Court of Appeal of The Hague
Case number: 200.302.332
Session date 4 April 2024

PAULUSSEN ADVOCATEN

Effectiveness of the reduction obligation

in the matter of:

1. **Vereniging Milieudefensie**
   having its registered office in Amsterdam, the Netherlands
2. **Stichting Greenpeace Nederland**
   having its registered office in Amsterdam, the Netherlands
3. **Landelijke Vereniging tot Behoud van de Waddenzee**
   having its registered office in Harlingen, the Netherlands
4. **Stichting ter bevordering van de Fossielvrij-beweging**
   having its registered office in Amsterdam, the Netherlands
5. **Stichting Both ENDS**
   having its registered office in Amsterdam, the Netherlands
6. **Jongeren Milieu Actief***
   having its registered office in Amsterdam, the Netherlands

Respondents, original claimants,

Collectively called: "**Milieudefensie et al./Friends of the Earth Netherlands et al.**" (hereinafter: Milieudefensie et al.)

Legal counsel:
mr. R.H.J. Cox, *mr.* M.J. Reij, *mr.* A.J.M. van Diem

versus:

Shell plc
having its registered office in London, United Kingdom

Appellant, original defendant

Legal counsel:
mr. D.F. Lunsingh Scheurleer, *mr.* T. Drenth

and:

Stichting Milieu en Mens

having its registered office in Zwolle, the Netherlands

Joined party on the part of Shell plc

Legal counsel:
mr. Dr D.J.B. Bosscher

Your Honours,

1. In today's oral arguments, it has been explained that Shell has an independent responsibility and legal obligation to contribute to preventing dangerous climate change.

2. One of the defences that Shell presents against its reduction obligation is that the Judgment would be ineffective, indeed counter-productive. According to Shell, the global climate approach would not benefit from Shell reducing its CO_2 emissions.

3. It has already been explained in detail in these proceedings that Shell cannot hide behind what other companies will do. The conduct of others is not up for review here, nor is it relevant in order to assess the question whether Shell is subject to a legal obligation.[1]

4. This was recently confirmed in the decision in the F-35 case of this Court of Appeal. In that case the State argued that the prohibition on supplying F-35 parts to Israel could not be awarded, because other countries would supply those parts to Israel instead. The Court rejected that argument. The Court considered that the Netherlands cannot escape its obligation because the interest "*in prohibiting the unlawful export of military goods from the Netherlands to Israel does not disappear because other countries may also be acting unlawfully by taking over the supply of the goods*."[2]

5. This case once again makes it clear that the behaviour of others does not stand in the way of granting an order if there is a threatened violation of a legal obligation.

6. At first instance and in its Statement of Defence on Appeal, as well as in its Statement of Defence on Appeal after Joinder,[3] Milieudefensie et al. again provided reasons for why the Judgment is effective. The Judgment is first of all effective in reducing the CO_2 emissions of the Shell group. This alone is enough to uphold the Judgment. In addition, in response to Shell's defence, Milieudefensie et al. showed that the reduction in CO_2 emissions to be realised by Shell will not be perfectly and immediately substituted by others in the oil and gas sector. In addition, it has been shown that the Judgment encompasses many other kinds of flywheel effects; effects that advance the climate approach and the energy transition.

7. Nevertheless, in this part of the arguments I will refute the detailed new expert reports that Shell has submitted.

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[1] Statement of Defence on Appeal, section 8, and Statement of Defence on Appeal after Joinder, section 5, in particular paras. 79 to 106.
[2] Court of Appeal of The Hague, 12 February 2024, ECLI:NL:GHDHA:2024:191, para. 5.45.
[3] Statement of Defence on Appeal, section 8, and Statement of Defence on Appeal after Joinder, section 5, in particular paras. 79 to 106.

8. Shell is particularly relying on the very detailed report of Richard Druce, a NERA consultant. The Druce report is a peculiar report in certain respects. Druce states what he would do if he were Shell and had to comply with the judgment. Shell apparently wants to show via Druce how it could act as an economic actor and asks Druce to tell that story on its behalf.

9. That is the reason why the following text of Druce is included in footnote 18 of the report:

   "*Note that this is my expert opinion based on my expectations of the response of an economic actor in these circumstances. In forming this view (and any other views set out in this report) I have not received any non-public information from Shell's future strategy.*"[4]

10. Shell therefore asked Druce, as it were, to sit on the chair of the Shell CEO and to say what he would do with the Judgment. Druce did so without taking account of Shell's underlying legal obligation or taking note of the considerations that led to the dictum and that make clear that Shell must endeavour to effectively help prevent dangerous climate change.

11. Nor does Druce take account of other important factors that will be relevant for the CEO and Shell's board of directors in deciding how to deal with the Judgment. For example, when deciding on how to comply with the Judgment, Shell's board of directors will, among other things, have to think about its social licence to operate, with regard to its employees, its shareholders, the political arena and the public at large.

12. Shell will have to engage in risk management and will have to ask its in-house legal department whether the way in which Druce proposes to comply with the Judgment, is actually legally achievable and tenable. We have already shown in this respect that Druce's assumption about the sale of Shell's fossil fuel assets has quite a few drawbacks. The simplicity with which Druce deals with the Judgment is not the simplicity with which Shell and its legal advisers can deal with the Judgment.

