

Netherlands Competition Authority

ADDENDUM D TO THE METHOD DECISION

Number: 102106-89
Case: Method decision in relation to the x factor and the volume parameters of regional electricity grid managers for the third regulatory period
Subject: Response of the Board of Directors of the Netherlands Competition Authority to the opinions submitted in relation to the draft method decision of 8 March 2006.

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1 Introduction

1. The opinions on the draft method decision of 8 March 2006,¹ discussed in this Addendum to the decision in relation to the method for determining the discount to promote efficient operations and the volume parameter of each tariff component for which a tariff is determined (hereinafter "the method decision"), pursuant to section 41(1) of the Electricity Act of 1998 for the years 2007 up to and including 2009. This Addendum is part of method decision 102106-89 of 27 June 2006.
2. On 6 April 2006, as part of the standard public preparatory procedure, as referred to in section 3.4 of the General Administrative Law Act, a hearing was held at the offices of the Board of Directors of the Netherlands Competition Authority (hereinafter "the Board"). The grid managers of Eneco, namely Eneco Netbeheer B.V., ENBU B.V., Eneco EdelNet Delfland B.V., Eneco Netbeheer Midden-Holland B.V., Eneco Netbeheer Weert B.V., B.V. Netbeheer Zuid-Kennemerland (jointly referred to hereinafter as "Eneco"), EnergieNed, the grid managers of Essent, namely Essent Netwerk B.V. and InfraMosane N.V. (jointly referred to hereinafter as "Essent"), Intergas Energie B.V. (hereinafter "Intergas"), NRE Netwerk B.V. (hereinafter "NRE"), Rendo Netbeheer B.V. (hereinafter "Rendo"), TenneT TSO B.V. (hereinafter "TenneT"), Vereniging voor Energie, Milieu en Water (hereinafter "VEMW") and Vereniging Particuliere Windturbine Exploitanten (hereinafter "PAWEX"), presented their opinions.
3. The Board received written opinions from N.V. Continuon Netbeheer (hereinafter "Continuon"), DNWB Netwerkbedrijf B.V. (hereinafter "DNWB"), Eneco, EnergieNed, Essent, Intergas, MKB-Nederland, NRE, ONS Netbeheer B.V. (hereinafter "ONS"), PAWEX, Rendo, TenneT, Westland Energie Infrastructuur B.V. (hereinafter "Westland") and VEMW.
4. The Board notes that Intergas, a regional gas network manager, submitted opinions in relation to the method decision adopted for the regional electricity grid managers. Intergas states that since the principles for the inclusion of any objectifiable regional differences formulated in the draft method decision for regional electricity grid managers are expected to be the same as those which will apply to regional gas network managers, they see reason to submit their opinion at this stage. However, the Board is of the opinion that this method decision has no direct legal consequences for Intergas and that Intergas cannot therefore be deemed to be an interested party. The Board has therefore decided not to take Intergas's opinion into account. The Board also notes that Intergas's

¹ With reference number 102106-43.

opinion has many substantive similarities to opinions submitted by interested parties, which are discussed in this Addendum.

5. The opinions submitted are presented briefly per topic and are accompanied by a response by the Board. Finally, if an opinion resulted in an amendment to the draft method decision, this is stated. If an opinion resulted in an amendment to the draft method decision, the nature of this amendment is stated.
6. A number of grid managers² refer in their opinions to the response which EnergieNed (Grid Managers Section) submitted to the draft method decision and the earlier consultation document "The Cost of Capital Allowance for Regional Grid Managers" ("*Cost of capital allowance regionale grid managers*") on the half of all the regional electricity grid managers. Several grid managers cite from and/or summarise EnergieNed's response. This has been dealt with in this Addendum as follows. In so far as the opinion of an individual grid manager deviates (partially) from EnergieNed's opinion, this opinion is dealt with separately. If the opinion corresponds to EnergieNed's opinion, reference is only made to the opinions submitted by EnergieNed.
7. The opinions submitted relate to a number of parts of the method decision. These parts are listed below briefly and if the respective opinion resulted in an amendment to the draft method decision, this is indicated.

Parts	Amendment
a the composition of the reference group;	No
b the retrospective settlement for the second regulatory period	Yes
b the playing field and the catch-up;	No*
c the determination of the volume parameter;	Yes
d the calculation of the equalisation factor and the measurement of the change in productivity;	No
e the correction for setting the <i>Landelijk Uniform Producenten transporttarief</i> (hereinafter "the National Standard Producer Transmission Tariff ") at nil;	Yes
f the determination of the cost of capital allowance (hereinafter "the WACC");	Yes
g the objectifiable regional differences ;	Yes
h opinions on procedural matters;	Yes
i other parts.	Yes

* The sole purpose of the amendment is to clarify the method decision.

² Continuon, Eneco, Essent, NRE, ONS, RENDO and Westland.

8. A brief summary of the most important amendments to the method decision follows below.
9. Some parts of the draft method decision related to the retrospective settlement for the second regulatory period. These parts have been deleted from the method decision. The Board will take a separate decision in relation to retrospective settlement for the second regulatory period.
10. As a result of the opinions submitted in relation to the determination of the volume parameter, the Board has also amended the method decision compared to the draft method decision. The Board has stated in the method decision that the invoiced volumes for the year 2005 are accompanied by an auditor's report.
11. On the basis of the opinions with regard to the correction, due to the fact that the National Standard Producer Transmission Tariff had been set at nil, the Board notes that anticipation of the possible consequences of the Electricity Companies Division Bill [*Splitsingswetsvoorstel*] in the draft method decision had resulted in a lack of clarity in this regard. The Board has therefore removed all references to this from the method decision.
12. The opinions submitted in relation to the WACC, in combination with the second opinion obtained on the Board's initiative in relation to the (method of calculating the level of the) WACC, have resulted in an amendment by the Board of several underlying parameters compared to the draft method decision. These amendments relate to beta and the debt premium. As a result of these amendments, the WACC (compared to the draft method decision) will be reduced to 5.8%.
13. In the light of the many responses to the research into objectifiable regional differences, Addendum A to this method decision contains an extensive section on the starting point of the research into objectifiable regional differences and the way in which the corrections have been incorporated. Due to the opinions submitted with regard to the objectifiable regional differences, the Board has decided for the time being not to anticipate the possible abolition of precario. The Board will therefore correct the tariffs for the third regulatory period for the objectifiable regional difference of taxes, of which the precario is the most important component. As soon as precario is abolished, the objectifiable regional difference "correction for taxes" will be set at nil.
14. Partly due to the opinions submitted, the Board is of the opinion that the potential objectifiable regional difference "connection density" now warrants further research. The

Board, after consultation with the parties involved, will start research into the effect of differences in connection density on the costs of grid managers. The outcomes of this research may result in tariff increases or tariff decreases for individual grid managers during the third regulatory period.

15. Finally, the Board notes that making a correction for objectifiable regional differences does not automatically mean that these will continue to exist indefinitely. Amendments to legislation and regulations,³ mergers, acquisitions, the introduction of capacity tariffs and the like may give the Board cause to reassess whether an objectifiable regional difference exists. If this is not the case, the respective corrections for the objectifiable regional difference will lapse.
16. Several opinions contained comments of a more procedural nature. In general, these did not result in amendments to the draft method decision. The Board has, however, given a slightly more extensive justification of the duration of the regulatory period in the method decision. In addition, the Board has removed all specific references to the method of regulation after the third regulatory period from the method decision. The Board has limited itself to a general section on regulation in the future in Addendum A.
17. Finally, several opinions were submitted which could not be categorised under any of the preceding topics. In general, these opinions did not result in amendments to the draft method decision. The Board, however, did correct a typing error in a formula in Addendum B on the basis of an opinion.

2 Opinions

2.1 Measurement group

Deviation from the proposal made in the consultation document and changes to the measurement group in the method decision for the third regulatory period are not justifiable

18. One respondent⁴ states that the Board has deviated from its initial proposal with regard to the composition of the measurement group in the consultation document, while it emerged from the responses to the consultation document that almost all the grid managers stated that, in principle, they agreed with the Board's proposal. This

³ For instance, the transfer of the 110 kV and 150 kV sections of the grids of the regional grid managers to TenneT.

⁴ EnergieNed.

respondent is of the opinion that this has not been justified sufficiently. One respondent⁵ makes the additional comment that the Board should adhere to its original proposal.

19. One respondent⁶ requests a justification for the inclusion in the method decision for the third regulatory period of the change in the way in which the measurement group and the productivity measurement for the second regulatory period are determined.

Response

20. The above-mentioned responses have resulted in the Board's concluding, on further reflection, that it is not desirable from the point of view of prudence and transparency to include the retrospective settlement for the second regulatory period in this method decision (for the third regulatory period). For this reason, the change in the way in which the measurement group and the productivity measurement for the second regulatory period are determined is included in a separate decision. The passages in the draft method decision relating to this have been removed or amended. The Board will therefore not discuss the respective opinions substantively here.

Conclusion

21. This opinion resulted in a number of amendments to the method decision compared to the draft method decision :
- a. Paragraph 28 of the draft method decision has been deleted.
 - b. The paragraphs under section 2.1 of Addendum A to the draft method decision have been deleted. A new paragraph with the contents below has been added under this section:

"The way in which the estimation errors, and therefore also the retrospective settlement, are determined for the second regulatory period, is set out in a separate decision by the Board."

- c. The final sentence of paragraph 49 of Addendum A to the draft method decision has been replaced by the following sentence:

"This correction is based on the correction, as described in variant 2b of the measurement group consultation document."⁷

⁵ Eneco.

⁶ EnergieNed.

⁷ DTe, *Consultatiedocument 'Meetgroep netbeheerders elektriciteit'*, 2005 (www.dte.nl) .

Paragraph 9 of Addendum B to the draft method decision has been amended. The contents after the first sentence have been deleted. The second sentence of this paragraph will read as follows:

"The way in which the estimation errors, and therefore also the retrospective settlement, are determined for the second regulatory period, is set out in a separate decision by the Board."

- d. The first sentence of paragraph 53 of Addendum A to the draft method decision has been replaced by the following sentence:

"As is stated in the method decision for the second regulatory period, the expected average change in the productivity of grid managers during the second regulatory period may deviate from the realised change in productivity."

TenneT may not be included in the measurement group

22. One respondent⁸ noticed that there is an inconsistency in the calculation of the catch-up and the composition of the measurement group. In calculating the catch-up, the TenneT (as a regional grid manager) is not included, while TenneT is part of the measurement group. This respondent states that the regional grid managers have a preference for a measurement group without TenneT. One respondent⁹ makes the additional comment that if TenneT were nevertheless included in the measurement group, a DEA score would still have to be determined, so that TenneT could also be included in the calculation of the catch-up.

Response

23. The Board agrees with respondents that the calculation of the correction for the catch-up is inconsistent. However, this inconsistency is based on historic facts. After all, TenneT does not have a DEA score because at the time that the x factor was determined for the first regulatory period, the DEA score had not yet been determined. In the Board's view, determining a DEA score with retrospective effect in order to determine the catch-up is a harsh measure. This is all the more so because there is a good alternative and determining a DEA score will have little or no financial effect. Since TenneT is not involved in determining the catch-up, TenneT is assumed to have an average catch-up. If TenneT were to have a DEA score, this would have little or no effect on the catch-up, because TenneT is a relatively small grid manager. Furthermore, TenneT is a regional

⁸ EnergieNed.

⁹ Eneco.

grid manager and the development of TenneT's productivity should therefore also be taken into account.

Conclusion

24. This opinion resulted in an amendment to footnote 5 of Addendum B of the draft method decision. The amended footnote is given below:

“In calculating the correction for catch-up, TenneT TSO B.V. will not be taken into account because at the time that the x factor was determined for the first regulatory period, the DEA score had not been determined. Determining a DEA score retrospectively to determine the catch-up is a harsh method and is not necessary because the x factor is not affected by this.”

2.2 Playing field and catch-up

Uneven playing field

25. One respondent¹⁰ states that the Board's assumption that the differences in revenues per unit of output have already been eliminated¹¹ is incorrect. According to this respondent, there is still an uneven playing field. This respondent demonstrates this on the basis of the tariffs for the year 2006 and the sales for the year 2004 of the various grid managers. The respondent gives as the explanation for this the fact that various developments occurred during the past regulatory period which made it possible for differences in revenues per unit of output at the end of the second regulatory period. Another¹² respondent also stated that there is not a level playing field, but does not substantiate this statement. One respondent¹³ states that there is a level playing field.

Response

26. The Board concludes that there is a difference of opinion between the first respondent mentioned¹⁴ and the Board with regard to the level playing field. In the draft method decision, the Board states that a level playing field has now emerged between the grid managers in the year 2006 in terms of total revenues per unit of output. This is based on

¹⁰ Continuon.

¹¹ See paragraph 9 of the draft method decision.

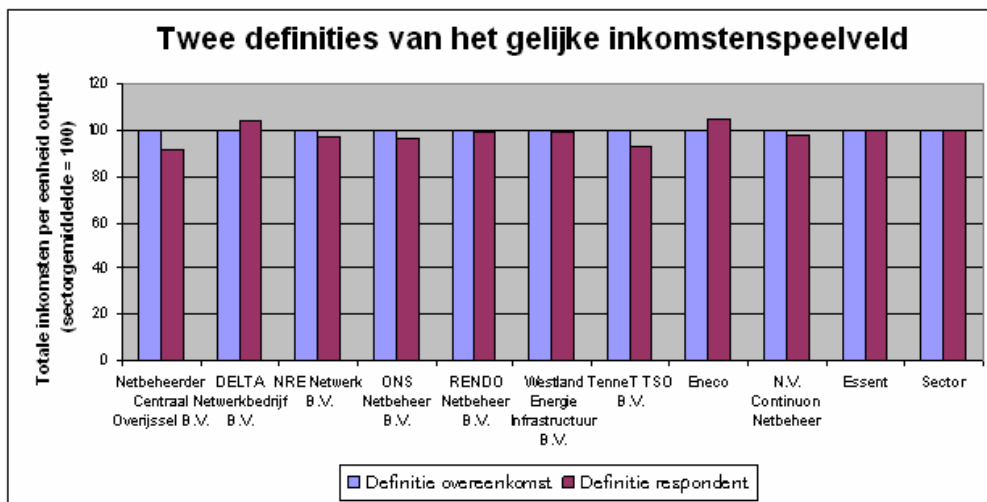
¹² TenneT.

¹³ Eneco.

¹⁴ Continuon.

the method on which agreement has been reached in the sector¹⁵ and which has been applied in the past two regulatory periods. This method entails creating a level playing field for the grid managers with regard to their tariff revenues *per unit of output in the year 2000*. The tariff revenues, in this regard, are only affected by inflation and the x factors. The output for the year 2000 is determined by means of sector-average tariffs for the year 2000 and sales in that year on the various submarkets on which the grid managers operate. The advantage of this method is that the level playing field could be determined with the data available at the time.

27. According to the definition in the agreement, the level playing field has, in fact, been realised. The bar diagram below shows that the total revenues per unit of output is the same for all grid managers according to this definition (see the first bar for each grid manager in the bar diagram).



Total revenues per unit of output (sector average = 100)	Two definitions of the revenues level playing field
	Definition agreement Definition respondent

Waarom staat deze table hierboven???

¹⁵ See the agreement between the Director of DTe and the regional electricity grid managers in relation to the regulation of electricity grid tariffs in the period from 2001 up to and including 2006 (Electricity Grid Tariff Regulation Agreement (2001-2006)) [*Overeenkomst Regulering Nettareven Elektriciteit (2001-2006)*], of 26 May 2003.

28. The respondent pointed out that if the actual revenues for the year 2006 are offset against the output calculated using *the tariffs in 2006 and the volumes in 2004*, a level playing field does not exist. On the basis of (recent) data, according to the respondent, there certainly are differences in the total revenues per unit of output. It appears from calculations made by the Board using the most recent data (tariffs for 2006 and volumes for 2005) that application of this method does indeed lead to different conclusions with regard to the level playing field (see the second bar for each grid manager in the bar diagram). After all, the revenues per unit of output, according to this approach, are not identical for all grid managers. Viewed on their own, both methods lead to correct and justifiable outcomes.
29. In practice, the concept of "a level playing field" can be used in numerous ways. Before the Board discusses the respondent's opinion in more detail, the definitions of a level playing field used, and the reason for using these, will first be clarified. Roughly a distinction can be made between: (1) equal opportunities to realise improvements in productivity (hereinafter "*the efficiency level playing field*") and (2) equal to hier ontbreekt tekst!! of revenues per unit of output (hereinafter "*the revenues level playing field*").
30. The objective of the efficiency level playing field is to create a situation in which each grid manager, in principle, has the same opportunities to realise improvements in productivity. This relates therefore to historic differences in efficiency between grid managers and the future opportunities for growth in productivity. The Board has noted that at the start of regulation (in 2000) efficiency differences existed between the grid managers. These efficiency differences resulted in a situation where a grid manager who was relatively inefficient could realise large improvements in efficiency more easily than a grid manager which had already achieved a high level of efficiency and could therefore increase its profit more easily. For this reason, the Board wished to give grid managers the opportunity first to eliminate the historic efficiency differences between the grid managers to ensure that the grid managers, as far as possible, reached a comparable starting position. The point of departure for regulation is that grid managers must be given a reasonable period in which to eliminate these historical inefficiencies. In the method decisions for the first two regulatory periods, this period was set at six years. The Board assumes that by doing so the method of regulation took adequate account of the need to ensure that grid managers reached an equal position so that an efficiency level playing field would be achieved.¹⁶
31. The objective of the efficiency level playing field is not to ensure that all grid managers are, in fact, efficient. Whether or not grid managers are equally efficient, after all,

¹⁶ Apart from any regional differences.

depends on the effort which the grid managers make. The aim of tariff adjustments (through x factors and the like) is to provide incentives to become more efficient, but it is up to the grid managers to give form to this. This is beyond the Board's control. After all, the Board adheres to the principle of output management.

32. The opinion of the respondent does not relate to the efficiency level playing field. The respondent's opinion relates to the revenues level playing field. The objective of the revenues level playing field is that all grid managers receive the same reward for equal performance (*equal revenues per unit of output*). With regard to the revenues level playing field, this has been achieved, according to the Board's definition. In the light of the "snapshot" made using data from 2000, which is, in other words, based on tariffs and volume data for 2000, all the differences in revenues per unit of output have been eliminated. In the Board's (static) approach, realising an revenues level playing field is a one-off exercise.
33. The respondent refers to the fact that since that time, new differences have arisen which ought to be eliminated. In this respect, the respondent's approach is significantly different to that of the Board. In the respondent's approach, the revenues level playing field is regarded as a dynamic test, which ought to be carried out every so often. In so far as individual grid managers deviate from this dynamic revenues playing field, this would have to be eliminated by means of individual x factors. This would result in a situation where the revenues level playing field (according to this definition) would never be achieved. After correction for differences, after all, new differences may arise which would have to be eliminated in the following regulatory period.
34. The Board is of the opinion that the respondent's approach has certain merits. One consideration in this regard is that the static approach adopted by the Board results in a situation where grid managers in time can obtain different rewards for the same performance. It appears from the graph that the respondent, according to his definition, has a level of revenues per unit of output which is below average. The respondent therefore has a material interest in this regard. In the static approach, consumers are also confronted by tariff differences which are rendered objective with difficulty. In addition, it is possible that these tariff differences will increase in time.
35. The Board is therefore of the opinion that the approach proposed by the respondent deserves closer examination. The Board will conduct this research at an appropriate moment and after consulting interested parties. The fact that the Board aims to achieve convergence of tariffs between grid managers in relation to each tariff component in the longer term also plays a role in this. Tariff convergence results in a situation where consumers throughout the Netherlands pay (approximately) the same tariff for the same

type of service. The approach proposed by the respondent is consistent with this framework. At present, tariff convergence can only be realised to a limited extent due to the presence of the cost driver kWh for small consumers; in the event of underutilisation of its capacity (few kilowatt hours), a grid manager would not generate sufficient revenues if tariffs have converged, while the costs incurred by this grid manager would be the same as the costs incurred if the capacity were fully utilised. However, it is expected that the cost driver of these small consumers will soon be based on capacity ("capacity tariff", with kW as the cost driver).

