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Office of Energy Regulation

DECISION

Number: 101783_2-76

Subject: Decision on the application by TenneT for permission to finance the NorNed cable in accordance with section 31 (6) of the Electricity Act of 1998

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I. TenneT's application

1. On 31 August 2004, the Director of the Office of Energy Regulation (hereinafter "the Director of DTe") received a written application from TenneT B.V., the manager of the national high-voltage grid (hereinafter "TenneT"). In the application, TenneT requests permission to finance a high-voltage cable between the Netherlands and Norway (hereinafter "the cable") using the revenues, as referred to in section 31 (6) of the Electricity Act 1998 (hereinafter "the Electricity Act").

2. TenneT and the Norwegian grid manager, Statnett SF (hereinafter "Statnett") intend to construct a high-voltage cable between the Netherlands and Norway (also referred to as the 'NorNed cable' or the 'NorNed project') and, by doing so, to create a direct connection between both high-voltage grids. According to the application, the cable has a length of

580 km and a capacity of 600 MW. It appears from the application that the full capacity will be made available to the market through the spot market of the Dutch power exchange APX and the Norwegian exchange Nord Pool. The cable is expected to come into operation at the beginning of 2008.

3. In addition to the application document, the application also consists of annexes to substantiate, for instance, the financial aspects, market coupling, technical aspects and legal aspects. TenneT requests permission to finance the cost of capital and the operating costs of the NorNed project from the proceeds of the auction. Each aspect of the application is discussed below separately.

II. Public preparation

4. The Director of DTe has declared the public preparatory procedure, as referred to in Part 3.4 of the General Administrative Law Act, to be applicable.

5. The public version of the application, together with the annexes (with the exception of Annex 8 of the part '*I. Financieel'* [I. Finance] of the application) was available for inspection together with the documents added by the Director of DTe from 27 September up to and including 27 October 2004 at the offices of DTe. This opportunity for inspection and a hearing were announced in the *Netherlands Government Gazette* (27 September 2004, No. 185, page 36) and on DTe's website (www.dte.nl). Opinions regarding the documents available for inspection could be brought to the attention of the Director of DTe by any person who wished to do so up to and including 27 October 2004. The opinions received were sent to TenneT by the Director of DTe in his letters of 15 November and 30 November 2004, with the invitation to respond in writing. TenneT did not respond to the opinions.

6. On 4 November 2004 a hearing took place at the offices of DTe. A report of the hearing was sent to the parties present.

7. Following the application, the Director of DTe raised further questions with TenneT in his letter of 24 September 2004, to which TenneT replied in its letter of 27 October 2004. In addition, TenneT also submitted further documents in its letter of 8 November 2004.

8. The letters of 27 October and 8 November 2004 together with the annexes were made available for inspection from 11 November up to and including 9 December 2004. During this period, the public version of Annex 8 of the part of the application entitled '*I. Financieel'* [I. Finance'] was also available for inspection. The availability for inspection of these documents was announced in the *Netherlands Government Gazette* [11 November 2004, No. 218, page 28] and on DTe's website (www.dte.nl). Opinions regarding these documents which were available for inspection could be brought to the attention of the Director of DTe by any person who wished to do so up to and including 9 December 2004. The opinions received

were sent to TenneT by the Director of DTe in his letter of 13 December 2004, with an invitation to respond in writing to these opinions. TenneT did not respond to the opinions.

9. The Director of DTe will discuss the contents of the opinions and the consequences which he has attached to these in this decision in the chapter "Opinions received".

III. Consultation with TenneT and the Norwegian authorities

Consultation with TenneT

10. After TenneT and Statnett had signed a Letter of Intent to investigate the possibilities for constructing the NorNed cable, TenneT notified the Director of DTe of this in January 2004. After this, TenneT informed the Director of DTe with some regularity of the progress of the research and consultation took place between TenneT and staff of DTe. Within this framework, DTe sent TenneT two letters on 15 April and 13 May 2004, to which TenneT replied in its letters of 28 April and 2 June 2004 respectively. On his own initiative, the Director of DTe also requested two advisers to advise him on several aspects of the research.

11. On 25 June 2004, TenneT sent the Director of DTe the provisional results of its research in the form of a draft report. The contents of the draft report were added to the application by TenneT in the form of annexes.

12. The public versions of the aforementioned letters and the recommendations of the two advisers were added to the public file by the Director of DTe and were made available for inspection together with the public version of the application and its annexes.

13. Following the hearing, consultations took place on numerous occasions between the Director of DTe and TenneT. The Director of DTe indicated on these occasions that, after assessing the application and weighing up the interests involved in this, immediate approval of the application was not possible in relation to a number of important points. TenneT subsequently clarified a number of points, as stated below. In this regard, it is important, in particular, that TenneT indicated in the application (Annexes III, Annex 8, Comparable Cost Estimate, page 3) and in its letter of 27 October 2004 and explained on 6 December 2004 that the cable could be utilised without problems at a capacity of 700 MW, although the capacity of converters would have to be increased to a limited extent. In this regard, TenneT also made known that the company which constructs the cable (ABB) was willing to cover the additional costs incurred by this. In the decision-making process, this increase in power and the fact that ABB would cover the cost of this were taken into account.

14. TenneT also clarified the application in a number of regards in an e-mail of 3 December 2004 and during discussions with the Director of DTe on 7, 8, 13 and 20 December 2004.

Consultation with the Norwegian authorities

15. On 8 and 9 June 2004, consultation took place between the Norwegian regulator, Norwegian Water Resources and Energy Directorate, and staff of DTe. On 8 November 2004, consultation took place between the Norwegian Ministry of Oil and Energy [*Olje- og Energidepartementet*] and staff of DTe.

16. The Norwegian authorities took a decision on 14 December 2004 approving the application submitted to them by Statnett. They also explained that they regard market coupling as the most preferable method of making the cable accessible to market parties.

IV. Legal context

17. TenneT based the application on section 31 (6) of the Electricity Act.

18. On the grounds of this section, TenneT may utilise the proceeds of the auction of transmission capacity on the cross-border grids to eliminate restrictions on the transmission capacity of these grids or for other purposes, to be determined by the Director of DTe.

19. The Grid Code (the conditions, as referred to in section 31 (1) (a) of the Electricity Act) contains no provisions in relation to the use of the proceeds of auctions, nor in relation to extensions to existing interconnector capacity or in relation to the construction of new interconnection capacity.

20. The Minister of Economic Affairs is authorised in accordance with section 6 of the Electricity Act to issue general or special instructions with regard to, for instance, the exercise of the powers assigned to DTe in section 31 of the Electricity Act. The Minister of Economic Affairs has not exercised this power. In a letter of 21 July 2004, the Minister of Economic Affairs referred TenneT to DTe in relation to the matter in question.

21. Central to the Electricity Act is the importance of the reliable, sustainable, efficient and environmentally healthy operation of the electricity supply system. Section 5 of the Electricity Act also requires DTe to take into account the importance of promoting the electricity market, characterised by non-discrimination, transparency, *de facto* competition and the operation of market forces.

V. Utility of interconnector capacity

22. Before discussing the grounds for assessing TenneT's application, the Director of DTe has set out concisely below his view of the utility of (expanding) interconnector capacity in general.

23. In principle, the Director of DTe views the expansion of interconnector capacity favourably for various reasons.

24. Expansion is in line with the policy of the European Commission, in particular the plans developed under the heading of 'Trans-European Energy Networks'. In this document, reference is also made to the initiative to construct a cable connection between the Netherlands and Norway. The construction of such a cable results in a direct connection to the Scandinavian electricity market. In addition, it would offer the Netherlands a more central position within the European electricity grid if electrical links were to exist not only with Belgium and Germany, but also with Norway.