13. These findings of Shell's legal advisers and the findings of Shell's board of directors regarding what is necessary to maintain its social license to operate, form part of the considerations of the rational economic actor presented by Druce. However, Druce does not discuss any of those other aspects that form part of the decision tree of Shell's board of directors to come to a management decision. Druce merely limits himself to a simple financial analysis, as if there are no other matters that Shell's board of directors has to bear in mind.

14. This makes the Druce report flawed and of little value on this point. In other words, it does not provide a good picture of the Judgment's effectiveness.

15. What is more, the arguments that Druce makes are substantively incorrect and the examples he mentions in this respect are not relevant for the specific position in which Shell finds itself. One such inaccurate argument is Druce's assertion that a reduction of Shell's trading house will not have any effect whatsoever on the oil and gas market.

16. Druce makes a point of it in his report that Shell not only sells its own oil and gas, but also trades oil and gas produced by third parties. According to Druce, Shell could comply with the Judgment not by reducing its own production, but by reducing the trade in and sale of the production of

[4] See also Exhibit S-122, p. 15 (footnote 18).

third parties. In that case there would be no price effect whatsoever because other trading houses would take over Shell's trade and sales, according to Druce.

17. However, what Druce does not explain precisely is what Shell's trading house, known as Shell Trading, does. Druce does not provide any context whatsoever regarding what Shell Trading is and does and what role Shell Trading plays within the oil and gas sector. If Druce had done so, it would have been clear why a reduction of Shell Trading will indeed have such a price effect in the market. It would also have been made clear why the Enron bankruptcy cited by Druce cannot be compared to a reduction of Shell's trading business.

18. Shell Trading is a global network of legal entities within the Shell Group that trades oil, gas, refinery products, electricity and CO_2 rights all over the world.[5]

19. Shell Trading not only purchases and sells oil and gas products, it provides its selling and buying clients with other important services. For example, Shell Trading also arranges the transport and logistics of the oil and gas trade for its clients.[6] This is how Shell Trading facilitates the global trade in oil and gas.[7]

20. Shell Trading has its own transport network,including its own shipping fleet of oil tankers, LNG ships and other kinds of ships. This is an enormous fleet.[8] Shell even has the biggest fleet in the world in terms of LNG ships.[9] In addition, Shell has its own refineries and storage terminals all over the world, where it processes and stores large quantities of oil and gas while awaiting later delivery possibilities.[10] Shell uses that enormous storage capacity to, inter alia, speculate on price fluctuations.[11]

21. Shell Trading is an important spider in the web of the flow of oil and gas that takes place within every link of the value chain, both within the Shell Group and in the wider oil and gas market. From oil and gas extraction, to refining, to transport and storage, to distribution to business and private clients. Shell Trading does this within the Shell Group for the Shell companies, and for others in the oil and gas market.[12]

22. As Milieudefensie et al. already discussed in its Statement of Defence on Appeal, there are hundreds of independent oil and gas producers that only produce oil and gas and do not have the infrastructure, the distribution and the trade network to deliver their products to the end consumer. These companies are dependent on oil and gas traders like Shell Trading to bring their products to the market.[13]

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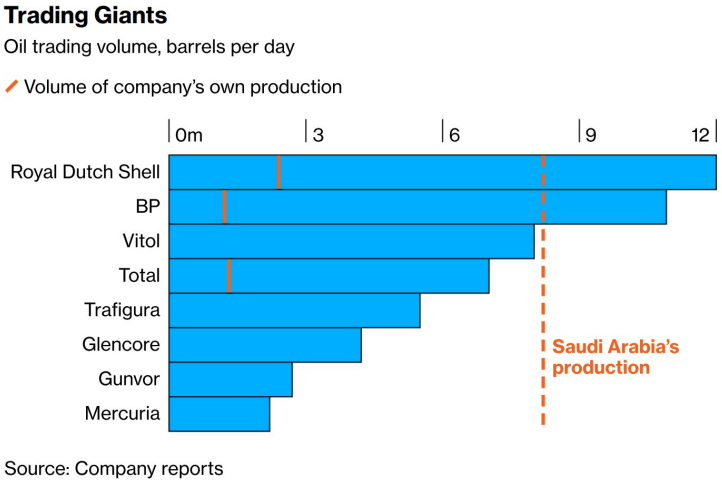
[5] MD-563A, p.1
[6] Ibid, pp. 1, 7, 10, 12.
[7] Ibid, pp. 1 and 10.
[8] Ibid, pp. 7, 8 and 10.
[9] Ibid, p. 7.
[10] Ibid, pp. 1, 7, 8, 9 and 12.
[11] MD-563C, pp. 1-2.
[12] Ibid, pp. 1, 2, 6 - 14.
[13] Statement of Defence on Appeal, paras. 934 – 938, MD-563A, pp. 3, 12.

23. Shell Trading trades some 12 million barrels a day,[14] making Shell the biggest oil and gas trader in the world.[15] Shell is both the biggest buyer of oil and gas in the world and the biggest seller of oil and gas. This can also be seen in the following figure from a Bloomberg article:[16]



24. This figure shows that Shell's trade volume is bigger than the trade volume of every other big trader in the market. Through the economies of scale it can create as the biggest trader, in its own words it provides extra financial value to its clients, including the independent oil and gas producers.[17] This is partly because of its global transport and distribution capabilities and the large capacity for purchasing and storing oil and gas.[18]

25. In addition to all of this, Shell Trading also finances independent producers of oil and gas.[19] Shell Trading finances other producers to ensure that it can continue buying big volumes of oil and gas in the future.

