

Case Note

Karaha Bodas and Himpurna arbitrations

Karaha Bodas Company LLC v Perusahaan Pertambangan Minyak Dan Gas Bumi Negara and PT. PLN (Persero), ad hoc arbitration under UNCITRAL rules, Final award of 18 December 2000 (Arbitrators Yves Derains (President), Prof Piero Bernardini, Prof Ahmed S. El Kosheri)¹

Himpurna California Energy Ltd v. PT. PLN (Persero), ad hoc arbitration under UNCITRAL rules, Final award of 4 May 1999 (Arbitrators, Jan Paulsson (President), Antonino Albert de Fina, Setiawan SH)²

Table of contents

Introduction.....	1
1. Factual Background.....	2
2. Applicable Law.....	3
3. Damnum Emergens and Lucrum Cessans.....	3
3.1 Damnum Emergens.....	4
3.2 Lucrum Cessans.....	5
4. Unpaid Invoices.....	7
5. Interest.....	7
6. Costs.....	7
7. Double Counting.....	8

Introduction

Karaha Bodas Company LLC (“Karaha Bodas”) v. *Perusahaan Pertambangan Minyak Dan Gas Bumi Negara* (“Pertamina”) and *PT. PLN (Persero)* (“PLN”) and *Himpurna California Energy Ltd* (“Himpurna”) v. *PLN* are two arbitral proceedings that centered upon investments by foreign companies in Indonesia’s electricity sector in the 1990s.

The awards delivered in the *Karaha Bodas* and *Himpurna* proceedings are noteworthy because of the approach taken to awarding damages in these cases. In particular, the Tribunals awarded *damnum emergens* (actual losses caused) plus *lucrum cessans* (gains

¹ Award available at <<http://www.karahabodas.com/legal/FinalArb.pdf>>, (last accessed 15 March 2007).

² *Yearbook Commercial Arbitration* XXV (2000), pp. 13-108.

prevented). This approach, according to Wells, resulted in the Tribunal in *Karaha Bodas* “double counting” (i.e. awarding damages twice). Moreover, based on Wells’ reading of *Karaha Bodas*, awarding *damnum emergens* and *lucrum cessans* in *Himpurna* should have also, on the face of it, resulted in the arbitral Tribunal double counting. Relevantly however, a number of other commentators have argued that the Tribunals in *Himpurna* and *Karaha Bodas* did not in fact double count because the Tribunals in those cases applied contractual-related as opposed to expropriation-related principles to the awards of damages.³

After setting out the factual circumstances giving rise to the *Karaha Bodas* and *Himpurna* proceedings, this note outlines the findings of the two Tribunals in the two awards on the applicable law and on damages, interest and costs. Finally, the case note discusses the issue of double counting when awarding damages for breach of contract.

1. Factual Background

Karaha Bodas was granted contractual rights to develop a geothermal electricity project in West Java, Indonesia. In 1994 it entered into a joint operating contract (“JOC”) with Pertamina, a state owned oil and gas company, and an energy sales contract (“ESC”) with PLN, a state owned electricity utility that supplied electricity to the Indonesian public. Under these contracts, Karaha Bodas was required to develop geothermal energy, and build, own and operate electricity generating facilities. PLN was required to purchase electricity generated by the project.

Like Karaha Bodas, Himpurna also entered into an ESC with PLN in 1994. Under this contract, Himpurna was required to supply PLN with electricity from a geothermal field in Java. The supply contract also required Himpurna to make a large investment in wells, plant and other infrastructure.

In 1997 and 1998, three Presidential Decrees (“Decrees”) were issued in the context of the Asian financial crisis. The Decrees meant that PLN and Pertamina could not perform their contractual obligations and resulted in the suspension of Karaha Bodas’ and Himpurna’s investments.⁴ In 1998, Karaha Bodas and Himpurna commenced arbitral proceedings under the dispute resolution clauses in the applicable contracts, alleging that

³ See, for example, M. Kantor, *Compensation for non-compliance on PPAs and similar long-term contracts*, <http://www.transnational-dispute-management.com/samples/freearticles/tv1-1-article_72.htm>, (last accessed 21 March 2007).