25. The Dutch and Norwegian electricity generation facilities also complement each other: the Dutch facilities are mainly thermal in nature and are therefore 'capacity determined'. The Norwegian facilities are mainly based on hydraulic power and are therefore 'energy determined'. By linking the two markets, limitations of the one system may partially be accommodated by the other and *vice versa*. This results in the more efficient use of the means of production and, in some cases, may also have a positive effect on security of supply.

26. Expanding interconnector capacity may also improve the liquidity of the Dutch market. Due to the increased supply of foreign electricity on the Dutch market (at those moments that transmission through the cable results in net imports), the number of active suppliers will be increased, which may increase the liquidity of the Dutch electricity market. Due to additional foreign supplies, the volatility of the electricity price is also expected to decrease. Furthermore, the liquidity of the Dutch market may also decrease at some moments due to the cable, if the cable results in the net export of electricity.

27. In his letter of 24 September 2004 to TenneT, the Director of DTe states that the cable is expected to have a favourable effect on liquidity due to the fact that a higher level of trade may arise with foreign markets and due to the fact that more parties can participate in this trade. This may also contribute to a reduction in the concentration of the Dutch electricity market. In March 2004, DTe carried out a study into the development of liquidity on the Dutch electricity market (hereinafter "the liquidity study").[1] In this study it is stated that a liquid electricity market is necessary for the realisation of effective competition and the efficient operation of market forces. The importance of liquidity is that it facilitates efficient market decisions. In a liquid electricity market, a reliable price signal is given to market parties. On the basis of this price signal, producers, traders and consumers can take optimal decisions. As a result, electricity will be produced at the lowest possible cost.

28. Since the electricity market is limited geographically by the limitations on transmission of the electricity grid, additional interconnector capacity may result in an increase in liquidity. An electricity market is also sensitive to the market power of suppliers, which are able to influence prices unilaterally at certain moments, even if market concentrations are relatively

[1] Research into the "Development of Liquidity on the Electricity Market 2003 to 2004" ["*Ontwikkeling Liquiditeit Elektriciteitsmarkt 2003-2004*"] by DTe. This report can be obtained from DTe's website (www.dte.nl).

low. This can result in less confidence in the market and consequently less willingness on the part of other parties to trade.

29. The liquidity study concludes that the liquidity of the Dutch wholesale market for electricity has decreased since 2002. In the light of the aforementioned importance of a sufficiently liquid market for the proper operation of the Dutch electricity market, this is an undesirable development. DTe therefore examined and recommended a number of measures in the liquidity study which may improve the liquidity of the Dutch electricity market.

30. One of these measures is the further expansion of capacity for importing electricity into the Netherlands. The NorNed cable would mean that the Dutch electricity market would be linked to the Norwegian electricity market and that the capacity to import electricity into the Netherlands will be increased.

31. By constructing a cable between Norway and the Netherlands, direct trade between these two countries will be made possible. As a result, the opportunities for transmitting electricity internationally and the geographical market for the trade in electricity will be increased. As a result, it will be possible to trade supply contracts in various countries more easily, which will increase liquidity.

32. Linking the Dutch and Norwegian electricity markets will also ensure that parties will be able to participate in trade on the Dutch and Norwegian electricity markets, which they would not be able to do without this cable. As a result, the level of concentration on the Dutch market will decrease. As was stated above, a less concentrated market will contribute to the proper functioning of and a more liquid wholesale market.

VI. Opinions received

33. The following organisations and market parties (in alphabetical order) submitted a written opinion on the first occasion that documents were made available for inspection (from 27 September up to and including 27 October 2004): ABB Power Technologies AB, APX B.V., EGL Nordic AS, Energiebedrijf.com B.V., Energie Data Maatschappij B.V., E.ON Benelux N.V., EnergieNed, Essent N.V., FME-CWM, Lankhorst Euronete Group B.V., MKB Nederland, Norsk Hydro ASA, Norske Skog Parenco B.V., N.V. Nuon Energy Sourcing, Statkraft Markets B.V., Statnett SF, VEMW and VNCI.

34. The following organisations and market parties (in alphabetical order) submitted a written opinion on the second occasion that documents were made available for inspection (from 11 November up to and including 9 December 2004): APX B.V. and VNO-NCW.

35. In the light of the quantity and contents of the opinions submitted, the Director of DTe concludes that the subject of the NorNed cable has the attention of organisations and market

parties. The Director of DTe appreciates the fact that the parties that submitted opinions took the time and effort to set their opinions out in writing and to contribute to the hearing.

36. The contents of the opinions will be discussed below and an indication will be given of the consequences which these had on the assessment on which the decision is based. Since most of the points were referred to by numerous organisations or market parties in their opinions—for practical reasons—the contents of the opinions will be discussed per topic.

The cable will contribute to more stable price formation

37. In a number of opinions, it is stated that the Dutch electricity market is characterised by limited liquidity and relatively high volatility, as a result of which price formation is less stable compared to other countries. Market parties indicated that they have a need, in particular, for more stable price formation and lower peak prices, also with regard to imbalance. They expect that the NorNed cable will result in improvements in these respects.

38. The opinion of the Director of DTe in this regard is as follows. The parties confirmed during the hearing that it is difficult to quantify the effect on the stability of price formation. APX provided simulations which indicate that price volatility on the Dutch electricity market will be reduced significantly because the Dutch thermal market and the Norwegian hydraulic market complement each other.

39. The Director of DTe expects the NorNed cable to reduce the volatility of prices, although the extent to which this will occur cannot be determined with certainty due to the lack of quantitative substantiation.

The cable must lower the barriers to entry

40. In a number of opinions, it is stated that entry by new parties to the Dutch electricity market is not attractive at this moment. They expect that an increase in import capacity and low barriers to entry through market coupling (which is essential, for instance, for large consumers) will make entry by new market parties more attractive. A number of parties remark in this regard, however, that applying market coupling will result in entry only to part of the market, namely the 'day ahead' market.

41. The Director of DTe refers to chapter IX of this decision for an assessment of market coupling.

Does the application provide sufficient basis for the investment decision?

42. Two parties state in their opinions that they are in favour of the construction of new interconnectors and therefore also of a cable between the Netherlands and Norway, but that the question is whether TenneT's application has sufficient substance to warrant approval by the Director of DTe. To substantiate their statements, they added an expert report, in which, in particular, the robustness of the assumptions regarding the revenues from the cable is assessed. Several other parties indicate that in the light of the size of the investment and the

nature of the project, it is necessary to take sufficient measures to counteract budget overruns and revenue shortfalls or to create provisions for these.

43. The Director of DTe's assessment of the above-mentioned opinions is as follows. Firstly, the Director of DTe explicitly took into account the risks of the project mentioned in his assessment in the form of additional costs and revenue shortfalls. In addition, the Director of DTe deems it necessary that a positive decision include conditions requiring TenneT to manage costs, to guarantee timely completion of the cable and to guarantee the availability of the cable to the market.

44. In addition, the consultation of the Director of DTe with TenneT after the hearing resulted in clarification of the application in a number of respects whereby, with the clarification provided, the application provides sufficient basis for the decision, in the opinion of the Director of DTe.

Socio-economic effects

45. In a number of opinions, it is stated that the construction of the cable will result in favourable socio-economic effects, for instance due to security of supply. One party states in this regard that the effects cannot be quantified, but expects that they will not be equal to nil.

46. For the (total) assessment of the socio-economic effects, the Director of DTe refers to chapter VIII of this decision.