36. The Board is of the opinion that it is not desirable to implement the approach proposed by the respondent in this decision. There are a number of reasons for this. Firstly, this is a fundamental point with regard to the regulation of regional grid managers. Up until now, the Board has stated that it wishes to apply a uniform x factor in the third regulatory period, in accordance with the method decision for the second regulatory period.¹⁷ The respondent's approach would result in a situation where individual x factors were reintroduced, which would be a derogation from the agreed method. The Board wishes to exercise care by only implementing such a fundamental change after consultation with interested parties. This is all the more important since the material interests affected by such amendments are considerable and possibly contradictory. A different respondent¹⁸ has also stated that, in its view, a level playing field does exist. Secondly, the Board is of the opinion that further research is necessary into the causes of the tariff differences which have emerged and the best way of dealing with these. The Board also considers consultation with interested parties desirable for this further research. Thirdly, the Board is of the opinion that implementing the respondent's approach would be unfavourable from the perspective of timing. After all, a number of major institutional changes are expected which may affect the tariff differences between grid managers. Amongst others, these relate to the expected introduction of the capacity tariff for small consumers and the possible transfer of the management of the high-voltage grids to TenneT. If these amendments are implemented, the tariff differences are expected to change or disappear. After implementation of the institutional changes, a new (efficient) revenues level playing field may have to be determined. The Board is of the opinion that this would be the right moment for a further discussion of the revenues level playing field.
37. On the basis of this opinion, the Board concludes that the present system will not be amended. However, at an appropriate moment and after consultation with interested

¹⁷ Decision in relation to the method for determining the discount to promote efficient operations, pursuant to section 41(4) of the Electricity Act for the period 2004-2006 of 12 September 2003 with reference number: 100947-82

¹⁸ Eneco.

parties, the Board will start research into the causes of changes in the revenues per unit of output and the desirability of a periodic reassessment of the revenues level playing field. In carrying out this research, the Board will also explore the possibilities for tariff convergence and will take into account institutional changes, in so far as decision-making in this regard has been concluded. The results of this research may be included in the method of regulation for the next regulatory period.

Conclusion

38. The opinion did not result in an amendment to the draft method decision.

Individual x factors

39. One respondent¹⁹ states that section 41a(1) of the Electricity Act illustrates the fact that the x factor for every grid manager ought to be determined separately, even if the level of the x factor is the same for every grid manager. This respondent therefore requests that the x factor be defined as the x factor to be determined separately for every grid manager. According to the respondent, the consequence of this is that where $x_{2007,..,2009}$ occurs in the formulas in the draft method decision, this term ought to be replaced by $x_{i2007,..,2009}$.

Response

40. The Board agrees with this respondent that the x factors will be determined individually. Formally, this respondent is correct. However, the Board wishes to keep the notes to the formulas in Annex B simple. For this reason, the index "i" corresponding to the x factors will not be reflected in the formulas.
41. Furthermore, from the third regulatory period onwards, the Board will apply x factors of the same level (generic x factors). The Board's regulatory system is based on yardstick competition. This is a system which the Board has worked towards during the past two regulatory periods. From the third regulatory period onwards, there is a level playing field. As a result, the system of yardstick competition will be fully effective for the first time. In practice, this will result in a situation where individual x factors will be set at the same level.

Conclusion

42. The opinion has resulted in a number of amendments to the draft method decision.
- a. The second sentence of paragraph 30 of Addendum A and the second sentence of paragraph 30 of Addendum B to the draft method decision are replaced by the following sentences:

¹⁹ Continuon.

“As a result, individual x factors, at the same level, (hereinafter “the generic x factor”) will be sufficient from the third regulatory period onwards. The generic x factor will be determined for each grid manager.”

- b. The first sentence of paragraph 8 of Addendum B to the draft method decision has been replaced by the following sentences:

“The individual x factor is the same for all grid managers in the third regulatory period. The x factor is therefore generic.”

Lack of clarity with regard to the catch-up

43. In the opinion of one respondent,²⁰ it is not clear how the individual correction for the catch-up will be included in the determination of the discount.

Response

44. The Board states that the correction for the catch-up is not an individual correction. The correction for the catch-up is a generic correction for the change in productivity measured. The Board refers this respondent in this regard to the formulas in paragraph 4 of Addendum B, in which it is clear that the catch-up is a generic correction.

Conclusion

45. The opinion resulted in the same amendment to the method decision as that referred to in paragraph 42 of this Addendum.

2.3 Volume parameter

Update factor is not necessary

46. One respondent²¹ states that there is no reason to use an update factor to determine the volume parameters. In this regard, reference is made to the formula in section 41b(1) of the Electricity Act, in which the total revenues (TI) are not linked to any year.
47. A number of respondents²² are of the opinion that the volume parameters must correspond as far as possible to the expected invoiced volumes. These respondents are

²⁰ ONS.

²¹ Continuo.

²² VEMW and PAWEX.

of the opinion that the growth in electricity consumption must be taken into account. In this context, these respondents object to the method of calculating the update factor.

48. One respondent²³ states in its opinion that this method of determining the volume parameters was used earlier in the second regulatory period and that this respondent agrees with this.

Response

49. The Board is of the opinion that the update factor is necessary and has also been calculated correctly. As is stated in section 2 of Addendum A, the total allowed revenues in a particular year are calculated taking into account the total allowed revenues of the previous year, the x factor, the q factor and the *cpi*. The development of the (invoiced) volumes is included in the change in productivity and accordingly in the x factor, but may not affect total revenues in any other way. To ensure that the volume parameters do not have any further effect on the total allowed revenues, the invoiced volumes must be corrected. Without an update factor, a grid manager would wrongly earn too much or too little. In accordance with section 41(5) of the Electricity Act, the volume parameter must be based on the invoiced volumes. The volume parameter, however, does not have to be equal to this.

Conclusion

50. The opinion did not result in an amendment to the draft method decision.

Invoiced volumes accompanied by auditor's report's

51. A number of respondents²⁴ are of the opinion that the invoiced volumes for the year 2005 must be accompanied by an auditor's report. This is not apparent from the draft method decision.

Response

52. The invoiced volumes for the year 2005, but also the data required to determine the standardised economic costs of the grid managers, are part of the codata productivity data module (formerly the regulatory annual reports) of the grid managers. These data are accompanied by an auditor's report, in accordance with the Board's request for information. The Board will state this more clearly in the method decision.

²³ Eneco.

²⁴ VEMW and PAWEX.

Conclusion

53. The opinion has resulted in an amendment to the draft method decision. The Board will state in the method decision that the invoiced volumes for the year 2005 shall be accompanied by an auditor's report. The Board will do so by adding the following sentence to paragraph 12 of Addendum B to the draft method decision:

"The invoiced volumes are accompanied by an auditor's report."

The volume parameters must be adjusted annually

54. A number of respondents²⁵ are of the opinion that the volume parameters should be adjusted annually. In this regard, reference is made to section 41a(2) of the Electricity Act. Inclusion of this in the method decision was requested.

Response

55. The Board is of the opinion that it is not necessary *a priori* to adjust the volume parameters every year. The volume parameters only change marginally every year. Section 41a(2) of the Electricity Act only indicates that the Board *may* amend the volume parameter during a regulatory period. However, the Board is not obliged to do so. The Board will amend the volume parameter if it deems this necessary. A significant amendment to the volume or an amendment to the volumes due to shifts in submarkets possible reasons to adjust the volume parameters.

Conclusion

56. The opinion did not result in an amendment to the draft method decision.

Volume parameter for one-off tariffs

57. A number of respondents²⁶ are of the opinion that it is wrong that there are no volume parameters for initial connection tariffs. These respondents argue that as a result revenues are wrongly generated by grid managers. The Board is nevertheless requested to make a realistic estimate of these volume parameters.

Response

58. The total allowed revenues²⁷ are determined to the exclusion of revenues from initial connection tariffs, because the volume parameters for initial connection tariffs may differ

²⁵ VEMW and PAWEX.

²⁶ VEMW and PAWEX.

²⁷ The term TI in the formula in section 41b of the Electricity Act.

significantly from year to year.²⁸ The grid managers' initial connection tariffs are determined by the Board by correcting the tariffs for the preceding year on a one-to-one basis in accordance with the formula contained in section 41b Electricity Act, so that, for instance, the x factor also affects these revenues. These revenues reflect the costs incurred by the grid managers. This ensures that the grid managers do not earn more or less on a structural basis. This would be the case if volume parameters were also to be determined for the initial connection tariffs.

Conclusion

59. The opinion has resulted in an amendment to the draft method decision. These sentences below have been added to paragraph 28 of Addendum A to the draft method decision.

“The total allowed revenues²⁹ are determined to the exclusion of revenues from initial connection tariffs, because the volume parameters for initial connection tariffs may differ significantly from year to year.³⁰ The grid managers' initial connection tariffs are determined by the Board by correcting the tariffs for the preceding year on a one-to-one basis in accordance with the formula contained in section 41b Electricity Act, so that, for instance, the x factor also affects these revenues. These revenues reflect the costs incurred by the grid managers. This ensures that the grid managers do not earn more or less on a structural basis. This would be the case if volume parameters were also to be determined for the initial connection tariffs.”

2.4 Equalisation factor and productivity measurement

The equalisation factor should be based on 2002 relative to 2005

60. One respondent³¹ is of the opinion that the equalisation factor should be based on the measurement of productivity for the year 2002 relative to the year 2005. The approach proposed by the Board, namely basing the equalisation factor on the measurement of productivity for the years 2002/2003, 2003/2004 and 2004/2005, is contrary to the Electricity Act, the method decision for the second regulatory period and general legal principles, such as the principle of legitimate expectations or the principle of legal

²⁸ This decision was taken by the Director of DTe (the legal predecessor of the Board) in the first regulatory period.

²⁹ The term TI in the formula in section 41b of the Electricity Act.

³⁰ This decision was taken by the Director of DTe (the legal predecessor of the Board) in the first regulatory period.

³¹ Eneco.

certainty, according to this respondent. Another respondent³² largely agrees with this. On the other hand, one respondent³³ states that the new method for calculating the change in productivity is an improvement compared to the old method.

Response

61. In determining the method decision for the second regulatory period, the Board assumed that the annual change in productivity would show a linear progression. However, this does not appear to correspond to reality. The change in productivity may differ substantially from one grid manager to the next and from year to year. Applying the method from the method decision for the second regulatory period (hereinafter "the old method") would also not be representative of the development in productivity in this period. The Board is of the opinion that the old method is not sufficiently consistent with reality. If the Board had known this beforehand, in all probability the Board would already have declared the new method (annual measurement) applicable in the second regulatory period.
62. The Board therefore considers it undesirable to continue using the old method in the third regulatory period. The outcomes of the old method would therefore continue to affect the allowed revenues in the future due to the formula in section 41b of the Electricity Act. For this reason, the Board applies the new method to the calculation of the equalisation factor. Since the new method corresponds better to reality than the old method, this is more consistent with the criteria and interests referred to in section 41(1) and (3) of the Electricity Act. Not only does the Board have the discretionary power to adjust the policy for the third regulatory period in line with this progressive insight, but is also obliged to do so in the light of the aforementioned sections of the Act. This amendment does not affect the second regulatory period.

Conclusion

63. The opinion did not result in an amendment to the draft method decision.

Fewer revenues due to the equalisation factor

64. One respondent³⁴ is of the opinion that the equalisation factor results in a situation where the overestimate of the x factor in the second regulatory period has the effect that the grid managers earn too little in the first two years of the third regulatory period. It is

³² DNWB.

³³ Continuon.

³⁴ DNWB.

stated that this is due to the fact that the total allowed revenues for the year 2006 are not adjusted on the basis of recalculated x factors.

Response

65. The Board is surprised by the comment made by this respondent that the estimate of the x factor is too high. At the moment that the draft method decision was adopted, the Board did not have at its disposal the data from the grid managers required to make such a statement. In so far as the estimate of the x factor in the second regulatory period was too low, the grid managers would have an advantage in the first two years of the third regulatory period and (indeed) this would be a disadvantage if the estimate were too high. The method used for the equalisation factor can therefore cut both ways. In this regard, the aim is to eliminate the estimation error at the end of the third regulatory period.

66. The method described by this respondent, in which the total allowed revenues for the year 2006 would have to be adjusted, is not possible legally due to the formula contained in section 41b(1)(d) of the Electricity Act. In addition, the method used by the Board is in line with the abolition of retrospective settlement of the x factor (at the request of the grid managers) with the possible disadvantage or advantage of this (no retrospective settlement) for the account of the grid manager.³⁵

Conclusion

67. The opinion did not result in an amendment to the draft method decision.

Different calculation of the equalisation factor

68. One respondent³⁶ is of the opinion that the calculation of the equalisation factor should be based on the method, described in the method decision for the second regulatory period. In this regard, this respondent refers to formula 22 of Addendum A to the method decision for the second regulatory period³⁷.

³⁵ The financial risk (of not making a retrospective settlement) for grid managers is reduced due to the equalisation factor, because the equalisation factor ensures that the actual change in productivity is the basis for this.

³⁶ DNWB.

³⁷ Decision in relation to the method for determining the discount to promote efficient operations, pursuant to section 41(4) of the Electricity Act for the period 2004-2006 of 12 September 2003 with reference number: 100947-82 (www.dte.nl).

Response

69. The Board does not agree with this respondent that formula 22 of Addendum A to the method decision for the second regulatory period should provide the basis for determining the equalisation factor for the third regulatory period. After all, it appears from paragraph 28 of Addendum A (to the method decision for the second regulatory period³⁸) that, for the purposes of making the correction for the estimation error for the years 2004, 2005 and 2006, the x factor is determined once in a different way compared to the standard method. This does not mean that the equalisation factor has to be determined in accordance with this different method. Furthermore, the Board is of the opinion that the method used to determine the equalisation factor in the third regulatory period does not depend on the method decision for the second regulatory period.

Conclusion

70. The opinion did not result in an amendment to the draft method decision.

New method for measuring the change in productivity is not sound

71. One respondent³⁹ states that the measurement of productivity for the period from 2003 up to and including 2005 should be determined on the basis of the measurement for the years 2003 and 2005. Including the intermediate years, according to this respondent, results in:

- a. a result in which the development of productivity at the beginning of the regulatory period weighs more heavily than the development of productivity at the end of the regulatory period; and
- b. a complicated method with a minimal difference in the outcomes.

A different respondent⁴⁰ largely agrees with the opinion expressed in (a).

72. A third respondent⁴¹ regards the method in which the change in productivity in the intermediate years is taken into account as an improvement compared to the method contained in the method decision for the second regulatory period, in which the intermediate years are not taken into account.

³⁸ Decision in relation to the method for determining the discount to promote efficient operations, pursuant to section 41(4) of the Electricity Act for the period 2004-2006 of 12 September 2003 with reference number: 100947-82 (www.dte.nl).

³⁹ Eneco.

⁴⁰ DNWB.

⁴¹ Continuon.

Response

73. The Board is of the opinion that the realised change in productivity in the intermediate years of the productivity measurement must be taken into account. The application of the method from the method decision for the second regulatory period is supposedly therefore not representative of the development in productivity in this period.⁴² The most important reason for this is that the revenues of grid managers do not run parallel to this change in productivity. As a result, (a part of the) possible losses or profits realised are not reflected in the tariffs.
74. The example below illustrates the difference between the method which the Board uses in the method decision (all years count towards the measurement of the change in productivity) and the method which the above-mentioned respondent describes (only the first and final years count towards the measurement).

Table 1 The change in productivity as a result of a cost increase

	Year 0	Year 1	Year 2	Year 3
Costs	100	105	105	105
Output	100	100	100	100
Revenues	100	100	100	100
Profit /Loss	0	-5	-5	-5
Change in productivity	N/A	-5%	0%	0%

The loss realised in the above-mentioned years is equal to -15. The Board's method in this regard generates an average change in productivity of -2.5% (rounded off), while the respondent's method generates a change of -1.6% (rounded off). Assuming that the revenues for a later period change in line with these percentages, the following revenues (rounded off) will be generated in the later period (of three years):

Table 2 The effect of a change in productivity on the tariffs in the following period

	Year 4	Year 5	Year 6
Revenues Board's method	102	105	108
Revenues respondent's method	102	103	105

The Board's method ensures that the loss of 15 is reflected in the tariffs, because $(102-100) + (105-100) + (108-100)$ is equal to 15. The method described by the respondent results in the reflection of only 2/3 of the costs in the tariffs.

⁴² See paragraph 61 of this Addendum.

75. As a result of the Board's method, the tariffs reflect realised advantages or disadvantages, even if other developments in productivity occur. If the respondent's method is applied, these developments are only partially visible in the tariffs.
76. The Board is of the opinion that the method for determining the measurement of productivity has not become more complicated. Apart from this, the Board is of the opinion that the substantive improvements achieved with the new method are an important reason to apply it.

Conclusion

77. The opinion did not result in an amendment to the draft method decision.

Cpi in relation to the book value, depreciation and cost of capital allowance

78. One respondent⁴³ states that the book values and depreciation should be increased by the *cpi* before they are used to measure the development in productivity. This respondent refers in this regard to paragraphs 42 up to and including 44 of Addendum A and paragraphs 29 up to and including 32 of Addendum B to the draft method decision.
79. One respondent⁴⁴ states that paragraph 45 of Addendum A to the draft method decision should be amended to include the requirement that the cost of capital be applied to the standardised asset value, increased by the *cpi* as of 2000 or as of the year in which it is capitalised (if this is after 2000).

Response

80. Paragraph 33 of Addendum B to the draft method decision states that the measurement of productivity occurs on the basis of data expressed at the price level of the same year. The aim of this is to provide an accurate measurement of the real development in productivity. This is not described in the formulas to keep the formula simple. The Board has clarified this in Addendum B. The Board is also of the opinion that it is not necessary to include this fairly technical provision in Addendum A. The technical provisions are included in Addendum B.

Conclusion

81. The opinion has resulted in an amendment to the draft method decision. The Board has clarified Addendum B.

⁴³ Continuon.

⁴⁴ Continuon.

X Factor must be corrected

82. One respondent⁴⁵ is of the opinion that the *x* factor must be corrected for economic growth in the Netherlands because the *cpi* is already affected by input price changes and economic growth. In this regard, reference is made to the research carried out by Ofgem in the year 2003.

Response

83. The Board is of the opinion that the study commissioned by Ofgem does not apply to the Board's regulatory system. As an approach to the way in which the *x* factor ought to be calculated, the method proposed by this respondent is entirely different to the approach applied by the Board. The application of this would be a major change to the regulatory system. Ofgem itself does not apply this method. The respondent does not substantiate why the method referred to in Ofgem's report is preferable. The Board is also of the opinion that this respondent could have brought this point to the attention of the Board earlier. After all, this respondent had sufficient opportunity to do so since this respondent participated in the consultative group for the third regulatory period.

Conclusion

84. The opinion did not result in an amendment to the draft method decision.

2.5 National Uniform Producers' Tariff

Procurement costs are still higher

85. One respondent⁴⁶ stated that, even after the possible transfer of grid management (of the 100 kV and 150 kV grids) to TenneT, the procurement costs throughout the sector are higher when compared to the situation before the National Uniform Producers' Tariff [*Landelijke uniform producententarief (LUP)*] was set at nil. This respondent indicates that this situation is unacceptable to the regional grid managers.
86. In addition to the above-mentioned opinion, two respondents⁴⁷ stated that the method of providing compensation for the consequences of setting the National Standard Producer Transmission Tariff at nil in the second regulatory period should be continued

⁴⁵ DNWB.

⁴⁶ EnergieNed.

⁴⁷ Eneco and ONS.

if grid management (of the 110 kV and 150 kV grids) is transferred to TenneT. One respondent⁴⁸ also stated that the fourth regulatory period should not be anticipated.

Response

87. On further reflection, the Board is of the opinion that the consequences of the Electricity Companies Division Bill [*Splitsingswet*]⁴⁹ should not be anticipated with regard to the fact that the National Standard Producer Transmission Tariff has been set at nil.⁵⁰ The consequence of anticipating this is that statements are made about a compensation scheme for the fourth regulatory period,⁵¹ while the present method decision relates to the third regulatory period.⁵²

Conclusion

88. The opinion has resulted in an amendment to Addendum A to the draft method decision.

Structural solution is lacking

89. One respondent⁵³ noticed that a structural solution to the consequences of setting the National Standard Producer Transmission Tariff at nil is missing. In this regard, this respondent proposes increasing the total allowed revenues structurally at the start of the third regulatory period.

Response

90. The Board is in favour of structural solutions. However, the Board is of the opinion that a structural solution to the consequences of setting the National Standard Producer Transmission Tariff at nil can only be implemented after clarity has been obtained on the

⁴⁸ Eneco.

⁴⁹ See also the Amendment of the Electricity Act of 1998 and of the Gas Act in Relation to Further Rules in Respect of Independent Grid Management [*Wijziging van de Elektriciteitswet 1998 and van de of the Gas Act in verband met nadere regels omtrent een onafhankelijk netbeheer*], Lower House of the Dutch Parliament, *Parliamentary Proceedings* 2005-2006, 30 212, No. 1-77, A and B.

⁵⁰ See also section 2.8 of this Addendum.

⁵¹ The Electricity Companies Division Bill stipulates that the third regulatory period comprises one year. This means that the consequences of this bill will only become visible in the regulatory system of the fourth regulatory period.

⁵² See also paragraph 370 of this Addendum.

⁵³ Westland.

possible transfer of management of the 110 kV and 150 kV grids to TenneT.⁵⁴ The Board has since formulated a solution for the third regulatory period in Addendum A, in which it is stated that the method used in the second regulatory period to provide compensation for the fact that the National Standard Producer Transmission Tariff has been set at nil will be continued in the third regulatory period. This is also in line with the opinion of one respondent,⁵⁵ which requested the Board not to anticipate the fourth regulatory period.⁵⁶

Conclusion

91. The opinion did not result in an amendment to the draft method decision.

Generic correction for the National Standard Producer Transmission Tariff rather than individual corrections

92. One respondent⁵⁷ is of the opinion that no individual corrections should be made for the consequences of setting the National Standard Producer Transmission Tariff at nil from the start of the third regulatory period. The reason for this is that the National Standard Producer Transmission Tariff is not deemed to be an objectifiable regional difference. This respondent is of the opinion that individual corrections in the second regulatory period were correct on the grounds of the Agreement in Relation to the Regulation of Electricity Grid Tariffs (2001-2006) [*Overeenkomst Regulering Nettareieven Elektriciteit (2001-2006)*]. This respondent is of the opinion that as of the third regulatory period, a generic correction must be made for the consequences of setting the National Standard Producer Transmission Tariff at nil. A different respondent⁵⁸ is of the opinion that the way in which the Board deals with the correction for the National Standard Producer Transmission Tariff in the third regulatory period is correct.