⁴ In *Himpurna*, PLN took the position that it was independent of the Indonesian Government and could not be held liable “in circumstances where the Contract ‘was suspended by government action binding on the parties’” (para.84). However, the Tribunal in this case considered “the relationship between PLN and the Government of Indonesia, *de jure* and *de facto*, and... the implications of the fact that the Contract itself expressly contemplated the effects of Governmental action” (para.86). It noted three “independently sufficient grounds for declining to excuse PLN’s non-performance on the grounds of State action”, namely: “PLN’s *de jure* subservience to the Government”, “The contractual allocation of the risk of Governmental action” and “PLN’s *de facto* subservience to the Government” (see pp.36-42). In *Karaha Bodas*, the Tribunal found that the Governmental decisions (i.e. the Decrees) did not amount to a breach of PLN’s and Pertamina’s obligations, but that “since a Governmental event is not a Force Majeure event for them, their non-performance has no legitimate excuse and must be considered as a breach of contract” (para.56).

PLN and Pertamina had breached their contractual obligations. The Claimants both sought termination of the relevant ESCs, Karaha Bodas sought termination of the relevant contracts,⁵ and an award of damages.

2. Applicable Law

In *Himpurna*, the substantive law governing the ESC was found to be Indonesian law. However, the parties to the ESC had “*agreed that the Arbitral Tribunal should not be bound by rules of law insofar as their application would contradict the terms of the contract*” (para.42). Furthermore, the Tribunal also applied international law on the basis that the parties to the dispute had referred to international authorities in their pleadings or submissions (this evidencing a “*tacit common position as to the permissibility of such references*”)⁶ and in these circumstances, according to the Tribunal, Article 28(3) of the UNCITRAL Rules supported its ability to apply international law.⁷

In *Karaha Bodas* the substantive law governing the ESC and the JOC was found to be Indonesian law. International law is not mentioned in this award.

3. Damnum Emergens and Lucrum Cessans

In respect of the question of the damages that should be awarded to Karaha Bodas and Himpurna, the Tribunals applied a conceptual approach that has been applied in “*countless international arbitrations*” and determined the damages payable by reference to the concepts of *damnum emergens* and *lucrum cessans*.⁸

According to both Tribunals, the concepts of *lucrum cessans* and *damnum emergens* were recognised by Indonesian law and could therefore be applied in the arbitral proceedings.⁹ The Tribunal in *Himpurna* had regard to both international law¹⁰ and to Indonesian law affected the application of international law, when applying these concepts. The *Karaha*

⁵ The ESCs and the JOC were ultimately terminated by the Tribunals.

⁶ *Himpurna*, para.43.

⁷ *Himpurna*, para.43. Article 28(3) provides that “*If one of the parties, duly invited to produce documentary evidence, fails to do so within the established period of time, without showing sufficient cause for such failure, the arbitral tribunal may make the award on the evidence before it.*” The Tribunal in the *Himpurna* proceedings stated in respect of the relevance of the parties evincing a tacit common position and Article 28(3) that: “*It remains to note only that PLN’s Closing Brief invokes a number of international arbitral awards, explaining ... that it is ‘convenient’ to refer to international practice with respect to matters ‘where Indonesian law is less detailed’. The Claimant has also invoked international arbitral awards. The Parties’ submissions thus evidence a tacit common position as to the permissibility of such references. Considering in addition that this approach is consonant with Art.28(3) of the UNCITRAL Rules, the Arbitral Tribunal shall follow the Parties’ example in connection with discrete points where international precedents appear useful.*”

⁸ See *Himpurna*, para.235.