The link to the West-European market

47. It is stated in a number of opinions that the construction of the cable is consistent with the development of the North-West European market and that the assessment of the application should be made in the light of this.

48. The Director of DTe refers to paragraph 24, in which he states that the cable should be assessed also from the perspective of the creation of a European market.

A regulated cable versus a merchant cable

49. A number of opinions emphasise that in assessing the application it should not be forgotten that this application originates from TenneT in its capacity as the grid manager of the national high-voltage grid and that the application should not be assessed by commercial standards.

50. The Director of DTe agrees with this, namely that the assessment of the application cannot be dominated exclusively by the question of whether it will result in a positive business-economic result after taking into account the cost and revenue risks. The proposed cable must also be characterised as the construction of infrastructure which may be of broader social importance and in which these broader social interests should also be taken into account. As appears elsewhere in this decision, consideration was given to this and the

Director of DTe has taken into account interests such as the interest of the sound development of the electricity market, security of supply and price volatility.

51. The considerations to be taken into account include, however, the financial aspects of the proposed construction of the cable, as appear, for instance, from the statutory aim of ensuring the efficient operation of electricity supply.

VII. Assessment grounds

52. In assessing the application, the Director of DTe applied the following grounds for assessment, in particular:
    - consideration of the costs and revenues of the cable for TenneT and Dutch grid users;
    - the value of the cable to the electricity market, including aspects such as liquidity, competition and the operation of market forces;
    - the value of the cable with regard to security of supply;
    - the effect of the cable on consumer and producer prices;
    - the risks and the measures taken to manage risk; and
    - the opportunities for realising trade revenues through market coupling.

VIII. Socio-economic assessment of the application

Contents of the application

53. In its application, TenneT refers to the following advantages of the cable:
    - a considerable trading margin due to differences in spot prices between both countries;
    - a contribution to security of supply in both countries;
    - promotion of the operation of market forces and the liquidity of the Dutch electricity market;
    - more stable and lower prices;
    - a supply of cheaper reserve and emergency power from Norway;
    - import of sustainable and emission-free electricity into the Netherlands.

Assessment by the Director of DTe

54. It follows from the statutory framework that the Director of DTe must assess the cable from the point of view of those connected to the grid/grid users, in other words consumers and producers. Moreover, the Director of DTe attaches importance to ascertaining through a separate test that the cable will, in any event, have a positive value for consumers.

55. Since the risks associated with the cable project will ultimately be carried partly by grid users, the Director of DTe deems it of considerable importance that careful consideration be given to the costs, income and any risks of the cable project. Through the system of regulated access, whereby the costs, income and risks are ultimately passed on in the grid tariffs, the net revenues or net costs of the project will be borne to a considerable degree by grid users, although they themselves can exercise hardly any influence on the project and the risks

associated with it. The Director of DTe therefore deems it essential that not only the projected costs and revenues be taken into account in assessing the project, but that the risks inherent in such a large-scale infrastructural project be accounted for adequately.

56. A critical assessment of the application is all the more essential, in the opinion of the Director of DTe, because experience has shown that such large projects are almost always implemented after it has been decided to realise them, even if new analyses expose considerable risks or result in operational shortfalls. Within this framework, it is worth noting that although experience has been obtained with the construction of submarine cables, the submarine electricity cable proposed in the present project with the length of 580 km is unique and such a cable has not been constructed before.

57. For this reason, in preparing this decision the Director of DTe requested TenneT not only to make a qualitative and quantitative analysis of the risks, but also to propose adequate measures to manage the risks. In addition, the Director of DTe will take into account the risks identified explicitly in the form of additional costs or lower revenues in assessing the project.

Assessment of the trade revenues

58. The application is based on an annual trade revenue of EUR 66 million on the basis of a net cable transmission capacity of 600 MW, which will be divided equally between the Netherlands and Norway. TenneT proposes adding the Dutch part, amounting to EUR 33 million, to the proceeds of the auction. These trade revenues are estimated in a study carried out by SKM and verified by a study carried out by ILEX. Since a certain degree of uncertainty is associated with such model analyses, it is important to pay explicit attention to this in the assessment of the project, which will be done below by means of a realistic estimate of the discount rate applied to this project.

59. In its report, 'The Viability of a NorNed Cable', The Brattle Group reaches the conclusion that an annual trade revenue of EUR 55 million to EUR 65 million is realistic if the cable is fully utilised with a capacity of 600 MW.

60. Subject to the considerations below with regard to the economic life of the cable and the risk component in the discount rate used to obtain the present value of the trade revenues, the Director of DTe sees no reason to consider the estimates of annual trade revenues made by TenneT to be incorrect, although they are on the edge of the estimates made by The Brattle Group.

61. Initially it appeared from the correspondence between TenneT and the neighbouring TSOs (Transmission System Operators), in particular Elia and RWE Transportnetz, submitted with the application that there was still insufficient certainty as to whether the cable could be utilised fully. In the opinion of the Director of DTe, the (limited) guarantees given in the application, however, contain a concrete risk that the trade revenues may be lower than stated above due to a failure to utilise the cable to its maximum, or could result in a

reduction of existing capacity on other interconnectors. In this regard, the Director of DTe refers to the situation where recently installed phase shifters on foreign connections between Meeden and Diele, despite expectations and undertakings by TenneT, have not yet resulted in an increase in cross-border capacity by 1000 MW.

62. In relation to this, a reduction in the annual trade revenues of 20% would be realistic, in the opinion of the Director of DTe. This would amount to a reduction in the net present value of the cable of EUR 45 million on the basis of capacity available to the market of 600 MW.

63. On 7 December 2004, however, TenneT provided the Director of DTe with an explanation of research carried out by TenneT into the possibilities of full utilisation of the cable and the coordination which TenneT has sought in this regard with neighbouring TSOs. TenneT has calculated the effect on cross-border transmission capacity on the borders with Belgium and Germany of the situation involving an import cable (+600 MW) and an export cable (−600 MW). In addition, on 7 December 2004 TenneT explained that and why these calculations also applied to utilisation of the cable with a capacity of 700 MW. According to TenneT, it appears that the cross-border transmission capacity hardly changes at all in both situations compared to the situation without the NorNed cable. According to TenneT, this conclusion also applies if the transmission from and to Norway is not intended for the Netherlands or originates from the Netherlands, but also if Germany and/or Belgium are/is involved. It appears from additional correspondence from TenneT to Elia and RWE Transportnetz that they support this conclusion. RWE Transportnetz, however, does so with the reservation that its opinion is based on the facts and circumstances known at the time. Furthermore, according to TenneT, in 2007 phase shifters will be installed in the Belgian network on the Belgian-Dutch border, which will make it possible to manage transmission at this border.

64. On the grounds of TenneT's explanation above, the Director of DTe deems it sufficiently plausible that it will be possible to utilise the NorNed cable fully without reducing existing capacity on other interconnectors. The Director of DTe therefore sees no further necessity to apply a reduction in the annual trade revenues of 20% in his assessment and shall set this percentage at nil.

Assessment of the economic life

65. In its application, TenneT assumes an economic life of 40 years. The aim of the study carried out by SKM was to estimate the trade revenues for the period up until 2020. Assuming that the cable will become operational at the earliest in 2008 and assuming that its economic life extends beyond 2020, there are no estimates of revenues for the period after 2020. In its report, 'Long Run Sensitivities: NorNed Trading Margin in the Long Run', SKM Energy Consulting estimates that it appears reasonable to assume that the trade revenues will decrease by 10% in the period after 2020. According to SKM this will be caused mainly by an expected increase in the share of gas-fired electricity generation plants in Norway.

