INTERNATIONAL CENTRE FOR SETTLEMENT OF INVESTMENT DISPUTES
WASHINGTON, D.C.

In the matter between

HRVATSKA ELEKTROPRIVREDA D.D.
(Claimant)

and

REPUBLIC OF SLOVENIA
(Respondent)

(ICSID Case No. ARB/05/24)

AWARD

Members of the Tribunal

The Hon. Charles N. Brower, Arbitrator
Professor Jan Paulsson, Arbitrator
Mr David A. R. Williams, Q.C., President

Secretary of the Tribunal

Ms Milanka Kostadinova

Representing the Claimant

Mr Josip Lebegner
Principal Representative for the Claimant

and

Mr Robert W. Hawkins
Mr Stephen M. Sayers
Ms Julie M. Peters
Mr Leo Andreis
Hunton & Williams LLP

Representing the Respondent

Mr Mark Levy
Mr James Freeman
Mr Rishab Gupta
Ms Katrina Limond
Allen & Overy LLP

Date of Dispatch to the Parties: 17 December 2015

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I. INTRODUCTION

THE PARTIES AND THEIR LEGAL REPRESENTATIVES

1. The Claimant is Hrvatska Elektroprivreda, d.d. ("HEP"), the national electric company of Croatia. From 1994 to the present time all shares in HEP have been owned by the Government of Croatia.

2. The Claimant is represented by Mr Josip Lebegner, principal representative of HEP, and Messrs Robert W. Hawkins, Stephen M. Sayers, Leo Andreis, and Ms Julie M. Peters, of the law firm Hunton & Williams LLP, 2200 Pennsylvania Avenue, NW, Washington, D.C. 20037, United States of America.

3. The Respondent is the Republic of Slovenia ("Slovenia").

4. The Respondent is represented by Messrs Mark Levy, James Freeman, Rishab Gupta, and Ms Katrina Limond, of the law firm Allen & Overy LLP, One Bishops Square, London E1 6AD, United Kingdom.

OTHER ENTITIES RELEVANT TO THE DISPUTE

Nuklearna Elektrana Krško vu

5. Nuklearna Elektrana Krško ("NEK"), a limited liability company, was established as a joint venture by the national electricity companies of Croatia and Slovenia in 1974 to build and operate the Krško Nuclear Power Plant (the "Krško NPP").

Elektro-Slovenija, d.o.o. Ljubljana

6. Elektro-Slovenija, d.o.o. Ljubljana ("ELES-GEN") is a wholly-owned subsidiary of Elektro-Slovenija, d.o.o. ("ELES"), the national electric power transmission company of Slovenia.

THE BASIC NATURE OF THE DISPUTE

7. The dispute between the parties concerns the ownership and operation of the Krško NPP, which is located outside of the town of Krško in south-eastern Slovenia, approximately 15 kilometres west of the border between Croatia and Slovenia.

8. The Krško NPP was designed and constructed in the 1970s using funds contributed equally by the national power industries of the Socialist Republics of Slovenia and Croatia at a time when both were still part of the former Yugoslavia. It is a significant national power resource for both countries.

9. The financing, construction, operation, management and use of the Krško NPP were regulated by four agreements between the Governments of Croatia and Slovenia between 1970 and 1984 ("the Governing Agreements"). The basis of the Governing Agreements was the principle that the co-investors were to be equal partners in all aspects related to the plant. This principle became known as the "parity principle."

10. Slovenia and Croatia each declared independence in 1991. Over the following years, the Slovenian Government adopted a series of measures that were viewed by HEP as being inconsistent with the parity principle and the basic provisions of the Governing Agreements. On 30 July 1998, Slovenia disconnected electricity lines from the Krško NPP to Croatia, terminated all electricity deliveries to HEP, and issued a Governmental "Decree" which HEP claimed affected its rights as a 50 percent owner and manager of the plant.

11. Following Slovenia's displacement of HEP from its role as a 50 percent owner of the Krško NPP, the Governments of the two countries entered into negotiations aimed at restoring HEP's rights. In mid-2001, Dr Goran Granic, the Deputy Prime Minister of Croatia, proposed a settlement approach that ultimately broke the deadlock. Dr Granic suggested that, rather than continuing to debate past financial differences, the parties, in essence, should "wipe the slate clean" as of an agreed date in the future. Under Dr Granic's proposal, all of the parties' claims up to this agreed date would be waived and, on that agreed date, deliveries of electricity to HEP from the Krško NPP were to be restored. Dr Granic's settlement approach was formally endorsed at a meeting of the

Prime Ministers of Croatia and Slovenia held in Rijeka, Croatia on 9 June 2001. It was agreed that 30 June 2002 would be the date of resumption of deliveries of electricity to HEP, and the date up to which all financial claims were to be waived. These agreements were recorded in the "Agreement between the Government of the Republic of Croatia and the Government of the Republic of Slovenia on Regulation of the Status and Other Legal Relations Regarding the Investment, Use, and Dismantling of Nuclear Power Plant Krško" (the "2001 Agreement").

12. HEP contends that Slovenia failed to restore HEP's rights as a 50 percent owner of the Krško NPP or to resume electricity deliveries from the plant by 30 June 2002, as required by the 2001 Agreement. Slovenia did not ratify the 2001 Agreement until late February of 2003, and it did not resume deliveries of electricity from the Krško NPP to HEP until 19 April 2003.

13. In bringing these proceedings, HEP sought compensation for the financial loss it claimed to have suffered as a result of Slovenia's failure to resume deliveries of electricity by 30 June 2002.

14. HEP advanced two independent legal bases for its claim. First, it alleged that Slovenia's termination of electricity deliveries to HEP on 30 July 1998, together with the issuance of the Decree removing HEP's rights as a 50 percent owner of the Krško NPP, violated HEP's rights as an investor under Articles 10(1) and 13 of the Energy Charter Treaty (the "ECT Claims"). HEP contended that these violations continued until deliveries of electricity were restored to HEP on 19 April 2003. HEP submitted that a proper construction of the 2001 Agreement demonstrated that, while it had agreed to waive its ECT claims accruing up to 30 June 2002, it had not waived those ECT claims that accrued between the period dating 1 July 2002 to 19 April 2003.

15. Secondly, HEP claimed for breach of Slovenia's obligation under the 2001 Agreement to restore electricity deliveries to HEP from the Krško NPP by 30 June 2002.

II. PROCEDURAL HISTORY

JURISDICTION AND MERITS

16. The procedural history of this arbitration prior to 12 June 2009 was set out in detail in the Tribunal's Decision on the Treaty Interpretation Issue of 12 June 2009. The Decision on the Treaty Interpretation Issue confirmed the Tribunal's jurisdiction and determined liability under the 2001 Agreement. The Decision on the Treaty Interpretation Issue is hereby incorporated by reference into the present Award and made an integral part of it. The procedural history leading up to this Decision will be briefly recapitulated below, together with a summary of the procedural history of this matter from 12 June 2009 onward.

17. The Claimant filed a Request for Arbitration with the International Centre for the Settlement of Investment Disputes (ICSID) on 4 November 2005.

18. On 27 February 2006, the parties entered into an Agreement on Constitution of the Tribunal under Rule 2 of the ICSID Arbitration Rules ("ICSID Rules"). Pursuant to clauses 3, 4 and 8 of the Agreement, the Tribunal was to consist of three arbitrators, one arbitrator to be appointed by each party, and the two party-appointed arbitrators to select and appoint the President of the Tribunal. In accordance with the 27 February Agreement, the Claimant appointed The Honorable Judge Charles M. Brower of the United States of America as its party-appointed arbitrator. The Respondent appointed Mr Jan Paulsson of Sweden as its party-appointed arbitrator. Judge Brower and Mr Paulsson together appointed as President of the Tribunal Mr David A. R. Williams QC of New Zealand.

19. The Claimant filed a Memorial on the Merits on 10 November 2006.

20. On 8 December 2006, the Respondent notified the Claimant and the Tribunal, in accordance with Rule 41(1) of the ICSID Arbitration Rules, that it objected to the jurisdiction of the Centre and to the competence of the Tribunal to decide the claims set out in the Claimant's Memorial on the Merits. The Respondent asked that its objections to jurisdiction be determined as preliminary matters, separately from and prior to the merits of the dispute.

21. On 15 February 2007, the Tribunal notified the parties that it had decided, pursuant to ICSID Rule 41(4), to reject the Respondent's request to bifurcate the proceedings.

22. The Respondent filed a Counter-Memorial and Memorial on Objections to Jurisdiction and Admissibility on 6 July 2007.

23. The Claimant filed a Reply Memorial on the Merits on 10 December 2007.

24. The Respondent filed a Rejoinder on 7 April 2008.

25. The first hearing commenced on 5 May 2008 at the offices of the World Bank in Paris. During the May 2008 hearing, all except certain specified matters relating to liability and quantum were addressed. The matters not addressed at the May 2008 hearing were reserved for a future hearing.

26. On 28 July 2008, the Tribunal informed the parties that it had reached the provisional view that it should determine the fundamental issue of the true interpretation of the 2001 Agreement (the "Treaty Interpretation Issue"), and the Claimant's claims under that head, before determining other issues.

27. Following the receipt of comments from the parties on the Tribunal's proposal, the Tribunal, by Procedural Order (No. 4) dated 6 October 2008, directed that the question of whether the Claimant's claims under the 2001 Agreement were tenable would be addressed before any other remaining issues.

28. The parties were directed to provide submissions on this issue. Both parties did so: the Claimant on 24 October 2008 and the Respondent on 14 November 2008. The Claimant then filed Reply Submissions on 19 November 2008.

29. A hearing on the Treaty Interpretation Issue was held at the World Bank Headquarters in Paris on 24 and 25 November 2008.

30. The Tribunal subsequently issued to the parties a Decision on the Treaty Interpretation Issue, dated 12 June 2009, together with an Individual Opinion from Mr Paulsson dated 8 June 2009. The ruling of the Tribunal, as expressed in the *dispositif* section of its Decision, was as follows:

For all the foregoing reasons and rejecting all submissions to the contrary the Tribunal DECLARES AND DECIDES as follows:

A. *Pursuant to the 2001 Agreement, and in particular its Article 17(1) and its Exhibit 3 ("Principles of the Structuring of the Financial Relations"), both of which constitute integral parts of the 2001 Agreement:*

(i) *Declares that the aforementioned Article 17(1) and Exhibit 3 constitute a financial settlement as of 30 June 2002 between the Republic of Croatia and the Republic of Slovenia in relation to their respective companies as set forth at (ii) through (vi) hereinbelow.*

(ii) *Declares that the Republic of Slovenia is liable to the Claimant for the financial value to HEP of 50 percent of the electrical power produced by NEK, or by its predecessor, JP NEK, throughout the period 1 July 2002 until 19 April 2003, subject, however, to the Tribunal determining in subsequent proceedings in this arbitration whether or not, and, if so, the extent to which: (1) HEP has waived such liability by acquiescence as alleged by the Respondent (in support of which allegation the Respondent was permitted to introduce its Exhibit 326 see Paragraphs 63, 64 and 67, above); or (2) NEK or JP NEK has satisfied such liability by the offers of electrical power made to HEP by either of them on 24 June 2002 and on 13 November 2002.*

(iii) *Declares that HEP has waived all claims against NEK and JP NEK for damages, i.e., for compensation for undelivered electricity, i.e., for use of the capital, for any and all periods of time from the beginning of time through 30 June 2002;*

(iv) *Declares that NEK and JP NEK have waived all claims against HEP in connection with delivered power and electricity for any and all periods of time from the beginning of time through 30 June 2002;*

(v) *Declares that NEK and JP NEK have waived all claims against ELES GEN in connection with delivered power and electricity for any and all periods of time from the beginning of time through 30 June 2002;*

(vi) *Declares that NEK and JP NEK have waived all claims against HEP in connection with charged fees for financing of the dismantling of Krško NPP for any and all periods of time from the beginning of time through 30 June 2002; and*

(vii) *Declares that NEK and JP NEK have waived all claims against HEP and ELES GEN in connection with pooled resources of depreciation and in connection with the coverage of losses for any and all periods of time from the beginning of time through 30 June 2002.*

B. *Dismisses all claims asserted by HEP against the Republic of Slovenia in this arbitration as arising under the Energy Charter Treaty.*

C. *Reserves costs for decision in the further proceedings.*

ISSUES FOR DETERMINATION IN QUANTUM PHASE

31. It will be seen from the above that certain matters remained for determination following the Tribunal's Decision on the Treaty Interpretation Issue of 12 June 2009. No jurisdictional issues were among them. At the time of the Tribunal's Decision, those matters were the following: first, whether HEP had by acquiescence waived Slovenia's liability under the 2001 Agreement; secondly, whether Slovenia had satisfied, in whole or in part, its liability under the 2001 Agreement by offering electricity to HEP in June and November 2002; thirdly, the amount of damages (if any) flowing from Slovenia's liability under the 2001 Agreement; fourthly, costs.

32. By letter dated 22 June 2009, the Claimant added a further issue for consideration. The Claimant conveyed its surprise that the Tribunal had dismissed its claims under the ECT, and asked that the Tribunal "reconsider and reverse" its dismissal of those claims, and to add them to the list of matters to be determined at the hearing scheduled to commence on 27 July 2009.

33. In the same 22 June 2009 letter, the Claimant submitted that nothing remained to be determined in respect of the waiver by acquiescence issue, and that that issue did not therefore need to be considered at the upcoming hearing. On 23 June 2009, the Respondent submitted that the issue of waiver did remain for determination at the July 2009 hearing.

34. On 26 June 2009, the Tribunal issued a set of directions to the parties in anticipation of the forthcoming hearing. Those directions stated that the issues to be discussed at the July 2009 hearing were the following:

> 1. *Whether the Respondent's waiver by acquiescence argument remains to be determined and, if so, the determination thereof;*
>
> 2. *Whether NEK or JP NEK has satisfied its liability through the two offers of electrical power made to HEP;*
>
> 3. *The damages and any other remedies to be awarded taking into account the Decision on the Treaty Interpretation issue;*
>
> 4. *Whether the dismissal of the Claimant's ECT claims should be reversed and, if so, the determination of those claims;*

5. *Any other issues identified by the parties.*

35. However, on 14 July 2009, the Respondent advised the Tribunal and the Claimant that it would not advance any argument in respect of waiver by acquiescence at the July 2009 hearing. Accordingly, only issues 2 – 5 of those matters set out above remained for discussion at the hearing.

36. At the request of the Tribunal, both parties made additional pre-hearing submissions on 22 July 2009 on the Claimant's application in respect of the ECT Claims.

JULY 2009 HEARING

37. A hearing in respect of those matters remaining for determination took place from 27 to 31 July 2009 at the ICC Hearing Centre in Paris. Mr Hawkins, Mr Sayers, Ms Tatjana Misulic and Mr Leo Andreis attended on behalf of the Claimant, and Mr Jagusch, Mr Levy, Mr Sinclair, Mr Ivo Novak, Mr Martin Novsay, Ms Vanja Bogolin, Ms Carole Katz, Mr Michael Cassone and Mr Thomas Kendra attended on behalf of the Respondent. Mr Ivo Čović, Mr Kazimir Vrankic, Mr Josip Lebegner, Mr Mladan Žodan and expert witnesses Mr Walck and Ms Oppel gave evidence for the Claimant and were cross-examined by counsel for the Respondent. Mr Janez Kopac, Mr Stane Rozman, Mr Brankon Ogorevc, and experts Mr Styles and Dr Petrov gave evidence for the Respondent and were cross-examined by counsel for the Claimant.

38. Following the July 2009 hearing, the Tribunal, in its Procedural Order No. 6 dated 12 August 2009, directed the parties to file written post-hearing submissions on those matters remaining for determination, including costs. The Tribunal sought particular assistance in certain areas, in respect of which it put to the parties a series of ten questions, six relating to the two offers to sell electricity to HEP in June and November 2002, and four relating to quantum. Each party duly filed written submissions on 5 October 2009, and replies to the other's submissions on 6 November 2009. The questions of the Tribunal were:

The HEP Offers

1. *Did the June and/or the November offers constitute full or partial compliance by Respondent with its treaty obligation as set forth by the Tribunal in its Decision on the Treaty Issue, i.e., its "liab[ility] to the Claimant for the*

financial value to HEP of 50 percent of the electrical power produced by NEK [or JP NEK] throughout the period 1 July 2002 until 19 April 2003"?

2. *Slovenia's duty as postulated by the Tribunal's decision was to hold HEP harmless from the financial consequences of non-delivery as from 1 July 2002. Were the June and November offers in conformity with that duty? To what extent, if any, did HEP have a duty to respond if it considered that the offers were not in conformity?*

3. *In determining the issue of compliance are any of the events or circumstances surrounding the making of the June or November offers relevant and, if so, how are they relevant or are they relevant only to the issue of mitigation?*

4. *Since the issue of compliance necessarily is an issue of international law, i.e., one of compliance with a treaty obligation, what principles of international law are to be applied, i.e., what are the relevant principles of treaty law, principles of customary international law, "general principles of law recognized by civilized nations" or subsidiary means of determining international law (all as prescribed in Article 38 of the Statute of the International Court of Justice)?*

5. *In any event, notwithstanding the general direction not to furnish memorials as an overall narrative, the Parties should set forth a chronological description of the events surrounding the making of the June offer and November offers commencing immediately after the 1998 Decree.*

Mitigation

6. *As to the issue of mitigation, including burden of proof matters relating thereto, what are the applicable principles of customary international law? In this case to what extent, if any, it is appropriate to refer to and seek guidance from "the general principles of law recognised by civilised nations" and in particular from English case law or text books?*

Quantum

7. *As to quantum, each Party should explain as well and fully as possible why its expert reports should be accepted and why the other Party's expert reports should be rejected. In this regard, the Parties should consider that, in broad terms, the case put by the Claimant is what it "would" have done had it received 50 percent of NEK's output during the period 1 July 2002 until 19 April 2003, and the case put by the Respondent, similarly in broad terms, is what Claimant "should" have done in such case. Neither side appears to have put the case in terms of what actually happened at HEP as regards dispatching starting 19 April 2003, although clearly each Party has cited aspects of that post-19 April 2003 dispatching in support of its respective expert reports. In this regard the Tribunal puts the question, "Why is not the best measure of the financial value to HEP in issue exactly what it in fact did starting 19 April 2003, including an analysis of the relevance or otherwise of matters such as the different hydrological experience and the coming on stream of the Zagreb power plant?"*

8. *Neither Party spoke at the hearing of the modernization loans, 50 percent of which starting 1 July 2002 "was to be borne through the cost of electricity" by Claimant. Do the Parties agree that the relevant amounts have indeed been included in both the June offer and the November offer, or were they not? The Parties are requested to explain just how they are accounting for Claimant's obligation in this regard.*

9. *Notwithstanding the general direction not to furnish memorials as an overall narrative, the Parties should set forth a chronological description of the events starting with the entry into force of the treaty and the recommencement of electrical supply to HEP from NEK, explaining also why that period should or need not be included in the financial value to HEP in issue. Specifically, what principles of international law permitted or prohibited this delay?*

10. *The Parties - the Respondent in particular, as the Claimant has set forth its case fairly clearly on this point - should address the issues of fact, law, and discretion raised by Claimant's claim for substantial interest, including the appropriate rate of interest, the point(s) from which it is to be charged, whether compound (and, if so, with what rests) or simple.*

39. The Claimant filed documentation in support of its claim for costs on 13 November 2009. A revised version, containing a small number of corrections to the Claimant's supporting documentation, was filed on 18 November 2009. The Respondent filed documentation in support of its costs claim on 24 November 2009, with more detailed (and slightly revised) information following on 10 December 2009.

40. Following receipt of the Post-Hearing Briefs, the Tribunal took time to deliberate.

APPOINTMENT OF TRIBUNAL EXPERT

41. In Procedural Order No. 7, issued by the Tribunal on 1 October 2010, the Tribunal concluded that it would be aided in the task of assessing the parties' positions with respect to quantum by the appointment of an independent expert. In paragraph 7 of Procedural Order No. 7, the Tribunal determined that it would make such an appointment pursuant to Rule 34 of the Arbitration Rules of the International Centre for Settlement of Investment Disputes.

42. Pursuant to Procedural Order No. 7, the parties made suggestions regarding candidates to fulfil the role of independent expert. After considering the parties' submissions, the Tribunal sent a letter on 15 April 2011 in which the Tribunal notified the parties that its

preferred candidate to serve as an independent expert was Mr Wynne Jones, of Frontier Economics, Ltd., London, England.

43. The Tribunal subsequently contacted Mr Jones, and asked him whether he would be willing to act in this capacity. He indicated that he would be prepared to do so.

44. In a letter from the Tribunal dated 9 June 2011, the parties were directed to contact Mr Jones to work out the terms of his appointment as required by paragraph 14 of Procedural Order No. 7. The parties did so and the Terms of Appointment were agreed in August 2011. The Tribunal approved the Terms of Appointment and a fully executed copy of these Terms was circulated to Mr Jones and the parties on 30 November 2011.

45. In the Terms of Appointment, Mr Jones confirmed that neither he nor his employer, Frontier Economics, were aware of any actual or potential conflicts of interest that would impinge upon his independence as a Tribunal-appointed expert in this case.

46. The Terms of Appointment specified that Mr Jones' task was to give independent advice to the Tribunal on the following issues:

(a) What, if any, compensation is due to HEP from Slovenia for non-delivery to HEP of 50% of the electrical output of the Krško Nuclear Power Plant from 1 July 2001 to 19 April 2003, in accordance with an Agreement referred to as the *2001 Agreement*?

(b) What would have been the cost to HEP had electricity been supplied pursuant to a timely ratification of the *2001 Agreement*, and what was the actual cost to HEP of substitute electricity on a comparable basis (i.e., excluding elements not included in the price of supply from the Krško Nuclear Power Plant, under the *2001 Agreement*)?

(c) What would have been the cost incurred by HEP under the offers for the supply of power from the Krško Nuclear Power Plant made by Slovenia in June and November of 2002?

47. As set out below, Mr Jones' Report was received in February 2014. The delay between Mr Jones' appointment and the production of his Report was the result of a combination of circumstances which included a family illness requiring Mr Jones to take some time away from the office[1] and, in particular, intense procedural wrangling between the parties as to what materials and submissions should or should not be allowed to be provided to Mr Jones, the detail of which is set out below.

MR JONES' REQUESTS FOR INFORMATION

48. As envisaged by paragraph 10 of his Terms of Appointment, Mr Jones submitted an Issues Paper/Preliminary Information Request on 11 December 2011. By letter to the parties dated 30 January 2012, the Tribunal responded to a number of queries raised by Mr Jones and invited the parties to consider and provide their comments on the Issues Paper. Thereafter, the parties responded to Mr Jones' Issues Paper, including by way of the following: Claimant's letter dated 7 February 2012; Respondent's letter dated 15 February 2012; and Claimant's letter dated 23 February 2012.

49. By letter dated 6 March 2012, the Claimant suggested that there be a meeting between the parties, their experts and Mr Jones in order to "go over any requests that [Mr Jones had] arising from the materials made available to [him] on the ICSID site, and to answer any questions that [Mr Jones may have had] regarding those materials." Following further correspondence from the parties, by email of 30 March 2012, Mr Jones declined the invitation due to concerns raised by the Respondent and the narrow focus of any agreed meeting. Mr Jones informed that parties that when he had completed his first review of all the documentation now provided, he would submit to them a brief paper identifying what he saw as the key areas of disagreement and proposing the order in which these would be addressed.

50. Following Mr Jones' email of 30 March 2012, the parties provided further comments on the impact of the documents already in the record on the matters raised in Mr Jones' Issues Paper, including by way of the following communications: Respondent's letter to

[1] Email from Mr Jones to Ms Kostadinova (28 October 2013).

Mr Jones dated 20 April 2012; Claimant's letter to Mr Jones dated 27 April 2012; and Respondent's letter to Mr Jones dated 10 May 2012.

51. By letter to the Tribunal dated 7 June 2012, Mr Jones provided an update on his progress and advised as to his proposed method of proceeding towards the finalisation of his report. He suggested that he should issue a preliminary paper before reviewing additional materials still to be provided by the parties to avoid undue delay. In addition, Mr Jones requested the Tribunal's guidance as to the interpretation of the purpose of his task. Specifically, he asked whether the issue was an assessment of damages related to a breach of obligations, as suggested by the Claimant, or to identify a value that should be paid according to the terms of the 2001 Agreement and that such a payment would fulfil the obligations of the 2001 Agreement rather than restitution for damage.

52. By letter to Mr Jones and the parties dated 4 July 2012, the Tribunal agreed with Mr Jones' approach of waiting until after he had issued his preliminary paper assessing the evidence before he reviewed any additional materials referred to by the parties but not, as yet, provided to him. The Tribunal confirmed that it would write to Mr Jones separately to ascertain a date for delivery of his promised paper.

53. In the same letter, the Tribunal noted that Mr Jones' query as to the purpose of his task should be reviewed after his forthcoming paper had been delivered. However, the Tribunal recalled the points on which Mr Jones had been instructed to advise in his Terms of Appointment. The Tribunal also clarified that any compensation due to HEP should:

> compensate [it] for damage caused thereby' (Article 36 of the International Law Commission's Articles on Responsibility of States for International Wrongful Acts). According to the Terms of Appointment, therefore, Mr Jones should include in his report all factors that, in his expert opinion, affected any damage suffered by HEP as a result of the non-delivery of electricity between the relevant dates.

54. In the course of preparing his report to the Tribunal, Mr Jones circulated two formal requests for additional information from the parties dated 4 July 2012 and 31 July 2012.

55. The Claimant provided its initial response to Mr Jones by letter dated 11 July 2012 and the Respondent did the same by letter dated 23 July 2012.

56. The Claimant's initial response to the 4 July requests generated objections from the Respondent concerning material compiled by the Claimant. By letter of 24 September 2012, the Tribunal issued further directions on hearing the Respondent's objections. The Tribunal also reminded the parties not to make submissions to Mr Jones; instead, they should focus on providing him with the data he had requested and reserve submissions until after his report had been published.

57. The Claimant provided further and "complete" responses to Mr Jones' requests for additional information on 30 August 2012 and 26 September 2012. On 1 October 2012, the Respondent applied to the Tribunal to have certain portions of the Claimant's proposed responses to Mr Jones' Requests for Additional Information amended or removed.

58. In the meantime, the Respondent filed its complete responses on 5 October 2012 and 31 October 2012 respectively.

59. The parties provided submissions on the Respondent's objections to the Claimant's responses to Mr Jones on 8 October 2012 (Claimant's Reply) and 15 October 2012 (Respondent's Rejoinder). The Tribunal issued its Ruling on the Respondent's Application on 12 November 2012, largely accepting the Respondent's position and directing that substantial amounts of the Claimant's proposed responses be struck out on the basis that they went beyond the mere provision of information and amounted to unsolicited and impermissible submissions.

60. On 1 November 2012, the Claimant informed the Tribunal that it objected to certain parts of the Respondent's second response to Mr Jones. The Claimant filed a formal Strike Out Application on 9 November 2012, followed by a response from the Respondent on 16 November 2012 and a further reply from the Claimant dated 21 November 2012.

61. Additionally, by letter dated 16 November 2012, the Claimant applied for leave to add to its draft Responses some further material addressing a number of questions posed by Mr Jones. The Respondent objected to this additional material on 26 November 2012. The Claimant replied to these objections on 28 November 2012 and provided the Tribunal with a copy of its proposed revised responses to Mr Jones on 7 December 2012. The

Respondent submitted further comments on the requested revisions on 19 December 2012.

62. The Tribunal issued its Ruling on both Applications on 22 February 2013. It ruled on each of the Claimant's objections to the Respondent's second response individually: upheld, dismissed, or no decision required. Additionally, it upheld the Claimant's application for leave to augment its draft Responses.

63. The Respondent applied on 1 March 2013 for leave to submit additional information to Mr Jones. The Claimant provided a response on 5 March 2013, to which the Respondent replied on 8 March 2013. On 22 March 2013, the Tribunal issued its "Ruling on the Respondent's Application for Leave to Supply Additional Related Information to Mr Jones" accepting the proposed revisions.

64. On 26 March 2013, the Respondent applied to the Tribunal to strike out certain portions of the Claimant's comments to Mr Jones on the Respondent's responses to him on certain issues. At the Tribunal's invitation, the Claimant submitted its reply to the strike out application on 28 March 2013. On 8 April 2013, the Tribunal issued its "Ruling on the Respondent's Strike-Out Application" ordering the Claimant to make certain revisions to its Comments to remove submission arguments. The Tribunal also endorsed the Claimant's assertion that:

> Even though Mr Jones' Terms of Appointment were approved on August 31, 2011, the last nineteen months have been spent in procedural jousting over the way in which information is to be put before Mr Jones, along with the assembly of the specific information that he has requested. It is time for this procedural jousting to stop, and for this arbitration to move forward.

65. The Tribunal asserted that it "sincerely hope[d] that this, its fourth Ruling on the matter, will bring an end to this "procedural jousting" and enable Mr Jones to proceed with the preparation of his Report".

66. On 10 April 2013, the Respondent produced the required documents and their annexes. By letter of 12 April 2013, the Claimant requested production of certain additional documents referred to in the documents produced by the Respondent. By letter dated 15

April 2013, the Respondent objected to the Claimant's Request to produce these additional documents.

67. At the direction of the Tribunal (dated 30 April 2013), the Claimant provided a further submission on 7 May 2013 and the Respondent replied on 14 May 2013. The Tribunal then issued a decision on 20 May 2013 declining the request for additional documents as they were not relevant to the issues before Mr Jones.

MR JONES' REPORT AND THE PARTIES' SUBMISSIONS IN RELATION THERETO

68. Mr Jones issued his Expert Report in February 2014. The Report was sent to the parties by the ICSID Secretariat on 12 February 2014, together with a letter from the Tribunal inviting the parties to propose a timetable for written submissions on the Report and to inform the Tribunal as to whether a hearing would be necessary.

69. On 21 March 2014, the parties notified the Tribunal that they had agreed upon arrangements for the filing of initial submissions and reply submissions, as well as a common list of requests for additional information from Mr Jones about his analysis. The parties also inquired of the Tribunal whether it would be possible to reserve a day for a hearing in June or July 2014, if the Tribunal determined a hearing would be necessary or desirable. The Tribunal offered the parties a hearing date on 30 July 2014, but the Respondent was unavailable on that date. The Tribunal offered the parties 8 December 2014 as an alternative hearing date, but the Claimant was unable to commit to this date. Eventually, the parties and the Tribunal were able to agree on a provisional hearing date (should a hearing be required) of 26-27 March 2015.

70. On 4 April 2014, the parties wrote to the Tribunal concerning, *inter alia*, additional exhibits relating to new issues raised by Mr Jones in his Report. As the parties agreed to their admission, the Claimant requested that the Tribunal allow it to introduce these exhibits in its 25 April 2014 submissions. The Tribunal allowed this.

71. In accordance with the agreed timetable, the parties filed their comments on Mr Jones' Report on 25 April 2014, with reply submissions filed on 30 May 2014.

72. On 25 June 2014, the Claimant wrote to the Tribunal confirming the parties' agreement that a hearing be scheduled to take place in Paris on 26-27 March 2015. It also requested that a status telephone conference be held with the Tribunal to discuss the schedule for the hearing and to address two "new issues" that the Claimant alleged Mr Jones had impermissibly included in his Report.

73. On 6 August 2014, the Tribunal requested that the Claimant clarify its concerns on these alleged new issues and a proposal on how to deal with them. The Tribunal also asked the parties to agree, if possible, on a proposed hearing schedule for the March 2015 hearing.

74. On 18 August 2014, the Claimant sent a letter detailing the two alleged new issues (being the "pass-on" defence and the "benefit-to-HEP" theory) and requested that the Tribunal not consider these issues in its assessment of compensation. The Respondent provided its response to these submissions on 4 September 2014, insisting that raising these new issues was within Mr Jones' mandate.

75. On 9 September 2014, the Claimant wrote to the Tribunal setting out a proposed hearing schedule for the March 2015 hearing that included a non-agreed segment during which the party-appointed experts would have the opportunity to respond to the oral testimony of Mr Jones and to be asked questions by the Tribunal. The Respondent clarified on 16 September 2014 that it objected to the party experts attending the March 2015 hearing because both parties had had a full and fair opportunity to present their cases and provide comments (including any new evidence) on Mr Jones' Report.

76. By letter dated 23 September 2014, the Claimant further elaborated that the March 2015 hearing would be the first time that the parties had heard Mr Jones' response to their comments on his Report, and therefore having the party experts in attendance may be useful for the Tribunal.

77. On 1 October 2014, the parties agreed to a status conference by telephone on Friday, 10 October 2014. On 3 October 2014, the Tribunal provided the parties with its "preliminary views" on the issues to be discussed at the status conference.

78. By email of 8 October 2014, the Respondent said that it agreed with the Tribunal's preliminary conclusions on the "New Issues" topic and that it would accept the

Tribunal's preference to adopt the Claimant's proposed hearing schedule, as set out in its letter of 9 September 2014. The Respondent therefore suggested the status conference was no longer necessary.

79. By letter of the same date, the Claimant said that it wished the status conference to proceed so that it could provide oral submissions on the "New Issues" topic. It also provided a two page skeleton argument to the Tribunal.

80. The status conference was held by telephone at 6pm London time on Friday, 10 October 2014. In addition to the members of the Tribunal and Ms Kostadinova from ICSID, those attending the call on behalf of the Claimant were Mr Stephen Sayers, Mr Robert Hawkins and Ms Julie Peters of Hunton & Williams (Virginia); and those attending on behalf of the Respondent were Mr Mark Levy, Mr James Freeman and Mr Rishab Gupta of Allen & Overy (London).

81. On 27 October 2014, the Tribunal issued its "Ruling on Claimant's Request that the Tribunal Refuse to Consider the "New Issues" Raised by Mr Jones and on the Hearing Schedule for March 2015". In that Ruling, the Tribunal decided that the two new issues raised by Mr Jones properly fell within the terms of his instructions and consequently that they should remain available for the Tribunal's consideration on quantum issues. The Tribunal also stated that both parties had had a full and fair opportunity to provide their views and comments on all issues in Mr Jones' Report, including an opportunity to adduce new evidence on the new issues. The Tribunal did allow the Claimant a further opportunity to comment on the Respondent's suggested adjustments to Mr Jones' benefit theory, with a further opportunity for the Respondent to reply. The Tribunal also adopted the Claimant's suggested hearing schedule as set out in its letter of 9 September 2014.

82. Accordingly, on 5 December 2014, the Claimant filed its "Response to Slovenia's New 'Benefit-to-HEP' Argument" and the Respondent filed its "Reply Submissions on the HEP Benefit Argument" on 30 January 2015.

83. On 12 February 2015, the Claimant requested permission to amend page 24 of its 25 April 2014 Submission on Mr Jones' Report, following further analysis of Mr Jones' replacement generation algorithm. The Tribunal granted the Claimant's request.

84. In February 2015, Mr Jones was sent a file by the ICSID Secretariat containing all relevant party submissions on his February 2014 Report.

85. On 16 March 2015, Mr Jones filed an Addendum to his Report which contained a recalculation, based on the parties' comments, of the benefit he contended was received by HEP as shareholder of NEK during the relevant period.

MARCH 2015 HEARING

86. The hearing was held on 26–27 March 2015 at the World Bank Centre in Paris, Mr Robert Hawkins, Mr Stephen Sayers, Mr Thomas Cawley and Ms Julie Peters of Hunton & Williams and Mr Leo Andreis of Andreis & Partneri appeared on behalf of the Claimant. Mr Mark Levy, Mr James Freeman and Mr Rishab Gupta of Allen & Overy appeared on behalf of the Respondent. Ms Kostadinova of ICSID attended as Secretary to the Tribunal. Tribunal Expert, Mr Wynne Jones, attended, together with his colleague Mr Nick Aked. Party-appointed experts Mr Walck and Ms Oppel (Claimant) and Mr Styles and Dr Petrov (Respondent) also attended and gave evidence.

87. Following the hearing, the Tribunal issued Procedural Order No. 9 on 1 April 2015, ordering the parties to provide costs submission by 24 April 2015 and stating that, aside from those submissions and appropriate amendments to the hearing transcript, neither party may present any further evidence or submissions to the Tribunal. The parties duly filed their costs submissions.

88. On 17 November 2015, the Tribunal informed the parties by letter that the proceedings had been declared closed under Rule 38(1) of the ICSID Arbitration Rules.

III. SUMMARY OF FACTS

89. The material facts established by the parties' pleadings, the documents, and the relevant evidence were set out in the Tribunal's Decision on the Treaty Interpretation Issue. For the sake of fullness and convenience they are substantially reproduced below. As was the case in the Decision on the Treaty Interpretation Issue, where there is disagreement between the parties as to the course of events, or the reasons behind the events, that disagreement has been noted. If one party has asserted a fact and the other has not disputed it, that fact has been taken as uncontested.

THE GOVERNING AGREEMENTS

90. As noted above, the contractual framework for the construction and operation of the Krško NPP was outlined by four "Governing Agreements": the Agreement of the Socialist Republic of Croatia and the Socialist Republic of Slovenia on Construction and Use of Krško Nuclear Power Plant dated 27 October 1970 (the "1970 Agreement"); the Agreement on Pooling of Resources for Joint Construction and Joint Exploitation of Krško Nuclear Power Plant dated 22 March 1974 (the "1974 Pooling Agreement"); the Annex of the Agreement on Pooling of Resources for Joint Construction and Joint Exploitation of Krško Nuclear Power Plant dated 16 April 1982 (the "1982 Annex to the Pooling Agreement"); and the Self-Management Agreement on Regulation of Mutual Rights and Liabilities Between the Incorporators and Krško Nuclear Power Plant dated 16 April 1982 (the "1982 Self-Management Agreement").