⁹ *Karaha Bodas*, para.121; *Himpurna*, para.235.

¹⁰ See for example cases referred to in *Himpurna* in footnote 19 (page 70), discussion of International Court of Justice’s approach in *North Sea Continental Shelf* 1969 at para.238, and footnoted reference to *Factory at Chorzów* case, para.240.

Bodas award, however, did not mention domestic or international law authorities (apart from the factually analogous *Himpurna* award) when applying these concepts.¹¹

3.1 *Damnum Emergens*

Karaha Bodas sought the award of US \$94,600,000 to recover its capital investment. The Tribunal awarded Karaha Bodas US \$93,100,000. In determining the amount to be awarded the Tribunal had regard to what expenditures had been approved by Pertamina. It deducted \$1,600,000 in respect of expenditure that had not been approved.

Himpurna claimed US \$315,046,166 (including interest to 30 April 1999) in respect of its capital investment. The Tribunal stated that “*the claimant is entitled to all of the sunken costs it is able to prove, and the arbitrators must decide on a preponderance of the evidence put before them*”.¹² The Tribunal adjusted Himpurna’s claim downwards by US \$34,646,431, and found the historical claimed costs to be US \$254,502,586.¹³ The amounts disallowed by the Tribunal related to pre-contractual expenditures in reliance upon promises yet to be given; VAT charges representing a deferred liability which the claimant has never paid; and head office and management service fees paid to CalEnergy.¹⁴ To establish the present value of the sunk costs, the Tribunal applied a multiplier of 0.929665.¹⁵ The Tribunal held that the recoverable *damnum emergens* amounted to US\$ 273,757,306.

In both cases, with respect to the awarding of *damnum emergens*, the Respondents sought to limit the extent of the damages that were payable on the basis that the costs incurred by the Applicants were wasteful or unreasonable. However, both Tribunals questioned the extent to which a Respondent is able to challenge an Applicant’s claim for *damnum emergens* on this basis. In particular, the approaches adopted suggest that Tribunals will be unlikely to question the reasonableness of expenses so long as there is evidence that the expenses were incurred by the investor in pursuit of the relevant investment. In these cases the Tribunals found as follows:

- (a) In the *Karaha Bodas* proceedings the Tribunal stated that: “*...the Claimant has as a matter of principle to be compensated for all the proven sunken costs which were incurred with regard to activities carried out in reality , without any need to enter into an ex post facto debate about whether such expenditures were reasonable and profitable or not. In other words, the Claimant is entitled to recover all costs an*

¹¹ See, for example, *Himpurna* para.110.

¹² *Himpurna*, para.257.

¹³ *Himpurna*, para.286. Note: These figures have been extracted from the body of the *Himpurna* award. However, the figures do not add up (i.e. \$315,046,166 minus \$34,646,431 is not \$254,502,586). This discrepancy could, perhaps, be attributed to a disallowance of interest by the Tribunal, given that interest was claimed by *Himpurna* (para.253) but is not discussed in the award.

¹⁴ *Himpurna*, see para.286.

¹⁵ In its reasoning, the Tribunal did not explain the reasons why it adjusted this figure upwards.

investments adequately proven and directly related to the works undertaken in implementation of the Contracts concluded with the respondents”.¹⁶

- (b) In the *Himpurna* proceedings the Tribunal stated that: “...while [PLN] has full entitlement to question the reality of the claimant’s alleged costs, there is little scope to question the reasonableness. As long as the expenditures were made in rational pursuit of the objectives of the Contract, there is no room to question their cost-effectiveness *ex post facto*. For example, PLN cannot seek to invalidate the payment of fees of third-party consultants on the basis that they were unnecessary or more expensive, than other consultants alleged to be equally proficient”.¹⁷