66. With regard to the economic life of the cable, the Director of DTe also gives consideration to the fact that it appears from the documentation provided by ABB that no experience has been obtained elsewhere in the world with operational submarine cables older than 27 years. In addition, no experience has been obtained with such long electricity cables (580 km). The supplier has also given no guarantee in the application that the cable will function 40 years in accordance with the specifications.

67. Taking into account the above, in assessing the application the Director of DTe will assume an economic life of 25 years, on the one hand, on the grounds of increasing uncertainty with regard to the trade revenues after 2020 and, on the other hand, on the grounds of the economic life of submarine cables currently in operation.

Compensation for the risks of trade revenues in the WACC

68. The uncertainty which is inherent in the evolution of future trade revenues is expressed in the level of the discount rate applied. There appears to be a difference of opinion between various experts on the level of the discount rate to be used in the assessment.

69. In its application, TenneT assumed a discount rate of 6.3%, which is in the same order of magnitude as the discount rate used by the Director of DTe for regulated investments in the grid with limited risk. In determining an appropriate discount rate for the present project, which carries more risk, the Director of DTe has been advised by experts in this area, namely Tabors Caramanis and Associates (hereinafter "TCA") and The Brattle Group. TCA arrives at a discount rate of between 8% and 12% for the present application. A second opinion commissioned by DTe from The Brattle Group confirmed this estimate by setting the discount rate in a range between 8% and 12.2%. TenneT commissioned a study by McKinsey and on the basis of this arrived again at a discount rate of approximately 6%.

70. Due to the difference of opinion between the experts, the Director of DTe proposed in his letters to TenneT of 13 May 2004 and 2 September 2004 that a clearer picture of the combination of the discount rate and the trade revenues should be obtained through a market test. This proposal was repeated in his letter of 24 September 2004. The result of a market test might have been that the parties, which are best able to estimate future trade revenues, namely the market parties themselves, would have expressed an opinion on the value of future trade revenues. However, TenneT was of the opinion that this method of determining a discount rate was not accurate, partly due to TenneT's doubts as to whether market parties would actually be interested in participating in such a market test. TenneT therefore opted not to take up this proposal and not to supplement its application with the results of such a test.

71. Due to the above considerations, namely that under the regulatory system it is ultimately not TenneT but the grid users who will bear the economic risk of this cable project, the Director of DTe decided to base his assessment mainly on the advice of TCA and two reports by The Brattle Group ('The Cost of Capital for the Nor-Ned Cable' and 'The Viability of a NorNed

Cable') in this regard. This means that the Director of DTe will assume a discount rate of 9%. This percentage is in the lower half of the bandwidth recommended by these experts and therefore also takes into account the lower discount rate recommended by McKinsey and proposed by TenneT.

Ancillary services

72. TenneT assumes that the revenues for the so-called ancillary services will amount to EUR 4 million per annum. TenneT has indicated that it is difficult to determine the precise value accurately.

73. The Director of DTe is of the opinion that these revenues have not been substantiated adequately and convincingly. It is also difficult to see from a qualitative point of view at what moments these revenues will be realised, since the value of ancillary services is greatest for the Dutch electricity system when the Dutch electricity price is high and the cable is therefore used fully to import electricity, which is automatically the case if market coupling is applied.

74. The Director of DTe is also of the opinion that it has not been shown that the cable has value in providing mutual support with regard to reserve power. Such support, after all, would also have to be provided in the direction in which congestion exists. The application does not show that this is possible.

75. The Director of DTe is also of the opinion that it has not been shown that the cable has value with regard to emergency power, which would require the cable to be (temporarily) overloaded. It has not been shown that overloading is possible and would not have any disadvantageous consequences for, for instance, the maintenance or the economic life of the cable. An alternative would be for TenneT to reserve part of the capacity of the cable for emergency power, which would be done at the expense, however, of the capacity available to grid users and would result immediately in lower trade revenues.

76. For the above reasons, for the purposes of the assessment the Director of DTe has set the value of the cable for ancillary services at nil.

Taking into account project risks by assuming later delivery (revenue shortfall) and additional costs

77. The cable is characterised by a double asymmetrical risk profile. Firstly, the application assumes a positive scenario. The probability of lower project costs or better-than-expected revenues is therefore clearly smaller than the probability of additional costs or disappointing revenues. Secondly, it is not TenneT but the grid users who bear the *de facto* project risk through the grid tariffs, although they are hardly able to influence these risks at all.

78. At the request of the Director of DTe in his letter of 24 September 2004, TenneT commissioned an additional risk analysis. The report by Scandpower, on which TenneT bases its findings, identifies and analyses a number of risks. The Director of DTe, however, doubts

whether all the risks are accounted for adequately in this. For instance, TenneT argues in its application that negotiations are currently being held with a second cable supplier and that the engineering has not yet been completed. The final costs and conditions of this are as yet unknown. TCA also points out the risk of a delay in the cable's coming into operation due to action taken by environmental groups.

79. TenneT states that 80% of the budget is covered by lump-sum contracts. In the opinion of the Director of DTe, TenneT's response with regard to the remaining 20% does not provide sufficient clarity on how these should be valued financially.

80. In its opinion, ABB states that many cable projects are completed with limited budget overruns or even budget underruns. It appears from the same opinion, as explained at the hearing, that roughly one fifth of such projects are confronted with demonstrable budget overruns. Leaving this aside, small percentage overruns in relation to projects such as this correspond to large nominal amounts.

81. Taking into account the above risks, in the opinion of the Director of DTe, it should be taken into account that the cost of investments will be exceeded by 10% and that the cable will actually become operational in 2009 rather than in 2008. A delay in the cable's coming into operation may have a considerable effect, since this will immediately result in lower trade revenues in 2008 and possibly even later.

NEA preparation costs

82. In its application, TenneT has included a cost item of EUR 25 million for the so-called NEA preparation costs.

83. In its report, 'The Viability of a NorNed Cable', The Brattle Group points out that these costs should be taken into account in the socio-economic assessment of the cable. This involves a shift in costs for the Dutch society, so that the net effect on prosperity is nil. The Director of DTe subscribes to this assumption and will therefore not take the NEA preparation costs into account in assessing the cable in relation to the Dutch society. The NEA preparation costs, however, are relevant to grid users because TenneT proposes offsetting these against the proceeds of the auction.

84. On the basis of the oral explanation given by TenneT at meetings on 7, 8, 13 and 20 December 2004, the Director of DTe is of the opinion that a maximum amount of EUR ■■■ million corresponds better to the value of the contracts and licences than the amount of EUR 25 million stated in the application of 31 August 2004 and therefore gives his consent to compensation for TenneT from the proceeds of the auction, subject to a maximum of EUR ■■■ million.

Value for security of supply

85. In its application, TenneT argues that the cable will make a positive contribution to security of supply in the Netherlands and Norway. TenneT argues that it is difficult to determine the precise contribution and has therefore not quantified this and has set it at nil in the application.

86. The Director of DTe concludes that the NorNed cable will contribute to security of supply. After all, electricity can be imported and exported by means of the cable so that reserves can be shared and mutual assistance can be given. However, in situations where electricity is exported via the cable, reserve capacity in the Netherlands will be reduced due to the fact that the exporting cable makes additional demands on the power available in the Netherlands or which can be imported through other interconnectors. For this reason, it is not easy to quantify the contribution of the cable to security of supply.

87. At the hearing, those present were asked how the contribution to security of supply could be quantified. Those present confirmed that quantification is, in fact, impossible. They therefore suggested referring to the contribution to security of supply as a positive but non-quantifiable effect.

88. Those present made the same suggestion for the contribution of the cable to other non-quantifiable effects, such as price stability and liquidity.

