the above sum will accrue from the date of actual payment (31 May 2011, see *supra* note 308) at the rate determined hereafter in Part V of this Award. .

b) *Domestic Sales of Natural Gas 2002-2004*

i. Total's Claim

192. In the relevant paragraphs of the Decision on Liability, quoted above, the Tribunal held that "…in so far as Argentina has fixed the domestic price of gas below the relevant benchmark without providing for compensation to Total as required by Article 6 of Decree 1589/89, Argentina has breached the fair and equitable treatment standard of the BIT." The Tribunal has specified that "…the 35% of the international price per cubic meter of Arabian light oil, 34° API was precisely a guarantee to producers of a given minimum price in case of future restrictions."[322]

193. In paragraph 455 of the Decision on Liability the Tribunal has noted that "Total does not submit any evidence enabling the Tribunal to gather that the price resulting from the measures was below 35% of the international price per cubic meter of Arabian light oil, 34° API. Nor does Argentina give any indication to the Tribunal that the price resulting from the measures was above this benchmark." The decision on this issue was therefore postponed to the present *quantum* phase.

194. In the *quantum* phase, Total submitted evidence that indeed the benchmark price in the period of 1 May 2002 – 21 April 2004[323] was higher (considerably higher) than the average price received by Total in the domestic market at regulated prices. Total has shown that the benchmark oscillated in that period, increasing from $1.40 to $1.80 per Mmbtu, with an average around $1.54 per Mmbtu. By contrast, the domestic sales price was fixed at an average of $0.43 per Mmbtu.[324] Total also provided evidence of the quantities of natural gas

[322] See Decision on Liability, *supra* note 1, para. 455, quoted above at *supra* para. 177. The relevant provision of Article 6 of Decree 1589/89 (reproduced at para. 354 of the Decision on Liability) is as follows: "Art. 6. ON EXPORT RESTRICTIONS: In the event the National Executive proceeds to establish restrictions on the exportation of crude petroleum and/or its derivatives, Article 6 of the Law No. 17.319 shall become enforceable, by virtue of which producers, refiners, and exporters shall receive, per product unit, an amount not less than that of petroleum, and derivatives of a similar nature". In the event of restrictions on the right of free availability [disposal] of gas, the price of a thousand cubic meters (1,000 m3) of gas of nine thousand three hundred calories (9,300 kilocalories) shall not be less than thirty five per cent (35%) of the international price per cubic meter of Arabian Light petroleum of 34° API".

[323] Total considers these two dates as the relevant dates: 1 May 2002, being "the commencement of the Government's unlawful gas price interventions", and 22 April 2004 as "the date of entry into force of the 2004 Agreement", Total QM, *supra* note 5, para. 182.

[324] See Total QM, *supra* note 5, para. 186 and table showing graphically the evolution of the Benchmark Price and average actual price; table at para. 187 showing also the volumes quarterly sold and the difference in revenues. For more details see CL First Report, *supra* note 54, paras. 81-84, Table VII and Graph II. Total

that it sold in that period at the regulated domestic prices. Finally, in paragraph 184 of its Memorial on Quantum, Total quantified its damages as "amounting to the difference between the Benchmark Price and the actual price, for all domestic sales of natural gas, multiplied by the volume of gas actually sold by Total Austral into the domestic market". This difference, which Total claims as damages, amounts to $112.3 million, net of income taxes.

ii. Argentina's Position

195. Argentina has raised three defenses against Total's claim. In the first place, Argentina says that the benchmark based on the international price of oil was never considered relevant for the fixing of gas prices since the two markets not connected. According to Argentina, "[t]his Arabian Light benchmark price had already lost any significance already before emergency measures were taken in Argentina", pointing out that in the relevant period from May 2002 to 2004 the benchmark was on average approximately 300% higher than the gas prices (in pesos) in the Argentine domestic market. According to Argentina, if the gas price is compared with the benchmark price after the issuance of Presidential Decree 1589/89, it is possible to observe, that throughout the 1990s these price trends were totally different, already making it unreasonable to use this comparator.[325]

196. Argentina claims, therefore, that the damages allegedly suffered by Total because of the government's intervention, which the Tribunal has held in breach of the BIT, cannot be measured by the difference between the benchmark and the actual domestic regulated price. According to Argentina, the benchmark price proposed by the Tribunal, based upon Section 6 of Presidential Decree 1589/89, "is not applicable". According to Argentina moreover Total had never invoked in the liability phase the benchmark and its experts had set the but-for price at much lower levels, $1.00 as compared to the benchmark of $1.38.[326]

197. Argentina relies on UBA's First Valuation Report, which calculates alternative benchmark prices, namely the exploitation cost and reasonable profit margins pursuant to the provisions contained in Section 6 of the Hydrocarbons Law, and the premises upon which the

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points out that as a consequence Total Austral "received prices that were, on average, 28.2% (or 71.8% below) of the Benchmark Price", Total QR, *supra* note 23, para. 213.

[325] Argentina QCM, *supra* note 6, paras. 219 ff and 224-225.

[326] *Ibid*., para. 225, with reference to the LECG Damage Report, *supra* note 115, para. 229 and Graphs VII, and VIII (which, however, set forth pre-2002 prices).

price path was calculated for the 2004 Agreement. The latter are especially relevant, according to Argentina, because this agreement was voluntarily executed by and between the Government and most gas producers (including Total Austral), and would have allowed producing companies to cover their costs and obtain reasonable profit margins from June 2002 to April 2004.[327]

198. Argentina concludes that if damages are calculated using the UBA price criteria and the volumes presented by Compass Lexecon, the amount of damages that would result, as calculated by UBA, would amount to US$5,465,436.[328]

199. The second argument raised by Argentina concerns the existence, at certain times, of "exceptional circumstances" which allowed the Executive to delink domestic prices from international prices under Article 6 of the Hydrocarbons Law.[329] This section of the Hydrocarbons Law provides that "[…] [w]hen international oil prices increase significantly due to exceptional circumstances, they will not be considered for setting the sale price within the domestic market. In that case, domestic prices can be set on the basis of real exploitation costs for the state-owned company, the amortizations that are technically applicable, and a reasonable interest rate on the updated and depreciated investments made by such state-owned company. […]". In such cases, according to Argentina, "if the crude oil price does not serve to fix domestic prices, it can neither serve as a reference to fix prices of gas sale to the domestic market". According to Argentina, such exceptional circumstances occurred in 2002 and 2003 respectively, due to a strike in the Venezuelan oil industry and the Iraq war.[330]

200. The third defence raised by Argentina concerns the volumes relevant to ascertain the damages suffered by Total due to its sales in the domestic market at regulated prices. Argentina submits that only Total's sales to distributors must be taken into account because Argentina's intervention on prices concerned only those sales under the terms of the relevant

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[327] *Ibid.*, para. 234.
[328] *Ibid.*, para. 235, relying on UBA First Valuation Report, *supra* note 63, paras. 504- 505.
[329] *Ibid.*, para. 228, footnote 250, referring to the Decision on Liability, *supra* note 1, para. 409, where this argument, previously made by Argentina in the liability phase, is summarized. See also Decision on Liability, *supra* note 1, paras. 252-259, setting forth the relevant provisions of the Hydrocarbons Law and of the various decrees of 1989 and 1991 and of the Concession Decree, all referring to Article 6 of the Hydrocarbons Law. Argentina states that Article 6 of the Hydrocarbons Law is referred to both in Article 6 of Decree 1589/89 and in Decree 2411/91 [hereinafter "Reconversion Decree"].
[330] For both references see Argentina QCM, *supra* note 6, para. 228, and Respondent's Response to Procedural Order No 5, submitted on 14 December 2011 [hereinafter "Argentina Response to PO No. 5"].

ENARGAS resolutions[331] such that the relevant volumes are a fraction of those advanced by Total.[332] Finally, Argentina submits that the end date for the calculation of damages is 2 April 2004, the date of the signature of the Price Path Recovery Agreement, and not 21 April 2004, the date of the agreement's entry into force, as suggested by Total.[333]

201. In its Reply on Quantum, Total opposed Argentina's arguments and defences. Specifically, Total objects to Argentina defining the Benchmark as "inappropriate", pointing out that it was set by Argentina's own law, to which the Decision on Liability has properly and conclusively referred.[334] Total also disagrees with the relevance of the 2002 oil sector strike in Venezuela and the 2003 Iraq war and the related reduction in Iraq's oil production.[335]

202. Total further denies that only sales to distributors[336] were affected by the Government's price intervention and objects to UBA cutting away "the bulk of the harm caused by Total" which leads UBA to reduce Total's damages by $53.4 million.[337] Total argues as follows:

> *Although ENARGAS Resolution 2612/2002, dated 24 June 2002, specifically suppressed prices for gas distributors, all contracts (including those of large users (industrial users and CNG customers) and power plants) were affected by these pricing measures. Once distributors supplied the market with subsidized gas, Total Austral was forced to match this price for its other customers. Otherwise, buyers would naturally have turned to the distributors to receive the cheaper gas indirectly. As a result, Total Austral was forced to sell gas to gas-fired power plants at suppressed prices – because if Total Austral attempted to raise prices above those set by ENARGAS in Resolution 2612/2002, these customers would have bypassed Total Austral and bought gas directly from the distributors. In addition,*

[331] *Ibid.*, paras. 216-217, with reference to ENARGAS 2612/2002. These measures and their impact on Argentina's gas price to consumers are dealt with in para. 368 of the Decision on Liability, *supra* note 1.
[332] UBA First Valuation Report, *supra* note 63, paras. 506-512, indicating an average volume of sales to distributors of 31% or 53%, depending on the source of the gas and pointing out that those additional revenues would be subject to taxes/royalties.
[333] *Ibid*., paras. 508-510.
[334] See Total QR, *supra* note 23, para. 209: "Moreover, the Decree 1589/1989 remains in force today: if Argentina truly believed that the Benchmark Price was no longer appropriate, it could have modified the law to that effect long ago."
[335] *Ibid.*, paras. 208 and 218, as to the initial and final relevant dates.
[336] *Ibid.*, paras. 216-219.
[337] See *Ibid*., text and Table at para. 216, based on the CL Second Report, *supra* note 23, para. 149 and Table there.