The 1970 Agreement Established the "Parity Principle"

91. Pursuant to the 1970 Agreement, Croatia and Slovenia committed to "support the action of [the] electric-power industries and other interested organizations from Croatia and Slovenia as regards the construction of [the] joint nuclear power plant" and to "provide all the necessary assistance and support necessary to achieve the goal of the said action." Clause 4 of the 1970 Agreement incorporated the "parity principle":

> The Republics deem that the joint investors from both Republics should participate in financing of construction of [the] joint nuclear power plant in equal parts and that their rights and liabilities should reflect such equal parts.
>
> The same principles should apply in establishing the rights and obligations during the operation of the joint nuclear power plant.

92. Clause 7 of the 1970 Agreement provided that the co-founders would be jointly liable for the procurement and repayment of foreign loans.

93. Clause 9 provided as follows:

> The Republics agree and understand that, in the case the economic measures and instruments are introduced in any of the two Republics, which adversely affect the construction or use of the joint nuclear power plant, as compared to the conditions in force at the beginning of its construction, such measures and instruments shall not have any effect on the rights and liabilities of the investors from the other Republic."

94. The specific details of the business arrangements were left to be determined by the joint investors, namely the electric power companies of Croatia and Slovenia, "in such a way that…the investors practically, directly or indirectly, have the rights to such part of the capacity of joint nuclear power plant which is directly related to the amount of their investment.

The 1974 Pooling Agreement Continued the Parity Principle

95. The 1974 Pooling Agreement was concluded on 22 March 1974 at a time when the construction of the Krško NPP was about to begin. It was concluded between Elektroprivreda Zagreb, on behalf of the electric power companies of Croatia, and Savske Elektrarne Ljubljana, on behalf of the electric power companies of Slovenia. Clause 2 of the 1974 Pooling Agreement stated that the parties would: (i) permanently pool resources for construction and start-up of the Krško NPP; and (ii) incorporate a joint venture company, NEK, through which they would jointly build, operate and use the Krško NPP.

96. It was agreed that each of the parties would cover 50% of the construction expenses and be liable for 50% of the total liabilities of NEK. The 1974 Pooling Agreement further stipulated that the Management Board of NEK would have 22 members, with each party appointing 10 members and the parties jointly appointing two additional members. Clause 21.3 stipulated that NEK "shall take care to fill the managerial and the key work posts in such a manner that the Parties are represented in equal proportions."

97. Regarding the exploitation of the Krško NPP, the 1974 Pooling Agreement stated that: (i) each of the parties would be entitled to receive 50% of the total available power and electricity generated by the plant; (ii) the parties would jointly establish the price of power from the Krško NPP, and any profit would be allocated between the Parties in a 50:50 proportion; and (iii) all risks associated with the operation of the Krško NPP would be shared 50:50 by the parties.

98. The first paragraph of Clause 6.1 of the 1974 Pooling Agreement, "Liabilities of Incorporators towards NE Krško, Company in the Process of Incorporation" read:

> Each of the Parties shall be liable to NE Krško, company in the process of incorporation, up to the amount of 50% of the total liabilities.

99. Clause 17.1.2 of the 1974 Pooling Agreement read:

> In case the Party from SR Slovenia fails to provide to the Party from SR Croatia the use of power and electricity from NE Krško pursuant to provisions hereof because it has used the power and electricity itself, it shall compensate to the Party from SR Croatia the difference in price of power plants or from other territories due to such failure, including the electricity acquired abroad, taking into account the reasonable nature of offers for supply as regards the price.

Finally, the 1974 Pooling Agreement provided for arbitration for the settlement of any disputes arising between the parties in connection to an Agreement.

The 1982 Annex to the Pooling Agreement Further Implemented the Parity Principle

100. On 16 April 1982, by which time construction of the Krško NPP had been completed and operations at the plant were about to begin, the electric companies of Croatia and Slovenia entered into the 1982 Annex to the Pooling Agreement. The main reason for this annex was to update the 1974 Pooling Agreement and to bring it into conformity with the Associated Labour Act (the "ALA"), legislation passed by the Federal Republic of Yugoslavia to govern "work organisations" such as NEK. The 1982 Annex to the Pooling Agreement did not change in any material respect the basic structure of the joint venture relationship established by the 1974 Pooling Agreement.

The 1982 Self-Management Agreement Extended the Parity Principle

101. Together with the 1982 Annex to the Pooling Agreement, the 1982 Self-Management Agreement was entered into on 16 April 1982 between: (i) the Associated Electric Power Industry Companies of Slovenia, Maribor; (ii) the Association of Electric Power Industry Companies of Croatia, Zagreb; and (iii) the Krško NPP, in the process of incorporation. The bulk of the 1982 Self-Management Agreement is devoted to: (i) a delineation of the rights and liabilities of the national electricity companies with respect to electricity produced at the Krško NPP; (ii) NEK's obligations with respect to operations of the Krško NPP; and (iii) the method of calculation of the price of electricity.

102. According to the 1982 Self-Management Agreement, the Krško NPP was to supply electricity only to the electricity companies of the two countries, in equal proportions,

and the price of electricity was to be mutually determined by the two companies for each business year in advance. The price of electricity was to include elements such as costs, investment maintenance and depreciation. The costs and income estimate was to encompass "costs of nuclear fuel and other costs relating to the aforementioned fuel [...] other material costs [...] investment maintenance [...] depreciation [...] income."

103. The 1982 Self-Management Agreement provided for the appointment of the Board of Directors ("BoD") and the Management Board. The BoD was to consist of twelve members, four to be appointed by the electricity companies of each of the two Republics, and four to be appointed by NEK. The Management Board was to consist of six members, three appointed by the Slovenian companies and three from the Croatian companies. The Slovenian national electricity companies were to appoint: (i) the Chairman of the Management Board; (ii) the Manager of the Economic and Finance Division; and (iii) the Manager of the General, Legal and Personnel Division. The Croatian national electricity companies would appoint: (i) the Vice-Chairman of the Management Board; (ii) the Manager of the Engineering Division; (iii) the Manager of the Commercial Division.

THE OPERATION OF NEK IN THE 1990S AND THE DISAGREEMENTS BETWEEN THE PARTIES

104. Commercial operations at the Krško NPP commenced in January 1983.

105. In July 1990, 119 independent electricity organisations in Croatia were consolidated to form HEP, a state-owned company. As the legal successor of the Croatian parties to the 1974 and 1982 Agreements, HEP assumed all of the rights and obligations of the Croatian investors under the Governing Agreements.

106. On 25 June 1991, both Slovenia and Croatia declared independence from the former Federal Republic of Yugoslavia. Shortly afterwards, differences began to emerge between the Government of Slovenia on the one hand, and HEP and the Government of Croatia on the other, with regard to the operation and status of the Krško NPP and the application of the Governing Agreements.

107. HEP submitted that the Government of Slovenia had taken over the rights of the Slovenian incorporators of the Krško NPP. At the end of 1995, the General Manager of

HEP wrote to ELES and Savske Elektrarne Ljubljana po ("Savske Elektrarne"), two of the major electricity companies in Slovenia, requesting them to appoint the representatives of the Slovenian Incorporator who would participate in negotiations. In their responses, the two companies stated that the rights of the incorporators had been taken over by the Republic of Slovenia.

108. In early 1994, the Presidents of Slovenia and Croatia agreed that legal and status-related questions regarding the Krško NPP should be regulated by a new inter-State agreement. The negotiating process started in March 1994. Slovenia's position was that the Governing Agreements did not acquire the status of a treaty when Slovenia and Croatia became independent sovereign States. Moreover, Slovenia maintained that many of the existing provisions of the Governing Agreements were no longer appropriate in the new political and legal climate. Croatia considered that the Governing Agreements should be elevated to the level of a treaty or bilateral contract and should continue to regulate matters relating to the Krško NPP. This issue was not resolved until the signature of the 2001 Agreement on 19 December 2001, which is further addressed below.

The Creation of a Decommissioning Fund

109. In December 1994, the Slovenian Parliament adopted a "Law on the Fund for Financing the Decommissioning of the Krško Nuclear Power Plant and the Disposal of Radioactive Waste of the Krško Nuclear Power Plant".

110. Croatia stated that "at no time did the Government of Slovenia ever consult with HEP, or any other party from Croatia, regarding any of the financial, legal, administrative or other requirements imposed by this Law." In Croatia's view, this law offered Slovenia very wide powers concerning the establishment of the decommissioning programme, in breach of the Governing Agreements' parity principle.

111. Slovenia retorted that the new law was a necessary measure in order for it to comply with its international obligations as a nuclear State:

> In the eyes of the international community as a result of its status as a nuclear State, it would ultimately be responsible for the costs of the process of the decommissioning of the Krško NPP.

As Slovenia was internationally responsible for any decommissioning costs, it was compelled to ensure that these responsibilities were met by the creation of the Decommissioning Fund. The Krško NPP was liable for payments to the Decommissioning Fund on a monthly basis, collected by NEK by means of a surcharge factored into the selling price of the electricity produced by the Krško NPP. The intention was that an equal amount would be charged to both HEP and ELES, in accordance with the parity principle, and that contributions collected from the buyer from each State would be credited towards that State's 50% share of the total cost of decommissioning.

112. NEK was liable to make payments to the Decommissioning Fund, regardless of whether it had itself received contributory payments from its buyers. Croatia did not contribute to the Decommissioning Fund.

The Replacement of the Steam Generators at the Krško NPP

113. On 10 February 1995, the Management Board decided to replace the steam generators. In September 1995, the Government of Slovenia issued a "Decision" supporting a modernisation programme. In paragraph 4 of that Decision the Government of Slovenia announced that:

> In the preparation and realization of the renovation of the NPP Krško NPP, the Nuclear Power Plant Krško shall act in the capacity of the investor.

114. According to HEP, the actions of Mr Rožman, the General Manager of NEK and a Slovenian national, conformed to the Government of Slovenia's September 1995 Decision and ignored the decision of NEK's Management Board, which mandated a team of two Croatian and two Slovenian representatives to supervise the steam generator replacement project. NEK proceeded on its own with respect to the plant modernisation programme. Mr Rožman invited HEP to presentations on the progress of the steam generator replacement programme, but did not form an Operational Team to manage the modernisation process, as a 1995 Krško Board directive had requested.

115. Slovenia contended that Croatia proposed Mr Vrankić and Mr Udovicic as HEP's nominees to the Operational Team, whereas Slovenia did not make any nominations. Instead, according to the September 1995 Government Decision, it delegated all

competences connected with the modernisation project to NEK. Thus, two employees of NEK, Messrs Rožman and Novsak, were delegated as Slovenia's representatives. When Mr Rožman attended the modernisation project Operational Team meeting on 7 June 1996 on behalf of Slovenia, HEP declined to acknowledge the competence of Slovenia's representatives.

The Dispute on the Appointment of NEK's Deputy General Manager

116. The 1982 Self-Management Agreement provided that the incorporators from Croatia were to appoint the Deputy General Manager of NEK. In February 1996, the Deputy General Manager of NEK resigned. By letter dated 4 September 1996, addressed to Mr Rožman, HEP nominated Mr Vrankić as Deputy General Manager. Mr Rožman rejected this appointment. He noted in his letter of 30 September that the Self-Management Agreement had become inadequate in the section concerning personnel, that personnel decisions should be based on "safety, stability and operational efficiency", and that candidates for managerial positions had to be qualified in the fields of nuclear technology and safe operation of power plants, which qualifications Mr Vrankić lacked.

117. In response to continuing differences between the Croatian and Slovenian members of the NEK Management Board, the Government of Slovenia created, by means of a Decision of 15 May 1997, a "Temporary Management Board", consisting of four members nominated by each founder, to oversee NEK. Slovenia argued that the Temporary Management Board was created in Portorož, Slovenia, in September 1997, by an agreement between Minister Porges of Croatia and Minister Dragonja of Slovenia. The September 1997 agreement is further discussed below.

118. In a letter dated 9 February 1998, the Slovenian Ministry of Economic Affairs informed the Chairman of NEK's Temporary Management Board that it agreed to the appointment of Mr Vrankić. The Temporary Management Board authorised Mr Rožman to appoint Mr Vrankić as Deputy General Manager. Mr Rožman, however, refused, claiming that Mr Vrankić did not possess the necessary qualifications (for example, a Senior Reactor Operator Licence ("SRO licence")).

119. At a meeting of the Temporary Management Board on 24 April 1998, HEP withdrew its consent to the nomination of Mr Rožman as General Manager of NEK and declared that it would only resume its participation on the Temporary Management Board once Mr Vrankić was installed as Deputy General Manager. At the same meeting, HEP declared that since Mr Vrankić had not been appointed Deputy General Manager, after 15 March 1998 HEP would not pay for the electricity it took from the Krško NPP.

120. Slovenia insisted that the only reason Mr Rožman was not willing to accept Mr Vrankić's appointment was because the latter lacked the necessary qualifications. Mr Rožman's point was not that HEP did not have the right to nominate NEK personnel, "only that such right was constrained by overarching safety imperatives." Neither the Temporary Management Board nor Mr Rožman were competent to waive mandatory conditions set out in NEK's Safety Analysis Report ("SAR") or NEK's operating licence. Slovenia highlighted that the Krško NPP Safety Committee ("KSC") opposed Mr Vrankić's appointment.

121. HEP denied that the reason behind Mr Rožman's refusal to appoint Mr Vrankić as Deputy General Manager was the absence of an SRO licence. HEP stressed that: (i) NEK has had three Deputy General Managers who did not have SRO licences; (ii) Mr Rožman based his rejection in his letter of 30 September 1996 primarily on the grounds that the Governing Agreements were no longer adequate; and (iii) in February and April 1998 the Government of Slovenia eventually consented to Mr Vrankić's appointment, even though he did not have the SRO licence.

<u>The Dispute over HEP's Financial Obligations towards the Krško NPP</u>

122. Slovenia emphasised the point that NEK operated the Krško NPP on a cost-covering basis. NEK's sole source of revenue came from selling the electricity produced by the plant. Slovenia stated that Croatia made delayed and incomplete payments for electricity it received during the 1990's, which lead to NEK suffering crippling debts. NEK's annual profit and loss account for 1998 showed a total net loss in the amount of Slovenian tolars (SIT) 5,752 million.

123. According to Slovenia, the following table shows the respective debts of HEP and ELES towards NEK in the period 1996-1998:

	31 December 1996		31 December 1997		30 June 1998	
	HEP	ELES	HEP	ELES	HEP	ELES
Total Debt to NEK in million SIT	9,023	923.8	17,703.2	(credit: 96.9)	16,689.5	844.4

124. Slovenia's calculation also reflected the sums owed by NEK to ELES for pooled depreciation assets. NEK had paid to HEP its share of these resources (by 1997 NEK had paid HEP over USD 175.7 million as pooled depreciation funds) but not to ELES. Slovenia stressed that HEP did not pay its part of the decommissioning costs and of the costs for the modernisation of the Krško NPP.

125. On 13 September 1997, an agreement was signed in Portorož, Slovenia, between the Croatian Minister of Economy, Mr Nenad Porges and the Slovenian Minister of Economic Affairs, Mr Metod Dragonja ("the Portorož Agreement"), in accordance with which the price of electricity would be calculated "ex plant" for both buyers. Pursuant to the Portorož Agreement, decommissioning costs would not be included in the price of electricity, as each State would regulate independently its share of the costs pending the execution of a new bilateral agreement that would govern cooperation between the two States including decommissioning of the Krško NPP.

126. It was agreed that within a month, Croatia would provide a guarantee for coverage of its share of decommissioning costs. According to Slovenia, no such guarantee was provided. HEP disagreed. According to HEP, Croatia did provide such a guarantee, although it delayed doing so by approximately five months.

127. Invoices sent to HEP following the Portorož Agreement continued to include decommissioning charges. Slovenia noted that these charges were calculated separately from the cost elements, and that NEK only pressed HEP to pay the electricity price, and not the decommissioning cost.

128. HEP would not pay the amount set out in NEK's invoices. HEP insisted that it would pay US2.05 cents per KWh, even though, according to Slovenia, the actual operating costs in 1997 indicated a price of US3.0841 cents per KWh (not including decommissioning costs). Slovenia stated that, despite several meetings between the ministers of Croatia and Slovenia, HEP continued to make only partial payments for electricity, and stopped paying altogether as of 15 March 1998.

129. HEP argued that Croatia's refusal to meet its decommissioning obligations prior to 1998 had nothing to do with the disputed issues in the case. Any such dispute should be resolved according to the dispute resolution provisions of the 2001 Agreement.

130. HEP referred to the witness statement of Damir Begović, a former General Manager of HEP, and explained how it calculated the cost of electricity at US2.05 cents per KWh. It also denied that it stopped making any payments as of March 1998. HEP noted that, during the months of March to December 1998, it paid to NEK approximately US$27.2 million. Moreover, according to HEP, the calculation of HEP's debt to NEK by Slovenia was false, for the following reasons:

- It includes the decommissioning costs, even though it had been agreed in Portorož that NEK would not request HEP to pay these charges.
- One of the reasons that HEP's financial obligations towards NEK appeared to be more extended than the Slovenian investor's, ELES's, obligations, is a result of the Slovenian accounting regulations. HEP claims that it serviced the loans originally obtained by its predecessor Croatian electric companies to fund their initial US$600 million investment in the Krško NPP completely independently of NEK. Slovenian loans on the other hand were transferred to NEK's books from 1986 onwards, and the debt service was paid after that by NEK on behalf of ELES.
- The calculation ought not to include the credit due from NEK to the incorporators for pooled depreciation assets.

131. Had the above not been taken into account, HEP's debt to NEK in 1998 would have amounted to 3,132 million SIT, whereas ELES's debt would have been 2,683 million SIT. Slovenia disagreed with HEP's calculation of its debts to NEK. It considered, for example, that HEP should not have subtracted the decommissioning costs from its own debts, but should have included them in its calculation of ELES's debts to NEK. The same is argued for the depreciation costs.

NEK's Financial Problems

132. Slovenia stated that the non-payment by HEP brought NEK to the brink of operational shutdown. NEK was effectively insolvent in mid-1998: it lacked the funds to pay for nuclear fuel and to pay employees' salaries, or to carry out necessary maintenance.

133. HEP responded that Slovenia's description of NEK's finances in July 1998 was exaggerated: (i) NEK did not start to have financial problems in 1998. Rather, NEK had suffered chronic liquidity problems since 1993; (ii) HEP's alleged debts to NEK were inflated, and the bulk of HEP's debts was disputed and had no impact on NEK's then current business operations (for example, the "decommissioning debts" to NEK was a charge to finance future expenditures, and therefore had no current impact on the operation of the Krško Plant during the years 1996-1998); (iii) the ELES-GEN debts to NEK contributed significantly to the chronic liquidity problems at the Krško NPP; and (iv) the gravity of NEK's financial condition in 1998 was exaggerated (for example, the reports to which Slovenia refers do not support Slovenia's proposition that "NEK had been effectively insolvent for over three years").

134. Slovenia disagreed with all of the above. It stressed, for example, that, in order to be able to finance the eventual decommissioning of the Krško NPP, funds had to be collected well in advance.

The Nuclear Safety Concerns at the Krško NPP

135. Slovenia contended that, as a result of HEP's non-payment for electricity deliveries, NEK did not have the necessary funds to secure its safe operation, and had to seek alternative buyers for the electricity. HEP countered that Croatia's capital, Zagreb, is located only 40 km downstream from the Krško NPP, so the proposition that HEP was indifferent with respect to matters of safety was incorrect.

136. Moreover, HEP asserted that the SNSA (the nuclear agency of the Republic of Slovenia) reports dealing with the Krško NPP that were produced by Slovenia in discovery did not support the assertion that the financial condition of NEK had created any threat to the safe operations of the Krško NPP. According to HEP, reports of different agencies and

bodies prior to 1998 (some of which were referred to by Slovenia) did not support this conclusion either. Similarly, there was no report subsequent to 1998 which supported the assertion that the Krško plant had any nuclear safety problems.

137. Slovenia denied HEP's interpretation. It noted that the reports were written in such a way so as not to cause undue public alarm, and that, contrary to HEP's submissions, most of the reports stated that the steam generators should be replaced. It also noted that the reports reflected concerns about NEK's financial situation.

The Suspension of Electricity Deliveries to HEP

138. NEK suspended electricity delivery to HEP on 30 July 1998.

139. HEP argued that the two 400 kV transmission lines over which electricity had been delivered from the Krško NPP to HEP had been disconnected. It was HEP's submission that the decision to disconnect these transmission lines was made by Mr Metod Dragonja, the Minister of Economic Affairs for the Republic of Slovenia; Dr Ivo Banič, the General Manager of ELES and the Slovenia-appointed Chairman of the Temporary Management Board of NEK; and Mr Stane Rožman, the General Manager of NEK.

140. HEP noted that Slovenia was not entitled to use HEP's alleged failure to pay for electricity as an excuse for taking this measure. Clause 6.1 of the 1974 Pooling Agreement and the 1982 Annex to the Pooling Agreement provided that the co-owners of the Krško NPP cross-guaranteed each other's financial obligations. Further, HEP stressed that the Governing Agreements provided for the resolution of any disputes by arbitration, and not by unilateral action.

141. HEP referred to a comment made by the Slovenian Minister for Spatial Planning and the Environment, Mr Janez Kopač, during a 2002 television appearance, in which he concluded that HEP's exclusion from the Krško NPP amounted to theft.

142. Slovenia disagreed, and by contrast maintained that the reason electricity deliveries to HEP had been suspended was because HEP would not pay for delivery. As a consequence, NEK did not have the funds necessary to secure its safe operation and had to seek alternative buyers for the electricity. Irrespective of the above, Slovenia

disagreed with HEP's interpretation of Clause 6.1 of the 1974 Pooling Agreement and the 1982 Annex to the Pooling Agreement, denying that it provided for a cross-guarantee of the parties' financial obligations.

143. Slovenia also emphasised that the termination of electricity supply to HEP had been intended to be a strictly temporary measure. This was evidenced by the fact that the electricity not delivered to HEP was sold on the short-term "spot" market.

In its Rejoinder on the Merits, Slovenia noted that:

> "[t]here is a distinction to be drawn between physical flows of electricity and how that electricity is purchased. A person may physically acquire electricity from persons other than from persons with whom it contracts to purchase it. Contracts may change, but the physical flows do not. The Tribunal should not be under any misapprehension that HEP or Croatia were deprived of actual energy flows from the Krško NPP. In fact, apart from a very brief period 10 years ago – just a few days – there was no physical cut-off at all. Even then, only two of the several transmission lines from Slovenia to Croatia were affected. Beyond this, throughout the whole of the relevant period Croatia continued to receive electricity from the Krško NPP in exactly the same way as it had done before July 1998 and indeed does so today. Zagreb continued to be powered by the electricity of the Krško NPP. Rather than any physical termination of electricity supply, what occurred is merely that on the contractual plane (i.e. as a matter of accounting or booking entries) as opposed to the physical plane, over this period HEP was deemed to have to purchased that electricity from other sources. All that HEP lost in July 1998 was the contractual ability to claim electricity from the Krško NPP. Indeed, this is all it seeks compensation for in damages."

Slovenia's Proposals for an Agreement over Electricity Supply to HEP

144. In late October 1998, Slovenia proposed conditions for an agreement for the resumed delivery of electricity from the Krško NPP to both HEP and ELES. The proposal included an offer of electricity at the same price to both ELES and HEP. Decommissioning costs were excluded from the offered price. Croatia rejected this proposal on 10 November 1998. The Croatian Minister, Mr Porges, complained in his letter sent to the Slovenian Minister, Mr Dragonja, that accepting the offer would put HEP in the position of a buyer. He also complained that the proposed production expenses were too high and not competitive.

145. In January 2000, Slovenia made another offer to restore the electricity supply to HEP for a period of two years. HEP rejected this offer, considering the price to be too high.

The 1998 Decree

146. On 31 July 1998, the Slovenian Government published a "Decree on Transformation of Nuklearna Elektrarna Krško po into Javno Poduzeće Nuclearna Elektrarna Krško d.o.o." (the "1998 Decree"). The 1998 Decree stipulated that it would remain applicable until the entry into force of a bilateral agreement between the Republic of Slovenia and the Republic of Croatia.

147. HEP claimed that several provisions of the 1998 Decree violated the Governing Agreements:

- Article 1 stipulated that, pending execution of "the appropriate bilateral agreement between the Republic of Slovenia and the Republic of Croatia", the incorporator's rights in Javno poduzeće Nuklearna elektrarna Krško, a limited liability company (transformed by the Decree of the Government of the Republic of Slovenia of 30 July 1998 from Nuklearna elektrana Krško p.o.) ("JP NEK") were to be exercised by the Government of Slovenia;

- Article 6 granted HEP the right to participate in the management of JP NEK, taking into account the Governing Agreements, "unless the same is contrary to this Decree";

- By virtue of Articles 20 and 21, JP NEK's Management Board consisted of eight members, four appointed by Slovenia and four by Croatia. In the event of a tie vote in respect of any decision of the Management Board, the Slovenia-appointed Chairman would have a controlling vote;

- Article 23 granted primary management responsibility to a manager, who was to be appointed by Slovenia;

- Article 16 authorised JP NEK not to deliver electricity to HEP in the event that its outstanding obligations exceeded the value of two-months' delivered electricity;

- Article 30 stated that if an agreement on the price of electricity was not reached between JP NEK, ELES and HEP "within 60 days from the date of entry into force

hereof, the price and terms of delivery of electricity should be determined by the incorporator", *i.e.* by the Slovenian Government. This violated HEP's right to participate in all decisions affecting the price of electricity produced at the Krško NPP; and

- Article 34 required that NEK's claims against HEP with respect to "pooled depreciation resources" were to be set off against HEP's investment in the Krško NPP, thus, according to Croatia, diluting HEP's overall percentage of ownership of the plant.

148. HEP stressed that the reasons behind the enactment of the 1998 Decree were not NEK's financial situation and/or concerns about nuclear safety, because Slovenia had been planning the 1998 Decree for at least eighteen months. Slovenia responded that, after its independence in 1991, NEK remained a work organisation pursuant to the old Yugoslav system of associated labour, and that NEK was required to restructure in line with the Law on Commercial Companies by 31 December 1994 at the latest. Since this did not happen, from 1 January 1995, NEK risked being liquidated by the Slovenian courts. NEK was also obliged to transform its socially-owned capital to "known" ownership by 1 August 1998. Otherwise, its capital would have become property of the Development Corporation of Slovenia.

149. Soon after their respective declarations of independence, Slovenia and Croatia commenced discussions over the need for a new bilateral agreement governing their relations in connection with the Krško NPP. The reorganisation of NEK in line with Slovenia's new company laws was postponed in the hope that negotiations would bring about a new bilateral agreement that would resolve NEK's status. In 1998, since NEK's financial position was dire, and since no progress had been achieved towards a bilateral agreement, Slovenia submitted that it was forced to enact the 1998 Decree.

150. NEK, therefore, had to be restructured. From Slovenia's perspective, there was no possibility of restructuring NEK by means of an agreement with HEP, since the latter was obstructing NEK's management. For example, HEP "refused to cooperate with management processes," which resulted in no further meetings of the BoD being held between 7 June 1996 and May 1997. Even after the Portorož Agreement, where the rules

of procedure for the new Temporary Management Board had been adopted, HEP continued to obstruct decision-making.

151. As to the content of the 1998 Decree, Slovenia stressed that it preserved HEP's interests. It did not deprive HEP of ownership rights in the Krško NPP, since HEP did not have any ownership rights until the entry into force of the 2001 Agreement, on 11 March 2003. Furthermore, the 1998 Decree expressly recognised and preserved the rights and invested assets of the Croatian co-founder. For example, Article 1 stated:

> The Republic of Croatia, *ie* Hrvatska Elektroprivreda dd Zagreb, which is the holder of rights and liabilities under this Decree, is recognised as the co-investor under this Decree based on invested assets (pooled resources).

Any adjustments to the value of assets held by either party would only be provisional and would be subject to settlement by the new bilateral agreement.

152. Slovenia also argued that the 1998 Decree did not block HEP's participation in the management and operation of the Krško NPP, or violate the parity principle. The existing Temporary Management Board of NEK was retained and renamed the New Management Board. The arrangement in the Governing Agreements, whereby the chairman of the Management Board and the manager of NEK were to be appointed by the Slovenian party was retained. Only in order to guard against "deadlock" would the vote of the chairman prevail. Slovenia stressed that this arrangement was never invoked, although it was replicated by Slovenia and Croatia in the 2001 Agreement.

153. On 31 December 1999, HEP commenced proceedings before the Slovenian Constitutional Court claiming that the 1998 Decree was unconstitutional and contrary to the Energy Charter Treaty. HEP's application was dismissed on 15 May 2003 on the basis that the 1998 Decree was a temporary measure. The Constitutional Court held that when the 2001 Agreement entered into force on 11 March 2003 "the initiator lost the legitimate interest for the evaluation of compliance of the Decree with the Constitution."

THE 2001 AGREEMENT

Negotiations Leading to the 2001 Agreement

154. Several meetings between Slovenian and Croatian Ministers on the issue of the Krško NPP took place after August 1998. A breakthrough in negotiations came at a meeting of the Croatian and Slovenian Prime Ministers held in June 2001 at Rijeka, and was based on the proposal of Dr Granić, the Deputy Prime Minister of Croatia. The proposal was along the following lines: (i) all sums claimed by each side would be waived; (ii) HEP would be recognised as co-owner and co-manager of the Krško NPP; and (iii) the delivery of electricity to HEP from the Krško NPP would be resumed as of an agreed date.

155. An issue that had to be decided during the negotiations was the date(s) as of which the waiver of the financial claims and the resumption of electricity deliveries would take place. HEP submitted that the agreed date was 30 June 2002. It alleged that the Croatian proposal at the Rijeka meeting was to use 1 January 2002 as the key date but that Slovenia proposed 30 June 2002. HEP stated that:

> [t]he bargain stuck between the Prime Ministers of the two countries at Rijeka on June 9, 2001, had as its centre a simple *quid pro quo*: Croatia and HEP waived all financial claims against Slovenia, ELES and NEK up to, but not beyond June 30, 2002; in return, Slovenia agreed that the Krško NPP would resume delivery of 50% of its power output to HEP on that date. Without such a *quid pro quo*, Croatia would not have entered into the 2001 Agreement.

156. Slovenia criticised the above as an oversimplified explanation of the settlement reached between the two States. Specifically, Slovenia claimed that the above view disregarded the fact that, in return for HEP agreeing to waive its financial claims, Slovenia also waived its past claims for the non-payment by HEP of its financial obligations towards NEK.

157. HEP emphasised that at a meeting on 28-30 June 2001 at Brijuni (Brioni), Croatia, the draft for an agreement on the resumption of electricity deliveries of both sides, Croatian and Slovenian, contained the date of 30 June 2002. The Croatian draft read:

> The shareholder from the Republic of Slovenia shall receive all generated power and electricity and financial effects related to the production thereof for the period from

> August 1, 1998 until the date on which HEP d.d. starts receiving electricity again, which means until June 30, 2002.

The Slovenian draft read:

> The Slovenian shareholder shall take all the generated power and electricity and any financial effects associated with the production thereof for the period from August 1, 1998 until the date of the receiving of electricity by HEP d.d., but not later than by June 30, 2002.

158. The parties agreed that the attendees at the meeting at Rijeka and at Brijuni (Brioni) expected that the agreement between the two States would be signed by mid-July 2001 and ratified by the end of 2001. Slovenia argued that the 30 June 2002 date meant that the parties agreed that their financial relations would be balanced as of six months from the expected date of entry into force of the Agreement.

The Content of the 2001 Agreement

159. The 2001 Agreement was signed on 19 December 2001 by the Croatian Minister of Economy, Mr Goranko Fižulić, and by the Slovenian Minister of Environment and Planning, Mr Kopač. The recitals stated that the two Governments took into account the Governing Agreements in agreeing upon the terms of the 2001 Agreement. They also stated that the 2001 Agreement was based on the Energy Charter Treaty, the Convention on Nuclear Safety, and the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

160. The 2001 Agreement:

- recognised HEP and ELES-GEN as the legal successors in interest to the Slovenian and Croatian companies that invested in the construction of Krško NPP;
- provided that HEP and ELES-GEN shall have equal rights and obligations, unless otherwise stated in the Agreement;
- established HEP and ELES-GEN as 50:50 shareholders in the limited liability company NEK d.o.o., a new legal entity to be governed by a Memorandum of Association (Exhibit 1 to the 2001 Agreement. The Memorandum of Association

stated in Article 2 that the transformation of NEK would take place in accordance with the 2001 Agreement and Slovenian company law. It also provided in Article 30 that NEK may terminate electricity deliveries to either shareholder if that shareholder failed to comply with its financial obligations.);

- stated that the governance of NEK d.o.o. would be exercised in accordance with the parity principle. ELES-GEN would nominate the Chairman of the Management Board and HEP the Vice-Chairman. HEP would nominate the Chairman of the Supervisory Board and ELES-GEN the Vice-Chairman. The Chairman of the Management Board had a casting vote, which vote was to be controlled by the Supervisory Board;

- ordered that electricity produced at the Krško NPP shall be delivered to the shareholders in equal proportions;

- stated that the price for electricity deliveries comprised operating costs in the amounts necessary for long-term investment, and includes, *inter alia*, depreciation costs;

- stipulated that decommissioning and radioactive waste disposal were joint liabilities of Croatia and Slovenia and would be financed in equal proportions. The funds for decommissioning would be collected in a special fund created by each State;

- Concerning past financial issues, Article 17 of the 2001 Agreement provided that:

  Past Financial Issues

  (1) Mutual financial relations existing up to the signing of this Agreement between NEK d.o.o., ELES d.o.o., and HEP d.d. shall be regulated in accordance with the principles set forth in Exhibit 3 of this Agreement.

  (2) The Contracting Parties agree that, as of the date of entry into force hereof, all obligations of NEK d.o.o. to the Fund for financing the dismantling of NE Krško and disposal of radioactive waste from NE Krško, which obligations arose from the application of the Act on Fund for Financing of Dismantling of NE Krško and Disposal of Radioactive Waste from NE Krško… shall cease to exist.

161. Article 19 contained the dispute resolution provision. Article 19(2) reads:

> If a dispute cannot be settled amicably within six months from the date of written report to the other Contracting Party, the aggrieved Shareholder may, at its discretion, refer the dispute for resolution to: ... e) the International Centre for Settlement of Investment Disputes – ICSID – in accordance with the Convention on the Settlement of Investment Disputes between States and Nationals of Other States and the additional contract on regulation of Conciliation, Arbitration and Fact-finding.

162. Article 22 of the 2001 Agreement ("Closing Provisions") stipulated that:

> By entry into force of this Agreement, the provisions of the [1970 Agreement] shall cease to have effect.
>
> All other issues which are not stipulated herein shall be governed by the Agreement between the Government of the Republic of Croatia and the Government of the Republic of Slovenia on stimulation and mutual protection of investments. This Agreement shall be ratified by the Croatian Parliament, i.e. in the Parliament of the Republic of Slovenia.
>
> This Agreement shall enter into force on the date of receipt of the last written diplomatic notice that all conditions as required by the legislations of the Contracting Parties required for its entry into force have been complied with.

163. Exhibit 3 of the 2001 Agreement, to which reference was made in Article 17, regulated the past financial issues between the Parties:

> PRINCIPLES OF THE STRUCTURING OF THE FINANCIAL RELATIONS
>
> (1) ELES GEN d.o.o. shall assume all obligations of NEK d.o.o towards the bank which have occurred as a result of the transfer to NEK d.o.o of the repayment of investment loans made by the Slovene founders, according to the balance on December 31, 2001. Obligations resulting from loans issued to carry out NEK's modernization project will be NEK d.o.o's only remaining long-term financial obligations. Until June 30, 2002, the cost of these loans will be borne through the cost of electricity by the Shareholder from the Republic of Slovenia and from that day forward by both Shareholders.
>
> (2) By virtue of the entry into force of this Agreement:
>
> -HEP d.d. waives all claims against NEK d.o.o for damages, i.e. for compensation for undelivered electricity, i.e. for compensation for use of the capital, and in this regard will fully waive all claims in court arising therefrom;

-NEK d.o.o waives all claims against HEP d.d. in connection with delivered power and electricity, and in this regard will fully waive all claims in court arising therefrom;

-NEK d.o.o waives its claims against ELES d.o.o in the same amount as in the previous bullet of this Paragraph;

-NEK d.o.o. waives all claims against HEP d.d. in connection with charged fees for financing of the dismantling of the Nuclear Power Plant Krško and disposal of radioactive waste from Nuclear Power Plant Krško, and in this regard will fully waive any claims in court arising therefrom;

-NEK d.o.o. waives all claims in connection with pooled resources of depreciation of both founders and claims in connection with the coverage of losses from previous years.

(3) Based on the provisions listed above, NEK d.o.o will rearrange its balance sheet on December 31, 2001 so that:

-it shows neither any claims torward HEP d.d. and ELES d.o.o nor any obligations toward the fund for financing of the dismantling of the Nuclear Power Plant Krško and the disposal of radioactive waste from the Nuclear Power Plant Krško;

-it does not show any obligations toward the bank which occurred as a result of the transfer of repayment of Slovene founders' investment loans to NEK d.o.o. described in Paragraph 1 of this Exhibit;

-based on the conversion of HEP's long term investments and the exemption of the loan, NEK d.o.o's capital will, after the payment of the possible uncovered losses, be distributed to the Shareholders in two equal parts, so that the initial capital of NEK d.o.o. reaches the amount listed in Article 2 of this Agreement, and so that any possible remainder is distributed into the reserves;

-any other necessary accounting corrections or changes arising from this Exhibit are executed.