3.2 Lucrum Cessans

Karaha Bodas claimed US \$512,000,000 lost profits associated with the “*loss of geothermal development opportunities*”.¹⁸ This figure was based on the project’s projected cash flows over the 30 year life of the energy sales contract discounted at 8.5%, based on the specified quantities to be delivered to PNL in exchange for energy and capacity payments provided, minus its “*prior investments as evidenced by the Report of its expert*”.¹⁹

In *Karaha Bodas*, the Tribunal noted the Claimant’s view that deducting its prior investments from the lost profits it claimed would result in “*no double counting*”.²⁰ The exact basis on which the Tribunal determined the amount of *lucrum cessans* that were payable to Karaha Bodas is not clear from the award. Having referred to the various risks that may have impacted upon the level of profits the Claimant might reasonably have earned and “[t]he too many variables involved in such an evaluation process”, the Tribunal, “*in the exercise of its inherent power to assess the quantum of damages on the basis of the evidence submitted by both parties*” fixed at US \$150 million the amount of lost profits, i.e. roughly 30% of the amount claimed.²¹

The approach taken by the Claimant in *Himpurna* to the calculation of *lucrum cessans* was very similar to the approach in *Karaha Bodas*. *Himpurna* alleged that the total projected revenues until 2030, discounted at 8.5%, would amount to US\$ 4.048 billion. It then deducted from this figure the present value of costs associated with the revenues (i.e. capital and operating costs, and taxes) at the discount rate of 8.5%, to arrive at the *lucrum cessans* claimed of US\$ 1,946,574,970. The Tribunal determined the *lucrum cessans* payable to *Himpurna* by taking the following steps:

- (a) First, the Tribunal noted that the damages sought by the Claimant were based on the assumption of a sustainable electricity generation capacity of 245 MW

¹⁶ *Karaha Bodas*, para.101.

¹⁷ *Himpurna*, para.258.

¹⁸ *Karaha Bodas*, para.109.

¹⁹ *Karaha Bodas*, para.109.

²⁰ *Karaha Bodas*, para.109.

²¹ *Karaha Bodas*, para.136.

for a period of 30 years.²² However, the Tribunal agreed with the figure proposed by PLN's expert that there were only 130 MW of proven reserves.²³

- (b) Second, the Tribunal noted that “*damages for the loss of a bargain may in principle be granted even when the victim of a breach has not yet incurred significant costs*”²⁴ but ultimately refused to grant profits on investments that had not been made at the date of breach.²⁵ To support this approach, the Tribunal relied on the doctrine of “abuse of right”.²⁶ In particular, it found that for Himpurna:

*[t]o seek to apply the [ESC] so as to permit the claimant to reap pure profit by reference to hypothetical **future initiatives** in pursuit of an agreement which has become an instrument of oppression would be like stepping on the shoulders of a drowning man. The Arbitral Tribunal finds that it would be insufferable, and therefore an abuse of right.*²⁷ (original emphasis)

- (c) In light of the matters noted in subparagraphs (a) and (b), the Tribunal thereby awarded a percentage of lost profits that was proportionate to the investment the Claimant had actually made. In order to calculate the lost profits payable by the Respondent, the Tribunal compared the present value of the costs it had accepted had been incurred by the Claimant (US\$ 273,757,306) with the amount the Claimant had put forward as the present value of its projected costs over the life of the contract if it had to be performed (US\$ 748,564,000). The Tribunal limited the recoverable profits to that proportion (i.e. 36% of the total claim of lost profits).²⁸
- (d) The Tribunal then considered the issue of determining the present value of the future net income. It noted that the Claimant had applied a discount rate of 8.5% to the projected revenue stream and to the costs associated with the revenues. However, the Tribunal adjusted the discount rate, having regard to the risks facing the project, and found the appropriate rate to be 19%.²⁹

²² *Himpurna*, para.305.

²³ *Himpurna*, paras.313-315.

²⁴ *Himpurna*, para.317.

²⁵ *Himpurna*, paras.318 & 378: Relevantly, the Tribunal noted that the concept of abuse of right is “*an element of overriding substantive law proper to the international arbitral process*” (para.323).