26. In addition to providing its own financing to independent oil and gas companies, Shell Trading also helps these producers to acquire banking financing.[20] Without the intervention of Shell Trading it is thus more difficult for independent oil and gas producers to obtain the necessary financing.

27. Last, Shell Trading also serves its clients in the area of risk management by protecting them against adverse price developments in the market. Shell does this via its derivatives trade. Shell Trading's daily trade in derivatives is a multiple of the trade in the 12 million physical barrels that it trades per day. Shell Trading uses the derivative trade to make investment returns for itself, but also to cover the risks of the physical trade for itself and for its clients.[21]

28. What has been discussed up to now paints a picture of what Shell Trading does and the scope of these activities. I have discussed this to show why, without further substantiation, Druce cannot simply say that the Judgment would have no price effect if Shell were to phase out its trade activities and that therefore nothing will change in the oil and gas market.

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[14] Ibid, pp. 1-3, 5-6.
[15] MD-563D, p. 7 (by volume) and MD-563B, p. 2 and MD-563A, p. 5 (both by revenue).
[16] MD-536D, p. 7.
[17] Exhibit MD-563A, pp. 9 to 12.
[18] Ibid, pp. 7 and 10.
[19] Ibid, pp. 1, 13 and 14. See Statement of Defence on Appeal, para. 934
[20] Ibid, pp. 13 and 14. See Statement of Defence on Appeal, para. 934.
[21] Ibid, pp. 2-4.

29. Druce's conclusion is illogical and is also contrary to how Shell itself sees things. Shell itself in fact believes that its current scale size as the biggest oil and gas trader in the world results in price advantages and other advantages for its clients.

30. But if the current scale size of Shell comes with these kinds of advantages for Shell's clients, then conversely the phasing down of that scale size will come with price disadvantages for Shell's clients and with a loss of the other advantages that Shell's current scale size offers them. Druce does not take these circumstances into account.

31. Nor is it likely that if Shell, as the biggest trader in oil and gas, were to considerably reduce its physical trading volume, that Shell's place could simply be filled in by others. First, there are almost no other players with the scale size of the current Shell trade branch and consequently they cannot offer the same advantages to the oil and gas market like Shell in its present state can. But secondly, and perhaps even more importantly, is that Shell has been active in the trading business for 100 years and its success is also to a great extent built on the trust Shell gets from the market due to its name and record of service.[22] The knowledge that Shell has built up in 100 years in terms of know-how, skill, capacity, business relations and trust, can never be taken over by another party overnight, if it could indeed ever be taken over to that degree by another party.

32. That reducing the trade branch would not have an effect on the oil and gas market is thus an unnuanced statement of Druce that does not align with reality. The comparison that Druce makes with the bankruptcy in the year 2001 of the trading house of the American Enron, does not align with reality. I will explain this on the basis of the expert report of Erickson and Green that Milieudefensie et al. has submitted as Exhibit MD-561.

33. Erickson and Green state in their expert report in response to Druce, why a shrinking of Shell Trading cannot be deemed the same as the bankruptcy of Enron.[23] Enron's position cannot be compared to that of Shell. Enron was primarily a broker, without significant production or retail activities in oil, like Shell does have.[24] Enron was thus primarily a broker who makes margins acting as a broker but other than that added little market value to the traded goods. This is completely different for Shell. The following comparison makes this clear, according to Erickson and Green.

34. In the year 2000, the year before Enron would go bankrupt, Enron earned approximately 1 dollar per traded barrel of oil and gas as broker. This is less than 10% of the then oil and gas prices. According to Erickson and Green, this low margin per barrel implies that Enron was to a great extent busy trading in "*commodity and futures contracts."*[25] In other words, trade on paper instead of physical trade.

35. To make a comparison with Shell: In 2022 Shell earned approximately 86 dollars per traded barrel of oil and gas and this is equivalent to more than 80% of the current oil and gas prices.[26] This shows that Shell adds far more value to the market per traded barrel. It is evident that the loss of a legal entity that adds more value to the market will have a greater impact on the market than if a legal entity that only adds a fraction of that value to the market disappears. In other

[22] MD-563A, p. 7.
[23] MD-561, pp. 9 and 10.
[24] MD-561, pp. 9 and 10.
[25] MD-561, p. 10.
[26] Ibid.

words, Shell and Enron are incomparable entities and so the market impact cannot be compared.

36. Erickson and Green also point out that Druce's analysis about Enron is suspect from a scientific perspective, inter alia because Druce does not show what would have happened with the oil and gas prices if Enron had not gone bankrupt. Druce is thus not making a comparison between the world with an Enron bankruptcy and the world without an Enron bankruptcy. The sources that Druce cites appear not to make that comparison either. For that reason, Druce's analysis is scientifically not valid.[27]

37. Erickson and Green describe why downsizing Shell's trading house can indeed be deemed to have market consequences. According to Erickson and Green, every restriction or price increase in the trade chain – whether this takes place on the production side, or on the consumption side or somewhere in between – can lead to a price increase for the consumer.[28] In view of everything that has been explained before with regard to the special position that Shell holds as the biggest trader in the world, it is evident that Shell cannot simply be replaced and that a reduction of Shell's trading activities will have a market impact.