Response

93. The Board does not agree with this respondent that the method of providing individual compensation for the consequences of setting the National Standard Producer Transmission Tariff at nil would be wrong in the third regulatory period. The Board notes that the National Standard Producer Transmission Tariff is included in the definitive list of regional differences in relation to electricity which are to be examined. Individual

⁵⁴ As soon as the Electricity Companies Division Bill is passed. See also Amendment of the Electricity Act of 1998 and of the Gas Act in Relation to Further Rules in Respect of Independent Grid Management, Lower House of the Dutch Parliament, *Parliamentary Proceedings* 2005-2006, 30 212, No. 1-77, A and B.

⁵⁵ Eneco.

⁵⁶ See also section 2.8 of this Addendum.

⁵⁷ Continuon.

⁵⁸ DNWB.

compensation would therefore be justifiable. This list was compiled in consultation with the grid managers. In this list, with regard to the National Standard Producer Transmission Tariff reference is made to the Decision in Relation to the National Standard Producer Transmission Tariff⁵⁹ of 4 May 2004. This decision includes a passage in which the method for providing individual compensation for the National Standard Producer Transmission Tariff is justified. The above-mentioned passage is contained in paragraph 49 of the decision and reads as follows:

"In consultation with the grid managers jointly, a method of settlement shall be determined to provide compensation for the loss of revenues based on the National Standard Producer Transmission Tariff and/or the increase in procurement costs as part of the allowed turnovers. The point of departure in this regard shall be that the settlement shall take place on a financially neutral basis."

The above-mentioned method of settlement has already been applied in the tariff decisions for the years 2005 and 2006. The Decision in Relation to the National Standard Producer Transmission Tariff is not a temporary decision. This decision is therefore also applicable to the third regulatory period. This means that providing individual compensation for the correction to the National Standard Producer Transmission Tariff is possible.

Conclusion

94. The opinion did not result in an amendment to the draft method decision.

2.6 WACC

95. The opinions on the cost of capital allowance are discussed in this part. On the basis of a number of opinions, the Board also requested Frontier Economics (hereinafter "Frontier") to read the opinions and to draw up a document in which the specific responses submitted by respondents are discussed. Where necessary, reference will be made to this document, which is included as Addendum I to this method decision.
96. The Board also requested a "second opinion" from Erasmus Universiteit Rotterdam in cooperation with Boer & Croon Management & Consulting Group (hereinafter "Erasmus

⁵⁹ Decision Amending the Tariff Structures [*Besluit tot wijziging van de tariefstructuren*], in terms of section 32(2) of the Electricity Act, with reference number 101685-39 (www.dte.nl).

University") on the method of determining and the level of the cost of capital allowance. Erasmus University's report is included as Addendum J to this decision.

2.6.1 Opinions: general issues

Fair cost of capital allowance

97. Three respondents⁶⁰ state that, in general, they agree with the method used by the Board to determine the WACC. These parties, however, could not always agree with the method used to determine the individual parameters of the WACC, the level of these parameters and the resulting level of the WACC.
98. Two respondents⁶¹ are of the opinion that the WACC in the draft method decision is too high. They argue that determining the WACC on the basis of efficient costs would result in a WACC of 3.8%. One respondent⁶² is of the opinion that the WACC is too low and is not adequate to enable the grid managers to carry out their statutory duties. According to this respondent, a WACC of 6.8% should be applied.
99. One respondent⁶³ agrees with the principles⁶⁴ which the Board says it applies in determining the WACC (section 1.2 of Addendum C to the draft method decision), but is of the opinion that the Board has not, in fact, managed to apply these principles. This respondent is of the opinion that the Board should adopt a more conservative approach.

Response

100. The Board notes that the opinions of the respondents diverge with regard to the ultimate level of the WACC. Some respondents are of the opinion that the WACC proposed in the draft method decision is too low. According to others, the WACC is too high. The Board has formulated a number of principles used to determine the WACC in paragraphs 6, 7 and 8 of Addendum C to the draft method decision. For instance, the WACC must be representative of the next regulatory period and must be sufficiently robust to withstand

⁶⁰ VEMW, PAWEX and EnergieNed.

⁶¹ VEMW and PAWEX.

⁶² EnergieNed.

⁶³ TenneT.

⁶⁴ This respondent refers to the following principle: taking into consideration a slightly longer period, a sufficient degree of robustness in relation to possible developments on the financial markets during the regulatory period by making conservative estimates of variables, and taking into account possible uncertainties in relation to the various parameters.

possible developments on the financial markets. In other words, the WACC (and the underlying method) must be fair.

101. After all, the WACC is meant to provide fair compensation (the cost of capital) based on the invested capital. The Capital Asset Pricing Model (hereinafter "the CAPM") is used for this. This is a method used by regulators and throughout the financial sector. In applying this method, not only the individual parameters must be determined in a fair and objective manner, but the outcomes of the method as a whole must also result in a fair WACC, partly in the light of the background to the regulatory system. Finally the question arises as to whether the WACC is fair, partly in the light of expected future conditions on the capital market.
102. In a nutshell, the question is whether the Board, within reason, has determined the WACC on the basis of sound research and valid data. Taking into account the extensive procedure preceding the determination of the WACC in this decision, and the large number of sources consulted, the Board is convinced that the method and the level of the WACC set out in the definitive decision are fair.
103. The Board is confirmed in its opinion by the outcomes of the research carried out by Erasmus University into and the method used to determine the WACC, as well as the level of the parameters of the WACC. In its research, Erasmus University assessed, for instance:
 - a. whether the application of the method used to determine the WACC is based on academic insight and the practice of the financial sector either the WACC has been set at a balanced, efficient level, so that consumers obtain value for their money and grid managers are in a position to finance themselves;
 - b. whether the WACC is sufficiently representative of the financing conditions expected during the next regulatory period; and
 - c. whether the method and the level of the WACC is fair (given the existing uncertainties and alternative approaches).
104. Erasmus University's recommendations with regard to the specific parameters are discussed elsewhere in this chapter. In general, Erasmus University concludes (with regard to the WACC contained in the draft method decision) that:

"in general we are of the opinion that the method used to determine the cost of capital allowance is well substantiated and is in line with the latest academic insights and the practice of the financial sector. None of the parameters, in our view, has been determined in an unbalanced way. A substantial reduction in one of the parameters (and therefore in the

*cost of capital allowance) would not be consistent, in our view, with the principle that the grid managers should be placed in a position to finance themselves. An increase in one of the parameters is also not justified on the basis of the model and would result in determination of the allowance at an inefficient level. As a result, consumers would pay too much. All in all, the cost of capital allowance has been determined at a "fair" level and is expected to be representative of financing conditions during the third regulatory period."*⁶⁵

105. In addition, Erasmus University concludes that:

*"To summarise, we are of the opinion that, in general, taking into account all the uncertainties, the cost of capital allowance has been set at a fair level. In our opinion, a reduction in the cost of capital allowance relative to the second regulatory period will not therefore jeopardise essential investments in the grid."*⁶⁶

106. Finally, the Board refers to the fact that the adjustment of the WACC will be implemented gradually and that the effects of an adjustment to the WACC will only be integrated fully into the total allowed revenues in three years' time.

Conclusion

107. The opinion did not result in an amendment to the draft method decision.

Inconsistency in the determination of the WACC

108. One respondent⁶⁷ is of the opinion that the method of calculating the WACC used by the Board is inconsistent over time. In this regard, reference is made to the method for determining the WACC and the level of the parameters used in the draft decision, in comparison to the decisions of the (legal predecessor of the) Board. Specific reference is made to the method for determining the WACC for regional electricity grid managers in the first and second regulatory periods and the method used in 2005 for the regulation of Gas Transport Services (hereinafter "GTS").

Response

109. In comparison to the WACC used in the first two regulatory periods (2001 up to and including 2006), the Board concludes that the main features of the method have not been amended. In general, it may be stated in relation to this method that the theoretical concepts used in the present method decision, such as making use of the WACC and the

⁶⁵ See page 2 and 3 of Addendum J to this decision.

⁶⁶ See page 3 of Addendum J to this decision.

⁶⁷ EnergieNed.

CAPM, have remained unchanged compared to the first two regulatory periods. This respondent's observation that the method has been amended is correct in so far as this relates to the method for determining several parameters of the WACC and the level of the equity risk premium, an input parameter of the WACC.

110. In preparation for the third regulatory period for the regional electricity grid managers and TenneT, as well as for the regulation of GTS, the Board sought the advice of the research firm, Frontier Economics (hereinafter "Frontier"). Partly on the basis of Frontier's advice,⁶⁸ which includes the most recent insights from academic literature, and progressive insight, several adjustments were made to the method for determining the level of the parameters compared to the method and the level of the parameters used in the first and second regulatory periods. The difference between the WACC, set out in the present method decision, and the WACC used in the first and second regulatory periods is partly due to the changing method for determining the parameters of the WACC and partly due to changes in the macroeconomic environment. What is meant by the latter, for instance, are changes in relation to expected interest rates, changes to tax rates and expected inflation.
111. In 2005, the Board also determined the WACC for GTS using the method set out in this method decision.⁶⁹ The Board also aims to determine the WACC for TenneT and the regional gas network managers in the third regulatory period in accordance with this system. The method set out in this method decision contributes precisely to ensuring that the WACC of the various electricity grid and gas network managers is determined in a consistent manner.

Conclusion

112. The opinion did not result in an amendment to the draft method decision.

Method decision is not adequately substantiated

113. One respondent⁷⁰ is of the opinion that the Board has provided insufficient justification as to why the arguments which the respondent presented in relation to the consultation document on the "cost of capital allowance for regional network managers" (hereinafter

⁶⁸ See Addendum G to this decision.

⁶⁹ See the Decision in Relation to the Method of Regulation, in Respect of the Price To Promote Efficient Operations for the Manager of the National Gas Transmission Network, pursuant to section 82(2) of the Gas Act, with reference number 101847-65, and the Decision, in terms of section 82(4) of the Gas Act, with reference number 101847-69 (www.dte.nl).

⁷⁰ EnergieNed.

“the consultation document”) have not resulted in an amendment to the method for determining the costs of capital allowance.

Response

114. The Board gave careful consideration to the arguments submitted by the various respondents to the consultation document. In so far as the format of a draft method decision allows for this, the Board has indicated why the opinions of the parties were or were not adopted. The Board refers to the justification of the reference period for determining the risk-free rate, the use of *ex post* and *ex ante* data in determining the equity risk premium and the use of daily data in determining beta.⁷¹ The Board considers the draft method decision to be a less suitable means for a detailed discussion of all the opinions in relation to the consultation document. The opinions submitted are therefore discussed extensively in this Addendum.

Conclusion

115. The opinion did not result in an amendment to the draft method decision, but the opinions received are discussed extensively in this Addendum.

Forward-looking WACC

116. One respondent⁷² argues that the reduction of the WACC is the result of a change in market conditions during the second regulatory period. This respondent is of the opinion that the WACC to be used should reflect an estimate of future market conditions.

Response

117. The Board agrees with the respondent's opinion that the WACC to be used should reflect an estimate of future market conditions. In paragraph 7 of Addendum C to the draft method decision, the Board also states the following:

“in determining the WACC, it is important that compensation is determined which is deemed representative for the coming regulatory period”.

118. To determine a WACC which is deemed representative for the coming regulatory period (the 5.8% stated in this decision⁷³), use is made, for instance, of the level and

⁷¹ See, for instance, paragraphs 23, 38, 46, 47 and 55 of Addendum C to the draft method decision

⁷² NRE.

⁷³ See, for instance, paragraph 88 of Addendum C to this method decision.

development of the parameters of the WACC in the (recent) past. At the same time, attention is paid to projections with regard to the development of these parameters.

Conclusion

119. The opinion did not result in an amendment to the draft method decision.

Roadshow

120. One respondent⁷⁴ is of the opinion that the reduction of the WACC is not consistent with the impression given by the Board in meetings with and presentations to market parties within the context of the sale of its, the respondent's, company.

Response

121. The Board does not subscribe to this opinion. The Board has communicated to market parties during this process, including potential investors in this company, that the WACC for the third regulatory period would be adjusted. In this regard, a reduction was mentioned as a plausible possibility, partly because of low interest rates and lower tax rates. The Board has made no statements whatsoever during the process with regard to the level of and adjustment to the WACC.

Conclusion

122. The opinion did not result in an amendment to the draft method decision.

Retrospective settlement

123. One respondent⁷⁵ states that additional uncertainty arises due to the abolition of retrospective settlement, which ought to be expressed in a higher WACC.

Response

124. Contrary to the argument presented, the Board is of the opinion that abolishing the retrospective settlement provides grid managers with more certainty. Since the retrospective settlement has been abolished, the efficiency improvement which they are expected to achieve is clear to grid managers prior to the regulatory period. This has precisely the effect of reducing uncertainty with regard to the total allowed revenues during the regulatory period.

⁷⁴ NRE.

⁷⁵ NRE.

125. In addition, the risks referred to by the respondent are non-systematic (diversifiable) risks. These are risks for which an investor need not be compensated.

Conclusion

126. De opinion did not result in an amendment to the draft method decision.

Facilitating the market

127. The additional activities which grid managers have carried out for some time to facilitate the market are a reason to increase the WACC, according to one respondent.⁷⁶ These activities, it is argued, carry higher risk than the original tasks of the grid managers.

Response

128. It is not clear to the Board precisely what risks the respondent refers to and why these risks should be greater than the other tasks of the grid managers. In so far as this relates to tasks aimed at facilitating the market in general, they are non-systematic (diversifiable) risks. These are risks for which an investor need not be compensated. In so far as the additional risks referred to by the respondent already deviate from the risk profile of the grid managers, this does not, in any event, result in an adjustment to the WACC. The costs associated with carrying out these tasks are also discounted in the measurement of productivity and consequently in the total allowed revenues of the grid managers.

Conclusion

129. The opinion did not result in an amendment to the draft method decision.

2.6.2 Risk-free rate

Interest rates are not representative of the next regulatory period

130. One respondent⁷⁷ agrees with the method for calculating the risk-free rate on the basis of an historic average. However, this respondent is of the opinion that the reference period of two to five years is too short and opts for a measurement period of five to 10 years. By partly determining the risk-free rate on the basis of a reference period of two to five years, according to this respondent the absolute lowest point for interest rate level is determined, which is not representative of the next regulatory period.

⁷⁶ NRE.

⁷⁷ EnergieNed.

131. According to a different respondent,⁷⁸ recent research by PricewaterhouseCoopers (hereinafter "the PwC")⁷⁹ shows that the UK regulators are of the opinion that the recent risk-free rates are not representative of future developments. In addition to this, two respondents⁸⁰ argue on the basis of forward curves of the risk-free rate that the general expectation is that the risk-free rate will increase further in the coming period. One respondent⁸¹ also refers to the strongly volatile nature of the risk-free rate in recent months.
132. On the basis of an analysis of the financing portfolios of Eneco, Nuon and Essent, two respondents⁸² reached the conclusion that a risk-free rate of 4% is fair. According to a different respondent,⁸³ this analysis is an "incorrect representation of reality".

Response

133. As has already been stated in paragraph 22 of Addendum C to the draft method decision, the Board is of the opinion that a recent period generates a better estimate of the risk-free rate for the next regulatory period than data for a longer period, since a recent period gives a better reflection of the present conditions on the capital market. In this regard, Erasmus University notes the following:

"The analysis shows that the estimated risk-free rate for a reference period of 5 and 10 years is indeed slightly more stable, but that the estimate of interest rates for these reference periods are not representative of the third regulatory period from an empirical perspective. On the basis of the above-mentioned analysis, we subscribe to a reference period of two years as a basis for estimating the risk-free rate, partly in the light of the moment at which DTe's decision is taken. In addition, given the historically low interest rate, based on estimates for a reference period of only two years, in our view DTe is justified in taking into account a reference period of five years in making a cautious estimate of the risk-free rate."⁸⁴

134. Using too short a period, however, may result in a situation where the risk-free rate is based on a period which is not representative of the next regulatory period, for instance due to macroeconomic shocks. Partly by taking into account a period of five years, it is

⁷⁸ DNWB.

⁷⁹ Source: Pleading by EnergieNed during the hearing of 6 April 2006.

⁸⁰ DNWB and TenneT.

⁸¹ DNWB.

⁸² VEMW and PAWEX.

⁸³ EnergieNed.

⁸⁴ See page 15 of Addendum J to this decision.

possible to avoid a situation where too much emphasis is placed on the most recent past.

135. The respondents' opinion that using a reference period of two to five years will result in determining the absolute lowest point for the level of interest rates appears to be based mainly on the present nominal level of interest rates. However, the relevant interest-rate is the real interest rate. In accordance with the statutory framework, the Board first determines a real WACC. The real interest rate, in short, is determined by reducing the nominal interest rate by inflation. The Board is of the opinion that the real interest rate set out in the draft method decision is fair.
136. If, after all, the level of the real interest rate is considered from an historical perspective, the only conclusion that can be drawn is that the bandwidth used by the Board (2.5% to 3%) is in no sense on the low side.⁸⁵ The average level of the real interest rate for recent years is given in the table below:

Table 3 Overview of historical real risk-free interest-rate levels in the Netherlands

Period	Average real interest rate
1-1-2004 - 31-12-2005 (2 years)	2.3%
1-1-2003 - 31-12-2005 (3 years)	2.2%
1-1-2002- 31-12-2005 (4 years)	2.0%

Source: Eurostat (europa.eu.int/comm/eurostatt) and Centraal Bureau voor de Statistiek (hereinafter "Statistics Netherlands; statline.cbs.nl").

137. If the required real interest rate for the first five months of 2006 is considered, this results in a real interest rate of 2.5%.

Table 4 Overview of required real interest rate in the period January-May 2006

Nominal interest	Realised inflation	Real interest
3.7%	1.2%	2.5%

Source: Eurostat (europa.eu.int/comm/eurostatt) and Statistics Netherlands (statline.cbs.nl).

138. To determine a real interest rate level which is representative of financing conditions in the next regulatory period, the Board also includes the expected development of interest rates in its analysis. Forecasts of the real interest rates, as this can be derived from the

⁸⁵ The midpoint of the bandwidth is 2.72 percent. This is calculated by determining the upper boundary and the lower boundary of the bandwidth of the real interest rate and taking the average of this. The real interest rate is determined on the basis of the following formula: $(1 + \text{nominal interest rate}) / (1 + \text{inflation}) - 1$

data published by the Netherlands Bureau for Economic Policy Analysis (see Table 5), leads to the conclusion that the Netherlands Bureau for Economic Policy Analysis expects a real interest rate of approximately 2.7%. Even after adjustment on the basis of June's inflation estimate, this parameter remains close to the 2.72% adopted by the Board in this decision. The Netherlands Bureau for Economic Policy Analysis's data illustrate, on the one hand, that a nominal increase in interest rates is expected. On the other hand, it can be derived from this that a nominal increase in interest rates will be accompanied by higher expected inflation. As a result, the real interest rate will remain almost the same.

Table 5 Expected real interest-rate as forecast by the Netherlands Bureau for Economic Policy Analysis

Source	Expected nominal interest rate 2007	Expected inflation 2007	Expected real interest rate 2007
<i>CPB nieuwsbrief</i> June 2006	4.25%	1.50%	2.71%
<i>CPB nieuwsbrief</i> April 2006	4%	1.25%	2.72%

139. The expected future interest rates can also be derived from so-called forwards. These forwards relate to nominal risk-free interest rates. If expected inflation is deducted from the expected nominal interest rates, an estimate can be made of the expected real interest rate. The table below shows the interest rates derived from forwards for the period 2007-2009. An expected real interest rate is then calculated on the basis of the most recent inflation estimate of the Netherlands Bureau for Economic Policy Analysis.

Table 6 Expected real interest rates during the next regulatory period on the basis of forwards

Year	2007	2008	2009
Expected nominal interest rate	4.1	4.2	4.3
Expected inflation	1.5 (Netherlands Bureau for Economic Policy Analysis)	1.5 (Board's assumption)	1.5 (Board's assumption)
Real interest-rate	2.6	2.7	2.8
Average real interest rate	2.7		

Source: Bloomberg⁸⁶, Netherlands Bureau for Economic Policy Analysis, Statistics Netherlands (statline.cbs.nl) and ECB (www.ecb.int). Note: Assumptions are only included for illustrative purposes.

⁸⁶ Data on forwards for the Dutch government bond of 20 June 2006.

140. Taking all factors into account, the Board is of the opinion that a fair estimate has been given of the risk-free rate. The real interest rate has been set slightly higher than the actual realised real interest rate in recent years, but is in line with the present required real return in 2006 and the expected real interest rate (in any event) for the year 2007. Erasmus University also agrees with this conclusion.⁸⁷ In any event, there are no indications on the basis of which it can be concluded that the bandwidth used by the Board is not representative of the future development of interest rates.