> *CAMMESA required power plants to base their reference prices on ENARGAS's 'large user' category of the Consumer Gas Tariff – meaning that these plants would not buy natural gas at higher prices, 'as otherwise they would be exposed to monetary (unrecoverable) losses'. In this way, Argentina's Treaty Breach distorted the entire domestic gas market, necessarily lowering the price at which Total Austral could sell to all of its customers." [Footnotes omitted.]*

According to Total, Argentina also fails to take into account "that the Benchmark Price is a measure for calculating compensation; it does not represent the price of gas in the absence of Argentina's Treaty Breaches."[338]

iii. The Tribunal's Evaluation

203. Before discussing the merits of the Parties' position on the issues set out above, the Tribunal recalls that in order to obtain more factual information and clarification of a number of the arguments set out by the Parties in their *quantum* briefs, the Tribunal issued PO No. 5 in which it asked the Parties to address certain specific points in advance of the *quantum* hearing. The Tribunal asked Total: (a) to detail the monthly prices for the natural gas quantities that Total could have exported to Chile if it had not been obliged to redirect them to the domestic market, and (b) to calculate the damages suffered by Total Austral for not having been able to sell those quantities to customers in the Chilean market. The Tribunal asked Argentina: (a) to submit detailed information as to increases of the price of imported crude oil into Argentina, pointing out in what respect they "increased substantially" due to "exceptional circumstances", and (b) to submit legal or administrative texts evidencing the scope and interpretation of the term "exceptional circumstances" in Article 6(3) of the Hydrocarbons Law. The answers of the Parties are referred to below, to the extent they are relevant.

204. Having carefully reviewed the Parties' arguments and all of the evidence submitted, including the Parties' submissions in response to PO No. 5, the Tribunal has concluded, contrary to what Argentina suggests, that the benchmark is an appropriate basis on which to calculate Total's damages. It is important to underline, as already clarified in the Decision on Liability, that in the Tribunal's view, the breach by Argentina of the FET Standard (Article 3

[338] *Ibid.*, paras. 217 and 219 (footnotes omitted).

of the BIT) relating to the regulation of natural gas domestic prices in 2002 – 2004 does not stem from such regulation or intervention *per se*. The breach consists, rather, in Argentina not having provided the compensation guaranteed in Article 6 of Decree 1589/89 in case of such an intervention, that is, in not having paid to Total Austral the difference between such regulated price and the benchmark as therein defined.[339]

205. This being the content of the obligation and the consequences of the breach thereof, it would not be appropriate for the Tribunal to substitute the benchmark guaranteed by Argentina's own legislation with another criterion. Moreover, the evidence submitted in the *quantum* phase, specifically the information submitted by Total in its answer to PO No. 5 concerning the price of natural gas exported to Chile, shows that the free market prices were not so distant from the benchmark.[340] This evidence contradicts Argentina's argument about the irrelevance of the benchmark compared with free market prices for gas.

206. The Tribunal therefore does not see any basis for departing from the use of the benchmark established in Decree 1589/89, as set forth in the Decision on Liability, to measure the compensation that Argentina should have provided under that Decree, as the basis for calculating the damages suffered by Total[341]

207. The issues to be resolved in order to determine the *quantum* of Total's damages are the following:

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[339] See Decision on Liability, *supra* note 1, para. 455. The Tribunal clarified there that the breach of Article 3 of the BIT does not consist in Argentina's non-respect of the price integration obligation *per se*, but in the fact that this constitutes "an unfair and unreasonable interference with Total's rights under Articles 6 and 8 of the Concession". Article 8 of the Concession Decree referred in turn to Article 6 of Decree 1589, see Decision on Liability, *supra* note 1, para. 359.

[340] See Total PHB, *supra* note 11, para. 66 and the graph set forth there comparing the evolution of the Benchmark to that of other prices.

[341] Contrary to Argentina's objection that Total had not invoked the benchmark in the liability phase, Total did so explicitly, notably at para. 714 of Total PHB, *supra* note 11. Total considers that the reference to the benchmark in the Decision on Liability is "*res judicata*," Total PHB, *supra* note 11, para. 64. The Tribunal understands this statement to imply that, according to Total, in no case could the Tribunal depart in the Award from its reliance on the benchmark as set forth in the Decision on Liability, *supra* note 1. Since the Decision on Liability is not a final award, the Tribunal is of the different opinion that it would not be precluded for good reasons, such as arguments and evidence supplied in the *quantum* phase, not only from clarifying, but also from rectifying any findings made in the Decision on Liability found subsequently defective, subject to respecting the principles of due process. The need to do so does not arise here for the reasons stated above that confirm the Tribunal's reliance on the benchmark.

a) the exact period in which the price intervention was in force during the period 2002 – 2004;

b) whether it has been shown, and if so for what period, that prices of imported petroleum increased significantly due to "extraordinary circumstances", that might render the reference to the benchmark inapplicable under the relevant regulation;[342] and

c) whether all sales by Total Austral in the domestic market, or, instead, only sales to distributors should be taken into account to identify the quantities in respect of which Total was entitled to receive the benchmark price.

208. As to the first issue, relating to the relevant initial and final dates, Article 2 of the ENARGAS Resolution of 24 June 2002, which established a maximum reference price that distributors could charge for the well-head price component of the Consumer Gas Tariff, explicitly provided that this price regulation was effective from 1 May 2002. Therefore, that is the relevant initial date.[343] This regulation terminated with the entry into force of the Price Path Recovery Agreement which provided for progressive increases by the SoE of the well-head price of natural gas applicable to industrial consumers between May 2004 and July 2005, with the aim of liberalising the well-head prices for industrial consumers as of August 2005. This agreement was signed by the gas producers, including Total Austral and the SoE, on 2 April 2004 and was approved by the Ministry of Federal Planning, Public Investments and Services by Resolution 208/04, dated 21 April 2004 (Exhibit C-208).[344] Article 13 of the Agreement provides, in fact, that its entry into force was subject to the approval within thirty days by the Ministry. From the above, the Tribunal deduces that the Agreement entered into force on the day of its approval by the Ministry, that is, on 21 April 2004. The relevant period is therefore the one from 1 May 2002 to 21 April 2004.[345]

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[342] See *supra* para. 199 quoting Article 6 of the Hydrocarbons Law to this effect.
[343] See Exhibit C-155 and Decision on Liability, *supra* note 1, para. 368.
[344] See Decision on Liability, *supra* note 1, para. 456 and fn. 633.
[345] Since the Tribunal was in doubt before the *quantum* hearing on whether the correct final date was 2 April or 21 April 2004, pursuant to the questions posed to Total in PO No. 7, Total's experts have calculated the damages suffered by Total also up to 2 April 2004 (based on the total quantities of gas sold domestically by Total Austral in this period), indicating an amount of $108.3 million, instead of $112.0 million set forth in Total QM, *supra* note 5 and in CL First Report, *supra* note 54. See CL Response to PO No. 7, *supra* note 92, para. 38 and monthly data at Table X there.

209. The second issue, relates to whether there were extraordinary circumstances which would render the benchmark inapplicable. The response provided by Argentina to the question addressed to it in PO No. 5, was not clear, nor persuasive with respect to the evolution of the price of imported oil or the extraordinary nature of the circumstances alleged.[346] The effects of the strike in the oil sector in Venezuela around the end of 2002 to which Argentina referred[347] are not evident from the graph of the evolution of oil prices in Argentina, even assuming that the strike was an "extraordinary" event, that is out of the ordinary and normal course of business.

210. The Tribunal finds otherwise in respect of the relevance of the war in Iraq, whose military operations lasted formally from 19 March to 1 May 2003 but whose outbreak was anticipated sometime before. On the one hand, such a war is undoubtedly an extraordinary event. On the other hand, the price data and graphs submitted by Total and its experts show a marked peak in oil prices in the months of February - April 2003, followed by a rapid descent back to previous average values of the period.[348] The Tribunal considers therefore that this increase is attributable to an extraordinary circumstance. This does not mean however that those two months must be simply excluded from the calculation of Total damages because Argentina would have no obligation to compensate producers during that period.[349] Section 6 of the Hydrocarbons Law provides for the exception in case that "…the prices of imported petroleum increase significantly due to exceptional circumstances". Section 6 also provides that where such significant increases and exceptional circumstances exist, then the prices of imported petroleum shall not be used for the setting of prices in the domestic market. It goes on to state that "…in such case, domestic prices can be set on the basis of the real

[346] See the Excel Table at Argentina Response to PO No. 5, *supra* note 330, at No. 19 "Precios de Importacion de Crudos". In Argentina PHB, *supra* note 28, para. 82, Argentina relied on the generic statements of its witness, Portnoy, quantum hearing, Day 3, 576:4-6.

[347] See UBA First Valuation Report, *supra* note 63, para. 471 and fn. 117, which refers to a "Monthly Oil Market Report" of the International Energy Agency of 17 January 2003. See "Highlights" Section at www.omrpublic.iea.org. This report mentions the loss of supply due to the "crippling strike in Venezuela" but without indications as to the effect on prices.

[348] According to Total QM, *supra* note 5, graph at para. 186, prices started to grow markedly in December 2002, peaked in February 2003, and were back at pre-increase levels in May 2003, see also CL Response to PO No. 7, *supra* note 92, Table X detailing the monthly average benchmark price. See also the graph at para. 66 of Total PHB, *supra* note 11. This graph shows that oil prices increased much more in subsequent years, starting from the beginning of 2005, but such subsequent evolution is not at issue in the present dispute.

[349] The damages to be excluded (and to be replaced by an average) result from the monthly data of Table XVII at para. 157 of CL First Report, *supra* note 54 (based on the total volumes sold by Total Austral on the domestic market). They amount to $4,436,000 for March 2003 and $3,259,000 for April 2003, together $7,695,000, out of a total claim for 2002-2004 of $112.3 million as mentioned at *supra* para. 162.

exploitation costs of the state owned company, the amortizations that are technically applicable and a reasonable rate on the updated and depreciated investments made by such state owned company…".[350] Rather, Argentina had the option of setting a price based on different costs incurred by the relevant state enterprise, etc. In the absence of information from the Parties on these alternative criteria,[351] and on the evidence available, the Tribunal finds it appropriate to use as benchmark price for a period of two months the average prices of January and May 2003.

211. In respect of the third issue, the volumes of Total Austral's sales of gas to be taken into account to calculate the compensation due to Total Austral, the Parties advanced their respective evidence and opposing arguments forcefully in their *quantum* briefs and at the *quantum* hearings. As mentioned above at paragraph 203, Total claims that although ENARGAS Resolution 2612/2002 of 24 June 2002 (retroactively effective since 1 May 2002), specifically suppressed prices payable by gas distributors. All contracts (including those with large users and power plants) were affected by these pricing measures. Once distributors supplied the market with subsidized gas, Total Austral was forced to match this price for its other customers. Total claims, therefore, that Argentina must pay as damages the difference between the benchmark and the actual regulated price for all domestic sales of Total Austral in the relevant period.[352]

212. Argentina opposes this argument both legally, since only sales to distributors were subject to the official price intervention in the relevant ENARGAS resolutions, and factually.[353] Argentina claims that Total was able to sell to clients other than distributors at higher prices. At the *quantum* hearing, invoices of sales filed by Total were submitted, discussed and commented on by the Parties' respective experts.[354] While Argentina and its experts considered that there was evidence of price differentiation, Total and its experts

[350] For the full text of Art.6 of the Hydrocarbon Law see Decision on Liability, *supra* note 1, para. 348.
[351] When the Hydrocarbon Law was enacted in 1967, YPF was the state-owned company in the hydrocarbon sector that was later privatized. The references provided for in the Hydrocarbon Law appear therefore to be unusable in respect of the exceptional circumstances of 2003.
[352] See *supra* para. 176. ENARGAS Resolution 24/2002 is Exhibit C-155.
[353] See Argentina QCM, *supra* note 6, paras. 216-217; Argentina QR, *supra* note 23, para. 172 and UBA Second Valuation Report, *supra* note 23, paras. 357-358, 364-365 and Annex III.
[354] See Exhibit C-806, comprising more than 3,000 invoices; *quantum* hearing, Transcripts, Day 2, 493, 507, and 559; Day 3, 699 (Abdala, Spiller, Portnoy).

attributed any such difference (which, in their view, is only minor and occasional) to other factors such as transport costs.