(4) Any possible profit to NEK d.o.o. arising from accounting corrections or changes described in Paragraph 3 of this Exhibit will be tax-exempt.

(5) ELES GEN d.o.o assumes the financial results of all power and electricity produced during the period from July 31, 1998 until the date HEP d.d. begins to take over the electricity again, but no later than June 30, 2002. All the while, NEK d.o.o.'s financial position must not worsen compared to its financial position on July 30, 1998.

(6) The Contracting Parties will ensure that the Shareholders determine, by no later than the end of 2002, whether the company needs additional long-term sources of

> financing its operating costs, which sources of financing will be secured by a capital increase in NEK d.o.o. or any other appropriate manner.

164. HEP submitted that the agreed deadline between the parties for the restoration of electricity deliveries to HEP, as well as the deadline for the waiver of its financial claims against NEK, was 30 June 2002.

165. Slovenia disagreed. It denied that Exhibit 3 contained an express obligation to supply HEP with electricity on 30 June 2002. It contended that the only provision in the 2001 Agreement for restoration of actual electricity deliveries was Article 5(2), which stated:

> (2) The Contracting Parties agree that the Company shall deliver the produced power and electricity to the Shareholders in equal proportions, half to each Shareholder, until the end of the regular useful life of the nuclear power plant in the year 2023, i.e. until the extended useful life of the power plant, if approved (hereinafter: useful life).

Slovenia stressed that Exhibit 3 did not deal with electricity supply to HEP, but with the terms of the financial settlement. It noted that Exhibit 3 was entitled "Principles of the Restructuring of the Financial Relations", and that the agreement of the parties was that a financial equilibrium between the parties should be deemed to have been reached as of six months after the date of entry into force of the agreement.

166. Slovenia also contended that it was only with the entry into force of the 2001 Agreement that HEP's rights in relation to Slovenia were activated, and that this was confirmed by the heading of Exhibit 3's Paragraph (2): "By virtue of the entry into force of this Agreement."

Ratification of the 2001 Agreement

167. The initial idea of the negotiating parties was that the 2001 Agreement would be ratified by Slovenia and Croatia by the end of 2001. The Governments of Croatia and Slovenia issued a Joint Statement on 19 December 2001, when the 2001 Agreement was signed, announcing that they should use their best efforts to achieve the ratification of the 2001 Agreement "as soon as possible during the first quarter of 2002".

168. In fact, however, Croatia ratified the 2001 Agreement on 3 July 2002 and Slovenia ratified the 2001 Agreement on 25 February 2003, following unsuccessful litigation

challenging its constitutionality. In Slovenia, the signature and ratification of the 2001 Agreement had met with parliamentary and public opposition for a long time. On 10 March 2003, the Slovenian Foreign Ministry advised Croatia of Slovenia's ratification. Croatia received the diplomatic notice on 11 March 2003.

169. The resumption of electricity deliveries of Krško-generated electricity to HEP took place on 19 April 2003.

NEK'S OFFERS FOR SALE OF ELECTRICITY TO HEP IN 2002

170. On 24 June 2002, NEK presented to HEP an offer for the supply of electricity for the six month period 1 July 2002 – 31 December 2002 (the "June 2002 Offer"). The June 2002 Offer included a charge for decommissioning. Slovenia stated that the fact that the 2001 Agreement would not come into force by 30 June 2002 caused concerns within Slovenia because:

> it meant that the deemed financial equilibrium expected to occur on 30 June 2002 would not happen, and nor would HEP begin to receive electricity again. The ramifications were unclear to the Slovenian Government. [...] Understandably, (although, as it turns out, mistakenly), Slovenia assumed that if it offered to supply electricity to HEP, even if this was done outside the framework of the still-to-be-ratified 2001 Agreement, that this would eliminate any risk that Croatia or HEP would bring a damages claim against Slovenia or NEK.

171. HEP did not accept the June 2002 Offer. The reasons for HEP's non-acceptance, and the parties' respective submissions thereto, are discussed below.

172. On 13 November 2002, NEK again offered to sell to HEP 50% of the electricity production of the Krško NPP, this time from 1 January 2003 to 31 December 2003 ("the November 2002 Offer"). The price requested was EUR 28.025 per MWh. There was a clearly delineated decommissioning charge of EUR 2.0289 per MWh. HEP rejected the November 2002 Offer.

IV. SUMMARY OF ISSUES TO BE ADDRESSED

173. Based on the foregoing procedural history and summary of facts, the Tribunal sets out the outstanding issues that it will address in this Award, as agreed by the parties. For each issue, the Tribunal will provide a summary of the parties' submissions, Mr Jones'

analysis and the parties' comments on Mr Jones' Report. The Tribunal will then set out its own analysis and conclusions. The issues to be determined are as follows:

(i) Did the 2002 Offers meet Slovenia's obligations? Should HEP have accepted these offers to mitigate its losses?

(ii) Did HEP pass on any additional costs to consumers and therefore suffer no loss?

(iii) If (i) and (ii) are answered in the negative, what loss (if any) was incurred by HEP?

(iv) Did HEP receive any benefit in the factual scenario that it would not have received in the counterfactual which needs to be taken into account in the overall damages calculation?

(v) How should interest be calculated on any compensation to be paid?

(vi) Is the Tribunal entitled to revisit the Claimant's ECT Claims? If so, should it?

(vii) Costs.

174. The issue of damages has proved to be extremely complex in the present case, as indicated by the fact that the Tribunal appointed its own expert in 2011 to assist in determining the appropriate compensation to be paid, if any, resulting from the Respondent's breach. The Tribunal wishes to thank Mr Jones for his helpful assistance in this difficult case. The Tribunal has benefited significantly from his insights, especially given the vastly differing assessments offered by the party-appointed experts. The Tribunal has found Mr Jones' analysis most useful and has to a significant extent followed his recommendations.

175. Before analysing the relevant issues, the Tribunal recalls that the burden of proof falls on the Claimant to show it suffered loss. The standard of proof required is the balance of probabilities and damages cannot be speculative or uncertain. However, scientific certainty is not required. Naturally, some degree of estimation will be required when considering counterfactual scenarios and this, of itself, does not mean that the burden of proof has not been satisfied. When faced with competing methodologies and opinions

the Tribunal has done its conscientious best, greatly assisted by the expertise of Mr Jones, to determine the loss (if any) that was suffered by the Claimant as a result of the Respondent's breach.

176. The Tribunal now proceeds to set out its analysis and conclusions on each of the above issues. As noted above, the Tribunal includes a summary of the party positions and Mr Jones' analysis of each issue. The summary is broadly intended to assist the reader and the fact that certain points may not be included in the summary should not be taken to mean that they were not considered by the Tribunal. The Tribunal considered all of the evidence, both written and oral, before coming to its decision on each issue.

V. THE 2002 OFFERS

177. The first "threshold" issue that the Tribunal must address is the impact of the offers made by the Respondent to the Claimant in June and November 2002 (the "2002 Offers") to sell electricity in place of that which should have been supplied under the 2001 Agreement. The factual circumstances surrounding these offers have been set out at paragraphs 170-172 above.

178. Two issues arise from the 2002 Offers. The first is that the Respondent argued that in making these Offers, it essentially complied with its obligations under the 2001 Agreement to supply electricity and therefore should not be held liable for any loss HEP incurred in rejecting the offers and sourcing electricity elsewhere. The second issue is whether the Claimant had an obligation to accept the 2002 Offers to mitigate any loss that was incurred.

179. The Tribunal summarises below the parties' initial submissions on the 2002 Offers, Mr Jones' analysis of the content of the Offers and the parties' responses to Mr Jones. Following these summaries, the Tribunal sets out it conclusions on the two issues identified above.

HEP'S INITIAL SUBMISSIONS IN ADVANCE OF JULY 2009 HEARING

180. HEP submitted that neither the June nor the November 2002 Offer constituted full or partial compliance by Slovenia with its obligations under the 2001 Agreement. HEP stressed that the 2002 Offers were "materially different from the requirements of the

2001 Agreement" in that they included decommissioning and NLB loan-related charges, and were made at a price set unilaterally by Slovenia. It was further submitted that the 2001 Agreement gave to HEP long sought-after recognition and protection of rights that went well beyond the right to buy electricity, including (i) the protection of HEP's 50% ownership interest in the Krško NPP; (ii) a guarantee of secure long term electricity supply; (iii) an assurance that HEP would not have to make decommissioning payments into an "all Slovenian" decommissioning fund; (iv) the right to participate equally in the management and operation of the Krško NPP; (v) a legal waiver of all alleged debts from HEP to NEK and JP NEK; (vi) a guarantee of the dismissal of pending litigation against HEP; and (vii) the provision of a specific dispute resolution forum. None of these rights, argued HEP, was offered or protected by the 2002 Offers.

181. HEP further submitted that it had rejected the 2002 Offers for sound reasons; in particular that: (i) HEP should not be forced to accept a change in status from an investor in the Krško NPP to a mere buyer or lessor of electricity; (ii) that an offer to buy electricity provided no means for HEP to recover its US$600 million investment; and (iii) that HEP had no control over the price at which the electricity was offered. HEP contended that Slovenia's arguments regarding the Offers ignored the background of Slovenian unilateralism on issues concerning NEK and the Krško NPP. The effect of Slovenia's actions was to create significant and justified concerns on the part of HEP as to the security of electricity supply should Slovenia's 2002 Offers be accepted.

182. HEP contended that Slovenia knew that the non-negotiable decommissioning charge and the debt servicing charge for "the NLB loans" included in the Offers would result in their "guaranteed rejection".

183. According to HEP, the material differences between the 2001 Agreement and the 2002 Offers demonstrated that HEP had acted reasonably in rejecting both Offers. Moreover, given the uncertainty at the time of the 2002 Offers as to the ratification of the 2001 Agreement, HEP maintained that the acceptance of either of the Offers would have been a disincentive to ratification.

184. As to the issue of mitigation, HEP submitted that it was not required to take risks with its money, nor sacrifice its property or rights in order to mitigate its loss. That, in HEP's

submission, was what would have happened had HEP accepted the 2002 Offers: it would have lost the protection of international law under a duly ratified treaty and been required to pay a price and charges that were set in violation of that treaty.

185. In relation to the applicable international law principles, HEP submitted that the salient question was whether HEP had acted reasonably in rejecting the 2002 Offers. HEP described the relevant principles of international law as set out below.

186. First, a State-party to a treaty was obliged to refrain from acts that would defeat the object and purpose of the treaty. In making the 2002 Offers, Slovenia had violated this obligation as (i) had HEP accepted the 2002 Offers it would have provided a disincentive to both Slovenia and Croatia to ratify the 2001 Agreement; and (ii) in respect of the November 2002 Offer, any agreement concluded following the acceptance of that Offer could have superseded all previous agreements on the issue, including the 2001 Agreement, because the November 2002 Offer did not specify that it would cancel upon ratification of the 2001 Agreement.

187. Secondly, HEP asserted that it was well settled under international law that the offer by a party of the same performance as that required under one agreement, in connection with the performance of a different agreement, does not absolve that party of its obligations under the first agreement. Whatever Slovenia offered in 2002 (which, HEP contended, was not the same as was required by the 2001 Agreement in any case) could not satisfy Slovenia's obligations under the 2001 Agreement because, as Slovenia had admitted, the 2002 Offers had been made "entirely outside the framework of the still-to-be-ratified 2001 Agreement." It was HEP's submission that the 2002 Offers and the 2001 Agreement were mutually exclusive.

188. Thirdly, the 2002 Offers were materially dissimilar to the 2001 Agreement. It was settled law that a subsequent agreement between the same parties to, and concerning the same subject matter as, a previous agreement superseded the earlier agreement and terminated the parties' rights under that agreement. HEP submitted that it was not obliged to give up its rights under the 2001 Agreement by accepting the 2002 Offers.

189. Fourthly, at international law, for an offer to be considered to have been made in good faith it must have been reasonable and the offeror must have had a legitimate expectation that the offer would be accepted. HEP submitted that neither condition had been met in this case.

190. Fifthly, international law did not require a claimant to enter into a new agreement with a party that, having breached an earlier agreement, had a "sudden change of heart". In deciding whether to enter a subsequent agreement with the party in breach, the innocent party was entitled to have regards to all factors relevant to reaching a reasonable decision.

191. Lastly, HEP submitted that it was not required under international law to accept the 2002 Offers where acceptance "would oblige [HEP] to waive any of its rights under the original agreement, or to accept terms different from those contained in the original agreement."

192. In relation to international law principles relevant to mitigation, HEP submitted that, in accordance with Article 38(1) of the Statute of the International Court of Justice, "the general principles of law recognised by civilised nations" constituted an authoritative source of law that "shall" be applied. Therefore, it was not only appropriate but was compulsory that an ICSID tribunal refer to and seek guidance from that source.

193. Further principles of international law that are applicable to the issue of mitigation are, in HEP's submission, that the burden of proving a failure to mitigate lies with the alleging party; that reasonable efforts to mitigate is all that is required; that a claimant is not required to resume a contractual relationship with a party who had breached an earlier agreement and then had a change of heart; that 'reasonable' steps to mitigate do not include an obligation on an innocent party to accept an offer from a breaching party where acceptance would oblige the innocent party to waive any of its rights under the original agreement, or to accept terms different from those contained in the original agreement; and that the party originally in breach cannot complain that one action, rather than another, would have better mitigated the other party's loss, so long as the steps taken by the innocent party in mitigation were reasonable, which is to be assessed in light of all the circumstances existing at the time of the breach.

194. Slovenia rebuffed HEP's reasons for rejecting the 2002 Offers, arguing that the Offers were genuine and designed to alleviate uncertainty while awaiting the coming into force of the 2001 Agreement. The Offers did not suggest a new business relationship between the parties, contrary to the spirit of the 2001 Agreement or, in Slovenia's submission, would acceptance by HEP of the 2002 Offers have provided a disincentive to ratification of the 2001 Agreement.

195. Slovenia submitted that there was nothing else it could have done other than offer electricity to HEP and therefore the Offers must necessarily either discharge Slovenia's obligation, or alternatively the rejection of the Offers caused a break in the chain of causation, such that any financial loss suffered by HEP could not be brought home to Slovenia.

196. In respect of the price of the 2002 Offers, Slovenia further submitted that the only difference between the price in the Offers and the price had the offers been made entirely on the basis of the 2001 Agreement was the decommissioning charge. It argued that the charge had to be made because there was a chance that the 2001 Agreement, pursuant to which HEP would contribute equally to decommissioning costs, would never enter into force. There was no risk that HEP could end up paying decommissioning charges twice once the 2001 Agreement was ratified because any decommissioning contribution made by HEP prior to ratification would have been put toward or set off against its obligations under the 2001 Agreement. As to the amount of the decommissioning charge, Slovenia submitted that ELES-GEN, the national electric power transmission company of Slovenia, was being charged the same amount for decommissioning, in accordance with the parity principle and that the decommissioning charge under the 2002 Offers was "far lower" than was now paid by HEP.

197. Turning to the reasonableness of HEP's rejection of the 2002 Offers, Slovenia submitted that the fact that the 2002 Offers were for the sale of electricity at a price substantially lower than the cost HEP now sought from Slovenia was prima facie evidence that the rejection of the 2002 Offers was not reasonable. Slovenia further submitted that HEP

suffered no financial loss because the electricity offered by Slovenia, even less the decommissioning charge, was higher than the market price at the time.

198. Slovenia's final submission on the 2002 Offers was that HEP could not claim for loss in excess of the 2002 Offers because that demonstrated a failure to mitigate. HEP ought to have mitigated its loss by accepting Slovenia's 2002 Offers or sourced electricity cheaper elsewhere.

199. Slovenia stated that, contrary to HEP's submission, the price in the 2002 Offers did not include charges for the payment of either interest or principal on the NLB loan. Slovenia rejected HEP's speculation about the validity of the English-language tables comprising Slovenia Exhibits 204 and 205, which were never intended as full translations of the original Slovenian documents.

200. Slovenia submitted that HEP was wrong to state that the offered price was set by Slovenia. The price had been set by NEK. The Republic of Slovenia approved the price, but did not alter or influence it. Lastly, it was submitted that the transmission charges contained in the 2002 Offers were at standard rates, and that they were completely independent of the Offers.

201. In Slovenia's submission, the 2001 Agreement could not come into force until ratification, and HEP's rejection of the 2002 Offers therefore deprived Slovenia of the opportunity to fulfil its financial liability prior to ratification.

202. With regard to the legal principles to be applied, Slovenia submitted that the proper approach was to first determine, in accordance with Articles 31 and 32 of the Vienna Convention on the Law of Treaties, what was the primary obligation, and then to consider whether Slovenia had complied with the primary obligation. It argued that the primary obligation, as identified in the Tribunal's Decision on the Treaty Interpretation Issue, was to execute the terms of the "financial settlement" found by the Tribunal to have been concluded. On Slovenia's part, the primary obligation was to provide to HEP the financial value of 50% of electricity produced by the Krško NPP.

203. Slovenia then submitted that the question for the Tribunal in respect of Slovenia's compliance with its primary obligation was what was the financial value of 50% of the

electricity from the Krško NPP, and whether, by making the Offers, Slovenia had effectively offered HEP that value? The case put by Slovenia was that, by virtue of the 2002 Offers, it had complied fully with its primary obligation.

204. Regarding mitigation, Slovenia submitted that, in accordance with Article 42 of the ICSID Convention, it was appropriate that the Tribunal seek guidance from and apply the general principles of law recognised by civilised nations as recognised by Article 38(1)(c) of the International Court of Justice Statute. That included not only English case law but the case law of Slovenia and Croatia and of States with long-established and stable legal systems.

205. It was noted by Slovenia that HEP had accepted that it was obliged to mitigate its losses to the extent that the mitigating acts would be reasonable in the circumstances. Slovenia acknowledged that it bore the burden of proving that HEP had failed to mitigate its loss, at least in the first instance. Slovenia submitted that it had met that burden by establishing that there had been opportunities for mitigation open to HEP, namely the 2002 Offers and the option of importing electricity from the market, and that HEP had been unreasonable in rejecting those opportunities.

206. Slovenia also argued that as HEP had failed to substitute its thermal plants for less expensive imported electricity after 30 June 2002, and as it had refused Slovenia's offers of electricity in 2002, HEP had failed to act reasonably in mitigation. In those circumstances, it was submitted, the burden of proof was upon HEP to show that its actions were reasonable and complied with its continuing duty to mitigate.

MR JONES' ANALYSIS OF THE OFFERS

207. With regard to the June and November 2002 Offers, Mr Jones did not attempt to opine on the legal issues surrounding these offers but considered whether, from an economic perspective, the 2002 Offers were different to the agreement contained in the 2001 Agreement. He concluded that cost of these Offers differed materially from the 2001 Agreement. He identified five specific variances, as follows:

(a) The Offers were based on budget costs without any reconciliation to actual costs;

(b) The cost included contributions to the dismantling fund;

(c) The cost included depreciation calculated on an accounting basis;

(d) The cost included NLB loan interest in 2003 but not in 2002; and

(e) The Offers were expressed in euros at a predefined rate for the whole period, rather than being expressed in Slovenian Tolar (SIT) and converted to Croatian Kuna (HRK) on a month by month basis.

208. Mr Jones also noted that there was a variance in relation to transmissions costs. He concluded that it was likely that transmission would have been charged from Krško to the border at the prevailing regulated transmission charge.

209. Overall, Mr Jones calculated that the cost of electricity under the June and November 2002 Offers was between EUR 66.79m – 69.84m, whereas the cost in accordance with the 2001 Agreement would have been EUR 55.65m.

HEP'S COMMENTS ON THE JONES REPORT

210. HEP endorsed Mr Jones' findings that the June and November 2002 Offers differed from the 2001 Agreement in six material respects and noted that this justified its refusal of the Offers. HEP once again rejected Slovenia's arguments regarding the inclusion of certain charges in the offer price (e.g. decommissioning) that differed from the 2001 Agreement. HEP also noted that Mr Jones appeared to be unaware that Slovenia's Exhibit 204, on which he relied, was not an exact translation of the original and that from the original document it was impossible to draw any conclusions as to whether or not the price included NLB loan interest.

SLOVENIA'S COMMENTS ON THE JONES REPORT

211. Slovenia disagreed with Mr Jones' assessment that there were six material differences between its 2002 Offers and the 2001 Agreement. It argued that in substance there was only one difference which, of itself, did not amount to a breach of the 2001 Agreement. This difference related to the decommissioning charge which Slovenia said it had no

choice but to charge as the 2001 Agreement was not yet in force and it was the only way to recover Croatia's share of that cost.

TRIBUNAL'S ANALYSIS AND CONCLUSIONS ON THE 2002 OFFERS

212. As set out above, the 2002 Offers comprise the offers made by Slovenia to HEP in June and November 2002 to supply electricity, in place of that due to be supplied under the 2001 Agreement which had not been ratified. There are two issues which arise from the making of these offers: (i) whether the Respondent remained in breach of the 2001 Agreement despite making these offers; and (ii) whether the Claimant had a duty to mitigate its losses by accepting one or both of the Respondent's Offers.

213. In addressing the first of these questions, the Tribunal recalls Mr Jones' finding that the 2002 Offers differed materially from the deal agreed in the 2001 Agreement in several respects (as detailed above). During the March 2015 hearing, Mr Jones reiterated his conclusions on the Offers, confirming that he had not been persuaded to alter his views following the Respondent's comments. The Tribunal finds Mr Jones' analysis compelling and accepts his conclusions, notwithstanding Slovenia's protestations. The Tribunal therefore concludes that in making the 2002 Offers, Slovenia had not complied with its obligations under the 2001 Agreement due to the material differences between the Offers and the Agreement, Slovenia therefore remains liable for any loss suffered by the Claimant as a result of its breach.

214. The Tribunal also accepts HEP's position that it was reasonable for HEP to reject the Offers due to the substantial differences between the terms of the Offers and those of the 2001 Agreement under which HEP should have been provided with electricity.

215. With regard to the second issue, that of mitigation, the Tribunal finds that general principles of international law applicable in this case require an innocent party to act reasonably in attempting to mitigate its losses.

216. The question therefore is whether HEP acted reasonably in rejecting the Offers in favour of sourcing replacement electricity elsewhere. As will be discussed further below, the Tribunal finds that HEP generally acted reasonably in its dispatch decisions and the Tribunal will not, therefore, second guess those decisions.

217. In addition to a general observation that HEP acted reasonably in its dispatching decisions, the Tribunal also accepts HEP's contention that other non-financial matters influenced its decision to reject the 2002 Offers. These matters included concern that accepting the Offers may have provided a disincentive to ratify the 2001 Agreement and concern as to a change of status from investor to buyer. Moreover, as the November 2002 Offer would have required HEP to sign a 12-month "contract of sale" with NEK that would have remained in effect even if the 2001 Agreement had been ratified, any loss suffered by HEP would likely have been greater had the November 2002 Offer been accepted. Together, these factors lead the Tribunal to find that HEP was not compelled to accept the 2002 Offers by its duty to mitigate loss.

218. In sum, the Tribunal accepts that there were material differences between the 2001 Agreement and the 2002 Offers and, therefore, finds that the Offers did not satisfy Slovenia's obligations under the 2001 Agreements. The Tribunal also finds that HEP was not required to accept the Offers so as to mitigate its losses under international law.

VI. PASS-ON DEFENCE

219. In his February 2014 Report, Mr Jones introduced for the first time a new element of the compensation analysis which has been dubbed the "pass-on defence". If accepted, the "pass-on" argument would mean that HEP had not suffered any loss and therefore no compensation would be required to restore it to its proper position. This is, therefore, the second "threshold" issue the Tribunal will address. The procedural issues surrounding the introduction of this new theory have been set out at paragraphs 72-81 above. Having accepted that it is entitled, and indeed obliged, to consider the pass-on defence, the Tribunal now turns to examine the issue.

MR JONES' ANALYSIS

220. Mr Jones opined that, based on his experience with the regulation of the sector before liberalisation in other countries, he would expect a monopoly entity like HEP to adjust its tariffs so as to reflect it costs. He said it would be normal for HEP to have been implicitly limited to set tariffs and receive revenue commensurate with the costs that it incurred. Essentially, the non-delivery of electricity would have affected HEP's revenue

as well as its costs,[2] and HEP would have passed any increase in costs on to the consumer and therefore have incurred no loss itself. As such, if its costs were higher in the factual (due to the cost of sourcing replacement power) than they would have been if NEK had performed its obligations then, all other things being equal, its revenue would also have been increased accordingly.

221. Mr Jones admitted he did not know if HEP had actually passed on any additional costs but he concluded that "[i]n the absence of evidence to contradict this assumed relationship, the implied conclusion is that no compensation would due *[sic]* to HEP as legal entity."[3]

222. Mr Jones stated that, in essence, HEP would have been kept whole by the informal or formal regulation of its pricing as a monopolist. This meant that HEP itself was unlikely to have suffered any financial damage from the non-delivery of NEK power during the "Relevant Period" (which he defined as 1 July 2002 to 18 April 2003).

HEP'S COMMENTS ON THE JONES REPORT

223. HEP objected to Mr Jones' so-called "pass-on" defence because it was based on assumption and speculation. HEP said that no evidence has been provided to support this theory and that, as the defence had not been proven, it should not be taken into account by the Tribunal.

224. HEP noted that Slovenia had never pleaded this defence, despite having all the relevant information available to it or available for request during the document production process. In its submission, Slovenia's failure to plead the defence belied its lack of substance.

225. HEP emphasised that the pass-on defence is an affirmative defence and, as such, needs to be proven by the Respondent. As no evidence had been produced either by Slovenia or Mr Jones in support of the theory, it simply could not be sustained. HEP also noted that there is no precedent in international law for the application of the pass-on defence and

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2 Jones Report at ¶8.15.

3 Jones Report at ¶8.24.

that the cases cited by Slovenia were irrelevant as they did not address this defence. HEP stated that U.S. and Canadian courts had rejected the defence as being based on the "hypothetical" and not "real world" and therefore being almost impossible to prove.

226. Moreover, HEP claimed that the defence was only available where those who suffered the harm (which in this case would be the Croatian consumers) were able to bring a direct suit against the wrongdoer to recover their losses. HEP stated it was "legally impossible" for Croatian consumers to recover compensation from the Slovenian state even if it could be shown that costs had been passed on. HEP also submitted that the Tribunal could not consider the position of related parties (consumers) because its mandate is limited to the parties subject to arbitration, and that the decisions of national courts do not reflect any consensus sufficient to demonstrate general principles of international law and thus do not assist the Tribunal.

227. Finally, HEP asserted that Mr Jones was incorrect in some of his assumptions regarding HEP's business model. It asserted that there was no fixed relationship between its cost and the prices charged to consumers and that, as a business, it aimed to maximise its profits. In addition, HEP noted that prior regulatory approval was required to change its prices, so HEP could not simply have adjusted prices to take account of a cost increase. HEP also asserted that Mr Jones was wrong to assume that an increase in price would not affect sales.

SLOVENIA'S COMMENTS ON THE JONES REPORT

228. Slovenia highlighted that two different experts (Styles/Petrov and Mr Jones), having approached the same question from different perspectives, had now both confirmed to the Tribunal that HEP did not incur any loss. Mr Styles and Dr Petrov argued that wholesale electricity during the Relevant Period was on average no higher than electricity from NEK would have cost, which meant that HEP incurred no loss.

229. Slovenia also warned against double recovery stating that "[i]f, as Mr Jones believes, HEP was able to pass its increased costs of supply to its customers, it has already

recovered any losses it suffered due to non-delivery of electricity."[4] It noted that HEP's legal arguments ignored this basic principle of international law and the principle that a party may only recover losses that it has actually incurred.

230. In its Reply Submissions, Slovenia noted that HEP had not denied that it had passed on charges to consumers and therefore Slovenia speculated that "Mr Jones' conclusion must, one assumes, be factually correct."[5] HEP also failed to adduce any evidence to counter Mr Jones' conclusions – in contrast to the benefit-to-HEP issue, on which it did adduce new evidence. Slovenia highlighted evidence in support of the pass-on defence such as the fact that "HEP has conceded that, '*[i]t is possible that, if Slovenia had delivered 50% of the power output of the Krško NPP to HEP during the 'measurement period', HEP might have decreased its prices in line with these decreased cost'*."[6]

231. Slovenia disputed the "affirmative defence" label given to the pass-on issue by HEP, stating that it is for HEP to prove it suffered a loss and that this is not a competition law case where the affirmative defence label has been given to the pass-on issue. Slovenia reiterated the relevant principles of international law that would support an application of the pass-on defence – that HEP can only recover "actual losses" and if there was no loss then no damages should be awarded, damages are not awarded to punish the responsible State, and that no double recovery is allowed. Slovenia also noted that the EU directive that HEP cited as authority for the fact that a pass-on defence only applies where the consumer can bring a case against the wrongdoer was outdated, and the updated version of the directive contains no such provision.

TRIBUNAL'S ANALYSIS AND CONCLUSIONS ON PASS-ON DEFENCE

232. As described above, Mr Jones has suggested that, in his experience, an entity like HEP would likely have recovered any increase in costs from consumers through price adjustment and thereby have recovered through its revenues any potential loss incurred as

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4 Respondent's Submissions on Expert Report of Wynne Jones (25 April 2014) at ¶31.

5 Respondent's Reply Submissions on Expert Report of Wynne Jones (30 May 2014) at ¶3(a).

6 Respondent's Submissions on Expert Report of Wynne Jones (25 April 2014) at ¶27(a) (emphasis in original).

a result of replacing the Krško power. The consequence of this thesis is considerable. As explained by Mr Jones:[7]

> This leads me to conclude that any damage suffered by HEP as a legal entity is likely to have been an order of magnitude less than any net increase in costs suffered by HEP and may well have been essentially zero. It is Croatian electricity consumers who are likely to have borne any extra costs …

233. In other words, if successful, the pass-on defence would mean that the Claimant had suffered no loss and therefore cannot recover any damages.

234. The pass-on defence was not raised by the Respondent. However, in its Ruling of 27 October 2014, the Tribunal decided that it would consider Mr Jones' pass-on analysis.[8] As was noted in that Ruling, this matter was within the terms of Mr Jones' instructions, to which the parties had agreed and the parties have had ample opportunity to make submissions upon the merits of this issue following Mr Jones' Report. For this reason, the Tribunal was entitled, indeed obliged, to address the matter, even though the Respondent had not raised it initially.

235. In its Comments on Mr Jones' Report, the Claimant made a range of submissions attacking Mr Jones' conclusions on the pass-on defence. The Claimant characterised the pass-on defence as a theory of economics,[9] based upon little more than speculation.[10] The Claimant raised a number of challenges:

(a) Factual: that there was nothing more than unsupported speculation behind the theory.[11] The Claimant submitted that HEP provided evidence to the contrary through its response to a question by Mr Jones, where it responded that "Slovenia's non-delivery to HEP of 50% of the power output of the Krško NPP did not cause an

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7 Jones Report at ¶8.21. See also ¶8.24.

8 Ruling on Claimant's Request that the Tribunal Refuse to Consider the "New Issues" Raised by Mr Jones and on the Hearing Schedule for March 2015 (27 October 2014).

9 Claimant's Submissions and Observations as to Mr Jones' Report (25 April 2014) at ¶21.

10 Claimant's Submissions and Observations as to Mr Jones' Report (25 April 2014) at ¶22.

11 Claimant's Submissions and Observations as to Mr Jones' Report (25 April 2014) at ¶¶22–23; Claimant's Response to Slovenia's Submissions concerning Mr Jones' Report (30 May 2014) at ¶¶30–33.

increase *per se* in the prices charged to HEP's customers during the 'measurement period.'"[12]

(b) Legal: the pass-on defence, where available, is only permissible where "there is a mechanism for a corresponding suit to be brought by the indirect purchasers against the wrongdoer."[13] This typically arises in the context of competition law disputes. Further, the Claimant argued that the pass-on defence would not accord with the international law concerning compensation because it would deprive HEP of compensation[14] and it has not been pleaded before under international law.[15]

(c) Policy: the Claimant referred to a number of North American decisions rejecting the application of a pass-on defence.[16] The Claimant contended the reasoning of those Courts should apply here as well; namely, that the pass-on defence is unduly theoretical, inapplicable to reality, and conducive of inflating the length and complexity of proceedings.

236. Slovenia, by contrast, argued there was ample evidence to support Mr Jones' contention including HEP's admission that it may have lowered prices had the 2001 Agreement. In other words, HEP had conceded that its prices might respond to its supply cost. Slovenia also argued that pass-on is consistent with basic principles of international law. That is, a party can only recover to the extent it has been damaged and a party cannot therefore recover if its loss has been passed-on to consumers.[17] As such, it suggested that the burden of proof is on HEP, as HEP must prove its damages before it is entitled to them.[18]

237. The Tribunal first addresses the classification of the pass-on defence. The essence of the defence is, quite simply, that HEP suffered no loss because any increase in the price of electricity was borne by HEP's consumers. It is not correct, therefore, to treat the pass-on

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12 Claimant's Responses to Mr Jones' 4 July 2012 Request for Additional Information (7 December 2012) at ¶3.

13 Claimant's Submissions and Observations as to Mr Jones' Report (25 April 2014) at ¶25.

14 Claimant's Response to Slovenia's Submissions concerning Mr Jones' Report (30 May 2014) at ¶40.

15 Claimant's Response to Slovenia's Submissions concerning Mr Jones' Report (30 May 2014) at ¶34.

16 Claimant's Submissions and Observations as to Mr Jones' Report (25 April 2014) at ¶¶40–45.

17 Respondent's Reply Submission on the Expert Report of Mr Jones (30 May 2014) at ¶12.

18 Respondent's Reply Submission on the Expert Report of Mr Jones (30 May 2014) at ¶18.

defence as a purely theoretical concept when, in reality, it encapsulates a concrete premise.

238. For this reason, the Tribunal does not find the Claimant's arguments that pass-on has never been applied under international law to be apposite. The correct approach is that of the Respondent; namely, to consider the defence within the framework of compensation in international law. While these concepts of compensation are more fully discussed below, it is trite to observe that the Claimant can only recover in compensation the loss that it has actually suffered.[19] The purpose of damages is to compensate the injured party, not to punish the wrong-doer. The pass-on defence thus raises an essentially factual question: has the Claimant suffered no loss because it recovered any increase in costs through an increase in revenue?

239. The Tribunal, therefore, sees no legal bar to a consideration of the pass-on defence. The authorities on pass-on arising from various domestic competition laws do not bind this Tribunal; nor are they of clear relevance. At best, they show how different states have approached pass-on contentions, typically in the competition law context. However, we are here concerned with a very different legal context and the defence, as it is applied in that area of law, is not relevant here. The relevance of the pass-on concept to this Tribunal is simply in assessing whether any actual damage was suffered and, in that connection, the effect on Croatian consumers is not directly material. Accordingly, the Tribunal does not wish the title of "pass-on" to confuse what is being suggested by Mr Jones; his supposition should not be conflated with the defence as used under European Union law or elsewhere.

240. The Tribunal now addresses the facts upon which this defence is argued. At the outset, it is important to stress that Mr Jones did not suggest HEP did actually pass any increased costs on to Croatian consumers; he raised it as a possibility based upon his experience of, and knowledge regarding, monopolistic utilities in pre-liberalisation markets. Thus, he

[19] Article 36 of the ILC Articles reflecting the principle in *Chorzów Factory*.

did not point to any specific evidence in support of this suggestion, although he did ask whether HEP had in fact raised its prices. HEP responded by stating:[20]

> … Slovenia's non-delivery to HEP of 50% of the power output of the Krško NPP did not cause an increase *per se* in the prices charged to HEP's customers during the "measurement period." Instead, Slovenia's actions resulted in increased costs to HEP, which, in turn, resulted in lost profits. It is possible that, if Slovenia had delivered 50% of the power output of the Krško NPP to HEP during the "measurement period," HEP might have decreased its prices in line with these decreased costs. These decreased prices could have had the effect of increasing demand, and this increased demand could have resulted in increased profits for HEP.

241. From this response, both HEP and Slovenia inferred the existence of evidence supporting their respective cases, perhaps thus instead revealing its dearth. HEP relied upon its indication that "non-delivery … did not cause an increase *per se* in the prices charged to HEP's customers". Slovenia argued that it is sufficient that "HEP might have decreased its prices in line with these decreased costs" had power been delivered. Slovenia further relied upon the broader comments by Mr Jones and the Respondent's experts concerning utilities operating in similar market conditions to HEP.

242. In the view of the Tribunal, the most significant matter to address here is the burden of proof between the parties. Slovenia quite rightly contended that it is HEP's burden to prove its loss. HEP countered that Slovenia has raised an affirmative defence, and thus bears the burden of proving that HEP did not suffer loss because it was able to recover its costs elsewhere.

243. The burden of proving that costs had been passed onto consumers lies with the party asserting this fact. It is therefore the responsibility of the Respondent in this instance to prove the allegation if it wishes the Tribunal to accept it. The Respondent might have proved the allegation by relying on any direct evidence cited by Mr Jones or by producing its own evidence. The Tribunal notes that it is not the responsibility of the Claimant to disprove allegations to this effect made without evidence.