89. The Director of DTe concludes that it does not appear to be possible to quantify accurately the contribution of the NorNed cable to security of supply and will therefore set the net contribution to security of supply at nil in his assessment.

Affects on prosperity

90. In its application, TenneT argues that the NorNed cable has an effect on prosperity, namely a change in the consumer and producer surplus. In the case of the Netherlands, TenneT assumes an annual effect on prosperity of approximately EUR 2 million, which can be broken down into a consumer surplus of approximately EUR 47 million per annum and a loss for producers of approximately EUR 45 million per annum.

91. The Director of DTe concludes that the cable may contribute to a consumer surplus and a producer surplus because linking the Dutch and Norwegian markets will result in a reduction in production costs since more efficient production plants can be utilised.

92. The Director of DTe is of the opinion that the precise distribution between the consumer surplus and the producer surplus is particularly uncertain, partly because the models used to calculate these amounts are not specific to this and not investing in a cable connection on economic grounds could lead to different investment behaviour by market parties. However, the Director of DTe is of the opinion that the balance of the producer surplus and the consumer surplus referred to by TenneT in the application is less dependent on the

assumptions. He therefore deems the effect on prosperity of EUR 2 million per annum to be realistic and will assume this in his assessment.

Other revenues

93. TenneT refers to a contribution to the ETSO CBT agreements amounting to EUR 1 million per annum and additional revenues on cross-border connections with Germany, Belgium and the United Kingdom as other revenues totalling EUR 2.3 million per annum.

94. The Director of DTe concludes that the ETSO CBT agreements are temporary by nature and are expected to be replaced or to lapse before the NorNed cable becomes operational. The Director of DTe will therefore set the contribution of the ETSO CBT agreement at nil in his assessment.

Conclusion of the socio-economic analysis

95. In the light of the above considerations and assumptions, the Director of DTe concludes that the net present value of the NorNed cable, as proposed in TenneT's application of 31 August 2004, as supplemented on 27 October 2004 and 8 November 2004, is a negative amount of EUR 85 million.

96. In reaching this conclusion, the Director of DTe took into consideration the fact that the cable will supposedly have positive effects on the development of the electricity market. These effects, however, are not quantifiable and the Director of DTe could not find adequate compensation in this for the negative net present value of EUR 85 million.

97. The Director of DTe arrives, however, at the conclusion that the net present value of the NorNed cable at the time that the decision was taken is almost neutral. This conclusion is based on the explanation which the Director of DTe received from TenneT on 3 December 2004 in relation to further guarantees from neighbouring TSOs with regard to the availability of the cable. This conclusion is also based on the explanation which the Director of DTe received during oral consultations with TenneT on 7, 8, 13 and 20 December 2004, in particular with regard to the technical feasibility of the higher transmission capacity of the cable, namely 700 MW (and the higher revenues expected to result from this). Furthermore the conclusion is based on the undertaking that the cost of connecting the cable to the Dutch electricity grid would be lower than the amount of EUR 24 million stated in the application, namely EUR ■■■ million.

98. In the light of the above and taking into account the non-quantifiable advantages with regard to liquidity, price volatility and security of supply, the Director of DTe has resolved to decide in favour of TenneT's application, subject to conditions. After all, it appears from the Electricity Act that these effects should play a role in the decision to be taken by DTe.

IX. Market coupling

TenneT's application

99. In its application, TenneT argues in favour of making transmission capacity to Norway accessible through the cable, by providing access through the market coupling mechanism. For this purpose, together with Statnett TenneT has entered into a Heads of Agreement with APX Spotmarket and Nord Pool Spot to make the transmission capacity available to the market through these exchanges.

Assessment by the director of DTe

100. The Director of DTe assesses access to the cable through market coupling as follows. Although TenneT's application does not extend to an assessment by the Director of DTe with regard to the method by which the transmission capacity of the cable will be allocated, the Director of DTe is of the opinion that market coupling is one of the most efficient mechanisms for allocating scarce transmission capacity in line with the market, due to the method of implicit auctioning in this method of allocating capacity. The market coupling mechanism has already proved successful in Scandinavia and the European Commission recently also expressed its support for market coupling as an efficient mechanism for allocating interconnector capacity in the short term, which is in line with the market.

101. Due to the central role played by exchanges, the market coupling mechanism will guarantee optimal use of the available interconnector capacity. After all, market parties will not bid separately for transmission capacity, but TenneT and Statnett will utilise the cable dependently of the hourly electricity prices on the exchanges involved, in such a way that the full capacity will be available to the market and price differences can be utilised optimally. As a result, the risks incurred by market parties will be limited as they will not, after all, be required to enter into separate transmission and commodity contracts. The cable will also be used in accordance with the economic needs on both sides of the cable, with electricity being imported from the country with the lowest prices.

102. The Director of DTe is not only of the opinion that market coupling is an appropriate way of allocating the transmission capacity of the NorNed cable, but that it is also necessary. After all, of the available methods for allocating transmission capacity, market coupling not only utilises transmission capacity optimally, but also does so at the lowest cost. If a different allocation system were to be chosen, for instance a system of explicit auctions, there are insufficient guarantees that the full trade margin, as estimated in the studies by SKM and ILEX referred to in the application, would be materialised. A different allocation system would incur higher risks for market parties, which may be translated into lower bids for transmission capacity, as a result of which the trade revenues may be lower than budgeted. This has a negative effect on the socio-economic assessment on which the present decision is based. In its report, 'The Viability of a NorNed Cable', The Brattle Group calculates that without market coupling the trade revenues may fall to approximately EUR 40 million per annum.

103. The Director of DTe is therefore of the opinion that a positive decision on TenneT's application is inherently linked to the mechanism of market coupling for the allocation of transmission capacity. For this reason, the following condition should be attached to the decision on TenneT's application. TenneT should be required to submit to the Director of DTe before 1 January 2006 a proposal pursuant to section 31 (1) (a) and section 31 (4) of the Electricity Act to the effect that chapter 5 of the Grid Code should be extended to include a scheme for the allocation of the transmission capacity of the connection with Norway on the basis of market coupling. This will safeguard that the market coupling mechanism can be applied in allocating the transmission capacity of the cable as of the day that the cable becomes operational.

X. Incentives for TenneT

Incentive to maximise the capacity of the cable

104. An important consideration taken into account by the Director of DTe in deciding favourably on TenneT's application is the further guarantee given by TenneT that the capacity of the cable will amount to 700 MW without any further costs being incurred for this by grid users. This guarantee is an important consideration, which has resulted in a socio-economic assessment which is considerably more favourable.

105. For this reason, the Director of DTe attaches a condition to the decision to the effect that the advantages of the higher capacity must actually benefit grid users. For this purpose, the nominal capacity will be determined for a consecutive period of 12 months, to be determined by TenneT, during a period of two years. This will be done on the basis of the capacity of the cable which is actually made available to market parties through the exchanges during these 12 months.

106. If the nominal capacity appears to be lower than 700 MW, TenneT will add an amount of EUR 260,000 per megawatt to the proceeds of the auction. If the nominal capacity appears to be higher than 700 MW, TenneT may withdraw an amount of EUR 260,000 per megawatt from the proceeds of the auction and add this amount to its own funds. This will also give TenneT a positive incentive to ensure that the capacity of the cable is as high as possible, in favour of market parties and grid users.

Incentive for maintenance and operating costs

107. In its application, TenneT requests permission to finance the cost of operating the cable, budgeted at approximately EUR 2 million per annum, and the additional costs incurred in relation to the operation of the national high-voltage grid, estimated at approximately EUR 1 million per annum, from the proceeds of the auction. In its application, TenneT argues that the additional costs in relation to the operation of the national high-voltage grid are low and are therefore covered in the regular manner through TenneT's transmission tariff.