213. The Tribunal is of the view that this dilemma is to be solved legally, focusing on the content of the obligation that Argentina had undertaken, the measures taken by Argentina, which breached that obligation and the consequences of its non-compliance therewith, which resulted in a BIT breach, in order to determine the damages thereby caused to Total.

214. As concluded in the Decision on Liability, Argentina is liable for not having made good to Total the difference between the regulated domestic price and the Benchmark price which had been guaranteed in case of restrictions imposed to the "free availability [disposal]" of gas (as to price and quantities) by virtue of the Deregulation Decrees of 1989.[355] As stated above in paragraph 204: "the breach by Argentina of the FET standard (Article 3 of the BIT) relating to the regulation of natural gas domestic prices in 2002 – 2004 does not stem from such regulation or intervention *per se*. The breach consists rather in Argentina not having provided the compensation guaranteed in Article 6 of Decree 1589/89 in case of such an intervention, that is, in not having paid to Total Austral the difference between such regulated price and the Benchmark as therein defined."

215. It is undisputed that the intervention by ENARGAS' Resolution of 24 June 2002 established a maximum reference price that distributors could charge for the well-head price component of the Consumer Gas Tariff, thus requiring producers to limit their sale price to distributors accordingly.[356] Given that the measure of Argentina at issue (which represents the "restriction on the free availability [disposal] of gas" giving rise to the price guarantee at issue) is directed only to distributors, whose tariffs were subject to regulated prices,[357] the price guarantee of Argentina operates only in respect of sales to distributors whose price was

[355] See Decision on Liability, *supra* note 1, paras. 454- 455.
[356] *Ibid*., para. 368: "Then commencing in May 2002, ENARGAS established a maximum reference price distributors could charge for the well-head price component of the Consumer Gas Tarff. The effect of this measure was to freeze the level of the Consumer Gas Tariff at the same level than in 2001, but pesified," referencing the various ENARGAS Resolutions including 2612/2002, fn. 498
[357] See the text of Resolution 2612/2002, pp. 2-3, 5, and 9 referring to "*las Reglas Básicas de la Licencia de Distribución… los Cuadros Tarifarios propuestos por dicha Distribuidora……las partes convocadas son Licenciatarias de distribución de gas natural…las Distribuidoras ratificaron las presentaciones en su respectivos expedientes, y en el conjunto con los transportistas también presentes en la sala, hicieron una petición acerca que debía generalizarse un aumento equivalente* para los segmentos regulados de las tarifas, es decir transporte y distribución…" (emphasis added).

compressed below the benchmark. Since by not complying with this obligation Argentina has breached its obligations under Article 3 of the BIT, Argentina must pay as compensation to Total the corresponding amount in respect of sales to distributors only. The obligation was not that of making good all losses that gas producers may have suffered in respect of other sales, even if indirectly due to the depressed price they had to charge to distributors, as Total claims.

216. The fact that Total Austral may have had to sell to its other clients at similar prices because of the gas market structure is thus not the consequence of Argentina not having paid such compensation in breach of its guarantee but rather the effect of a market situation for which Argentina is not liable. The characterisation of these losses as indirect or rather consequential damages and the discussion whether the breach of the treaty standard entails, as a breach of an international obligation, compensation for only direct losses (as Argentina submits), or also for indirect losses (as Total submits, claiming that they were an inevitable consequence of Argentina's action) is therefore irrelevant in the Tribunal's view, because of the specific content of the substantive primary obligation that Argentina had undertaken.[358] An "a contrario" argument confirms this conclusion: had Argentina been willing to provide the price difference in accordance with Decree 1589/89 it should have done so only in respect of sales subject to restrictions, that is those of the distributors subject to regulated tariffs. If Argentina had done so, Argentina would not have breached Article 3 of the BIT. Also in such a situation the non-regulated prices might have aligned themselves to the compressed regulated prices, but Argentina would have committed no breach Article 3 of the BIT. In conclusion, the Tribunal is called to determine the amount of sales that Total Austral made to the distributors from 1 May 2002 to 21 April 2004. In response to Argentina's challenge of its approach,[359] Total supplied various break-downs of Total Austral's sales by types of clients and different data as to the percentage of its sale to distributor and the volumes

[358] In any case, the Tribunal considers that the losses incurred by Total (Total Austral) in respect of sales to others than the distributors, due to the market prices having aligned themselves to those to the distributors which were subject to the ENARGAS regulation, might be labelled as indirect or consequential. As such they would not be covered by the international obligation of compensation, see ILC *Draft Articles on State Responsibility*, Comment to Article 31, para. 13.; I. Marboe, *Calculation of Compensation and Damages in International Investment Law*, 2009, pp. 304-305; S. Alexandrov and J Robins, *Proximate Causation in Investment Disputes*, YB on Intl Investment L & Pol, 2008-9, p. 321.

[359] See UBA First Valuation Report, *supra* note 63, paras. 364-365.

thereof.[360] According to its report annexed to Total's Quantum Reply, CL's previous calculation of damages amounting to $112.3 million, based on total sales, is reduced by $53.4 million if only sales to distributors are taken into account, thus resulting in a loss of $58.4 million.[361] In their presentation at the *quantum* hearing, Total's experts projected and distributed a slide indicating that sales to distributors amounted to 36.1% of all Total Austral domestic sales in the relevant period.[362] In its Post-Hearing Brief, Total mentions instead that sales to distributor were approximately 25% of Total Austral's overall sales.[363]

217. Having carefully reviewed the different calculations presented by Total, the Tribunal considers it appropriate to rely on the data of the slide presented at the hearing, which presents the clearer and more detailed calculation. Moreover, that slide sets forth intermediate values among those submitted by Total. As mentioned above, the share of sales going to distributors is set forth there as being 36.1% of total gas sales to the domestic market. Total Austral's total sales from 1 May 2002 to 21 April 2004 were $112.3 million;[364] averaging the losses for two months between February and April 2003, as explained above at paragraph 210, the value of the loss in respect of the benchmark for all sales of Total Austral in the period amount to $109.2 million. The amount of losses for sales to distributors, due to Argentina not implementing its guaranteed benchmark price, amounts thus to **$43 million** (36.1% of $109.2 million). This is the amount of damages, as of April 2004, owed by Argentina to Total on account of the price intervention without the payment of the compensation up to the benchmark price in breach of Article 3 of the BIT, as explained in the preceding paragraphs.[365]

INDIVIDUAL OPINION UNDER ARTICLE 48(4) OF THE ICSID CONVENTION (DISSENT) BY ARBITRATOR HENRI ALVAREZ IN RESPECT OF PARAGRAPHS 213 – 217 CONCERNING THE VOLUME OF SALES TO BE CONSIDERED IN ORDER TO DETERMINE DAMAGES TO TOTAL.

[360] See CL Second Report, *supra* note 23, para. 149, Table VIII: "Differences in Domestic Volumes Subject to the Breach (UBA and CL)" based on Exhibit C-788 (Excel Worksheet "Reconciliation") with yearly breakdown and comparisons of total sales with sales to distributors. The figures submitted by Argentina are slightly different from those of Total's experts; see UBA's slides 7-11, *quantum* hearing of 21 December 2011.
[361] See CL Second Report, *supra* note 23, para. 149.
[362] Direct Testimony by M. Abdala and P. Spiller, 19-21 December, 2011, Slide 4.
[363] Total PHB, *supra* note 11, para. 70.
[364] See CL Response to PO No. 7, *supra* note 92, annexed to Total PHB, *supra* note 11, Table II.
[365] Since this amount of damages corresponds to the compensation that Argentina should have paid to Total Austral and not to an income, this amount is not subject to any deduction for royalties payments.

218. The Tribunal has concluded that Argentina breached the FET Standard when it passed ENARGAS Resolutions Nos. 2612/2002 and 2614/2002 and subsequent related resolutions (the "ENARGAS Resolutions") and failed to pay compensation to reach the minimum benchmark price provided for in the regulatory framework in the event of restrictions on the free disposal of gas. The ENARGAS Resolutions limited the price that distributors could charge to their domestic customers (the well-head price component of the Consumer Gas Tariff). The majority has concluded that damages for the Respondent's breach of the FET Standard by fixing the domestic price of gas is limited to damages flowing from Total Austral's sales to distributors on the basis that the relevant ENARGAS Resolutions applied only to the price that distributors could charge to their customers. The majority has also refused to award damages for losses suffered by Total Austral on sales to industrial and commercial users and power plants stating that these were indirect or consequential damages.

219. Mr. Alvarez disagrees with both of these conclusions. In his view, the ENARGAS Resolutions interfered generally with the right of free disposal of gas and clearly and foreseeably caused the suppression of the price of all domestic sales of gas in the relevant period from 1 May 2002 to 21 April 2004. By freezing the reference price that distributors could charge for the well-head price component of the Consumer Gas Tariff, ENARGAS predictably and effectively suppressed all sale prices in Argentina's regulated gas market and thereby interfered with Total Austral's right to freely dispose of the natural gas it produced.

220. At paragraphs 204, 214 and 216 above, the majority states that the freezing of the well-head price was not, *per se*, the breach. For the reasons described in Mr. Alvarez's Individual Opinion attached to the Decision on Liability (at paragraphs 72-103 and 109), Mr. Alvarez is of the opinion that the ENARGAS Resolutions were in violation of the broad right of free disposal of natural gas provided for in the regulatory framework (including the Deregulation Decrees, Reconversion Decree, *Acta Acuerdo* and Conversion Decree) and did not fall within the narrowly-defined limitations of this right contemplated in Article 6 of the Hydrocarbons Law and the subsequent Decrees. As a result, according to Mr. Alvarez, the Respondent's breach of the FET Standard was not limited to a failure to pay the minimum bench-mark price provided for in Article 6 of Decree 1589/89, but, rather, was the much broader underlying breach consisting of freezing the well-head price component of the Consumer Gas Tariff in violation of the right of free disposal of gas provided for in the regulatory framework.