²⁶ Note that arbitrator de Fina dissented on this point in his separate statement:

I am particularly troubled by the novel proposition adopted by my colleagues that the claimant's reliance upon its contractual rights to establish quantum amounts to an abuse of rights thus leading to an permitting a substantial reduction of what might otherwise be awarded.

My concern is that such a questionable proposition and the manner of its application in this Award prejudices notions of legal security and basic principles of private law.

²⁷ *Himpurna* para.343.

²⁸ *Himpurna*, para.347.

²⁹ *Himpurna*, para.371. The Tribunal did not show how it arrived at this figure.

In short, the Tribunal took 36% of the Claimant's after-tax net cash flow, and discounted it to the present value at the rate of 19%, with the resulting amount being US\$ 117,244,000.

4. Unpaid Invoices

The Tribunal in the *Himpurna* proceedings found that in circumstances where Himpurna had sought termination of the ESC and the Tribunal had upheld this claim, it was not entitled to receive payment for unpaid invoices. It reached this conclusion on the basis that the Tribunal's task was to “*assess the consequences of termination on account of PLN's breach – not to enforce its performance*”.³⁰ The Tribunal found that to order PLN to pay past invoices in addition to reliance damages (i.e. damages in respect of Himpurna's lost investment) “*is to commingle contradictory premises of recovery*”.³¹ Accordingly, the “*legally correct solution*” was held to be to simply disregard the unpaid invoices in light of the termination of the energy sales contract. This issue was not considered in the *Karaha Bodas* award.

5. Interest

Karaha Bodas sought the award of interest on amounts awarded by the Tribunal from 10 January 1998, this being the date of the final Presidential Decree that had resulted in the suspension of its investment. In the case of interest in respect of *damnum emergens*, the Tribunal found that “[s]ince the arbitral Tribunal is compensating the Claimant for the value of its lost expenditures as at the end of the year 2000, no interests should be paid by the Respondents before that date in this respect, since such evaluation meet its request for interest [sic]”.³² In the case of interest in respect of *lucrum cessans*, the Tribunal held that interest would accrue from the date of the award.³³ The Tribunal found the applicable interest rate to be 4%, noting that:

*International Arbitral Tribunals enjoy a large freedom when fixing the rate of interest, taking into account the money of payment, the respective situation of the parties and the circumstances of the case.*³⁴

In the *Himpurna* proceedings, Himpurna sought the payment of interest on *damnum emergens* to 30 April 1999.³⁵ However, it is not clear from the award what approach the Tribunal took to this issue because the issue of interest is not discussed.³⁶

6. Costs

³⁰ *Himpurna*, original emphasis, para.248.

³¹ *Himpurna*, para.249.

³² *Karaha Bodas*, para.138.

³³ *Karaha Bodas*, para.138.

³⁴ *Karaha Bodas*, para.138.

³⁵ *Himpurna*, para.253.

³⁶ See also the matters discussed in footnote 13 above.

In *Karaha Bodas*, after noting Article 40(1) of the UNCITRAL Rules, that the Respondents had been unsuccessful on the principles, and that a significant part of the damages request by the Claimant had been denied, the Tribunal concluded that the Respondents should bear two-thirds of the costs and expenses of the arbitration and the Claimant one third.³⁷ In *Himpurna*, PLN was ordered to pay the costs of the arbitration.³⁸ In both cases, each side was ordered to bear its own costs of legal representation and assistance.