244. As noted above, Mr Jones has clearly acknowledged that in raising this issue he has relied on his experience of monopolistic utilities, rather than any direct knowledge of HEP's

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[20] Claimant's Responses to Mr Jones' 4 July 2012 Request for Additional Information (7 December 2012) at ¶3.

pricing in the present case. During the March 2015 hearing, he similarly acknowledged that his suggestion that costs may have been passed on by the Claimant to consumers is based on his "general knowledge of a large number of regulated utilities."[21] Mr Jones has stated that he has no specific knowledge as to whether the Claimant actually passed on costs in this particular instance. The Respondent has not provided any additional evidence on this issue.

245. Consequently, no evidence has been adduced by either party or by Mr Jones that would allow the Tribunal to conclude that the cost of replacing Krško power following the Respondent's failure to comply with its obligations under the 2001 Agreement was recovered from consumers – let alone to what degree. Without supporting evidence, the Tribunal is not in a position to conclude that no loss occurred in the present case. The Tribunal therefore finds that the pass-on defence has not been proved and it is not accepted by the Tribunal.

VII. CALCULATION OF DAMAGES

246. Having considered and dismissed the two threshold issues, the Tribunal now turns to calculating the loss, if any, suffered by HEP as a result of Slovenia's breach of the 2001 Agreement. This section begins with a summary of the original positions adopted by each party prior to the appointment of Mr Jones. The purpose of this summary is to provide some context for Mr Jones' appointment and conclusions. Mr Jones' Report and the parties' comments thereon are then summarised, following which the Tribunal shall set out its conclusions.

247. The key issues addressed below are: (i) appropriate methodology for calculating loss; (ii) calculation of the cost of electricity in the "counterfactual"; and (iii) calculation of the cost of electricity in the "factual" scenario. A fourth issue pertinent to the final determination of overall loss – whether HEP received a benefit in the factual scenario that should be deducted from the damages to be awarded – is addressed separately in the next section.

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[21] 2015 Transcript, Day 1 (26 March 2015), 20: 14–15.

HEP'S INITIAL SUBMISSIONS PRIOR TO THE JULY 2009 HEARING

248. HEP contended that, in accordance with the basic principles of reparation contained in Article 31(1) of the Articles on the Responsibility of States for Internationally Wrongful Acts, of the available methods of making reparation, restitution comes first. Where restitution is not possible, reparation is accomplished through compensation equivalent.

249. In this case, HEP submitted, restitution was not possible, and Slovenia is therefore required to pay compensation to HEP. As to the legal standard for determining the amount of compensation, HEP cited the *Chorzów Factory* case,[22] which stated that "reparation [or in this case, in HEP's submission, compensation] must, as far as possible, wipe-out all the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if that act had not been committed." Applying the *Chorzów Factory* standard to the facts of this case, HEP submitted that what was required was for Slovenia to make financial compensation to HEP in an amount that would place HEP in the financial position it would likely have occupied had it received electricity from the Krško NPP between 1 July 2002 and 18 April 2003.

250. As to the method by which the quantum of compensation should be calculated, HEP referred the Tribunal to the reports of its experts, Mr Walck and Ms Oppel of Navigant. They had started with two questions: first, how did HEP actually source its electricity during the period 1 July 2002 – 18 April 2003? Secondly, if HEP had received Krško electricity during that period, which alternate sources would HEP have eliminated?

251. HEP dubbed the cost of the electricity obtained from sources other than the Krško NPP, which HEP submitted would not have been used had HEP been receiving Krško electricity, "Factor X". The cost of the electricity that should have been supplied under the 2001 Agreement was dubbed "Factor Y". Mr Walck and Ms Oppel, in essence, had subtracted the cost of Factor Y from Factor X, and had calculated that the latter exceeded the former by roughly €29.5 million, excluding interest. In other words, according to Mr Walck and Ms Oppel, had HEP received electricity from the Krško NPP, it would have

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[22] *Case concerning the Factory at Chorzów (Germany v. Poland)* (Merits) (1928) PCIJ, Series A, No. 17, at page 40.

eliminated certain of its alternate sources and in so doing would have saved €29.5 million.

252. Expanding on the Walck/Oppel calculations, HEP submitted that its experts had determined what would have been HEP's 50% share of the actual production at the Krško NPP during the relevant period, and had identified, on an hour-by-hour basis, the alternate source of electricity that carried the highest cost, and would therefore have been removed as a source. Mr Walck's and Ms Oppel's conclusion was that, had HEP received electricity from the Krško NPP during the 1 July 2002 – 18 April 2003 period, it would have ceased or reduced its use of its thermal power plants ("TPPs"), primarily those at Rijeka, Sisak and Jertovec, and that HEP would have eliminated certain electricity imports.

253. HEP submitted that Slovenia's expert witnesses, Mr Styles and Dr Petrov, largely concurred (subject to two minor differences) with the calculation of "Factor Y", i.e. the cost of electricity from the Krško NPP that would have been paid by HEP had it received electricity from that source during the relevant period.

254. It was acknowledged by HEP that Mr Styles and Dr Petrov disputed aspects of both the methodology used by Mr Walck and Ms Oppel in respect of "Factor X" and the calculation arrived at using that methodology. The first dispute as to methodology was that Mr Walck and Ms Oppel had "pre-selected" the three TPPs that it was said HEP would have eliminated if it had received electricity from the Krško NPP. HEP disagreed with Mr Styles and Dr Petrov's claim, submitting that the three TPPs identified had been selected in accordance with the *Chorzów Factory* standard, that compensation ought to re-establish the likely situation had there been supply to HEP from the Krško NPP. The three TPPs were the most expensive sources of electricity used by HEP in place of power from the Krško NPP, and it was consistent with HEP's mandate to provide inexpensive and reliable electricity that the most expensive of the alternate sources would have been eliminated. Certain imported electricity sources were the next most expensive, and they would have been next to be eliminated had HEP received 50% of Krško's electricity output.

255. In HEP's submission, the second dispute as to methodology was that, in the opinion of Mr Styles and Dr Petrov, Mr Walck and Ms Oppel should have focused on the least expensive of the available electricity sources. In other words, while Mr Walck and Ms Oppel looked at the most expensive of those sources actually used by HEP to replace power from the Krško NPP, Mr Styles and Dr Petrov focused on what was the least expensive of all viable and available alternatives. In answer, HEP submitted that Slovenia's experts were applying "20/20 hindsight" and ignoring the relevant context, which was that HEP had been using hydro, imported, and thermal sources of electricity since its supply from the Krško NPP was terminated on 30 July 1998, and that nothing had changed on 1 July 2002: it was "business as usual". HEP argued that it had had no incentive to "play games" with its electricity-sourcing decisions from 1 July 2002 as its objective was unchanged – to provide secure and reliable electricity at minimum cost. HEP further argued that it was not open to HEP to simply import all its electricity, as a domestic source was essential to national security and economic well-being.

256. The third point of dispute on methodology, as submitted by HEP, was whether the Rijeka and Sisak TPPs would in fact have been removed as sources of Krško-replacement power. HEP characterised Mr Styles and Dr Petrov's views as being that the two TPPs in question had to remain online for reasons of system stability, and that they would not have been removed as Mr Walck and Ms Oppel had postulated. HEP's responsive submission was that the evidence of Slovenia's experts on this point was speculative, and had been contradicted by HEP's evidence, in particular that of Mr Žodan, who had provided written testimony that HEP had other means to provide system stability, and that the Rijeka and Sisak plants had been shut down in the past without incident. HEP maintained that those two plants would have been removed as suppliers had power from the Krško NPP been delivered.

257. In respect of the actual calculation made by Mr Walck and Ms Oppel for "Factor X", HEP submitted that Mr Styles and Dr Petrov did not dispute the computation except with regard to the cost of imports that HEP had submitted would have ceased had it received electricity from the Krško NPP, on which the HEP experts had used a "weighted average", whereas Slovenia's experts had contended that baseload contracts only were relevant.

258. HEP submitted that it was entitled to an award of €29,472,307, plus interest and costs.

SLOVENIA'S INITIAL SUBMISSIONS PRIOR TO THE JULY 2009 HEARING

259. On the issue of HEP's entitlement as a result of the Tribunal's Decision on the Treaty Interpretation Issue, Slovenia registered its disagreement with HEP's approach. In Slovenia's submission, the ILC Articles and the principles contained in the *Chorzów Factory* case are not relevant to the dispute, as it is not a damages claim. Instead, the Tribunal's task is to put in place what the Tribunal determines the parties had agreed upon by way of financial settlement under the 2001 Agreement.

260. Slovenia cited the *dispositif* of the Tribunal's Decision on the Treaty Interpretation Issue in its submission that, under the 2001 Agreement, Slovenia was liable to HEP for the financial value to HEP of 50% of the electrical power produced at the Krško NPP from 1 July 2002 to 19 April 2003. Therefore, it was submitted, one had to consider what was the financial value of that power or, in other words, what was the cost to HEP of replacing the Krško supply over the relevant period. If the cost of replacement exceeded the cost to HEP under the 2001 Agreement, then HEP was entitled to recoup that excess. If, however, the cost of replacement power was less than HEP would have paid under the 2001 Agreement then, in Slovenia's submission, HEP had no claim as there was no value.

261. To assess the cost of replacement electricity to HEP, Slovenia submitted that various methods could be used, including reference to the spot market price for imports, the price at which HEP was offered baseload electricity to import, and the scope it had for sourcing baseload power internally. Slovenia argued that the approach it advocated had been directly endorsed by the Tribunal in its Decision on the Treaty Interpretation Issue, wherein it was said that Slovenia's obligation under the 2001 Agreement was "almost identical" to that found in Clause 17.1.2 of the Pooling Agreement, which, Slovenia contended, was the way in which it had approached quantum.

262. As to the possible methodology suggested by the Tribunal in the Decision on the Treaty Interpretation Issue, namely the tracking of the sale by Slovenia of HEP's 50% share of Krško electricity and payment by Slovenia of the profit made on such sale, it was

submitted that such an approach posed difficulties, in that (i) neither party had adduced evidence on the basis of such an approach; and (ii) that, as a non-tangible product, the sale of electricity could not be tracked. Slovenia considered that the Tribunal's approach would yield very similar results to the approach advocated by the Slovenia experts, but in a less appropriate manner.

263. Slovenia pointed to two further areas of dispute with HEP's quantum calculation: the first in respect of the NLB loans, which Slovenia submitted was an issue based on a misunderstanding, and should not have been deducted by Mr Walck and Ms Oppel. The second related to interest, which Slovenia noted had been compounded monthly by HEP, which Slovenia claimed was excessive and inappropriate.

264. Slovenia's case on quantum was that HEP had used imported electricity as the primary replacement for electricity from the Krško NPP during the period in issue, as was evidenced by the fact that, when supply from NEK had resumed in April 2003, HEP's electricity imports declined. In Slovenia's submission the same pattern could be clearly seen over the period 1995 – 2004 (i.e. before the termination of supply from the Krško NPP and after the resumption of that supply), namely that when supply from Krško to HEP went up, imports went down, and vice versa. Conversely, it was submitted, HEP's supply of power from domestic TPPs had increased following the recommencement of delivery from the Krško NPP.

265. It was Slovenia's submission that these facts illustrated that the reason HEP ran the TPPs had nothing to do with Krško and that there were other many why HEP might have chosen to run the TPPs. Slovenia submitted that Mr Styles and Dr Petrov had demonstrated that there was no evidence to support HEP's claim that, had it received supply from the Krško NPP during the period in issue, it would have compensated by eliminating or reducing supply from the TPPs. That was not what had happened when supply from the Krško NPP resumed in April 2003.

266. In the submission of Slovenia, based on the findings of its experts Mr Styles and Dr Petrov, the true value of Krško electricity was to be found predominantly in the import market, because it was that source of electricity that HEP had used as a replacement for Krško-generated power. Having examined the published electricity-price indices

Slovenia submitted that the cost to HEP of sourcing replacement electricity through imports had been less than HEP would have paid for Krško electricity over the same period under the 2001 Agreement.

267. Focussing more closely on the market for imported electricity, Slovenia submitted that there was a liquid and competitive and well-stocked electricity market available to HEP, and from which HEP had already imported electricity. That market was said to be the "UCTE region", a zone covering 23 nations in Continental Europe, including Croatia. Any nation in the UCTE region was able to import electricity produced in any other nation in the UCTE region, subject to there being sufficient transmission capacity and to the payment of a €2 transit fee. Slovenia made the argument that the competitive nature of the market within the UCTE region meant that electricity prices in the region fell markedly between 1995 and 2003. In Slovenia's submission, HEP had been ideally placed to take advantage of the competitive prices for electricity imported from the UCTE region as the marketplace was on Croatia's doorstep.

268. The price of electricity sourced from the UCTE region could, it was submitted, be ascertained by reference to the "EEX Price". EEX, the European Electricity Exchange, was said to provide a regularly updated spot price for electricity in the central and eastern areas of the UCTE.

269. Slovenia made two further, general, submissions in respect of electricity price. The first was that the price of electricity from the Krško NPP was fixed at the cost of production, and that that price could therefore be above or below market price. The second was that it was important to bear in mind that there were separate markets, with separate pricing, for baseload and peakload power,[23] and that the Krško NPP was a baseload provider while other plants, such as TPP Jertovec, were peakload providers. For that reason, Slovenia contended, HEP's claim that it would have backed-off certain peakload providers had it been in receipt of baseload supply from the Krško NPP could not be right. In addition, Slovenia submitted that HEP had incorrectly included the cost of peakload imports (which were "a lot more expensive" than baseload supply) when calculating the price of

[23] Baseload power was described as being the continuous supply of electricity over a 24-hour period, while peakload power was said to be provided at peak times, when demand is highest.

imported replacement electricity, because the purpose of imported peakload supply was not the replacement of baseload supply from the Krško NPP.

270. Slovenia then addressed the issue of whether HEP had been able to import replacement electricity into Croatia. Slovenia submitted that the views of HEP's experts Mr Walck and Ms Oppel, to the effect that HEP was unable to import sufficient electricity due to bottlenecks in the supply lines between Austria and Slovenia and between Hungary and Croatia, were based on "throwaway comments" from HEP witness Mr Žodan, and were incorrect. Slovenia stated that it had investigated the claims that there had been bottlenecks, and had adduced evidence that they did not exist. As to the claimed bottleneck between Austria and Slovenia, Slovenia had adduced a written witness statement from Mr Zoran Marcenko, head of systems operation at ELES, who had first-hand knowledge of capacity on the Austria-Slovenia border and who expressly denied that there were any transmission problems. Slovenia noted that Mr Marcenko had not been called by HEP for cross-examination, and that his written statements were unchallenged. In respect of the claimed bottleneck between Hungary and Croatia, Slovenia submitted that contemporaneous articles and website documents published by Mavir, the Hungarian "TSO" (Transmission Systems Operator), together with email statements made by Mavir to Slovenia, constituted "pretty clear" evidence that there was no transmission bottleneck there either.

271. Slovenia next submitted that HEP had participated in the market for imported electricity, and had been offered, but had declined, supply at prices less than the cost of the domestic TPPs from which HEP was sourcing. Slovenia supported its submission on this issue by reference to two calls for tenders for the supply of electricity issued by HEP, the first in October 2002 and the second in December 2002. Slovenia submitted that, on both occasions, HEP had received tenders for the cumulative supply of more electricity than it would have received from the Krško NPP over the 1 July 2002 to 19 April 2003 period, and that on both occasions HEP had rejected tenders at prices below those of the Croatian TPPs.

272. Slovenia submitted the tenders showed that: (i) that HEP had been actively participating in the market for imported electricity; (ii) the claim that HEP had imported as much

electricity as it could was false – HEP was able to import more but had chosen not to; and (iii) the fact that HEP had rejected offers of imported supply at prices less than the TPPs demonstrated that HEP would have kept running the TPPs even if it had had supply from the Krško NPP. HEP had not been making decisions as to its sources of electricity on a strict economic merit basis – which was the only way the analysis of HEP's experts could work – because if it had been, it would not have rejected tenders at prices lower than the TPPs. Indeed, Slovenia argued, it was not possible to select power sources solely on the basis of economic merit, for reasons of system reliability. System reliability requirements were, in Slovenia's submission, the likely reason that the Rijeka and Sisak TPP's were run when there were cheaper alternatives available, and the reason that supply from the TPPs did not reduce when supply from the Krško NPP eventually resumed under the 2001 Agreement.

273. As to the actual financial value of Krško electricity to HEP during the period in question, Slovenia referred the Tribunal to the calculations of its experts, Mr Styles and Dr Petrov. They had commenced by examining the EEX price for baseload electricity over the relevant period, and added to it the transit fee that HEP would have to have paid. On such a calculation, Mr Styles and Dr Petrov concluded that the cost to HEP of sourcing imported electricity would have been €2,195,345 greater than the cost that HEP would have paid for the same amount of electricity from the Krško NPP over the same period. Slovenia compared that price to HEP's quantum claim of €29,611,550, and stated that "HEP is claiming that its replacement cost exceeded the cost in the market by 1,300%".

274. However, in Slovenia's submission that was not the end of the matter. Mr Styles and Dr Petrov had gone on to show that simply using the EEX price resulted in an overstated cost, because on certain days HEP had been producing electricity domestically at a price under the EEX price, and HEP was able to take advantage of those lower prices on such days. The result put forward by Mr Styles and Dr Petrov was that the actual cost to HEP of sourcing replacement baseload electricity for the relevant period was €732,228 below the price HEP would have paid under the 2001 Agreement for Krško electricity.

MR JONES' ANALYSIS AND CALCULATION OF LOSS

275. Mr Jones analysed the approaches taken by both the Claimant's experts, Navigant (Mr Walck and Ms Oppel), and the Respondent's experts, Mr Styles and Dr Petrov. The former calculated damages using a "replacement costs" model and the latter used a "financial value" model. Mr Jones commented on the aspects of each approach that he found reasonable or with which he did not agree. He offered a revised calculation for each method, explaining where he differed from the relevant experts. He did not recommend one approach over the other.

NEK Production and the Cost of NEK Output During the Relevant Period

276. Before beginning is calculations, Mr Jones confirmed that there was agreement between the parties on NEK's annual production in 2002 and 2003, as follows:

(a) 5,307.3 GWh in the calendar year 2002, as shown in NEK's annual report for 2002; and

(b) 4,963 GWh in the calendar year 2003.

277. He also noted that the parties agreed on NEK's monthly production data from the same sources and that it was reasonable to assume that the monthly production was spread evenly over each hour of the month.

278. The first element of the quantum analysis that Mr Jones addressed was the cost that HEP would have paid for electricity from the Krško NPP (or "NEK output" as he referred to it) had it been correctly supplied under the 2001 Agreement (i.e., the cost in the "counterfactual" scenario). Mr Jones calculated that this cost would have been €55.65 million. This figure was slightly lower (€2.04 million less) than Navigant's estimate because of adjustments made by Mr Jones to the calculation; namely, including a depreciation charge based on the principles of the 2001 Agreement and basing his assessment on costs incurred in the second half of 2002 only (i.e., those months which fell within the Relevant Period) and not the year as a whole.[24]

[24] Jones Report at ¶4.43.

279. Mr Jones noted that his overall estimate was equivalent to €23.97/MWh actually produced for the whole of the Relevant Period.

280. In estimating the price of electricity that would have been paid from June 2002 to April 2003 (which is equal to the operating costs of NEK), Mr Jones took the actual costs from NEK's 2003 and 2004 reports and deducted contributions for dismantling (which were the responsibility of the Governments and not the entities) and NLB loan interest charges, as well as making an adjustment for depreciation. With regard to the depreciation issue, Mr Jones decided after considerable correspondence with the parties to base his assessment of costs on depreciation "calculated on the basis of the 2001 Agreement, in spite of the absence of a long-term investment plan".[25] He then said that "[t]he depreciation charge in the counterfactual is the sum of investment and (non-founder) loan repayments for each period related to renewal and technological improvement of Krško NPP".[26] He said that both parties agreed with this approach.

281. Mr Jones noted that, in relation to transmission charges that would have occurred in the counterfactual, there was a discrepancy between the actual transmission charges agreed by HEP in April 2003 and those set out in the 2001 Agreement. He was unclear whether costs should be estimated as per the 2001 Agreement or what he considered would most likely actually have been the costs agreed (i.e., the April 2003 price). The issue could be worth up to €2.21 million.

Replacement Cost Model

282. In relation to the replacement cost approach taken by Navigant, Mr Jones noted that the basic approach – which involves working backwards through the merit order of the electricity sources, removing the most expensive plants first – was generally reasonable. However, Mr Jones set out a number of specific concerns about the implementation of the approach by the Claimant's experts. In particular, he decided to review four specific issues which may affect the replacement cost model: (i) the implication of HEP's fuel

[25] Jones Report at ¶4.29.

[26] Jones Report at ¶4.29.

contracts; (ii) the marginal costs of the TPPs; (iii) the availability and price of imports of electricity; and (iv) consistency of HEP's actual dispatch with merit order.

283. The two elements required for the replacement cost model are the cost of electricity to have been supplied had the 2001 Agreement been performed, and the cost of replacement electricity sourced by HEP when NEK failed to adhere to the Agreement. Having already calculated the cost of Krško electricity in the counterfactual scenario as €55.65 million, Mr Jones turned to consider the cost of replacement electricity purchased by HEP to cover the shortfall resulting from the failure to implement the 2001 Agreement (the factual scenario). This calculation was made more complicated by the fact that HEP had been operating without deliveries of electricity from NEK since July 1998 and, therefore, the fact that deliveries of electricity did not restart on 1 July 2002 represented a prolongation of a pre-existing situation. Mr Jones therefore had to determine (as Navigant had also attempted to do) which sources of electricity would no longer have been required by HEP in July 2002 if Krško supply had resumed in accordance with the 2001 Agreement.

284. Two main sources of replacement electricity were used by HEP – generation from its Croatia's own power plants, including TPPs, and imports from outside Croatia. As noted above, Mr Jones considered that Navigant's approach of determining the merit order of these supplies and eliminating the most expensive first was inherently reasonable. However, he had concerns with some of the conclusions drawn by Navigant to establish merit order.

285. Mr Jones conducted his own analysis to determine whether Croatia's TPPs (being the most expensive source of electricity) had in fact been run in merit order. He noted that it was extremely complicated to untangle the dispatch decisions made by HEP at the time and even more so to determine the dispatch decisions that would likely have been made in the counterfactual (i.e., what TPPs would or would not have been run if NEK had provided the agreed electricity supply from 1 July 2002).

286. Mr Jones surmised that the major difference between the parties concerned the relative importance of the different replacement options. For example, the extent to which deliveries of Krško electricity were replaced by HEP with imports of electricity from

third parties and/or by additional production from its own TPPs. He recalled that HEP's position was that in the counterfactual it would have been able to reduce production, principally from the three TPPs at Rijeka, Sisak and Jertovec. In contrast, Slovenia claimed that these power stations produced electricity for reasons other than the absence of deliveries from NEK and that their output would have been very similar even if NEK had resumed delivery on 1 July 2002. Slovenia argued that the replacement electricity was provided by imports and that, had the TPPs not been required to run, it would have been cost effective to import more.

Impact of Fuel Contracts

287. The issue to be addressed in relation to fuel contracts, according to Mr Jones, was whether HEP was subject to any take-or-pay obligations under its gas or fuel oil purchase arrangements that may have affected its dispatching decisions. He concluded that "HEP consumed more than the minimum quantity of both fuels in 2002. However, in 2003 there was a shortfall of 32.2 million m^3 under the gas contract."[27] Mr Jones was not clear why HEP had chosen to consume less gas and more fuel oil than it was required to, even though two of the plants had the capability to switch from fuel oil to gas. He speculated as to whether the opportunity cost of fuel was perceived as lower than its contract price, making its generation cheaper, or whether HEP was under some sort of pressure to use fuel oil, i.e. to generate rather than import. Mr Jones concluded that it was very difficult to estimate different fuel values and carry these through into the estimation of the replacement costs.

288. Considering the counterfactual, Mr Jones concluded that there is some evidence that there could have been under-use of fuel oil in 2002 had NEK resumed supply of Krško electricity, but not in 2003. Mr Jones noted that HEP had informed him that any shortfall in the counterfactual in the use of fuel oil would have no financial consequences. He also noted that although his conclusion was that in the counterfactual there would be no shortfall in the use of gas and oil (in aggregate) in 2003, in reality there was a shortfall

[27] Jones Report at ¶6.13.

under the gas contract because (for an unknown reason) HEP chose to use less gas and more fuel oil than was required.

Marginal Costs

289. Navigant had used the average fuel and variable operating costs of generation at the three TPPs to define a merit order for plant operation and to derive the cost which would have been avoided if deliveries from NEK had resumed in July 2002. Navigant's approach assumed costs were fully variable, but Mr Jones said he was sceptical of this conclusion (i.e., whether all the operating and maintenance costs would have varied pro rata between the factual and counterfactual).

290. Mr Jones' preference was to use both the marginal and average operating costs of the TPPs to determine their merit order. This was because they were often needed to meet peak demand later in the day and therefore could not shut down. He noted that the data he used did not take account of fuel consumed during start-up, but that there were few start-ups in the relevant period (which was also consistent with the cross-check he conducted in the corresponding period in the following year when NEK deliveries had resumed). This meant that Sisak and Rijeka were producing a minimum load most of the time and, if stopped, the stoppage was for a substantial period. Overall, he concluded that the marginal cost was more likely to be the appropriate cost to consider as plants were seldom shut down.[28]

291. Mr Jones observed that the marginal cost results suggest that untangling dispatch decisions was extremely complicated, even without consideration of system or other constraints at the TPPs. Nonetheless, using this approach, he determined that generally speaking, generating electricity using the TPPs was more expensive than importing electricity. He also concluded that the TPPs were often run out of merit order (i.e., more expensive plants were run in preference to cheaper ones).

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[28] Jones Report at ¶6.54.

Availability and Price of Imports

292. In order to draw the above conclusion, Mr Jones considered the position of imports. He noted that Croatia was able to import and export electricity through interconnections with Slovenia, Hungary and Boznia and Herzogovina. HEP undertook two rounds of tenders for additional imports when NEK failed to commence transmission from the Krško NPP – the first in October 2002 and the second in December 2002.

293. Mr Jones identified seven import contracts that HEP had specifically entered into following the October and December 2002 tenders to make up for the shortfall in electricity resulting from NEK's failure to deliver power. He said that in terms of replacing output from NEK, he focused primarily on baseload contracts but, in principle, a combination of peakload imports and offpeak production from plants in Croatia could also be used to replace NEK production.

294. According to Mr Jones, in November / December 2002, HEP had in total purchased baseload imports of 280MW, and a further 70 MW of peakload contracts. Following the December 2002 tender, HEP was importing 250 MW of baseload power. The baseload profile of these contracts appeared to Mr Jones to resemble the electricity due to have been supplied under the 201 Agreement. In total, in July 2002, HEP had baseload contracts of 300 MW, almost sufficient to replace HEP's share of NEK's output.

295. Mr Jones did not consider that transmission constraints would likely have prevented HEP importing more electricity had it wished to do so. Mr Jones concluded that "increased imports should have been perfectly feasible without posing problems for HEP's system. Instead, HEP chose to produce more electricity from its own resources."[29] In particular, he said that the evidence suggested that there was some available capacity on the interconnector with Hungary, although he acknowledged that some responses to the December tender were conditional on transmission capacity being available and two providers said they could not make offers due to lack of border capacity via Hungary or Austria.

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[29] Jones Report at ¶6.53.

296. Overall, Mr Jones surmised that imports were available and the price of these imports was lower than the full average costs of production at the TPPs. Consequently, Mr Jones concluded that the TPPs were frequently operated out of merit order and went on to consider why this may have been the case.

Merit Order

297. Mr Jones observed that there were four main reasons why the TPPs may have been run out of merit order: (i) dynamic constraints; (ii) transmission constraints; (iii) the need to hold a spinning reserve; and (iv) security of supply.

298. Navigant incorporated the dynamic constraints (difficulties in stopping and starting large generating units) of the TPPs into its algorithm for the counterfactual. Mr Jones acknowledged that if a plant was needed later in the day, it may explain why a TPP was run out of merit order during off peak hours. He considered this position specifically in relation to Sisak and Rijeka. He concluded that while an inability to cycle the TPPs through a start-up and stop each day may explain part of the dispatch pattern, it was insufficient to explain all dispatch patterns observed.

299. Next, Mr Jones considered whether there were any domestic transmission constraints to explain the out-of-order running of the TPPs. HEP itself had stated that (aside from in Osijek Vukovar region) domestic transmission capacity was not constrained. Mr Jones looked at whether there was any negative correlation with output from Croatia's hydro stations or CHP plants near Zagreb and the use of TPPs. He concluded that while the evidence was suggestive, it was insufficient to allow him to reach any definitive conclusions.

300. With regard to the need to keep a spinning reserve to meet potential contingencies on the power grid, Mr Jones noted that HEP had informed him that it holds sufficient reserve to cover the loss of load served by Rijeka although it does not keep records of where the reserves are held and no particular plant provides the reserve. Mr Jones considered that the use of TPPs as a source of spinning reserve would be consistent with HEP's dispatch decisions and it was quite likely that reserve considerations influenced such decisions. Mr Jones confirmed this by comparing his findings with the 12 month period after NEK

deliveries resumed (the "Comparison Period"), although he acknowledged that this period was invariably harder to interpret due to differing demands. He noted that Navigant's counterfactual analysis implied a much lower spinning reserve, sometimes zero and that it looked very different from the Comparison Period. Consequently, Mr Jones' "base case" assumed a requirement to provide 100 MW of reserve from the TPPs, but he also provided calculations if no reserve was required.

Security of Supply

301. Mr Jones opined that security of supply concerns were insufficient to justify using the use of TPPs out of merit order because HEP would always have had its own plants that it could have used if imports had turn out to be unreliable. However, Mr Jones did acknowledge supply security could have been a perceived risk, especially with regard to the Hungarian border. He also accepted that the non-delivery of Krško power may have led HEP to seek a more secure supply and be less comfortable relying on imports.

302. Mr Jones acknowledged that creditworthiness of suppliers may have been an issue with the collapse of Enron and a number of traders experiencing difficulties at the time. However, he considered that it should have been possible to enter into arrangements that minimised these risks.

303. In summary, Mr Jones concluded that the most plausible explanations for running the TPPs out of merit order were as follows:

(a) considerations related to HEP's system or spinning reserve requirement;

(b) possibly a need for transmission support; and

(c) considerations related to commitments or other pressures to consume gas and/or fuel oil, lowering the perceived costs of production.

304. Having analysed the imports in the factual scenario, Mr Jones observed that imports were sufficient to replace a high proportion of the non-delivered Krško electricity, although by no means all. Consequently, actual replacement of these deliveries cannot have been entirely through imports as Mr Styles and Dr Petrov implied.

305. In relation to imports, Mr Jones looked at HEP's dispatch decisions made by HEP between 1 July 2003 and 18 April 2004 (he called this the "Comparison Period"). While a number of different conditions existed during the Comparison Period, he still considered the period a useful cross-check for his conclusions. The demand required to be met by TPPs and imports was lower during the Comparison Period and Mr Jones found that output from the TPPs contributed 36% to the required reduction and a fall in imports contributed 64% to this reduction. Given that Mr Jones would have expected the greater reduction to be from the more expensive TPPs all things being equal, this suggested to him that system constraints caused the TPPs to continue to be run. Mr Jones concluded therefore that imports would have been a more important source of replacement energy for Krško electricity than Navigant's analysis implied.

306. Having considered the import to TPP generation ratio. Mr Jones decided that in the counterfactual, it is unlikely that HEP would have imported electricity under those contracts it had identified specifically as replacement imports for NEK electricity. Mr Jones then assumed that the remainder of the replacement of HEP's share of NEK's output was provided by the TPPs.

307. The replacement imports provided aggregate power of between 150 MW and 350 MW (at the higher end of this scale, the level of imports was sufficient to cover all NEK output). Overall imports replaced 61% of the NEK output in aggregate (as opposed to Navigant's assessment of 30.8%). Mr Jones valued the replacement imports at the price provided by HEP for each contract, adjusting it where appropriate if the term of the contract exceeded the Relevant Period. He noted this was important due to the seasonality of electricity prices which would have meant that HEP paid cheaply for imports during the Relevant Period, but only at the expense of incurring the liability to pay over the market prices in the remainder of the contract term. Using this approach, Mr Jones calculated that the cost of replacement imports in the factual scenario was €40.964 million.

308. Turning then to the remainder of the replacement Krško electricity, Mr Jones concluded that this was provided by incremental generation by the TPPs, specifically from Sisak and Rijeka. Hence, the counterfactual should reflect a reduced output from these plants. On

the base case assumption of a 100 MW spinning reserve requirement, Mr Jones calculated that the replacement cost of TPP generation was €33.167 million. This created a total replacement cost (i.e., imports plus TPP generation) of €74.131 million for the Relevant Period (Case 1). If no spinning reserve was required in the counterfactual, the replacement cost of TPP generation was €36.241 million, with an overall replacement cost of €77.205 million (Case 2).

309. As noted above, the cost of HEP electricity in the counterfactual case was €55.65m. The X-Y calculation therefore was for Case 1: €74.131 - €55.65m = €18.48; and for Case 2: €77.205m - €55.65m = €21.56.

310. Finally, Mr Jones said that the parties had assumed that HEP would have sold the same amount of electricity under the factual and counterfactual scenarios. He did not think this was necessarily the case, for example, HEP might have chosen to export more electricity in the counterfactual.

Financial Value

311. In relation to the financial value approach taken by the Respondent's experts, Mr Styles and Dr Petrov, Mr Jones noted that his concerns with this approach, which involved valuing HEP's share of NEK's output by reference to trades between Croatia and the EEX, were that (i) it relied on there being no congestion at the border; (ii) Mr Styles and Dr Petrov had not considered market liquidity; and (iii) it relied on short term trades only.[30]

312. In relation to congestion at the Austria-Slovenia border, the system in place for ELES' half share of that capacity involved allocating capacity on a daily basis using a "first come first serve" system. Mr Jones said that he understood why HEP would be reluctant to rely on this system. The Austrian TSO's capacity was already allocated. Mr Styles and Dr Petrov's analysis relied on notional imports that would have required capacity at the Austria-Slovenia border, although HEP did purchase some energy from HSE (a

[30] Jones Report at ¶2.31.

Slovenian utility) in July/August 2002, so those imports may not have had to cross the Austrian border. Mr Jones did not know why further purchases were not made.

313. Mr Jones then said that the evidence showed that there were likely to have been real constraints on power flows between Germany/Austria and Italy. This in turn meant that the EEX price used by Mr Styles and Dr Petrov ceased to provide a relevant benchmark for Croatian prices.

314. Finally, Mr Jones stated his concern with the use of daily data by Mr Styles and Dr Petrov. This data was more volatile and may have the effect of cherry picking because if HEP had purchased forward products and resold some of them, the net cost would not be properly reflected.

315. When determining the financial value of HEP's share of NEK's output during the Relevant Period, Mr Jones noted that the value of this share should not be less than the price at which HEP could have sold Krško electricity on the open market. HEP would always have had the option in the counterfactual just to sell its share of the Krško electricity and to source power elsewhere.

316. Mr Jones therefore determined the market price of NEK's output. To do this, he said an important benchmark was the value for which NEK had actually sold the power to other purchasers in Slovenia. Mr Jones noted the evidence provided by Mr Kopac that the price of NEK's June 2002 Offer to HEP was the same as the average price paid by Slovenian purchasers at that time. Mr Jones calculated that the average price paid by Slovenian purchasers must therefore have been €34.16/MWh, but noted that there was no hard evidence that this price was actually a "market" price and the price seemed out-of-line with the offers HEP received for imports in response to its 2002 tenders.

317. One explanation for the difference may have been that the Slovenian contracts were for the full 2002 year, and therefore must have been negotiated in 2001. However, Mr Jones said that HEP had the option of extending contracts for all of 2002 at a rate of around €26.6 /MWh. HEP also accepted contracts in 2002 for prices at €24 /Mwh and later at €32 /Mwh, but HEP rejected an offer at €34.6 /Mwh. Mr Jones concluded that this suggested an average price of €28-29 /Mwh between July – December 2002.

318. NEK output was sold to ELES-GEN in January-April 2003 at a price intended only to cover costs. It therefore provided no indication of market price for this period. Mr Jones reviewed the tenders received by HEP for this period and concluded that the lowest rejected price was €27.95 /Mwh. He used this price as a proxy for market value, but applied a seasonal adjustment factor to each month (given that power prices vary considerably with the seasons).

319. Using these prices, Mr Jones calculated an overall financial value for HEP's share of NEK's output during the relevant period as being €67.29 million. When the cost of electricity in the counterfactual (€55.65 million) and the benefit-to-HEP (€9.38m) are deducted, this resulted in a loss of €2.25 million.

320. Mr Jones also provided calculations in case the Tribunal considered that the appropriate end date for compensation was 11 March 2003, as argued by the Respondent (this being the date on which ratification of the 2001 Agreement was notified to the Claimant). If the end date of the period were to be 11 March 2003 rather than 18 April 2003, the total compensation due under the replacement cost approach would be €9.13 million and under the financial value approach, €2.83 million.

HEP'S COMMENTS ON THE JONES REPORT

321. HEP reiterated that the "replacement cost" methodology used by its experts was the correct methodology to be applied as it reflected operational realities, was consistent with *Chorzów Factory* principles and avoided unnecessary speculation.

322. HEP asserted that many of its electricity sources had to be run and therefore were common to both the factual and counterfactual. These sources of electricity should therefore be disregarded for damages purposes.

