

**International Centre for
Settlement of Investment Disputes**

Washington, D.C.

In a dispute between

Azienda Elettrica Ticinese

and

The Federal Republic of Germany

CLAIMANT'S MEMORIAL

Luther.

Luther Rechtsanwaltsgesellschaft mbH

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GLOSSARY

AET	Azienda Elettrica Ticinese
Arbitration Rules	ICSID Arbitration Rules as in force since 1 July 2022
BNetzA	<i>Bundesnetzagentur</i> , the German Federal Grid Authority
BNetzA List	A List determining the order in which the remaining coal-fired power plants are being shut down from 2020 onwards, published by the BNetzA
BR-Drs.	<i>Bundesrats-Drucksache</i> , Parliamentary printing matter of the Bundesrat (second house of the German Parliament)
BT-Drs.	<i>Bundestags-Drucksache</i> , Parliamentary printing matter of the Bundestag (first house of the German Parliament)
Claimant	Azienda Elettrica Ticinese
Coal Ban Law	Law to reduce and end coal-fired power generation, in German, <i>Gesetz zur Reduzierung und zur Beendigung der Kohleverstromung (Kohleverstromungsbeendigungsgesetz)</i> of 8 August 2020, published in <i>Bundesgesetzblatt I 2020, Nr. 37, 13 August 2020, pp 1818 et seq.</i>
Coal Commission	Commission on Growth, Structural Change and Employment, in German, the <i>Kommission "Wachstum, Strukturwandel und Beschäftigung"</i>
Consortium Agreement	Agreement signed by the Partner Companies to pursue the aim of building the Lünen Plant
ECT	Energy Charter Treaty, Lisbon, 17 December 1994, UNTS 2080, 95
ETS	European Emission Trading System
EU	European Union
FET	Fair and Equitable Treatment
Germany	The Federal Republic of Germany
ICSID	International Centre for Settlement of Investment Disputes
ICSID Convention	Convention on the Settlement of Investment Disputes between States and Nationals of Other States, Washington, D.C., 18 March 1965, 575 UNTS 159
Institution Rules	The ICSID Institution Rules as in force since 1 July 2022
Lünen plant	The Coal-Fired Power Plant in Lünen, Germany
MCPS	Most Constant Protection and Security
Partner Companies	The Municipal Utilities other than Claimant that own shares in TKL, see Annex for the current shareholder list
Partnership Agreement	2006 Agreement between the Partner Companies establishing TKL
Respondent	Federal Republic of Germany
TKL	Trianel Kohlekraftwerk Lünen GmbH & Co. KG
World Bank	International Bank for Reconstruction and Development

MEMORIAL

- 1 As Counsel for the Swiss company Azienda Elettrica Ticinese (“**AET**” or “**Claimant**”), we hereby respectfully submit AET’s Memorial in this ICSID arbitration.
- 2 This Memorial is accompanied by documentary evidence in the form of exhibits (a list of these is attached as **Annex A**) as well as the following expert reports:
 - An expert report by Mr Kiran P. Sequeira and Mr Stuart P. Dekker of Secretariat International ([Exhibit CER-0001](#), the “**Secretariat Report**”);
 - An expert report by Dr Christoph Riechmann and Dr Jens Perner of Frontier Economics, ([Exhibit CER-0002](#), the “**Frontier Report**”).
- 3 The expert reports and witness statements are relied upon by Claimant in their entirety and form part of this Memorial.
- 4 This Memorial is structured as follows: after a short introduction (**A.**), we will set out the factual background of the dispute (**B.**), before explaining why the Arbitral Tribunal has jurisdiction to hear the case (**C.**) and why Respondent has breached its obligations under the Energy Charter Treaty (**D.**). The Memorial then continues with a section explaining the quantification of damages (**E.**). It concludes with Claimant’s prayers for relief (**F.**)

A. INTRODUCTION AND SUMMARY OF THE CASE

- 5 The essential facts of this case have already been set out in the Request for Arbitration (the “**Request**”). For the convenience of the Arbitral Tribunal, they shall be briefly recapitulated in this summary section.
- 6 The dispute is neither about the existence of climate change and its consequences, nor is it about contesting the need to reduce CO2 emissions or even a State’s right – in principle – to prohibit the firing of coal. It is instead about a very simple issue: if a State forces an investor to sacrifice its lawful investment for the public benefit, then the State has to pay compensation. This is a tenet not only of the Energy Charter Treaty (“**ECT**”)¹, but of investment protection in general. And Respondent has not complied with that principle. What is more, it has chosen not to pay compensation despite intense criticism and advice to the contrary. Its actions do not only constitute an expropriation of Claimant’s investment, but also unfair and unreasonable treatment as well as a breach of the obligations it entered into with regard to Claimant’s investment.

¹ [Exhibit CLA-0002: Energy Charter Treaty](#).

- 7 The dispute arises out of Claimant's investments in the new, highly efficient coal-fired power plant Lünen ("Lünen plant") through *Trianel Kohlekraftwerk Lünen GmbH & Co. KG* ("TKL"), the direct owner of the Lünen plant. Claimant is not only a shareholder of TKL. [REDACTED] Rule 66(f)
- [REDACTED] Rule 66(f)
- 8 The Lünen plant is one of the modern highly efficient coal-fired power plants which Germany at the turn of the century desperately wanted and needed: Germany needed the coal-fired power plants to replace the reliable base-load capacity to be lost due to the 2002 nuclear phase-out, and to reduce its carbon dioxide emissions by replacing old, polluting coal-fired power plants with new, highly efficient ones. AET is one of the companies which responded to that need, and which trusted that Germany would honour its commitments associated with the calls for long-term investments in new coal-fired power plants.
- 9 Germany did not. In 2020, Germany decided to prohibit the production of energy by firing coal. The Coal Ban Law provides for a shutdown path of coal-fired power plants which will lead to the Lünen Plant being closed down in 2031. The existing and irrevocable permits which allow the Lünen Plant to operate, fire coal and emit CO₂ (subject to having emission allowances) will be revoked. No compensation will be paid.
- 10 That was a fundamental change of its policy so far: instead of regulating CO₂ emissions via the European Emission Trading Scheme ("ETS") and letting the market forces determine the fate of coal-fired power plants, Germany decided to regulate them out of the market – irrespective of permits and irrespective of whether they would have emission allowances.
- 11 Germany knew that besides several power plants having operated for decades, it would also shut down the very power plants for whose constructions it had argued only a few years earlier. It knew that those plants would and could not have re-earned their construction costs, let alone their owners a return on their investment. It nevertheless decided to compensate only lignite coal-fired power plants, but not hard-coal fired power plants such as the Lünen plant. Germany thereby ignored not only the recommendations of its own Coal Commission (on whose authority and conclusions Germany pretended to act) but also the input from industry associations and experts which it had requested during the legislative proceedings. Those associations and experts pointed out that new coal-fired power plants, i.e. those having entered service after 2010, would not even be able to regain their investment cost. Germany chose not to review this in detail and thus intentionally closed its eyes to the consequence of its actions.
- 12 The Lünen plant will now be shut down before it will have even repaid the loans taken on for its construction. This does not only prevent Claimant from re-earning its investment as well as from making any profits on its investment. It also obliged Claimant to

pay back that part of the loans not re-earned during the operation of the Lünen plant. The damage caused to Claimant has been calculated at [REDACTED] Rule 66(f), excluding interest.

- 13 The Lünen plant is owned by AET and 28 other municipal-owned electricity utilities. They have tried in vain to convince the German government to grant compensation. German law does not allow them to directly claim compensation. Complaints filed with the Federal Constitutional Court would be inadmissible, inter alia, due to the public nature of the partners. As the sole non-EU partner, AET is able to rely on the ECT.

B. THE PARTIES

I. Claimant

- 14 AET is a legal entity under public law (*Instituto Cantonale di Diritto Pubblico*) organized under the laws of Switzerland with its address in El Stradùn 74, 6513 Monte Carasso, Bellinzona, Ticino, Switzerland.² It is wholly-owned by the Canton of Ticino (one of the 26 Cantons forming the Swiss Confederation).
- 15 AET is a producer and seller of electricity active on its Swiss home market as well as on the markets of other European countries such as Germany, Italy and France. AET predominantly uses Ticino's natural resources to generate renewable energy. More than a third of Ticino's hydropower is managed by AET on behalf of the Canton. In the 2023 financial year, AET, with its about 300 employees, generated a turnover of CHF 1,044 million.³
- 16 After 2000, as energy demand in the Canton of Ticino steadily increased, it became increasingly difficult for AET to ensure a secure electricity supply. Consequently, AET decided to diversify its electricity portfolio to supplement its primarily hydropower-based energy generation with more stable base-load energy sources (see **Section C.III.** below).
- 17 Traditional base-load capacities like coal and gas power plants were scarcely represented in Switzerland, and the country's energy policy was also increasingly moving away from nuclear power. Additionally, potential co-shareholders in Switzerland were not interested in joint ventures due to competition. Therefore, AET needed to look outside Switzerland for investment opportunities.

² [Exhibit C-0001: Commercial Register for AET \[EN/IT\]](#); and Article 1 of AET's Law of 10 May 2016 (*Legge sull'Azienda elettrica ticinese del 10 maggio 2016*) available [here](#) (last accessed on 29 September 2023).

³ [Exhibit C-0018-DE / Exhibit C-0018-EN: AET, The AET at a glance, available at: https://www.aet.ch/Die-Azienda-Elettrica-Ticinese](https://www.aet.ch/Die-Azienda-Elettrica-Ticinese), (last accessed on 27 July 2024).

- 18 At that time, Germany had decided to promote new and highly efficient coal-fired power plants following its decision to phase out nuclear energy, ensuring a stable electricity supply. As a result, AET found good investment conditions in Germany (see Section C.II. below) and joined a major German project to build a state-of-the-art coal-fired power plant by investing in TKL.
- 19 AET's conventional energy business in Germany is concentrated in AET's 15.84 % direct participation in TKL.⁴

II. Respondent

- 20 The Federal Republic of Germany ("**Germany**") is represented by the Federal Ministry of Economy and Climate Protection (*Bundesministerium für Wirtschaft und Klimaschutz, BMWK*).
- 21 Coal-fired power plants have historically played a significant role in Germany's energy landscape and economic development. For decades, they have been a cornerstone of the country's electricity generation, providing a reliable and cost-effective source of energy. This has been and continues to be essential for Germany as a highly industrialised country, featuring many energy-intensive industries (such as steel and chemical manufacturing) dependent of stable and affordable energy supply. Accordingly, still today, Germany remains one of the largest consumers of coal in Europe, with coal accounting for approximately 26% of its energy mix.⁵
- 22 Germany is divided into 16 Federal States. Legislative and administrative powers are divided between Germany and the Federal States. In general, however, execution of federal laws is done via the Federal States.

C. FACTUAL BACKGROUND

- 23 In the following sections, we will first describe the Lünen power plant, its technical characteristics, and its importance, especially for the shareholders (I.). We will then provide further background relevant to the arbitration, explaining that, after the turn of the century, Germany pursued a clear energy policy and emphasized the importance of new and modern coal-fired plants (II.). As a result, Germany emerged as a country with ideal investment conditions for building coal-fired power plants. Therefore, AET, which at that time sought to secure the power supply in Ticino with additional base-load capacity, decided to invest in the Lünen plant in Germany (III.). At the time, Respondent's clear message was that the climate protection goals could and would be achieved by

⁴ [Exhibit C-0002: Commercial Register for TKL \[EN/DE\]](#) AET's share of **EUR 4,686,722.28** equals 15.84%.