38. Every friction, every restriction and every delay that arises due to an intervention in the trade chain can push the price of a product up further than would have been the case without that intervention, according to Erickson and Green.[29]

39. For the same reason, a decision of Shell to comply with the Judgment by selling a part of its fossil fuel assets could also lead to price increases.[30] The sale of assets also initiates new frictions, even if only because of the time and the transaction costs that will accompany these sales and the fact that the market is dealing with a sale of assets as a result of a court climate order for the first time.[31] According to Erickson and Green, that novelty can in itself lead to frictions in the trade chain because buyers have to update their own expectations about the speed of the energy transition due to this new market risk. Erickson and Green explained that consequently buyers will stipulate a lower sales price, or request extra concessions from Shell or perhaps even completely decide against buying assets from Shell. According to them, all these consequences can make the sale of assets more difficult for Shell and delay the sale and these kinds of frictions can in themselves already lead to a reduced supply of oil and gas and thus bring about a price effect and a reduction of CO_2 emissions.[32]

40. Erickson and Green also point out that Druce also indicates himself in his report that companies that buy or sell oil and gas fields will take account of existing and expected rules and trends relating to the decarbonisation of the energy system.[33] Seen in that light, the Judgment is of course a signal to the market that cannot be ignored, regarding how those decarbonisation rules and trends might develop more quickly than expected.[34] According to Erickson and Green, the market signal that emanates from the Judgment is also one of the reasons why it may be expected that it will lead to a reduction in oil and gas production. Both buyers and sellers of oil

[27] Ibid.
[28] MD-561, p. 3.
[29] MD-561, p. 6.
[30] MD-561, pp. 6 and 7.
[31] MD-561, pp. 6 and 7.
[32] MD-561, pp. 6 and 7, see also p. 8.
[33] MD-561, p. 8 with a reference to para. 67 of the Druce report (Exhibit S-122).
[34] See in this respect also MD-471.

and gas fields will discount this market signal in their decisions. Druce and the examples to which he refers do not take account of these kinds of circumstances.[35]

41. In the previously submitted report of Erickson et al. from 2022 (Exhibit MD-469)[36] it was already pointed out that the Judgment is expected to have a limiting effect on the financing options for new oil and gas fields.[37] Erickson et al. also pointed out that due to the Judgment companies in the oil and gas sector will have to take more account than would otherwise be the case of an acceleration of restrictions of oil and gas production. They will also have to take account of their own potential liability position.[38] There are thus several roads along which Shell's compliance with the Judgment can result in disincentives in the market, so that it cannot simply be assumed that oil and gas companies will continue investing in oil and gas assets on exactly the same footing as previously. These disincentives also make a contribution to the climate approach. Druce did not present a substantiated dispute of these findings of Erickson et al. in the Druce report.

42. In addition, Druce's analysis only relates to fields already in operation and he did not look at the effects emanating from the Judgment in relation to fields that are not yet under development, even though this is to a great degree decisive for the future production of a company, according to Erickson and Green.[39] They stick with the conclusion drawn earlier in the report of Erickson et al. that the Judgment has positive effects for global CO_2 reduction, compared to a situation where the Judgment did not exist.

43. The Dutch economists Sweder van Wijnbergen and Rick van der Ploeg support Erickson and Green's analysis relating to the Judgment's effect on future production and the requisite project development. Milieudefensie et al. submitted their expert statement as an exhibit.[40]

44. Van Wijnbergen and Van der Ploeg point out that due to its special position, Shell is able to develop very capital-intensive and highly complex oil and gas fields. According to Van Wijnbergen and Van der Ploeg, if Shell, in compliance with the Judgment, must have withdrawn from the oil and gas market to a considerable degree by 2030, Shell's special position will not easily be taken over by someone else.[41] Druce did not take account of the fact that, as a result of the Judgment, in 2030 Shell will be less able to develop these kinds of capital-intensive and highly complex new oil and gas fields.

45. In addition, with regard to new oil and gas fields not yet developed by Shell, it is less onerous for Shell not to transfer these fields and licences to other parties. Shell will in such case not yet have made any costs for putting these fields into production, so that it will not have to earn back those costs.[42]

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[35] MD-561, pp. 7 and 8.
[36] For a detailed discussion of the report of Erickson et al. see: Statement of Defence on Appeal, paras. 905 – 930.
[37] MD-561, p. 1 with a reference to their report of September 2022 (Exhibit MD-469).
[38] MD-561, p. 1 with a reference to their report of September 2022 (Exhibit MD-469).
[39] MD-561, p. 7.
[40] MD-562.
[41] MD-562, p. 5.
[42] See Statement of Defence on Appeal, para. 913 for the possible effectiveness of returning licences. The Beyond Oil and Gas Alliance mentioned there now comprises 24 countries and regions: See https://beyondoilandgasalliance.com/who-we-are/.