7. Double Counting

When awarding damages for breach of contract, a tribunal is seeking to put the Claimant in the same position it would have been in if the parties' had performed their contractual obligations.³⁹ Indeed, according to Gotanda, “[t]oday, it is well recognized by international tribunals that a wrongful breach of contract entitles the injured party to the benefit of the bargain. In theory, this allows the claimant to recover money for actual loss incurred as a result of the breach and any net gains prevented”.⁴⁰ This suggests that under international law a Claimant is entitled to seek both reliance and performance damages in the form of *damnum emergens* and *lucrum cessans* – in accordance with the parties' rights and obligations as set out in the relevant contract.⁴¹

As has been noted above however, the *Karaha Bodas* award has been criticized by Wells who argued that “from an economist’s point of view, the total amount awarded [in *Karaha Bodas*] was likely excessive” because of double counting and, further, in calculating net present value (“NPV”) the Tribunal had considered the stream of future income from investments that had not yet been made.⁴² In particular, Wells asserted that:

In sum, one could estimate [fair market value] (FMV) by starting with either the investment or the NPV of expected cash flows, but they should not be added together. It appears from available documents that the arbitrators in the case double counted in determining the amounts owed by Pertamina and PLN by awarding the amount of the investment (with no adjustment...) plus the NPV of expected cash flows.

In this case, calculating NPV should lead to an additional adjustment. The investment had not been completed; even if one turns to NPV, one ought only to consider only the stream of earnings that would accrue to the investment actually

³⁷ *Karaha Bodas*, para. 140.

³⁸ *Himpurna*, para.388.

³⁹ *Sapphire*, pages.185-6.

⁴⁰ J. Gotanda, *Damages in Lieu of Performance Because of Breach of Contract*, Villanova University Legal Working Paper Series, Working Paper 53, p.70, available at <<http://law.bepress.com/villanovalwps/papers/art53/>>, (last accessed 24 April 2007).

⁴¹ According to the Tribunal in the *Himpurna* proceedings, in claims for breach of contract “[c]laimants are on solid ground when they ask to be reimbursed monies they have actually spent in reliance on the contract; recovery of lost profits is less certain”: *Himpurna*, para.241.

⁴² L. Wells, *Double Dipping in Arbitration Awards? An Economist Questions Damages Awarded Karaha Bodas Company in Indonesia*, *Arbitration International*, No.4, 2003.

made by the time the ‘taking’ occurred. Yet it appears that the expected cash flows actually considered by the tribunal were those for the completed project.

*Although there is no evidence of such adjustments in this case, one could, of course, modify the concepts, and thus the calculations, of *damnum emergens plus lucrum cessans* so that they come out equivalent to fair market value. It would be much more straightforward, however, to estimate FMV directly, from the investment actually made **or** from the NPV of future cash flows, rather than by adapting concepts that are appropriate to another kind of transaction.⁴³ (original emphasis)*

Based on Wells’ approach, awarding *lucrum cessans* and *damnum emergens* in *Himpurna* should also, on the face of it, have resulted in the arbitral Tribunal double counting.

Importantly however, a distinction must be drawn between an expropriation-type case where an arbitral Tribunal would seek to ascertain and award a Claimant the “fair market value” of its investment, and a contract-type case where an arbitral Tribunal would seek to put a Claimant in the same position it would have been in if the contract had been performed. According to Kantor, the Tribunals in *Karaha Bodas* and *Himpurna* did *not* engage in double-counting because they had simply calculated damages by reference to the parties’ contractual obligations and not the expropriation-styled “*projections of investment returns*”.⁴⁴ Similarly, with respect to *Karaha Bodas*, Rubins has also noted the relevance of the particular contractual provisions involved to the approach taken by the Tribunal:

as one of the team involved in the enforcement of the Karaha Bodas award, I would concur completely that the Karaha situation was very distinct from the typical expropriation case we encounter in recent investor-state arbitration, because of the contractual provisions involved.⁴⁵

However, notwithstanding Kantor’s and Rubins’ comments, if a Claimant is simply awarded both the costs it has incurred in performing its obligations under the contract (i.e. *damnum emergens*) *and* the profits it would have obtained in the future (i.e. *lucrum cessans*), depending on the exact way in which lost profits are calculated, it could potentially be placed in a better position than it would have been in if the contract had actually been performed.⁴⁶ In order to prevent double recovery, any monies expended by a Claimant in reliance on the contract must be deducted from the lost profit calculations.⁴⁷ More specifically, in order to prevent double recovery when awarding both *damnum*

⁴³ *Ibid.*, p.6.