Conclusion

141. The opinion did not result in an amendment to the draft method decision.

Stable development of the risk-free rate

142. One respondent⁸⁸ is of the opinion that a reference period of two to five years is too short to provide a stable forecast of the development of the risk-free rate. This respondent refers to the fact that the risk-free rate has been adjusted downwards in the Board's recent (draft) method decisions, while the risk-free rate on the capital market has risen. The respondent proposes using a reference period of 5 to 10 years.

Response

143. As in the case of the other parameters of the WACC, an important assumption in determining the risk-free rate is the adoption of an interest rate which is representative of the next regulatory period. On the basis of its own research, Erasmus University draws the conclusion that applying a reference period of five to 10 years may perhaps generate slightly more stable results, but applying this period would lead to results which are not expected to be representative of the next regulatory period. Erasmus University notes that:

"The analysis shows that the estimated risk-free rate for a reference period of 5 and 10 years is indeed slightly more stable, but that the estimate of interest rates for these reference periods are not representative of the third regulatory period from an empirical perspective. On the basis of the above-mentioned analysis, we subscribe to a reference period of two years as a basis for estimating the risk-free rate, partly in the light of the moment at which DTe's decision is taken. In addition, given the historically low interest rate, based on estimates for a

⁸⁷ See pages 16 and 17 of Addendum J.

⁸⁸ EnergieNed.

*reference period of only two years, in our view DTe is justified in taking into account a reference period of five years in making a cautious estimate of the risk-free rate.*⁸⁹

144. The respondent also refers to the fact that in comparison to the method decision for Gas Transport Services in 2005,⁹⁰ the risk-free rate in the method decision for the regional electricity grid managers has fallen, while the interest rate on the capital market has risen. The Board notes that this effect also occurs if the method proposed by the respondent is used.

Conclusion

145. The opinion has resulted in an amendment to the draft method decision. In paragraphs 24 up to and including 27 of Addendum C to this method decision, the reason for using a reference period of two to five years for the draft method decision is explained.

Nature and composition of the assets

146. With regard to the reference period used in Addendum C to the draft method decision, one respondent⁹¹ notes that this period does not correspond to the nature and composition of the assets of the grid managers and the financing portfolio related to this, which, according to the respondent, is of a long-term nature (in line with the long economic life of the assets). The respondent opts for a reference period of 5 to 10 years. Two respondents⁹² are of the opinion that the financing portfolio is of a shorter-term nature.

Response

147. The Board only partially acknowledges the relationship between the nature of the assets and the financing portfolio associated with this outlined by the respondent. The fact that (most) of the grid managers' assets have a long economic life (50 years), does not mean that these assets are actually financed for such a long period. Furthermore, even if the assets are financed for a long period, a good manager can make the financing conditional on revision of the interest rate during the life of the loan, for instance every two years.

⁸⁹ See page 15 of Addendum J to this decision.

⁹⁰ See the Decision in Relation to the Method of Regulation, in Respect of the Price To Promote Efficient Operations for the Manager of the National Gas Transmission Network, pursuant to section 82(2) of the Gas Act, with reference number 101847-65, and the Decision, in terms of section 82(4) of the Gas Act, with reference number 101847-69 (www.dte.nl).

⁹¹ TenneT.

⁹² VEMW and Pawex.

148. It also appears from Erasmus University's analysis that the financing portfolios of the various grid managers differ considerably.⁹³

Conclusion

149. The opinion did not result in an amendment to the draft method decision.

Realising gains from improved conditions on the capital market

150. According to one respondent,⁹⁴ gains due to improved conditions on the capital market (lower interest rate) can only be realised partially because part of the credit facilities have a long life to maturity (seven years) and costs are incurred for rescheduling loans.

Response

151. The method of financing is a management decision made by the grid manager. A grid manager can agree to financing subject to the condition that the interest rate is revised during the life of the loan or that refinancing is possible.⁹⁵ If this condition is not included and the level of interest rates rises during the life of the loan, the grid manager has made a choice to its advantage. If the level of interest rates falls, as it has done in recent years, the grid manager will not benefit in the short term from the improved conditions on the capital market. However, this risk should not be transferred to electricity consumers (in the form of allowing a higher WACC).

Conclusion

152. The opinion has not resulted in an amendment to the decision.

2.6.3 Debt premium

Level of the debt premium

153. Two respondents⁹⁶ are of the opinion that a debt premium of 60 basis points is sufficient. They base this opinion on an analysis of the annual reports of three large energy companies,⁹⁷ as well as Société Générale's US market monitor of electricity companies (hereinafter "Société Générale's monitor"), in which it supposedly appears

⁹³ See page 16 of Addendum J to this decision.

⁹⁴ DNWB.

⁹⁵ See also paragraph 147 of this Addendum.

⁹⁶ VEMW and PAWEX.

⁹⁷ Eneco, Nuon and Essent.

that the debt premium on debt capital with a BBB credit rating and higher amounts to 60 basis points.

154. One respondent⁹⁸ is of the opinion that a debt premium of 80 basis points is the most realistic assumption. This respondent notes that the analysis of the respondents referred to in paragraph 153 lacks the necessary robustness and that it is possible that the interest rate premium of the three large energy companies deviates from the average for the sector.

Response

155. The results of Société Générale's monitor indicate a direction, but have to be interpreted with the necessary caution. After all, it is not clear what credit ratings the companies have which are included in this index. If this mainly includes companies with a rating below a single A (BBB rating), this would be a reason to reduce the debt premium. If mainly companies with a rating above a single A are included, there is less need for this.
156. Frontier's report⁹⁹ supports the analysis of the respondents referred to in paragraph 153. It appears from the report that the debt premium of two large Dutch energy companies¹⁰⁰ were in the region of 50 basis points during the past two years.
157. It appears from the research by Erasmus University¹⁰¹ that the median of the debt premiums of companies in the reference group is 52 basis points. The median (and not the average of the reference group) is the relevant factor in this case, because the values of the debt premiums within the reference group are not distributed normally. Erasmus University concludes that the bandwidth for the debt premium amounts to 50 to 70 basis points on the basis of the median of the reference group and the debt premium of single A-rated bonds. Taking into account an allowance for transaction costs and volatility of the debt premium, Erasmus University is of the opinion that a debt premium of 60 to 80 basis points is sufficient.
158. The Board agrees with the analysis of Erasmus University that the median is the relevant factor in this case because the distribution of the debt premiums of the companies in the reference group is not normal. The median is also in line with the more recently debt premiums required of companies with a single-A rating and the debt premiums of the Dutch energy companies referred to in paragraph 156.

⁹⁸ EnergieNed.

⁹⁹ Frontier Economics, *The Cost of Capital for Regional Distribution Networks*, 2005 (Addendum G, www.dte.nl).

¹⁰⁰ Eneco and Essent.

¹⁰¹ See page 18 and 19 of Addendum J to this decision

159. In the light of the paragraphs above, the Board is of the opinion that there are sufficient grounds to reduce the debt premium. Taking into account the volatility of the debt premium, and the transaction costs which accompany financing on the basis debt capital, the Board has set the debt premium at a bandwidth of 60 to 80 basis points.

Conclusion

160. The opinion has resulted in an amendment to paragraphs 27 up to and including 29 of Addendum C to the draft method decision. The Board has set the debt premium at a bandwidth of 60 to 80 basis points.

2.6.4 Gearing

A higher level of gearing must be set

161. Two respondents¹⁰² are of the opinion that the level of gearing¹⁰³ should be set at 70%. They base this opinion on information in relation to the level of gearing of integrated energy companies in the United States and the level of gearing of "pure" grid companies. The gearing ratio of Eneco, Nuon and Essent, according to these respondents, is 65%.
162. According to a different respondent,¹⁰⁴ it appears from its own analysis that Dutch grid companies in practice operate below a level of gearing of 60%.

Response

163. As was stated in paragraphs 30 and 31 of Addendum C to the draft method decision, in determining the level of gearing, the Board adheres to the principle that it should be possible for grid managers to achieve a healthy financial position and that grid managers should be given an incentive to realise an efficient financial structure. The Board considers a single-A credit rating to be a healthy financial position.
164. As is set out in Addendum C to the draft method decision, the regulated grid managers and companies with stable cash flows and relatively valuable assets with a long economic life. Partly due to stable demand for the transmission of electricity and annual indexation of the total allowed revenues for actual inflation, relatively stable and predictable operating cash flows can be generated by the grid managers. A grid manager

¹⁰² VEMW and PAWEX.

¹⁰³ The gearing is the ratio of debt capital to the total capital of a company.

¹⁰⁴ EnergieNed.

can maintain a healthy financial position, while nevertheless being financed to a considerable degree by debt capital.

165. The key issue is the level of gearing appropriate to a healthy financial position. There is no unequivocal answer to this. Red Electra, a company which only carries out grid activities, has an AA rating and a gearing ratio of 56%.¹⁰⁵ United Utilities, on the other hand, carries out activities, 95% of which are grid-related,¹⁰⁶ and has an A-minus rating and a gearing ratio of 48%. However, there are also examples of companies with a gearing ratio above 60% in combination with a single-A rating or higher.
166. The information provided by the first two respondents with regard to the level of gearing of integrated energy companies in the United States must be considered with some caution. From the information, it is not clear, for instance, what the average credit rating is for these companies. It is possible that these companies have a lower credit rating than the single-A credit rating proposed by the Board.
167. The impression obtained from the data submitted by the three respondents is not clear with regard to the method of financing of Dutch energy companies (grid companies). On the basis of various calculation methods, the respondents obtain outcomes which vary from 50% to approximately 65% financing by means of debt capital. It appears from the research done by Erasmus University that there are considerable differences in the way in which grid managers are financed.¹⁰⁷ In many cases, the annual accounts of the energy companies, in any event, do not provide sufficient basis to draw conclusions from the figures with regard to the way in which the grid company is financed. The present method of financing the grid managers cannot therefore be ascertained properly.
168. On the basis of the available information, the Board considers it possible that higher levels of gearing are maintained, while still retaining financial stability. The Board, however, is still not convinced that grid managers in the Netherlands, on average, are financed by debt capital for more than 60% or that this applies to a majority of the grid managers. The Board is of the opinion that it is not desirable to anticipate higher levels of gearing in the regulatory system because this could result in a situation where companies which opt for conservative financing (with a lower level of gearing) have a relatively low return. In addition, it is possible that a higher level of gearing will result in a reduction in the financial stability of the grid managers. In the light of the above, at

¹⁰⁵ See page 32 of Addendum G to this decision.

¹⁰⁶ Including water activities.

¹⁰⁷ See page 16 of Addendum J of this decision.

present the Board considers maintaining the level of gearing at its present level of 60% a reasonable starting point for determining the regulated cost of capital allowance.

Conclusion

169. The opinion did not result in an amendment to the draft method decision.

Obligatory maintenance of the gearing ratio determined by the Board

170. Two respondents¹⁰⁸ note that on the assumption that grid managers finance their activities with more than 60% debt capital, consumers incur the risk that a grid manager becomes insolvent while the income associated with financing by means of additional debt capital (lower cost of capital) accrues to the grid managers. These respondents note that an obligation on the part of grid managers to maintain the level of gearing determined by the Board also gives consumers the financial security for which they pay.

Response

171. As was argued in paragraph 167, on the basis of the available data it is not possible to determine accurately what the grid managers' present level of gearing is, so that it is not clear whether the situation outlined by the respondents occurs at present.
172. In more general terms, the Board notes that in regulating the grid managers it adheres to the principle of output management, whereby the Board intervenes as little as possible in the specific decisions taken by the management of the regulated company. Prescribing a certain mandatory capital structure is not consistent with this principle. Furthermore, the grid managers must also have the financial flexibility to deviate from the gearing ratio determined by the Board (for instance, for company-specific reasons).

Conclusion

173. The opinion did not result in an amendment to the draft method decision.

2.6.5 Corporation tax rate

Retrospective settlement of corporation tax

174. According to two respondents,¹⁰⁹ retrospective settlement is required for the corporation tax rate applicable in the third regulatory period. The respondents refer to the fact that the Minister of Finance intends to reduce the corporation tax rate. By means of a

¹⁰⁸ VEMW and PAWEX.

¹⁰⁹ VEMW and PAWEX.

retrospective settlement a correction can be made for the undesirable financial effects of this.

Response

175. Since retrospective settlement will be abolished, the total allowed revenues of grid managers will no longer be recalculated on the basis of the difference between the estimated and realised change in the productivity of the grid managers. The advantage of abolishing the retrospective settlement in the regulatory system is that the grid managers are given a greater incentive to operate more efficiently. In addition, abolishing the retrospective settlement makes the regulatory system simpler. Abolishing the retrospective settlement also results in a situation where (the parameters of) the WACC cannot be settled retrospectively.
176. In the regulatory system, the Board, in general, does not anticipate developments in the environment of grid managers which may possibly have the effect of increasing or reducing costs, unless a development (such as an amendment to the corporation tax rate) is implemented in legislation and the financial effect of this can be determined unequivocally. For this reason, the Board assumes the data with regard to the corporation tax rate published in the most recent Tax Plan.¹¹⁰ In the Tax Plan it is stated that the corporation tax rate for 2007 and later years will amount to 29.1%.

Conclusion

177. The opinion did not result in an amendment to the draft method decision.

2.6.6 Market return

Market return versus equity risk premium

178. To determine the costs of shareholders' equity, one respondent¹¹¹ proposes using the total market return, as OPTA does, rather than the sum of the risk-free rate and the equity risk premium. From an historical perspective, the market return is more stable than the equity risk premium.

¹¹⁰ www.minfin.nl.

¹¹¹ EnergieNed.

Response

179. *Ex post* realisation can be determined by assuming the historic realised market return (the respondent's approach) or by determining the risk-free rate and the equity risk premium separately (the Board's approach). Both methods are applied in practice and result in the same outcomes (if the same input parameters are used).
180. If the respondent's approach is used, this also implies a risk-free rate and a equity risk premium. If the market return, for instance, amounts to 7% and the risk-free rate amounts to 4%, the equity risk premium is then 3%.
181. The Board has opted to determine the risk-free rate and the equity risk premium separately because the Board takes both *ex post* realisation and *ex ante* expectations into account when determining the parameters of the cost of shareholders' equity. By determining the parameters separately, the considerations which underlie the Board's determination of these parameters are made more transparent.

Conclusion

182. The opinion has resulted in an amendment to the draft method decision. Compared to the draft method decision, paragraph 42 of Addendum C to the method decision clarifies why the market return is not used.

2.6.7 Equity risk premium

Level of the equity risk premium

183. Two respondents¹¹² are of the opinion that historic returns realised in the past are irrelevant and that what is important are the expected future returns. It follows from this, according to these parties, that only the (expected) future equity risk premium must be used to determine the equity risk premium. On the basis of future-oriented studies, these respondents propose applying a equity risk premium of 3.8%.
184. Two other respondents¹¹³ are of the opinion that the period 1950-1990 and 1950-2000 respectively should be included in determining the market return.¹¹⁴ One of these

¹¹² VEMW and PAWEX.

¹¹³ EnergieNed and TenneT.

¹¹⁴ As is stated above, these parties are of the opinion that the market return should be used to determine the cost of shareholders' equity.

respondents¹¹⁵ is of the opinion that the period 1900-1950 is not representative of the future market return, while the period 1990-2000 is less representative. The other respondent¹¹⁶ sees no reason to adjust the bandwidth of 4% to 7% used by the Board in the past.

Response

185. As was also noted by Frontier,¹¹⁷ the equity risk premium is determined by a number of factors and circumstances, including the degree of risk aversion of investors and the structure of the financial markets. By making use of historic (*ex post*) data, it is possible to derive the premium which investors required in the past as compensation (for instance) for the factors mentioned. Due to the greater interrelationships between capital markets, the equity risk premiums on the various markets will possibly converge slightly.

186. The question which arises is which historic period should be used to determine the (*ex post*) equity risk premium. Contrary to the opinion of the two respondents,¹¹⁸ the Board considers it important that this is based on the longest possible period. By using a long time series, the equity risk premium reflects the effect of various factors and circumstances which have occurred on the capital market and which may possibly occur in the future. By using a long period, it is possible to avoid a situation where the equity risk premium is distorted by specific factors and conditions which occurred during a relatively short period. In this regard, Frontier notes:

*"The reason for taking a long time horizon is that equity returns exhibit high volatility in the short term. This volatility can distort measures of equity returns even when measured over decades. As a result, estimates based on shorter periods of time (which should, in principle, reflect trends in the underlying drivers of equity returns) are unduly influenced by cyclical fluctuations in stock market returns."*¹¹⁹

187. A further advantage of this method is that the equity risk premium measured does not have to be adjusted on the basis of an "expert opinion", because the equity risk premiums during the specified period (such as the 1990s) are considered "exceptional". The Board has included numerous studies (all on the basis of long periods) in its assessment of the *ex post* equity risk premium. Greater weight is attributed to the study

¹¹⁵ EnergieNed.

¹¹⁶ TenneT.

¹¹⁷ See page 15 and 16 of Addendum I to this decision.

¹¹⁸ EnergieNed and TenneT.

¹¹⁹ See page 16 of Addendum I to this decision.

by Dimson, Marsh and Staunton¹²⁰ (also used by the respondents¹²¹). The Board has taken the most recent study by Dimson, Marsh and Staunton into account in its assessment.

188. The use of *ex ante* data in determining the equity risk premium is relevant for two reasons. The first reason is that (ideally) the WACC is supposedly “forward-looking” and anticipates expected developments. The use of *ex ante* data is consistent with this. The second reason is that it is possible to assess whether the market expects a change to occur in factors and conditions relevant to the equity risk premium in the coming years which would justify a (small) adjustment to the historic, realised equity risk premium. With regard to the use of the *ex post* data and *ex ante* expectations and the level of the market risk premium, Erasmus University considers it advisable:

“to assess the premium on the basis of the diversity of sources and not to base it only on a single ex post or a limited number of ex ante sources. The analysis of a large number of sources, both ex post and ex ante sources, and an assessment on the basis of the average equity risk premium applied by other regulators shows that the equity risk premium remains within a bandwidth of 3.0% to 7.0%. In this regard, 3.0% is the absolute minimum and 7.0% is the absolute maximum. The largest number of sources lie between 4.0% and 6.0%, whereby on average calculations based on a wide range of sources lie slightly below 5.0%.”¹²²

189. With regard to the opinion of one of the respondents,¹²³ namely that an adjustment to the equity risk premium is not necessary, the Board notes that the more recent studies, including the most recent study by Dimson, Marsh and Staunton, point in the direction of a lower equity risk premium. In line with the outcomes of extensive research by Frontier into the level of the equity risk premium, the Board has reduced the equity risk premium. The analysis by Erasmus University also supports applying a bandwidth of 4% to 6%.

Conclusion

190. The opinion has resulted in an amendment to the draft method decision. Compared to the draft method decision, paragraphs 44 up to and including 50 of Addendum C to the method decision clarify why both *ex post* data and *ex ante* expectations are included in the determination of the equity risk premium.

¹²⁰ Dimson, E., P. Marsh and M. Staunton, *Global Investment Returns Yearbook 2005*, 2005 and previous editions.

¹²¹ EnergieNed.

¹²² See page 22 of Addendum J to this decision.

¹²³ TenneT.

2.6.8 Beta

General

191. On the grounds of four sources, two respondents¹²⁴ reach the conclusion that the asset beta of the grid managers lies between 0.14 and 0.26.

Response

192. The Board concludes that these respondents agree with the method used by the Board to determine beta. With the exception of raising the number of companies in the reference group for discussion, which the Board discusses in paragraphs 224 up to and including 227 of this Addendum, the respondents have no comments with regard to the method used by the Board to determine beta.
193. The lower boundary (0.14) of the bandwidth which the respondents propose is determined by correcting the reference group used by the Board and by determining the beta of a "pure" grid company. This analysis is incorrect in a number of respects. Firstly, a number of companies in the reference group used by the Board have erroneously not been included in the analysis. However, in the Board's opinion these companies meet the criteria for inclusion in the reference group.¹²⁵ Secondly, the extent of the grid activities, as a percentage of the total activities, has been underestimated by the respondent. The respondents used turnover as the criterion for determining the percentage of grid activities, while net revenues is the correct yardstick. In this regard, Frontier states:

"On theoretical grounds, the preferred methodology for calculating shares of different activities in the companies' total operations should be by using net income. This is because equity betas, for the calculation of which comparators are ultimately selected, measure the correlation of company performance (i.e., the net income stream, present and expected, that it generates) with the performance of the overall market".¹²⁶

194. In addition, there are no data relating to, for instance, the data frequency and the reference period, so that it is not possible to deduce how this beta was determined. Finally, the Board notes that the beta of a "pure" grid company (also referred to by the

¹²⁴ VEMW and PAWEX.

¹²⁵ Paragraphs 25 up to and including 33 of Addendum I to this decision explain why the company's proposed by the Board meet the criteria. An assessment is then made to determine whether the companies proposed by the respondents meet the criteria.