221. Article 6 of Decree 1589/89 simply provided a minimum price for gas (the "Benchmark Price") in the event of restrictions on the free disposal of gas. However, this provision does not address the circumstances in which restrictions on the fundamental right of free disposal may be permitted. This right is provided for and guaranteed in other parts of the regulatory framework. Further, Article 6 of Decree 1589/89 does not limit the application of the minimum price it sets for sales to distributors or any other specific category of purchasers, but refers in general terms to the minimum price for natural gas.

222. In Mr. Alvarez's view, the evidence was clear that Total Austral was unable to sell natural gas in the domestic market at prices higher than those fixed for consumers because of the freezing of the well-head component of the Consumer Gas Tariff applicable to distributors. As a result, all of Total Austral's sales and contracts, including those with industrial and commercial users and power plants were affected by the measure. Once the distributors supplied the market with gas at the low, subsidized price, Total was required to match that price for all of its other customers. Otherwise, the customers would simply have turned to the distributors and purchased the gas at the cheaper price from the distributors. The evidence was clear and persuasive that all of Total Austral's contracts and natural gas prices in the relevant period from 2002 through to 2004 were similar and very low. The effect on all prices was recognized by, amongst others, a study in 2003 commissioned by the SoE (Exhibit ARA-233) and the 2004 Price Path Recovery Agreement and implementing decree (Exhibit C-208), which recognized the need to liberalize and restore prices for a wide range of gas consumers, including industrial users (see the Tribunal's Decision on Liability at paragraph 456). Mr. Alvarez is of the view that this confirms that the Respondent's measures controlling the well-head price in sales to distributors clearly affected the price to the entire domestic market, including industrial users and power generators which were significant customers of Total Austral.

223. The relationship between fixing the prices to distributors and consumers and the effect this had on other (industrial and commercial) consumers in the domestic market is evident and was foreseeable. This was reviewed convincingly in detail by Total's experts. ENARGAS did not need to regulate expressly for the entire market when all that was required was to regulate the key well-head price component in the Consumer Gas Tariff for sales to distributors and the market would dictate all other domestic prices in a form of "regulatory arbitrage". Thus, in Mr. Alvarez's view, the ENARGAS Resolutions were the

foreseeable, proximate cause of the loss suffered by Total Austral on all of its sales of gas in the domestic market during the relevant period.

224. In this regard, Mr. Alvarez does not agree with the majority when it considers that the losses incurred by Total Austral and the respective sales to customers other than distributors should be labelled as indirect or consequential and, therefore, not available. The relevant obligation at international law is to make full reparation so as to wipe out all the consequences of the illegal act and re-establish the situation which would have existed had it not been committed. In his view, the damages flowing from the effect of the ENARGAS Resolutions on the entire domestic market have been proven and are properly compensable at international law. Accordingly, Mr. Alvarez considers that Total was entitled to damages covering the losses suffered by Total Austral on all its gas sales in the domestic market between 1 May 2002 to 21 April 2004, measured by the difference in the actual sales price and the Benchmark Price during that period. **(END OF INDIVIDUAL OPINION OF MR. HENRI ALVAREZ)**

c) *Domestic Sales of Natural Gas 2004-2006*

i. Total's Claim

225. In the liability phase in this proceeding, Total complained that Argentina by not having fully implemented the Price Path Recovery Agreement of 2004-2006 had further breached Article 3 of the BIT.[366] The Tribunal rejected Total's argument that any breach of this agreement would entitle Total to rely on the benchmark price, since Total has not challenged the validity of this agreement. The Tribunal has concluded on this point in paragraph 457 of the Decision on Liability as follows "[t]he Tribunal, therefore, concludes that Total's right to invoke the 35% of the international price per cubic meter of Arabian light oil (34° API) standard of compensation concerns the period from June 2002 to April 2004. Further details, including the relevance, if so, of Argentina not having fully implemented the Price Path Recovery Agreement, as Total complains, should be left to the quantum phase."

226. During the *quantum* phase, Total argued that it is entitled to damages arising out of Argentina's failure to fully implement the terms of the 2004 Price Path Recovery Agreement.

[366] See Decision on Liability, *supra* note 1, paras. 371, 390 and 457.

This agreement was intended to implement a return to free market pricing by progressive increases of the well-head price of natural gas, first as to industrial and other large consumers and later as to residential and small commercial consumers.[367] Total complains specifically that the Government failed to implement the Price Path Recovery Agreement by unilaterally increasing the volumes required to be sold to the local market at regulated prices in excess of the volumes established in the Agreement.[368] As a result, Total says that it was prevented from enjoying the liberalisation of prices that had been granted by the Price Path Recovery Agreement and required to redirect volumes destined for free market sales (including for export) through the imposition of "Additional Injection Requirements" on the gas producers.[369] Total argues that this amounts to a breach of the FET Standard guaranteed under Article 3 of the BIT based on the same reasoning that has led the Tribunal to find a breach of this provision in relation to Argentina's interference with gas prices in 2002-2004.[370]

227. Total claims that the damages it suffered are appropriately measured as the difference between the actual depressed price at which Total Austral was compelled to sell the additional quantities and the benchmark price. Based on detailed data of quarterly volumes of gas so affected, Total claims a cumulative loss of $28.2 million as of the end of 2006.[371]

ii. Argentina's Position

228. Argentina denies Total's claim. According to Argentina (a) it was entitled to require the injection of additional quantities of gas for sale in the domestic market at regulated prices under the Price Path Recovery Agreement, and (b) Total had in any case accepted to deliver more gas at the agreed price, since it complied with the request without availing itself of the right to resolve the Price Path Recovery Agreement by invoking the alleged breach pursuant to the terms of the Price Path Recovery Agreement.[372]

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[367] *Ibid*., para. 456.
[368] Total QM, *supra* note 5, para. 192 ff.
[369] For a description of these interventions, see Decision on Liability, *supra* note 1, paras. 373-378 referring to Resolutions 659/2005, Exhibit C-215 and 752/2005, Exhibit C-497.
[370] See Total QM, *supra* note 5, paras. 202-204. See also Decision on Liability, *supra* note 1, para. 378.
[371] Total QM, *supra* note 5, para. 212 and the table there, based on CL First Report, *supra* note 54, paras. 158-164 and Tables XVII and XIX.
[372] Argentina's QCM, *supra* note 6, paras. 236-242.

iii. The Tribunal's Evaluation

229. Both objections raised by Argentina appear to the Tribunal to be without merit. The Price Path Recovery Agreement did not permit the unilateral additional requests that Argentina implemented by way of Resolutions 659/2005 and 752/2005.[373] Argentina thereby retreated from its contractual commitment pursuant to which it had promised a return to normality, with agreed modalities, from the previous situation of 2002 – 2004. This situation, as Total has described was "unsustainable from the gas producing companies' point of view and were incapable of allowing producers to receive an acceptable rate of return."[374] In the Decision on Liability, the Tribunal found that Argentina should have remedied this situation by honouring the guarantee it had given that in the event of restriction of the right of free disposal of gas, the price would not be less than the Benchmark.

230. After Argentina had set up, in April 2004, the Price Path Recovery Agreement to progressively allow the return to market prices in the gas market, a unilateral return to the previous depressed price situation, in breach of the terms of the 2004 Price Path Recovery Agreement, amounts necessarily to a breach of the FET Standard to which Total was entitled under the BIT. Therefore, the Tribunal concludes that Argentina did breach Article 3 of the BIT by requiring additional quantities at the below-market prices of the Price Path Recovery Agreement.

231. However, the Tribunal is of the view that the ensuing damages should not be calculated on the basis of the Benchmark. As stated in paragraph 457 of the Decision on Liability, the 2004 Price Path Recovery Agreement set up a new mechanism for the gas regime, as to prices and market liberalization. Above the sales at (still) regulated prices of certain quantities, the 2004 Price Path Recovery Agreement rendered sales at a free market price possible, both domestically and within the export market. Damages stemming from the breach by Argentina of the Price Path Recovery Agreement cannot be based on a "guaranteed benchmark price" any more but must be therefore calculated as the difference between the price Total would have obtained on the free market, and the lower price which it was compelled to accept in respect of the redirected quantities.

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[373] See Agreement, Exhibit C-208, specifically Article 10. Nor is rescinding the agreement by Total Austral (which would have entailed further negative consequences for it) a precondition for Total being able to invoke the protection of the BIT.

[374] See Decision on Liability, *supra* note 1, para. 455.

232. Following the discussion of the proper valuation method for the damages arising under the Price Path Recovery Agreement at the *quantum* hearing, the Tribunal asked Total to submit a calculation of damages based on this alternative method. Total's experts supplied this calculation and re-determined the damages as amounting to **$8.4 million** for the period from April 2004 to 31 December 2006.[375] The Tribunal considers the underlying figures to be correct and, for the above reasons, concludes that this amount represents the damages suffered by Total during the period from 2004 to 2006, and that must be compensated by Argentina, with interest from 1 January 2007.

233. Finally, in its Quantum Memorial, Total claimed damages in general terms for the period after the expiration of the 2004 Agreement, from the end of 2006 to the date of the Award.[376] It is uncontested that after the expiration of the 2004 Agreement at the end of 2006 a new agreement replaced it.[377] Total complained in its Quantum Memorial that Argentina has continued to intervene in domestic gas prices in disregard of this latest agreement. Later in the proceedings, however, Total stated that it does not seek damages under the 2007 Agreement, that is for the period after 31 December 2006.[378] In its Post-Hearing Brief, Total accordingly limited its claim up to 31 December 2006 and has not made any claim for damages for the subsequent period of time.[379]

234. Therefore, the Tribunal is not required to decide on damages that Total may have suffered after the end of 2006, nor, preliminarily, whether Argentina has committed any breach of the BIT by its conduct in respect of the 2007 Agreement, since such a claim is not before it. However, the Tribunal notes that Total has reserved the right to make additional submissions, including a request for interim relief, if necessary, in light of Argentina's conduct in relation to the conditions in the domestic market.[380] For the same reasons spelled out in paragraph 190 in respect of a similar reservation by Total concerning any future imposition by Argentina of further retroactive taxes on exports from Tierra del Fuego, the Tribunal must decline any such reservation. Once the Tribunal has issued its award it will

[375] See CL Response to PO No. 7, *supra* note 92, paras. 39-42 and Table XI.
[376] See Total QM, *supra* note 5, paras. 182(c), pp. 213-224.
[377] *Ibid*., paras. 223 and 224, Exhibits ARA-269 and C-739 ("The 2007-2011 Agreement with Natural Gas Producers").
[378] Total QR, *supra* note 23, para. 225.
[379] Total PHB, *supra* note 11, Section VB3.
[380] Total QR, *supra* note 23, para. 225.

have concluded its task and its jurisdiction will cease so that it would be impossible for it to entertain any further claims or requests.

d) *Argentina's Limitations of Gas Exports (Interference with Gas Export Contracts)*

i. Total's Claim

235. Total relies on the Decision on Liability at paragraphs 460-461, where the Tribunal stated that "…the measures by which Argentina has specifically interfered with Total's gas export contracts that had been duly authorised by Argentina's authorities are in breach of Total's rights under the BIT", such that "Total is entitled in any case to be compensated by Argentina for its loss of reasonably expected profits under these contracts." As to the calculation of the amount of damages, Total relies on the finding in the Decision on Liability that damages should be calculated "…based on the difference between the domestic prices it received for the gas redirected and sold in the domestic market and the export prices agreed in export contracts".