46. Shell has indicated in this respect that it must be expected that governments may demand the return of licences for the development of new fields if Shell does not use the licences. In the Statement of Defence on Appeal, Milieudefensie et al. referred to the Beyond Oil and Gas Alliance, an alliance between countries that has the goal of facilitating the phasing out of oil and gas production.[43] This is, inter alia, due to no longer issuing new oil and gas licences, reducing existing oil and gas production, no longer subsidising the production of oil and gas and by collaborating when taking other significant measures that contribute to reducing the supply of oil and gas on the global market. In the meantime, the group of countries that has aligned with this initiative has expanded further and the alliance now comprises 24 countries and regions.[44]

47. Up to now we have discussed the effect of the Judgment on oil and gas fields. According to Erickson and Green, however, the Judgment will also have an effect on investments and transactions relating to fossil fuel assets other than oil and gas fields.[45] Think of such things as the sale of petrol stations, pipe lines, ships, land, etc.[46] Buyers can use the purchased assets for something else, so that less oil and gas is sold, resulting in a positive climate impact.[47] For example, land that was first used for oil and gas exploration can be transformed into a storage site for CCS activities, and petrol stations can, for example, be transformed into charging stations.[48]

48. In his analysis of the sale of petrol stations, Druce does not take account of this alternative possibility of transforming petrol stations into charging stations. He thus also does not take account of the positive climate effects this could entail.[49] Erickson and Green furthermore point out that here too the approach applied by Druce has its defects. This is, among other things, because the data he uses does not show the total volume of the sales, but only the averages per petrol station. On the basis thereof it could not be determined what happens with the total volume, say Erickson and Green.[50] In addition, the period after sale that Druce assessed is too short to chart all behaviour adaptations of consumers. Behaviour changes such as purchasing a more efficient car or modifying the commuting distance to limit transport costs, often take years (only when a new car is purchased or a relocation occurs).[51]

49. Erickson and Green also point out that Druce wrongly does not take account of how Shell could deal with the proceeds it generates by the sale of fossil fuel assets as a result of the Judgment. Shell could invest those proceeds in, e.g., the growth of its sustainable energy branch. This would help reduce global CO_2 emissions, because Shell would be increasing the supply of sustainable energy and its price would fall at the same time.[52] That Druce does not take this into account is a shortcoming in his reasoning.

50. Erickson and Green indicate that a comparable shortcoming can also be found in Druce's reasoning regarding the consequences of Shell having to make staff redundant.[53] According to Druce, Shell staff that is made redundant will simply start working for another oil and gas

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[43] Statement of Defence on Appeal, paras. 913 et seq.
[44] See https://beyondoilandgasalliance.com/who-we-are/.
[45] MD-561, p. 8.
[46] MD-561, p. 8.
[47] MD-561, p. 8.
[48] MD-561, pp. 4 and 8.
[49] MD-561, p. 8.
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[51] MD-561, p. 8.
[52] MD-561, p. 4.
[53] MD-561, p. 4.

company and their work will consequently have the same climate impact. Once again, Druce is being rather slapdash and his reasoning is limited.

51. Erickson and Green believe that the skills that Shell staff have are relatively easy to transform to skills that are necessary with regard to scaling up low-carbon solutions such as hydrogen, wind and CCS. Druce again does not take any of this into account and simply assumes that there are no options for Shell staff other than continuing to work in the oil and gas industry. Druce's reasoning again falls short.[54]

52. It can therefore be concluded that in his report Druce structurally does not pay attention to the alternative ways in which production factors of Shell such as capital assets, people and land can be used differently and how an impact that is favourable for the climate can be the result thereof. Nor does Druce take account of what Shell could generate in terms of positive climate consequences with the proceeds of the sale of its assets. Nor does he take sufficient account of the market signal emanating from the Judgment and how this can have an impact in the oil and gas sector. Nor has Druce presented substantiated as to why Shell's trade activities could shrink without any market effect and this has also turned out to be highly improbable on the basis of what I have discussed in this respect. Nor does Druce's analysis take account of the frictions, restrictions, and delays that in the value chain will be the result of Shell's compliance with the Judgment, each of which can in turn lead to price effects.

53. Now I would like to move on to what should be the most important aspect of the Druce report, a disputing of the relationship taken into account by UNEP in the Production Gap Report between less oil production and less oil consumption. According to UNEP, that relationship entails that a limiting of oil production leads to an increase in the oil price and that the effect of this is that less oil will be consumed. UNEP specifically indicates that for every barrel not produced, 0.2 to 0.6 fewer barrels of oil are consumed.[55] The District Court included these findings of UNEP in the Judgment.[56]

54. These findings of UNEP are based on, inter alia, peer reviewed studies of Erickson and these findings are supported in the report of Erickson et al.[57] Druce attempts to refute those peer reviewed results in his report, but fails to do so.