108. The Director of DTe decides that TenneT may withdraw the realised cost of operating the cable connection, with the exception of the cost of procuring electricity to cover grid losses, for the period from the date on which the cable becomes operational up to and including 31 December 2010 from the proceeds of the auction, subject to a maximum of EUR 2.5 million per calendar year throughout this period.

109. In addition, the Director of DTe decides that as of 1 October 2010, TenneT must submit an annual proposal in the following calendar year for the cost of operating the cable connection, as a separate part of its tariff proposal pursuant to section 41b of the Electricity Act, with the exception of the cost of procuring electricity to cover grid losses. Nearer the time, consideration must be given to the extent to which a financial incentive should be included to ensure that the cost of the operation and maintenance of the cable is as efficient as possible.

Incentive for the availability of the cable

110. The availability of the cable for the market is an important factor in the attainable trade margin. In its application, in calculating the trade revenues TenneT assumes that the cable will be available each calendar year for 95.62% of the time. In its letter of 27 October 2004, TenneT states that a minimal availability of 97% is even possible. If a higher level of availability is realised this will increase the trade margin, because it will be possible to trade for a larger number of hours. However, lower availability will reduce the attainable trade margin.

111. TenneT can influence the availability of the cable because TenneT, together with Statnett, is responsible for the management and maintenance of the cable. Maintenance is relevant in this regard, as is the planning of foreseeable maintenance at moments that the loss of trade revenues is minimal. It is also important that foreseeable and unforeseeable maintenance do not last longer than is strictly necessary, so that the cable is soon available again to grid users.

112. For this reason, the Director of DTe includes a bonus-malus system in this decision with the aim of providing TenneT with an incentive to operate the cable connection with Norway in accordance with the proposed plan, to ensure that the availability of the cable to the market is optimal and at the same time to protect grid users from the risk that technical availability will be less than 95.62%.

113. In this regard, the Director of DTe has applied an incentive amounting to EUR 400,000 per 1% availability, which corresponds to the estimated annual trade revenues for the respective 1% of transmission capacity, assuming the possible trade revenues estimated by TenneT in its application. In addition, the Director of DTe has decided that the maximum amount to be compensated or retained shall be EUR 1.2 million per calendar year. These amounts will be inflated annually in line with the consumer price index.

Financing of the cable

114. In its application, TenneT argues that all the costs of the cable, both capital costs and operating costs, should be financed from the proceeds of the auction. In this regard, the Director of DTe has given consideration to the following.

115. The Director of DTe has explained his decision with regard to the financing of the operating costs above.

116. With regard to the financing of the capital costs, TenneT stated in its letter of 27 October 2004 that it is realistic to assume that the balance of the proceeds of the auction will be adequate to finance the NorNed cable on the date on which it becomes operational. In this letter, TenneT also states that there is therefore no question of advance financing by TenneT and that there are therefore also no interest payments and redemption payments. TenneT states that the construction interest will be financed by debt capital.

117. In the regulation of TenneT, it has been determined that the payment from the proceeds of the auction will be made at the moment that the investment in question becomes operational and is capitalised in the accounts. The Director of DTe has determined that this principle shall also apply to the payment of the costs of the cable in question from the proceeds of the auction. At the moment that this decision is taken, the date on which the payment would occur was not yet known because the date on which the NorNed cable would become operational had not yet been determined. TenneT expects the cable to become operational in 2008.

118. On the basis of historic proceeds of the auction and taking into account the expected payment to cover compensation for reactive power from the proceeds of the auction, the Director of DTe is of the opinion that it is realistic to assume that the proceeds of the auction will be sufficient to cover the capital costs of the cable in full. However, it is not possible to provide certainty in this regard beforehand because the future proceeds of the auction cannot be predicted with certainty.

119. The Director of DTe decides that an amount equal to the realised investment cost, subject to a maximum of EUR 318 million, will be paid out at the moment at which the cable becomes operational and after the investment has been capitalised to cover the capital costs of the cable. The investment costs referred to include the project and construction costs referred to in the application, amounting to a maximum of EUR ■■■ million, the cost of connecting the cable to the Dutch grid, amounting to a maximum of EUR ■■■ million, the cost of the contracts and licences of B.V. Nederlands Elektriciteit Administratiekantoor amounting to a maximum of EUR ■■■ million, and the cost of construction interest, amounting to a maximum of EUR ■■■ million.

120. The Director of DTe deems it desirable to add a bonus-malus scheme to this payment to give TenneT a financial incentive to ensure the most economical construction of the cable

connection with Norway. If the realised investment costs, assessed by an independent auditor and accompanied by an unqualified auditor's report, are lower than EUR 318 million, TenneT is allowed to eat that this lower amount, increased by EUR 10 million, but not higher than EUR 318 million, from the proceeds of the auction. If the realised investment costs, assessed by an independent auditor and accompanied by an unqualified auditor's report, are higher than EUR 318 million, TenneT is allowed to withdraw this higher amount, decreased by EUR 10 million, but not lower than EUR 318 million, from the proceeds of the auction.

121. The Director of DTe also deems it desirable to add a bonus-malus scheme to this payment to give TenneT a financial incentive to construct the cable connection with Norway as quickly as possible, but in any event in accordance with the timetable set out in the application. This incentive means that TenneT may retain an amount of EUR 100,000 per day that the cable becomes operational prior to 1 January 2008, but will be required to add an amount of EUR 30,000 per day to the proceeds of the auction for each day after 31 March 2008 that the cable is not operational, in both cases subject to a maximum of EUR 10 million.

122. The payments stated above are subject to the conditions set out in the annexes to this decision.

XI. Decision

123. In the light of the above, the Director of DTe approves the application subject to the conditions set out in Annexes A and B of this decision.

124. This decision shall be promulgated in the *Netherlands Government Gazette* and shall be published on DTe's website (www.dte.nl).

Date: 23 December 2004

The Director of the Office of Energy Regulation,
on his behalf:

[Signed]

Dr R.A. Hakvoort
Unit Manager, Market Infrastructure

Any person, whose interests are directly affected by this decision, promulgated in the Netherlands Government Gazette*, may appeal against this decision within six weeks after the date of promulgation by filing a notice of administrative appeal with the Legal Department of the Netherlands Competition Authority, P.O. Box 16326, 2500 EB The Hague.*

Annex A to decision 101783_2-76

ANNEX A: CONDITIONS

Conditions with regard to the payment of the cost of the cable from the proceeds of the auction and the timely coming into operation of the cable

1. The costs to be borne by TenneT and described in the application for the construction and coming into operation of the high-voltage connection between the Netherlands and Norway referred to in the application (hereinafter "the cable"), including the cost of the cable, the installations necessarily related to this and the connection of the cable to the Dutch high-voltage grid, may be compensated from the proceeds of the auction, subject to the provisions below.

2. The compensation referred to means that at the moment that the cable comes into operation and after capitalisation of the cable in TenneT's accounts, TenneT may withdraw from the proceeds of the auction an amount equal to a maximum of EUR 318 million to cover the project and construction costs, as referred to in the application, amounting to a maximum of EUR ■■■ million; the cost of connecting cable to the Dutch high-voltage grid, amounting to a maximum of EUR ■■■ million; the costs associated with taking over the contracts and licences of B.V. Nederlands Elektriciteit Administratiekantoor, amounting to a maximum of EUR ■■■ million; and the costs of construction interest, amounting to a maximum of EUR ■■■ million. The maximum amount in compensation is the amount of the realised costs. In this regard, TenneT is required to maintain a separate administration for the project.