¹²⁶ See page 6 of Addendum I to this decision.

respondents), such as Envestra, is higher than the beta of 0.14 used by the respondents in their analysis.

195. The upper boundary of the bandwidth is determined on the basis of a study of energy utility companies in the United States during the period from 1989 up to and including 2003 and an analysis by the respondents of the betas of utility companies in the United States. The respondents have given no or insufficient justification as to why the betas precisely of companies in the United States (and not the betas of companies in other countries) are representative of the beta of the regional grid managers. As is argued more extensively from paragraph 226 onwards, the reference group should not consist of companies from a single country. If this is the case, it is possible that the results of the study or reference group will be distorted and not representative of the situation of Dutch regional grid managers. In addition, there is no data with regard to, for instance, the data frequency and the reference period used in the study, so that it is not possible to deduce how these data were determined.

Conclusion

196. The opinion did not result in an amendment to the draft method decision.

Data frequency

197. The Board determines beta in the draft method decision on the basis of daily data over a two-year period and weekly data over a five-year period. One respondent¹²⁷ opts for determining beta on the basis of weekly data over a two-year period and monthly data over a five-year period. According to this respondent, the use of daily data may result in the distortion of the beta measured due to autocorrelation. According to this respondent, it is not clear whether the Board has assessed this carefully.

Response

198. As has already been stated in paragraph 52 of Addendum C to the draft method decision, using data with a relatively high frequency (such as daily data) makes it possible to achieve a considerably higher level of statistical reliability than would be the case if relatively low frequencies were used (such as monthly data).
199. An additional advantage of using daily data over a period of two years is that this takes into account the most recent information regarding the risk profile of the company's present activities.

¹²⁷ TenneT.

200. From a theoretical perspective, the respondent is correct in arguing that the use of daily data may result in a distortion of the beta measured. After all, there are two possible disadvantages to using daily data. The first disadvantage is that this could systematically result in an underestimation of beta. The reason for this is that shares with low liquidity can be traded less quickly, which may result in an underestimation of beta. The requirement with regard to the degree of liquidity (tradability) of the shares of companies in the reference group used by the Board ensures that this effect does not occur.
201. The second possible disadvantage is the effect of autocorrelation. Since there is a much stronger autocorrelation when using daily data, compared to other frequencies, the considerably higher level of statistical reliability (due to the higher data frequency of daily data) would be eliminated. Frontier carefully assessed whether this effect had occurred. Erasmus University also assessed whether autocorrelation had occurred. The conclusion of Erasmus University is that it is unlikely that the reliability of the final results is distorted by autocorrelation. Erasmus University is therefore of the opinion that it is more reliable to estimate beta on the basis of daily and weekly returns than on the basis of lower frequencies.¹²⁸

Conclusion

202. The opinion has resulted in an amendment to the draft method decision. Relative to the draft method decision, paragraph 61 of Addendum C to this method decision clarifies what the possible disadvantages are of using daily data and why using daily data is not appropriate in this case.

Modigliani-Miller versus Miles Ezzel adaptation

203. For the conversion of the equity beta to the asset beta, two respondents¹²⁹ argue that the Miles Ezzel method should be used rather than the Modigliani-Miller method. The difference between these two variants, according to the respondents, is the assumption in relation to debt capital. The assumption on which the Modigliani-Miller method is based is that the (absolute) level of financing by means of debt capital will remain constant in the future, while the Miles Ezzel method assumes that the ratio of debt capital to the total capital (gearing) will be constant. According to one of these two respondents,¹³⁰ the Miles Ezzel is more consistent with the regulatory system because the gearing is assumed to be constant.

¹²⁸ See page 23 and 24 of Addendum J to this decision.

¹²⁹ EnergieNed and TenneT.

¹³⁰ EnergieNed.

Response

204. To determine the WACC of the regional grid managers, a gearing level of 60% is applied.¹³¹ During the regulatory period, this level is indeed assumed to be constant. The Board can change the level of gearing for a subsequent regulatory period.
205. Various methods are available for converting the equity beta to the asset beta and *vice versa*, such as the Modigliani-Miller method, the Miller method, the Miles Ezzel method and the Harris-Pringle method. On the basis of a recent article,¹³² Frontier concludes that the Modigliani-Miller method is preferable.¹³³ Other methods may generate inconsistent results. Erasmus University also prefers to use the Modigliani-Miller method.¹³⁴
206. With regard to the use of the Miles Ezzel method, Frontier states:

*" The Miles-Ezzel approach was based on the assumption that a firm wishes to keep a constant gearing ratio and that, in this case, the firm should be valued differently from a firm that has a preset level of debt. The assumption of a constant gearing ratio is a sensible proxy for the behaviour of a regulated network utility. However, the Fernandez paper concludes that the application of the Beta formula in Miles-Ezzel will give inconsistent results under different scenarios for the growth rate of the firm and the rate of corporate taxes".*¹³⁵

207. Partly in the light of the recent change to the corporation tax rate and expected future changes to the corporation tax rate, the Board is of the opinion, in the light of the above, that it would not be consistent to apply the Miles Ezzel method.

Conclusion

208. The opinion has resulted in an amendment to the draft method decision. Compared to the draft method decision, paragraph 65 of Addendum C to this method decision clarifies why the Modigliani-Miller method is applied.

Reference group

209. Three respondents¹³⁶ argue that beta should be determined on the basis of a larger reference group. According to one of these respondents,¹³⁷ the companies which the

¹³¹ See also paragraphs 163 up to and including 168 of this Addendum.

¹³² Fernandez, P., *Levered and Unlevered Beta*, IESE Business School Research Paper, January 2003.

¹³³ See page 9 and 10 of Addendum I to this decision.

¹³⁴ See page 24 and 25 of Addendum J of this decision.

¹³⁵ See page 10 of Addendum I of this decision.

¹³⁶ EnergieNed, DNWB and TenneT.

¹³⁷ EnergieNed.

Board has included in its reference group are only comparable to the grid managers to a limited extent. According to two of these respondents,¹³⁸ the companies included in the reference group are also comparable to a limited extent, but by using a larger reference group (59 companies) and regression analysis, factors can be distinguished which are relevant to the beta and a precise beta can be estimated.

Response

210. The Board does not agree with the respondents' opinion that the companies in its reference group can be compared to grid managers in the Netherlands "only to a limited extent". Dutch grid managers are not listed on the stock exchange. This means that it is not possible to calculate beta on the basis of market data observed by the grid managers themselves. For this reason, the Board determines this on the basis of a reference group. The most important criterion in compiling the reference group, used by the Board, is the risk profile of the companies. The risk profile of a company depends, for instance, on the nature of its activities and the method of regulating the company.
211. To ensure that the risk profile of the company corresponds to the risk profile of the grid managers, the reference group is compiled of companies whose activities correspond as far as possible with the regulated activities of the regional grid managers. If the companies also undertake other activities, the Board has only included companies whose risk profile does not deviate significantly from the risk profile of the regulated activities of the grid managers. By using this method, a reference group of 14 companies has been compiled which can be compared fairly well to the regional grid managers. The way in which the reference group has been compiled is described extensively in paragraphs 53 up to and including 55 of Addendum C to this method decision.
212. The Board is of the opinion that an approach such as this proposed by the respondents could result in a less precise determination of beta. Although the reference group consists of 59 regulated companies, many of these companies carry out activities with a very different risk profile compared to the management of electricity grids. In addition, a distinction is not made between the various activities within the electricity sector, such as the management of electricity grids, producing and trading electricity and selling electricity. Frontier¹³⁹ and Erasmus University are not proponents of the method proposed by the respondent.
213. In this regard, Erasmus University states:

¹³⁸ EnergieNed and TenneT.

¹³⁹ See page 12 of Addendum I of this decision.

*"PwC's regression analysis only explains 40% of the variation in Beta (R^2). It is not clear what determines the remaining 60%. If the remainder is determined by factors specific to the sector, activities or the regulatory system, the model is invalid. Since DTe's model only considers comparable companies, this problem does not arise."*¹⁴⁰

214. It is also stated that:

*"PwC's group consists largely of American companies and companies with activities which deviate strongly from the management of grids, which may distort the final outcomes considerably."*¹⁴¹

215. The Board notes that the method proposed by the respondent has considerable disadvantages.

216. Partly on the basis of the above opinion, Erasmus University notes that the values of the assets betas are not distributed normally. As a result, it is preferable to determine the lower and the upper boundaries of the bandwidth on the basis of the median of the daily and weekly asset betas respectively, rather than to determine the bandwidth on the basis of average betas.¹⁴² For this reason, Erasmus University recommends using the median value.

217. The Board agrees with this analysis by Erasmus University. By basing beta on the median, a situation is avoided where the beta applied by the Board is affected by a relatively large or small value within the reference group.

218. The median and the average of the reference group only differ minimally.

Conclusion

219. The opinion has resulted in an amendment to Addendum C to the method decision compared to the draft method decision. The asset beta will be determined on the basis of the median. As a result, the bandwidth of the asset beta amounts to 0.28 to 0.39. The bandwidth of the equity beta amounts to 0.58 to 0.80. The above amendments have been made to Addendum C to the method decision and have been substantiated.

¹⁴⁰ See page 27 of Addendum J of this decision.

¹⁴¹ See page 27 of Addendum J of this decision.

¹⁴² See page 26 of Addendum J of this decision.

No reasons given for the choice of companies in the reference group

220. According to one respondent,¹⁴³ the Board has not given reasons why the companies included in the reference group are indeed comparable to the regional grid managers.

Response

221. Paragraphs 46 up to and including 48 of Addendum C to the draft method decision provide a detailed description of the criteria which the Board has used to compile the reference group. By applying these criteria, it is possible to guarantee that the companies in the reference group are, in fact, comparable to the grid managers.

Conclusion

222. The opinion did not result in an amendment to the draft method decision.

Comments with regard to specific companies in the reference group

223. Two respondents¹⁴⁴ are of the opinion that the following companies in the reference group are less comparable to the grid managers: Atmos, United Utilities, Viridian, Atlanta Light and Gas, and Terasen. According to these respondents, the following companies should be added to the reference group: Ameren, Wisconsin Energy, Cinergy, American Electric Power, Dominion and Pinnacle West.

Response

224. Terasen was not included in the reference group by the Board because this company was acquired some time ago by Kinder Morgan. On the basis of this opinion, Frontier again assessed whether Atmos, United Utilities, Viridian, and Atlanta Light and Gas meet the criteria set for inclusion in the reference group. Frontier concludes that, apart from Terasen, all the companies meet the Board's criteria.¹⁴⁵
225. With regard to the suggestion that other companies be added to the reference group, the Board wishes to point out that four companies from the United States are already included in the reference group. If too many companies from a single country are included, it is possible that the results of the reference group will not be representative of the conditions experienced by the regional grid managers. Erasmus University states:

"If a major part of the group were to consist of American companies, there is a chance that beta will be affected by this and may possibly no longer be representative of the risk profile of

¹⁴³ DNWB.

¹⁴⁴ VEMW and PAWEX

¹⁴⁵ See page 25 up to and including 33 of Addendum I of this decision.

the regional grid managers. For this reason, we advise DTe not to add the companies proposed by the regional grid managers, which are all American companies, to the reference group."¹⁴⁶

226. In compiling the reference group, this was already taken into account. Frontier states that:

*"[...] In practice, this meant that we included in our sample all companies that we could identify as meeting the inclusion criteria from all comparable regulatory regimes/countries, with just one exception: the United States. The particular feature of the United States that makes it different from all other countries is that in the US there are dozens of companies fully or marginally meeting the inclusion criteria. Actually including all of these companies in the sample would make the results dominated by the particular features of both the regulatory regime and the market and operational risk conditions in the United States. We did not feel that such approach was appropriate for determining the cost of capital of regulated utilities in the Netherlands, and instead decided to go with the balanced sample approach. Even so, the current sample contains more companies from the US than from any other single country."*¹⁴⁷

227. The Board has verified the extent to which the betas of the American companies in the reference group are representatives. Frontier states that:

*"We consider US companies already included in the sample to be broadly representative of all US companies potentially meeting the inclusion criteria – for example, Beta estimates for Ameren and Wisconsin Energy are not very different from Beta estimates for existing US comparators in the sample, and in fact are on the lower side of the existing sample (Annexe 1)."*¹⁴⁸

Conclusion

228. The opinion did not result in an amendment to the draft method decision.

Risk profile of the companies

229. Two respondents¹⁴⁹ conclude that the companies in the reference group have a risk profile which is higher than that of the grid managers, since the companies in the

¹⁴⁶ See page 26 of Addendum J of this decision.

¹⁴⁷ See page 5 of Addendum I of this decision.

¹⁴⁸ See page 5 of Addendum I of this decision.

¹⁴⁹ VEMW and PAWEX

reference group also carry out activities which incur greater risk than the activities of the grid managers. On the basis of this, these respondents are of the opinion that the beta must be adjusted to reflect this difference in their risk profiles.

Response

230. The Board has selected companies for the reference group which can be compared well to the grid managers. To illustrate this, the reference group used to determine the beta consists of companies which mainly carry out grid activities. The other activities mainly relate to activities (such as gas transmission and activities relating to water), the risk profile of which is fairly similar to the activities of the grid managers. Activities (such as trading energy), which in terms of their risk profile usually incur higher risks than the activities of the grid managers, generally only comprise a small part of the activities of these companies.

Conclusion

231. The opinion did not result in an amendment to the draft method decision.

Transmission versus distribution

232. One respondent¹⁵⁰ argues that the reference group wrongly includes companies which have electricity transmission as their activity. These companies reduce the average (asset) beta.

Response

233. On the basis of Frontier's research,¹⁵¹ there appears to be no difference between the level of the beta of transmission, as opposed to distribution, companies. The Board is also not aware of other research which supports this argument. The Board therefore has no evidence to assume that the risk profile (and accompanying this, at the level of the beta) of foreign transmission-related grid managers deviates (in a statistically significant way) from foreign distribution-related grid managers. The respondent also failed to provide this evidence. The Board notes in this regard that there are differences in the regulatory system which may justify a difference in the beta of transmission and distribution-related grid managers. For instance, in the Netherlands the manager of the national high-voltage grid is regulated on the basis of turnover. By applying turnover regulation, systematic risks have no or only a limited effect on the total allowed revenues of the national grid manager.

¹⁵⁰ DNWB.

¹⁵¹ See page 12 and 13 of Addendum I of this decision.

Conclusion

234. The opinion did not result in an amendment to the draft method decision.

Beta cannot be estimated accurately

235. Two respondents¹⁵² refer to a recent analysis by PwC.¹⁵³ This analysis supposedly shows that regulators which are of the opinion that beta cannot be estimated accurately use a beta of 1.

Response

236. The underlying analysis to which this respondent refers was not submitted with the opinions on the draft method decision or the regional electricity grid managers. The Board cannot therefore verify the basis of this research.
237. It appears from the opinion, however, that the argument is only relevant in a situation where beta (for whatever reason) cannot be estimated accurately. One of the two respondents¹⁵⁴ refers in this regard to the fact that:

"There is reason to doubt whether the fall in the betas of the peer group can be attributed to an actual decrease in the risk profile of these companies or whether other market conditions play a role in this."

238. The Board is not of the opinion that the beta of the grid managers cannot be estimated accurately. In addition, the Board concludes that the betas have been higher on average during the past two years compared to the past five years, so that the conditions outlined by the respondent did not apply.

Conclusion

239. The opinion did not result in an amendment to the draft method decision.

Geographic spread of the companies in the reference group

240. One respondent¹⁵⁵ is critical of the composition of the reference group, due to the fact that nine of the fourteen companies in the reference group are located outside Europe.

¹⁵² DNWB and TenneT.

¹⁵³ Pleading by PricewaterhouseCoopers in relation to the WACC for DTe, hearing of 6 April 2006.

¹⁵⁴ DNWB.

¹⁵⁵ TenneT.

Response

241. In order to compile a reference group, an extensive list of listed companies active in the area of grid management was first compiled. Companies from various European countries were included in this long list. The reference group was then compiled on the basis of the criteria set out in paragraphs 46 up to and including 48 of Addendum C to the draft method decision. The fact that five companies are located within Europe can be explained by the fact that many European energy companies are not listed or that a substantial part of their activities focus on a different part of the energy market, such as energy production and/or the supply of energy. The Board is of the opinion that companies which carry out activities which are comparable to those of the grid managers, but which operate outside Europe can be compared better to the grid managers than European energy companies which focus primarily on, for instance, energy production.

Conclusion

242. The opinion did not result in an amendment to the draft method decision.

Difference in the regulatory method

243. One respondent¹⁵⁶ criticised the composition of the reference group, because the regulatory methods applied in the countries of the reference group differ from the method applied in the Netherlands.

Response

244. It is not possible to compile a reference group from companies regulated by a system which is entirely comparable to the system of regulation applicable to the regional grid managers in the Netherlands. On the one hand, this is because regulation differs from country to country (in general or in respect to detail). On the other hand, this is because (detailed) information on regulation in various countries is often lacking. The criterion applied by the Board in compiling the reference group is that the regulatory system applicable to the selected companies must bear some similarity with the system of regulation applicable to the regional grid managers.

Conclusion

245. The opinion did not result in an amendment to the draft method decision.

¹⁵⁶ TenneT.

2.6.9 Inflation

Inflation used is too low

246. Two respondents¹⁵⁷ are of the opinion that the expected inflation used by the Board for the third regulatory period (1.25 percent) is too low. On the basis of forecasts by ECB and *The Economist* these respondents are of the opinion that an inflation rate of 1.8% should be applied.
247. In addition, these respondents are of the opinion that the WACC should be settled retrospectively with regard to the difference in expected and realised inflation during a regulatory period. These parties give the following arguments for this claim. The grid managers' allowed revenues are increased annually by the actual rate of inflation.¹⁵⁸ If the realised inflation deviates from expected inflation (as used to calculate the WACC), this results in allowed revenues for the grid managers which are too high or too low. This can be corrected by means of a retrospective settlement for inflation.

Response

248. The *cpi* for the third regulatory period is determined on the basis of the expectations of the Netherlands Bureau for Economic Policy Analysis, whereby the level of the real interest rate which results from the use of this inflation rate is also taken into account. Estimates made by the Netherlands Bureau for Economic Policy Analysis relating to the entire third regulatory period are not available at this moment. An estimate by the Netherlands Bureau for Economic Policy Analysis is only available for the year 2007.¹⁵⁹ At the time of publication of the draft decision, this estimate amounted to 1.25%. Immediately prior to the publication of this decision, the Netherlands Bureau for Economic Policy Analysis, however, published a new estimate. The Netherlands Bureau for Economic Policy Analysis expects an inflation rate of 1.5% in 2007.
249. Despite the adjustment to the inflation forecast of the Netherlands Bureau for Economic Policy Analysis, the Board has decided to leave the inflation rate to be applied unchanged at 1.25%. As a result, the real risk-free rate applied by the Board amounts to 2.72% (midpoint). The Board will give its reasons below for the method used to determine this percentage.

¹⁵⁷ VEMW and PAWEX.

¹⁵⁸ This relates to the *cpi*, as described in section 41b(1) of the Electricity Act.

¹⁵⁹ <http://www.cpb.nl>.

250. In determining the inflation rate to be applied, the Board, as indicated above, also took into account the resulting real interest rate. If the level of the real interest rate is considered from an historic perspective, it appears that the real interest rate amounted to approximately 2% to 2.3% during the past four years (see Table 3 of this Addendum). If the realised real interest rate for the first five months of 2006 is considered, the real interest rate amounted to 2.5% (see Table 4 of this Addendum).
251. To determine a real interest rate which is representative of the financing conditions in the next regulatory period, the Board also included the development of interest rates in its analysis. As appears from Tables 5 and 6 of this Addendum, the expected real interest rate has fluctuated around 2.7% since 2007.
252. All aspects considered, the Board is of the opinion that the use of an inflation rate of 1.25% comes closest to meeting the expectation that the nominal interest rate will rise in the future to a level which is at the upper end of the bandwidth of 3.7 to 4.3% used at present by the Board. On the basis of these parameters, the interest rate applied by the Board amounts to 2.72%. This is consistent with the most recent estimates of the Netherlands Bureau for Economic Policy Analysis.
253. With a real interest rate of 2.72%, the Board is also consistent with earlier decisions by the regional grid managers (for the first and second regulatory periods) and the most recent decisions in relation to GTS and TenneT (draft decision). The real interest rate is therefore set at a level slightly higher than the actual real interest rate realised in recent years, but is in line with the required real return.
254. The Board does not agree with the opinion that grid managers realise allowed revenues which are too high or too low if retrospective settlement is not applied. The Board determines a real WACC, that is, a WACC which (for instance) is considered representative of the coming regulatory period. This takes into account the present expectations with regard to the nominal interest rate, the real interest rate and inflation. If inflation deviates from the inflation forecasts during the regulatory period, in all probability this will also be expressed in a higher nominal interest rate. The real interest rate will not be affected by this.

Conclusion

255. The opinion has resulted in an amendment to the draft method decision. Paragraphs 69 up to and including 78 of Addendum C to this method decision, compared to the draft method decision clarify why an inflation rate of 1.25% is applied.