55. It must first be noted that the studies of Erickson and other scientists mentioned by UNEP provided insight into the effects of a production reduction on consumption, based on the elasticity of supply and demand. Contrary to what Druce suggests, these elasticities are based on empirical investigation into the real world changes in supply, price and demand in the oil and gas market.[58]

56. The studies from which these elasticities ensue are therefore based on a large number of actual events in the oil and gas market, including the transfer of assets and other production factors that may have occurred between producers.[59] To determine those elasticities it is not relevant what type of actor limits the supply.[60] This can be a public authority, but also a company. Druce

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[54] MD-561, p. 4.
[55] See, inter alia, Statement of Defence on Appeal, para. 921.
[56] Para. 4.4.50 of the Judgment.
[57] See also MD-561, pp. 6 and 7.
[58] MD-561, p. 4 (at the bottom) and p. 5 (at the top).
[59] MD-561, pp. 4, 5 and 6.
[60] MD-561, p. 5 (at the top): "*these elasticities are taken from statistical studies on how real-world changes in supply (regardless of the type of actor restricting supply) or demand have affected price in the oil and gas*

wrongly makes it appear as if the peer reviewed studies of Erickson and other scientists had not taken account of the transfer of production factors like capital, material and people. But this is incorrect.

57. Erickson and Green point out that Druce himself provides an overview of both supply and demand elasticities.[61] Although Druce gives his own estimate of the demand elasticity of -0.16 on the basis of these studies,[62] he fails to do so for the supply elasticity. Erickson and Green have established, however, that the supply elasticities cited by Druce are in the same order of magnitude as the demand elasticity he mentioned.[63] This is an important conclusion.

58. Because when the price elasticity is the same on the supply side and the demand side, the reduction of the production by 1 barrel of oil has half that effect on the reduction of consumption. According to Erickson and Green that principle ensues from "*countless economic textbooks*".[64] The elasticities mentioned by Druce himself would therefore lead to approximately half (0.5) a barrel not consumed for every barrel not produced, according to Erickson and Green. This calculation would then come to the top of the bandwidth of what UNEP has indicated, i.e. the previously mentioned bandwidth of 0.2 to 0.6. According to Erickson and Green there are other economists who have calculated that in the long term the ratio between supply and demand is this factor 0.5.[65] The supply elasticities mentioned by Druce therefore do not refute the UNEP findings, but confirm them.

59. Erickson and Green lastly explain that Druce's other comments on this UNEP finding and the underlying studies of Erickson and others carry no weight. They explain why a limitation at the level of an individual company can just as easily have a price effect, as the supply limitations to which the study cited by UNEP relates.[66]

60. Nor does Druce deny that a reduction of the sale of oil and gas leads to an increase in price and that an increased price leads to less consumption of oil and gas, if the other circumstances remain the same.[67] The only thing that Druce asserts is that the price effect will be small or minimal. But as Erickson and Green remark, even a small price effect does not mean that it is an insignificant effect or that there is no effect.[68]

61. What stands out in this respect is that Druce particularly emphasises that Shell "only" produces 1.5% and 2% of global oil and gas and that therefore any impact will by definition be minimal. This is, of course, rather remarkable framing. Certainly for one company this is a very large share in global oil and gas production. And that is only the production. As explained above, Shell is also the biggest trader in oil and gas in the world. The suggestion that it would not matter if one of the biggest and most influential players on the oil and gas market is forced to change is, in Milieudefensie et al.'s opinion, not credible.

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market."

[61] MD-561, p. 5 (third paragraph). See also S-122, pp. 110 and 121.

[62] S-122, p. 109. See also: MD-561, pp. 5 and 6.

[63] MD-561, pp. 5-6.

[64] MD-561, pp. 5 and 6 and note 35.

[65] MD-561, p. 6.

[66] MD-561, p. 6.

[67] Ibid, pp. 1 and 2.

[68] Ibid, p. 2.

62. Druce then asserts that what Shell will no longer produce and sell, can simply be taken over by OPEC countries and otherwise by producers of shale oil and shale gas in the United States. This argument cannot succeed either.

63. First, because the historical market behaviour of OPEC and the shale producers is already encompassed in the empirical data used by UNEP and Erickson. Second, Druce presents the functioning of OPEC and shale producers without nuance.

64. Obviously, an important reason for the founding of OPEC was that the OPEC countries can make agreements on the quantity of oil that they produce together. Naturally this gives OPEC a certain influence on the oil prices.

65. Druce, however, assumes that OPEC must in any event intervene in response to a supply restriction by Shell, by opening the OPEC tap some more. As Erickson explains, this is an "*extraordinary claim*" by Druce. The future behaviour of OPEC is in fact very uncertain and difficult to predict.[69] Druce himself mentions examples in which OPEC limits its own production by turning the oil tap a little shut, to keep the oil price high. It is quite possible that OPEC will not respond at all to a limiting of supply elsewhere in the world.[70]

66. Druce also loses sight of the fact that the national oil companies (called NOCs) of OPEC countries must often also serve public goals. This means things such as providing employment, public infrastructure and taking care of specific fixed national revenue for the OPEC countries.[71] Depending on the considerations to be made in this respect, the response of OPEC countries can differ.

67. The previously cited economists Van Wijnbergen and Van der Ploeg indicate that in any event the oil and gas producers in the Middle East appear to not want to undermine the energy transition. This is presumably from fear of the charging of border taxes on CO_2 as these will be introduced at the external borders of the EU.[72] For example, the Saudi national oil company Saudi Aramco recently decided not to increase oil extraction.[73] Once again, Druce did not take these kinds of developments and possibilities into account.