⁵ [Exhibit C-0019-DE / Exhibit C-0019-EN: Statement of the Bundesrat and counter-statement of the Federal Government on the Coal Ban Draft, 8 April 2020 \(excerpts\)](#).

reducing emissions through the European Emissions Trading System and emphasized this approach even after the Lünen plant was put into operation in Lünen in 2013 (IV.). With the establishment of the Coal Commission, the Respondent's course fundamentally changed (V.). With the adoption of the Coal Ban Law, Lünen will be forced to shut down after less than half of its expected minimum lifetime of 40 years. The serious consequences for Lünen, directly related to the Coal Ban Law, are described in section (VI.). In the final section (VII.), we will show that these serious consequences lead to a loss in value of the Claimant's investment and deprive the Claimant of this investment.

I. The Lünen Power Plant

1. Introduction

- 24 Put into operation in December 2013, the Lünen Plant is recognized as one of the most modern and efficient coal-fired power plants globally.



- 25 It is operated by TKL, a limited partnership (*Kommanditgesellschaft*) with 29 limited partners all of which are municipal utilities and regional energy providers from Germany, Austria, and Switzerland⁶. The nature of the partners allowed a debt financing of 66(f) of the Lünen plant. Rule 66(f)

⁶ TKL is a “GmbH & Co. KG”. Under German law, GmbH & Co. KG (in German, *Gesellschaft mit beschränkter Haftung & Compagnie Kommanditgesellschaft*) is a company with limited liability, in which the general partner, which is personally and unlimitedly liable, is not a natural person (as in typical *Kommanditgesellschaft*), but a company with limited liability (GmbH).

Rule 66(f)

Rule 66(f)

- 26 The Lünen Plant is located in the town of Lünen, near the city of Dortmund in North Rhine-Westphalia in the west of Germany. It is situated on the north bank of the Datteln-Hamm Canal, which connects to the Rhine, offering ideal conditions for the shipping of coal to the power plant.⁷



- 27 In the following, this section will further describe the Lünen Plant and how it is operated (2.). The Lünen Plant is one of the most modern coal-fired power plants operating in Germany, which has won prizes for its efficiency (3.). During the permitting procedure for the Lünen plant, authorities confirmed the overriding public interest in the construction and operation of the Lünen plant (4.).

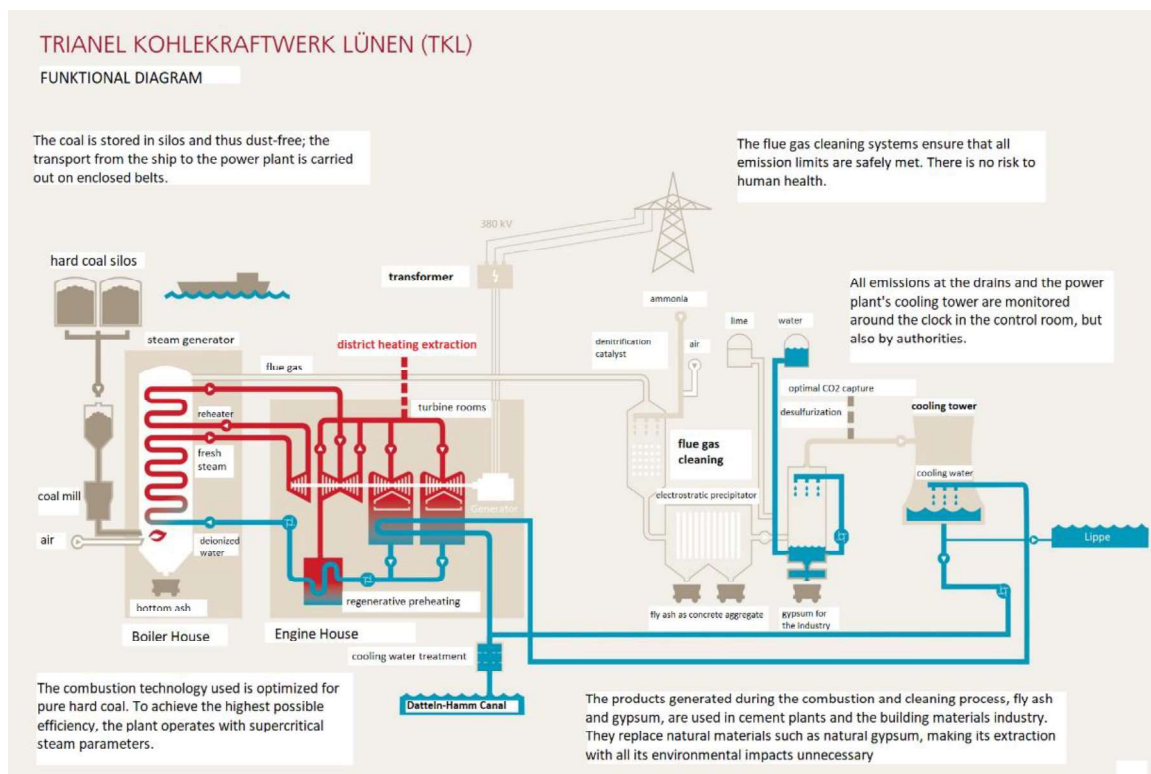
2. The Lünen plant is a highly efficient state-of-the-art power plant

- 28 The Lünen plant is constructed as a 750 MW mono-block coal-fired power plant. The energy produced can supply up to 1.6 million households.⁸

⁷ [Exhibit C-0020-DE / Exhibit C-0020-EN: TKL, Power plant: Location Lünen Stummhafen](https://www.trianel-luene.de/kraftwerk/der-standort), available at <https://www.trianel-luene.de/kraftwerk/der-standort>, (last accessed on 24 July 2024).

⁸ [Exhibit C-0021-DE / Exhibit C-0021-EN: TKL, Power plant: Facts and figures about the power plant](https://www.trianel-luene.de/kraftwerk/daten-und-fakten), available at <https://www.trianel-luene.de/kraftwerk/daten-und-fakten>, (last accessed on 24 July 2024).

29 It is a “supercritical plant”⁹ with an electric efficiency of nearly 46%, making it one of the most efficient coal-fired power plants globally. The functioning of the power plant is described in the diagram below.¹⁰ To achieve this efficiency, the system is operated with supercritical steam parameters (280 bar steam pressure and 600 °C)¹¹. The highly heat-resistant material in the steam generator enables the steam to be heated to a maximum temperature before reaching the turbine. As a result, this yields a greater amount of energy, facilitating more efficient turbine operation.



30 In the machine house, the steam is relaxed with high temperature and pressure in the successive high, medium and low-pressure turbines. A Siemens SST5-6000 turbine is used. The rotating turbines drive the SGen5-3000W generator, which is specifically designed to efficiently convert mechanical energy into electrical energy.¹² This

⁹ The term “supercritical” does not refer to risks associated with the operation, but to conditions of heat and pressure where water does not merely boil and forms steam bubbles, but where the water directly becomes indistinguishable from steam. The efficiency of power plants with supercritical steam generators is higher than with subcritical steam. For more details, see https://en.wikipedia.org/wiki/Supercritical_steam_generator (last accessed on 24 July 2024).

¹⁰ [Exhibit C-0021-DE / Exhibit C-0021-EN: TKL, Power plant: Facts and figures about the power plant, available at https://www.trianel-luenen.de/kraftwerk/daten-und-fakten, \(last accessed on 24 July 2024\).](#)

¹¹ [Exhibit C-0022-DE / Exhibit C-0022-EN: TKL, Power plant: Functional diagram, available at https://www.trianel-luenen.de/kraftwerk/funktionsschema \(last accessed on 24 July 2024\),](#) [Exhibit C-0023: Power Technology, Lünen Coal-Fired Power Plant, 24 April 2014, available at https://www.power-technology.com/projects/lnen-coal-fired-power-plant/?cf-view&cf-closed, \(last accessed on 24 July 2024\).](#)

¹² [Exhibit C-0023: Power Technology, Lünen Coal-Fired Power Plant, 24 April 2014, available at https://www.power-technology.com/projects/lnen-coal-fired-power-plant/?cf-view&cf-closed, \(last accessed on 24 July 2024\).](#)

generator significantly contributes to the overall performance of the power plant and supports the seamless transition from mechanical energy into electrical energy.

- 31 Its high efficiency also makes the Lünen plant particularly valuable from an environmental perspective. While on average hard coal-fired plants in Europe have an efficiency of 36 %, the Lünen plants' efficiency is 46%.¹³ This translates to even greater savings in fuel consumption, reducing coal consumption by approximately 20% compared to conventional coal-fired power plants.¹⁴
- 32 In addition, the Lünen plant also uses state-of-the-art technology to ensure a clean operation of the power plant. A downstream flue gas cleaning system ensures that all emission limits are met safely, so there is no risk to human health. The residual materials fly ash and gypsum produced in the combustion and cleaning process are recycled and used in cement plants and the building materials industry. The purified flue gases are discharged via the cooling tower.¹⁵
- 33 The cooling water leaves the condensers at about 30° C and is pumped from there into the trickle plane of the cooling tower. There it rains into the cooling tower cup and is cooled down by the outdoor air flowing up from below. Most of the cooling water returns to the circuit, the smaller part leaves the cooling tower as pure water vapour. The resulting loss is replaced by purified water from the Datteln-Hamm canal. The purified waste water from the cooling tower sludge is discharged into the river Lippe.¹⁶
- 34 In addition state-of-the-art technology at the power plant minimizes emissions. Overall, the Lünen plant emits one-third fewer pollutants than older technologies, saving over a ton of CO₂ per year while producing the same amount of electricity.¹⁷ Emissions are minimized through advanced flue gas cleaning technology, ensuring no additional environmental burden. To minimize dust emissions, all coal transportation facilities, as well as the power plant itself, are fully enclosed. All pollutants, including dust, carbon monoxide, sulphur oxides, and nitrogen oxides, are well below the limits set by the

[24 July 2024](#)).

¹³ [Exhibit C-0024-DE](#) / [Exhibit C-0024-EN](#): TKL, *Power plant: Low Emissions & Recycling*, available at <https://www.trianel-luene.de/kraftwerk/emissionen>, (last accessed on 24 July 2024), see also [Exhibit C-0025-DE](#) / [Exhibit C-0025-EN](#): TKL, *Environment: Climate protection*, available at <https://www.trianel-luene.de/umwelt/klimaschutz>, (last accessed on 24 July 2024).

¹⁴ [Exhibit C-0025-DE](#) / [Exhibit C-0025-EN](#): TKL, *Environment: Climate protection*, available at <https://www.trianel-luene.de/umwelt/klimaschutz>, (last accessed on 24 July 2024).

¹⁵ [Exhibit C-0022-DE](#) / [Exhibit C-0022-EN](#): TKL, *Power plant: Functional diagram*, available at <https://www.trianel-luene.de/kraftwerk/funktionsschema> (last accessed on 24 July 2024).

¹⁶ [Exhibit C-0022-DE](#) / [Exhibit C-0022-EN](#): TKL, *Power plant: Functional diagram*, available at <https://www.trianel-luene.de/kraftwerk/funktionsschema> (last accessed on 24 July 2024).