323. In its comments, HEP agreed with Mr Jones' calculation that the cost of electricity supplied by NEK during the Relevant Period would have been €55,647 million in the counterfactual.[31] Therefore, the primary issue was determining the amount HEP had paid

[31] The Claimant later resiled from this position, preferring Navigant's initial calculation of the counterfactual value as set out in ¶1.350 below.

for replacement electricity. In this respect, HEP noted that both Navigant and Mr Jones agreed that the replacement electricity would have been sourced from a mixture of TPPs and imports, although the proportion from each differed. The different proportions accounted for the differing damages assessments (€29.47 million by Navigant and €18.34 million by Mr Jones – assuming no benefit to HEP deduction).

324. HEP contended that Mr Jones' assessment that a higher proportion of the replacement electricity was sourced from imports was based on speculation, whereas Navigant considered the actual data in detail to arrive at its conclusion that the TPPs provided more replacement electricity, including the need for a spinning reserve. HEP reiterated its concerns regarding over-reliance on imports and the supply security issues this would have created. HEP claimed that, with the benefit of hindsight, Mr Jones had minimised these concerns which were very real at the time following the failure of Enron and TXU, as attested to by Slovenia's own witnesses. HEP also reiterated its concerns regarding transmission capacity and referenced the testimony of Mr Žodan in this regard. HEP contented that Mr Jones did not take proper account of these concerns, despite having been supplied with the relevant information showing significant uncontrolled, uncontracted-for flows of electricity over HEP's transmission lines.

325. HEP said that Mr Jones incorrectly concluded that its large TPPs at Sisak and Rijeka had to continue running, and that they could be used as peaking units rather than baseload units. This conclusion was due to his misunderstanding of cycle time requirements and his focus on aggregate data rather than looking that the TPPs individually. The actual data provided by HEP to Slovenia demonstrated that both TPPs were turned off for large periods of time after the resumption of power supply from NEK and demonstrated patterns that were similar to those adopted by Navigant in its Counterfactual. Moreover, Mr Jones' assumption that more imports would have been used to replace Krško electricity was apparently made on the basis that the TPPs could be turned off and on instantly which was not the case, as it would significantly shorten their life. In reality, dispatches to TPPs were weekly so this is the shortest period for which a TPP could have been activated or turned off – not daily. HEP reiterated that Navigant had considered these issues in detail and based their conclusions on the factual information provided (and

cited in support of its conclusions) and had hence understood the issues much better than Mr Jones.

326. HEP contended that the Comparison Period used by Mr Jones to cross-check his assumptions was marked by a number of unusual events, including a one month outage of the Krško NPP and an extraordinarily hot summer in 2003 which reduced the amount of available imports (due to high demand and low supply). HEP said Mr Jones simply assumed the drop in imports at this time was due to the resumption of NEK supply. HEP maintained that there was ample evidence to show that HEP used the resumed supply from NEK to reduce its use of TPPs, rather than imports.

327. HEP stated that Mr Jones' use of the "marginal fuel cost" rather than the "average variable cost" was incorrect. This is because the use of the TPPs to replace NEK electricity resulted in increased maintenance costs due to additional running time and higher fuel and consumables costs to start the plants and bring them to operating temperature. The incorrect use of marginal costs also caused Mr Jones to mistakenly assume that the third TPP (Jertovec) was dispatched out of merit order. HEP noted that Jertovec was specifically designed to be a peakload unit, therefore having higher marginal costs, but lower average variable costs. HEP stated that in his counterfactual, Mr Jones "dispatches Jertovec regularly, rather than returning it to its designed role as a peaking unit, when it would have been dispatched infrequently during peak needs."[32] Mr Jones also failed to account for the costs of keeping Jertovec in a ready state.

328. HEP also queried Mr Jones' assumption that HEP would have exported more than twice the exports it actually did, noting that it may not have been able to find buyers for this significant increase. In addition, HEP argued that a blended baseload/peak-load cost for imports would have been more appropriate, rather than just a baseload cost as used by Mr Jones. This was because the baseload and peak-load distribution changed, so imports for both were affected when supply from NEK resumed.

329. As a result of these various errors, HEP contended that its calculation of the replacement cost (€29.47 million) was more reliable and correct than Mr Jones' calculation.

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[32] Claimant's Submissions and Observations as to Mr Jones' Report (25 April 2014) at ¶88.

330. HEP argued that it was not for Mr Jones to second-guess dispatching decisions HEP made among reasonable alternatives, especially when Slovenia had agreed HEP's decisions were reasonable. HEP cited a number of instances where Slovenia agreed that HEP ran its system sensibly and rationally, and that there was no suggestion that the system should be run a different way or that HEP had been deliberately inefficient in its choices. HEP stated that Mr Jones inappropriately used hindsight to criticise dispatch decisions and used after-the-fact information to support his statements. This hindsight led him to make incorrect assumptions as to why HEP made certain decisions. HEP stated that "Mr. Jones' belief that a substantially greater portion of HEP's replacement energy came from imports appears to be a result of two things—a basic factual error in assuming that HEP's TPPs can be cycled daily, and his use of hindsight to second-guess HEP's actual sourcing decisions."[33]

331. Because the parties agreed that HEP's decisions were reasonable at the time, as a matter of law, HEP contended that there was no place for the defence of mitigation in the assessment of damages.

Financial Value versus Replacement Cost Models

332. HEP reiterated its argument that the financial value methodology – which measures one counterfactual situation against another hypothetical counterfactual situation – should not be applied in this case. The financial value methodology relies on hindsight and uses theoretical values rather than documented facts. It is especially inappropriate in this case where HEP did not need to source replacement electricity in 2002 when NEK did not resume supply, as it had been without supply since 1998 and therefore carried on with its prior arrangements. The more appropriate question is therefore what sources would HEP cease using once supply resumed, as is the case in the replacement cost model.

333. HEP also stated that the replacement cost model is appropriate because HEP used a system of "economic dispatch" (taking electricity from the cheapest sources first, subject to any countervailing factors) which Mr Jones stated he found to be reasonable. This

[33] Claimant's Submissions and Observations as to Mr Jones' Report (25 April 2014) at ¶69.

approach is consistent with international law principles on compensation (including those found in *Chorzów Factory*) to be applied in this case.

334. HEP also argued that if the financial value method were used, the correct assumed value for which HEP could have sold the Krško electricity should be the same as the price the Slovenian buyers actually paid for the electricity. HEP submitted that Mr Jones incorrectly ignored this information and used a "proxy price" without explanation. HEP argued that if Mr Jones had used the correct data, HEP's loss would have amounted to €23.64 million under the financial value methodology.

SLOVENIA'S COMMENTS ON THE JONES REPORT

335. Slovenia emphasised that Mr Jones was in agreement with Mr Styles and Dr Petrov on issues of principle, including that HEP could or should have used imports to replace Krško electricity rather than the more expensive TPPs.

336. However, Slovenia did not agree with the way Mr Jones had estimated his proxy import cost which it contended had led him to overestimate HEP's loss. However, in relation to HEP's criticism of Mr Jones' rejection of the average price paid by Slovenian purchasers of Krško electricity it concluded that "HEP's unreasoned expression of concern is no ground to reconsider Mr Jones' reasoned rejection of €34.16 /MWh as a market price."[34]

337. Slovenia contended that Mr Jones essentially agreed with its case on damages and had "dismissed the basic premise of HEP's case, which was that, if it had received electricity from NEK during the Relevant Period, it would have eliminated its most expensive sources of supply: the three TPPs at Sisak, Rijeka and Jertovec."[35] This is due to Mr Jones' finding that HEP would have run the TPPs in any event because certain system operating constraints required it to do so.

338. Slovenia contended that as Mr Jones found that additional imports would have been both feasible and cheaper than generation from the TPPs, the replacement cost methodology should be disregarded and the financial value methodology used instead.

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[34] Respondent's Reply Submissions on Expert Report of Wynne Jones (30 May 2014) at ¶54.

[35] Respondent's Submissions on Expert Report of Wynne Jones (25 April 2014) at ¶10.

339. Slovenia endorsed Mr Jones' finding that the TPPs were often run out of merit order which it said was consistent with its own experts' findings. It also contended that the implication from Mr Jones' findings was that HEP would continue to run the TPPs out of order, even if NEK resumed supply of Krško electricity because other factors were behind the decision to run the plants. Slovenia similarly endorsed Mr Jones' finding that HEP could have imported more electricity than it did (i.e., it was not constrained by transmission issues) and that imports were readily available and were a cheaper source of replacement electricity than the TPPs.

340. Slovenia agreed with Mr Jones' observations on security of supply and his conclusion that there was no evidence to support the view that HEP did not take more imports for security reasons.

341. Slovenia submitted that "Navigant assumed that HEP had obtained 30.8% of its replacement electricity from imports. However, Mr Jones has pointed out that these seven contracts alone, which HEP has admitted were entered into so as to obtain replacement electricity, replaced 61.3% of the electricity that HEP would have obtained from NEK. This inconsistency between HEP's case and its evidence is largely responsible for the reduction in HEP's damages claim from over €29 million to just over €9 million."[36] Slovenia also noted that HEP had not proven that any shortfall regarding replacement imports in these seven contracts was made up using the TPPs.

342. Regarding the cost of imports, Slovenia stated that not entirely clear how Mr Jones has arrived at his "proxy" estimate of the market price in his financial value model. However, it noted that using the cost of imported electricity as a reference point is common ground between Mr Jones and its own experts. Although they differed in their calculation of the cost of imports (Mr Jones relied on longer term prices, while Mr Styles and Dr Petrov looked at daily prices), Slovenia noted that there is broad agreement of approach.

343. Nonetheless, Slovenia stated that it had reservations about the way that Mr Jones calculated the cost of imports. In particular, by basing the price on the seven import

[36] Respondent's Submissions on Expert Report of Wynne Jones (25 April 2014) at ¶58.

contracts HEP identified as replacement imports, Mr Jones did not take account of other potentially relevant contracts nor make any adjustments for the flexibility contained in their terms which made the electricity more valuable. Slovenia estimated that this meant Mr Jones had overstated the value of the NEK supply by 14.6% in November and December 2002, and by 3.4% in January to April 2003. This resulted in a revaluing of NEK's power for the Relevant Period at €62.84 million, which in turn resulted in a damages calculation of €1.15 million.

344. Slovenia also contended that Mr Jones had failed to take into account the following factors in his calculations: (i) the possible downward pressure on prices if HEP was forced to offload surplus electricity during periods of low demand; and (ii) the impact of cheap supplies of surplus hydro-electricity to which HEP will almost certainly have had access during the Relevant Period. Each of these would take the damages calculation below zero.

345. Slovenia also suggested that Mr Jones could either have taken all imports into account when determining market price (which would reduce the replacement cost by €2.5 million) or assessed the market price under the seven import contracts by only applying the prices that were relevant in any given month (i.e., not applying the prices over the whole term but only to those months when imports were taken under the contract). The latter approach would reduce the replacement cost by €2.7 million.

346. With regard to the cost of NEK electricity during the relevant period, Slovenia stated that it "accepts Mr Jones' approach to the 'counterfactual' scenario, and his calculation that HEP's cost of buying electricity from NEK in the counterfactual scenario would have been €55,647,000".[37]

347. In its Reply Submissions, Slovenia rejected HEP's criticism that Mr Jones used hindsight and assumption. In its view, Mr Jones' conclusions adhered more closely to reality than Navigant's analysis. In particular, Mr Jones based his calculation of replacement cost on the premise that the import contracts HEP stated were entered into to replace Krško

[37] Respondent's Submissions on Expert Report of Wynne Jones (25 April 2014) at ¶55.

electricity did just that – these contracts alone generated almost twice as much import electricity as Navigant had modelled.

TRIBUNAL'S ANALYSIS AND CONCLUSIONS ON THE CALCULATION OF LOSS

348. Having examined in detail the evidence and arguments presented by the parties and Mr Jones, the Tribunal sets out below its conclusions as to how damages, if any, should be calculated. Both Parties approached compensation using the same basic calculation: "X minus Y".[38] In this equation, the "X" figure represents the factual scenario: the cost HEP incurred replacing the electricity it would have received from the Krško NPP. The "Y" figure represents the counterfactual scenario: the cost that HEP would have incurred had it received 50% of the electricity produced by the Krško NPP.

Valuation of the "Counterfactual" – Y Factor

349. Mr Jones calculated the cost to HEP of the electricity that should have been supplied under the 2001 Agreement (i.e., the "Y" factor) to be €55,647,000.[39]

350. It appeared that both parties initially accepted Mr Jones' calculation of the Y factor,[40] but at the March 2015 hearing, the Claimant clarified that it preferred Navigant's calculation of the Y factor of €57,690,000.[41] The Claimant maintained this position even though the higher figure of €57,690,000 was less advantageous to it (a higher Y factor would lead to a lower overall damages figure once Y is deducted from X).

351. Mr Jones approached the counterfactual by assessing the cost of the Krško NPP electricity, as reported in NEK's reports of 2003 and 2004.[42] He looked at actual costs

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38 See Respondent's Skeleton Argument for Hearing on 26–27 March 2015 (24 March 2015) at ¶5; and Claimant's Skeleton of its Position on the Issues for Determination Relating to Mr Jones' February 2014 Report (24 March 2015) at page 2.

39 Jones Report at ¶4.43.

40 Respondent's Skeleton Argument for Hearing on 26–27 March 2015 (24 March 2015) at ¶5(b).

41 At the 2015 hearing, the Claimant made clear that despite some confusion over "common ground", it instead preferred Navigant's figure of €57.69 million to that of €44.647 million: 2015 Transcript, Day 2 (27 March 2015), 30: 13–17. See Claimant's Skeleton of its Position on the Issues for Determination Relating to Mr Jones' February 2014 Report (24 March 2015) at page 3.

42 Jones Report at ¶4.3, relying upon HEP Exhibit 528 and HEP Exhibit 529.

for the second half of 2002 and for the entirety of 2003.[43] As part of Mr Jones' approach, he calculated the cost of transmission by including a transmission charge of ad valorem 0.242% on the price of electricity at the station busbars.[44] This figure was derived from an agreement HEP signed with ELES on 9 April 2013. Mr Styles and Dr Petrov also used the 0.242% charge to determine the transmission charge.[45] Navigant had accepted that this charge should be included.[46]

352. Navigant similarly approached the counterfactual by considering the Krško NPP costs from NEK's annual financial statements from 2002 and 2003.[47] Navigant excluded: (i) the debt transfer which required ELES-GEN to take over NEK's obligations relating to repayment of the Slovenia loans, while providing for NEK's waiver of various claims against HEP and ELES-GEN;[48] and (2) certain decommissioning expenses and loan servicing costs attributable to ELES-GEN.[49]

353. In his February 2014 Report, Mr Jones explained the difference between his approach and Navigant's calculation which accounted for the €2,040,000 variation in their final figures. He stated that:[50]

> The reasons for the difference are the use of a depreciation charge based on the principles of the 2001 Agreement and the focus on costs in the second half of 2002. This estimate of costs is equivalent to €23.97/MWh actually produced for the whole of the Relevant Period.

354. Referring to the 2001 Agreement and the draft Memorandum of Association, Mr Jones took the view that the 2001 Agreement provided for "depreciation … based on expectations of future investment requirements and their financing."[51] The Tribunal

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43 Jones Report at ¶4.32.

44 Jones Report at ¶4.36 and ¶4.40.

45 Expert Report of Styles and Petrov (6 July 2007) at ¶170.

46 Expert Reply Report of Walck and Oppel (7 December 2007) at ¶107.

47 Export Report of Walck and Tun (10 November 2006) at ¶111.

48 Export Report of Walck and Tun (10 November 2006) at ¶111.

49 Export Report of Walck and Tun (10 November 2006) at ¶112.

50 Jones Report at ¶4.43.

51 Jones Report at ¶4.26.

agrees with Mr Jones' approach to assessing what the depreciation charge would have been in the counterfactual scenario. That is, Mr Jones was correct to:[52]

> …base [his] assessment of costs on depreciation calculated on the basis of the 2001 Agreement, in spite of the absence of a long-term investment plan. The depreciation charge in the counterfactual is the sum of investment and (non-founder) loan repayments for each period related to renewal and technological improvements of Krško NPP … .

355. The Tribunal finds that Mr Jones' approach, whereby depreciation is assessed upon actual expenditure on investments during the so-called "Measurement Period" or "Relevant Period" (being 1 July 2002 to 18 April 2003), is accepted.

356. Regarding his focus on costs in the second half of 2002, Mr Jones said:[53]

> I noted that the parties appeared to favour a full year. With some reservations, the parties agreed that this was the preferred approach. However, having read the 2001 Agreement again and considered the data, I now think that the right approach is to assume that each party owned half of the business as it existed at 30 June 2002 and that my assessment should relate only to the second half of 2002. One reason for this is the need to adjust the compensation due to HEP for the higher prices that Slovenian customers paid NEK for electricity from July to December in 2002 and for the remainder of the Relevant Period in 2003.

357. Once again, the Tribunal accepts Mr Jones' conclusions and finds his methodology is to be preferred. The parties have not offered any compelling reason to find otherwise. In particular, the Claimant – which clarified at the March 2015 hearing that it preferred Navigant's calculation of the Y factor to that of Mr Jones – did not specify any particular issues it had with Mr Jones' calculation or methodology. The Claimant did not challenge Mr Jones at the hearing or in its submissions.

358. The Tribunal therefore accepts Mr Jones' calculations and finds that, in the counterfactual scenario, the cost of Krško electricity to HEP would have been €55,647,000. This figure is adopted as the Y factor in the damages calculation.

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[52] Jones Report at ¶4.29.

[53] Jones Report at ¶4.30.

Valuation of the "Factual" – X Factor

359. The parties diverged considerably on the appropriate approach to, and value of, the X factor, which represented the cost incurred by HEP in replacing the Krško electricity that should have been supplied under the 2001 Agreement. The Tribunal was effectively presented with two competing models, which are explained below. But even within these models, substantial questions remain as to the value of certain inputs.

360. The Claimant adopted a so-called "replacement cost" approach, according to which the Claimant contended that the X valuation should be €87,160,000.[54] By contrast, the Respondent adopted a so-called "market value" model, calculating the X valuation to be €62,840,000.[55]

361. Mr Jones considered that both approaches could be used to calculate damages in the present case and therefore provided calculations for each, leaving it to the Tribunal to determine which methodology was to be preferred. The Tribunal notes that, if price were the only consideration in making dispatch decisions, the models should produce substantially similar outcomes – the market would dictate the price. However, as discussed below, other factors may influence an entity's dispatch decisions and one of the key issues is whether the entity acted reasonably in making the decisions that it did.

Underlying Principles

362. The Tribunal begins its analysis by recalling some basic principles of compensation in international law. HEP submitted that replacement cost is a method commensurable with, and demanded by, the decision in *Chorzów Factory*,[56] which is reflected in the *Articles on State Responsibility*.[57] Slovenia accepted that these sources provide the basic

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54 Claimant's Skeleton of its Position on the Issues for Determination Relating to Mr Jones' February 2014 Report (24 March 2015) at page 3.

55 Respondent's Skeleton Argument for Hearing on 26–27 March 2015 (24 March 2015) at ¶25.

56 Claimant's Response to Slovenia's Submissions Concerning Mr Jones' February 2014 Report (30 May 2014) at ¶42.

57 Claimant's Submissions and Observations as to Mr Jones' Report (25 April 2014) at ¶51.

framework to compensation in international law.[58] Article 31(1) of the *Articles on State Responsibility* provides that the "responsible State is under an obligation to make full reparation for the injury caused by the internationally wrongful act."[59] Article 31(1) is drawn from the famous passage in the *Chorzów Factory* decision where it was said:[60]

> The essential principle contained in the actual notion of an illegal act … is that reparation must, as far as possible, wipe out all the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if that act had not been committed. Restitution in kind, or, if this is not possible, payment of a sum corresponding to the value which restitution in kind would bear; the award, if need be, of damages for loss sustained which would not be covered by restitution in kind or payment in place of it—such are the principles which should serve to determine the amount of compensation due for an act contrary to international law.

363. Taken together, Article 31(1) and the *Chorzów Factory* decision require that HEP be placed in the same situation "which would, in all probability, have existed" had it received electricity from the Krško NPP from July, while also providing "damages for loss sustained". As the Tribunal is considering the loss caused to HEP from non-delivery of electricity, it is of course correct to say, as Slovenia contended, that the "damage actually incurred, therefore, represents the upper limit of the amount of damages."[61] That is to say, HEP cannot recover damages that it did not suffer.[62] These are trite principles of international law.

364. The Tribunal finds that, consistent with the above principles, the preferred approach to calculate the X factor is the replacement cost approach. The focus compelled by Article 31 and the *Chorzów Factory* decision is on the loss suffered to the harmed party; here, being HEP. In the present case, the replacement cost approach best achieves what is required by international law as it allows the Tribunal to analyse the factual matrix to

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58 Respondent's Submissions on Expert Report of Wynne Jones (25 April 2014) at ¶29.

59 James Crawford, *The International Law Commission's Articles on State Responsibility: Introduction, Text and Commentaries* (Cambridge University Press, Cambridge, 2002) at page 201.

60 *Case concerning the Factory at Chorzów (Germany v Poland)* (Merits) (1928) PCIJ, Series A, No. 17 at page 47.

61 Respondent's Submissions on Expert Report of Wynne Jones (25 April 2014) at ¶29, quoting from Irmgard Marboe, *Calculation of Compensation and Damages in International Investment Law* (Oxford University Press, Oxford, 2009) at ¶2.76.

62 Irmgard Marboe, *Calculation of Compensation and Damages in International Investment Law* (Oxford University Press, Oxford, 2009) at ¶2.74.

determine what HEP actually did to replace the electricity it would have received from the Krško NPP and to determine whether its actions were reasonable. Once the Tribunal has ascertained what HEP actually did, it will be able to calculate the X factor and, ultimately, determine whether HEP did in fact suffer any loss.

365. If the Tribunal were to accept the market value approach recommended by Slovenia, the focus would be shifted away from HEP and onto the market. This would distract the Tribunal from its central inquiry: what loss did HEP suffer, if any? The central proposition established by *Chorzów Factory* is that restitutionary damages must make the claimant whole by restituting the value *to it* of the right of which it has been deprived, and not just the fair market value which might, for example, be required as compensation in the event of *lawful* expropriation. (This principle has figured prominently in the jurisprudence of the Iran-U.S. Claims Tribunal; see, e.g. *Phillips Petroleum Co. Iran v. Iran*, 21 Iran-U.S. Claims Tribunal Report 79 (1989 I).)

366. Accepting the replacement cost approach means no more nor less than that the Tribunal must now determine what HEP actually did to replace electricity from the Krško NPP, subject to a caveat of reasonability. Slovenia has quite rightly argued that even under the replacement cost approach, it could be determined that HEP replaced the Krško NPP electricity with imports and consequently the outcome would be the same as the market value approach (given imports would have had to have been purchased on the open market). The key therefore to the replacement cost approach is assessing what HEP did to replace the lost power, and whether it took a reasonable course of action in doing so.

Replacement Cost Methodology

367. The Tribunal is confronted by multiple approaches to the replacement cost. The differences between these approaches largely pertain to the replacement source of electricity, and the reasons justifying the decision to use those replacement sources.

368. As HEP explained, the replacement cost method is:[63]

[63] Claimant's Skeleton of its Position on the Issues for Determination Relating to Mr Jones' February 2014 Report (24 March 2015) at page 3.

> Based on the principle of "economic dispatch," this method identifies those sources of more expensive electricity that HEP would, in all probability have eliminated from its dispatch stack on each day during the "Measurement Period," if it had received its rightful share of the Krško NPP's production. This is after taking into account all relevant factors, such as security of supply and both system-wide and individual generation facility constraints.

369. Navigant contended that HEP was "forced to use older, less efficient fossil fuel generators to replace much of the electricity it was entitled to receive from the Plant."[64] The TPPs did not replace all of the power that would have been received from the Krško NPP and so "HEP was also compelled to import electric energy".[65]

370. In simple terms, the Claimant suggested that approximately two-thirds of the Krško NPP electricity was replaced by TPPs with one-third was replaced by imports.[66] On this approach, the Claimant contended that the X valuation is €87,160,000.[67]

371. Mr Jones accepted that the Claimant's methodology was "in general terms, reasonable", but pointed to a "number of potential deficiencies in the way that Navigant has implemented the approach"[68] as outlined in paragraphs 282-284 above.

372. In view of his concerns, Mr Jones adjusted the underlying inputs into the replacement cost model. The main point of departure between Mr Jones and Navigant was that Mr Jones concluded that approximately two-thirds of the Krško NPP electricity was replaced by imports, with only one-third replaced by TPPs.[69]

373. Mr Jones calculated the X valuation based on two scenarios.[70] On "Case 1", which assumed that TPPs Sisak and Rijeka were providing 100MW of spinning reserve, the

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64 Expert Report of Walck and Tun (10 November 2006) at ¶¶7 and 61–70.

65 Expert Report of Walck and Tun (10 November 2006) at ¶¶8, 88 and 94.

66 Claimant's Skeleton of its Position on the Issues for Determination Relating to Mr Jones' February 2014 Report (24 March 2015) at page 3.

67 Claimant's Skeleton of its Position on the Issues for Determination Relating to Mr Jones' February 2014 Report (24 March 2015) at page 3.

68 Jones Report at ¶2.30.

69 Claimant's Skeleton of its Position on the Issues for Determination Relating to Mr Jones' February 2014 Report (24 March 2015) at page 3, where the Claimant highlights this main point of difference.

70 Jones Report at ¶¶2.55–2.57.

total replacement cost (replacement imports plus replacement TPP generation) would be €74,131,000. On "Case 2", which assumed Sisak and Rijeka would operate without any required reserve, the total replacement cost would be €77,205,000.

374. For its part, the Respondent—although favouring a market value approach—suggested that the same outcome should be reached on the replacement value approach because a reasonable purchaser would replace the electricity at market price. Thus, the Respondent argued, imports should have replaced the Krško electricity and the TPPs should not be considered in valuing the X factor.

375. Having outlined the parties' positions on the matter, the Tribunal will need to approach the X factor in two steps. It will first address the question of what HEP actually did to replace the electricity from the Krško NPP. Then it will then address the specific nuances of valuing that replacement electricity.

Replacement Energy Sources

376. The question of what was done to replace the Krško electricity is not a simple one to answer. The first constraint worth mentioning is that this inquiry is, in a sense, artificial. HEP had not received Krško electricity since 1998. In real terms, it was not that HEP had the power turned off on 1 July 2002, but they it had to deal with the continuation of non-supply that had already endured four years. So to ask "how did they replace electricity from 1 July 2002" is not entirely apposite due to this historical record. Nor can HEP, when considering the alternative of imports, be equated with a consumer who might be in a position to turn on and off a switch connecting him to a single supplier as it might suit him. A public utility must take account of leads and lags, as well as the issue of security of supplies, in a manner which is not comparable to that of a consumer whose impact is next to imperceptible at the macro level. After all, HEP did not know when Krško electricity would be made available again by NEK; this was in the hands of the Respondent. Nor is there any warrant to assume that HEP was content to incur uneconomically high costs on the footing that it would ultimately be able to pass them along to Slovenia; its managers would have been most unlikely to "bank" on an international remedy affording them such a luxury when making the hard decisions required in the circumstances.

377. The second point is that HEP is a national power provider that operates under a range of constraints or influences at any one time. Thus, it is no simple task to identify how HEP actually responded to the failure of the Respondent to resume supply of electricity from NEK on 1 July 2002. In fact, to disentangle those decisions from broader operational decisions is extremely difficult. To simply demonstrate this, the Tribunal refers to HEP's 2002 Annual Report, where it was reported that:[71]

> In 2002, due to below-average precipitation, hyro power plants generated 18 percent or 1178 GWh of electricity less than in 2001. *The shortage was offset by greater production from thermal power plants (21 percent more than in 2001) and by an 11.5 percent higher import of electricity*. A second unit at the Plomin thermal power plant generated more than ever so that from TE Plomin d.o.o. 42.8 percent more electricity was taken than in 2001. *Again, no electricity was received in 2002 from the Krško nuclear power plant due to a property dispute with the Slovenian co-owner of the plant.*

378. As can be seen from this passage, HEP did not simply have to contend with non-supply of electricity from NEK. A range of demands operated on it throughout the Measurement Period. This dynamic environment is further exampled in the Witness Statement of Mladen Žodan, who was Head of Energy Management and Analysis in HEP's System Control Department during the Measurement Period. Mr Žodan noted that:[72]

> Actual dispatching of power plants and covering the demand requires modifying the annual and daily plans based on actual circumstances. *HEP's dispatchers must respond to many constraints at all times.* The most important of these constraints are: security of supply, system stability, transmission capabilities, frequency and voltage stability, flexibility of operation, operational reserves, actual hydrology conditions, availability of resources, and the electricity market.

379. The Tribunal notes that, although it is difficult to isolate decisions made to replace Krško electricity and decisions made as a result of other factors, this does not mean that the "X" factor cannot be determined. As explained below, with the assistance of Mr Jones, the Tribunal has been able to make informed and reasonable decisions based on the evidence before it.

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71 HEP Exhibit 515 at page 22 (emphasis added).

72 Witness Statement of Mladen Žodan at ¶9 (emphasis added).

380. The Tribunal finds that Mr Žodan was in the best position to describe the actual decisions made at the time. Mr Žodan said:[73]

> The interruption of electric delivery to HEP from the Krško plant deprived HEP of a significant base loan unit. That made our dispatching more difficult and our electric supply more expensive. It required us to use more expensive sources to replace the energy need to meet HEP's demand. In the period of July 1st 2002 – April 19th 2003 we attempted, as HEP always does, to purchase as much less expensive, imported electricity as we could, given our other operating constraints. During this period, most of HEP's import contracts were short term arrangements covering only 1–3 months, since HEP did not know when deliveries from Krško would be resumed. *This imported power was generally cheaper then [sic] the production in HEP's replacement thermal power plants. Because we could not import enough energy to fully replace HEP's share of the Krško production, we were required to use expensive thermal units to replace much of the electricity we should have received from Krško.*

381. Mr Žodan further explained, in his Supplemental Witness Statement, that Rijeka and Sisak TPPs were older and less efficient than HEP's newer TPPs and so were the last units to be dispatched to meet demand.[74] Therefore, Mr Žodan concludes, "[s]ince they are the last units committed to service, they are the first to be taken out of service as demand decreases or lower cost resources such as the Krško NPP become available."[75]

382. However, in cross-examination, Mr Žodan confirmed what he had alluded to in his Witness Statement; namely, that HEP cannot always operate "[s]olely on the economic merits".[76] In other words, dispatch on a strict merit order is sometimes departed from where necessary. This can be seen starkly when Mr Žodan commented in cross-examination that "at various times we had … the possibility of a relatively cheaper option than Sisak and Rijeka" but those TPPs were used so as not to "jeopardize the safety of supply of our customers, or the safety of the system itself."[77]

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73 Witness Statement of Mladen Žodan at ¶13 (emphasis added).

74 Supplemental Witness Statement of Mladen Žodan at ¶12.

75 Supplemental Witness Statement of Mladen Žodan at ¶12.

76 2009 Transcript, Day 2 (28 July 2009), 207: 2.

77 2009 Transcript, Day 3 (29 July 2009), 19: 1–11.

383. From Mr Žodan's evidence, the Tribunal accepts that HEP did in fact use a combination of imports and TPPs in order to replace the electricity that would have been received from the Krško NPP. The actual proportions of imports and TPPs are addressed below.

Reasonableness of Using TPPs and Imports in Combination

384. The Respondent's arguments against the replacement cost model itself are also applicable to the replacement cost model's application. The essence of that argument is that: (a) HEP could have imported enough replacement energy; (b) imports were cheaper than electricity from TPPs; and (c) HEP had no valid security of supply reasons not to import all of its replacement electricity.[78]

385. For its part, HEP argued that the Tribunal should accept that the decisions made in 2002 by HEP's dispatchers were reasonable.[79] As Mr Hawkins argued, "HEP's system operators did not have the luxury of hindsight."[80]

386. While deference should be given to the judgment of the HEP dispatchers who made decisions in real time, the Tribunal does require that those judgments were reasonable. In the Commentary to Article 31 of the *Articles on State Responsibility*, the International Law Commission writes that "[e]ven the wholly innocent victim of wrongful conduct is expected to act reasonably when confronted by the injury."[81] As that passage makes clear, the victim must act reasonably when confronted by injury; in other words, at the time of the wrong. The Tribunal therefore recognises the risks inherent in appraising decisions of system operators many years after the fact. The fact that someone else would have acted differently is not enough to discredit HEP's course of conduct unless it was unreasonable or irrational. In summary, this approach does not give an operator *carte blanche* to make any decision at will, but the Tribunal will not second guess an operator's decision unless there is evidence that the decision was unreasonable.

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78 Respondent's Skeleton Argument for Hearing on 26–27 March 2015 (24 March 2015) at ¶7(a)–(b).

79 2015 Transcript, Day 2 (27 March 2015), 5: 2–12.

80 2015 Transcript, Day 2 (27 March 2015), 5: 2–3.

81 *Articles on Responsibility of States for Internationally Wrongful Acts 200* at page 205. See also *Middle East Cement Shipping and Handling Co. S.A. v. Arab Republic of Egypt* (ICSID Case No. ARB/99/6), Award (12 April 2002) at ¶170.

387. To this end, the Tribunal recalls that the Respondent had repeatedly affirmed in the early stages of this arbitration that the Claimant's dispatch decisions at the relevant time were reasonable. Indeed, Mr Levy (for the Respondent) stated at the 2009 Hearing:[82]

> It is not our primary case that they were incompetent in running their system. Far from it. We doubt very much they were incompetent. We know exactly what they were doing.

388. However, he also contended that although the TPPs were being run sensibly, those sensible reasons "had nothing to do with Krško or the fact that they were not getting supply from Krško."[83] Instead, it was the Respondent's case that "it was possible for HEP to import sufficient volumes of electricity to replace its share of NEK output" and that "HEP had no valid security of supply reason to decline the opportunity to import all of its replacement energy".[84]

389. The Tribunal does not accept that HEP should have imported all of its replacement energy, even if imported electricity was more economical. The evidence before the Tribunal provides no basis on which the Tribunal should second-guess the dispatching decisions at the time, which all parties had agreed were reasonable.

390. For reasons discussed below, it is the Tribunal's view that HEP acted reasonably, based on security of supply concerns, in not relying entirely on imports for replacement energy. The Tribunal's finding that HEP validly chose not to import all of its replacement electricity avoids the need to consider the logically earlier question of whether there was congestion at Croatia's borders allowing for more imports.

391. The Claimant asserted that it chose not to replace the Krško NPP electricity entirely with imported electricity because, *inter alia*:[85]

> … HEP must maintain the security of its energy supply. Internally-generated electricity is more secure than imported energy, because it is directly under HEP's

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82 2009 Transcript, Day 2 (28 July 2009), 57: 16–20.

83 2009 Transcript, Day 2 (28 July 2009), 57: 6–7.

84 Respondent's Skeleton Argument for Hearing on 26–27 March 2015 (24 March 2015) at ¶7(a)–7(c).

85 Expert Reply Report of Walck and Oppel (7 December 2007) at ¶29. See also Claimant's Responses to Mr Jones' 4 July 2012 Request for Additional Information (7 December 2012), at ¶¶66–74.

> control. One need only recall the 2003 blackout in Italy – resulting from the loss of a Swiss transmission line – to appreciate the risk attendant to importing too great a share of a country's energy needs.

392. The Claimant noted that during the Measurement Period there were a number of events that heightened concern around the reliability of imports and counterparty risk: Enron went bankrupt;[86] Dynegy exited the European market;[87] and TXU effectively ceased its European trading.[88] These are some examples considered by Mr Walck and Ms Oppel, who concluded:[89]

> From our review of HEP's import activity, and the significant degree to which traders were pulling back from the market, we have concluded that HEP did what it reasonably could do to obtain lower cost imported energy. HEP conducted its import and trading operations as one would expect of a reasonable utility in the normal course of its business, and the suggestion that there were vast amounts of additional energy is fallacious … . Messrs. Styles and Petrov's substitution of an imaginary "should-have-been-actual" set of hypothetical facts for the actual facts of HEP's operations is factually baseless and without merit.

393. In response to these comments, Mr Styles and Dr Petrov argued that: (1) Krško NPP did not provide internally produced electricity; (2) any concerns in Italy were due to human error; and (3) proper functioning markets were the only true guarantee of energy supply.[90]

394. Mr Jones agreed that HEP could indeed have imported more, but he did recognise a number of concerns that might have influenced HEP's behaviour:[91]

(a) There were concerns about the creditworthiness of counterparties, particularly in light of Enron's collapse and TXU's liquidation;[92] and

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86 Expert Reply Report of Walck and Oppel (7 December 2007) at ¶¶41–42.

87 Expert Reply Report of Walck and Oppel (7 December 2007) at ¶46.

88 Expert Reply Report of Walck and Oppel (7 December 2007) at ¶49.

89 Expert Reply Report of Walck and Oppel (7 December 2007) at ¶54.

90 Supplemental Expert Report of Styles and Petrov (7 April 2008) at ¶¶9.1–9.4.

91 See also, 2015 Transcript, Day 1 (26 March 2015), 43: 16–19.

92 Jones Report at ¶6.82.

(b) Reluctance to purchase imports from Slovenia in case the perception was given that HEP was purchasing NEK output indirectly and at a higher price than it was otherwise entitled to.[93]

395. When pushed on this point at the 2015 hearing, Mr Jones concluded that he was not saying that HEP acted irrationally, but that there appeared to be other options available.[94] In the Tribunal's view, the fact that other options were available does not, of itself, undermine the decisions actually made by HEP. The Respondent would need to demonstrate that those decisions were unreasonable.