68. Van Wijnbergen and Van der Ploeg also show why Druce's reasoning about the share producers is not correct. Druce has the same story about shale producers in the United States as he has about OPEC, i.e. that they will immediately fill the gap that Shell will create through less production and sales of oil and gas.

69. Once again, first and foremost the behaviour of shale producers is already incorporated in the empirical data that forms the basis of the previously discussed UNEP findings.

70. Aside from this, Druce's reasoning is again not correct. As Van Wijnbergen and Van der Ploeg indicate, the operational shale fields are running at full capacity and there is little to no spare capacity.[74] Drilling new shale fields takes time in any event and the related decision depends on

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[69] MD-561, p. 9.
[70] MD-561, p. 9. See also Exhibit S-287, p. 8 (footnote 44).
[71] MD-565A, p. 1.
[72] MD-562, p. 3.
[73] MD-562, p. 3.
[74] MD-562, pp. 3 and 4.

the oil price at that time. Extracting shale oil has a high cost price and is not profitable with oil prices that are too low.[75]

71. Van Wijnbergen and Van der Ploeg also point out that Druce and Mulder do not take sufficient account of the changes going on in the world. They point out, inter alia, that in the last few years more and more countries have set a net zero goal for 2050, that in that area there is more and more regulation and that it is therefore unlikely that Shell will be the only company that will undergo changes in the coming years.[76] For that reason it is therefore not logical that every reduction that Shell brings about in its production and sale of oil and gas, will continually be supplemented by oil and gas companies. Historical data have little value in this respect in a rapidly changing world that is busy achieving a 1.5°C target.[77]

72. I will briefly respond to another incorrect argument by Druce. He wrongly asserts that a reduced production of oil and gas by Shell can on balance lead to more global CO_2 emissions. This is supposedly the result of the fact that other companies produce more carbon-intensively. According to Druce, reduced gas production by Shell would lead to more coal use so that on balance carbon emissions could increase.

73. As Erickson and Green explained, however, a reduced gas production will be accompanied by an increasing gas price. The result of the increasing gas price is first of all reduced gas use, so that carbon emissions are reduced. With increasing gas prices people will be more frugal in their energy use.

74. In addition to more frugal behaviour, people and legal entities might also look for alternatives to gas. Insofar as they find those alternatives in sustainable energy solutions, gas use will decline further, as will carbon emissions. Insofar as they find those alternatives in coal use, carbon emissions will increase again compared to the emission reduction that is achieved.[78]

75. This means that on balance the CO2 emissions can only increase if the effect of the increased use of coal is greater than the effect of frugal use of energy and sustainable energy counted together.[79]

76. Druce primarily concentrates on increased coal use and does not take into account that partly due to the gas crisis both in and outside of Europe, the focus is very much on sustainable alternatives and more energy efficiency. The decision of the global community during COP28 to move away from fossil fuels in this critical decade also shows this.

77. The same applies to the decision at COP28 to triple the capacity of sustainable energy in the coming years and to double energy efficiency. All of this also shows that Druce's focus on increasing coal use is wrong and unfair, say Erickson and Green.[80] In the short term the gas crisis may have led to more emissions because of the enormous speed by which the gas supply from Russia to the EU plummeted, but in the coming years and in the longer term the gas crisis will in fact lead to fewer emissions because of the further scaling up of sustainable energy which takes place as a result thereof.[81] Erickson and Green refer in that respect to the same conclusions of

[75] MD-562, pp. 3 and 4.
[76] MD-562, p. 5.
[77] MD-562, p. 5. See in this respect also Exhibit MD-471.
[78] MD-562, p. 5.
[79] MD-561, pp. 11 and 12
[80] MD-561, pp. 11 and 12.
[81] MD-561, pp. 11 and 12.

the IEA,[82] which conclusions Milieudefensie et al. already discussed in its Statement of Defence on Appeal after Joinder.[83]

78. Last, a brief response to Druce's last two arguments.

79. First, Druce's argument that it would be better to let Shell produce rather than leave it up to others. This is because the CO_2 intensity of Shell's production is lower than average. This is odd reasoning, because just as there are producers that emit more emissions with production than Shell, there are also produces that have lower emissions with their production. This applies, e.g., to virtually all production in the Middle East.[84] During his arguments, *mr*. Van Diem explained that the IEA does not see any value in the argument that producers with a lower emission intensity should be allowed to produce more than others.[85]

80. Moreover, Erickson and Green demonstrate on the basis of studies that in general the degree in which companies differ in the CO_2 intensity of their production is too small to counteract the already discussed favourable CO_2 effects of reduced oil and gas production by Shell. On balance, the climate benefit that is achieved will remain positive if Shell reduces its oil and gas production.

81. Lastly, Druce's argument that the Judgment would be at the expense of the well-being of consumers if it were to cause the price of oil and gas to go up. This is also an odd argument because Druce does not take account of the fact that the Judgment finds its basis in the harm to the life and well-being of citizens due to the consequences of climate change.[86]

82. Erickson and Green point out in this respect that just as a price for oil and gas can be too high, the price for oil and gas can also be too low; an oil and gas price that is too low means an abundant availability of oil and gas and that undermines the taking of climate action.[87] This is also an important reason why interference on the supply side is necessary, according to Erickson and Green.[88]

83. Intervening on the supply side, as the Judgment does, helps to deal with the climate approach. This intervention on the supply side is important because it offers a counterweight to the leakage effects of climate measures that only reduce the demand for oil and gas. An example can illustrate this. If the demand for oil and gas falls in one part of the world due to climate measures, the prices will also fall. These price reductions will then increase the demand for oil and gas. On balance there is then a leakage effect of the climate efforts on the demand side. To mitigate this leakage effect it is important that action is taken precisely on the supply side, by limiting the supply of oil and gas, according to Erickson and Green.[89]

84. As has already been explained today, this is another reason to reduce the quantity of oil and gas on the market in this critical decade, as the Judgment intends.