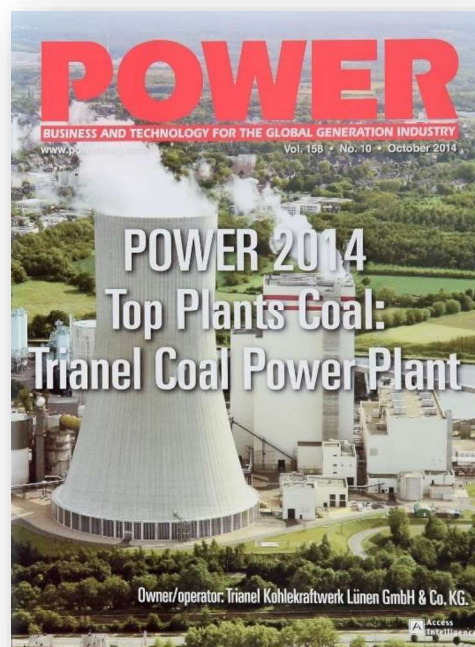
¹⁷ [Exhibit C-0024-DE](#) / [Exhibit C-0024-EN](#): TKL, *Power plant: Low Emissions & Recycling*, available at <https://www.trianel-luene.de/kraftwerk/emissionen>, (last accessed on 24 July 2024).

Federal Immission Control Law (“**FICL**”, in German, the *Bundesimmissionsschutzgesetzes - BImSchG*)¹⁸. Emissions are continuously monitored and transmitted online to the district government for maximum transparency.¹⁹ The Lünen plant recycles by-products such as fly ash and gypsum into the construction industry, further minimizing environmental impact.²⁰

- 35 Part of the Lünen plant is an efficient 35 MW heat system allowing it to provide the city of Lünen with heat, making the Lünen plant even more efficient. This Combined Heat and Power Generation (**CHP**) offers better efficiency than separate power and heat generation, demonstrating the Lünen plant's environmentally friendly energy supply.²¹ The Arnsberg District Government, the permitting authority, described the CHP employed as a measure for energy conservation to “*efficiently exploit the primary energy used*” and as a measure of “*energy efficiency*”.²²

3. The Lünen plant is widely recognised for its advanced technology

- 36 It is therefore not surprising that the Lünen coal-fired power plant has been praised in the press and received several awards due to its efficiency and state-of-the-art environmentally friendly technologies. In 2014, the Lünen Plant was honoured with the “2014 Top Plant Award” by POWER magazine and was also celebrated as the “Most Efficient Power Plant in Europe 2014” within the same year.²³



¹⁸ [Exhibit C-0026-DE / Exhibit C-0026-EN](#): Federal Immission Control Law - FICL (*Bundesimmissionsschutzgesetz - BImSchG*), BGBl. 15 March 1974. (excerpts).

¹⁹ [Exhibit C-0027-DE / Exhibit C-0027-EN](#): TKL, *Environment: State-of-the-art technology - low emissions*, available at <https://www.trianel-luene.de/umwelt/emissionen>. (last accessed on 24 July 2024).

²⁰ [Exhibit C-0024-DE / Exhibit C-0024-EN](#): TKL, *Power plant: Low Emissions & Recycling*, available at <https://www.trianel-luene.de/kraftwerk/emissionen>. (last accessed on 24 July 2024).

²¹ [Exhibit C-0028-DE / Exhibit C-0028-EN](#): TKL, *Power plant: The Trianel Lünen coal-fired power plant*, available at <https://www.trianel-luene.de/kraftwerk>. (last accessed on 24 July 2024), [Exhibit C-0029-DE / Exhibit C-0029-EN](#): Lünen public utility company (*Stadtwerke Lünen – SWL*), *The SWL Heating network*, available at <https://www.stadtwerke-luene.de/netze/waerme/>. (last accessed on 24 July 2024).

²² [Exhibit C-0030-DE / Exhibit C-0030-EN](#): District Government of Arnsberg, *2013 Advance Decision (Vorbescheid)*, 20 November 2013. (excerpts), p. 291.

²³ [Exhibit C-0031-DE / Exhibit C-0031-EN](#): TKL, *Award: "Most efficient coal-fired power plant in the world"*.

37 Following this, in 2015, the Lünen plant was bestowed with the “Advanced Energy for Life Clean Coal Award”, earning the title of the most efficient coal power plant globally. The jurors highlighted the 750-megawatt facility at Lünen's Stummhafen for its exceptionally high efficiency rate of about 46 percent, which results in a minimal CO2 footprint during electricity production. The Lünen plant was acknowledged for its pioneering role in coal combustion.²⁴

38 During the selection of the location of the site, it was also ensured that the Lünen Plant would have sufficient space to accommodate future innovations to reduce CO2 emissions like the Carbon Capture and Storage (CCS) technology. The Lünen plant was designed with the capability to implement such advancements.²⁵ However, Germany chose to effectively prohibit CCS. Only on 29 February 2024, the Federal Ministry for Economic Affairs and Energy announced that CO2 storage in Germany might commence in 7-10 years, but this would exclude coal-fired power plants due to the coal ban policy.

4. Germany recognised an overriding public interest in the Lünen plant

39 Moreover, as part of the permitting procedure, Germany itself explicitly recognised that there was an overriding public interest in the construction and operation of the Lünen plant. As a clean, highly efficient power plant, it had a key role ensuring Germany's security of energy supply while achieving the climate protection objectives.

40 In its 2008 Advance Decision, the District Government of Arnsberg declared the Advance Decision to be immediately enforceable and stated:

“[...] In addition, there also exists a special public interest in the implementation of the administrative act. Specifically, this results from the fact that the construction of the hard coal-fired power plant

- contributes to the long-term security of the power supply

- it is to be expected that significantly more inefficient power plants will be replaced and therefore, in relation to the same amount of electricity, valuable resources will be conserved and the emission of environmentally harmful gases reduced, and

available at <https://www.trianel-luene.de/kraftwerk/auszeichnungen>. (last accessed on 24 July 2024); **Exhibit C-0032-DE** / **Exhibit C-0032-EN**: Soest municipal utilities, *Lünen power plant: The latest technology for maximum efficiency*, available at <https://www.stadtwerke-soest.de/die-stadtwerke/erzeugung/kraftwerk-luene>. (last accessed on 24 July 2024).

24 **Exhibit C-0031-DE** / **Exhibit C-0031-EN**: TKL, *Award: “Most efficient coal-fired power plant in the world”*, available at <https://www.trianel-luene.de/kraftwerk/auszeichnungen>. (last accessed on 24 July 2024); **Exhibit C-0032-DE** / **Exhibit C-0032-EN**: Soest municipal utilities, *Lünen power plant: The latest technology for maximum efficiency*, available at <https://www.stadtwerke-soest.de/die-stadtwerke/erzeugung/kraftwerk-luene>. (last accessed on 24 July 2024).

25 **Exhibit C-0027-DE** / **Exhibit C-0027-EN**: TKL, *Environment: State-of-the-art technology - low emissions*, available at <https://www.trianel-luene.de/umwelt/emissionen>. (last accessed on 24 July 2024).

- the construction of the power plant will have a positive long-term impact on the local labour and training market as well as on the economy."²⁶ (Emphasis added)

- 41 These interests were likewise affirmed in the updated Advance Decision from 2013.²⁷ It underlined the great importance of new hard coal-fired power plants with regard to climate protection, and concluded that

"new highly efficient power plants are of overriding public interest in order to fulfil the objectives of Section 1 (1) Energy Industry Law to secure the supply of electricity to the general public while at the same time safeguarding the constitutional interest of climate protection."²⁸ (Emphasis added)

- 42 The District Government speaks in this context of fulfilling "*important public concerns of energy policy, energy industry, grid stability and security of energy supply*".²⁹ Moreover, it stressed that even more new coal power plants would be necessary:

*"According to the Federal Network Agency's 2011 monitoring report [...], an increase of further 16,600 MW is required in addition to the power plants under construction in Germany – which also includes the Lünen plant – [...] in order to compensate for dismantling of the supply-independent power plant capacity by 2022 (nuclear power plants and obsolete fossil fuel power plants)."*³⁰

- 43 This illustrates that Respondent itself attributed utmost importance to the Lünen Plant in specific, and also to modern highly efficient power plants in general, to safeguard energy supply and achieve climate protection. Therefore, for the competent authorities, the Lünen plant was inherently in the overriding public interest.

5. Summary

- 44 Since being put into operation in 2013, the Lünen Power Plant is recognized as one of Europe's most efficient coal-fired power plants. Its superior efficiency leads to substantial emission reductions, prompting the regulatory authority to underscore its crucial role in ensuring reliable electricity supply and achieving climate protection goals.

²⁶ [Exhibit C-0033-DE / Exhibit C-0033-EN: District Government of Arnsberg, 2008 Advance Decision for the construction and operation of the Lünen hard coal-fired power plant \(Vorbescheid\) and First Partial Permit, 6 May 2008 \(excerpts\)](#), p. 167.

²⁷ The initial advance decision was challenged in court, revoked and reissued.

²⁸ [Exhibit C-0030-DE / Exhibit C-0030-EN: District Government of Arnsberg, 2013 Advance Decision \(Vorbescheid\), 20 November 2013, \(excerpts\)](#), p. 289.

²⁹ [Exhibit C-0030-DE / Exhibit C-0030-EN: District Government of Arnsberg, 2013 Advance Decision \(Vorbescheid\), 20 November 2013, \(excerpts\)](#), p. 292.

³⁰ [Exhibit C-0030-DE / Exhibit C-0030-EN: District Government of Arnsberg, 2013 Advance Decision \(Vorbescheid\), 20 November 2013, \(excerpts\)](#), p. 290.

45 As Claimant will show in the following, the Lünen Plant is exactly what Germany needed and wanted after the turn of the century. Germany needed new and modern coal-fired power plants to compensate for the planned nuclear phase-out.

II. At the turn of the century, Germany concluded it needed new and modern coal-fired power plants

46 In the period leading up to Claimant's investment in the Lünen plant in 2006-2008, Respondent actively sought investors to build new coal-fired power plants in Germany.

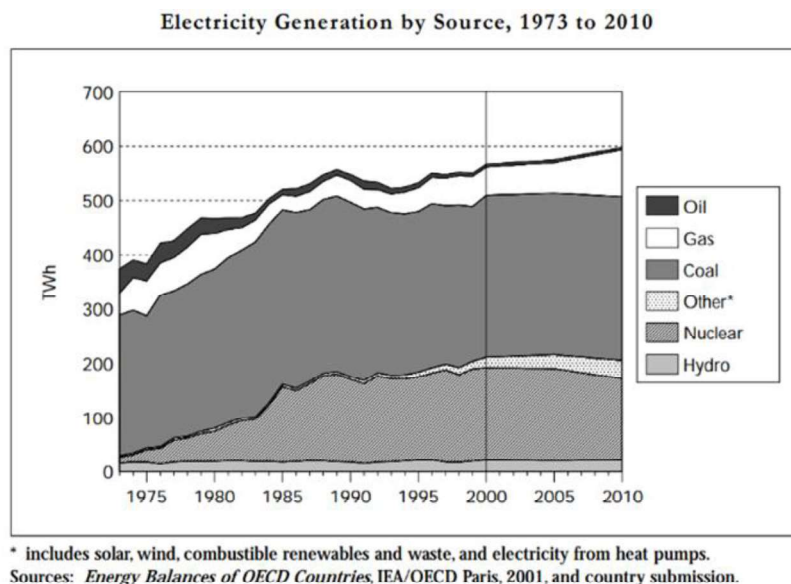
47 At the time, Respondent had just decided to phase out nuclear power plants, which needed to be replaced by a reliable baseload alternative to secure Germany's energy supply. Respondent thus emphasized that coal-fired power generation would continue to be needed for a long time in Germany's energy policy **(1.)**. Thus, to keep a balanced energy mix in line with its climate agenda and meet its emission reduction targets, Respondent chose to stimulate the construction of new, more modern and efficient coal-fired power plants to replace older, more polluting plants **(2.)**. Respondent actively sought investors to build these new plants **(3.)**. Aware that such investments require stable and predictable policies and conditions, Respondent repeatedly assured investors that CO₂ emissions would be solely regulated by the European Emissions Trading System (ETS) **(4.)**.