3. If the realised costs, as referred to in paragraph 2 of this annex and determined by the Director of DTe on the basis of the project administration provided by TenneT, accompanied by an unqualified auditor's report issued by an independent auditor, are lower than the amount of EUR 318 million referred to, TenneT may withdraw an amount from the proceeds of the auction:
   - amounting to the realised costs increased by EUR 10 million, if the realised costs are lower than EUR 308 million; or
   - amounting to EUR 318 million, if the realised costs lie between EUR 308 million and EUR 318 million.

4. If the realised costs, as referred to in paragraph 2 of this annex and determined by the Director of DTe on the basis of the project administration provided by TenneT, accompanied by an unqualified auditor's report issued by an independent auditor, are higher than the amount of EUR 318 million referred to, TenneT may withdraw an amount from the proceeds of the auction:
   - amounting to the realised costs reduced by EUR 10 million, if the realised costs are higher than EUR 328 million; or
   - amounting to EUR 318 million, if the realised costs lie between EUR 318 million and EUR 328 million.

5. If the cable comes into operation before 1 January 2008, TenneT may increase the amount to be withdrawn from the proceeds of the auction in accordance with the above provisions by an amount of EUR 100,000 for every day between the date on which the cable comes into operation and 1 January 2008, subject to the condition that this increase shall amount to a maximum of EUR 10 million.

6. If the cable comes into operation after 31 March 2008, the maximum amount that TenneT may withdraw from the proceeds of the auction in accordance with the above provisions shall be reduced by EUR 30,000 for every day between 31 March 2008 and the date on which the cable comes into operation, subject to the condition that this reduction shall amount to a maximum of EUR 10 million.

7. The date on which the cable comes into operation shall be the first day of the first consecutive period of seven calendar days in which an average of at least 600 MW of transmission capacity is offered on the exchanges involved in market coupling and the transmission capacity is actually available to market parties.

8. TenneT may withdraw the realised costs for the operation of the cable connection, with the exception of the purchase of electricity to cover grid losses, for the period from the date on which the cable comes into operation up to and including 31 December 2010, per calendar year in arrears from the proceeds of the auction, subject to a maximum of EUR 2.5 million per calendar year during this period.

9. As of 1 October 2010, TenneT shall annually submit to the Director of DTe, as a separate part of its tariff proposal based on section 41b of the Electricity Act, a proposal with regard to the cost of operating the cable connection in the next calendar year, with the exception of the cost of purchasing electricity to cover grid losses.

Compensation in the event that the nominal capacity of the cable is less than 700 MW

10. The nominal capacity of the cable shall be set by the Director of DTe on the basis of a consecutive period of 8760 hours in the period from the date on which the cable comes into operation until two calendar years thereafter. The nominal capacity shall be calculated by summing up, on the one hand, the number of megawatts which are available to market parties on the exchange designated for this purpose within the framework of market coupling and, on the other hand, the actual transmission capacity available in the hour for market parties and required by market parties, and by dividing this sum by 8376 hours (that is 8760 hours multiplied by 95.62%). Within two months after the period referred to above has lapsed, TenneT shall announce the consecutive period for which the nominal capacity is determined.

11. If the nominal capacity of the cable is lower than 700 MW and in so far as this is not related to licences issued by Dutch authorities, within one month after the period referred to in

paragraph 10 of this annex has lapsed, TenneT shall add to the proceeds of the auction from its own funds an amount equal to the difference between 700 MW and the nominal capacity of the cable multiplied by EUR 260,000 per megawatt, subject to a maximum of EUR 15 million.

12. If the nominal capacity of the cable is higher than 700 MW, within one month after the period referred to in paragraph 10 of this annex has lapsed, TenneT may add to its own funds from the proceeds of the auction an amount equal to the difference between the nominal capacity of the cable and 700 MW, multiplied by EUR 260,000 per megawatt, subject to a maximum of EUR 15 million.

Providing an incentive to ensure optimal availability to the market

13. If the relative availability of the cable in any calendar year is lower than 95.62% of the nominal capacity referred to in paragraph 10 of this annex, TenneT is required to add to the proceeds of the auction from its own funds an amount equal to the amount of the incentive, as defined in the paragraphs below.

14. If the relative availability of the cable in any calendar year is higher than 95.62% of the nominal capacity referred to in paragraph 10 of this annex, TenneT may withdraw from the proceeds of the auction of the cable in the respective year an amount equal to the amount of the incentive, as defined in the paragraphs below, and may add this amount to its own funds.

15. The relative availability of the cable as a percentage, assuming the nominal capacity of the cable, shall be calculated by summing up, on the one hand, the number of megawatts of transmission capacity between the Netherlands and Norway for all hours in a calendar year which are available to market parties on the exchange designated for this purpose within the framework of market coupling and, on the other hand, the actual transmission capacity available in the hour for market parties and required by market parties, and dividing this sum by the product of the nominal capacity of the cable and the number of hours in the respective calendar year.

16. The amount of the incentive is equal to the absolute value of the difference between the relative availability of the cable and 95.62%, multiplied by EUR 400,000 for each percentage point, subject to a maximum of EUR 1,200,000 per calendar year.

17. The scheme described in paragraphs 13 up to and including 16, in relation to the incentive, shall commence two calendar years after the date on which the cable comes into operation and shall apply up to and including 31 December 2032. If the commencement date of the incentive referred to in this paragraph does not coincide with 1 January, the scheme referred to shall apply on a *pro rata* basis in the first calendar year in proportion to the period after the cable becomes operational in that calendar year.

18. The settlement of the amount of the incentive shall be made in respect of the preceding calendar year. For this purpose, TenneT shall submit to the Director of DTe a proposal for the amount of the settlement, including a substantiation of this and an unqualified auditor's report. TenneT shall submit this proposal at the latest on 1 February of each year following the calendar year in respect of which the amount of the incentive is calculated.

Force majeure

19. In the event of *force majeure* ('Acts of God'), the following conditions shall apply:
    a. TenneT is obliged to notify the Director of DTe in writing and without delay of *force majeure* on the commencement thereof.
    b. TenneT is obliged to do everything which may within reason be required of it to bring an end to the *force majeure* or to limit the consequences thereof.
    c. In the event of *force majeure* in relation to the conditions regarding costs, the reductions referred to in paragraph 4 of this annex shall not apply to the part attributable to the *force majeure*.
    d. In the event of *force majeure* in relation to conditions regarding the completion of the cable, the reductions, referred to in paragraph 6 of this annex, shall not apply to the part that is attributable to the *force majeure*.
    e. In the event of *force majeure* in relation to the determination of the nominal capacity, the reductions, referred to in paragraph 11 of this annex, shall not apply to the part that is attributable to the *force majeure*.
    f. In the event of *force majeure* in relation to accessibility, the obligations to provide compensation, referred to in paragraphs 13 and 14 of this annex, shall not apply to the part that is attributable to the *force majeure*.
    g. If TenneT does not comply with the conditions referred to in paragraphs 19 (a) and 19 (b) of this annex, the provisions of paragraph 18 (c) up to and including (f) of this annex shall not apply and the provisions of paragraphs 4, 6, 11, 13 and 14 of this annex shall apply in full.

20. *Force majeure* shall in any event be understood to include:
    - the effect of terrorist attacks;
    - the effect of natural disasters;
    - the effect of war situations;
    - the effect of nuclear reactions;
    - a break in the cable due to external forces resulting from ships' anchors and construction activities, which are not part of the project,

    which delay the construction and coming into operation of the cable or make it impossible to utilise the cable.