85. The last argument that Druce has against this is that he would prefer not to see intervention on the supply side by a measure like the Judgment. According to him, it would be preferable to

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[82] MD-561, pp. 11 and 12.
[83] Statement of Defence on Appeal after Joinder, sections 3.4 and 3.5.
[84] MD-561, p. 12.
[85] Oral arguments on Shell's reduction obligation – section 4, pp. 20-21.
[86] Notes on Oral Arguments 1 of day 3. See also MD-561, p. 13.
[87] MD-561, p. 13.
[88] MD-561, p. 13.
[89] MD-561, p. 13.

bring supply and demand down by means of market-led incentives, like emissions trading and CO_2 taxes.[90]

86. As Erickson and Green point out, efficiency benefits can certainly be gained if there were a global market approach to CO_2 emissions, but there is no such global approach.[91] At present, worldwide only 17% of the global emissions fall under some form of emissions trading system.[92] To put it differently, 83% of the global emissions does not fall under an emissions trading system. Shell may mention the ETS in the EU, but the bulk of its emissions do not fall under this system. For this reason alone, the discussion relating to the EU ETS is only of very limited relevance for this case.

87. Druce also gets caught up in ideal images on how the world could solve the climate problem as cost efficiently as possible, but this means nothing when it can be established that those images are not reality and probably will not become reality, in any event not during this critical decade. Because of the lack of the desired global approach – which has been lacking for 30 years, partly under pressure from the fossil fuel industry[93] – it is therefore necessary that every party with a great influence on the problem will take its responsibility in solving the problem.

88. Druce's argument on the alleged relative efficiency of CO_2 pricing or other market instruments for reducing emissions is a distraction manoeuvre, according to Erickson and Green.[94] It has been one of the fixed talking points of the oil and gas industry for decades, but it has not helped the world move forward. No single actor – this Court of Appeal, Shell, a country or region – is able to implement a global "efficient" climate policy on its own. However, this does not detract from each party's own responsibility and the effectiveness of the reduction order, because of the direct and indirect effects that can be expected for the acceleration of climate action.

89. I would like to refer in this respect to the detailed discussion of the expected indirect effects of the Judgment by Professor Rotmans and Professor Loorbach.[95] None of the important indirect effects mentioned by them are validly disputed by Druce or other experts of Shell. This is understandable: not one of the Shell experts is a transition scientist. They therefore do not have the scientific transition expertise that Rotmans and Loorbach have.

90. With reference to many sources, Rotmans and Loorbach establish that the indirect (system) effects of the Judgment are at least as great as the direct (market) effects. To quote them: *"[T]he judgment has contributed to an increased (financial) risk profile for the fossil fuel industry, a risk that the oil and gas companies themselves also acknowledge. In addition, it was a wake-up call for numerous other companies domestically and abroad and in a wide range of industries. The judgment is also an inspiration for a growing number of lawsuits in which governments and companies are being summoned to take more action to combat dangerous climate change, thereby protecting human rights."*[96]

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[90] MD-561, pp. 14 and 15.
[91] MD-561, pp. 14 and 15.
[92] This appears from the 'Emissions Trading Worldwide, Status Report 2023', of ICAP, p. 7. Shell has submitted a part of this report as Exhibit S-227, but not this part. The report is available on: https://icapcarbonaction.com/system/files/document/ICAP%20Emissions%20Trading%20Worldwide%202023%20Status%20Report_0.pdf.
[93] MD-561, p. 14.
[94] Exhibit MD-561, pp. 14-15.
[95] Statement of Defence on Appeal, section 8.5, with reference to Exhibit MD-471.
[96] Exhibit MD-471, p. 2.

91. I will conclude this section.

92. Large changes always start with individual steps. Steps which hopefully the Court will order Shell to take. In 2007 the US Supreme Court decided in the EPA climate case that solving big problems starts by each party taking its own responsibility and not hiding behind the conduct of others.[97] The Dutch Supreme Court came to the same conclusion in the Urgenda case. The German Constitutional Court emphasised in the Neubauer case that a party cannot elude its responsibility by pointing to the emissions of others.[98] All these cases dismissed the argument that it would be pointless to make an individual contribution if others failed to make a contribution. Shell too must stop looking for excuses not to make an adequate contribution to climate action. It has got away with these excuses for three decades, and the world is now dealing with the serious consequences of this behaviour on a daily basis.

93. Milieudefensie et al. asked the District Court at first instance to draw a clear line and to tell Shell: Up to here and no further. Fortunately that is what the District Court did. We ask the Court to do the same and to affirm the Judgment of the District Court.

[97] Summons, para. 647.
[98] Statement of Defence on Appeal, paras. 890 et seq.