2.6.10 Other considerations

Corrections to the WACC

256. According to three respondents,¹⁶⁰ in determining the parameters of the WACC, liquidity with regard to the tradability of the shares must be taken into account, together with the small-firm effect and regulatory risk. These three effects should result in an increase in the WACC.
257. With regard to the small-firm effect, one respondent¹⁶¹ is of the opinion that realising the optimal economy of scale is limited by the illiquidity of the shares of other grid managers, due to the division of energy companies and due to the Decentralized Public Authorities (Funding) Act, which prohibits public authorities from maintaining a diversified investment portfolio. This respondent also notes that a small company incurs greater risk than a large company.
258. With regard to the illiquidity of the trade in shares, this respondent notes that a public authority which wishes to sell its interest in the grid manager is confronted by the limited tradability of the shares, because the grid managers are not listed and the group of buyers is subject to legal limitations. A different respondent states that due to the illiquidity premium, the cost of shareholders' equity should be increased by 20%.
259. With regard to regulatory risk, a number of developments are mentioned by two respondents,¹⁶² which supposedly affect the level of the WACC. These include the regulation of the metering market for small consumers, the fact that the National Standard Producer Transmission Tariff is set at nil and amendments to the categories of connections. The introduction of the market model is also mentioned.

Response

260. With regard to the small-firm effect, the Board notes that the respondents do not define this effect and also fail to indicate how much additional premium should be added to the WACC as a result. It is unclear, for instance, whether the respondent is of the opinion that a relatively small grid manager (such as ONS Netbeheer) ought to have a higher WACC than a relatively large grid manager (such as Essent).

¹⁶⁰ EnergieNed, TenneT and DNWB.

¹⁶¹ DNWB.

¹⁶² EnergieNed and NRE.

261. Paragraph 68 of Addendum C to the draft method decision states that a small-firm premium is justified on the grounds of transaction costs. Access to the capital market is accompanied by transaction costs. Transaction costs are fixed costs (for instance, per loan or issue), which means that economies of scale exist. (As a percentage) transaction costs are therefore higher for relatively small companies. In the regulatory system, however, the Board does not take the economies of scale of grid managers into account. It is up to the grid managers to determine their optimal economy of scale. Higher transaction costs for obtaining capital is one of the considerations. The effect of transaction costs on the total costs for obtaining capital is also fairly small. In addition, transaction costs are taken into account in determining the risk premium.
262. The Board does not share the opinion that realising the optimal economy of scale is limited by the illiquidity of the shares of other grid managers and by the division of the energy companies, in any event not to such an extent that an optimal economy of scale cannot be achieved. For instance, the present grid managers have resulted from mergers in the past. At the time, these parties were not listed on the stock exchange. The division of energy companies has not yet taken place and is therefore not relevant to this decision. In addition, the Board notes that the government, through participation in various investments (for instance in a water company) in many cases has already created a diversified investment portfolio. The Decentralized Public Authorities (Funding) Act sets boundaries for investments, but in no way prohibits maintaining a "diversified investment portfolio". On the basis of the above, an additional premium as a result of the small-firm effect is not necessary.
263. Paragraph 67 of Addendum C to the draft method decision already states that the CAPM is based on assumptions which do not always correspond to reality. For instance, the CAPM assumes that investors always have all available information (and interpret this information in the same way) and that the shares of companies can be traded freely. The fact that assumptions, such as the free tradability of shares, are not always valid does not mean that the outcomes are incorrect. The Board has already taken into account the uncertainty with regard to the level of the cost of shareholders equity by giving sufficiently conservative estimates of the underlying parameters and using a bandwidth.
264. In addition, the Board notes that the grid managers are owned by public authorities. In addition to a possible disadvantage, such as reduced access to the market for shareholders' equity, this could also result in a relatively low risk premium. The Board has also not made a correction for this effect. On the basis of the above, the Board is of the opinion that an additional premium for illiquidity is therefore not necessary.

265. With regard to the regulatory risk, the Board has concluded that the developments referred to by the respondents do not relate to systematic risks. In addition, the Board is of the opinion that these developments, in so far as they are relevant, do not have a (considerable) effect on the risk profile of the grid managers. Erasmus University notes that:

*"on the basis of the above, we conclude that the [...] changes mentioned do not affect the risk profile of the regional grid managers in the next regulatory period and therefore do not affect the level of the cost of capital allowance."*¹⁶³

Conclusion

266. The opinion did not result in an amendment to the draft method decision.

2.7 Objectifiable regional differences

267. In this section, opinions are discussed which were submitted in relation to the research into objectifiable regional differences. In so far as the opinions relate to the analyses by The Brattle Group (hereinafter "Brattle"), the Board has asked Brattle to read the document and to draw up a document in which the specific responses of the respondents are discussed in more detail. Where necessary, reference will be made to this document which is included as Addendum F to this method decision.
268. In the light of the many responses to the research into objectifiable regional differences, an extensive section clarifying the assumptions of this research into objectifiable regional differences and the way in which the corrections are made is provided in Addendum A to this method decision. Where necessary, in response to the opinions the Board will refer to this section.

2.7.1 Objectifiable regional differences in relation to electricity: general issues

Retrospective effect of (any) corrections

269. Two respondents¹⁶⁴ are of the opinion that corrections made in relation to objectifiable regional differences ought to be declared applicable with retrospective effect in relation

¹⁶³ See page 36 of Addendum J of this decision.

¹⁶⁴ DNWB and Rendo.

to the first and second regulatory periods, in accordance with the history of the legislation. The respective respondents stated that the Board has not provided sufficient reasons in the draft method decision as to why this should not apply with retrospective effect. The fact that the electricity agreement¹⁶⁵ includes the provision that a correction is made from the third regulatory period onwards, is not a reason, according to these respondents, why compensation should not still be given for the loss of revenues in the first and second regulatory periods as a result of acknowledged regional differences.

270. One respondent¹⁶⁶ explicitly argues against a correction with retrospective effect. According to this respondent, it would appear from the respective provisions of the agreement that there are no grounds for correction with retrospective effect. The same respondent notes that retrospective effect with regard to objectifiable regional differences also means that the allowed turnovers will have to be adjusted as a result of other developments in the interim. This is unworkable.

Response

271. The Board will not make corrections for objectifiable regional differences with retrospective effect. Although it is clear that managers can be compensated on the grounds of objectifiable regional differences from 1998/1999 onwards, neither the Act nor the history of the legislation makes it obligatory to apply this correction with retrospective effect from the first regulatory period (2001-2003).
272. The electricity agreement contains no provision(s) from which it appears that it is the aim to make corrections for any objectifiable regional differences with retrospective effect. Article 16 of the electricity agreement only states the following:

Article 16 of the electricity agreement:

“During the second regulatory period, DTe will carry out research into the existence of any objectifiable differences, as expressed in the parliamentary proceedings (note 6). Research will be conducted to establish whether objectifiable regional differences are relevant to the regulatory system, as a result of which tariff increases or tariff reductions would be justified. This research will, in any event, relate to the effects on the cost structure of the presence and absence of water crossings and the extent of decentralised electricity generation (including wind farms) in the supply areas of the various grid managers. If it emerges from this research that objectifiable regional differences exist between grids which are relevant to the regulatory

¹⁶⁵ This relates to the agreement between the Director of DTe and the regional electricity grid managers in relation to the regulation of electricity grid tariffs in the period from 2001 up to and including 2006 (Electricity Grid Tariff Regulation Agreement (2001-2006)) [*Overeenkomst Regulering Nettareven Elektriciteit (2001-2006)*], of 26 May 2003.

¹⁶⁶ Continuum.

system, these outcomes will be included in determining the allowed turnovers in the third regulatory period. In addition, research will be conducted to ascertain whether the National Standard Producer Transmission Tariff is incorporated correctly into the regulatory system."

273. The Board is of the opinion that if it had been the intention to make any corrections for objectifiable regional differences with retrospective effect, this would have been included explicitly in the agreement. The method decision for the second regulatory period¹⁶⁷ also makes no mention of any retrospective settlement of revenues lost or excessive tariff revenues as a result of regional differences. The fact that grid managers are divided on whether or not this should apply with retrospective effect underlines that it is not self-evident that corrections are made with retrospective effect for any objectifiable regional differences which automatically follow from (the text of) the agreement.
274. The Board is of the opinion that a correction with retrospective effect is not in the interests of grid managers, investors and consumers because applying a correction with retrospective effect results in uncertainty with regard to whether previous tariff revenues were lawful and the development of future revenues. Corrections with retrospective effect in this situation would, after all, form a precedent which would give rise to the question as to whether corrections with retrospective effect ought to be possible in numerous situations. The Board does not consider this desirable.
275. In addition, the issue of corrections with retrospective effect is no longer relevant since the method decisions for the first and second regulatory periods are no longer admissible for review and/or judicial appeals. It appears from the Memorandum of Reply¹⁶⁸ in relation to the Electricity Production Sector Transition Act [*Overgangswet Elektriciteitsproductiesector (OEPS)*]¹⁶⁹ that the coming into force with retrospective effect of the amended section 41a of the Electricity Act as of 1 January 2006 was meant to ensure that the tariff decisions taken earlier would not have to be taken again.

Conclusion

276. The opinion did not result in an amendment to the draft method decision.

¹⁶⁷ Decision in relation to the method for determining the discount to promote efficient operations, pursuant to section 41(4) of the Electricity Act for the period 2004-2006 of 12 September 2003 with reference number: 100947-82.

¹⁶⁸ Upper House, *Parliamentary Proceedings* 2002-2003, 28 174, No. 110b, p .5.

¹⁶⁹ Upper House, *Parliamentary Proceedings* 2002-2003, 28 174, No. 110b, p .5.

Meticulousness of the research into objectifiable regional differences (process and approach)

277. Three respondents¹⁷⁰ are of the opinion that the research into objectifiable regional differences was not carried out and supervised with due care by DTe. In this regard, three respondents¹⁷¹ emphasise, in particular, the analyses of the potential regional difference "connection density". Two respondents¹⁷² are of the opinion that Brattle wrongly ignored certain data and one respondent¹⁷³ stated that it had not received a response to a report which it had submitted on the potential objectifiable regional difference "connection density". Four respondents¹⁷⁴ state that it was wrongly assumed that there was no relationship between connection density and costs. One respondent¹⁷⁵ is of the opinion that the type of soil is not acknowledged as an objectifiable regional difference. A bottom-up analysis for the purpose of examining this potential objectifiable regional difference is lacking.
278. One respondent¹⁷⁶ is of the opinion that DTe wrongly only plays a facilitating role. This respondent is also of the opinion, together with another respondent,¹⁷⁷ that insufficient grounds are given as to why and in what way the outcomes of Brattle's research are included in the draft method decision. One respondent¹⁷⁸ is of the opinion that a greater onus rests upon the Board to provide a justification for its failure to acknowledge "connection density" as an objectifiable regional difference since the Minister supposedly mentioned "connection density" as an objectifiable regional difference during the Parliamentary proceedings.
279. One respondent¹⁷⁹ notes that the research, as this was carried out by Brattle, provides insufficient insight into the extent to which there are regional differences between grid managers. One of the respondents,¹⁸⁰ however, explicitly states that it agrees that Brattle's final report should be taken as the starting point for any corrections for objectifiable regional differences.

¹⁷⁰ Essent, Rendo and TenneT.

¹⁷¹ DNWB, Essent and Rendo.

¹⁷² DNWB and Rendo.

¹⁷³ DNWB.

¹⁷⁴ DNWB, Essent, Rendo and TenneT.

¹⁷⁵ Rendo.

¹⁷⁶ Essent.

¹⁷⁷ Rendo.

¹⁷⁸ DNWB.

¹⁷⁹ TenneT.

¹⁸⁰ Eneco.

Response

280. The Board does not agree with the comment that the research into objectifiable regional differences was not conducted with due care. At the request of the grid managers it was decided that Brattle, as an independent party and an expert, should be entrusted with carrying out the analyses. All the information which grid managers submitted on time¹⁸¹ and which met the (reliability) requirements stipulated, was included in the research. The Board considers the comment that Brattle wrongly ignored certain data to be incorrect.¹⁸² Grid managers have had numerous opportunities to respond to Brattle's (interim) results. The way in which the information provided by the grid managers has or has not influenced Brattle's analyses and conclusions was communicated on numerous occasions to the grid managers during the research. The Board is therefore of the opinion that the research into regional differences, including the potential regional difference "connection density", was carried out carefully and grid managers were given sufficient opportunity to submit data and to influence Brattle.
281. The Board does not agree with the comment that a relationship between connection density and costs is denied. On the basis of the data available at present, however, as emerges from Brattle's analyses, such a relationship cannot be objectified and quantified in accordance with the jointly agreed criteria which were worked out in more detail by Brattle.¹⁸³
282. Furthermore, the Board is of the opinion that it cannot be concluded from the data provided by grid managers and the analyses which have been conducted that the type of soil is a significant and structural regional difference. This is explained again in Brattle's response.¹⁸⁴
283. It appears from the Parliamentary proceedings¹⁸⁵ that the Minister explicitly places the burden of proof of any objectifiable differences with the individual companies. The Board is of the opinion that DTe, through facilitating and financing the research into objectifiable regional differences, has more than complied with its obligations, as set out in the electricity agreement. DTe's aim has been to enable grid managers to achieve maximum agreement on the design of the research, the choice of the independent

¹⁸¹ The deadline for the submission of data was 30 January 2006.

¹⁸² During the process in relation to objectifiable regional differences it was clearly stated what (reliability) criteria data had to meet and that the data should be submitted on time. Ultimately all the data, submitted by 30 January 2006 at the latest, were included in the research into objectifiable regional differences.

¹⁸³ See paragraphs 21 and 22 of Addendum A.

¹⁸⁴ Addendum F (p. 5 and 6).

¹⁸⁵ Lower House of the Dutch Parliament, *Parliamentary Proceedings* 1998-1999, 26 303 No. 7, p. 30.

consultant, the factors to be examined and the data required to identify regional differences objectively. When it no longer appeared possible to reach agreement with the grid managers, DTe did indeed start playing a more directive role.

284. The Board does not agree with the comment that the draft method decision provides inadequate justification for the way in which the Board will incorporate corrections and the role which Brattle's final report on objectifiable regional differences will play in this. The Board has nevertheless opted to devote a lengthy passage to this in Addendum A of this method decision. At the meetings of the consultative group with the directors of the grid managers, DTe gave a verbal explanation of the conclusions which would be attached to Brattle's report. Throughout the process, DTe has continuously stated that Brattle's report would be the starting point for drawing conclusions. In a letter, the Board finally set out the way in which it, the Board, intended implementing any corrections in the draft method decision.¹⁸⁶In this regard, the Board notes that the statement in question made by the Minister, namely that connection density may be a possible regional difference, does not automatically mean that this is a sufficiently objectifiable difference which justifies an adjustment to tariffs. This can only be determined on the basis of empirical research.

285. The Board does not agree with the respondent who states that Brattle's research provides insufficient insight into the extent to which regional differences exist between grid managers. It appears from Brattle's final report that water crossings and taxes can be considered to be objectifiable regional differences. The fact that Brattle's final report is a good starting point for incorporating corrections for objectifiable regional differences is also explicitly supported by one of the respondents.¹⁸⁷

Conclusion

286. The opinion has resulted in an amendment to the draft method decision. On the basis of the opinions submitted, the way in which the corrections for objectifiable regional differences are implemented is clarified and explained in greater detail in Addendum A to the method decision.

Data (requirements)

¹⁸⁶ Letter of 8 March 2006 with reference number: 101712-764 (www.dte.nl).

¹⁸⁷ Eneco.

287. According to two respondents,¹⁸⁸ Brattle's analyses should be redone on the basis of reliable data, substantiated analyses and methods, and objective criteria determined beforehand.
288. One respondent¹⁸⁹ is of the opinion that DTe and Brattle have failed to create more data points, partly by stipulating unreasonable reliability criteria with regard to usable data. For instance, an unqualified auditor's report for non-financial data was considered unfeasible. The reliability criterion, which was ultimately adjusted for non-financial data, whereby the auditor was at least required to declare that technical data corresponded to the grid manager's administration, was also not feasible. Proposals for a solution, suggested by the respondents in question, were allegedly ignored by DTe. Finally, one respondent¹⁹⁰ states that the Board did not act consistently in excluding certain data which lacked an unqualified auditor's report.
289. Two respondents¹⁹¹ stated that applying the zero-sum principle was counter-productive as some parties were given an incentive to withhold data or not to have data validated.¹⁹² Questions were raised in relation to DTe's reasons for wishing to apply this principle, partly because DTe decided to abandon this principle at the last moment. Two respondents¹⁹³ disagree with abandoning this principle and are of the opinion that it should be applied fully.
290. One respondent¹⁹⁴ is of the opinion that Board should have used its powers to obtain information to force grid managers to make the necessary data available.

Response

291. The request for data in relation to objectifiable regional differences was designed in consultation between DTe and all the grid managers.¹⁹⁵ All the grid managers committed

¹⁸⁸ DNWB and Rendo.

¹⁸⁹ Essent.

¹⁹⁰ Continuon.

¹⁹¹ Essent and Rendo.

¹⁹² When applying the zero-sum principle, it is assumed that the average level of tariffs in the Netherlands should remain unchanged after inclusion of regional differences. At the start of the research into objectifiable regional differences it was thought that some grid managers would benefit and that others would be placed at a disadvantage, so that on balance the average level of tariffs would remain unchanged.

¹⁹³ VEMW and PAWEX.

¹⁹⁴ Essent.

¹⁹⁵ A consultative group of directors and grid managers was created specially for the research into objectifiable regional differences.

themselves to providing the necessary data accompanied by an unqualified auditor's report in order to demonstrate the existence of any objectifiable regional differences. The Board is of the opinion that it is not up to it, the Board, to create more data points, but that the grid managers are responsible for providing sufficient, suitable and reliable data as the basis for carrying out the necessary analyses.

292. When it emerged, after filling in the data request, that an unqualified auditor's report was not feasible for non-financial data, in particular, DTe relaxed the requirements with regard to the reliability of non-financial data, despite the fact that two grid managers were opposed to this.¹⁹⁶ In this way, more data could be made available for the necessary analyses. In response to the results of Brattle's first analysis, one of the respondents¹⁹⁷ stated that it regarded the relaxation of these reliability criteria, proposed by DTe, to be a workable proposal. The Board considered further relaxation of the reliability criteria in relation to the data irresponsible and not in accordance with the agreements made on commencement of the research between DTe and the grid managers.¹⁹⁸ A minimum requirement was formulated for non-financial data, namely that the data supplied must be consistent with the grid manager's administration. If this requirement were to be abandoned, there is no guarantee whatsoever that the data to be analysed would bear any relationship to reality.
293. The Board does not agree with the comment that it, the Board, acted inconsistently when applying the reliability criteria in relation to the various data. The Board has clearly explained how the reliability of the various data would be assessed and has applied this consistently.
294. In principle, the Board considers the application of the zero-sum principle to be fair and prudent as a general starting point.¹⁹⁹ If there are regional differences between grid managers which result in both an increase in costs and a reduction in costs, it is reasonable to assume that the average level of tariffs will remain unchanged, whereby the corrections to the objectifiable regional differences which are applied reflect the

¹⁹⁶ This involved Eneco and Westland. Partly as a result of this, DTe exercised the utmost care in considering how to deal with adjustments to the reliability criteria.

¹⁹⁷ Essent.

¹⁹⁸ Eneco and Westland were expressly opposed to this relaxation of the reliability criteria. In addition, Brattle, DTe and the grid managers agreed on the type of data which would serve as the point of departure for the research into objectifiable regional differences. On the basis of this, the data request was then formulated.

¹⁹⁹ It appears from NRE's opinion, for instance, that the application of the zero-sum principle would be the obvious course to take if a regional difference exists in relation to the procurement of high-voltage services. It appears from this that the zero-sum principle, as such, is not contested by this grid manager.

relative differences between grid managers. Applying a zero-sum principle is prudent in the sense that the application of this principle is a guarantee for consumers that the inclusion of any corrections to objectifiable regional differences will not affect the average level of tariffs in the Netherlands.²⁰⁰ Needless to say, applying the zero-sum principle must make sense,²⁰¹ there must be clearly demonstrable cost advantages,²⁰² and applying this principle must not lead to a situation where a grid manager operates below the efficient revenue level (after correction for any demonstrable cost advantages).

295. The Board believed that it was necessary to be open from the start about the application of this zero-sum principle. It would have been careless only to confront grid managers with this intention to apply the zero-sum principle in the final phase of the of the research into objectifiable regional differences, after requesting the required data, since the application of this principle could have adverse financial consequences for some grid managers. Given the information available at the start of the research into objectifiable regional differences, the Board remains convinced that its wish to apply the zero-sum principle was reasonable. After all, at the time there was an extensive list of regional differences to be researched, which potentially could have the effect of both increasing costs and reducing costs. It would not have been fair to consumers only to take into account the factors which would increase costs.