1. Germany needed new and modern coal plants to replace the capacity of nuclear power plants to be closed in the nuclear phase-out

48 In the early 2000's, about 30% of the electricity generated in Germany was produced by nuclear power plants, approximately 53% by coal-fired power plants and only up to 10% by gas-fired power plants.³¹ The shares of other electricity generation sources

³¹ [Exhibit C-0034: International Energy Agency, *Energy Policies of IEA Countries: Germany 2002 Review, January 2003*, Figure 28 – Electricity Generation by Source 1973 to 2010, p. 101.](#)

were minimal: 3.8% for hydro, 1.8% for combustible renewables and waste, 1.7% for solar and wind energy, and 0.8% for oil.³²



- 49 The beginning of the century was however marked by Germany's decision to phase-out its nuclear power plants. Despite the initial broad parliamentary consensus of peaceful use of nuclear energy through the Atomic Energy Law in 1960, German opposition against nuclear power developed due to concerns about the safety risks of the nuclear power plant technology. In the wake of nuclear accidents such as the Three Mile Island in Harrisburg in 1979, and in Chernobyl in 1986, the German antinuclear agenda gained federal support and, in 1998, the then new government agreed to work towards abandoning the use of nuclear power.
- 50 Only three years later, in 2001, an agreement providing for a structured phase-out of nuclear power was reached between the German Federal Government and Germany's nuclear power plant operators (the so-called "*Atomkonsens*"). Under the *Atomkonsens*, the operators agreed to accept the government's wish to limit the lifetime of nuclear power plants in return for a guarantee of undisturbed operation during the remaining lifetime of the plants.³³
- 51 In 2002, the *Atomkonsens* was incorporated to the Atomic Energy Law,³⁴ which fundamentally changed the legal situation that had applied in Germany since 1960. It

³² [Exhibit C-0034: International Energy Agency, *Energy Policies of IEA Countries: Germany 2002 Review*, January 2003](#), p. 101.

³³ [Exhibit C-0035-DE / Exhibit C-0035-EN: Agreement between the Federal Government and the energy supply companies \(*Atomkonsens*\), 14 June 2000](#), p. 3.

³⁴ [Exhibit C-0036-DE / Exhibit C-0036-EN: Amendment of the Atomic Energy Law \(2002 Amendment\)](#), BGBl. 26 April 2002 (excerpts), p. 2, § 7 (b) and [Exhibit C-0035-DE / Exhibit C-0035-EN: Agreement between the Federal Government and the energy supply](#)

allocated specific volumes of electricity that each of the 19 German nuclear power plants would be allowed to produce before they would be obliged to stop production. The construction of new commercial nuclear power plants and reprocessing plants was no longer permitted. Announced on 26 April 2002, the sixteenth anniversary of the Chernobyl reactor disaster, the Nuclear Phase-out Law, which included the 2002 Amendment, came into force one day later on 27 April 2002.³⁵

52 The decision to phase out nuclear power had significant implications to Germany's national energy policy. Replacing nuclear energy posed a challenge to the three fundamental but mutually competing goals of its then national energy policy, namely, economic growth, security of energy supply, and environmental protection.

53 Thus, already in November 2000, in connection with its National Climate Protection Program, the German government explained that it anticipated that

“the energy supply will therefore continue to be based on a balanced energy mix of mineral oil, natural gas, hard coal, lignite and renewable energies (in the order of current supply contributions) after the end of the use of nuclear energy”³⁶. (Emphasis added)

54 In 2001, the German Ministry of Economic Affairs, published a report on the “*Sustainable Energy Policy to Meet the Needs of the Future*” (the **2001 Sustainable Energy Report**)³⁷ outlining the results of two studies commissioned to analyse how the balance among the energy policy goals could be sustained in the wake of the decision to phase-out nuclear energy. More specifically, it was assessed how much climate protection and supply security German energy policy should account for in its long-term planning

[companies \(Atomkonsens\), 14 June 2000](#), p. 4.

³⁵ The path to the effective shut down of Germany's nuclear power plants was however not as straightforward as planned in 2002. After a change of government in 2009, Germany extended the lifetime of nuclear power plants as part of its program Energy Policy 2050 to bridge the transition to renewable energy sources. But this extension was short lived. In 2011, following the accident at Fukushima Dai-Ichi nuclear power plant in Japan on 11 March 2011, Germany decided to accelerate its nuclear phase-out, closing some of its older nuclear plants immediately thereafter. The final phase-out was however again delayed in 2022 due to supply security concerns with the beginning of the war in Ukraine in 24 February 2022. Germany's last nuclear plants were only finally closed in April 2023. See also [Exhibit C-0037: L. Paddison et al. 'A new era': Germany quits nuclear power, closing its final three plants, CNN World, 15 April 2023, available at <https://edition.cnn.com/2023/04/15/europe/germany-nuclear-phase-out-climate-intl/index.html> \(last accessed on 24 July 2024\).](#)

³⁶ [Exhibit C-0038-DE / Exhibit C-0038-EN: Parliamentary Paper BT-Dr 14/4729, National climate protection programme: Fifth Report of the Interministerial Working Group on CO2 Reduction, 14 November 2000, \(excerpts\)](#), p. 13.

³⁷ [Exhibit C-0039: Federal Ministry for Economic Affairs and Technology \(BMWi\), Energy Report Nr. 508: Sustainable Energy Policy to Meet the Needs of the Future, June 2002.](#)

for the years to come up to 2020.³⁸ In two scenarios, the 2001 Sustainable Energy Report compared different energy policy paths and analysed different courses of development up to the year 2020 from a common point of departure: one study followed a “business as usual” path, i.e. assuming that the energy policies in place in 1999 would continue to follow the same course until 2020; and the other study considered which energy policies adjustments would have to be made so that a CO2 reduction of approximately 40% could be achieved in 2020 relative to the 1990 level (significantly exceeding the Kyoto commitments).

55 In its 2002 review of Germany’s energy policy, the International Energy Agency (IEA) assessed the 2001 Sustainable Energy Report and flagged that the considerations under both scenarios would lead to one conclusion: Germany would still rely on an energy mix including coal for many years, if it was to avoid high macro- and micro-economic costs, including expensive consequences for the economy and security of supply. That is because, while, on the one hand, relying on renewable energy would have been the best alternative from an environmental protection perspective, the technology and installed capacity at the time were still incipient, costly and inefficient. In addition, generation from renewables tended to be intermittent and not suitable for baseload. On the other hand, increasing the use of gas or coal would be more cost-effective, but would also mean increasing CO2 emissions, and, in the case of gas, also increasing Germany’s dependence on energy imports.³⁹

56 The same considerations were presented by the German government before the parliament in 2002⁴⁰, specifically addressing the inevitable need of balancing the different goals of having an energy policy aiming to achieve a climate-friendly, secure and economical energy supply, all while maintaining Germany as an attractive location for energy companies in the future and retaining jobs and technological know-how. It thus explained that:

“For this reason energy policy in Germany will continue to focus on a balanced energy mix of mineral oil, natural gas, hard coal and lignite as well as renewable energies. Through such an energy mix, including domestic coal, additional supply and price risks can be kept within limits.”⁴¹

38 [Exhibit C-0039: Federal Ministry for Economic Affairs and Technology \(BMWi\), *Energy Report Nr. 508: Sustainable Energy Policy to Meet the Needs of the Future*, June 2002](#), p. 5.

39 [Exhibit C-0034: International Energy Agency, *Energy Policies of IEA Countries: Germany 2002 Review*, January 2003](#), p. 122.

40 [Exhibit C-0040-DE / Exhibit C-0040-EN: Parliamentary Paper BT-Dr. 14/8953, *Report of the Federal Government on the prospects for Germany - National Strategy for Sustainable Development*, 25 April 2002, \(excerpts\)](#), pp. 67-68.

41 [Exhibit C-0040-DE / Exhibit C-0040-EN: Parliamentary Paper BT-Dr. 14/8953, *Report of the Federal Government on the prospects for Germany - National Strategy for Sustainable Development*, 25 April 2002, \(excerpts\)](#), p. 68.

57 In line with these conclusions, the then-Minister of Economic Affairs, Dr Werner Müller, repeatedly affirmed that “coal is and will remain an indispensable source of energy worldwide” (emphasis added).⁴² He cautioned that an eventual coal ban would “dangerously” increase the dependence on natural gas and, thus, further increase the risks for the security of supply and of increasing prices.⁴³

58 At the same occasion, Minister Müller emphasized that one solution to address and balance these concurring goals was developing the cutting-edge technology to construct new coal-fired power plants. These could have a long-term positive climate effect, not only in Germany, but around the world too:

“If you look at coal use from this technological perspective, it even has a long-term positive effect for our climate: because having our own coal base is crucial for the further development of European cutting-edge technology in this area. The export of such technologies can then lead to a more environmentally friendly utilisation of coal in countries that will continue to use this energy resource on a massive scale for a long time to come.”⁴⁴ (Emphasis added)

59 The benefits of a diversified energy mix involving coal was again reiterated by Chancellor Schröder in late 2003:

“Constructing an incompatibility between coal-fired power generation and wind power, for example, is wrong and makes it difficult to identify reasonable solutions. The fact is that a broadly diversified and therefore intelligent energy mix has ensured the security of energy supply in the past. I want to work to ensure that this remains the case in the future. [...]”

However, we cannot and we do not want to ban coal, this is an important fact as well. Around half of Germany's electricity is generated from coal,

⁴² [Exhibit C-0041-DE](#) / [Exhibit C-0041-EN](#): Federal Minister for Economic Affairs and Technology, Dr Werner Müller, *Speech at the Saar Energy Conference*, Bulletin of the Federal Government No. 26-2 of 11 April 2002 (extracts), p. 1, and [Exhibit C-0042-DE](#) / [Exhibit C-0042-EN](#): Federal Minister for Economic Affairs and Technology, Dr Werner Müller, *Speech at the International Congress “The Future of Coal - Prospects for Modern Coal Technologies”*, “Energy policy for Germany”, Bulletin of the Federal Government No. 19-2 of 6 March 2001 (excerpts), p. 5, This opinion was also shared by the then-Chancellor Gerhard Schröder, as evidenced in [Exhibit C-0043-DE](#) / [Exhibit C-0043-EN](#): Chancellor Gerhard Schröder, *Speech at the General Meeting of the German hard-coal Staff Council*, Bulletin of the Federal Government No. 11-2 of 31 January 2003 (excerpts), p. 2 and 3.

⁴³ [Exhibit C-0044-DE](#) / [Exhibit C-0044-EN](#): Federal Minister for Economic Affairs and Technology, Dr Werner Müller, *Speech at the conference “Future of the Energy Industry”: “Energy policy perspectives”*, Bulletin of the Federal Government No. 22-2 of 19 March 2002 (excerpts), p. 7; See also [Exhibit C-0045-DE](#) / [Exhibit C-0045-EN](#): Federal Minister for Economic Affairs and Technology, Dr Werner Müller, *Speech at the 100th anniversary of the Lech Elektrizitätswerke: “Current energy policy situation and strategies for the future”*, Bulletin of the Federal Government No. 68-2 of 11 October 2001 (excerpts), p. 8.