396. It is certainly not in issue that security of supply is a legitimate principle upon which to run a national power provider. As the Claimant demonstrated by reciting evidence of both HEP's and Slovenia's witnesses,[95] security of supply is a concern that would rightly influence decisions made by HEP's dispatchers. As provided above, the Respondent's counsel also accepted that HEP's dispatchers did in fact act reasonably.

397. The real question, as the Tribunal sees it, is whether there were circumstances that justified HEP accepting some imports as replacements for Krško electricity, but not all. Mr Levy accepted this in his closing submissions at the 2015 hearing: "[s]o one accepts that security of supply is a legitimate concern. … But that doesn't then mean that once you say that that is right, that you can adopt any behaviour".[96] The Tribunal agrees that simply saying that HEP had to be mindful of security of supply would not be an answer to any challenge as to the reasonableness of HEP's actions. However, the Tribunal also considers that HEP did act reasonably in the light of legitimate security of supply concerns, particularly given the history of interrupted supply from the Krško NPP and the general uncertainty facing the electricity market at time following the difficulties experienced by some prominent suppliers.

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93 Jones Report at ¶6.84.

94 2015 Transcript, Day 1 (26 March 2015), 49: 15–18, see also 46: 10–11.

95 Claimant's Submissions and Observations as to Mr Jones' Report (25 April 2014) at ¶¶73–78.

96 2015 Transcript, Day 2 (27 March 2015), 64: 20–21 and 24–25.

398. The Tribunal will not judge HEP's actions in 2002 and 2003 with the full benefit of hindsight. To do so would be to assess HEP's decisions in a radically different context from that in which they were made. On 1 July 2002, HEP found itself still without power from the Krško NPP and no guarantee of when that supply would resume. This was moreover the continuation of nearly four years of uncertainty; HEP had no indication of when it might begin to receive Krško energy from NEK.

399. It is understandable that HEP would be circumspect about simply importing energy to replace the Krško NPP's energy, given the circumstances of the European energy market at the time. The Tribunal accepts that these events, which would have been of concern to those in the energy market, were contemporaneous with HEP's decisions concerning replacement energy and likely would have affected those decisions.

400. The Respondent's experts opined that HEP should have used imports as replacements and mitigated risk by "having a range of different contracting periods and a range of different types of profile of electricity, with a range of counterparties".[97] Although this may have been one option available, in the Tribunal's view it does not make the decisions HEP actually made unreasonable. Clearly, as Mr Jones said, there were various options available, and the fact that HEP took one course of action over another does not open the door for the parties, the experts or the Tribunal to second-guess, with the benefit of hindsight, HEP's decisions at the time without evidence those decisions were unreasonable. As Mr Levy acknowledged, there was no "fine distinction" between what HEP did do and should have done.[98]

401. Moreover, the Tribunal considers that the Respondent's submission that HEP should simply have imported more elides the great depth of complexity that would underlie such a decision. As the tender process demonstrates, some counterparties were not confident in their ability to supply such electricity. As Mr Jones noted, the second tender process saw "EGL and EDF Trading … say[ing] that they were unable to offer due to lack of, or uncertain ability to secure, border capacity via Hungary or via Austria. … An offer from

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97 2015 Transcript, Day 1 (26 March 2015), 178: 7–9.

98 2015 Transcript, Day 2 (27 March 2015), 64: 16.

Verbund was also conditional on the allocation of border capacity".[99] In addition, having had the Krško NPP suddenly stopped in 1998, and fail to resume it in 2002, the Tribunal understands that reliance on internal production sources within HEP's own control must have been attractive.

402. In testing circumstances, HEP made decisions to replace Krško electricity with a combination of TPPs *and* imports. For all the above reasons, the Tribunal finds that HEP acted reasonably in making these decisions, in response to legitimate and genuine security of supply concerns. This finding makes it unnecessary to address the Respondent's other concerns about the Claimant's *ability* to import electricity because, even if there was ample capacity, the Claimant acted reasonably in choosing to use a combination of imports and TPPs, even though the TPPs did cost more than imports. This does not mean that the Tribunal accepts *per se* that the Claimant replaced two-thirds of the Krško electricity with TPP production. That is a factual question that the Tribunal considers below.

403. Finally, the Tribunal notes that there has been no serious suggestion that HEP was attempting to exacerbate damages by deliberately making dispatch decisions that would increase its losses. The Tribunal observes that there is no evidence to suggest that, in 1998, HEP acted with consciousness of this dispute and the enhancement of recovery in this arbitration. As such, the Tribunal concludes that the Claimant would not have used the TPPs unless it was in the best interest of the company. The Claimant submitted that it operated in the same way in 2002–2003 as it had done in 2000–2001, which means that a finding of "irrationality" with respect to the 2002–2003 period would taint the entire period.

404. Counsel for the Claimant was understandably concerned about remarks made by Mr Jones in response to questions by the Tribunal regarding what Mr Jones saw as the actual mix of TPP/import usage.[100] Mr Jones said:[101]

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[99] Jones Report at ¶6.48.

[100] 2015 Transcript, Day 2 (27 March 2015), 190–191.

[101] 2015 Transcript, Day 2 (27 March 2015), 191: 16 to 192: 1.

> I am not sort of accusing any particular person of being a liar, but I am saying that the totality of the evidence doesn't fit together in a way that gives a plausible explanation for that being all of the replacement cost, being that particular mix of the thermal power plants and import generation, unless they have behaved irrationally and not minimised cost; and I don't know whether that's the case. So it's either that they have behaved irrationally and not minimised cost, or that actually certain other things have driven their use of the plant.

405. The Tribunal does not accept the view that the Claimant tried to mislead it and nor was Mr Jones suggesting that it had. It takes Mr Jones' comment to mean that there is some dispute over how the evidence should be interpreted, which ties back to his disagreement with Navigant's analysis that the TPPs accounted for two-thirds of the Krško replacement energy.

Proportion of TPP/Imports

406. The main differences between the approach of Mr Jones and the approach of the Claimant, which account for a difference in their valuations of €9,130,000, were helpfully summarised by Claimant as follows:[102]

(1) the proportion of replacement energy derived from TPPs versus imports; and
(2) a determination of the appropriate costs of that replacement energy.

407. It is the proportion of the replacement energy that the Tribunal will now discuss.

408. The basic concept underlying the approach of the Claimant's expert and Mr Jones is similar. As Mr Jones' explained:[103]

> The principle which Navigant has applied can be summarised as a merit order approach, assuming generally that the most expensive plant operating in each hour has been called on to replace the energy that would have been received from NEK.

409. Mr Jones accepted as reasonable the general approach that, if NEK had begun supplying Krško electricity, the sources used to replace it would been removed by "working backwards through the merit order removing the most expensive plants on the system".[104]

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[102] Claimant's Response to Slovenia's Submissions Concerning Mr Jones' February 2014 Report (30 May 2014) at ¶48.

[103] Jones Report at ¶5.15.

410. While this approach is generally reasonable, the Tribunal agrees with Mr Jones that, in the present circumstances, simply assuming that TPPs would be backed off first because they were the most expensive source of energy is too simplistic and does not properly consider how HEP actually replaced the energy the Respondent failed to supply.

411. Instead, the first necessary step is to determine how HEP replaced Krško energy it would have received from NEK. Krško electricity was a relatively cheap, baseload supply of energy. Having lost this source, HEP—by its own, frequent admissions—would have then dispatched the next *least expensive* source of electricity. Putting the specific price of electricity aside for the moment, it is uncontroversial that electricity imports were cheaper than the TPPs; indeed, HEP accepts that the TPPs were the last source to be dispatched.[105]

412. On 1 July 2002, finding itself still without Krško power, HEP's first step was to increase imports. As Mr Žodan explained in his witness statement, imports could not fully cover the electricity that would have received from the Krško NPP, HEP's next step was to then dispatch the TPPs.[106] Hence, consistent with economic dispatch, HEP replaced the Krško electricity with two sources: first, imports; and secondly, TPPs.

413. The Tribunal finds that the correct approach is thus to first identify *how much* of the Krško electricity was replaced by imported electricity. Whatever was not replaced by imports would have then been replaced by the TPPs. Consistent with economic dispatch, when NEK resumed supply, then the TPPs would first be backed down, followed by the imports. This is the approach taken by Mr Jones.

414. In the Tribunal's view, Navigant fell into error by jumping to this second step, which distorts the proportion of electricity attributable to imports. The Tribunal accepts the criticism of Mr Styles and Dr Petrov when they said:[107]

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[104] Jones Report at ¶5.25.

[105] Witness Statement of Mladen Žodan at ¶14; Expert Report of Walck and Tun (10 November 2006) at ¶72; and Jones Report at ¶6.54(f).

[106] Witness Statement of Mladen Žodan at ¶14.

[107] Expert Report of Styles and Petrov (6 July 2007) at ¶107 (emphasis added, references removed).

> In other words, Navigant consider electricity imports which were the most economic replacement option over much of the Investigated Period, as the last source in their investigated energy mix; i.e. *imports are taken into account last* and only when the electricity output of the three TPPs attributed to replacement needs is insufficient to cover fully the lost volume.

415. The concept of dispatch requires that the most expensive sources are eliminated first. However, it requires that the cheaper sources are dispatched first. By purporting to eliminate the most expensive sources, Navigant attribute a greater degree of replacement energy to the TPPs than is consistent with the actual decisions made by HEP to replace Krško electricity and these basic principles of energy economics. In short, the Tribunal finds it impermissible to eliminate the most expensive sources without determining what proportion of the replacement electricity those sources contributed. That can only be done by first identifying how the energy was replaced and, consistent with the principle of economic dispatch, we must look to HEP's imports.

416. For these reasons, the Tribunal prefers the methodology employed by Mr Jones. Mr Jones attributed the "import contracts that HEP has stated were entered into on account of the non-delivery of power" as the first replacement source for Krško electricity.[108] Mr Jones provided that the import contracts he considered accounted for 1422 GWh of the replacement, which amounts to 61.3% of what would have been provided by the Krško NPP.[109] This remaining 28.7% was replaced by the last source to be dispatched, the TPPs.[110] In Mr Jones' view, the remaining electricity would be made up by increased generation from Sisak and Rijeka.[111]

417. This methodology takes the necessary first step that the Claimant's experts omit. That is, Mr Jones identified the dispatch order of replacement sources of electricity and calculates how far the cheaper sources would go to replace the Krško power. In this case, the import contracts would go 61.3% of the way towards replacing Krško electricity. Thus, the TPPs would next have to be dispatched, until the Krško energy was completely replaced. It is then legitimate to say that, when NEK resumed supply of Krško

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[108] Jones Report at ¶7.13.

[109] Jones Report at ¶7.19.

[110] Jones Report at ¶7.16.

[111] Jones Report at ¶7.29.

electricity, the first replacement energy sources to be backed down would be the TPPs. That would not displace the fact that the TPPs only contributed 28.7% of the replacement energy and no more.

418. Having determined that this is the proper methodology, the Tribunal now addresses the question of whether Mr Jones was correct to identify the import contracts that he does as replacement energy.

419. The Claimant first challenged Mr Jones' conclusion that all "as opposed to some portion, of the approximately 1,400 Gwh of imports that HEP purchased pursuant to extensions of contracts with EGL and ETC … were "replacement imports" for the electricity HEP should have received from the Krško NPP."[112] The Claimant then contended that Mr Jones' replacement cost model (on Case 1, where Mr Jones assumed 100 MW of spinning reserve was necessary) identified an extra 230.9 GWh of electricity as replacement electricity.

420. In furtherance of this first argument, at the 2015 hearing, Mr Hawkins for the Claimant challenged Mr Jones by suggesting he had characterised import contracts as replacements despite the Claimant not expressly providing that they were purchased to replace the Krško supply.[113] Mr Jones, in identifying these contracts as replacements, relied upon one of the Claimant's response to one of his information requests.[114] Mr Hawkins said that "HEP [had] never told [Mr Jones] that it wouldn't have entered into any of these contracts or some portion of these contracts even if it had had NEK production".[115] This criticism may be a reflection of an earlier comment in Navigant's First Report, where they alleged that:[116]

> Through discussions with HEP personnel, we determined that certain imports of electricity were required for voltage stability and system reliability. These imports

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[112] Claimant's Skeleton of its Position on the Issues for Determination Relating to Mr Jones' February 2014 Report (24 March 2015) at page 4.

[113] 2015 Transcript, Day 1 (26 March 2015), 69: 3–6.

[114] Claimant's Responses to Mr Jones 4 July 2012 Requests for Additional Information (7 December 2012) at ¶¶75–78.

[115] 2015 Transcript, Day 1 (26 March 2015), 70: 4–6.

[116] Expert Report of Walck and Tun (10 November 2006) at ¶107.

> would have been needed even if HEP had received energy from the Krško NPP's we did not consider them to have been replacements for HEP's share of the Krško NPP's total electric generation.

421. Having traversed this material, the Tribunal accepts Mr Jones' position and considers it correct to identify 1422 GWh as replacements for Krško electricity supplies. In particular, the Tribunal agrees with Mr Jones that, based on paragraphs 75 to 78 of HEP's Response to Mr Jones' 4 July 2012 Requests for Additional Information, the contracts outlined were for replacement purposes. Moreover, it is quite clear that when the Krško supply did not resume on 1 July 2002, HEP first renewed its contracts with EGL and ETC (as well as relying on "short-term contracts (monthly, weekly or daily)"), then issued a public tender in October 2002, and finally issued another tender in December 2002.[117] It is this information that Mr Jones, rightly, relied upon.[118]

422. In reaching this conclusion, the Tribunal notes that it is unpersuaded by the Claimant's characterization of Mr Jones' Case 1 as flawed because it identifies more replacement energy than needed and assumes instead that 230.9 GWh would be re-exported. The Tribunal considers below which of Mr Jones' alternative models should be accepted – that is, whether Case 1 or Case 2 should be accepted. As a starting point, the Tribunal accepts Mr Jones' response to Mr Hawkin's questioning on this point; that is, the electricity not replaced by imports would need to be replaced by the TPPs, which are "lumpy".[119] In other words, and as Navigant pointed out, TPPs used as replacement energy sources have minimum loads—they cannot simply be fixed to produce whatever energy is needed.[120] Pointing out that would be 230.9 GWh of additional energy does not vitiate the validity of Mr Jones' model.

423. The Tribunal is thus of the view that Mr Jones approached the question of identification of replacement imports comprehensively and reasonably and accepts his conclusions that

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[117] Claimant's Responses to Mr Jones' 4 July 2012 Request for Additional Information (7 December 2012) at ¶¶76–78.

[118] Jones Report at ¶¶7.13–7.28.

[119] 2015 Transcript, Day 1 (26 March 2015), 75: 15–17.

[120] Expert Report of Walck and Tun (10 November 2006) at ¶¶73–75.

1422 GWh of imports was used to replace Krško electricity, with the remainder being sourced from TPPs.

424. The Tribunal must now consider separately the valuation of electricity from (a) the TPPs, including the question of system constraints, and (b) imports.

Valuation of Electricity from TPPs

425. The first issue that arises here is which of Mr Jones' scenarios—Case 1 or Case 2—should be relied upon in assessing quantum. The Tribunal will need to address the question of spinning reserves and other system constraints that may have required the TPPs to run. This will allow the Tribunal to then determine the value of electricity generated from the TPPs.

426. To reiterate, Mr Jones took 1422 GWh of imports and makes up the remaining 28.7% of what HEP would have received from the Krško NPP with an increase in generation by the Sisak and Rijeka TPPs.[121]

427. Mr Jones then provided a number of possible assumption-based models, which are reproduced for ease:[122]

> My base case assumption is that [Sisak and Rijeka] are required to provide 100 MW of reserve in the hour that exhibits the peak demand for these plants. As a sensitivity case, I later relax the assumption that these plans are required to provide any level of reserve.
>
> In the case of no reserve requirement, this simple approach leads to there being times at which the residual output required from Sisak and Rijeka is less than the minimum stable generation on any one of the sets at these stations. In these circumstances, I have explored two methods:
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> a. The first assumes that one unit is run at the level of its minimum stable generation and the excess is exported. …
>
> b. The second assumes that HEP acquires additional imports assumed to be available at the weighted average price for the day.

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[121] Jones Report at ¶7.29.

[122] Jones Report at ¶¶7.31–7.32.

428. Mr Jones therefore distinguished two main situations: Case 1, where there is 100MW spinning reserve minimum; and Case 2, where there is no reserve minimum. Mr Jones calculated the total replacement cost under Case 1 at €74,131,000, of which €33,167,000 is the cost of electricity produced by TPPs.[123] Under this Case, Mr Jones assumed that 230.9 GWh would have been exported during the Measurement Period, as Sisak and Rijeka would have produced more energy than needed.[124]

429. Mr Jones calculated the total replacement under Case 2 at €77,205,000, of which €36,241,000 is the cost of electricity produced by TPPs.[125] As Mr Jones explained in Annex 2 of his Report, Case 2 can be approached by two methods. Method A assumes that on days when peak demand is less than 45 MWh, one unit has to run at minimum stable generation. Any excess generation will then be exported.[126] Method B assumes that no units run on such days, and that instead exports/imports will be manipulated to meet demand. If there are sufficient exports in the factual, they would be reduced until demand is met. If there are insufficient exports, it is assumed that imports would meet the balance of demand.[127]

430. As the difference between Method A and Method B, for the purpose of valuing the TPP component of the value of Case 2 (that is, not including the value of imports), is €511,000 (being Method A at €36.497 and Method B at €35.986),[128] Mr Jones averaged the two so that Case 2 had an overall valuation of €36.241.[129] In order to account for export/import adjustments, Case 2 assumes that 112.9 GWh would be exported.[130]

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123 Jones Report at Table 22.

124 Jones Report at Table 20.

125 Jones Report at Table 22.

126 Jones Report at page 136.

127 Jones Report at page 136.

128 Jones Report at Table 36.

129 Jones Report at Table 36.

130 Jones Report at Table 20.

431. Mr Jones provided a number of caveats to his models, which the Tribunal does not need to outline in full. They mostly reflected the fact that certain underlying assumptions had to be made by Mr Jones when modelling these scenarios.[131]

432. The Tribunal finds that Case 2 is the better model to use for the reasons explained below. This finding rests upon the Tribunal's further finding that the Sisak and Rijeka TPPs were not required to run for system reasons, and were not required to provide spinning reserve.

433. As explained in the summary of Mr Jones' Report above, Mr Jones speculated that there were three possible reasons that could indicate HEP did run its TPPs in merit order: fuel contracts; transmission support; and spinning reserve.

434. Mr Jones raised the question of whether "take-or-pay obligations under its gas or fuel oil purchase arrangements in either the calendar year 2002 or 2003 … could have influenced dispatch decisions".[132] He concluded that although this might be an explanation for running TPPs out of merit order "it is very difficult to estimate different fuel values and carry these through into the estimation of the replacement costs."[133] HEP argued that there was no material impact resulting from the take-or-pay provisions, especially given gas supply restrictions that existed at the time.[134]

435. Having analysed all of the evidence, the Tribunal finds that there is no basis on which to conclude that HEP's fuel contracts had any material bearing upon its dispatch decisions in the way suggested by Mr Jones and, briefly, by Mr Styles and Dr Petrov. The notion that there has been such an effect is speculative at best. Without clearly substantiated evidence, the Tribunal is unable to accept that take-or-pay provisions had any appreciable influence upon the running of TPPs as replacement energy.

436. On the question of transmission support, after undertaking some analysis of whether the Rijeka and Sisak TPPs were required for voltage and reactive power support, Mr Jones

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131 Jones Report at ¶7.42.

132 Jones Report at ¶6.5.

133 Jones Report at ¶6.24.

134 Claimant's Submissions and Observations as to Mr Jones' Report (25 April 2014) at ¶67.

concluded that he was "unable to reach definitive conclusions on the extent to which transmission constraints have had an effect on the dispatch of generation at Rijeka and Sisak."[135]

437. In doing so, Mr Jones recognised that although Mr Styles and Dr Petrov found correlations between the TPPs and variables unrelated to the Krško NPP, these were at best "suggestive" and at worse "not … a convincing case".[136] Although Mr Styles and Dr Petrov raised a number of possible explanations for why these TPPs were run for system reasons, they are mostly propositions based upon correlations said to support those conclusions.[137]

438. The Tribunal sympathises with the inherent difficulty of understanding which factors drove various decisions, but does not consider that any of these reasons are so convincing as to demonstrate that the TPPs were run for system reasons. On balance, the Tribunal accepts the evidence of the Claimant that the Rijeka and Sisak TPPs were not run out of merit order for transmission support. First, none of the various explanations provided by Mr Styles and Dr Petrov are determinative of this issue. Although they provide various correlation analyses, the Tribunal prefers the balanced view of Mr Jones that no definitive conclusion can be reached. In terms of the onus of proof, the Respondent has not established that, on the balance of probabilities, the TPPs were run for system reasons. In a complex, national system where various factors are at force at any one time, it is fraught to rely upon corroboratory evidence based upon correlation. Correlation, as is so often said, is not causation. That is particularly so in the context of a complex national power provider.

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[135] Jones Report at ¶6.67.

[136] Jones Report at ¶¶6.64–6.66.

[137] Jones Report at ¶¶112–120.

439. Secondly, the Tribunal has no reason to doubt the truthfulness or accuracy of Mr Žodan's evidence on this point, where he responded to suggestions made by Mr Styles and Dr Petrov concerning transmission capacity:[138]

> TPP Rijeka and Sisak were not necessary for supplying [voltage and reactive power support]. All thermal and hydro power plants located in the vicinity of the consumption centers of Rijeka and Zagreb were supplying voltage and reactive power services. In addition, all larger 220/110 kV substations (Mraclin, Sisak, Meline, Medurić, Konjsko) were equipped with control transformers with the possibility of online voltage control. Moreover, eight substations were equipped with capacitor batteries, and substation Tumbri is equipped with the damping coil of 50 MV Ar.

440. Mr Žodan went on to further explain at the 2009 hearing:[139]

> Our Thermal Power Plants in Croatia were not needed for that in the grid, because in the hydro plants we had sufficient reserves for those reasons, for the reasons of frequency. By the way, the frequency of the entity in Europe is very stable and with the connections that we have got with those systems, and grids. We do not have that problem, when it comes to determining whether those power plants are going to be used or not.

441. Mr Žodan maintained this position convincingly under cross-examination, explaining that Sisak and Rijeka TPPs were not used for the purpose of maintaining voltage in the system.[140] The Tribunal is satisfied that Mr Žodan's evidence provides a sufficient answer to any doubts raised by Mr Styles and Dr Petrov. Mr Žodan has an intimate knowledge of how the Croatian system is operated and how various electricity sources are deployed, and the Tribunal has no reason to doubt his expertise or his integrity on these matters.

442. The final matter raised by Mr Jones was the question of the "spinning reserve". Again, it must be remembered that Mr Jones was suggesting reasons for why the TPPs could have been run out of merit order. As Mr Jones said, spinning reserve was "one of the reasons

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[138] Supplemental Witness Statement of Mladen Žodan (7 December 2007) at ¶13. See also 2009 Transcript, Day 2 (28 July 2009), 210–211.

[139] 2009 Transcript, Day 2 (28 July 2009), 210: 1–9.

[140] 2009 Transcript, Day 3 (29 July 2009), 5.

that I think may have applied. I don't know enough precisely how spinning reserve was handled to say that that is definitive".[141]

443. Spinning reserve is "unloaded capacity held on generating units that are synchronised to the network and able to provide active power"[142] to meet potential contingencies, such as the loss of a transmission line or generating unit.[143] Mr Jones suggested that 100MW of spinning reserve would need to be maintained by the TPPs. This seems to be an assumption. As Mr Jones explained at the 2015 hearing, after conceding that this figure of 100MW was not supplied by HEP: "I observe that that is what is going on in the factual, and I also observe that in the factual scenario that the sets were run significantly more than was required simply to meet peak demand."[144] Mr Jones later noted that he did not investigate "whether Sisak and Rijeka were actually needed to provide spinning reserve" but instead "observed what was held on them."[145]

444. Mr Jones ultimately thought it "quite likely that … reserve considerations may have influenced HEP's despatch decisions".[146]

445. When questioned on this matter, Ms Oppel provided a number of salient responses, which the Tribunal records in full:[147]

> If we use terminology that was in place in 2002/2003 and is currently in place, and I believe it was Exhibit [318], the UCTE Operations Handbook, they actually defined three types of operating reserves. And spinning reserve is a type of operating reserve.
>
> The first one is called "primary". And that primary reserve basically operates within 15 seconds; it's automatic. And it's a type of spinning reserve.
>
> The secondary operates within approximately 3 minutes, automatic again. And so the secondary is also a type of spinning reserve.

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141 2015 Transcript, Day 1 (26 March 2015), 58: 13–15.

142 2015 Transcript, Day 1 (26 March 2015), 58: 1–8.

143 Jones Report at ¶6.56(c).

144 2015 Transcript, Day 1 (26 March 2015), 59: 1–4.

145 2015 Transcript, Day 1 (26 March 2015), 59: 16–19.

146 Jones Report at ¶6.72.

147 2015 Transcript, Day 1 (26 March 2015), 163–165.

> The third reserve that's recognised in the UCTE Operations Handbook is called "tertiary", and that tertiary reserve needs to operate in approximately 15 minutes. And that can include units that are offline that can quickly start within that 15-minute period.
>
> So the term "spinning reserve", as used by Mr Jones, may be translated … to mean primary and secondary reserves. That really wasn't clear in his report. It did become clear this morning that that is what he was talking about when he used that term. …
>
> So getting back to the operating reserves that HEP had to operate under, the primary reserve, that needs to operate within about 15 seconds, is in the order of 10 megawatts. The secondary reserve, which needs to operate within about 3 minutes, is dependent upon the peak load that HEP is serving, and it varies between about 35 and 75 megawatts.
>
> So if we translate the term "spinning reserve" to mean primary and secondary reserves, that will be somewhere between about 45 megawatts and 85 megawatts, not the 100 megawatts which was quoted.

446. Having provided that background explanation, Ms Oppel then discussed HEP's system specifically by reference to HEP's Demonstrative Exhibit Number 2:[148]

> … we took the actual production of each of the units and what their maximum capability was, did the difference, summed it up for every hour during the relevant period, then we took out anything that was provided by Sisak, Rijeka and Jertovec and the run-of-river hydro plants. …
>
> So this is the secondary and tertiary. The tertiary reserves that are required is the minimum to cover the loss of your largest generator. If we assume Krško was online, it's about 340 megawatts; 338, to be exact. And that is what is shown as the red line. So it's clear that without the TPPs that we have been discussing and the run-of-river hydro, there was ample secondary and tertiary reserves.
>
> Now, getting back to the primary and secondary reserves, if we call them "spinning", I did the calculation. It shows that even without Sisak, Rijeka, Jertovec and the run-of-river hydro, we are still above the 85 megawatts. So remember, primary and secondary, if we define that as "spinning reserve", it's somewhere between 45 and 85 megawatts. So even without these units, it was above the minimum required for this period.

447. The Tribunal accepts that Sisak and Rijeka were not required for spinning reserve. The explanation provided by Ms Oppel sufficiently answers any concerns raised by Mr Jones. The Tribunal accepts that HEP had sufficient reserves without requiring Sisak and Rijeka

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[148] 2015 Transcript, Day 1 (26 March 2015), 165–166.

to provide that support. Indeed, Mr Jones, upon being shown HEP's Demonstrative Exhibit Number 2, seemed to accept that HEP's system had sufficient reserves to replace any single baseload unit even without Sisak and Rijeka.[149]

448. Further, the Tribunal would add this conclusion is consistent with that of Mr Žodan, who maintained that Sisak and Rijeka were not required for system reserves (as discussed above).

449. Finally, the Tribunal notes that HEP demonstrated that, once the Measurement Period ended, Sisak and Rijeka were at times offline at the same time that the Krško NPP was offline.[150] Although not sufficient by itself, the fact that these three units could collectively be offline supports the Tribunal's finding that these TPPs were not required for transmission support, as Mr Jones indeed went some way towards acknowledging at the 2015 hearing.[151]

450. For all of the foregoing reasons, the Tribunal concludes that there were no system reasons preventing the TPPs from being run in merit order and, importantly, there was no need for the TPPs to provide spinning reserve. As a result of this last finding, the Tribunal accepts Mr Jones' Case 2, which does not provide for spinning reserve, over his Case 1, which provides for 100 MW of spinning reserve.

451. The Tribunal therefore accepts the soundness of Mr Jones' Case 2 valuation for the cost of electricity and finds it is €36,241,000. In doing so, it rejects the Claimant's contention that Mr Jones should have used the average variable cost of the TPPs in calculating cost, rather than the marginal cost.

452. The Claimant contended that using the average variable cost would recognise and account for the fact that "the decision to commit one of these large units requires HEP to incur not only some incremental fuel associated with a higher level of generation …, but

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[149] 2015 Transcript, Day 1 (26 March 2015), 62: 8–14. Mr Jones response to the question of whether "HEP's entire system held sufficient reserves to replace the largest single source of electricity at all times" was "It certainly looks like it does".

[150] 2015 Transcript, Day 1 (26 March 2015), 63–64; and HEP Demonstrative Exhibit Number 3.

[151] 2015 Transcript, Day 1 (26 March 2015), 64: 17–25.

also the fuel required to bring the equipment up to operating temperatures, before a single MWh can be generated."[152]

453. Mr Jones in his Report noted that he was "sceptical as to whether these costs are anywhere near fully variable – in other words, whether all maintenance and operations costs would have varied pro rata between production in the factual and counterfactual."[153] However, Mr Jones otherwise relied on the data provided by HEP and had the advantage of considering the analysis of Navigant.[154]

454. The Tribunal accepts Mr Jones' decision to use marginal, rather than variable, costs. Mr Jones, with the full benefit of reviewing the Claimant's expert reports, has brought his independent judgment to this matter and considered that there is insufficient evidence to justify a variable costs approach.[155] Although Mr Jones agreed that variable costs might be appropriate if there were truly variable costs his conclusion – expressed at the 2015 hearing during questioning – was that he was "not at all clear that Navigant's measure of what they have called 'variable costs' are indeed actually variable with production levels".[156]

455. In summary, the Tribunal accepts Mr Jones' analysis in calculating the cost of the TPPs at €36,241,000. The next question in contention is the value of imports.

Valuation of Imports

456. As to the value of replacement imports, Mr Jones' number is €40,964,000.[157] To be clear, the Tribunal is referring to the 1,422 GWh of imported energy used to partially replace the missing Krško electricity.

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[152] Claimant's Submissions and Observations as to Mr Jones' Report (25 April 2014) at ¶93. See also Claimant's Skeleton of its Position on the Issues for Determination Relating to Mr Jones' February 2014 Report (24 March 2015) at page 5.

[153] Jones Report at ¶6.26.

[154] Jones Report at ¶7.34. See Expert Report of Walck and Tun (10 November 2006) at ¶¶95–105.

[155] See Jones Report at ¶6.25–6.32.

[156] 2015 Transcript, Day 1 (26 March 2015), 79: 18–21.

[157] Jones Report at Table 21.

457. Mr Jones approached valuation by using the "price provided by HEP for each contract" although it was necessary to "make an adjustment in respect of the replacement contracts that were entered into for a term which *ex post* exceeded the residual part of the Relevant Period."[158]

458. To add another layer to this picture, Mr Jones noted that considering the cost of imports also requires the taking into account of "the additional costs of the power that HEP contracted in December for delivery in the period after deliveries from NEK resumed."[159] This is necessary, Mr Jones pointed out, because the value of electricity changes seasonally due to higher demand during winter.[160] Thus:[161]

> … I would have expected that the prices actually paid by HEP in the replacement contracts in 2003 would be below market price in January and February, about the same in March and April and above market price in May and June. Put another way, it is to be expected that HEP paid cheaply for such imports during the Relevant Period but only at the expense of incurring the liability to pay over the market price in the remainder of 6 month contract term.

459. Understanding the seasonal variation led Mr Jones to consider the EEX, whereby he "analysed the quotes for forward baseload contracts on this market in the period 16–18 December 2002, the three days preceding the close of the tender, for supply in the months of January to June 2003 and derived seasonal adjustment factors for each month."[162] Mr Jones' seasonal adjustments can be seen in Table 17 of his Report. Mr Jones then "applied these seasonal adjustment factors to the contract price for electricity in the month of April to June beyond the Relevant Period in order to derive a market price during this period. The difference between the contract value and the market value in this period represents the additional cost."[163] The outcome of this analysis can be seen in Table 18.

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158 Jones Report at ¶7.21.

159 Jones Report at ¶7.24.

160 Jones Report at ¶7.23.

161 Jones Report at ¶7.23.

162 Jones Report at ¶7.25.

163 Jones Report at ¶7.27.

460. The Claimant opposed Mr Jones' general approach to pricing baseload imports. It submitted that a more nuanced approach should have been taken, which considered both baseload and peakload import pricing.[164] As Navigant explained in its First Report:[165]

> … for each day, we calculated the weighted average cost of energy imports that were not otherwise required for system operation reasons. We multiplied the daily average cost by the mWh of replacement energy purchased by HEP that day to arrive at the cost of those replacement energy purchases.

461. The Respondent argued, *inter alia*, that price should be approached based on market rates. The Tribunal will repeat here what it has said above: the concern is to remedy the actual loss that the Claimant incurred. That will not be achieved by simply looking at market prices. As a consequence, the Tribunal does not have to address the range of issues raised by the parties and Mr Jones concerning valuation of the market value of imports, such as the pricing of variability in the import contracts, for example.

462. The Tribunal is faced with a choice between the two models posed by Mr Jones and the Claimant as to the valuation of imports on the Replacement Model. However, the Respondent may be seen to have implicitly supported the approach later taken by Mr Jones because Mr Styles and Dr Petrov argued valuation should be of baseload imports, rather than mixed imports.[166]

463. The Tribunal finds that the replacement value of HEP's imports should be calculated as suggested by Mr Jones; namely, that only baseload import contracts that are recognised as replacement contracts should be considered. The approach of valuing these contracts based on the price HEP actually paid is entirely consistent with the replacement model, whereby the Tribunal calculates the costs HEP *actually* incurred in replacing energy that should have been received from the Krško NPP. Having accepted Mr Jones' conclusions on which import contracts were used as replacements, it is a straightforward process to then calculate their value by reference to the price paid.

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[164] Claimant's Skeleton of its Position on the Issues for Determination Relating to Mr Jones' February 2014 Report (24 March 2015) at page 5.

[165] Expert Report of Walck and Tun (10 November 2006) at ¶109. See also Expert Reply Report of Walck and Oppel (7 December 2007) at ¶¶63–64.

[166] Expert Report of Styles and Petrov (6 July 2007) at ¶179.

464. The Tribunal does not agree with the Claimant's submission that a mixed profile be considered. The Tribunal, in accepting Mr Jones' model on replacement energy sources, has also accepted that replacement energy came principally from imports and the remainder was then made up by the Sisak and Rijeka TPPs. These replacement sources were used to replace Krško power, the principal source of baseload electricity in Croatia. When considering the costs HEP actually incurred in replacing a baseload electricity source, it would be inappropriate to consider a mixture of baseload and peakload import contracts.

465. The Tribunal moreover does not accept the complicated position suggested by the Claimant, where it argued:[167]

> It follows that, if HEP had restructured its import plan, not by simply omitting a defined set of contracts, but by shifting its dispatch stack and by filling the resulting holes with appropriate imports, its import contract costs in the counterfactual case would not simply be the peak-load or optionality contracts, but something more nuanced. By putting the Krško NPP back into the baseload spot in its dispatch stack, HEP would have been able to avoid some baseload imports. But HEP would also have been able to move some of its generating units into a higher position in the dispatch sequence, which could offset some of its peak profile imports as well.

466. The Tribunal finds that this approach is unnecessarily complex and serves to obscure what is a very simple question: what did HEP pay for its replacement contracts, identified earlier? The contracts identified were for the purpose of replacing Krško electricity and were for the purpose of providing baseload electricity. Moreover, the Claimant's initial submission as to the appropriate approach was intertwined with its unsuccessful submission that some imports were used for transmission support reasons.[168] As the Tribunal made clear above, it is not convinced that import contracts should be ignored because the Claimant simply asserted they were needed for system reasons and no more. This also supports the Tribunal's decision to reject Navigant's proposition.

467. The Tribunal does note, however, that although these contracts did account for some degree of variability, it will not adjust the value of those contracts downwards, as the Respondent would have it. First, the Respondent's submissions all focused on valuing

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[167] Claimant's Submissions and Observations as to Mr Jones' Report (25 April 2014) at ¶97.

[168] Expert Report of Walck and Tun (10 November 2006) at ¶¶107–108.

that variability for the purpose of the market value approach. Secondly, as the Respondent otherwise submitted that the Claimant acted reasonably and had not challenged the specific use of contracts with variability, the Tribunal sees no reason to vary the valuation of the factual. The price actually paid is the price the Tribunal finds to be correct.

468. The Tribunal also agrees with Mr Jones' decision to account for seasonality. No party seemed to take issue with this approach. Mr Styles did briefly comment at the 2015 hearing that seasonal price variations were better suited to Europe generally, rather than Croatia specifically,[169] but he did not provide substantiation of its purported effect and therefore left Mr Jones' calculation effectively intact. As such, it is accepted by the Tribunal.