⁴⁴ M. Kantor, *Compensation for non-compliance on PPAs and similar long-term contracts*, <http://www.transnational-dispute-management.com/samples/freearticles/tv1-1-article_72.htm>, (last accessed 21 March 2007).

⁴⁵ N. Rubins, *Email to TDM*, <http://www.transnational-dispute-management.com/samples/freearticles/tv1-1-article_72.htm>, (last accessed 21 March 2007).

⁴⁶ L. Fuller & W Perdue, “*The Reliance Interest In Contract Damages*”, 46 *Yale Law Journal* (1936), p.81.

⁴⁷ *Ibid.*

emergens and *lucrum cessans*, tribunals must at least make an adjustment (i.e. reduction) to future net cash flow calculations in order to take into account the amortization/depreciation of capital investment.⁴⁸ The need to take into account amortization/depreciation was expressly recognised by the Tribunal in the *Himpurna* proceedings, who stated that:

*... the quantification of lost profits must result in a lower amount to avoid double counting. This is so because future net cash flow generally includes all the amortisation of investment there ever will be. To ask for the full amount of the future revenue stream when also claiming recoupment of all investments is wanting to have your cake and eat it too. If the DCF method is applied in a contractual scenario to measure nothing but net cash flows (thus excluding the accrual accounting notion of 'income' which may cover non-cash items such as depreciation), there is no room for recovery of wasted costs. In other words, when the victim of a breach of contract seeks recovery of sunken costs, confident that it is entitled to its *damnum*, it may go on to seek lost profits only with the proviso that its computations reduce future net cash flows by allowing a proper measure of amortisation.*⁴⁹

Finally, it is also relevant to briefly note Wälde's opinion on the issue of double counting which differs from that expressed by Wells. In particular, Wälde stresses that in circumstances where damages are awarded for the breach of contract, a Claimant will then be free to (and indeed, according to some authorities, must) reinvest the damages awarded.⁵⁰ In these circumstances a Claimant could also earn an additional rate of return on the damages awarded – and will therefore have been awarded more than if the contractual breach had not occurred. According to Wälde however, the Tribunal in the *Himpurna* award got around the issue of double counting (when it is used in this sense) by applying the doctrine of “abuse of right” as an “*emergency brake*”.⁵¹

⁴⁸ Such an adjustment must be made because when considering future cash flows, past capital expenses are spread into the future periods in the form of depreciation. Depreciation is a non-cash item; being an accounting concept, it is a fiction that allows money spent in the past to be spread into the future.

⁴⁹ *Himpurna*, para.242.

⁵⁰ See email exchange between M. Kantor, T. Wälde, & N. Rubins, *Compensation for non-compliance on PPAs and similar long-term contracts*, <http://www.transnational-dispute-management.com/samples/freearticles/tv1-1-article_72.htm>, (last accessed 25 April 2007).

⁵¹ T Wälde, *Remedies and Compensation in International Investment Law*, p.6, (First Draft, July 2005), <<http://www.ila-hq.org/pdf/Foreign%20Investment/ILA%20paper%20Walde.pdf>>, (last accessed 21 March 2007). In particular, Wälde has asserted in respect of the risk of double counting that: “*My suggestion is that this tribunal, well aware of the risk of over-recovery, was still in thrall to the *damnum emergens/ lucrum cessans* categories and thus needed the emergency brake of “abuse of right” to avoid being pushed by these categories into the abyss of double recovery. One cannot criticise the tribunal’s reliance on the “abuse of right” concept without appreciating the risk inherent in the *damnum emergens / lucrum cessans* categories*”.