⁴⁴ [Exhibit C-0044-DE](#) / [Exhibit C-0044-EN](#): Federal Minister for Economic Affairs and Technology, Dr Werner Müller, *Speech at the conference “Future of the Energy Industry”: “Energy policy perspectives”*, Bulletin of the Federal Government No. 22-2 of 19 March 2002 (excerpts), p. 7.

almost equally from hard coal and lignite. Therefore, it is clear that environmentally friendly hard coal-fired and lignite-fired power plants will continue to be the backbone of the German power supply for many years to come.

*The prerequisite for this is that we address the issue of climate protection, as we have done in the past. We occupy a leading position internationally. We have taken on and achieved by far the largest share of greenhouse gas reduction commitments in Europe.*⁴⁵ (Emphasis added)

- 60 A similar opinion was also expressed by the then-Minister of Economic Affairs, Mr Wolfgang Clement, who explained:

[...] The discussion about the security of power supply this summer has shown the importance of a broad energy mix.

*There must be no favouritism. Wind, in particular, is an unreliable candidate. It lacks security, as it does not blow in accordance with a set schedule. Sometimes the wind supply only reaches a fraction of the installed capacity. I do not aim at conjuring a calm. It's a plea for speaking plainly. Wind energy is not suitable to cover the base load. For that, we need coal, which currently generates about 50% of our electricity.*⁴⁶ (Emphasis added)

- 61 This policy strategy gained force over the subsequent years. In 2006, the then-Minister of Economic Affairs, Minister Michael Glos, continued to affirm that "power plants based on coal and gas will remain the backbone of the electricity supply for a long time to come."⁴⁷ He added that, since coal is widely distributed around the world in large supplies by politically stable countries, using coal was considered to better protect Germany's energy supply.⁴⁸

- 62 One year later, in 2007, the then-Minister for the Environment, Mr Sigmar Gabriel, again stressed that replacing coal with gas would not be possible, also because that much gas would not be available and would "significantly impact the price for electricity".⁴⁹

- 63 In line with these statements, and against the background of rising oil prices and dependence on energy imports, Chancellor Schröder announced in his 2005 government

⁴⁵ [Exhibit C-0007-A-DE / Exhibit C-0007-A-EN: Chancellor Gerhard Schröder, Speech German Hard Coal Day, Bulletin of the German Federal Government Nr. 101-1 of 11 November 2003 \(extended excerpts\)](#), pp. 6-8.

⁴⁶ [Exhibit C-0006: Minister of Economic Affairs Wolfgang Clement, Speech Energy Conference of Bündnis 90/Die Grünen, Bulletin of the German Federal Government Nr. 80-3 of 29 September 2003 \[EN/DE\] \(excerpts\)](#), p. 4.

⁴⁷ [Exhibit C-0008-A-DE / Exhibit C-0008-A-EN: Minister of Economic Affairs Michael Glos, Speech at the 13th Handelsblatt Annual Energy Sector Conference, Bulletin of the German Federal Government Nr. 03-2 of 17 January 2006 \(extended excerpts\)](#), p. 9.

⁴⁸ [Exhibit C-0008: Minister of Economic Affairs Michael Glos, Speech at the 13th Handelsblatt Annual Energy Sector Conference, Bulletin of the German Federal Government Nr. 03-2 of 17 January 2006 \[EN/DE\] \(excerpts\)](#), pp. 8-9.

⁴⁹ [Exhibit C-0012: Minister of the Environment Sigmar Gabriel, Government policy statement, Bulletin of the German Federal Government Nr. 46-1 of 26 April 2007 \[EN/DE\] \(excerpts\)](#), p. 9.

statement, an energy policy which, “*first, is based on coal and coal products*” (emphasis added).⁵⁰

64 This policy was incorporated and further developed into the National Climate Protection Program 2005, in which the German government stated its commitment to promote the research and development of modern and environmentally friendly power plant technologies for coal and gas, stating that, “[i]n order to contribute to climate protection, particularly efficient power plant technologies must therefore be developed”.⁵¹

65 In 2008, the support for coal-fired power plants by the German government became particularly unequivocal in a speech by Chancellor Merkel at the occasion of the laying of the cornerstone for one of the aforementioned new hard coal-fired power plants, namely blocks D and E of the Westfalen power plant. She attended the event specifically because she wanted “*to expressly support the modernisation of coal-fired power plants in what sometimes turns out to be a very heated discussion*”.⁵² She also emphasized the importance of the construction of new coal-fired power plants for the future of Germany:

*“If we aim at remaining self-sufficient regarding our energy supply as an industrial location, we need new, high-performance power plants in Germany. This includes efficient, modern coal-fired power plants. Those preventing the construction of new power plants, for whatever reason, are prepared to accept substantial risks for jobs, prices and the future of Germany.”*⁵³ (Emphasis added)

66 Finally, in response to the challenge of replacing nuclear energy, the German government chose not only to rely on an energy mix that explicitly included the use of coal to support its advances in the renewables sector, but also to stimulate improvements in energy efficiency, making the “*modernization of the power plant fleet*” a key element in its energy and climate strategy in the years that followed.⁵⁴

50 [Exhibit C-0009: Chancellor Gerhard Schröder, Government Statement, Bulletin of the German Federal Government Nr. 72-1 of 7 September 2005 DE + EN \[EN/DE\] \(excerpts\)](#), p. 3.

51 [Exhibit C-0046-DE / Exhibit C-0046-EN: Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, National Climate Protection Programme 2005 \(Nationales Klimaschutzprogramm 2005\), 13 July 2005 \(excerpts\)](#), p. 48.

52 [Exhibit C-0013: Chancellor Dr Angela Merkel, Speech at the foundation stone ceremony for blocks D and E of the Westfalen power plant, Bulletin of the German Federal Government Nr. 86-1 of 29 August 2008 \[EN/DE\] \(excerpts\)](#), p. 1.

53 [Exhibit C-0013: Chancellor Dr Angela Merkel, Speech at the foundation stone ceremony for blocks D and E of the Westfalen power plant, Bulletin of the German Federal Government Nr. 86-1 of 29 August 2008 \[EN/DE\] \(excerpts\)](#), p. 2.

54 [Exhibit C-0047-DE / Exhibit C-0047-EN: Coalition Agreement between the Parties CDU, CSU and SPD: “Together for Germany. With courage and humanity”, 11 November 2005 \(excerpts\)](#), p. 52.

2. Germany also needed new coal-fired plants to meet its climate goals

- 67 The modernization of its power plant fleet was also a key measure of Respondent's climate policy. Considering its need and decision to continue relying on coal generation for its baseload capacity, the construction of new, modern and efficient coal-fired power plants would be necessary to meet its climate goals. It would not only allow for a cost-effective and secure generation, but also have minimal increase in CO2 emissions.
- 68 In the early 2000's, Respondent's climate goals and CO2 emission reduction targets were primarily shaped by its need to implement the 1997 Kyoto Protocol.⁵⁵ Respondent signed the Kyoto Protocol on 29 April 1998 and ratified it on 31 May 2002.⁵⁶ The Protocol itself entered into force on 16 February 2005. In Annex B, the EU agreed to a total emissions reduction of 8%, meaning that its greenhouse gas emissions should not exceed 92% of its 1990 levels. This overall reduction target was distributed between the Member States of the EU. Germany agreed to a reduction of 21%.
- 69 The strategy and policy to modernize Respondent's power plant fleet was developed against this climate protection background.
- 70 Already in 2003, Chancellor Schröder explained that, in order to meet the ambitious climate protection targets from the Kyoto Protocol and the expectations of the German citizens, not only the renewable energies would need to be integrated into the existing energy supply structure, but also "*a large part of our power plant fleet needs to be modernized or replaced*"⁵⁷. He highlighted that experts assumed that up to 40,000 megawatts of power plant capacity would have to be modernized between 2010 and 2020, which would mean "*a huge investment requirement*"⁵⁸.
- 71 Chancellor Schröder highlighted that Germany was "*making a very important contribution to climate protection in this area through the technology that we develop, offer and sell on the world's markets.*"⁵⁹ He repeatedly called on the coal industry to "*tackle the*

⁵⁵ [Exhibit C-0048: Kyoto Protocol to the United Nations Framework Convention on Climate Change, 10 December 1997, available at https://unfccc.int/documents/2409 \(last accessed on 23 January 2024\).](https://unfccc.int/documents/2409)

⁵⁶ [Exhibit C-0049: UNFCCC - Germany as a Contracting State to the Convention, available at https://unfccc.int/node/180158 \(last accessed 13 February 2024\).](https://unfccc.int/node/180158)

⁵⁷ [Exhibit C-0007-A-DE / Exhibit C-0007-A-EN: Chancellor Gerhard Schröder, *Speech German Hard Coal Day*, Bulletin of the German Federal Government Nr. 101-1 of 11 November 2003 \(extended excerpts\), p. 5.](#)

⁵⁸ [Exhibit C-0007-A-DE / Exhibit C-0007-A-EN: Chancellor Gerhard Schröder, *Speech German Hard Coal Day*, Bulletin of the German Federal Government Nr. 101-1 of 11 November 2003 \(extended excerpts\), p. 5.](#)

⁵⁹ [Exhibit C-0050-DE / Exhibit C-0050-EN: Chancellor Gerhard Schröder, *Speech at the annual event of the German Council for Sustainable Development*, Bulletin of the Federal](#)

renewal of the outdated power plant fleet in the next few years in Germany" for coal-fired power plants with "state-of-the-art technology with maximum energy efficiency and low pollutant emissions".⁶⁰

72 Minister Clement emphasized this again in 2005:

*"We will not be able to do without fossil fuels, especially coal, for a very long time to come. Equipped with state-of-the-art technologies, coal will continue to be the backbone of our electricity supply for a long time to come."*⁶¹ (Emphasis added)

73 Also in 2005, Germany's commitment to promote the development and construction of modern coal-fired power plants became an official policy for energy efficiency as part of the already mentioned (see para. 23 above) 2005 National Climate Protection Program.⁶²

74 By 2007, this policy gained a front row seat in Germany's Climate Agenda 2020⁶³ The Climate Agenda 2020 was Germany's plan to reduce greenhouse gas emissions, launched following a EU summit in March 2007, in which the European heads of state and government set out ambitious climate protection targets, promising a unilateral

[Government No. 82-4 dated 4 October 2003 \(excerpts\)](#), pp. 7-8. See also [Exhibit C-0051-DE / Exhibit C-0051-EN](#): Chancellor Gerhard Schröder, [Speech at the International Conference for Renewable Energies](#), Bulletin of the Federal Government No. 55-1 of 3 June 2004 (excerpts), p. 6; [Exhibit C-0052-DE / Exhibit C-0052-EN](#): Chancellor Gerhard Schröder, [Speech at the Inauguration of the ISKEN power plant](#), Bulletin of the Federal Government No. 16-2 of 24 February 2004 (excerpts), p. 1; [Exhibit C-0053-DE / Exhibit C-0053-EN](#): Chancellor Gerhard Schröder, [Speech at the workforce meeting of the mine „West“](#), Bulletin of the Federal Government of 17 April 2005 (excerpts), p. 7.