296. The Board has no concrete evidence that the application of a zero-sum principle has been careless, in the sense that certain grid managers intentionally withheld (validated) data. The grid managers, in agreement amongst themselves, decided on the objectifiable regional differences which were to be researched and on the basis of this approved the contents of the request for data, including the requirement of an unqualified auditor's report. In the consultative meetings with the grid managers, DTe appealed to their joint responsibility to supply the necessary data. The Board therefore assumes that the grid managers made every effort to supply the necessary and relevant data and has never before received reports that data was intentionally withheld. It appears from the modules of the data research request for data in relation to objectifiable regional differences that in most cases the data was, in fact, supplied. However, the various auditors do not always appear to have been in a position to issue an unqualified auditor's report. Furthermore, Brattle's research is designed in such a way that all data, whether or not it

²⁰⁰ Grid managers who are confronted by regional differences which result in a reduction in costs must sacrifice tariff revenues in favour of grid managers who are confronted with regional differences which result in an increase in costs.

²⁰¹ In the case of the objectifiable regional difference "water crossings", for instance, it does not make sense to apply the zero-sum principle.

²⁰² In other words, in addition to the cost disadvantages to the respective grid managers, the cost advantages to the remaining grid managers are clearly demonstrable (quantifiable).

is adequately validated, is included in the first step of the analysis in which an assessment is made as to whether a potential regional difference is at all significant (substantial and sustained over time). A large number of regional differences were excluded at this stage.

297. The zero-sum principle was ultimately abandoned because it appeared from the research into objectifiable regional differences that only two objectifiable regional differences could be identified for which it did not make sense (and was not possible) to apply the zero-sum principle.²⁰³ Factors which clearly had the effect of reducing costs were also not identified. Applying the zero-sum principle in this case, where the tariff increases of grid managers with additional costs due to objectifiable regional differences are financed by reductions in the tariffs of grid managers with fewer costs due to objectifiable regional differences, would result in a situation where the tariff revenues of the latter category of grid managers would fall below the efficient revenue level. Under these circumstances, the Board considers it unfair to apply the zero-sum principle.
298. The Board is of the opinion that if the data is not available, within reason, the Board is not in a position to exact it. DTe appealed to the (individual) grid managers on numerous occasions, both during the various meetings of the consultative group and by letter, to supply the data necessary for the research into objectifiable regional differences.
299. The Board does not exclude the possibility that new potential regional differences may be proposed in the future or that new data will become available in relation to potential regional differences which have already been researched, for which no evidence has been provided to date that these should be considered to be objectifiable regional differences. If a grid manager can present a plausible case²⁰⁴ that a potential regional difference exists, the Board will decide at that moment whether and, if so, in what way (further) research should be carried out²⁰⁵ (see also paragraph 41 of Addendum A).
300. Partly on the grounds of the opinions submitted, the Board is of the opinion that the potential objectifiable regional difference "connection density" already warrants further

²⁰³ These are the objectifiable regional differences "water crossings" and "taxes", the cost of which are not or are hardly represented at all in the uniform endpoint (tariff objective 2006), because the benchmark is only based on efficient grid managers. It can also be argued for other reasons that the application of the zero-sum principle does not make sense specifically in the case of the objectifiable regional difference "taxes".

²⁰⁴ For instance, by submitting the results of independent research.

²⁰⁵ Objectifiable regional differences must be significant (in other words, substantial and sustainable) and objectifiable (in other words, the costs are beyond the control of the management). Small or temporary factors do not qualify for a tariff adjustment.

research. The Board will therefore start further research into the effect of differences in "connection density" on the costs of grid managers after consultation with the parties involved. The outcomes of this research may result in increases or reductions in the tariffs of individual grid managers during the third regulatory period (see also paragraph 42 of Addendum A).

Conclusion

301. The opinion has resulted in an amendment to the draft method decision. Passages have been included in paragraph 17 of the method decision and in paragraphs 41 and 42 of Addendum A to this method decision passages which, subject to a number of conditions, leave open the possibility for further research in the future into regional differences.

Criteria for the definition of a regional difference

302. One respondent²⁰⁶ is of the opinion that the supplementary criteria for the definition of a regional difference (minimum size and sustainable for a certain period), which the Board allegedly introduced of its own accord, are incorrect.

Response

303. The Board wishes to make the following comments with regard to the criteria applied in relation to the minimum size (substantiality) of an objectifiable regional difference and the extent to which this is sustained for a certain period (sustainability. In consultation with the grid managers, the criteria which the objectifiable regional difference must meet were determined. Both the degree to which a substantial difference existed and the extent to which a difference may be considered structural were taken to be criteria.²⁰⁷ These criteria were then worked out in more detail in Brattle's research, in consultation with DTe and the considerations in this regard were communicated extensively to the grid managers. The Board is of the opinion that the criteria used in Brattle's report with regard to 'substantiality' and 'sustainability' are reasonable. It is incorrect for the respondent in question to claim that the Board introduced these criteria as supplementary criteria and of its own accord.

Conclusion

304. The opinion did not result in an amendment to the draft method decision.

²⁰⁶ Continuum.

²⁰⁷ These criteria can also be derived from the Parliamentary proceedings, during which the Minister of Economic Affairs (hereinafter "the Minister") states that several objectifiable differences of some size will be included in possible corrections. These must also be differences between companies which result in differences in costs on a structural basis (Lower House of the Dutch Parliament, *Parliamentary Proceedings* 1998-1999, 26 303, No. 7, p. 30).

Royal of consumers and necessity for the correction for objectifiable regional differences

305. Two respondents²⁰⁸ note that, in their view, the process relating to the objectifiable regional differences lacks transparency and in their opinion it is wrong that consumers were not involved in this process. Furthermore, they consider a correction for objectifiable regional differences to be superfluous. In their view, it is improbable and not proven that grid managers were confronted with costs during the past two regulatory periods for regional differences which they were not able to recover through the (regulated) tariffs. The respective respondents request the Board to provide a quantitative substantiation of the costs which could not be covered by the tariffs in the first and second regulatory periods due to the lack of a correction for objectifiable regional differences.

Response

306. The Board is of the opinion that it exercised sufficient care in involving consumers in any corrections made for objectifiable regional differences. Since the burden of proof of any objectifiable regional differences lies with the grid managers, it was obvious initially that a process involving the objectifiable regional differences should be started in cooperation with the grid managers.²⁰⁹ In this regard, a deliberate choice was made to commission an independent research firm (Brattle) to carry out the research. Since it now appears from the research that the objectifiable regional differences may have an impact on the tariffs, the Board is of the opinion that it is important to involve consumers in the definitive decision making. Precisely due to the care taken, the results of the research into objectifiable regional differences have been included in the draft method decision to which the uniform public preparatory procedure (section 3.4 of the General Administrative Law Act) applies.
307. In answer to the reservations raised by the respondents with regard to the necessity of including the costs associated with regional differences in the tariffs, the Board wishes to note the following. It appears from the history of the legislation that the legislator acknowledges that there are possibly:

“differences between companies which result in structural differences in costs. The uniform tariff must be corrected for this.”²¹⁰

²⁰⁸ PAWEX and VEMW.

²⁰⁹ See also the Parliamentary proceedings in which the burden of proof of any objectifiable differences was passed to the grid managers by the Minister (Lower House of the Dutch Parliament, *Parliamentary Proceedings* 1998-1999, 26 303, No. 7, p. 30).

²¹⁰ Lower House of the Dutch Parliament, *Parliamentary Proceedings* 1998-1999, 26 303, No. 7, p. 30.

The aim of the research into objectifiable regional differences is to provide insight into whether there are significant and sustainable regional differences between grid managers which result in differences in the level of efficiency attainable by the various grid managers. By making corrections for any regional differences, this inequality is eliminated.

Conclusion

308. The opinion did not result in an amendment to the draft method decision.

Method for including the correction

309. One respondent²¹¹ raises a number of questions about the way in which regional differences are settled. Applying a percentage surcharge to the total allowed tariff revenues, for instance, would not be correct. After all, by doing so the surcharge would be linked to the turnover, cpi, the x factor and the q factor, while the costs incurred for regional differences do not bear a direct relationship to these. An additional argument in this regard, according to this respondent, is the statement that the inclusion of any regional differences in the tariffs will occur in accordance with section 41c of the Electricity Act. This implies that corrections for regional differences must be included in the annual setting of tariffs and should not form part of the tariffs (or the total allowed tariff revenues) determined annually in accordance with section 41b of the Electricity Act. Finally, this respondent notes that a correction for objectifiable regional differences ought to be based on current data and not on the data used in the research into objectifiable regional differences.²¹²

Response

310. The Board does not agree with the respondent that it is by definition incorrect to include a structural correction for objectifiable regional differences in the total allowed tariff revenues. The Board is of the opinion that it should also be possible for a grid manager to become more efficient in relation to these costs, in so far as they do not relate to taxes or other exogenous imposed cost items.
311. Legally, however, it is not possible to derogate from the method of determining the allowed revenues, as set out in section 41b(1)(d) of the Electricity Act. For the third regulatory period, the Board therefore opts to include the corrections for objectifiable regional differences in accordance with section 41c of the Electricity Act. In accordance with this section, the Board has the power to correct tariffs in any year if these are

²¹¹ Continuum.

²¹² Data up to and including 2003 was used in the research into objectifiable regional differences.

determined on the basis of incorrect data. The most important considerations in this regard are, on the one hand, that some of the corrections are expected to be of a temporary nature due to the possible transfer of the management of the 110 kV and the 150 kV grids to TenneT as of 1 January 2008 if the Electricity Companies Division Bill²¹³ passes into law. On the other hand, this method makes it possible to take into account the current level of levies for the correction for the objectifiable regional difference "taxes", which may differ from year to year, and the Cabinet's intention to abolish precario. This will partly meet the wishes of the respondent, who is of the opinion that current data should be used.

312. With regard to water crossings, the Board is of the opinion that the correction method proposed²¹⁴ already takes into account the development of additional costs relating to water crossings over time and the structural presence of these water crossings. The additional costs, relating to the presence of water crossings, can be estimated well and are relatively stable. As a result, on the basis of available data from the research into objectifiable regional differences (up to and including 2003), the annual correction can be determined for DNWB, the only grid manager with this objectifiable regional difference.
313. The Board considers it reasonable to base the correction for objectifiable regional differences for taxes as far as possible on current data, since the level of precario can vary considerably from year to year. The way in which a correction can be made for taxes is discussed in paragraphs 38 up to and including 40 of Addendum A to this method decision.

Conclusion

314. The opinion has resulted in an amendment to the draft method decision. Compared to the draft method decision, Addendum A to the method decision clarifies and explains the way in which the correction for objectifiable regional differences will be implemented.

Future

²¹³ Amendment of the Electricity Act of 1998 and of the Gas Act in Relation to Further Rules in Respect of Independent Grid Management [*Wijziging van de Elektriciteitswet 1998 and van de of the Gas Act in verband met nadere regels omtrent een onafhankelijk netbeheer*], Lower House of the Dutch Parliament, *Parliamentary Proceedings* 2005-2006, 30 212, No. 1-77, A and B.

²¹⁴ See the letter of 8 March 2006, with reference number: 101712-764 (www.dte.nl).

315. One respondent²¹⁵ notes that the research into objectifiable regional differences cannot be considered a one-off exercise since in time new regional differences may arise or the relevance of acknowledged regional differences may increase or decrease. One respondent²¹⁶ states that it will again raise possible differences in the cost of procuring high-voltage services if the discussion on potential regional divisions is resumed.

Response

316. With the conclusion of the research, an intensive research process extending over two years came to an end. The reason for this research was the electricity agreement in which it was stipulated that the Board would carry out research of this nature into possible regional differences during the second regulatory period. At present, the Board does not consider it worthwhile to reopen the discussion on possible regional differences, since this is not expected to result in new insights. After all, all information available at present has been supplied by the grid managers. The Board is of the opinion that only the potential objectifiable regional difference "connection density" warrants further research at this stage.²¹⁷

Conclusion

317. The opinion has resulted in an amendment to the draft method decision. Paragraphs 41 and 42 of Addendum A to the method decision provides an indication of the conditions under which the Board will consider further research in the future, whereby the Board is of the opinion that the potential objectifiable regional difference "connection density" warrants further research at this stage.

2.7.2 Water crossings

Incremental costs for water crossings

318. One respondent²¹⁸ is of the opinion that it is not fair that compensation is only given for the additional costs and not the total costs the regional difference "water crossings". The respondent is of the opinion that by doing so the Board concludes that the Oosterschelde and Westerschelde regions fall within DNWB's supply area. According to the respondent, this is not consistent with the approach taken to objectifiable regional differences in the research in relation to treatment of the regional difference "connection

²¹⁵ Continuum.

²¹⁶ NRE.

²¹⁷ See also paragraph 17 of the method decision.

²¹⁸ DNWB.

density", whereby large water surfaces are not deemed to be part of the supply area of a grid manager.

Response

319. The Board is of the opinion that it is fair only to include the additional costs of DNWB's water crossings in the research into objectifiable regional differences. After all, in some locations other grid managers must also bridge distances without supplying consumers in these regions.²¹⁹ It is the additional cost of water crossings which make this a regional difference. On the basis of the opinions submitted, the Board requested Brattle to carry out a sensitivity analysis with regard to the supply area. Whether or not the surface areas of the Oosterschelde and the Westerschelde are included in DNWB's supply area appears to have no effect on the conclusions of the analyses of the potential regional difference "connection density".²²⁰

Conclusion

320. The opinion did not result in an amendment to the draft method decision.

Water crossings are not a regional difference but an appreciable investment

321. One respondent²²¹ is of the opinion that water crossings should not be regarded as an objectifiable regional difference, but should be assessed as an appreciable investment

Response

322. At the start of the research into objectifiable regional differences, the grid managers jointly decided what the regional differences were which were to be researched. Water crossings were finally identified as an objectifiable regional difference, since they met the criteria set for such objectifiable regional differences.²²² The Board therefore regards this discussion as a closed book.

Conclusion

323. The opinion did not result in an amendment to the draft method decision.

2.7.3 Taxes

²¹⁹ The Waddenzee is a case in point.

²²⁰ Addendum F (pp. 4 and 5).

²²¹ Continuon.

²²² In this regard, see also paragraphs 21 and 22 of Addendum A to this method decision.

Anticipating the abolition of precario

324. Three respondents²²³ are of the opinion that the Board may not anticipate the abolition of precario,²²⁴ which is still uncertain, as an argument for not implementing the correction for objectifiable regional differences. According to one of the respondents,²²⁵ this is not legally permissible and it therefore requests a more detailed formulation of the correction to the tariffs discussed in paragraph 24, footnote 13 of Addendum A to the draft method decision. One respondent,²²⁶ however, states that it agrees with the Board's decision not to work out the correction for taxes in detail for the time being.

Response

325. The Board does not agree with respondents who state that the Board may not anticipate the proposed abolition of precario²²⁷. The Board is of the opinion that it has the discretionary power to make policy in this respect. In weighing up the interests involved, the Board may take into consideration the fact that a new form of correction to be made may perhaps be reversed in the near future, which may place an (unnecessary) administrative burden on both the grid managers and the Board. There is also no financial interest for grid managers, since it has no material effect if a correction for taxes is implemented immediately or only in retrospect, should it transpire that the abolition of precario is deferred or abandoned. Nevertheless, the Board appreciates that grid managers require more clarity in this regard. For this reason, following the opinions submitted, the Board has decided no longer to anticipate the abolition of precario. Addendum A to this method decision therefore explains how the correction will be made for taxes. In this regard, it is assumed that severance tax will still exist on 1 January 2007.

Conclusion

326. The opinion has resulted in an amendment to the draft method decision. The way in which the Board intends to make a correction for the regional difference "taxes" is included in paragraphs 38 up to and including 40 of Addendum A to this method decision.

Distinction between precario paid to shareholders and non-shareholders

²²³ Eneco, ONS and Rendo.

²²⁴ Precario is the largest component of taxes. Without precario, taxes are not considered to be a regional difference.

²²⁵ Rendo.

²²⁶ Continuon.

²²⁷ Lower House of the Dutch Parliament, *Parliamentary Proceedings* 2005-2006, 30 300 VII, No. 15.

327. Two respondents²²⁸ are of the opinion that in providing compensation for precario a distinction should not be made between precario paid to shareholders and precario paid to non-shareholders. According to them, there is no (legal) relationship between precario and dividend. One respondent,²²⁹ however, notes that precario paid to shareholders can only be explained as a way of paying out a dividend to the shareholder without paying tax on this.

Response

328. Partly on the basis of opinions submitted by the respondents, the Board wishes to make the following known. As soon as the correction for objectifiable regional differences for taxes has been approved in a separate decision (see also the explanation in paragraph 40 of Addendum A), consideration will be given to the extent to which it is desirable and fair to include the (actual) shareholders portion of the precario in the correction.

Conclusion

329. The opinion has resulted in an amendment to the draft method decision. In paragraphs 38 up to and including 40 of Addendum A to the method decision, compared to the draft method decision the way in which the correction is made for objectifiable regional differences is clarified and explained.

The correction for the objectifiable regional difference "buying out of precario"

330. One respondent²³⁰ is of the opinion that if precario is abolished, it will still be necessary to provide compensation for the buying out of precario since taxes have been identified as a regional difference. According to these respondents, grid managers will still be confronted with (the depreciation of) these costs after the abolition of precario.

Response

331. The Board regards the buying off of precario as a management decision, as has already been explained in a letter.²³¹ The respective grid managers made their own risk assessment in the past when deciding whether or not to buy off precario. The Board does not consider it fair to pass this risk on to consumers through the tariffs if precario is abolished. A grid manager should approach the respective municipality/municipalities, water Board/water Boards or province/provinces with a request for reimbursement of these costs.

²²⁸ Eneco and Continuon.

²²⁹ NRE.

²³⁰ Rendo.

²³¹ Letter of 8 March 2006 with reference number: 101712-764 (www.dte.nl).

Conclusion

332. This opinion did not result in an amendment to the draft method decision.

Correction for average precario on its abolition

333. Two respondents²³² state that they are of the opinion that the way in which a correction is made for precario in the event of its abolition, namely compensation for the average already supposedly included in the tariffs, is inconsistent with the general policy for correcting regional differences. In addition, one respondent²³³ is of the opinion that this proposed correction cannot be made on the basis of section 41c of the Electricity Act because none of the conditions referred to in this section have been met.
334. The Board does not agree with the comment that the proposed correction in the event that precario is abolished would be inconsistent with the way in which corrections are made for regional differences. If precario is abolished, there will no longer be a correction for the regional difference "taxes". However, abolition of precario may result in a situation where the average level of revenues covered by the (average) tariffs is too high (above the efficient level) in the Netherlands because the cost base which the tariffs are meant to cover also includes (albeit to a limited extent) the cost of precario. As a matter of principle, the Board deems it defensible to make a correction for this since grid managers will receive compensation for costs which are not incurred if precario is abolished. As a result of the abolition of retrospective settlement, grid managers may enjoy a financial advantage as a consequence.
335. The Board is of the opinion, however, that the benefits of making such a correction must outweigh the costs of doing so. This is not expected to be the case. The reason for this is that the compensation for precario, which at present is included in the tariffs, is not expected to be a substantial amount and this amount will be difficult to determine. For this reason, on further reflection, the Board has decided not to make a correction for precario in the event of the abolition of precario which at that moment is still included in the tariffs (allowed revenues). This means that the grid managers will have a very small financial advantage if precario is abolished up to the moment that the tariffs are determined in accordance with a new efficiency level through the x factor.
336. Since the Board has decided no longer to make a correction for the average precario in the event of the abolition of precario, the issue as to whether the Board could make such

²³² Essent and Continuon.

²³³ Eneco.

a correction in accordance with section 41c Electricity Act is no longer relevant.

Conclusion

337. The opinion has resulted in an amendment to the draft method decision (see paragraph 29 of Addendum A). On the abolition of precario, a correction will not be made for the average compensation for precario which at present is included in the tariffs.

2.7.4 Connection density

Population density versus connection density

338. One respondent²³⁴ contests the distinction made by Brattle between connection density and population density. This respondent argues that an analysis based on population density can serve as an alternative if an analysis based on connection density does not appear possible.

Response

339. On the basis of Brattle's analyses, the Board sees no reason to assume that there is a causal link between the cost per standardised unit of output and population density.²³⁵

Conclusion

340. The opinion did not result in an amendment to the draft method decision.

Connections for public lighting

341. One respondent²³⁶ is of the opinion that Brattle's analyses must exclude public lighting, since this respondent doubts the reliability of the data in this regard.

Response

342. Brattle acknowledges that the data for public lighting appear strange. However, excluding these connections does not have a significant effect on the results.²³⁷

Conclusion

343. The opinion did not result in an amendment to the draft method decision.

²³⁴ Rendo.

²³⁵ This is explained further in Addendum F to this method decision (p. 11 and 12).

²³⁶ DNWB.

²³⁷ This is explained further in Addendum F to this method decision (p. 8 up to and including 10).