236. As to the contracts affected, Total refers to the description of the factual situation complained of by it in paragraph 458 of the Decision on Liability. Total claims that the "Gas Rationing Program" measures that Argentina enacted commencing in March 2004, SoE Resolutions 659/04 and 752/2005,[381] compelled Total Austral to redirect natural gas originally destined for export to Chile to specific consumers in the domestic market at prices well below the agreed export price. As a consequence, Total Austral was prevented from complying with duly authorized export contracts it had entered into with various Chilean companies.[382]

237. Total's experts calculated the volume of gas redirected and the difference between the agreed export prices and those obtained on the domestic market (as indicated in paragraph 460 of the Decision on Liability) for the relevant period from 2004 to 2006, during which the relevant Resolutions and Dispositions were in force.[383] With respect to the export prices, these calculations distinguish between the various contracts affected, and take into account: the different prices agreed therein; the export curtailments under the various measures of

[381] Resolution 257/2004 and Disposition 27/04, see Decision on Liability, *supra* note 1, para. 458.
[382] See Decision on Liability, *supra* note 1, paras. 378 and 458, Total QM, *supra* note 5, paras. 231 and 232.
[383] See CL First Report, *supra* note 54, paras. 165-175.

restriction; and the monthly volumes curtailed. As for the domestic prices, the regulated price of about US$1.03 per Mmbtu (against agreed monthly export prices between $1.46/Mmbtu and $1.89/Mmbtu) are used. The difference, net of a 12% royalty and 35% income tax, amounts to $2.4 million as of 31 December 2006.[384]

238. In addition to this amount, Total also claims indemnification for legal fees and costs in the amount of $381,454 incurred by Total Austral. These fees and costs were incurred for the litigation between Total Austral and the Chilean buyers arising from the failure to deliver the agreed volumes of gas redirected pursuant to the measures.[385] Total justifies this request on the basis that these costs are "incidental" to the damages arising from Argentina's Treaty breach.[386]

ii. Argentina's Position

239. Argentina opposes Total's claims based primarily on two arguments. First, Argentina argues that the authorizations to export gas were subject to the condition that additional quantities of gas, above the daily amounts authorized, needed to supply the domestic market, could be redirected to that market.[387] Argentina submits that the export volumes curtailed and redirected were indeed additional volumes subject to that provision. Second, Argentina objects that Total did not provide evidence of the domestic contracts it entered into in respect of the redirected sales and, therefore, did not meet its burden of proof.[388]

iii. The Tribunal's Evaluation

240. The Tribunal recalls that in the Decision on Liability it found that export limitations to ensure domestic supply of gas as well as gas export taxes were generally lawful.[389] Only

[384] Total QM, *supra* note 5, para. 238 based on CL First Report, *supra* note 54, para. 175, Table XXI.
[385] Total QM, *supra* note 5, paras. 240-242; Total PHB, *supra* note 11, para. 82.
[386] Total reserves the right to claim further damages including interim and injunctive relief "to the extent that Argentina continues to interfere with Total Austral's Export Contracts in the future", Total QM, *supra* note 5, para. 243.
[387] See Argentina QCM, *supra* note 6, para. 251, Argentina QR, *supra* note 23, paras. 186-190.
[388] See Argentina QCM, *supra* note 6, paras. 249-262; Argentina QR, *supra* note 23, paras. 191-195.
[389] Decision on Liability, *supra* note 1, para. 459.

interference with duly authorized export contracts in force was held to be in breach of the fair and equitable treatment obligations of Article 3 of the BIT.[390]

241. The Tribunal considers that the parameters used by Total in the *quantum* phase to calculate its damages correctly reflect the findings and indications set forth in the Decision on Liability. Total gave detailed evidence of the duly authorized contracts in force which Total Austral was prevented from performing, the volumes involved, the time period during which its export contracts were affected by the various measures issued by Argentinean authorities, as well as the relevant price differences. This information formed the basis of the damages calculations performed by Total's experts.[391]

242. The Tribunal is not persuaded by Argentina's arguments that the quantities involved in the redirection to the domestic market were "surplus" quantities that Argentina was authorized to curtail in respect of authorized contracts.[392] Nor does the Tribunal find that it was necessary for Total to supply evidence of the details of the individual domestic buyers and sales, since the sales values were duly proved and the domestic prices were regulated. Therefore, the Tribunal grants Total's claim for damages due to Argentina's interference with gas export contracts of Total Austral in the amount of **$2.4 million** as of 31 December 2006.

243. On the other hand, the Tribunal denies Total's claim for indemnification of legal fees borne by Total Austral in respect of litigation initiated by its Chilean clients because of the forced non-performance of its export contracts. In the Tribunal's view, this claim was submitted too late as it was presented only in the *quantum* phase and is thus inadmissible.[393] In addition, Total's reservation to make further requests to the Tribunal must be denied for the reasons spelled out above in respect of similar reservations as to other claims made by

[390] *Ibid.*, para. 460.
[391] See *supra* para. 237.
[392] In PO No. 3, the Tribunal noted that Argentina would be able to challenge the data supplied by Total relying on the data of exports to Chile, in its possession, in the relevant period. Accordingly, the Tribunal rejected Argentina's request for a production order directed at Total. See also CL Second Report, *supra* note 23, paras. 229-231.
[393] Total refers to Total RM Merits, *supra* note 136, fn. 339. Total refers there to potential penalties it might incur for breach of contract of Total Austral's contracts with its Chilean clients, but no reference to (possible) litigation and no reservation for litigation costs are found there. Total refers in Total QM, *supra* note 5, para. 242 as a basis for this claim the mention in the Decision on Liability of "incidental costs" with reference to taxes for operation in Tierra del Fuego, see Decision on Liability, *supra* note 1, para. 442. By "incidental costs" the Tribunal refers, however, to costs incidental to the taxes themselves as explained in *supra* note 317. In respect of this claim the Tribunal refers to and relies on the reasons given above at *supra* paras. 188-189 for rejecting the similar claim by Total in respect of Total Austral's litigation costs concerning the Tierra del Fuego tax issue.

Total pertaining to future tax measures.[394] Once the Tribunal has issued its award it will have concluded its task such that it will be impossible for it to entertain any further claims or requests.

244. In conclusion, for the reasons spelled out above, the Tribunal decides that Total is entitled to recover from Argentina the following damages caused to it by Argentina for breach of the FET Standard under Article 3 of the BIT in respect to Total's investments in Exploration and Production of Hydrocarbons (Oil and Gas):

a) retroactive elimination of the Tierra del Fuego Tax Exemption: **$7.628 million** as of 31 May 2011;

b) measures relating to the domestic sale of natural gas from 2002 to 2004: **$43 million** as of 30 April 2004;

c) measures relating to the domestic sale of natural gas from 2004 to 2006: **$8.4 million** as of 31 December 2006; and

d) limitation of gas exports (interference with gas export contracts): **$2.4 million** as of 31 December 2006.

For a total of **$61.428 million**.

V. INTEREST

A. Total's Position

245. In respect of interest, Total underlines, as recalled above, that interest "is an integral component of full compensation under international law" when payment of compensation is delayed. Total claims both "pre-award" interest from the date of valuation for each loss, which corresponds to that of Argentina's relevant breach, and "post-award" interest. The latter is meant to compensate Total for the additional loss incurred from the date of the Tribunal's award to the date of final payment.[395] As to the rate of interest to be applied, Total distinguishes between compensation in relation to investments that Total does not own any more (that is the two electricity generators Central Puerto and HPDA), for which Total

[394] See *supra* para. 190.
[395] Total QM, *supra* note 5, paras. 45- 67.

proposes in its Post-Hearing Brief a "commercial risk-free pre-award interest rate" of 3.69% and in relation to the other investments, that Total continues to own (TGN and Total Austral). Total justifies requesting higher interest in respect of these latter two investments because "Total continues to bear the various risks in connection with these assets, and should be compensated accordingly for having been deprived of associated funds over time". [396] According to Total, the WACC of TGN and Total Austral (respectively 11.01% and 10.92% p.a.) should be used because "(a) the WACC reflects each company's real cost of raising funds; and (b) Total continues to own and operate these assets, and remains subject to the operational risks inherent in each business".[397]

246. Total claims "compound interest" on all pre- and post-award interest (also defined as pre- and post-judgment interest), explaining that this approach is "consistent with economic reality". Total points to the fact that "the majority of recent investor-State arbitration tribunals have awarded compound interest on awards of damages, confirming the legitimacy and necessity (in appropriate circumstances) of compounding as an element of full reparation for violations of international law".[398]

B. Argentina's Position

247. Argentina submits that, even admitting that interest is due as part of the standard of "fair compensation", "international practice is clear in that international law sets forth that simple interest must be applied."[399] Furthermore, Argentina submits that a risk-free rate must be applied in any case because the purpose of awarding interest is only to compensate the victim for the time value of money when payment is deferred. Argentina relies specifically on the ILC Commentary of Article 38 of the Draft Articles on State Responsibility, at paragraph 8, where it says that "the ILC has emphatically stated" that: "[t]he general view of

[396] *Ibid.*, para. 50-51, Total PHB, *supra* note 11, para. 89.
[397] Total QM, *supra* note 5, para. 52. Total specifically claims that an award of interest at the WACC for TGN and Total Austral is essential to avoid what it labels as "the impermissible "round trip" embedded in UBA's calculations, using a high discount rate to bring cash flows back to a valuation date several years in the past, and then actualizing damages to the present at a much lower interest rate", Total PHB, *supra* note 11, paras. 92 and 26. Total QR, supra note 23, paras. 59-67.
[398] Total QM, *supra* note 5, paras. 60-63. Total proposes compounding on an annual basis, *ibid.*, para. 65.
[399] Argentina QCM, *supra* note 6, para. 61, citing case law and referring to the *ILC Draft Articles on State Responsibility* (2001), Commentary Article 38, Exhibit ALRA-320.

courts and tribunals has been against the award of compound interest, and this is true even of those tribunals which hold claimants to be normally entitled to compensatory interest".[400]