In relation to the allocation of the capacity of the cable and the allocation of the revenues from the cable

21. In accordance with the procedure set out in section 31 *et seq.* of the Electricity Act, TenneT shall submit a proposal before 1 January 2006 for the expansion of chapter 5 of the Grid

Code, which shall contain an arrangement for determining the capacity of the cable and the allocation thereof to market parties on the basis of market coupling, as described in the application. It must be possible for the arrangement in question to be in operation on the date on which the cable becomes operational and to remain applicable at least up to and including 31 December 2032.

22. At least 50% must be added to the proceeds of the auction, as referred to in section 31 (6) of the Electricity Act, with the exception of the provisions of the following paragraphs. This 50% is the part of all future revenues generated by the cable which accrue to TenneT, including revenues obtained through the auction or sale of transmission rights; revenues obtained if the transmission capacity of the cable is allocated to market parties or exchanges in a different manner in line with the market, including revenues generated by utilising the cable through market coupling with one or more Dutch or foreign exchanges; and revenues related to the sale in whatever form of rights to future revenues from the cable.

23. The cost of procuring electricity to cover grid losses, associated with the utilisation of the cable, may be deducted annually from the above-mentioned revenues from the moment at which the cable comes into operation.

24. The revenues referred to above must be added to the revenues of the auction in all instances within 10 working days after the moment at which the respective revenues are generated.

Other conditions

25. If at any moment the allocation of the transmission capacity of the cable to market parties through market coupling, as referred to in paragraph 21 of this annex, is not possible, the allocation of the transmission capacity must occur in a different manner in line with the market, after prior approval by the Director of DTe. The provisions of this annex, which involve market coupling, shall apply *mutatis mutandis* to the other method of allocating transmission capacity which is in line with the market.

26. TenneT shall maintain a separate project administration for the investment in the cable. The accounting rules set out in Annex B of this decision shall apply to this project administration. After commencement of the activities, TenneT shall comply within two months with a half-yearly request for information from the Director of DTe in which TenneT shall submit the realised project costs to the Director of DTe. The final request for information shall relate to the full cost of the cable project. The realised project costs shall be accompanied by an unqualified auditor's report. DTe shall include with the requests for information an audit instruction for the auditor containing guidelines with regard to the activities to be carried out and the report.

27. The concept of 'realised costs' referred to in this annex shall be applied in accordance with the accounting rules contained in Annex B.

28. All amounts referred to in these conditions, with the exception of the amounts stated in the provisions contained in paragraphs 2 up to and including 6 of this annex and the provisions contained in paragraphs 11 and 12 of this annex, relate to real amounts as at 31 December 2004, which should be corrected for inflation for each full calendar year thereafter, applying the consumer price index as stated in section 41b (1) of the Electricity Act.

29. Up until the date on which the cable comes into operation and is capitalised in TenneT's accounts, no withdrawals may be made from the proceeds of the auction which result in a situation where the amount available for withdrawals from the proceeds of the auction on the basis of this decision is less than EUR 318 million.

30. If the proceeds of the auction on the date on which the cable comes into operation and is capitalised in TenneT's accounts is insufficient to allow for the one-off withdrawal of the entire amount, the entire amount available in the proceeds of the auction shall be withdrawn at once and all future proceeds of the auction shall be used immediately to withdraw the remainder until the amount referred to in paragraph 2 has been withdrawn in full.

Annex B to decision 101783_2-76

ANNEX B: ACCOUNTING RULES

1. This annex sets out the accounting rules for the administration of the cable project. These accounting rules apply to reports submitted to the Director of DTe regarding the project administration in relation to the tangible fixed asset "the cable". Variances with the budget for the investment approved by the Director of DTe are determined on the basis of the project administration. The project administration shall be submitted to the Director of DTe on each occasion within two months after receiving a request for information from the Director of DTe and shall be accompanied by an unqualified auditor's report.

2. Only costs which comply with the guidelines for, amongst others, capitalisation and valuation set out in this annex may be compensated from the proceeds of the auction. These costs are referred to as 'realised costs' in Annex A of this decision.

Principles to be taken into account

3. In compiling the project administration, TenneT shall take into account principles of financial reporting generally accepted in the Netherlands. This relates, for instance, to the allocation and causality principle.

4. The price of goods and services supplied by group companies shall be based on the arm's length principle. The application of this principle shall be based on a comparison of the conditions applicable to a transaction between affiliated undertakings and the conditions of a transaction between independent companies. The price charged for goods or services shall reflect the functions carried out, taking into account the utilised assets and risks incurred.

5. Transactions in foreign currencies during the reporting period shall be processed in the project administration at their realised cost.

6. Costs which TenneT reports in the administration of the cable project shall not be/have been included in other requests for information by the Director of DTe.

Capitalisation criteria

7. An asset is defined as a resource arising from past events, in respect of which TenneT has the power of disposal and from which economic advantages are expected to arise in the future. The condition must also be met that the cost of the asset can be determined reliably.

8. Where reference is made in these accounting rules to assets, this refers solely to assets which are used to carry out the activities associated with the construction of the cable and bringing the cable into operation.

9. Tangible fixed assets are understood to be tangible fixed assets which are intended to serve TenneT on a long-lasting basis in carrying out its activities. In determining which assets are deemed to be tangible fixed assets, economic ownership and not legal ownership shall be decisive.

10. Assets on order shall not be capitalised, unless the investment costs relate to completion of an asset which is already operational.

11. Costs directly related to future large-scale maintenance shall not be capitalised, but shall be charged as a single amount to the operating costs in the future.

12. Capitalisation shall take place on the first day of the month following the month in which the asset becomes operational.

Valuation

13. Tangible fixed assets shall be valued on the basis of historic cost from the moment that the criteria for capitalisation are met, as set out in this annex.

14. Historic costs shall be understood in this annex to be the internal production cost of the cable.

15. The internal production cost includes:
    - direct costs;
    - indirect costs; and
    - interest.

16. Costs are deemed to be direct if there is a demonstrable causality between these costs and the cable. The following categories are distinguished:
    - materials;
    - internal hours; and
    - services provided by third parties.

17. The cost of materials and services provided by third parties are reported at their purchase price and accompanying costs, excluding an internal profit margin.

18. The cost of internal hours as part of the internal production costs are based on an internal hourly rate excluding a profit margin. The internal hourly rate shall consist exclusively of the direct personal costs, namely gross salaries, employer's costs and other direct personnel costs.

19. Indirect costs can be allocated to the fixed asset. The following criteria should be taken into account in this regard:

- a consistent method of calculation and allocation; deviations from the method of calculating and allocating indirect costs, if the amendment is significant and material, are not allowed without the prior permission of the Director of DTe;
- the application of the concept of 'causality'; indirect costs may be allocated to a fixed asset using an allocation formula and the allocation formula shall be based on demonstrable causality between the level and nature of the allocated indirect costs and the fixed assets; and
- transparency; insight must be given, for instance, into the allocation formula applied, the total indirect costs and the calculations.

20. The indirect capitalised costs reported in any financial year shall amount to a maximum of 15% of the total amount of the costs of the cable capitalised in that year.

21. At the end of the financial year, construction interest shall be capitalised amounting to the nominal WACC determined for TenneT multiplied by the average project costs for the past year, excluding construction interest capitalised previously.

22. Amounts received from third parties shall be deducted from the capitalised costs.

Depreciation

23. The depreciation reported shall relate to the cable.

24. Depreciation shall be calculated from the first day of the month following the month in which the asset becomes operational.

25. Depreciation shall be calculated on the basis of the historic cost using a linear depreciation method with a residual value of nil.

26. A period of 25 years shall be applied in determining the economic life.

27. Grounds shall not be depreciated.