469. Seasonality is an adjustment that makes sound commercial sense. The value of electricity fluctuates by the season, with demand much higher in the winter months. The Tribunal finds that the following comment of Mr Jones accurately summarises the position, which has not been specifically challenged by the Claimant: "it is to be expected that HEP paid cheaply for such imports during the Relevant Period but only at the expense of incurring the liability to pay over the market price in the remainder of the 6 month contract term."[170] The Tribunal also accepts the remainder of Mr Jones' analysis on this question and his overall valuation of the replacement imports at €40,964,000.

Conclusion on Compensation

470. Having reached this juncture, the Tribunal finds it convenient to summarise its conclusions thus far:

(a) The Tribunal finds the "counterfactual" scenario Y factor is €55,647,000.

(b) The Tribunal finds the "factual" scenario X factor is €77,205,000, which is comprised of €36,241,000 for TPP generation and €40,964,000 for import contracts.

[169] 2015 Transcript, Day 1 (26 March 2015), 185–186.

[170] Jones Report at ¶7.23.

(c) These figures are then inserted into the X – Y calculation to reach the final sum of €21,558,000 (i.e., €77,205,000 – €55,647,000 = €21,558,000). This figure is the amount which the Tribunal finds is the measure of damages to which the Claimant is entitled subject to any deduction required by the "benefit-to-HEP" theory analysed below.

VIII. BENEFIT-TO-HEP DEDUCTION

471. In his February 2014 Report, Mr Jones included a deduction which took account of benefits he suggested HEP received in the factual scenario that would not have existed in the counterfactual scenario. As with the pass-on defence addressed above, this was considered to be a "new issue", not previously addressed by the parties. In its Ruling of 27 October 2014, the Tribunal ruled that it was appropriate to consider this issue during deliberations as part of the overarching framework for determining loss.

472. The Tribunal summarises the position of Mr Jones and the parties below, before setting out its own analysis and conclusions on this issue.

MR JONES' ANALYSIS OF THE BENEFIT TO HEP

473. Mr Jones suggested that, in the counterfactual scenario, any Slovenian purchaser of Krško power would have paid the same tariff as HEP – that is, a tariff calculated in accordance with the 2001 Agreement. He concluded that this would have been a lower price than was paid in the factual scenario. Consequently, in the counterfactual scenario where the 2001 Agreement was implemented from July 2002, NEK would actually have received a reduced income for power generated by the Krško NPP and, therefore, have been in a worse financial position at the end of the Relevant Period. As a result, NEK was worth more by April 2003 in the factual scenario than it would have been worth in the counterfactual scenario.

474. Mr Jones stated that, as HEP owned a 50% share of NEK, HEP would have benefited from the increased value. Hence, any compensation should be reduced accordingly.

475. He concluded that, on this basis, any compensation should comprise the estimated replacement cost or financial value in each month less the costs in the counterfactual and any adjustment for the value of NEK. Mr Jones then calculated that the total value of the

benefit HEP would have received as a shareholder of NEK during the relevant period was HRK 70.5 million or €9.38 million. He deducted this amount from the totals calculated under both the replacement cost and financial value approaches in order to derive the final damages figure payable to HEP.

HEP COMMENTS ON THE JONES REPORT

476. HEP submitted that the Tribunal should disregard Mr Jones' new "benefit-to-HEP" theory pursuant to which he deducted €9.38m from the compensation payable to HEP. It contended that Mr Jones made a basic error in his benefit-to-HEP calculations by using budgeted or projected sales pricing figures rather than actual figures for 2002. In reality, HEP said, the actual sales price per unit in 2002 (6,499 SIT/MWh) was much lower than the projected sales price (7,039 SIT/MWh) used by Mr Jones and which would reduce the alleged benefit by €3.23 million.

477. HEP also contended that Mr Jones had taken no account of certain actions taken by the NEK Supervisory Board that would have been relevant to his calculations. These decisions included (i) refunds provided to purchasers from 1 January 2003 to bring the charges back into line with the 2001 Agreement, hence the ultimate price paid in 2003 was in line with 2001 Agreement charges; and (ii) excess depreciation raised in 2002 was used to cover shortfalls in depreciation between 1998 and 2001 (when HEP was "out of the Plant"[171] and therefore received no benefit from it). HEP submitted that if Mr Jones had known of these actions, he would not have put forward a benefit-to-HEP theory.

478. In response to Slovenia's argument that HEP had also received credit notes for the first part of 2003, HEP countered that Slovenia had mischaracterised the nature of these credits in its submissions. HEP summarised the factual background in detail and concluded that the contemporaneous documentation made it clear that HEP received no refund, and hence realized no "benefit", with respect to the period from 1 January to 18 April 2003. HEP argued that Slovenia's entire submission on this issue rested on the factual misstatement that because NEK made most of its profit in the first quarter of 2003, the refund to HEP must relate to that period. In HEP's submission, NEK continued

[171] Claimant's Submissions and Observations as to Mr Jones' Report (25 April 2014) at ¶13.

to make a profit after 19 April 2003 despite its price adjustment on 17 April 2003 (which brought its pricing into compliance with the 2001 Agreement, but did not adjust for differences between projected and actual costs). Credits received by HEP related to the post-19 April period only and HEP received no refund for the period 1 January to 18 April 2003.

479. On the surplus depreciation issue, HEP explained that, in 2006, when asked by HEP if the surplus depreciation from 2002 could be used to fund capital improvements etc., KPMG had said it could not as it had already been spent by NEK in 1998-2001. HEP contended that the argument that HEP benefited from paying off this prior shortfall and from the improvements made in 1998-2001 ignored the agreement in Paragraph 5 of Prilog 3 to the 2001 Agreement: "ELES GEN, d.o.o. assumes the financial results of all power and electricity produced in the period from July 31, 1998 until the date HEP d.d. begins to take over the electricity again." Therefore, any shortfall in the depreciation fund was exclusively the responsibility of ELES-GEN and the "surplus depreciation" funds generated in 2002 were not available to NEK for the benefit of HEP, once HEP's ownership was restored.

480. Correcting these errors, HEP calculated that if a benefit-to-HEP theory were to be applied, the correct benefit to apply for entire Relevant Period would be an immaterial €150,000.

SLOVENIA'S COMMENTS ON THE JONES REPORT

481. Slovenia agreed with HEP that Mr Jones should have used actual figures, not budgeted figures, to calculate the benefit to HEP. However, Slovenia disagreed with HEP's deductions regarding surplus depreciation and credit notes.

482. In relation to surplus depreciation, Slovenia argued that "the fact that the surplus depreciation funds were used to pay off depreciation shortfalls in previous years does not detract from the fact that NEK (and, consequently, HEP) was better off in the factual scenario."[172] It explained that any depreciation financing, even if it relates to shortfalls in

[172] Respondent's Reply Submissions on Expert Report of Wynne Jones (30 May 2014) at ¶34.

previous years still benefitted HEP post-2003. This is because returns on investment in capital assets are realised over a period of time and consequently HEP received a benefit from these prior investments.

483. Slovenia also disagreed with HEP's position that, under paragraph 5 to Exhibit 3 to the 2001 Agreement, shortfalls in 1998-2001 were ELES-GEN's sole responsibility. Slovenia said that all costs post-June 2002 were to be shared, including costs involved with addressing shortfalls in depreciation funds for prior years.

484. With regard to the credit notes, Slovenia maintained that the refunds were not linked to purchases made by HEP and ELES-GEN, hence there is no basis for HEP's assumption that because it did not purchase electricity prior to 18 April 2003, that it did not receive refunds in relation to that period. Slovenia argued that most of NEK's profit was made in the first quarter of 2003, therefore refunds had to relate to income earned during this period. It also said that HEP had received credit notes in 2003 which would need to be included in the benefit to HEP in that year. Slovenia suggested that, as a result of the credit notes, "the value of the HEP Benefit for 2003 is 638.87 million SIT (or €2.70 million), which is €0.11 lower than the €2.81 million figure calculated by Mr Jones."[173]

485. Finally, Slovenia initially contended that HEP (and Mr Jones) wrongly estimated the interest charge paid on NLB loans as 945 million SIT, when it was in fact 849 million SIT. Later, Slovenia revised its position stating that ELES-GEN had reimbursed NEK for the 849 million SIT paid in NLB loan interest charges and therefore no deduction should be made in this regard.

MR JONES' ADDENDUM AND RECALCULATION OF THE BENEFIT TO HEP

486. Following the parties' comments, on 16 March 2015 in advance of the Hearing, Mr Jones provided an addendum setting out his re-calculation of the benefit HEP received. Mr Jones concluded that the correct benefit figure was €4.34m, rather than his initial €9.37m estimate.

[173] Respondent's Reply Submissions on Expert Report of Wynne Jones (30 May 2014) at ¶48.

487. In his Addendum, Mr Jones (a) adopted actual, not budgeted figures; (b) resurrected the NLB loan interest matter, suggesting that SIT 96m should be deducted because NEK paid SIT 945m in interest on the NLB loans, of which ELES-GEN reimbursed it SIT 849m; (c) maintained his previous position on surplus depreciation, explaining that, based on his interpretation of the 2001 Agreement, the Agreement does not allow the Tribunal to look into issues before 2002 and so surplus depreciation should not be deducted; and (d) deducted, on account of credit notes, the difference between the sums received by ELES-GEN and HEP, being SIT 240m.

488. In relation to the NLB loan interest, Mr Jones stated:[174]

> I have also reviewed Counsel for Slovenia's letter to me as dated 24 April 2014 referring to a request I made in my report of February 2014 to clarify the matter of interest payments on NLB loans. Paragraph 5 of the letter says that the interest payments were made by Eles-Gen on behalf of NEK from 1st July 2002. This point is also made in paragraph 5.16 of Slovenia's response to my second information request. I had originally noted that interest charges were shown in the NEK accounts and had assumed that these must have been additional to any interest that Eles-Gen had paid. However, it now appears to me that the 'payment of interest' by Eles-Gen referred to by Slovenia was formally a payment to NEK, not NLB. It was a reimbursement of interest payments that had actually been made by NEK.
>
> The evidence on any net amount that NEK actually paid is not completely clear. The working hypothesis that seems to me to be most consistent with the accounting data is that there was a payment by NEK of SIT 945m and a reimbursement by Eles-Gen of SIT 849m, leaving a net payment of SIT 96m. I have therefore used this number in my revised estimate of the benefit to HEP. However, I note that my interpretation of the data remains to be confirmed.

TRIBUNAL'S ANALYSIS AND CONCLUSIONS ON THE BENEFIT TO HEP

489. The Tribunal begins its analysis by noting that both parties, in principle, appear to agree that if HEP did indeed received a benefit as shareholder between 1 July 2002 and 18 April 2003, this benefit should be taken not account in the damages calculation. In other words, Mr Jones' perception is conceptually sound. In the March 2015 Addendum to his Report, Mr Jones noted that:[175]

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[174] Jones Report Addendum at ¶¶12–13.

[175] Jones Report Addendum at ¶5.

> My understanding is that neither party challenges the principle that any difference between the value of NEK in the actual scenario and that which would have resulted under the counterfactual should be reflected in an adjustment (positive or negative as appropriate) in the calculation of any damage incurred by HEP.

490. This benefit was derived from the fact that NEK sold the Krško energy that should have been supplied to HEP under the 2001 Agreement to other Slovenian buyers at a higher price than it would have received from HEP, thus increasing its own revenue. Mr Jones initially raised this issue in his February Report, but revised his calculation in March 2015 in his Addendum, as described above.

491. In the Addendum, one of the corrections made to his initial calculation was to use actual data rather than budgeted data. Both parties and Mr Jones agreed that this amendment should be made.

492. At the 2015 hearing, Mr Hawkins (for the Claimant) suggested that there were only two substantive issues remaining in relation to the benefit-to-HEP theory. These were (i) whether there should be any deduction for the payment of NLB loan interest, and (ii) whether there should be any deduction for surplus depreciation.[176] Mr Hawkins may have been overly optimistic. A third issue remains outstanding; namely, (iii) whether there should be any deduction for credit notes issued in 2003 by NEK to HEP (and ELES-GEN) and, if so, what that deduction should be.

493. The Tribunal will consider each of these outstanding issues in turn, beginning with the NLB loan interest to be deducted. Mr Jones acknowledged that any payment of the NLB loan interest is a payment that would have been for the benefit of Slovenia alone and therefore should not be included.[177] The Tribunal also understands the parties to agree conceptually that any interest paid by NEK regarding the NLB loans, rather than by ELES-GEN, should be deducted. The dispute concerns how much, if anything, was actually paid by NEK.

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[176] 2015 Transcript, Day 2 (27 March 2015), 8: 9–17.

[177] Jones Report Addendum at ¶10.

494. Initially, it appeared that the parties had agreed that the correct deduction required to account for the payment interest charges on NLB loans in the second half of 2002 was 849 million SIT, as reported in NEK's 2002 Annual Report.[178]

495. However, in his Addendum, Mr Jones indicated that the 849 million SIT was actually – in his understanding – the amount that ELES-GEN paid to NEK on account of interest payments to made on the loan. He therefore considered that only 96 million SIT should be deducted (being the remainder of the total interest (945 million SIT) that Mr Jones estimated should have been paid in the second half of 2002). The Claimant has challenged this recalculation and noted that no evidence of a payment by ELES-GEN to NEK has been adduced.

496. As Slovenia's Counsel noted at the 2015 hearing,[179] the issue is essentially a factual one – did NEK pay the interest on the NLB loans or did ELES-GEN pay it by providing NEK with the required funds? Slovenia's position was that NEK's Annual Report for 2002 "clearly says that in the second half of 2002, ELES-GEN repaid … to NEK 849 million SIT" and therefore sufficient and clear proof has been provided that ELES-GEN paid the loan interest.[180] Slovenia stated that no other payments were made – including the SIT 96 million Mr Jones had assumed – and therefore no further deduction was required on account of the NLB loans.

497. The Tribunal finds it useful to recount Mr Jones' position on this issue as set out in his Addendum. Mr Jones stated that:[181]

> My original calculation used a figure of SIT 945m for the second half of 2002. This was taken from the NEK annual report for 2002 … . Slovenia has now directed me to the final audited version of this report. This shows the same total interest payment on all loans as the report provided by HEP (SIT 5045 m), but also indicates that Eles-Gen *repaid* interest of SIT 844m and 5m of bank fees to NEK. Slovenia has also

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[178] Respondent's Reply Submissions on Expert Report of Wynne Jones (30 May 2014) at ¶31(a). Claimant's Skeleton of its Position on the Issues for Determination Relating to Mr Jones' February 2014 Report (24 March 2015) at page 1.

[179] 2015 Transcript, Day 2 (27 March 2015), 78–79.

[180] 2015 Transcript, Day 2 (27 March 2015), 79: 5–11.

[181] Jones Report Addendum at ¶11 (emphasis in original, references removed).

now said that the interest charge on the NLB loans was 849 million, quoting the same source.

498. Mr Jones went on to state that "it now appears to [him] that the 'payment of interest' by ELES-Gen referred to by Slovenia was formally a payment to NEK, not NLB. It was a reimbursement of interest payments that had actually been made by NEK."[182] Mr Jones concluded his Addendum by suggesting that the evidence on how much ELES-GEN had paid was unclear but that, in his view, "there was a payment by NEK of SIT 945m and a reimbursement by Eles-Gen of SIT 849 million, leading a net payment of SIT 96m."[183]

499. At the 2015 hearing, Mr Jones confirmed this position. During the hearing, Mr Levy (for Slovenia) asked Mr Jones the following question: "So you are saying that although they repaid 849 million SIT, NEK might have paid more than 849 million SIT in respect of interest?"[184] Mr Jones responded, consistently with his Addendum: "That is what I understand."[185] When pressed on this sum, Mr Jones and his assistant, Mr Aked, told Mr Levy that — when considering SIT 1,890 million paid in interest in 2002, as seen in HEP Exhibit 528 — they divided the interest paid in two, leaving the figure of SIT 945 million. When Mr Levy indicated he was "not aware of any other document which suggests that they have paid any more than 849", Mr Aked responded that "[b]ecause we could find no other evidence, we assumed that the total amount for the year was divided equally between the first half and the second half."[186] Mr Levy suggested that there had not been symmetry in the interest payments made between the two halves, so SIT 945 million was not correct.[187]

500. The Tribunal observes that both parties agreed the payment made on account of the loan interest over the relevant period was SIT 849 million, not SIT 945 million. The Claimant queried, not the amount, but whether ELES-GEN had repaid this money to NEK as suggested by the Respondent. This appears to be the real issue between the parties. The

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182 Jones Report Addendum at ¶12.

183 Jones Report Addendum at ¶13.

184 2015 Transcript, Day 1 (26 March 2015), 135: 9–11.

185 2015 Transcript, Day 1 (26 March 2015), 135: 12.

186 2015 Transcript, Day 1 (26 March 2015), 137: 5–9.

187 2015 Transcript, Day 1 (26 March 2015), 17: 10–11.

Tribunal has examined NEK's Audited Accounts as found in Slovenia Exhibit 347. It agrees with the Respondent and Mr Jones that the 849m SIT appears to have been paid by ELES-GEN to NEK to cover the NLB loan interest and charges. The Audited Annual Report states that that:[188]

> The majority of borrowings raised for the construction of NEK at NLB, were repaid by NEK until 30 June 2002 in accordance with the repayment schedule in the amount of **SIT 1,271 million**. Since 1 July 2002, ELES GEN repaid these borrowings before their maturity in accordance with the Agreement for Assumption of liabilities.

501. At page 24 the Report records that:

> According to paragraph one of Enclosure 3, ELES GEN has assumed all the NEK's liabilities to the bank for borrowings raised for investing activity. Furthermore, paragraph three provides that elimination of these borrowings should be reflected in the capital increase. The Assumption Agreement did not provide for this conversion and accordingly, in 2002 NEK recognised receivables due from ELES GEN and extraordinary revenue. As at 11 March 2003, these borrowings were eliminated from the books of accounts of NEK whilst at the same time we wrote-off receivables due from ELES GEN and debited them to liabilities to NLB in the amount of SIT 12,064 million

502. The Annual Report further records that:[189]

> … Pursuant to the Assumption Agreement, NEK recognised receivables due from ELES GEN and extraordinary revenue in that same amount (SIT 16,516 million). In addition, NEK also recognised interest receivables and bank fees and commission as an item of extraordinary revenue (SIT 849 million). In the second half of 2002, ELES GEN repaid SIT 4,452 million of the principal outstanding and repaid SIT 844 million of interest and bank fees and commission in the amount of SIT 5 million. The resulting **extraordinary revenue** amounts to **SIT 17,365 million**.

503. The Claimant's suggestion that proof of the payment by way of wire transfer or similar is unwarranted. The Audited Annual Report stated that ELES-GEN made this payment and the Tribunal accepts this.

504. There is no evidence that additional amounts over and above the 849m SIT were paid by NEK. During the 2015 hearing, Mr Aked (who worked with Mr Jones on his Report) appeared to accept that there may be valid reasons as to why interest was not paid evenly throughout the year and, therefore, that the assumption that the interest paid in the second

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188 Slovenia Exhibit 347 at page 21.

189 Slovenia Exhibit 347 at page 6.

half of the year was equivalent to the half of the full year's interest may not be correct.[190] The Tribunal agrees with the Respondent that it would have been strange for ELES-GEN to have repaid SIT 849 million and left SIT 96 million unpaid without any explanation.

505. Based on the above, the Tribunal finds that ELES-GEN repaid to NEK all amounts relating to NLB loan interest charges. Consequently, the Tribunal finds that no deductions need be made on account of NLB loan interest and therefore the additional 96m SIT deducted by Mr Jones in his Addendum calculation should be added back to the total.

506. The second issue with the Addendum calculation relates to the 2.482 million SIT of surplus depreciation accumulated in 2002 and whether this surplus indeed accrued for the "benefit" of HEP. It is agreed that there was a shortfall in depreciation in 1998 and 2001 and that, in November 2006, KPMG assigned the 2002 surplus depreciation to the shortfalls accrued in 1998 and 2001. The Claimant argued that the surplus was therefore not available for HEP or NEK to use and should not be seen as a benefit to HEP.[191] The Respondent conversely stated that, if the surplus had not existed, HEP would have had to bear 50% of the previous shortfalls and therefore the fact that they were remedied by the surplus was of benefit to HEP.

507. The Tribunal begins by considering the position under the 2001 Agreement. The Tribunal recalls Exhibit 3, and sets it out in full below:

> PRINCIPLES OF THE STRUCTURING OF THE FINANCIAL RELATIONS
>
> (1) ELES GEN d.o.o. shall assume all obligations of NEK d.o.o towards the bank which have occurred as a result of the transfer to NEK d.o.o of the repayment of investment loans made by the Slovene founders, according to the balance on December 31, 2001. Obligations resulting from loans issued to carry out NEK's modernization project will be NEK d.o.o's only remaining long-term financial obligations. Until June 30, 2002, the cost of these loans will be borne through the cost of electricity by the Shareholder from the Republic of Slovenia and from that day forward by both Shareholders.
>
> (2) By virtue of the entry into force of this Agreement:

[190] 2015 Transcript, Day 1 (26 March 2015), 136–137.

[191] 2015 Transcript, Day 2 (27 March 2015), 13–14.

-HEP d.d. waives all claims against NEK d.o.o for damages, i.e. for compensation for undelivered electricity, i.e. for compensation for use of the capital, and in this regard will fully waive all claims in court arising therefrom;

-NEK d.o.o waives all claims against HEP d.d. in connection with delivered power and electricity, and in this regard will fully waive all claims in court arising therefrom;

-NEK d.o.o waives its claims against ELES d.o.o in the same amount as in the previous bullet of this Paragraph;

-NEK d.o.o. waives all claims against HEP d.d. in connection with charged fees for financing of the dismantling of the Nuclear Power Plant Krško and disposal of radioactive waste from Nuclear Power Plant Krško, and in this regard will fully waive any claims in court arising therefrom;

-NEK d.o.o. waives all claims in connection with pooled resources of depreciation of both founders and claims in connection with the coverage of losses from previous years.

(3) Based on the provisions listed above, NEK d.o.o will rearrange its balance sheet on December 31, 2001 so that:

-it shows neither any claims toward HEP d.d. and ELES d.o.o nor any obligations toward the fund for financing of the dismantling of the Nuclear Power Plant Krško and the disposal of radioactive waste from the Nuclear Power Plant Krško;

-it does not show any obligations toward the bank which occurred as a result of the transfer of repayment of Slovene founders' investment loans to NEK d.o.o. described in Paragraph 1 of this Exhibit;

-based on the conversion of HEP's long term investments and the exemption of the loan, NEK d.o.o's capital will, after the payment of the possible uncovered losses, be distributed to the Shareholders in two equal parts, so that the initial capital of NEK d.o.o. reaches the amount listed in Article 2 of this Agreement, and so that any possible remainder is distributed into the reserves;

-any other necessary accounting corrections or changes arising from this Exhibit are executed.

(4) Any possible profit to NEK d.o.o. arising from accounting corrections or changes described in Paragraph 3 of this Exhibit will be tax-exempt.

(5) ELES GEN d.o.o assumes the financial results of all power and electricity produced during the period from July 31, 1998 until the date HEP d.d. begins to take over the electricity again, but no later than June 30, 2002. All the while, NEK

> d.o.o.'s financial position must not worsen compared to its financial position on July 30, 1998.
>
> (6) The Contracting Parties will ensure that the Shareholders determine, by no later than the end of 2002, whether the company needs additional long-term sources of financing its operating costs, which sources of financing will be secured by a capital increase in NEK d.o.o. or any other appropriate manner.

508. The Claimant relied on paragraph 5 of Exhibit 3 to argue that surplus depreciation covering past shortfalls in 1998 and 2001 apply to a period when ELES-GEN was responsible. The Respondent countered by saying that while paragraph 5 covers benefits, paragraph 1 covers costs. Slovenia stated that:[192]

> In either case, 1 July 2002 was intended to be the critical date – in the six months before 1 July 2002, ELES-GEN was to bear the relevant costs and enjoy the relevant benefits; on and after 1 July 2002, both HEP and ELES-Gen were to share these costs and benefits.

509. In its Decision on the Treaty Interpretation Issue, the Tribunal found that:[193]

> Exhibit 3 is entitled "Principles of the Structuring of Financial Relations". Its paragraph (1) provides that ELES GEN d.o.o. shall be responsible for the repayment of investment loans by the Slovene founders of NEK "according to the balance on December 31, 2001," and that NEK's responsibility for "remaining long-term financial obligations" arising out of "NEK's modernization project" "will be borne through the cost of electricity by the Shareholder from the Republic of Slovenia [until June 30, 2002] and from that day forward by both Shareholders." This of course is in line with the parity principle that has governed the two sides since the 1970 Agreement and which permeates the 2001 Agreement (see Paragraphs 196-197, below). *Accordingly, HEP's post-30 June 2002 obligation to share NEK's previously incurred modernization costs is part of the financial settlement achieved by Article 17 and Exhibit 3 of the 2001 Agreement. That settlement is a two-way street.*_Paragraph (5) provides that ELES GEN "assumes the financial results of all power and electricity produced during the period from July 31, 1998 until the date HEP d.d. begins to take over the electricity again, but no later than June 30, 2002." *Hence, starting 1 July 2002, HEP would share the costs outlined in paragraph (1) in accordance with the new financial terms and, as of 1 July 2002 HEP would also be entitled to the financial results of its share of the electricity produced by Krško NPP.*
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> …

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[192] Respondent's Reply Submissions on the "HEP Benefit" Argument (30 January 2015) at ¶22.

[193] Decision on the Treaty Interpretation Issue (12 June 2009) at ¶¶174–177 (emphasis added).

> The Tribunal's construction of Article 17 and Exhibit 3 becomes clearer still when, as the VCLT requires, one considers their wording "in light of the [the 2001 Agreement's] object and purpose" and "in their context."
>
> …
>
> Turning to the object and purpose of the 2001 Agreement, the Tribunal concludes that the 2001 Agreement was in general terms a settlement agreement intended to resolve the longstanding and significant differences between the two countries and to thereby enable the resumed joint operation and exploitation of NPP Krško in accordance with the parity principle. *In other words, the purpose of the 2001 Agreement was to draw a line in time, on 30 June 2002, as of which all past financial disputes were to be settled and from which new financial terms were to take effect, with a "zero/zero" financial balance to be achieved, as of 1 July 2002.*

510. In accordance with its previous analysis, the Tribunal considers that Exhibit 3 draws a line as at the critical date of 30 June 2002. All financial obligations prior to this date fall on ELES-GEN. The Tribunal therefore prefers the interpretation of the Claimant whereby the 2002 depreciation surplus that was attributed to earlier shortfalls cannot be deemed to be a benefit to HEP. The Tribunal finds that the surplus depreciation should be deducted from the benefit calculation.

511. The Claimant set out the following calculation which results from the above finding. The Tribunal understands this calculation has not been challenged:[194]

> What this means is that this 2,482 million SIT in "surplus depreciation" collected in 2002 was not available to NEK to finance new investment once HEP resumed its co-ownership of the Krško NPP in April 2003. It follows, therefore, that in calculating the "benefit" to HEP of higher prices paid by Slovenian buyers in 2002, a deduction must be made for the portion of those revenues that was used to finance depreciation short-falls for the years 1998 to 2001, when HEP was out of the Plant. That calculation is straightforward. One simply multiplies the 2,482 million SIT collected in 2002, but spent on prior years' depreciation, by the ratio of: (a) electricity generation in the second half of the year (2,932 GWh), to (b) electricity generation for the entire year (5,307 GWh). (See HEP Ex. 528; see also Slov. Ex. 326.) The result is 1,371 million SIT.

512. The Tribunal finds therefore that a deduction of SIT 1,371 million should be made to the benefit-to-HEP calculation. Using Mr Jones' 2002 exchange rate, this equates to €2.98m.

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[194] Claimant's Submissions and Observations as to Mr Jones' Report (25 April 2014) at ¶13.

513. The third issue that arose from Mr Jones' initial calculations related to credit notes provided to HEP and ELES-GEN in 2003. HEP argued that these credit notes refunded some of the additional amounts paid by ELES-GEN and had not properly been taken into account. At the 2015 hearing, Mr Jones agreed that discount should be provided for asymmetry in these credit notes. He deducted SIT 281 million from his HEP benefit calculation as a result.

514. Mr Jones stated in his Addendum that he had been unaware of the credit notes when writing his initial Report and that:[195]

> To the extent that equal amounts were credited to both Eles-Gen and [HEP], such credit notes can be ignored. However, any mismatch in the credit notes issued needs to be taken into account.
>
> Two sets of credit noted [*sic*] were issued. However, the only asymmetry relates to the first set of credit notes which credited Eles-Gen with SIT 516.277m and HEP with SIT 234.912m. The additional amount received by Eles-Gen is therefore the difference, namely SIT 281.365m.

515. During questioning by Mr Levy, Mr Jones confirmed that this amount should therefore be deducted from any benefit, stating that:[196]

> In the counterfactual [the credit notes] would have been paid out symmetrically and there would not have been that difference. So here is a payment that was made, but was not to the benefit of HEP, and it should be deducted from any aggregate measure -- which could be positive or negative -- as to how much HEP was better or worse off because of the events surrounding the relevant period.

516. The Tribunal finds Mr Jones' reasoning and conclusions on this point compelling and it agrees with his overall analysis that a deduction of SIT 281 million is appropriate.

517. In summary, the Tribunal finds that the benefit HEP received during the relevant period that should be deducted from the overall loss of €21,558,000 calculated in paragraph 470 above, is €1.571m. This has been calculated by making the following amendments to the "Updated 2002" column of Table 1 of Mr Jones' March 2015 Addendum to his Report:

(b) Replacing the NLB loan interest figure of 96 SIT with 0;

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[195] Jones Report Addendum at ¶¶29–30.

[196] 2015 Transcript, Day 1 (26 March 2015), 142: 17–24.

(c) Adding a line for surplus depreciation of 1,371 SIT;

(d) Amending "Total deductions" for 2002 to 2,724 SIT (instead of 1,449 SIT);

(e) Consequently, the "Net additional revenue (NEK)" for 2002 is 1,013 SIT (instead if 2,288 SIT);

(f) The "Net benefit to HEP" in 2002 is €2.200 (instead of €4.968);

(g) Resulting in a total benefit for both 2002 and 2003 of €1.571m.

IX. CONCLUSION ON DAMAGES

518. For the reasons set out above, the Tribunal concludes that the Claimant suffered damages in the amount of €19,987,000.

519. This is figure calculated by taking:

(a) Mr Jones' "Case 2" replacement cost calculation of the "factual" scenario X factor – €77,205,000;

(b) Less Mr Jones' calculation of the "counterfactual" scenario Y factor – €55,647,000;

(c) Giving loss of €21,558,000;

(d) Less the "benefit-to-HEP" of €1,571,000.

X. INTEREST

520. Having determined the loss suffered by the Claimant, the Tribunal now turns to consider how interest on that amount should be calculated.

HEP'S INITIAL SUBMISSIONS ON INTEREST

521. HEP cited Gotanda, *Compound Interest in International Disputes*,[197] to the effect that there were three reasons to award interest to a successful claimant: to fully compensate the claimant by restoring it to the position it would have been in had the breach not

[197] Oxford University Comparative Law Forum 1 at pages 3-4

occurred; to prevent the unjust enrichment of the respondent through the use of money owed to the claimant; and to promote efficiency by encouraging both parties to avoid future disputes.

522. HEP contended that interest should accrue from the "date when the State's international responsibility became engaged", i.e., from 1 July 2002.[198]

523. As to the rate, HEP argued it should be based on "the one-month EURIBOR rate, with an appropriate risk premium ranging from 1.75–5.5%".[199] Navigant's First Report argued that this was the appropriate sum because HEP's short-term working capital borrowings increased when replacing electricity from the Krško NPP, leading to interest rates pegged to the EURIBOR with an additional risk premium of between 1.75% and 5.5%.[200] HEP rejected Slovenia's submission that reference should be made to the Croatian National Bank rate. HEP contended that there was nothing to suggest that that was what HEP would have done with its money. HEP argued that it should be awarded interest at its actual borrowing rates.

524. HEP refuted Slovenia's submission that there was no link between the damages suffered by HEP and HEP's working capital, which was described as being "contradicted by common sense and by reality."[201] HEP argued that the damages it had suffered had reduced the amount of cash available to it, which in turn had reduced the amount of working capital available.

525. HEP submitted interest should be compounded monthly and that the authorities cited by Slovenia in support of simple interest were anachronistic. HEP contended that there were numerous more recent authorities in which arbitral tribunals had awarded compound interest, and that this was a trend in keeping with commercial reality.

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198 Claimant's Skeleton of its Position on the Issues for Determination Relating to Mr Jones' February 2014 Report (24 March 2015) at page 5.

199 Claimant's Skeleton of its Position on the Issues for Determination Relating to Mr Jones' February 2014 Report (24 March 2015) at page 5.

200 Expert Report of Walck and Tun (10 November 2006) at ¶118.

201 Claimant's Post-Hearing Reply Brief (6 November 2009) at ¶170.

SLOVENIA'S INITIAL SUBMISSIONS ON INTEREST

526. Slovenia argued that HEP's interest claim, as advanced by Mr Walck, was based upon a "false premise"; namely that interest rates charged to HEP on short term loans it had received were linked to HEP's working capital and to its claim. In Slovenia's submission there was no link between the loans, HEP's working capital, and HEP's claim. Slovenia contended that the correct measure of interest was one based on the lost benefit to HEP of not having the financial amount at its disposal; put another way, the rate of deposit that would have been received by HEP had it been able to re-invest the funds. Slovenia's case was that this rate could be found by reference to the foreign currency deposit interest rate provided by the Croatian National Bank, and that, over the period for which HEP had provided interest calculations, the average Croatian National Bank rate was 2.683%.

527. In the alternative, Slovenia argued that if the Tribunal found that interest should be calculated by reference to the rates of the short terms loans taken by HEP, the calculation made should be "on the basis that this is a representative rate, rather than the (false) premise that these loans represented the replacement by HEP for its purported losses."[202] Slovenia further argued that the interest rate advocated by HEP should be based on the currency of HEP's claim, i.e. euros.

528. It was Slovenia's submission that any interest awarded should run from the date on which the obligation to pay the principal sum arose – being the date of an award by the Tribunal requiring Slovenia to pay a sum to HEP. In the alternative, Slovenia argued that interest may only be charged from 12 June 2009, that being the date of the Tribunal's Decision on the Treaty Interpretation Issue, which was the first time Slovenia's potential liability had been invoked. Lastly, Slovenia submitted that, if its two prior submissions as to the date from which Slovenia's obligation ran were not accepted by the Tribunal, the earliest date that interest could possibly run from was 11 March 2003, that being the date of entry into force of the 2001 Agreement. Prior to that date, Slovenia argued that it had no international responsibility to HEP. Mr Walck's interest calculation, in which interest began to run on 30 June 2002, should be disregarded.

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[202] Respondent's Post-Hearing Brief (5 October 2009) at ¶10.14.

529. Slovenia submitted that interest awarded should be simple rather than compound. It argued that the awarding of simple interest was the standard practice of international arbitral tribunals except where "special circumstances" had been shown that dictated the use of compound interest. It was Slovenia's submission that no such special circumstances were present in this case. Alternatively, if the Tribunal were to find that interest should compound, it should not compound on a monthly basis as claimed by HEP. HEP had not shown that it paid interest compounded monthly in replacement of its alleged losses, and thus any award of monthly compounded interest would result in an over-compensation to HEP. Slovenia argued that, if interest were to compound, it ought to do so on a yearly basis.

MR JONES' ANALYSIS ON INTEREST

530. Mr Jones expressed his views on interest, although recognised that interest involved some legal questions. For this reason, Mr Jones noted that his views were based "solely on economic considerations."[203]

531. Mr Jones set out his preferred approach to the calculation of interest as follows:

(a) Interest should be paid from the time at which the damage occurred until any compensation due is paid (he offered interest calculations to 31 December 2013).

(b) Interest should be compounded with a periodicity matching the nature of the interest used. Mr Jones started with monthly data and therefore compounded monthly in his interest calculation.

(c) The rate should be based on a currency that matches the damages award – in this case, euros.

(d) In an efficient financial market, any premium offered by an investment over the risk free rate would reflect the level of risk. He viewed payment of any compensation contained in an arbitration award as a certainty and therefore considered that no

[203] Jones Report at ¶8.46.

premium over the risk free rate of return was warranted. In other words stating that "the interest rate that is commensurate with such certainty is the risk free rate".[204]

(e) To calculate an appropriate risk free rate, interest should be based on the yield on bonds issued by the German Government, the most creditworthy country in the Eurozone.

532. Mr Jones suggested that the Claimant's position on interest, found in Navigant's First Report, conflated the two issues of (a) working capital and (b) the time value of money.[205]

HEP'S COMMENTS ON THE JONES REPORT

533. HEP agreed with Mr Jones that interest should run from the date of the wrongful act and should be calculated on a compounding basis. HEP referred to decided cases in support of its position.

534. HEP argued that a 3-4% risk premium, rather than the risk free rate of return suggested by Mr Jones, was appropriate as this is the premium consistently applied to the cost of equity for investing in Slovenia (i.e., the perceived risk). HEP therefore requested that the Tribunal order interest at a rate based on zero coupon German Government bonds plus 4%.

535. HEP submitted that Slovenia's proposed approach to interest would not make HEP whole and that Slovenia's urging of simple interest was "outdated" and ignored the "overwhelming trend of modern authority" in favour of an award of compound interest.