248. Argentina especially objects to Total's request that in respect of the damages that Total incurred due to Argentina's treaty breaches in respect of its investments in TGN and Total Austral, which Total still holds, the proper interest rate should not be a risk-free rate but based on the respective WACC of these two companies. Argentina submits that a calculation on this basis would transform the loss of Total, due to delayed payment of the principal amount of damages, into compensation for loss of hypothetical profits that Total might have made if it had reinvested the amounts due to it in those two companies. Argentina argues that this concept is extraneous to the awarding of interest to compensate delay in payment.[401]

C. The Tribunal's Evaluation

249. In the light of the positions of the Parties outlined above, the Tribunal must decide several issues in respect of interest on which Total and Argentina disagree, namely:

a) whether the interest rate for all losses of Total should be at a risk-free rate or whether it should reflect the WACC of TGN and Total Austral in relation to the amount of damages awarded by the Tribunal to Total in respect of these investments;

b) whether interest should be calculated as simple interest or as compound interest;

c) whether a distinction should be made between pre-award and post-award interest; and

d) the proper risk-free interest rate.[402]

[400] *Ibid.*, paras. 62-63.
[401] *Ibid.*, paras. 72-74 and Argentina QR, *supra* note 23, paras. 49-59.
[402] Total has requested a risk-free rate of 3.69% in its post hearing brief in respect of the electricity sector from which it has divested in 2006 (Total PHB, *supra* note 11, para. 89 and Annex 1: "Total's detailed request for relief"), while it had indicated a rate of 4.56% "consistent with the position in the liability phase" in Total QM, *supra* note 25, para. 50.

250. The Tribunal underlines that the issue concerning interest in this case is not just "ancillary" to the determination of *quantum*, as is mostly the case whenever the principal awarded as damages represents by far the preponderant part of the overall compensation for damages. In this case instead, Total's request for interest almost doubles the global amount of compensation it requests: the principal amount of $557.2 million claimed by Total becomes $1,002.2 million as of 15 March 2012.[403] This is due to the length of time from the dates of the various breaches (most of which occurred during the period from 2002 to 2006), the rates of interest claimed, especially the WACC-based rates in respect of TGN and Total Austral, and finally the compounding of the interest calculated at the rates advocated by Total.[404] Deciding the issue of how interest should be calculated requires, therefore, the utmost care in this case due to its impact on the overall compensation, depending on the approach adopted.

251. At the outset the Tribunal recalls certain legal parameters that it must consider in deciding all the above issues. First of all, it is undisputable that the delay incurred by the creditor, in this case Total, in receiving the payment of the amount of money due to it must be compensated through the awarding of interest at an appropriate rate. This is required in order to compensate a creditor for the lack of use of the funds (*i.e.* reflecting "the time value of money") and "to the extent that is necessary to ensure full reparation".[405] The awarding of interest, specifically in respect of a principal sum due to the creditor to compensate it for the injury caused by an internationally wrongful act, as here, is independent from the reasons of the delay.

252. The BIT between France and Argentina provides at Article 5, concerning compensation due to an investor in case of expropriation, that interest shall accrue at an "appropriate" (*apropiada / approprié* in the official Spanish and French texts of the BIT*)* rate up to the date of payment. The Tribunal believes in this respect that there is no reason not to

[403] See Total's PHB, *supra* note 25, Annex 1: "Total's detailed request for relief", Table One: Total's Damage Claim: Principal v. Interest. In their Response to the request by the Tribunal in P.O. No. 5 to calculate in the alternative pre-award interest based on a risk-free rate, Total's experts have calculated the total of simple interest (at an annual rate of 4.08% for TGN and Total Austral and 3.69% for Electricity) on the principal claimed by Total to amount to $116.9 million up to 30 September 2011.
[404] Argentina objects to Total's methodology that results in the amount of interest being greater than that of the damages claimed "como si el recurso al arbitraje fuese una inversion financiera y no el inicio de un procedimiento jurisdiccional", Argentina PHB, *supra* note 28, para. 3.
[405] ILC *Draft Articles on State Responsibility* cit, Commentary to Article 38(2), Exhibit ALRA-133.

apply this provision also to damages due for the breach of other articles of the BIT.[406] The term "appropriate" is not definitive because it requires a term of reference: appropriate in respect of what? The premise is that interest is intended to ensure full compensation considering that the delay in payment reduces the value of the principal amount of compensation. Failure to pay interest at an "appropriate" rate would normally not provide for "adequate" compensation which, as prescribed by Article 5(2), should correspond to the "real value" of the property lost, or to its decrease in value. Interest must thus compensate for the additional loss due to the non-availability of the sum to which the creditor is entitled for a given period of time. The level of interest and other features of its calculation, in order to adequately cover such additional loss, depends on the currency in which the principal is expressed and the market rate for money placed in that currency, which in turn reflects *inter alia* the rate of inflation.

253. The Tribunal must take into account also Article 8(4) of the BIT, which directs an arbitral tribunal in case of a dispute under the BIT between France and Argentina to apply, besides the terms of the BIT itself and the principles of international law, also the law of the Contracting Party which is part of the dispute, thus here the law of Argentina. The Tribunal therefore inquired on the law of Argentina in respect of the various issues it has to decide in respect of interest, asking the Parties in PO No. 5, to supply in advance of the *quantum* hearing "information with legal exhibits on the applicable rate(s) of interest under Argentine law". The Tribunal considers that overall it has not obtained much useful information from the answers of the Parties to the above question. This is not because the Parties have been reticent or not forthcoming, or because they have not supplied sufficient information and documentation. On the contrary, the Parties submitted the texts of legal provisions, commentaries and a number of judicial decisions. Rather, the law of Argentina relating to interest is of limited assistance since the domestic situation of Argentina bears little correspondence with the international setting in which this Tribunal operates.

254. Thus, first, Argentina is a high-inflation economy in which prevailing interest rates are much higher than those which characterize a risk-free investment in US dollars, which is of primary relevance for the Tribunal for the reasons spelled out hereafter. Second, in

[406] See *supra* para. 26 as to the calculation of the amount of compensation "in accordance with the real value of the investment affected". The same reasoning has been made by the *EDF* Award, *supra* note 107, para. 1337.

Argentina two different sets of interest rates exist, the *tasa pasiva*, and the *tasa activa*, which are used also to calculate interest on amounts due by law, contract or judicial decision. The first one is the low interest rate given by banks to depositors, the second one is the higher rate which banks charge to their clients[407]. Moreover, different legal provisions apply depending on whether the Civil Code or the Commercial Code governs a given obligation. Finally, while in principle interest is calculated as simple interest, courts have discretion in commercial disputes to grant pre-judgment compound interest to compensate the specific loss suffered by an individual creditor for the delay in being paid.[408]

255. The above details of the Argentine legal regime on interest cannot be transposed to the dispute at hand which concerns interest for damages caused by a breach of international law (the BIT between France and Argentina) and to be granted in an international award governed by the ICSID Convention. As a result, the law of Argentina in respect of interest cannot appropriately guide the Tribunal in its decision on how to calculate interest on the principal amount granted to Total in the present Award. As an exception, the only point where the Tribunal may find guidance in Argentine law, and on which the Parties tend to agree, is that normally post-judgement interest, that is on amounts granted by a court to the successful party (the creditor) which the unsuccessful party (the debtor) does not satisfy promptly, contrary to its obligation to comply with the decision, is calculated on a compound basis.[409]

256. Having dealt with the above general or preliminary issues, the Tribunal addresses the first issue (a) above, whether the rate of interest must be risk-free also as to the damages awarded to Total in respect of its investments in TGN and Total Austral. In this regard, the Tribunal does not share Total's point of view that since Total still owns stakes in these two companies and bears the connected risks, the interest rate on the compensation for damages it has suffered in respect of these investments should reflect this risk. The principal amounts that the Tribunal is awarding to Total, because of the damages it has suffered due to wrongful

[407] While Total suggests that the *tasa activa* would be relevant by application of Argentine law, Argentina submits that the *tasa pasiva* would be the proper reference: see Total's PHB, *supra* note 25, para. 93 and Argentina's PHB, *supra* note 28, para. 6, respectively. In any case, Argentina submits that "En la legislación argentina, la tasa libre de riesgo, líquida y de relativo corto plazo, aplicable a la actualización de potenciales daños en una controversia de estas características, es la tasa para depósitos en dólares a un plazo de seis meses", Argentina PHB, *supra* note 28, para.19.

[408] See Claimant's Response to Procedural Order No. 5 of 15 December 2011 [hereinafter "Total Response to PO No. 5"], para. 1.

[409] *Ibid*., para. 1, based on Article 623 of Argentina's civil code; Argentina PHB, *supra* note 28, para. 17.

conduct of Argentina causing losses to Total in respect of its various investments in Argentina, are granted to Total in application of the principle that losses caused by internationally wrongful conduct entails a duty of reparation. It is immaterial whether Total has maintained those investments after suffering any such loss. Maintaining the investment or divesting it is a business choice of Total which, as such, should not influence the rate of interest that Argentina has to pay on the principal amount of damages determined by the Tribunal from the date of the loss to the date of payment.

257. The losses suffered by Total crystallized at the respective dates of the breaches by Argentina, as determined above. Whenever the losses entailed a decrease in the value of the company in which Total had a stake at that time, which is the case of TGN, HPDA and Central Puerto (but not of Total Austral, which suffered mostly transitory decreases in monthly income), the DCF method was applied to determine that loss in value, as advocated by Total in accordance with prevailing valuation methodologies. This has entailed using the respective WACC of those companies to discount future revenues. Once the amount of damages has been determined in this manner, interest on the various amounts has to be calculated to determine the additional loss suffered by Total as a result of the delay in payment, irrespective of the investment which suffered losses

258. The use of a risk-free rate in respect of all principal amounts is justified in any case, by the legal nature of the claim as recognized and enshrined in the Award and is supported by the particular nature of the present Award under international law. The present Award, which contains pecuniary obligations expressed in US dollars, is issued at the seat of ICSID in Washington, DC, in accordance with the ICSID Convention and is governed specifically by Articles 53(1) and 54 of the Convention as to its authority and effects. The particular situation of Total's investment in Argentina is therefore irrelevant in this respect. The Tribunal concludes, therefore, that interest on all principal amounts granted as compensation for damages to Total in the present Award shall be at a risk-free rate.

259. As to issue (b) above, whether interest should be simple or compounded, the Tribunal has taken note of the divergent views of the Parties recalled above. The Tribunal notes that the traditional view, supported by case-law and by doctrinal contributions as reviewed by the ILC, is against the awarding of compound interest in international law. The ILC in its Draft Article on State Responsibility has been cautious, however, in not reaching definite

conclusions.[410] It has noted that several authors have argued for reconsideration of this principle on the ground that "compound interest reasonably incurred by the injured party should be recoverable as an item of damage"[411] and that this view has been supported by arbitral tribunals in some cases. The conclusion of the ILC is that "given the present state of international law it cannot be said that an injured State has any entitlement to compound interest, in the absence of special circumstances which justify some elements of compounding as an aspect of full reparation".