⁶⁰ [Exhibit C-0043-DE / Exhibit C-0043-EN](#): Chancellor Gerhard Schröder, [Speech at the General Meeting of the German hard-coal Staff Council](#), Bulletin of the Federal Government No. 11-2 of 31 January 2003 (excerpts), p. 4. See also [Exhibit C-0051-DE / Exhibit C-0051-EN](#): Chancellor Gerhard Schröder, [Speech at the International Conference for Renewable Energies](#), Bulletin of the Federal Government No. 55-1 of 3 June 2004 (excerpts), p. 6; [Exhibit C-0052-DE / Exhibit C-0052-EN](#): Chancellor Gerhard Schröder, [Speech at the Inauguration of the ISKEN power plant](#), Bulletin of the Federal Government No. 16-2 of 24 February 2004 (excerpts), p. 1; [Exhibit C-0053-DE / Exhibit C-0053-EN](#): Chancellor Gerhard Schröder, [Speech at the workforce meeting of the mine „West“](#), Bulletin of the Federal Government of 17 April 2005 (excerpts), p. 7.

⁶¹ [Exhibit C-0054-DE / Exhibit C-0054-EN](#): Minister of Economic Affairs and Labour, Wolfgang Clement, [Speech at the 3rd Ordinary Trade Union Congress](#), Bulletin of the Federal Government No. 81-2 of 13 October 2005 (excerpts), p. 9. See also [Exhibit C-0055-DE / Exhibit C-0055-EN](#): Minister of Economic Affairs Wolfgang Clement, [Speech at the German Hard-Coal Day: "The future needs coal"](#), Bulletin of the Federal Government No. 89-3 dated 9 November 2005 (excerpts), p. 5.

⁶² [Exhibit C-0046-DE / Exhibit C-0046-EN](#): Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, [National Climate Protection Programme 2005 \(Nationales Klimaschutzprogramm 2005\)](#), 13 July 2005 (excerpts), p. 48.

⁶³ [Exhibit C-0011](#): German Federal Ministry for the Environment, [Climate Agenda 2020 Restructuring Industrial Society](#), 1 Apr 2007, item no. 1.

20% reduction, with the option to increase this target to 30% if major economic powers such as the USA or China followed suit. With its Climate Agenda 2020, the German government went beyond the EU commitment and promised a 40% reduction (which corresponded to a reduction in CO₂ of 270 million tons by 2020, compared to 2006 levels), calling for “[r]estructuring the industrial society”⁶⁴. In order to achieve such ambitious target, the document proposed eight measures, the very first being “*Modernization of the power plant park -> Annual CO₂ reduced by 30 million tons*”.⁶⁵

- 75 Accordingly, directly at the outset, the Climate Agenda 2020 openly called for the replacement of old power plants by highly efficient coal-fired power plants:

“The electric power industry’s share in the total greenhouse gas emissions in Germany is 40%. Since 1999, the emissions in this sector have increased by over 30 million tons. Therefore, the modernization of the power plant portfolio is of crucial importance. Many plants are at the end of their lives and must be replaced. At the same time, based on a mix of new power plants, energy-saving measures and the increase of renewable energies, we will be able to reduce greenhouse gas emissions in the sector and to replace the performance of the nuclear power plants that will be shut down in accordance with the nuclear phaseout agreement.”

The emission reductions in the power plant sector are achieved with higher efficiencies of new coal-fired power plants and the addition of natural gas power plants.”⁶⁶

- 76 Minister Gabriel explained these measures in his 2007 government statement in Parliament, emphasizing that by replacing inefficient old power plants a “*massive relief for climate protection*” could be achieved. He expressly welcomed the announced construction of new power plants until the end of 2012 with a total output of 12,000 megawatts, highlighting that new plants were so much more efficient that they could save the atmosphere up to 42 million tons of CO₂ per year.⁶⁷

- 77 The replacement of the outdated German power plant fleet was further described as one of Germany’s *Key Elements of an Integrated Energy and Climate Programme*⁶⁸, a

⁶⁴ [Exhibit C-0011: German Federal Ministry for the Environment, *Climate Agenda 2020 Restructuring Industrial Society*, 1 Apr 2007](#), title.

⁶⁵ [Exhibit C-0011: German Federal Ministry for the Environment, *Climate Agenda 2020 Restructuring Industrial Society*, 1 Apr 2007](#), p. 3.

⁶⁶ [Exhibit C-0011: German Federal Ministry for the Environment, *Climate Agenda 2020 Restructuring Industrial Society*, 1 Apr 2007](#), p. 3.

⁶⁷ [Exhibit C-0012: Minister of the Environment Sigmar Gabriel, *Government policy statement*, Bulletin of the German Federal Government Nr. 46-1 of 26 April 2007 \[EN/DE\] \(excerpts\)](#), p. 9. See also [Exhibit C-0056-DE / Exhibit C-0056-EN: Minister for the Environment, Nature Conservation and Nuclear Safety, Sigmar Gabriel, *Speech on the draft bill to amend the legal basis for emissions trading with regard to the 2008 to 2012 allocation period before the First Chamber of the German Parliament in Parliament*](#), Bulletin of the Federal Government No. 69-2 of 22 June 2007 (excerpts), p. 3.

⁶⁸ [Exhibit C-0010: German Cabinet, *Main Pillars of an Integrated Energy and Climate*](#)

program designed to implement the decision by the European Council on an Europe-wide integrated energy and climate policy. It noted that:

“The German government is of the opinion that the replacement of inefficient hard coal-fired and lignite-fired power plants with new and highly efficient power plants will make an important contribution to climate protection and to the modernisation of our energy supply.”⁶⁹ (Emphasis added)

78 The German government was however fully aware that only its beliefs and unequivocal support would not be enough to achieve the modernization of its old and outdated power plant fleet. It needed help of the private sector to back its climate policy and invest in the modernization of its fleet. So it actively called for investors to construct new highly efficient coal-fired power plants in Germany.

3. Germany called on investors to build new coal-fired power plants and promised stability for such investments.

79 Respondent routinely acknowledged that its energy policy needed to provide a long-term vision for investors.⁷⁰ In particular, it knew that for companies to invest in new electricity generation capacity, it needed to provide a clear framework and stable investment conditions. It recognized that an important element of this was to inform the energy sector transparently about the government's plans for the development of the energy sector, including the envisaged energy mix.

80 In 2005, then Minister of Economic Affairs Clement therefore repeatedly addressed the industry in very similar terms:

“What is important for companies that want to invest in the energy industry is what the energy mix of the future should look like in our country.

In this context, it can be assumed that: with lignite, a competitive - and therefore subsidy-free - domestic primary energy source for electricity generation. The generation of electricity from hard coal must and will also continue to make an important contribution for the electricity supply in Germany.”⁷¹ (Emphasis added)

[Program \(Eckpunkte für ein integriertes Energie- und Klimaprogramm\), 23/24 August 2007](#), p. 1.

⁶⁹ [Exhibit C-0010: German Cabinet, Main Pillars of an Integrated Energy and Climate Program \(Eckpunkte für ein integriertes Energie- und Klimaprogramm\), 23/24 August 2007](#), pp. 6-7.

⁷⁰ See e.g. [Exhibit C-0057-DE / Exhibit C-0057-EN: Minister for Economic Affairs and Technology, Dr Werner Müller, Speech at the conference of the working group “Ecological market Economy”: “Energy policy principles and prospects”, Bulletin of the Federal Government No. 74-3 of 22 October 2001 \(extracts\)](#), pp. 8-9.

⁷¹ [Exhibit C-0054-DE / Exhibit C-0054-EN: Minister of Economic Affairs and Labour, Wolfgang Clement, Speech at the 3rd Ordinary Trade Union Congress](#), Bulletin of the Federal Government No. 81-2 of 13 October 2005 (excerpts), p. 8, See also [Exhibit C-0055-DE / Exhibit C-0055-EN: Minister of Economic Affairs Wolfgang Clement, Speech at the](#)

81 At the 2006 Annual *Handelsblatt* Energy Sector Conference, his successor, Minister Glos, reinforced this commitment and set out the government's expectation that the industry should join efforts to finally renew the old power plant fleet:

*"I would like to see reliable commitments from the companies involved as to what investments in highly efficient fossil-fuelled power plants and networks will actually be realised. Those who are considering the transfer of electricity volumes may not expect policy makers to release the large power generating companies from their obligation to modernise the outdated fossil-fuelled power plant by building highly efficient coal-fired and gas-fired plants."*⁷²
(Emphasis added)

82 In 2008, when attending the laying of the cornerstone of the Westfalen plant, Chancellor Merkel highlighted the enormous costs associated with the construction of hard coal-fired power plants and that energy policy is always meant to be for the long-term:

*"We know that such investments don't come cheap, in this present case, the investment is 2 billion euros. But I am convinced that the innovation and the investment in our future will pay off in the coming years and decades, because energy policy is a very long-term policy."*⁷³ (Emphasis added)

83 Through its calls for investment, Respondent aimed at attracting companies to back, and especially fund, its energy policy, having them investing in the construction of new coal-fired power plants, and thereby aiding the German government in achieving its climate goals of reducing emissions by 2020.

4. According to Respondent, CO2 emissions would be regulated – solely – by the European Emissions Trading System (ETS)

84 In line with its clear message of providing stable investment conditions, Respondent repeatedly stated and assured investors that the CO2 emissions would only be regulated through the clear framework for emissions trading, the EU Emissions Trading System ("ETS").

85 Established in 2003⁷⁴ and officially launched in 2005, the ETS is a cornerstone of the EU's policy to combat climate change and its key tool for reducing greenhouse gas emissions cost-effectively. It works on a 'cap and trade' principle, meaning that

[German Hard-Coal Day: "The future needs coal"](#), Bulletin of the Federal Government No. 89-3 dated 9 November 2005 (excerpts) p. 2.

⁷² [Exhibit C-0008: Minister of Economic Affairs Michael Glos, Speech at the 13th Handelsblatt Annual Energy Sector Conference, Bulletin of the German Federal Government Nr. 03-2 of 17 January 2006 \[EN/DE\] \(excerpts\)](#), p. 4.

⁷³ [Exhibit C-0013: Chancellor Dr Angela Merkel, Speech at the foundation stone ceremony for blocks D and E of the Westfalen power plant, Bulletin of the German Federal Government Nr. 86-1 of 29 August 2008 \[EN/DE\] \(excerpts\)](#), p. 1.

⁷⁴ [Exhibit C-0058: Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC](#).

emission allowances, which can be traded, are issued. The amount of allowances is set with reference to the total amount of greenhouse gases that can be emitted in sectors covered by the ETS, which includes the energy sector. The cap is reduced annually in line with the EU's climate target, ensuring that emissions decrease overtime. Since 2005, the ETS has helped bring down emissions from power and industry plants by 37%.⁷⁵

- 86 In 2007, as part of its Climate Agenda 2020, the German government explained that it would not enforce a particular energy mix but that this was to be determined by market forces and the mechanics of the ETS:

"The emission reductions in the power plant sector will be achieved with higher efficiencies of new coal-fired power plants and the addition of natural gas power plants. The central tool for this is emissions trading. The Federal Government has already set clear reduction targets in the National Allocation Plan for 2008-2012 - the emission quantity for power plants will be reduced by 57 million tons. [...]

It is not the responsibility of the Federal Government to determine the energy mix in 2020 through dirigiste interference. It is rather the responsibility of the market players, depending on future coal, gas and CO2 prices and raw materials available at the planned power plant sites."⁷⁶ (Emphasis added)

- 87 Thus, the government would leave it to the market to determine how electricity could be produced most efficiently, with the CO2-price ensuring that most efficient plants prosper.