SLOVENIA'S COMMENTS ON THE JONES REPORT

536. Slovenia agreed with Mr Jones' conclusion that an appropriate interest rate was that based on the yield from German Government bonds (i.e., a risk free rate of return in euro currency). Slovenia disagreed that the date from which interest should accrue should be the date of the wrongful act and reiterated its argument that post-Award interest only was

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[204] Jones Report at ¶8.54.

[205] Jones Report at ¶8.47.

appropriate. Slovenia also reiterated its arguments for simple interest, rejecting Mr Jones' view that compound interest should be applied and noting that there were no exceptional circumstances (including no expropriation) that might justify compound interest in this instance.

537. Slovenia rejected HEP's position that the interest rate should reflect the cost of equity, noting that this suggestion had been rejected recently by the Tribunal in *Rurelec PLC v. Bolivia*,[206] where the tribunal held that the cost of equity did not reflect a normal commercial rate.

TRIBUNAL'S ANALYSIS AND CONCLUSIONS ON INTEREST

538. The Tribunal addresses below the following key points: the date from which interest should run; the rate of interest (including any risk premium); and whether interest should be simple or compounding.

539. The Tribunal begins by recalling that the purpose of interest is to "ensure full reparation".[207] The Commentary to the *Articles on State Responsibility* states:[208]

> As a general principle, an injured State is entitled to interest on the principal sum representing its loss, if that sum is quantified as at an earlier date than the date of the settlement of, or judgment or award concerning, the claim and to the extent that it is necessary to ensure full reparation.

540. This principle of full reparation thus guides the Tribunal in making its finding on interest.

Date of Commencement of Interest Calculation

541. In Slovenia's Post Hearing Submissions filed after the 2009 hearing, it argued that interest should be paid from the date on which quantum is fixed (i.e., the date of this Award).[209] However, it appeared to resile from that position, and subsequently argued that liability should be calculated from 11 March 2003 because "[i]t was only upon entry

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[206] *Guaracachi America, Inc. Rurelec PLC v. Plurinational State of Bolivia* (PCA Case No. 2011-17), Award, (31 January 2014).

[207] ILC Articles, Art. 38(1).

[208] ILC Articles, page 235.

[209] Respondent Post-Hearing Brief (5 October 2009) at ¶10.17.

into force of the 2001 Agreement that Slovenia had any international responsibility towards HEP."[210]

542. The Tribunal disagrees with this argument. As this Tribunal made plain in the Decision on the Treaty Interpretation Issue:[211]

> … the Republic of Slovenia *is liable* to the Claimant for the financial value to HEP of 50 percent of the electrical power produced by NEK, or by its predecessor, JP NEK, *throughout the period 1 July 2002 until 19 April 2003*…

543. The Respondent's position that it should not be liable for interest until 11 March 2003 is inconsistent with this Tribunal's earlier decision. The Respondent's obligations under the 2001 Agreement commenced on 1 July 2002, and not from the date of ratification. Slovenia is obligated to compensate HEP for its losses from 1 July 2002, not only losses incurred since ratification. Essentially, Slovenia's breach of its obligations commenced on 1 July 2002.

544. As the purpose of interest is to ensure that HEP receives full compensation, Mr Jones' economic view that "interest should be applied from the time at which damage occurs until any compensation paid is due" accords with the correct legal approach.[212] Consequently, the Tribunal accepts the Claimant's submission that interest should be calculated from 1 July 2002, which is when "its damages first started to accrue".[213]

545. The Tribunal therefore finds that interest will begin to accrue from 1 July 2002, which is the beginning of the Measurement Period.

546. For completeness, the Tribunal notes that the parties have not pleaded interest separately on pre or post-Award bases. Rather, a single interest rate has been pleaded that runs from the date of liability until the time of payment. For this reason, the Tribunal also finds that interest will continue to run until the Award debt is satisfied by the Respondent.

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[210] Respondent Post-Hearing Brief (5 October 2009) at ¶10.19.

[211] Decision on the Treaty Interpretation Issue (12 June 2009) at ¶¶196–198 (emphasis added).

[212] Jones Report at ¶8.52.

[213] Claimant's Reply to the Republic of Slovenia's Post-Hearing Brief (6 November 2009) at ¶167.

Rate of Interest

547. The purpose of interest is to "compensate the injured party for not having had the use of the money between the date when it ought to have been paid and the date of the payment."[214] It is therefore appropriate that the rate of interest represents a reasonable and fair rate that approximates the return the injured party might have earned if it had had the use of its money over the full period of time. This is the approach advocated by Slovenia based on principles expressed in previous investment treaty cases. Slovenia suggested that "the general rate to be applied should be a general rate of deposit as if HEP had had the finance at its disposal and had been able to reinvest this sum."[215] The purpose of interest is therefore not just to compensate for the time value of money.[216] Interest must also compensate for the loss of opportunity associated with the use of that money. This approach accords with the *Chorzów Factory* principles of making the injured party whole and wiping out the consequences of the breach.

548. The essential concern is one of opportunity cost: had HEP received electricity from the Krško NPP, what would it have done with the money it would not have otherwise spent on replacement energy? As Mr Jones put it, a "sum of money in 2002/2003 would have been more valuable to HEP than the same nominal sum of money now as, for example, HEP could have earned interest on the sum in the interim period."[217]

549. If HEP had received the money, it would, as Mr Jones noted, "have had a range of ways in which the funds might have been invested with different levels of return and corresponding risk."[218] However, Mr Jones then went on to say that "[w]e may safely assume that any compensation that is awarded will be paid with certainty. The interest rate that is commensurate with such certainty is the risk free rate."[219]

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214 Respondent's Post-Hearing Brief (5 October 2009) at ¶10.9, citing the Tribunal in *Southern Pacific Properties (Middle East) Limited v. Arab Republic of Egypt* (ICSID Case No. ARB/84/3), Award (20 May 1990) (Slovenia Exhibit No. 182).

215 Respondent's Post-Hearing Brief (5 October 2009) at ¶10.12.

216 Jones Report at ¶¶8.47–8.48.

217 Jones Report at ¶8.40.

218 Jones Report at ¶8.54.

219 Jones Report at ¶8.54.

550. Mr Jones approached his risk free rate, which the Respondent appeared to agree with, by noting that:[220]

> If HEP had invested a sum in 2002 with knowledge that it would get a guaranteed sum in at a future date, it would be fairly rewarded with a compound return based on the risk free rate commensurate with the term of that investment.
>
> For the euro, the closest approximation to a risk free interest rate is the yield on bonds issued by the German Government, the most creditworthy country in the Eurozone.

551. The Claimant contested Mr Jones' assertion as to certainty of payment and the use of the German Government bond rate, arguing that the cost of equity in Slovenia was 3–4% higher than investing in Germany, the highest rated country in Europe.[221]

552. The Respondent alternatively submitted that the appropriate interest rate would be that offered by the Croatia National Bank on foreign currency deposits.[222] The average rate of interest paid between July 2002 and October 2006 was 2.683%, apparently.[223] As another option, the Claimant submitted that an appropriate rate of interest could be the "average bank short-term lending rate to prime borrowers", which Claimant contended was the one-month EURIBOR rate with a risk premium between 1.75% and 5.5%.[224] The Claimant tied this risk premium to the cost of its borrowing.

553. The Tribunal observes that it is common in investment treaty cases to tie the interest rate to LIBOR – although in the present case, where the currency is euros, it is more appropriate to use EURIBOR. This represents an objective, market-orientated rate, well suited to ensuring that the consequences of the breach are indeed wiped out. Although the Tribunal recognises that German bonds provide a valuable benchmark, the complexity of Mr Jones' calculations to determine yield are not practicable. The Tribunal

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220 Jones Report at ¶¶8.54–8.55 (references omitted).

221 Claimant's Submissions and Observations as to Mr Jones' Report (25 April 2014) at ¶¶103–104.

222 Respondent's Post-Hearing Brief (5 October 2009) at ¶10.13.

223 Respondent's Post-Hearing Brief (5 October 2009) at ¶10.13.

224 Claimant's Skeleton of its Position on the Issues for Determination Relating to Mr Jones' February 2014 Report (24 March 2015) at page 5.

prefers an interest rate that is more simply expressed. For this reason, the Tribunal finds that the average six-month EURIBOR is appropriate in the present case.

554. However, to reflect a commercial interest rate and the relative risk associated with different countries, the Tribunal considers that it is appropriate to add a small premium of 2%. Such a premium is also appropriate in relation to the post-award period, because one of the purposes of awarding post-award interest is to incentivise parties to honour their liability under an award in an expedient fashion.[225] The Tribunal therefore finds that interest on the damages sum awarded should be calculated at a rate of EURIBOR, plus 2%.

Simple/Compounding

555. The Tribunal has little difficulty accepting that interest should be compounding. In modern practice, tribunals often compound interest, and the Claimant referenced a number of such awards.[226] The Claimant's list dated from 2009, and there would be no difficulty in expanding it by reference to awards handed down in the intervening six years.

556. In essence, compounding interest reflects simple economic sense. Business people invest money and expect some yield from it. This Tribunal agrees with the comments of Professor Gotanda, cited by the Claimant:[227]

> … compound interest 'reflects the reality of financial transactions … and best approximates the value lost by an investor. … In the modern world of international commerce, almost all financing and investment vehicles involve compound, as opposed to simple, interest. Thus, it is neither logical nor equitable to award a claimant only simple interest when the respondent's failure to perform its obligations in a timely manner caused the claimant either to incur finance charges that included compound interest or to forego opportunities that would have had a compounding effect on its investment.

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225 Claimant's Reply to Slovenia's Post-Hearing Brief (6 November 2009) at ¶161, referring to the "third reason" for awarding interest posited by Professor Gotanda.

226 Claimant's Reply to Slovenia's Post-Hearing Brief (6 November 2009) at page 104, footnote 82.

227 Claimant's Post-Hearing Brief (5 October 2009) at ¶177.

557. For this reason, the Tribunal cannot accept the Respondent's argument that simple interest be awarded. The principal decision that the Respondent relied upon was *Autopista Concesionada de Venezuela, C.A. v Bolivarian Republic of Venezuela*.[228] That decision was made in 2003. Much water has passed under the bridge since, and the Tribunal doubts the current accuracy of the statement made in that award to the effect that "there is no well-established principle of international law requiring the award of compound interest".[229]

558. Rather, the Tribunal agrees with the Claimant's submission that compound interest is appropriate, commercially sensible, and consistent with modern international practice.

559. Finally, the Tribunal finds that interest should be compounded at six-month intervals (semi-annually). Monthly compounding in investment cases is rare, and it is more usually that interest is compounded on an annual or semi-annual basis.[230]

Conclusion on Interest

560. The Tribunal concludes that the Claimant is entitled to interest from 1 July 2002 at the average six-month EURIBOR rate + 2%, compounded semi-annually.

XI. ENERGY CHARTER TREATY CLAIMS ISSUE

561. The parties each made submissions by letter in late June and early July 2009 as to whether the Tribunal's dismissal of the ECT Claims should be reconsidered. Thereafter, following a pre-hearing conference on 7 July 2009, the Tribunal issued a Procedural Order on 9 July 2009 directing the parties to file further written submissions on 22 July 2009 addressing, first, whether the ECT Claims and the claims under the 2001 Agreement were mutually exclusive and whether the Tribunal had therefore ruled out the

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[228] *Autopista Concesionada de Venezuela, C.A. v. Bolivarian Republic of Venezuela* (ICSID Case No. ARB/00/5), Award (23 September 2003) at ¶394.

[229] See Respondent's Post-Hearing Brief (5 October 2009) at ¶10.25 and the Respondent's Submissions on Expert Report of Wynne Jones (25 April 2014) at ¶101.

[230] See *Occidental Petroleum Corporation and Occidental Exploration and Production Company v. Republic of Ecuador* (ICSID Case No. ARB/06/11), Award (5 October 2012), at ¶844.

ECT Claims, and secondly, if the ECT Claims had been ruled out, whether the Tribunal had the power to reintroduce them.

HEP'S POSITION

562. HEPs position was that it had from the outset pursued two alternative avenues in respect of liability, of which its ECT Claim were one. HEP contended that it is common for a party to a dispute to raise alternative causes of action in this way, and HEP was entitled to do so. HEP had not waived its ECT Claims, and was surprised that the Tribunal had, without warning and without stating the reasons for doing so, dismissed those claims. HEP submitted that the Tribunal's actions in this regard violated the ICSID Convention, ICSID Rules, and fundamental notions of due process.

563. HEP emphasised that it had not waived its ECT Claims and that the Tribunal had not ruled that it had done so. The Tribunal had found, in its Decision on the Treaty Interpretation Issue, that HEP had waived its claims for undelivered electricity up until 30 June 2002, yet the period covered by HEP's ECT Claims did not begin until 1 July 2002, continuing to 18 April 2003, at which time deliveries of electricity to HEP resumed.

564. HEP asked that the Tribunal reconsider and reverse its ruling on the ECT Claims. Although HEP acknowledged that there was no express provision in the ICSID Rules enabling the Tribunal to reverse itself in this way, HEP submitted that Article 44 of the ICSID Convention, which allowed an ICSID Tribunal to decide procedural questions that were not otherwise covered by the Convention or the Rules, applied, and that the Tribunal surely also had the inherent ability to consider HEP's request, as the alternative would be that the Tribunal could not cure its own errors.

565. At the July 2009 hearing, it was further submitted that, if Slovenia indeed preferred to be held liable under the 2001 Agreement than under the ECT, it ought to have agreed to HEP's proposal that Slovenia waive its right to challenge the Tribunal's ruling in respect of the 2001 Agreement, if HEP waived its claim under the ECT. That Slovenia had not so agreed indicated that it had not ruled out the possibility of challenging the Tribunal's ruling on the 2001 Agreement. If that were to come to pass, HEP submitted that it should also be permitted to stand on its alternative cause of action under the ECT.

SLOVENIA'S POSITION

566. In its early correspondence, Slovenia submitted that HEP had been on notice for nine months, as a result of the Tribunal's Procedural Order No. 4, that a determination by the Tribunal of the treaty interpretation issue in HEP's favour would likely lead to the dismissal of the ECT Claims. It was, Slovenia submitted, incorrect to state as HEP had that there had been no forewarning from the Tribunal of the dismissal of the ECT Claims.

567. Slovenia further submitted that, even if the ECT Claims had not been dismissed, they were factually irrelevant, as HEP had not claimed anything under the Energy Charter Treaty that it had not claimed under the 2001 Agreement.

568. As to the Tribunal's ability to reverse its decision, Slovenia submitted that there was no basis upon which the Tribunal could so act. Citing Schreuer, *The ICSID Convention: A Commentary*[231] and *Wena Hotels Ltd v Arab Republic of Egypt*,[232] Slovenia contended that Article 48(3) of the ICSID Convention did not compel the Tribunal to address the ECT Claims, particularly when the resolution of the claims under the 2001 Agreement also disposed of the ECT Claims.

569. Slovenia argued that it was clear that the basis of the Tribunal's dismissal of the ECT Claims was that the ECT Claims had been waived by operation of the 2001 Agreement. The Tribunal's findings that, first, the purpose of the 2001 Agreement was to "wipe the slate clean" as at 30 June 2002, and secondly, that the parties had agreed that HEP would be compensated for the non-delivery of electricity post 30 June 2002 until sales resumed, had the logical consequence that any causes of action under the ECT were extinguished.

570. Even if the Tribunal had not dismissed the ECT Claims for the reasons submitted by Slovenia, it was argued by Slovenia that it was able to do so for reasons of judicial economy. The ECT Claims were duplicative of HEP's claims under the 2001 Agreement. No distinct relief was sought via the ECT Claims. The Tribunal was entitled not to consider the ECT Claims when everything sought by HEP could be awarded if it

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[231] Christoph Schreuer, *The ICSID Convention: A Commentary* at ¶¶45–46 on Article 48.

[232] *Wena Hotels Limited v. Arab Republic of Egypt* (ICSID Case No. ARB/98/4), Decision on Annulment (5 February 2002).

succeeded on its claims under the 2001 Agreement. HEP's assertion that Article 48(3) of the ICSID Convention precluded the Tribunal from acting in this way was incorrect: Article 48(3) did not require a Tribunal to address all of a party's alternative causes of action if the acceptance of one of them gave the result sought by that party. Slovenia argued that, if the ECT Claims were revived, the parties and their witnesses would be required to attend a fourth hearing in circumstances where quantum had already been determined and the consequences of any further determination were meaningless. That, according to Slovenia, would represent a waste of time, money and effort.

571. In Slovenia's submission HEP's position was that the Tribunal had "inadvertently failed" to address the ECT Claims issue. Slovenia disagreed with HEP on that point and considered that the Tribunal was factually and legally correct in its ruling. It was also submitted that the Tribunal could if it wished provide further reasons for any of its rulings in its final award.

572. It was argued for Slovenia that HEP ought not to be entitled to pursue its ECT Claims upon the ground that Slovenia may bring annulment proceedings in respect of the 2001 Agreement. Annulment was a remedy available only in respect of awards, and the award in this matter had not been issued. HEP's submissions in respect of annulment were, therefore, hypothetical. Moreover, it was submitted, Slovenia had not indicated an intention to attempt to annul the final award.

TRIBUNAL'S ANALYSIS

573. In its Decision on the Treaty Interpretation Issue, at paragraph VII. 202. B, the Tribunal dismissed "all claims asserted by HEP against the Republic of Slovenia in this arbitration as arising under the Energy Charter Treaty." Subsequently, with its permission, the Tribunal received the "Claimant's Submissions in Support of Its Request that the Tribunal Reconsider and Reverse Its Ruling Dismissing the Claimant's Energy Charter Treaty Claims" ("HEP's Submissions") and "Slovenia's Submissions On HEP's Application For The Tribunal To Reconsider and Reverse Its Decision To Dismiss HEP's Claims Under the Energy Charter Treaty" ("Slovenia's Submissions").

574. It appears that the thrust of HEP's Submissions is, as set forth in paragraph 1 thereof, that "[n]o reasons were stated in the Treaty Decision for this dismissal of HEP's Energy Charter Treaty ('ECT') claims." The Tribunal was of the view in issuing its Decision on the Treaty Interpretation Issue that the reasons for that dismissal were implicit in the fact that Claimant had pleaded, in the alternative, the 2001 Treaty between Croatia and Slovenia, which was the subject of the Treaty Decision, and the Energy Charter Treaty as two distinct possible bases of the claimed liability of Slovenia.

575. As HEP's Submissions straightforwardly state, in paragraph 3:

> From the very beginning of these proceedings in November 2005, HEP has pursued two alternative theories of liability against Slovenia, in support of a single claim for compensation.

576. That was exactly what the Tribunal had understood from the very beginning of this arbitration. It was apparent that the Claimant was offering alternative treaty bases of liability for identical monetary relief.

577. With this understanding, and realizing that the 2002 Treaty necessarily would be central also to any application of the Energy Charter Treaty, the Tribunal determined to address in the first instance the 2001 Treaty. In its Procedural Order No. 4 of 6 October 2008, as noted in paragraph 11 of HEP's Submissions, the Tribunal therefore decided that "between the Treaty claim and the ECT claim it is preferable to decide the question of whether the claim is tenable under the 2001 Treaty first." That Procedural Order continued:

> A ruling on that matter favor[able] to the Claimant may possibly obviate the need to consider the ECT claim. A ruling favourable to the Respondent may also preclude the ECT claim. Much depends upon the way in which the Treaty claim is resolved.

578. This was well understood during the hearings held in May 2008, as the then counsel for Respondent, Mr Jagusch, when asked by Judge Brower if it was true that Slovenia would "rather be hung for a lamb, for violation of the 2001 Treaty, than be hung for a sheep, for expropriation et cetera under the Energy Charter Treaty," replied:[233]

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[233] 2008 Transcript, Day 6 (12 May 2008), 80–81.

> Yes, sir, though the spin we put on it is that you acting judicially ought not to do that if the extent of our liability can be determined through a simpler course that would be less provocative and unpalatable in the circumstances of the relationship between the parties.

579. Given the substance of the Decision on the Treaty Interpretation Issue, which found the Respondent liable to the Claimant for the latter's "single claim for compensation," the amount of which has now been finally determined in the present Award, the alternative basis on which HEP had sought such compensation, the other of "the two alternative theories of liability against Slovenia" pursued by HEP, namely the Energy Charter Treaty, necessarily, indeed automatically, fell out of consideration. In the circumstances, no reasons were stated because they were inherent in the full context of how the case had been pleaded by HEP and decided at that point by the Tribunal.

580. Leaving aside the issue of whether or not this ICSID Tribunal has, or does not have, the power to reconsider VII. 202. B. of its Treaty Decision, which issue the Tribunal need not and does not decide, clearly no viable basis for the requested reconsideration exists. The Claimant has achieved now the "single claim for compensation" it sought from Respondent, on the basis of interpretation and application of the 2001 Treaty. Therewith, the alternative ECT Claim for such compensation necessarily has fallen away. The Claimant has been deprived of nothing by the dismissal of its alternative ECT Claim. No purpose would be served by its continuation. Therefore, the Tribunal, having now spelled out the reasons for the earlier dismissal of Claimant's ECT Claim, which were necessarily implicit, rejects "Claimant's Submissions," without deciding whether or not it has the power to consider them, on the ground that they are patently unmeritorious.

XII. COSTS

RELEVANT RULES

581. The ICSID Convention provides the Tribunal with a wide discretion to award costs. Article 61(2) of the Convention states:

> …the Tribunal shall, except as the parties otherwise agree, assess the expenses incurred by the parties in connection with the proceedings, and shall decide how and by whom those expenses, the fees and expenses of the members of the Tribunal and the charges for the use of the facilities of the Centre shall be paid. Such decision shall form part of the award.

582. Rule 28 of the ICSID Arbitration Rules similarly states:

> (1) Without prejudice to the final decision on the payment of the cost of the proceeding, the Tribunal may, unless otherwise agreed by the parties, decide:
>
> (a) at any stage of the proceeding, the portion which each party shall pay, pursuant to Administrative and Financial Regulation 14, of the fees and expenses of the Tribunal and the charges for the use of the facilities of the Centre;
>
> (b) with respect to any part of the proceeding, that the related costs (as determined by the Secretary-General) shall be borne entirely or in a particular share by one of the parties.
>
> (2) Promptly after the closure of the proceeding, each party shall submit to the Tribunal a statement of costs reasonably incurred or borne by it in the proceeding and the Secretary-General shall submit to the Tribunal an account of all amounts paid by each party to the Centre and of all costs incurred by the Centre for the proceeding. The Tribunal may, before the award has been rendered, request the parties and the Secretary-General to provide additional information concerning the cost of the proceeding.

583. Article 61 of the Convention suggests that there are three categories of costs that can be claimed: (i) costs incurred by the parties such as legal fees, expert witness fees and other expenses; (ii) the tribunal's fees and expenses; and (iii) expenses associated with ICSID. Category (i) is usually referred to as "party costs" and parts (ii) and (iii) together as the "costs of the arbitration".

TRENDS IN AWARDING COSTS IN INVESTMENT ARBITRATION

584. Both parties have observed that it is becoming more common in investment treaty arbitration for costs to follow the event – that is, that the prevailing party is awarded some or all of its costs.

585. The awarding of costs to the successful party is considered to accord with the recognised principle in *Chorzów Factory* to wipe out the consequences of the breach and to fully compensate the injured party.

586. The parties have cited the following cases as evidence of this trend:

(a) *ADC v Hungary,*[234] in which the Tribunal stated at paragraph 533 that "the starting point [is] that the successful party should receive reimbursement from the unsuccessful party".

(b) *Waguih Elie George Siag v. Arab Republic of Egypt,*[235] where the Tribunal stated at paragraph 621 that "[t]he Tribunal finds that it is appropriate in this case for the losing party to bear the reasonable costs of the successful party in these proceedings. The Claimants have succeeded on the merits and Egypt's objections to the jurisdiction of the Tribunal were rejected."

(c) *Plama Consortium Ltd. v. Republic of Bulgaria,*[236] in which the prevailing respondent was awarded U.S. $7 million in costs and legal fees. In this case, the Tribunal stated at paragraph 325 that "the Arbitral Tribunal will apply the principle that 'costs follow the event,' by a weighing of relative success or failure, that is to say, the loser pays costs including reasonable legal and other costs of the prevailing party; or costs are allocated proportionally to the outcome of the case."

(d) *Southern Pacific Properties (Middle East) Ltd. v. Arab Republic of Egypt,*[237] where the Tribunal noted at 207 that "there is little doubt that the legal costs incurred in obtaining the indemnification must be considered as part and parcel of the compensation, in order to make whole the party who suffered the loss and had to litigate to obtain compensation."

587. In short, both parties have submitted that the starting point for the Tribunal in the present case should be the principle that the prevailing party be awarded its costs, unless circumstances justify a departure from this principle.

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[234] *ADC Affiliate Limited and ADC & ADMC Management Limited v. Republic of Hungary* (ICSID Case No. ARB/03/16), Award (2 October 2006) at ¶533.

[235] *Waguih Elie George Siag and Clorinda Vecchi v. Arab Republic of Egypt* (ICSID Case No. ARB/05/15), Award (1 June 2009) at ¶621.

[236] *Plama Consortium Limited v. Republic of Bulgaria* (ICSID Case No. ARB/03/24), Award (27 August 2008) at ¶325.

[237] *Southern Pacific Properties (Middle East) Limited v. Arab Republic of Egypt* (ICSID Case No. ARB/84/3), Award (20 May 1990).

CLAIMANT'S SUBMISSION ON APPLICATION OF COSTS PRINCIPLES

588. The Claimant submitted that it should be awarded its full costs in this arbitration for the following reasons:

(a) Slovenia's jurisdictional objections were meritless and were dismissed by the Tribunal. HEP submitted that it "incurred considerable time and expense in responding to Slovenia's obviously baseless and scatter-gun jurisdictional challenges".[238]

(b) The issue that arose in relation to David Mildon QC's appointment significantly increased HEP's legal expenses and the administrative costs of the proceedings because it meant quantum could not be heard with liability in May 2008. Claimant said that a result the case was prolonged by a number of years with consequent increase in costs.

(c) HEP has prevailed on its liability claims under the 2001 Agreement.

589. The Claimant claimed costs of US$13,319,289.23 ($10,175,907.71 in the initial phase + $3,143,381.52 in the tribunal expert phase). The Claimant also claimed interest thereon, calculated from the date of this Final Award at the 1-month EURIBOR rate, plus 2%, compounded monthly.

590. The Claimant rejected Slovenia's argument that the parties incurred substantial increased costs as a result of the dismissed ECT Claims. The Claimant stated that most of the costs referred to by the Respondent in this regard would have been incurred in any case through the process of addressing the 2001 Agreement claims. Therefore, very few costs would have been saved had the ECT Claims not been included.

RESPONDENT'S SUBMISSION ON APPLICATION OF COSTS PRINCIPLES

591. The Respondent submitted that the costs follow the event principle should apply in the present case and that it should be regarded as the successfully party if (i) the 2002 Offers

[238] Claimant's Supplemental Costs Submissions (23 April 2015) at page 8.

had absolved it of liability; or (ii) if the Claimant had suffered no loss and therefore were awarded no damages.

592. The Respondent claimed €8,487,339.69, being comprised of: (i) €7,924,125.68 in legal costs and expenses; and (ii) €563,214.01 in costs of the arbitration.

593. However, the Respondent submitted that if the Claimant were to be regarded as the successful party, the above principle should not apply and the parties should bear their own legal costs. The Respondent stated that a departure from the "costs follow the event" principle was justified as it would better reflect the overall balance of success between the parties in the arbitration and the fact that HEP's conduct of its claims caused the parties to incur additional and unnecessary costs.

594. In support of this contention, the Respondent submitted that: (i) HEP's ECT Claims had been unsuccessful and should never have been brought; (ii) HEP substantially increased the costs of the quantum phase due to steps taken when responding to information requests posed by Mr Jones; and (iii) if the Tribunal finds HEP's claim for damages was inflated and unjustified, it would militate against a costs award.

595. In particular, the Respondent argued that the ECT claims were duplicative of the contractual claims, but required large amounts of submissions/evidence and therefore should not have been pleaded. Specifically, the Respondent stated that "nearly two-thirds of the total costs incurred by Slovenia during the liability phase of these proceedings were in relation to the ECT Claims".[239]

596. Slovenia rejected HEP's criticism of its jurisdictional claims, stating that half of the jurisdictional claims related to ECT Claims. Slovenia also disagreed that it should bear costs as a result of the ruling regarding the participation of David Mildon QC, alleging that it was HEP that forced the Tribunal into its decision that Mr Mildon could no longer participate and that, in any case, any additional costs were *de minimus*.

[239] Respondent's Supplemental Costs Submissions (23 April 2015) at ¶24.

597. Finally, the Respondent also suggested that this was an appropriate case for the parties to bear their own legal costs because:[240]

> … the Tribunal has had to address whether Slovenia's potential liability arises under an implied term or retroactive obligation, both possibilities being exceptional in treaty law. Neither Slovenia nor Croatia/HEP could, from the express words of the 2001 Agreement, have formed a definitive view of their respective legal positions, as at 1 July 2002, and acted accordingly.

TRIBUNAL'S CONCLUSIONS

598. The Tribunal has a wide discretion under the ICSID Convention and Arbitration Rules to award costs.

599. The Tribunal agrees with the analysis of both parties that the prevailing trend in investment treaty arbitration is that the successful party recover some or all of its costs. This costs principle aligns with the more general damages principles found in the *Chorzów Factory* case that the injured party be restored to the position in which it would have been had the breach not occurred.

600. In the Tribunal's view, the Claimant is the successful party in the present case, having succeeded on liability and having been awarded a significant portion of the damages claimed. The issue therefore is whether any circumstances exist in this case that would lead the Tribunal not to award the Claimant its costs.

601. The Respondent argued that "HEP's misguided pursuance of its ECT Claims has significantly increased the costs of this arbitration"[241] and that the Tribunal's dismissal of the ECT Claims is a basis on which would justify a decision not to award costs in the present case. It argued that pleading these claims in the first place resulted in wasted resources and costs, including devoting a day of the July 2009 hearing to this issue and producing voluminous submissions and evidence on the ECT Claims.

602. The Tribunal has dismissed the Claimant's ECT Claims. However, this dismissal, as was made clear above, was not on the basis that the ECT Claims themselves had not been

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[240] Respondent's Post-Hearing Reply Brief (6 November 2009) at ¶11.11.

[241] Respondent's Supplemental Costs Submissions (23 April 2015) at ¶24.

proven or were untenable, but because they were pleaded in the alternative to the primary and ultimately successful claims under the 2001 Agreement. Because the primary legal basis was successful, the Tribunal did not need to consider the alternative legal basis presented under the Energy Charter Treaty. The Tribunal is not aware of, nor has the Respondent pointed to, any previous tribunal decisions or general principles that would support the contention that pleading alternative legal bases should affect any award on costs. The Claimant was entitled to plead alternative liability bases, just as the Respondent was entitled to rely upon alternative defences.

603. The Respondent has suggested that the ECT Claims required significant additional work to address. However, the Tribunal agrees with the Claimant that much of the work done (including the statements of witnesses named by the Respondent) would have been required to address the 2001 Agreement claims anyway. Both sets of claims involved the same factual basis and therefore any additional work would have been limited to addressing the legal principles involved. While of course some costs would have been incurred as a result of the required legal analysis and submissions, the Tribunal is of the view that these costs would not have been so significant as to justify abandoning of the "costs follow the event" principle.

604. However, the Tribunal does agree with the Respondent that the Claimant's pursuit of the ECT Claims issue after they were dismissed in the Treaty Interpretation Decision was unwarranted and created some additional cost. This additional cost included the time spent on the issue at the 2009 hearing. As set out in section XI above, there was no merit to the Claimant pursuing this issue and the Tribunal will therefore take this into account when assessing the level of costs that the Claimant should be awarded.

605. The Tribunal has also examined the behaviour of the parties during the tribunal expert phase, which was raised by the Respondent as a further reason not to award costs to the Claimant. The Tribunal recalls the delay and difficulties involved in providing requested information to Mr Jones and the many procedural issues that arose during this time. The Tribunal agrees with the Respondent that "ill-judged steps" caused this delay and increased the costs of the tribunal expert phase. The Tribunal is of the view that both parties were guilty of taking such ill-judged steps and recalls its "Ruling on the

Respondent's Strike-Out Application" dated 8 April 2013, in which it endorsed the Claimant's assertion that:

> "Even though Mr Jones' Terms of Appointment were approved on August 31, 2011, the last nineteen months have been spent in procedural jousting over the way in which information is to be put before Mr Jones, along with the assembly of the specific information that he has requested. It is time for this procedural jousting to stop, and for this arbitration to move forward."

606. The fact that both parties engaged in the procedural jousting referred to above is no reason to ignore this behaviour in a costs assessment. Moreover, when examining the record, it is clear that the Respondent was successful in a number of its challenges in relation to the information provided by the Claimant to Mr Jones and that the Claimant was less successful in its challenges of the Respondent's information. As noted by the Respondent in its Supplemental Cost Submissions:[242]

> The Tribunal will recall in particular HEP's responses to Mr Jones' Information Requests that it submitted on 30 August and 26 September 2012 (together, HEP's Responses). These responses were over 100 pages long and violated almost every principle set out by the Tribunal in respect of how the parties should respond to the Information Requests. This left Slovenia with no choice but to make an application requesting that the Tribunal strike out significant portions of HEP's Responses. Along with the application, Slovenia submitted around 40 pages of tables identifying the portions of HEP's Responses that failed to comply with the Tribunal's directions. In its decision dated 14 November 2012, the Tribunal granted Slovenia's application and ordered that large parts of these responses be struck out.

607. The Tribunal will take the behaviour of both parties into account when assessing costs, as well as the relative success of the parties in relation to this phase of the arbitration. However, the procedural wrangling that took place in the tribunal expert phase does not, of itself, justify abandoning the costs follow the event principle overall.

608. In short, the Tribunal finds that the Claimant is the successful party in this arbitration and is therefore entitled to recover costs. There are no circumstances that justify a move away from awarding the successful party its costs, in favour of the parties bearing their own costs. However, the Claimant's pursuance of the ECT Claims after the Treaty Interpretation Decision and the unnecessary delays and expense associated with the

[242] Respondent's Supplemental Costs Submissions (23 April 2015) at ¶28.

tribunal expert information gathering phase will be considered in assessing the amount to be awarded, as will the overall reasonableness of the costs claimed.

609. Although costs should generally follow the event in the present case, the Tribunal considers that an exception is appropriate in relation to the fees of Mr Jones. The Tribunal finds that Mr Jones' fees should be shared equally between the parties. Mr Jones' appointment became necessary because neither party's experts provided a clear and convincing damages case. The Tribunal was therefore required to appoint a tribunal expert to assist it. This decision was vindicated by the fact that the Tribunal has, for the most part, accepted Mr Jones' calculations and recommendations. The Tribunal considers that both parties should be equally liable for Mr Jones' fees. As the parties have already paid these fees in equal shares, Mr Jones' fees have been removed from the overall costs considerations and the Claimant's cost claim is therefore reduced to US$13,177,041.52.

610. Finally, the Tribunal considers whether the costs claimed by the Claimant are "reasonable" in the circumstances. As noted above, the Claimant has claimed approximately US$13.3 million in costs for the entire arbitration. The Respondent has claimed around €8.5 million in costs (at the current exchange rate this equates to approximately US$9 million).

611. While it is to be expected that the length of the present arbitration would have resulted in considerable cost and that a claimant's costs may be higher than a respondent's costs, there is nonetheless a large gap between the fees of the Claimant and the Respondent and the fees claimed (for both sides) are considerable. The Tribunal does not suggest that the fees claimed by either party are inaccurate, but there is a need to ensure that parties and their counsel conduct arbitrations in an efficient manner that minimises costs involved.

612. Taking all of the above into account, including the attempt to revive the ECT Claims, the behaviour of the parties in providing information to the tribunal expert and the reasonableness of the costs claimed, the Tribunal finds that the Claimant is entitled to recover costs in the amount of US$10 million.

613. The Tribunal therefore awards the Claimant costs of US$10 million, plus interest at a rate of EURIBOR plus 2%, compounded semi-annually.

XIII. THE AWARD

614. For all the foregoing reasons and rejecting all submissions to the contrary the Tribunal DECLARES AND DECIDES as follows:

(a) The Tribunal finds that the present dispute is within ICSID's jurisdiction and the competence of the Tribunal for reasons set forth in its Decision on the Treaty Interpretation Issue dated 12 June 2009, which is hereby incorporated by reference into the present Award and made an integral part of it.

(b) The Respondent shall pay to the Claimant compensation for the breach of the 2001 Agreement in the sum of €19,987,000.

(c) The Respondent shall pay to the Claimant interest on the sum awarded in (b) above at a rate of EURIBOR plus 2%, compounded semi-annually, from 1 July 2002 until the date of payment in full.

(d) The Respondent shall reimburse the Claimant for their costs of the arbitration and for their legal and other reasonable costs incurred in connection with this arbitration, in the amount of US$10,000,000.

(e) The Respondent shall pay to the Claimant interest on the sum awarded in (d) above at a rate of EURIBOR plus 2%, compounded semi-annually, from the date of this Final Award until the date of payment in full.

(f) All other claims by either party are hereby dismissed.

[*Signed*]

Mr Jan Paulsson
Arbitrator
Date: December 3rd, 2015

[*Signed*]

The Hon. Charles N. Brower
Arbitrator
Date: [9 December 2015]

[*Signed*]

Mr David A.R. Williams, Q.C.
President of the Tribunal
Date: [14 December 2015]