260. While duly taking into account the above position of the ILC, the Tribunal recognizes that Total is correct in pointing out that there has been an increasing trend by investment arbitral tribunals to award compound interest. Most of the awards rendered against Argentina, especially in recent years, have decided in favour of compound interest, a trend that commentators have recognized and largely supported.[412]

261. This evolution indicates that discretion in the matter is recognized to investment arbitral tribunals and that they have made use of this discretion.[413] The trend towards granting compound interest in investment awards reflects the different status and position of investors in such disputes from that of States in inter-States disputes, since investors operate in a commercial environment. A common explanation given is that "compound interest would better compensate the Claimants for the actual damages suffered since it better reflects contemporary financial practice", [414] an explanation which is particularly appropriate when the investor operates in the financial sector. [415] Another similar explanation given is that the standard of full reparation would not be met if an award were to deprive a Claimant of compound interest which would have been available on the sums awarded had they been paid

[410] ILC *Draft Articles* cit, Commentary (9) to Article 38, Exhibit ALRA-133. For a detailed analysis see P. Nevill, *Awards of Interest by International Courts and Tribunals*, 78 BYIL, 255-341 (2008).
[411] *Ibid.*, referring to F.A. Mann, *Compound Interest as an Item of Damages in International Law*, 21 UC Davis LR, 577 (1988).
[412] Total QM, *supra* note 5, para. 61 distinguishing pre and post-2004 awards and referring to seven awards against Argentina and eight other investment awards issued after 2006 granting compound interest. Simple interest was granted in 2002 in the *CMS* Award, *supra* note 29, para. 471, Exhibit ALRA-240.
[413] The Ad Hoc Committee in *Wena Hotels Limited v. Arab Republic of Egypt*, ICSID Case No. ARB/98/4, Decision on Annulment (5 February 2002) [hereinafter "*Wena* Decision"], paras. 52-53, held that the tribunal had not gone beyond the boundaries of its discretion and that the award of compound interest pursued the legitimate objective of preventing the erosion of compensation by the passage of time.
[414] *LG&E* Award, *supra* note 210, para. 103, Exhibit CL-186.
[415] This is the case of the *Continental Casualty Company v. Argentine Republic*, ICSID Case No. ARB/03/9, Award (5 September 2008), Exhibit CL-207, [hereinafter "*Continental* Award"] where the tribunal recalls at para. 313 that Continental's loss consisted of the deprivation of an interest-bearing Argentinean treasury bill held as reserve by its subsidiary, a local insurance company.

in a timely manner.[416] The Tribunal finds these reasons persuasive and concludes that the awarding of compound interest is justified in this case.

INDIVIDUAL OPINION UNDER ARTICLE 48 (4) OF THE ICSID CONVENTION (DISSENT) BY ARBITRATOR LUIS HERRERA MARCANO IN RESPECT OF PARAGRAPH 261 IN FAVOUR OF GRANTING OF COMPOUND INTEREST.

262. Mr. Herrera Marcano does not agree with the majority as to the awarding of compound interest on the compensation granted to Total as damages in this Award. In his view the position of international law in this matter is properly reflected in the statement of the International Law Commission, according to which simple interest is the rule "in the absence of special circumstances". Mr. Herrera Marcano cannot detect any such special circumstances in this case. He also notes that investment arbitral tribunals are split on the issue. In any case, as he stated in his Concurring Opinion to the Decision on Liability at paragraph 9, these tribunals are not "international tribunals under international law" and their decisions do not create precedent. In Mr. Herrera Marcano's view, therefore, simple interest should have been granted on all amount of compensation granted to Total from the date due of any such amount until payment thereof. **(END OF MR. HERRERA MARCANO'S INDIVIDUAL OPINION)**.

263. As to issue (c) above, whether a distinction should be made between pre-award and post-award interest, the Tribunal notes that, besides pre-award interest, post-award interest is regularly granted until payment of the principal determined in an award. This is justified because the rationale for interest is to compensate the creditor for the time lag between the date in which it ought to have received the amount due as compensation and the effective date of collection. A distinction between pre- and post-award interest is sometimes made as to simple versus compound interest, respectively, and as to the rate of each. Such a distinction is not necessary in the present case, since compounding interest is justified also in respect of any delay by Argentina in paying the principal amount granted to Total in the present Award. As noted above, compounding post-judgment interest is also admitted in Argentine law.[417] Compound interest has also been granted by investment tribunals that have granted simple

[416] *BG Group Plc v. Argentine Republic*, UNCITRAL, Award (24 December 2007) [hereinafter "*BG Group* Award"], paras. 455-456, Exhibit CL-192; *Siemens AG v. Argentine Republic*, ICSID Case No. ARB/02/8, Award (6 February 2007) [hereinafter "*Siemens* Award"], para. 399, Exhibit CL-121; S. Ripinsky and K. Williams, Damages and International Investment Law, BIICL 2008, pp. 386-387.
[417] See *supra* note 409.

pre-award interest,[418] considering that any delay in payment after the issuance of a decision is normally due exclusively to the debtor not satisfying promptly the obligation arising from the final and binding decision at issue.[419] The Tribunal concludes therefore that post-award interest due by Argentina shall be compounded in the same manner as pre-award interest.

264. The Tribunal deals now with the last issue set out above, (d), namely the proper risk-free interest rate to be used. For measuring the loss suffered by a creditor for not having received timely an amount due, the standard reference is to a rate that can be obtained from a first class issuer presenting no risk as to payment of interest and repayment of capital (typically, as to US dollars, the U.S. government). The underlying assumption is that the money could have earned such a rate of interest in any event, by being placed at no risk with such a first-class borrower.

265. This generally-followed approach does not look at the subjective nature of the creditor (consumer or investor, individual or business entity) or at its hypothetical preferences as to the type of investment, such as putting the money in the creditor's business, which may yield a higher return but may also be exposed to higher risks.[420] Total could have, in any case, placed the money owed to it by Argentina in such a US Governmental risk-free instrument and thus have earned, at a minimum, the periodic interest paid to their holders.

266. As to the type of security to be used as reference, a review of awards shows that ICSID tribunals have made use of a remarkable discretion. While most awards base the risk-free interest rate for claims in U.S. dollars on the yields of certain U.S. governmental debt instruments, such as short-term U.S. treasury bills or longer term bonds,[421] the rates of

[418] See *CMS* Award, *supra* note 29, para. 471 and *LG&E* Award, *supra* note 210, para. 105.
[419] See Article 53 of the ICSID Convention: "The award shall be binding on the parties…Each party shall abide by and comply with the terms of the award except to the extent that enforcement shall have been stayed pursuant to the relevant provisions of this Convention."
[420] In order to support its claim to a WACC-based rate of interest for the principal related to TGN and Total Austral, Total claims that it "would only have invested these revenues from TGN and Total Austral in a project that would provide a comparable rate of return" (Total QM, *supra* note 5, para. 58), but this statement has not been supported by evidence. The extreme difficulty of proving such a but-for scenario is the reason for the use instead of market based rates and is behind the legislative indication in many domestic legal systems of a "statutory official rate of interest" ("legal rate of interest"), applicable in the absence of specific evidence of higher damages suffered by the creditor for not having had the due amount at its disposal.
[421] In some case the LIBOR has been used, depending also from the request of the claimant. Here Total's experts have advocated reference for pre-award interest the rate of US Treasury bills, using the rate for ten-year U.S. Treasury bonds explaining that this security "approximately matches the duration of the cash flow being

interest that tribunals have adopted, though based on rates which were known, have varied greatly. A first divide is that some tribunals have referred to the variable rate of a specific security leaving it to the parties to make the ensuing calculations,[422] while other tribunals have set the rate for the period between the due date(s) and the date of the award. [423] Following the second approach, in one of the first awards against Argentina, *CMS v. Argentina*, an interest rate of 2.51% was awarded, while in the *Sempra* award issued in 2007, the rate was set at 6%. In one of the most recent decisions, *EDF v. Argentina*, the rate awarded was 4.51%. These differences in rates do not appear to depend necessarily on different rates prevailing at the time of the issuance of those awards but rather depend on the individual choice of each tribunal.

267. The Tribunal believes that in view of the different dates at which the various amounts of damages determined in the present award became due (and at which dates, consequently, interest start accruing on each of those amounts) and the substantial variation in interest rates from July 2002 until 2013, it is not appropriate for the Tribunal itself to fix a single rate of interest applicable for the whole pre-award period, based on some kind of averaging. The Tribunal finds it more appropriate, instead, to follow the first approach mentioned above and to refer to the interest rates in force from time to time as to an appropriate security as the basis for calculating the interest accruing on the distinct amounts granted to Total for the damages it has suffered in respect of its various investments.

268. As to the type of security to be used as reference, the Tribunal notes that investment tribunals have referred mostly to short-term US Treasury bills, such as 6-month or one-year bills, rather than to longer instruments, such as 10-year Treasury bonds.[424] In light of the preceding examination of the issue and of the various parameters available and used by investment tribunals, the Tribunal determines that all amounts due by Argentina to Total as damages shall bear interest at the one-year U.S. Treasury bill average rate in effect on the

valued", LECG Damages Report, *supra* note 115, para. 314; Total Response to PO No. 5, *supra* note 408, paras. 2-8.

[422] See thus *BG Group* Award, *supra* note 416, para. 457, Exhibit CL-192: interest "at the average interest rate applicable to US six-month certificates of deposit compounded semi-annually."

[423] Under the second approach the rate for the post-award period until payment must be separately determined by reference to the future interest rate of the security chosen prevailing from time to time (such as quarterly, semi-annually or annually).