- 88 The German government was also fully aware that coal-fired power plants have an average lifetime of over 40 years and that their CO2 emissions will have an influence on the total CO2 emissions of a state for a long time. The new coal-fired power plants were however not considered to be incompatible with Germany's climate policy. To the contrary, in his 2007 government statement in Parliament regarding the construction of modern and efficient coal-fired power plants, then-Minister for the Environment Gabriel explained that the total CO2 emissions would be regulated through the limited number of emission rights:

"But I am just as clear in saying that under the conditions of emissions trading there are clear limits to the generation of electricity from lignite and hard coal. This results from the progressive reduction of emission rights. The

⁷⁵ [Exhibit C-0059: European Commission, EU Emissions Trading System \(EU ETS\), What is the EU ETS?, available at: https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/what-eu-ets_en](https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/what-eu-ets_en) (last accessed on 28 February 2024).

⁷⁶ [Exhibit C-0011: German Federal Ministry for the Environment, Climate Agenda 2020 Restructuring Industrial Society, 1 Apr 2007](#), p. 3. See also [Exhibit C-0060-DE / Exhibit C-0060-EN: Federal Minister for the Environment, Nature Conservation and Nuclear Safety, Sigmar Gabriel, Speech on the results of the Climate Summit in Bali before the First Chamber of the German Parliament, Bulletin of the Federal Government of 17 January 2008 \(excerpts\)](#), pp. 3-4.

*horror scenario of 29 or 40 new coal-fired power plants has no basis.*⁷⁷ (Emphasis added)

- 89 The government repeatedly reassured investors that it was committed to providing a clear framework and stable investment conditions, highlighting that the ETS provides such framework for investment security:

"The German Government has created clear framework conditions for investment security without relieving the utilities of their entrepreneurial responsibility for such decisions.

I only need to mention the phase-out of nuclear energy, the Renewable Energy Sources Act, emissions trading and coal financing. We believe that highly efficient and thus climate-friendly fossil fuels and renewable energies form a balanced energy mix for the future."⁷⁸ (Emphasis added)

- 90 It was against this background of clear statements, repeated assurances and conditions by the German government, that AET and many other companies chose to invest in the construction of the Lünen plant as one of the new and most efficient coal-fired power plants in Germany and in Europe.

5. The Federal State of North Rhine-Westphalia specifically supported the construction of coal-fired power plants

- 91 The understanding that the nuclear power could only be reasonably replaced by investing in the development and modernization of coal power plants was also promoted regionally, in the Federal State of North Rhine-Westphalia ("**NRW**"), where the Lünen Plant was to be built.

- 92 On more than one occasion, Christa Thoben, Minister for Economic Affairs and Energy of North Rhine-Westphalia, made it clear that the local government was supporting the construction of new high-efficiency coal-fired power plants in the region, and that the investments on these plants were to be made on the basis of the most modern and efficient technologies:

"First of all, I hope that the following points are undisputed:

Firstly. The age of the existing power plant fleet makes it necessary to replace it with new, highly efficient coal-fired power plants.

⁷⁷ [Exhibit C-0012-A-DE](#) / [Exhibit C-0012-A-EN](#): Minister of the Environment Sigmar Gabriel, *Government policy statement*, Bulletin of the German Federal Government Nr. 46-1 of 26 April 2007 (extended excerpts), p. 9.

⁷⁸ [Exhibit C-0054-DE](#) / [Exhibit C-0054-EN](#): Minister of Economic Affairs and Labour, Wolfgang Clement, *Speech at the 3rd Ordinary Trade Union Congress*, Bulletin of the Federal Government No. 81-2 of 13 October 2005 (excerpts), pp. 8-9. See also [Exhibit C-0055-DE](#) / [Exhibit C-0055-EN](#): Minister of Economic Affairs Wolfgang Clement, *Speech at the German Hard-Coal Day: "The future needs coal"*, Bulletin of the Federal Government No. 89-3 dated 9 November 2005 (excerpts), pp. 2 and 5.

Secondly. The construction of new highly-efficiency coal-fired power plants has great potential for reducing CO₂ with positive effects for the economy, the labour market and dwindling resources.

Thirdly. North Rhine-Westphalia is regarded worldwide as the most modern location for highly efficient power plant technology. This position must not only be maintained, but further expanded.

Fourthly. From an energy and climate policy perspective, it is of paramount importance that these investments are made on the basis of the most modern and efficient technologies. Only those who can offer these technologies will be able not only to support what is necessary in terms of energy and climate policy in the long term, but also to take advantage of the industrial and labour market opportunities that the demand for power plants offers worldwide. In short: climate protection technology will become a job engine in the power plant sector.⁷⁹ (Emphasis added)

- 93 Three years later, in 2010, Christa Thoben confirmed NRW's support to the construction of in another speech:

The state government supports the construction of further coal and lignite-fired power plants in North Rhine-Westphalia. They make a significant contribution to a secure supply of low-cost electricity [...].⁸⁰ (Emphasis added)

- 94 She continued, emphasizing that the position of the state government was that new coal-fired power plants would still be necessary for many years to come:

Ladies and gentlemen, there is a sharp dividing line between those who want to prevent new coal-fired power plants - which is not forbidden - and those who consider them necessary for many years to come. The latter is the position of the state government, and that is why we are making new power plants possible in terms of planning within the framework of the European and German climate concept, within the framework of our energy policy and within the framework of planning and environmental legislation, because they are an important part of a secure energy supply and a mainstay of our industry.⁸¹ (Emphasis added)

- 95 The state government confirmed the vision of the Federal Government, emphasizing that it was "creating legal certainty for investments in future projects" aiming at "giving potential investors confidence":

"Nevertheless, the state government and the municipal level have taken up the challenge of changing the framework conditions so that power plant projects can continue to be realised in the future in accordance with the law.

Ladies and gentlemen, we are thus creating legal certainty for investments in future projects, but also for the specific [hard coal-fired] power plant in

⁷⁹ [Exhibit C-0061-DE / Exhibit C-0061-EN: State Parliamentary Papers of North Rhine-Westphalia \(Landtag Nordrhein-Westfalen\) 14/71, Speech by the State Minister for Economic Affairs and Energy of North Rhine-Westphalia, Christa Thoben, 24 October 2007 \(excerpts\)](#), pp. 8156-8157.

⁸⁰ [Exhibit C-0062-DE / Exhibit C-0062-EN: State Parliamentary Papers of North Rhine-Westphalia \(Landtag Nordrhein-Westfalen\) 14/71, 25 March 2010 \(excerpts\)](#), p. 17362.

⁸¹ [Exhibit C-0062-DE/Exhibit C-0062-EN: State Parliamentary Papers of North Rhine-Westphalia \(Landtag Nordrhein-Westfalen\) 14/71, 25 March 2010 \(excerpts\)](#), p. 17363.

Datteln. Our aim must be to give potential investors confidence in the work of the authorities and the state government.⁸² (Emphasis added)

96 Both federal and local governments were aligned in their intentions. By stating their explicit support, providing stable investment conditions, both were clearly setting the scene for a long-term partnership between investors and the German government.

6. Summary

97 When Claimant considered investing in the Lünen power plant, Respondent was conveying a very clear message: it needed and wanted new coal-fired power plants to be built, and was actively seeking investors, highlighting the long-term perspective of its energy policy. Through the official reports and statements by Ministers, and its Chancellors, Respondent publicly declared that building new coal-fired power plants was not only desired by it, but compatible with its climate policy and even an essential factor to achieve its climate goals. This position was consistently repeated until 2020.

III. Claimant's decision to invest in the Lünen Plant

98 Claimant's decision to invest was pursued against this background. Faced with forecasts of long-term electricity supply gaps in the Canton of Ticino, and limited investment opportunities in Switzerland, AET reviewed investment opportunities abroad (see **Section 1**). Attracted by ideal investment conditions in Germany, AET decided to participate in the planning and construction of the Lünen plant and invested more than EUR 23 million (**Section 2**). In 2013, after all necessary permits had been obtained from the German authorities (**Section 3**) and the construction work had been completed. (**Section 4**), one of the most modern coal-fired power plants began its operation (**Section 5**).

1. Claimant needed access to baseload capacity outside of Switzerland

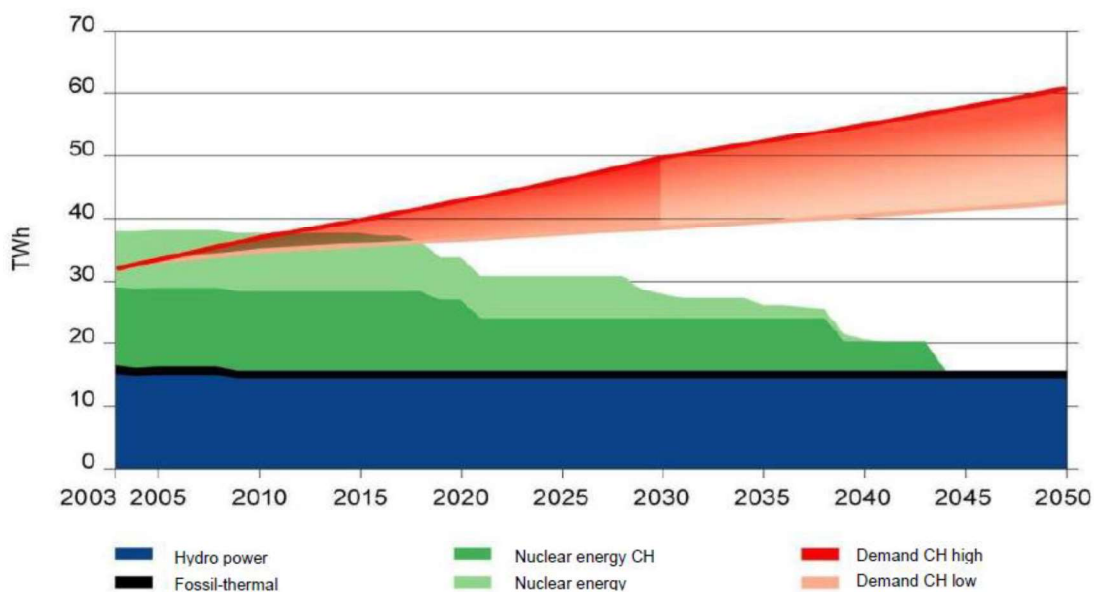
99 Since its founding in 1958, AET has placed significant emphasis on utilizing natural resources, particularly hydropower, for electricity production.⁸³ Hydropower was the main source of electricity generation and ensured the reliable supply for the Canton of Ticino. From the year 2000 onwards, however, the energy demand in Switzerland and in the Canton of Ticino continuously increased due to factors such as population growth, urbanization, technological advancements, and a higher standard of living. In Ticino, the electricity demand had been continuously increasing, similar to Switzerland

⁸² [Exhibit C-0062-DE / Exhibit C-0062-EN: State Parliamentary Papers of North Rhine-Westphalia \(Landtag Nordrhein-Westfalen\) 14/71, 25 March 2010 \(excerpts\)](#), p. 17357.

⁸³ [Exhibit C-0018-DE / Exhibit C-0018-EN: AET, The AET at a glance, available at: https://www.aet.ch/Die-Azienda-Elettrica-Ticinese](https://www.aet.ch/Die-Azienda-Elettrica-Ticinese), (last accessed on 27 July 2024).

and Europe, at an annual growth rate of about 2-2.5 %. This development would lead, AET had considered, to a significant risk for electricity shortages by 2020.⁸⁴

100 The figure below depicts this electricity shortage expected in Switzerland from 2020 onwards (red line)⁸⁵. This is a scenario calculated by Axpo, a leading Swiss energy company.⁸⁶



101 It would be increasingly difficult to rely solely on hydropower for electricity generation. Hydropower plants are highly dependent on hydrological conditions and subject to seasonal and climatic fluctuations, i.e. rainfall in summer / winter. Additionally, the storage capacities of hydropower plants are limited, which can to shortages during periods of high energy demand or prolonged dry spells, further compromising the stability of electricity supply.⁸⁷

⁸⁴ [Exhibit C-0063-IT / Exhibit C-0063-EN: Department of Finance and Economic Affairs of the Canton of Ticino, Message No. 6091 to the Grand Council of the Republic and Canton of Ticino on the Participation of AET in a company for the construction of a thermal power plant in Germany, 9 July 2008](#), p. 8.