Statistical analyses

344. One respondent²³⁸ is of the opinion that the confidence level of 95% applied by Brattle in the regressions was chosen arbitrarily and is too ambitious. Brattle also applies confidence levels which are incorrect and, according to two respondents,²³⁹ Brattle carried out various regressions incorrectly. As a result, too few relationships were considered significant. Two respondents²⁴⁰ are of the opinion that it is wrong that Brattle characterises a significant relationship as non-causal. This issue of causality is purportedly at odds with earlier descriptions of the statistical tests which Brattle applies to determine regional differences. One respondent²⁴¹ is of the opinion that it is not correct that Brattle in advance assumes a linear relationship between connection density and costs.
345. In its analyses of connection density, Brattle uses two methods in its research into the relationship between connection density and costs. In analysis method A, the number of connections per square kilometre is considered and in analysis method B consideration is given to the number of connections per kilometre of cable. One respondent²⁴² is of the opinion that Brattle gives insufficient justification for considering method B is considered to be more reliable than method A. Furthermore, two respondents²⁴³ are of the opinion that the conclusions drawn by Brattle place too much emphasis on data from a single specific grid manager (Continuon), which is an exception. Furthermore, one of these respondents²⁴⁴ cannot understand why Brattle considers the data of another grid manager (Westland) to be strange.
346. Another respondent²⁴⁵ states that the reliability of the research into objectifiable regional differences can be increased by not only basing the statistical analyses on standardised costs without conducting further research. The reason for this is that these standardised costs emerged from a negotiation process and therefore do not reflect the actual costs.

²³⁸ Essent.

²³⁹ DNWB and Essent.

²⁴⁰ DNWB and Essent.

²⁴¹ DNWB.

²⁴² Essent.

²⁴³ DNWB and Essent.

²⁴⁴ Essent.

²⁴⁵ Rendo.

Response

347. The Board does not agree with the comment that the confidence level of 95% chosen by Brattle is arbitrary. A confidence level such as this is commonly used in numerous economic and non-economic analyses. If a (large) number of regressions between several variables are carried out, statistically there is always a probability that a significant relationship will be found. However, the relationship found may be coincidental and does not necessarily imply causality.²⁴⁶ In Addendum F of this method decision, Brattle discusses, in more detail. The comments made by respondents which are of the opinion that Brattle carried out the regression analyses incorrectly.²⁴⁷ The Board does not agree with the comment that Brattle assumes in advance that a linear relationship exists between connection density and costs. After all, in the final report, Brattle also examines non-linear relationships.
348. The Board is of the opinion that within the framework of the research into objectifiable regional differences, Brattle adequately explained why method B, in its opinion, was preferable as a means of obtaining insight into the relationship between connection density and costs. In Addendum F, by means of an illustrative example, Brattle again emphasises that the number of connections per kilometre (method A) need not have a direct relationship to (additional) costs incurred by the grid manager.²⁴⁸ The fact that method A generates more data points is not a decisive argument, since method B is better suited for examining the relationship between the number of connections and the costs incurred by a grid manager.
349. The Board does not agree with the comment that Brattle included the data of various grid managers in the analyses in an unbalanced way and that Brattle based its conclusions too much on the data of a single specific grid manager. Brattle only notes that there are discrepancies between the data of the various grid managers which make it difficult to draw clear conclusions. In this regard, Brattle does not regard the data and the position of Westland as strange, but rather as confirmation of the preference for method B as a means of demonstrating a possible relationship between the connection density and (additional) costs of grid managers.²⁴⁹
350. The Board notes that the data with regard to standardised costs are the point of departure for regulation. In consultation with each other, the grid managers agreed to

²⁴⁶ The Brattle Group, *Regional Differences for Electricity and Gas Companies in The Netherlands*, 2006 (see Addendum E, p. 7).

²⁴⁷ Addendum F (p. 11 up to and including 14).

²⁴⁸ Addendum F (p. 16 and 17).

²⁴⁹ Addendum F (p. 17 and 18).

take these costs as the starting point for the research into objectifiable regional differences. Partly at the request of the grid managers, Brattle also carried out a supplementary literature study to investigate whether a causal relationship between connection density and costs is probable.²⁵⁰

Conclusion

351. The opinion did not result in an amendment to the draft method decision. A further explanation by Brattle, however, is included in Addendum F to the method decision, in which a clarification is given of the analyses which were carried out.

Literature study

352. Two respondents²⁵¹ indicate that Brattle wrongly concludes on the basis of a literature study that there is not a negative causal relationship between connection density and costs because, in theory, an inverse causal relationship is also possible. The level of urbanisation in the Netherlands is nowhere of such a nature that a positive causal relationship between connection density and costs can be assumed.

Response

353. The Board is of the opinion that the literature study on this topic mainly shows that empirical research, on the basis of data analysis, is required to establish any relationship between low connection density and high costs for grid managers. The reason for this is that it appears from the literature that such an unequivocal relationship cannot be established *a priori*. The fact that a number of grid managers also stated during the research into objectifiable regional differences that they were of the opinion that high connection density would result in (additional) costs, is an indication that it cannot simply be assumed that this relationship is unequivocal. Empirical statistical analyses are therefore necessary. In Addenda E and F to this method decision, Brattle discusses the arguments raised by the respondents in more detail.²⁵² In this regard, the Board concurs with Brattle's conclusions.

Conclusion

354. The opinion did not result in an amendment to the draft method decision.

²⁵⁰ The Brattle Group, *Regional Differences for Electricity and Gas Companies in The Netherlands*, 2006 (see Addendum E: Appendix II, pp. 65 up to and including 67) and Addendum F: (pp. 14 up to and including 16).

²⁵¹ DNWB and Essent.

²⁵² The Brattle Group, *Regional Differences for Electricity and Gas Companies in The Netherlands*, 2006 (see Addendum E: Appendix II, pp. 65 up to and including 67) and Addendum F (pp. 14 up to and including 16).

DEA study by Frontier and data correction decisions

355. One respondent²⁵³ cannot understand why the outcomes of the research done by Frontier in the past (2000), in which a correlation was described between the standardised costs and the length of the grid, were not included in the research into objectifiable regional differences. Another respondent²⁵⁴ proposes basing the analyses of “connection density” on data from DTe’s correction decisions²⁵⁵ rather than on the data are submitted within the framework of the research into objectifiable regional differences because these data were accompanied by an unqualified auditor’s report.

Response

356. In the past, research was only carried out into the effect of the length of the grid as a “cost driver” in relation to several other variables, such as the number of transformers.²⁵⁶ However, this cannot be the point of departure for research into possible regional differences because the research was not based on the present regulatory system. Furthermore, within the framework of the research into objectifiable regional differences, grid managers have also been given the opportunity to supply all relevant information. This also includes data used at the time by Frontier.
357. The Board again emphasises that the grid managers agreed amongst themselves that the data from the request for data in relation to objectifiable regional differences would serve as the starting point for the analyses. Changing this starting point in the last phase because connection density is not considered an objectifiable regional difference on the basis of data from the research into objectifiable regional differences would not be responsible, in the Board’s view. Brattle discusses its doubts about the data in more detail in Addendum F to this method decision.²⁵⁷

Conclusion

358. The opinion did not result in an amendment to the draft method decision.

²⁵³ Rendo.

²⁵⁴ DNWB.

²⁵⁵ See:

http://www.dte.nl/nederlands/elektriciteit/transport/tariefregulering/tweede_herziene_bob_tot_vaststelling_korting.asp

²⁵⁶ Yardstick Competition for Regional Electricity Grid Companies for the Second Regulatory Period [*Maatsta concurrentie Regionale Netbedrijven Elektriciteit, tweede reguleringsperiode*], Information and Consultation Document (DTe, November 2002).

²⁵⁷ See pp. 6 up to and including 8.

359. As was noted earlier, on the basis of the opinions submitted, the Board is of the opinion that the potential objectifiable regional difference "connection density" warrants further research. After consulting the parties involved, the Board will start further research into the effect of differences in connection density on the costs of grid managers. The outcomes of this research may result in increases or reductions in the tariffs of individual grid managers during the third regulatory period (see also paragraph 17 of the method decision and paragraph 42 of Addendum A).

2.8 Procedural matters

360. In this section, opinions of a procedural nature discussed.

Reference to an earlier response

361. One respondent²⁵⁸ refers in its response to the method decision for the third regulatory period to responses in relation to the method decisions for the first and second regulatory periods.

Response

362. The Board refers in this regard to the earlier response of the Director of DTe (the legal predecessor of the Board) to this respondent.

Conclusion

363. This opinion did not result in an amendment to the draft method decision.

Duration of the third regulatory period

364. Two respondents²⁵⁹ are of the opinion that the duration of the third regulatory period can be extended to four years. One of the two respondents²⁶⁰ attaches to an extension the condition that in deciding on the duration, proposed amendments to legislation, such as the Electricity Companies Division Bill, must be taken into account.²⁶¹ Both respondents

²⁵⁸ MKB-Nederland.

²⁵⁹ EnergieNed and Eneco.

²⁶⁰ EnergieNed.

²⁶¹ Amendment of the Electricity Act of 1998 and of the Gas Act in Relation to Further Rules in Respect of Independent Grid Management [*Wijziging van de Elektriciteitswet 1998 and van de of the Gas Act in verband met nadere regels omtrent een*

see as an advantage the fact that this will result in synchronisation of the duration of the third regulatory period for the national and regional electricity grid managers. One respondent²⁶² sees as an additional advantage of any extension the fact that this will result in stability with regard to the development of tariffs. Two respondents²⁶³ are explicitly in favour of a regulatory period of three years in relation to the Electricity Companies Division Bill.

Response

365. The Board sees no reason to extend the duration of the third regulatory period. In the prior consultation, all the grid managers stated that they had a preference for a three-year regulatory period. The reason for this was that the grid managers did not yet consider the regulatory system to be sufficiently stable, partly in the light of the proposed amendments to legislation. This situation has not changed since then.
366. Furthermore, the Electricity Companies Division Bill has since been passed by the Lower House of the Dutch Parliament and is awaiting consideration by the Upper House. This Bill stipulates that the third regulatory period for both regional electricity grid managers and for the national manager of the high-voltage grid will be limited to one year due to the transfer of the management of several sections of the grids of several grid managers to the manager of the national high-voltage grid.²⁶⁴ If this Bill acquires the force of law, the period of regulation of the third regulatory period will be limited to one year. In this case, the duration of regulation of the regional grid managers and the duration of regulation of the national manager of the high-voltage grid will be synchronised. Apart from the above-mentioned situation, the Board sees no advantages in synchronisation of the duration of regulation of the regional grid managers and the duration of regulation of the national manager of the high-voltage grid.
367. The above does not detract from the fact that in time the Board will strive to extend the duration of the regulatory period to five years. One of the advantages of this is that this results in more stability in the sector, as the Board has also indicated in paragraph 7 of the method decision.

Conclusion

onafhankelijk netbeheer], Lower House of the Dutch Parliament, *Parliamentary Proceedings* 2005-2006, 30 212, No. 1-77, A and B.

²⁶² Eneco.

²⁶³ VEWM and PAWEX.

²⁶⁴ Lower House of the Dutch Parliament, *Parliamentary Proceedings* 2005-2006, 30 212, No. A.

368. The opinion has resulted in an amendment to the draft method decision. The Board has given a further explanation of its decision with regard to the duration of the regulatory period in Addendum A to this method decision.

Anticipation of the fourth regulatory period and the Electricity Companies Division Bill

369. One respondent²⁶⁵ states that the method decision may not anticipate the fourth regulatory period and any consequences of the Electricity Companies Division Bill [*Splitsingswetsvoorstel*]. This respondent is of the view that this is contrary to the legal system and obstructs the discussion of preparation for the fourth regulatory period. Other respondents²⁶⁶ have stated in relation to specific parts of the draft method decision that the draft method decision provides insufficient information on how the system of regulation will take into account the consequences of the Electricity Companies Division Bill.

Response

370. In various paragraphs of the draft method decision, the Board has stated how it intends to deal with regulation in general and in relation to several specific topics. Where necessary, the Board includes the Electricity Companies Division Bill in this.²⁶⁷ The Board does so, for instance, by providing grid managers, investors and consumers with more certainty about the method of regulation in the long term.
371. In addition, the Board is of the opinion that in relation to due care and transparency, it is important that it provides some clarity on the future method of regulation. Also in the light of requests from other respondents to provide more clarity about the continuity of regulation, the Board has decided to retain a number of pages on this in Addendum A. These are passages in which the Board discusses regulation in the long term. However, the passages relating to the fourth regulatory period have been deleted.

Conclusion

372. The opinion has resulted in an amendment to the draft method decision. The Board has deleted the passages relating to the fourth regulatory period.

²⁶⁵ Eneco.

²⁶⁶ PAWEX and VEMW.

²⁶⁷ See the paragraphs 87 and 366 of this Addendum.

Consequences of the transfer of the management of sections of the grid to TenneT

373. Two respondents²⁶⁸ request the Board to provide clarity with regard to the way in which the regulatory system will take into account the transfer to TenneT of the management of the high-voltage grids of the regional electricity grid managers.

Response van de Board

374. The Board is of the opinion that it is not necessary to discuss the possible consequences of the method decision for regulation of the transfer to TenneT of the management of the high-voltage grids. After all, it is not certain that the transfer will proceed. The Electricity Companies Division Bill, of which the transfer of grid management to TenneT is a part, is now before the Upper House of the Dutch Parliament.²⁶⁹ The Board does not consider it prudent to anticipate the outcome of the debate in the Upper House.
375. For the sake of completeness, the Board notes that, if the Bill is passed, the duration of the third regulatory period will be limited to one year for both the regional electricity grid managers and for TenneT.²⁷⁰ This means that the transfer of the management of the high-voltage grids as of 1 January 2008 will coincide with the start of the fourth regulatory period for both the regional electricity grid managers and for TenneT. Any consequences of the transfer of the management of the high-voltage grids for the regulation of the regional electricity grid managers *and* of the national grid manager will therefore have to be governed by the method decisions for the fourth regulatory period.

Conclusion of the Board

376. The opinion did not result in an amendment to the draft method decision.

Regulation of TenneT

377. One respondent²⁷¹ notes that the same regulatory method would have to apply to all the sections of the grid managed by TenneT. This respondent is of the opinion that the Electricity Act makes this possible and that it is desirable, logical and efficient.

Response

378. The Board cannot apply a single regulatory method to TenneT. This is due to the system contained in the Electricity Act. The manager of the national high-voltage grid (hereinafter "the national grid manager") is defined in the Act as the manager of all grids

²⁶⁸ PAWEX and VEMW.

²⁶⁹ Lower House of the Dutch Parliament, *Parliamentary Proceedings* 2005-2006, 30 212, No. A.

²⁷⁰ Lower House of the Dutch Parliament, *Parliamentary Proceedings* 2005-2006, 30 212, No. A.

²⁷¹ TenneT.

intended for the transmission of electricity at a voltage level of 220 kV or higher (including the cross-border grids of 500 kV and higher).²⁷² In addition there are managers of sections of the grid with lower voltages, including the 110 kV and 150 kV grids.²⁷³ As a result, TenneT is a grid manager on two counts: as the grid manager of the national high-voltage grid and as the manager of a regional grid (the 150 kV grid). This does not mean that both of these management tasks are regulated in the same way. The point of departure for regulation is the grids and not the legal entities which manage them.

379. On the grounds of section 41(2) and section 41d(2) of the Electricity Act, a different regulatory system applies to the national grid manager than to the regional grid managers. The system of yardstick competition applies to the regional grid managers and an x factor, q factor and volume parameter are determined for each grid manager. However, the system of turnover regulation applies to the national grid manager and a q factor is not determined.²⁷⁴

380. Finally, the Board notes that if the Electricity Companies Division Bill is passed, the management of all 110 kV and 150 kV grids will be transferred to TenneT as of 1 January 2008. At the same time, section 10(1) of the Electricity Act will be amended so that the national high-voltage grid also includes these two sections of the grid. As of that moment, it will therefore be possible legally to regulate TenneT on the basis of a single regulatory method.

Conclusion

381. The opinion did not result in an amendment to the draft method decision.

Insufficient opportunity to submit opinions verbally

382. One respondent²⁷⁵ stated that it had had insufficient opportunity to avail itself of its statutory right to present an opinion verbally.

Response

383. The Board is of the opinion that interested parties had sufficient opportunity to submit their opinions. The Board gave the interested parties the opportunity to submit their

²⁷² Section 10(1) and (2) of the Electricity Act.

²⁷³ Section 10(3) of the Electricity Act.

²⁷⁴ Stricter quality criteria apply to the sections of the grid of 220 kV and higher on the basis of the Grid Code (e.g. section 4.1.4.5).

²⁷⁵ Essent.

opinions both verbally and in writing. With regard to the verbal submissions, the Board organised a hearing two weeks prior to the deadline for the submission of opinions. The aim of this hearing was twofold. Firstly, it provided interested parties with the opportunity to present their views on the draft method decision. Secondly, those present could take cognizance of the views of other parties and, if they so desired, incorporate these into their written opinion. It was made known beforehand that the time allocated to each speaker was limited as there were many speakers. Most of the speakers, with the exception of the respondent, took advantage of this by presenting the main points of their written response, by referring to the written response itself and by referring to earlier or other speakers. If the respondent nevertheless considered the time allocated to be too short, this speaker could have asked the Board for an opportunity to explain its verbal opinion in more detail at a later moment.

384. Finally, the Board notes that the respondent had the opportunity to submit an extensive written opinion for two weeks after the hearing. Matters which were not discussed at the hearing could therefore always have been raised in writing. The respondent did not make use of the opportunity to submit a written opinion.

Conclusion

385. The opinion did not result in an amendment to the draft method decision.

No opportunity to inspect confidential correspondence

386. One respondent²⁷⁶ stated in its opinion that it wished to inspect documents in relation to the topic of 'regional differences' which the Board classified as confidential.

Response

387. The Board is of the opinion that the respondent does not have the right to inspect confidential documents. For the assessment of the draft method decision in relation to the topic 'regional differences', only Brattle's final report on objectifiable regional differences and the accompanying letter, with the consequences for regulation arising from the objectifiable regional differences, are important.²⁷⁷ These documents were already in the possession of all interested parties on commencement of the inspection period. The Board has also communicated this response to the respondent in a letter.

²⁷⁶ Essent.

²⁷⁷ The research into objectifiable regional differences has undergone an extensive separate (participation) process which has resulted in The Brattle Group's final report into objectifiable regional differences and a letter by the Board of Directors of the Netherlands Competition Authority (of 8 March 2006 with reference number: 101712-764, www.dte.nl) setting out the possible consequences of this for regulation.

Conclusion

388. The opinion did not result in an amendment to the draft method decision.

2.9 Other

389. This section deals with the opinions submitted on matters which do not fall under one of the above topics.

Averted Grid Losses Scheme [Regeling Uitgespaarde Netverliezen (RUN)]

390. One respondent²⁷⁸ is of the opinion that the additional procurement costs associated with the introduction of the Averted Grid Losses Scheme [*Regeling Uitgespaarde Netverliezen (RUN)*] should be included in the x factor or in the initial turnover of the third regulatory period.

Response

391. The Board does not agree with this. For the time being it is unclear exactly what additional procurement costs will be incurred by the regional grid managers by the introduction of the Averted Grid Losses Scheme. The Averted Grid Losses Scheme has only been in force since 1 January 2006.²⁷⁹ It is expected that the financial consequences of higher procurement costs will become visible in the year 2008. The Board therefore does not consider it desirable to include the consequences of this in the x factor or in the initial turnover of the third regulatory period.
392. Finally, the Board wishes to note that on the basis of the formula in section 41b(1) of the Electricity Act it is not possible to amend the initial turnover of a regulatory period.

Conclusion

393. The opinion did not result in an amendment to the draft method decision.

Settlement of the estimation error

394. One respondent is of the opinion that settlement of the estimation error for the second regulatory period must be spread out over the years 2007 and (possibly also) 2008. This respondent is of the opinion that settlement of the estimation error may have a

²⁷⁸ Continuum.

²⁷⁹ See the Decision Amending the Tariff Structures [*Besluit tot wijziging van de tariefstructuren*], in terms of section 32(2) of the Electricity Act, with reference number 101685-39 (www.dte.nl).

maximum effect on the tariffs of 10%. In this regard, reference is made to the CODATA Handbook NE-TAR-05-09, in which the figure of 10% is mentioned in relation to the assessment of the tariff proposals of regional electricity grid managers.

Response

395. The Board will give the grid managers timely notification of the way in which the estimation errors will be incorporated into the tariffs for the third regulatory period. The Board could base this on the 10% rule which is already included in the CODATA-Handbook NE-TAR-05-09. The Board is of the opinion that the exact determination of this need not be part of the method decision for the third regulatory period.

Conclusion

396. The opinion did not result in an amendment to the draft method decision.

Estimated Change in productivity of 1.5% is incorrect

397. One respondent²⁸⁰ mentions that the statement that the estimated change in productivity in the second regulatory period is 1.5% is a misunderstanding. In this regard, reference is made to paragraph 20 of Addendum B.

Response

398. The Board does not agree with this. After all, in paragraph 12 of Addendum A of the method decision for the second regulatory period²⁸¹ (x factor), the estimated change in productivity is given as 1.5%.

Conclusion

399. The opinion did not result in an amendment to the draft method decision.

Typing error

400. One respondent²⁸² notices that there is a typing error in formula 16 of Addendum B.

Response

401. The Board concludes that this respondent's observation is correct.

²⁸⁰ Continuum.

²⁸¹ Decision in relation to the method for determining the discount to promote efficient operations, pursuant to section 41(4) of the Electricity Act for the period 2004-2006 of 12 September 2003 with reference number: 100947-82 (www.dte.nl).

²⁸² Continuum.

Conclusion

402. This opinion has resulted in an amendment to of the draft method decision.