[424] As recalled above, Total has supported reference to the 10-year bonds, whose yield is higher, while Argentina to the 6-month bills whose yield is lower.

date on which each payment became due[425] and thereafter at the subsequent yearly average interest rates of one-year U.S. Treasury bills until payment. Accruing interest shall be compounded yearly.[426]

VI. COSTS

A. Total's Position

269. Pursuant to Article 61(2) of the ICSID Convention and Article 47(1)(j) of the Arbitration Rules, the Tribunal must allocate the costs of the arbitration between the parties, including ICSID's administrative charges, the Tribunal's fees and expenses, and the legal and other expenses incurred by the parties.[427]

270. Total requests "a full award of its costs and fees related to this arbitration, with interest, calculated on a compound basis".[428] Total relies on the principle that "costs follow the event", and on its right to full reparation which includes reimbursement of the costs necessary to obtain such reparation. Total points out that while Article 61(2) of the ICSID Convention "affords the Tribunal broad discretion in deciding how to allocate the costs of the arbitration", recent ICSID tribunals have reversed the traditional trend to split the arbitration costs equally among the parties.[429] According to Total, the factors considered by investment arbitral tribunals in exercising such discretion are (a) the extent to which each party has prevailed in relation to jurisdiction, liability and damages; (b) the underlying factual circumstances giving rise to the arbitration and the complexity of the proceedings; and (c) the conduct of each party in the arbitration, and in particular whether either party has "needlessly prolonged" or "obstructed" the proceedings. [430]

[425] Such dates have been determined above in the relevant paragraphs dealing with each item of damage and are conclusively specified hereafter in Part VII of the present Award.
[426] Compounding on an annual basis has been suggested in Total QM, *supra* note 5, para. 65.
[427] In order for the Tribunal be in the position to decide on apportionment of costs, Article 28(2) of the Arbitration Rules provide that promptly after the closing of the proceeding, each party "shall submit to the Tribunal a statement of costs reasonably incurred…". The Parties have supplied their respective statements (Costs Submissions) on 26 April 2012 pursuant to the directions of the Tribunal.
[428] Total QM, *supra* note 5, para. 246. Claimant's Submission on Costs of 26 April 2012 [hereinafter "Total Cost Submission"] specified that the risk-free rate should be 3.69% from the date of the Award until full payment.
[429] Total QM, *supra* note 5, para. 251.
[430] Total Cost Submission, *supra* note 428, para. 4.

271. Total submits that it should be entitled to full reimbursement of its arbitration costs as "the Tribunal has rejected Argentina's objections to jurisdiction and found Argentina to be in breach of the Treaty in numerous ways". In its final Costs Submission of 26 April 2012 (Total's Costs Submission"), Total submitted that Argentina should be ordered to pay all the costs that it has incurred, amounting to € 12,950,579.93 and $7,357,581.03, which include the legal fees (international and Argentine counsel), the fees of its experts on *quantum* and its other expenses and fees incurred in the arbitration. Total has also asked that Argentina reimburse the full amount of its deposits to the Secretariat of ICSID on account of the fees and expenses of the Tribunal and administrative fees.

B. Argentina's Position

272. Argentina objects to the request of Total concerning costs, referring to what it says is the dominant practice (*la práctica imperante)* of investment arbitral tribunals, in any case at ICSID, that each party bears it costs and that the costs of the tribunal is equally apportioned between the parties.[431] Moreover, Argentina rejects Total's assessment that the Decision on Liability was against Argentina, pointing out that the Tribunal rejected all claims by Total except those based on the breach of the fair and equitable treatment obligation. Argentina also submitted its statement of costs ("Argentina's Costs Submission") on April 26, 2012. According to Argentina's Costs Submission, its total costs in these proceeding amount to $2,434,243.49, representing the costs of the staff of the *Procuración del Tesoro de la Nación* in charge of the legal defense of Argentina and of its experts on *quantum*.

C. The Tribunal's Evaluation

273. The Tribunal is guided in its decision on the matter of apportionment of costs by the following considerations. Undoubtedly, the relevant ICSID provisions give broad discretion to arbitral tribunals in the matter. The practice of ICSID tribunals in apportioning costs is neither clear nor uniform. It has been noted that in a majority of cases ICSID tribunals have decided that the parties should bear in equal shares the fees and expenses of the arbitrators and the charges for the use of the Centre's facilities, and that each party should bear its own expenses.[432] When so deciding, tribunals often have given no reason, taking it somehow for

[431] Argentina QCM, *supra* note 6, paras. 196-203.
[432] C. Schreuer, *The ICSID Convention. A Commentary* (Second Edition), Article 61, paras. 19 and 33.

granted that this is the rule. When tribunals have apportioned the costs differently, especially those incurred by the parties, they have referred to the criteria that Total has mentioned, such as the extent to which the claimant has prevailed, the breaches adduced having been found to exist; the complexity of the proceedings and whether arbitration costs have somehow been due to the "misconduct" of a party in the course of the proceedings.[433]

274. The Tribunal is thus empowered to consider all relevant factors mentioned above in order to apportion the costs between the parties based on the outcome of the case and the conduct of the proceedings rather than deciding at the outset that each party shall bear its own costs.

275. In view of the above, as to the underlying factual and legal issues and the conduct of the proceedings the Tribunal notes the following: (a) the proceedings have been very complex, lengthy and costly, due to the number and complexity of the claims submitted under the BIT, affecting three different types of investments in Argentina, and involving a number of complex legal issues under local and international law; (b) the proceedings have spread over ten years (the Request for Arbitration was filed in May 2003 although the Tribunal was constituted almost a year later, in March 2004); they entailed the issuance of a first a decision on jurisdiction (in May 2006), thereafter a Decision on Liability (at the end of December 2010), and finally the present Award in 2013. The proceedings have comprised a number of hearings, the examination of many factual and expert witnesses, the filing by the Parties of more than one thousand factual exhibits, of hundreds of legal documents and authorities, and finally a number of voluminous memorials and briefs by the Parties and many complex reports by their respective experts in both the liability and in the *quantum* phases.

276. In respect of the issues mentioned as relevant in the previous paragraphs, the Tribunal does not consider that any of the Parties is "responsible" for the complexity or the duration of the proceedings such that those elements should influence the decision on the apportionment of the costs. Both Parties have made full use of their rights of defense as they were entitled to do, without abusing the process. No party has committed any "procedural misconduct"; on

[433] *Ibid.*, para. 44. The Parties have also referred to recent cases where claimants that have lost a case against a State, either as to jurisdiction or on the merits have been ordered to pay the costs of the respondent State.

the contrary the Tribunal takes the opportunity to acknowledge the cooperation of both Parties in facilitating the conduct of such complex proceedings at all stages.

277. As to the outcome of the dispute, the Tribunal notes that Total had raised two general types of claims against Argentina: the first relating to the pesification of tariffs and prices by the Emergency Law and related Decrees in 2001-2002; the second relating to the freezing of the tariffs and restrictions on the prices of energy affecting the operation of the companies in which Total had invested. In the Decision on Liability the Tribunal found that pesification did not breach the BIT, while it found that the freezing of tariffs and restrictions on prices (and other connected measures) did represent a breach of the fair and equitable treatment guaranteed to Total under the BIT.

278. As to *quantum*, this Award has determined that the losses that Argentina must compensate to Total are substantial, in excess of US$250 million. On the other hand Total had claimed twice that compensation (US$557 million), before interest. Based on the compound interest rates claimed by Total (which in its view should not be risk-free in respect of about one-half of the amount of the principal), interest would have doubled the amount of overall damages claimed by Total. Such overall amount, as recalled above in the Award, is in excess of one billion dollars. Since the Tribunal has only awarded risk-free pre-award interest on the entire principal sum, the amount of interest due by Argentina to Total to the date of the Award will be substantially less.

279. Finally, the Tribunal believes that the absolute and relative amounts of the costs claimed by the Parties and directly incurred by them should also be taken into account. In this respect, the Tribunal notes that the legal and experts' costs of Total are considerable and that they are multiple of those claimed by Argentina. On the other hand, the amount of costs incurred and claimed by Total reflects the complexity of the case, the number, volume and quality of the briefs, the length and complexity of the hearings and the amount of damages to be determined.

280. On balance and making use of its discretion, the Tribunal considers that it is appropriate that each Party bears its own costs and that the Parties share the administrative costs of the Centre in equal parts, including the expenses and fees of the members of the Tribunal in accordance with Article 59 of the ICSID Convention.

VII. DECISION OF THE TRIBUNAL

281. For these reasons, the Tribunal decides as follows:

Argentina shall pay to the Claimant the following amounts as compensation for the damages caused by Argentina in respect to Total's investments in Argentina in breach of Article 3 of the BIT between Argentina and France of 3 July 1991, as decided in the Decision on Liability issued by this Arbitral Tribunal, dated 27 December 2010, to be considered an integral part of this Award:

(A) Compensation for losses in the gas transportation sector:

- **US$80.3 million** plus interest as of 1 July 2002, for losses related to Total's stake in TGN;

- **US$4.9 million**, plus interest as of 1 March 2006, for losses related to Total's rights as Technical Operator of TGN.

(B) Compensation for losses in the electricity sector:

- **US$123.3 million**, plus interest as of 1 January 2007, for losses related to Total's stake in Central Puerto and HPDA.

(C) Compensation for losses in Hydrocarbons Exploration and Exploitation (Oil and Gas):

Retroactive Elimination of the Tierra del Fuego Tax Exemption:

- **US$7,628,000**, plus interest as of 1 June 2011, for withholding taxes on exports from Tierra del Fuego during the period of 2002-2006, imposed retroactively in breach of Article 3 of the BIT.

- The Tribunal also declares that future requests for additional retroactive taxes on exports from Tierra del Fuego for the period 2002-2006 would also be in breach of Article 3 of the BIT. Therefore, should Total S.A. or Total Austral be compelled to pay any such taxes to Argentina's tax authorities, Claimant

Total S.A. would be entitled to recover any such taxes with interest under this Award as specified in paragraph 191.

Domestic Sales of Natural Gas in 2002 – 2004:

- **US$43 million**, plus interest as of 1 May 2004 for losses in sales to distributors, due to Argentina's intervention and lack of compliance with the benchmark price in breach of Article 3 of the BIT.

Domestic Sales of Natural Gas in 2004 – 2006:

- **US$8.4 million** plus interest as of 1 January 2007.

Limitations of Gas Exports (Interference with Gas Export Contracts):

- **US$2.4 million**, plus interest as of 1 January 2007.

For a total amount of US$269,928,000 before interest.

(D) Interest:

- On all above amounts, interest shall accrue as of the date indicated for each amount, at a rate equal to the average rate of the one-year U.S. Treasury bills prevailing on such initial date, and thereafter at the subsequent yearly average interest rates of one-year U.S. Treasury bills prevailing in each following yearly periods, until payment. Such interest shall be compounded yearly;

- Each Party shall bear all of its own legal costs and expenses, including for its respective experts, without recourse to each other;

- The Parties shall bear equally the costs and expenses of the Arbitral Tribunal and ICSID.

- All other claims, defences and exceptions of the Parties are hereby rejected.

Done in English and Spanish, both versions being equally authoritative.

[*Signed*]

Mr. Henri Alvarez
Arbitrator
Date: 24/10/13
Subject to the dissenting opinion reflected in paragraphs 218-224

[*Signed*]

Mr. Luis Herrera Marcano
Arbitrator
Date: October 18, 2013
Subject to the dissenting opinion reflected in paragraph 262

[*Signed*]

Professor Giorgio Sacerdoti
President of the Tribunal
Date: 4 November 2013