⁸⁵ [Exhibit C-0063-IT / Exhibit C-0063-EN: Department of Finance and Economic Affairs of the Canton of Ticino, Message No. 6091 to the Grand Council of the Republic and Canton of Ticino on the Participation of AET in a company for the construction of a thermal power plant in Germany, 9 July 2008](#), p. 7, see Figure by AXPO scenario on the coverage of electricity demand in Switzerland in the winter half year.

⁸⁶ [Exhibit C-0064: Axpo Group, About us, available at https://www.axpo.com/group/en.html \(last accessed on 24 July 2024\)](https://www.axpo.com/group/en.html).

⁸⁷ The developments and technologies of storage capacities are more advanced today. In 2023, the Swiss government approved the establishment of hydropower reserves and additional storage capacities to further enhance the stability and reliability of energy supply. These measures aim to mitigate the risk of energy shortages and ensure a continuous electricity supply. See [Exhibit C-0065: Swissgrid Media Service, Procurement of the third tranche of the](#)

102 In 2004, the Board of AET decided to diversify its electricity generation to address these challenges of ensuring a secure energy supply. This decision also aimed to counteract the overall declining production coverage in Switzerland and Europe, to address the expected rising energy costs in national and international markets, and to ensure a stable energy supply and prices for consumers.

"In 2004, AET developed a production strategy to meet the mitigation of production coverage that is affecting Europe and in our country, and the rapid growth of energy costs on the national and international market:

- the adjustment of hydroelectric production capacities in Ticino, where possible;*
- the purchase of stakes in production plants in Switzerland, where possible;*
- the participation in production plants abroad, so as to be able to offset the expected coverage deficit in Switzerland and balance the electricity market production portfolio of neighbouring countries, which is closely interconnected with the Swiss market;*
- investments in renewable energy in Switzerland and abroad, where legislation already allows for higher production costs than for other sources."⁸⁸*
(Emphasis added)

103 While the expansion of other renewable energy sources such as solar and wind energy was to be continued, at that time, these technologies were less widespread and considered less efficient and reliable.⁸⁹ AET considered them insufficient to guarantee energy security.

104 AET aimed to integrate traditional, stable base-load power plants, such as coal-fired power plants, into its portfolio to minimize supply risks. Base-load energy, which is available around the clock to meet the basic demand for electricity, could only be generated by power plants that are constantly in operation regardless of weather conditions. Building sufficient base-load energy production capacity was essential, as such capacities were not existing in Ticino and barely (apart from nuclear power plants) existing in Switzerland.⁹⁰ Therefore a central aspect of the diversification strategy was exploring investment opportunities in base-load power plants outside Switzerland to compensate for the anticipated domestic supply shortfall.

[hydropower reserve for next winter has taken place](#), 14 September 2023, available at: [Procurement of the third tranche of the hydropower reserve for next winter has taken place \(swissgrid.ch\)](#) (last accessed on 24 July 2024).

⁸⁸ [Exhibit C-0063-IT](#) / [Exhibit C-0063-EN](#): Department of Finance and Economic Affairs of the Canton of Ticino, [Message No. 6091 to the Grand Council of the Republic and Canton of Ticino on the Participation of AET in a company for the construction of a thermal power plant in Germany](#), 9 July 2008, pp. 3-4.

⁸⁹ [Exhibit C-0063-IT](#) / [Exhibit C-0063-EN](#): Department of Finance and Economic Affairs of the Canton of Ticino, [Message No. 6091 to the Grand Council of the Republic and Canton of Ticino on the Participation of AET in a company for the construction of a thermal power plant in Germany](#), 9 July 2008, pp. 5 ff.

⁹⁰ [Exhibit C-0063-IT](#) / [Exhibit C-0063-EN](#): Department of Finance and Economic Affairs of the Canton of Ticino, [Message No. 6091 to the Grand Council of the Republic and Canton of Ticino on the Participation of AET in a company for the construction of a thermal power plant in Germany](#), 9 July 2008, p. 6.

105 In this context, AET evaluated various international locations for their geographical and infrastructural advantages as well as their respective national energy policies. In assessing potential investment destinations in different European countries, Germany quickly emerged as the preferred target.⁹¹ As explained above, following the early 2000s nuclear phase-out, German energy policy focused on developing and promoting modern coal-fired power plants (see **C.II.**). The orientation of German policy towards new highly efficient coal-fired power plants to cope with the growing need for electricity in Germany aligned with AET's goals of ensuring a reliable and long-term secured energy supply in Ticino. Thus, Germany became an attractive location for AET's diversification efforts.

106 Also the Department of Finance and Economics of Claimant's owner, the Canton of Ticino, explicitly emphasised why Germany was an advantageous location for such investments:

"In Germany, the electricity demand is currently covered by somewhat old power plants, mainly lignite (Braunkohle), hard coal (Steinkohle) and nuclear. [...]

Growing demand for electricity, together with the need to renew power plant stocks and the German Federal Government's decision to shut down all nuclear power plants by 2040, obliges Germany to build approximately new generating capacity of around 2,000 MW per year.

The presence of a significant hard coal industry and the possibility of water transport on rivers and canals makes Germany a favoured location for coal-fired power production. Now that the nuclear option has been abandoned, and the availability of gas is limited in any case (due to strategic dependence and long-term global reserves), Germany can only achieve the twofold aim of covering its electricity needs and meeting the Kyoto Protocol targets by building new, efficient coal-fired power plants to replace the old, inefficient ones (lignite and coal-fired power plants).

Modern coal-fired power plants no longer have the same impact as everyone imagines. Environmental aspects clearly come first in the design and planning process. [...].

As already mentioned, the problem of CO2 emissions remains. Because the new power plants replacing the old plants that are now at the end of their technical lifetime are more efficient, an initial tangible reduction in emissions can be achieved compared to the current situation. Compared to the average efficiency of coal-fired power plants in Germany, these new plants lead to an improvement of 9 percentage points in efficiency (from 36% to 45%).

Space has also been set aside in the planned site, to build a CO2 sequestration plant known as a Carbon Capture and Storage Plant (CCS) once the technology is sufficiently advanced and it is industrially feasible. This technology has currently been applied on various prototypes and is expected to

91

move to an industrial application phase within ten years.”⁹² (Emphasis added)

2. Claimant joined a consortium of other municipal utilities to review an investment in the Lünen Plant.

107 In 2005, AET established contact with a consortium in Germany that intended to build one or more highly efficient, modern coal-fired power plant. At that time, the consortium consisted of 25 mainly German municipal utilities.

108 The consortium already had established a project structure with the goal to develop highly efficient coal-fired power plant generation capacity of at least 750 MW.⁹³ The project was led by today's Trianel GmbH (“**Trianel**”).⁹⁴ To ensure the efficient involvement of all project partners in the planning, the formation of a company for project implementation was planned under the name Trianel Power – *Projektentwicklungsgesellschaft Kohlekraftwerk GmbH & Co. KG* (“**TPK**”).

109 AET was strongly interested in participating. Consequently, on 20 July 2005, AET's board approved up to [Redacted Rule 66(f)] for the exploration of the Trianel project.

a) The risk assessment supported an investment in a new coal project in Germany

110 The TPK project team conducted a feasibility study on the construction and operation of a 750 MW coal-fired power plant in Germany. The study examined the profitability, feasibility, and risks of investing in a coal-fired power plant, as well as providing initial time and cost estimates. A team of internal resources and external consultants evaluated the project's implementation and reached positive conclusions.⁹⁵

111 A key factor of the feasibility study were the developments in German energy policy and their impact on the electricity supply in Germany. Germany was ideal for the construction of a new highly efficient coal power plant because the existing power plant

⁹² [Exhibit C-0063-IT / Exhibit C-0063-EN: Department of Finance and Economic Affairs of the Canton of Ticino, Message No. 6091 to the Grand Council of the Republic and Canton of Ticino on the Participation of AET in a company for the construction of a thermal power plant in Germany, 9 July 2008](#), pp. 10-12.

⁹³ [Redacted]
[Redacted Rule 66(f)]
[Redacted]

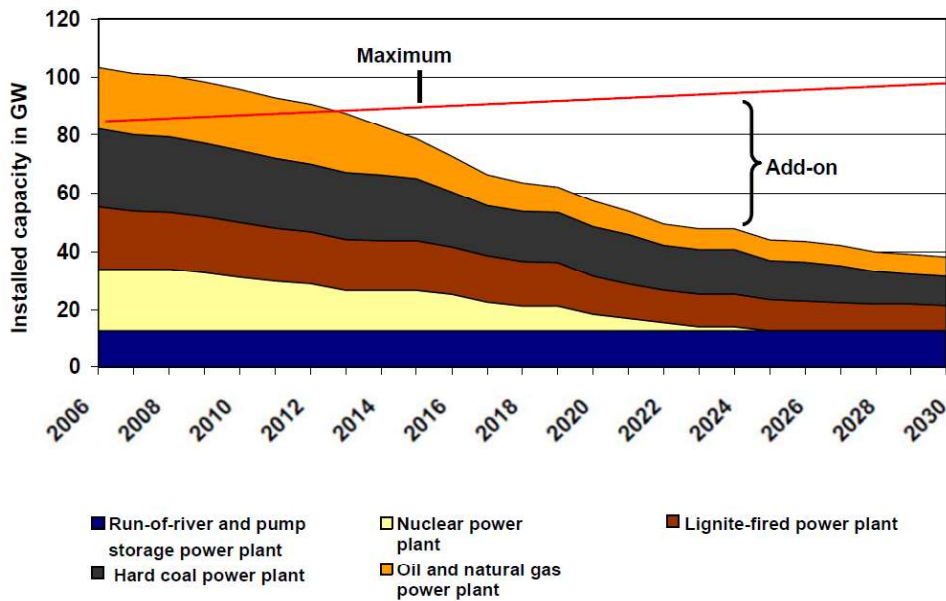
⁹⁴ Trianel GmbH was originally established under the name Trianel European Energy Trading GmbH (“TEET”), see [Exhibit C-0067-DE / Exhibit C-0067-EN: Commercial Register for Trianel GmbH](#).

⁹⁵ [Exhibit C-0068-DE / Exhibit C-0068-EN: TKL, Feasibility study for coal-fired power plant, 14 March 2006 \(excerpts\)](#).

fleet consisted of many old plants that were soon to be shut down. The parallel decision of the Federal Government to shut down all nuclear power plants and an increasing electricity demand were expected by AET to create a supply gap that needed to be filled by new power plants.⁹⁶ This was also concluded by the feasibility study:

“The existing power plant fleet in Germany is characterised by a large number of relatively old plants that have already been amortised and will be shut down in the coming years due to their age. Furthermore, the political decision to phase out nuclear energy will gradually result in the loss of generation capacity, which will have to be replaced by new power plants. As a slight increase in load development is assumed, there will be an increasing shortfall in coverage over the next few years, which will have to be filled by new power plants.”⁹⁷

112 The following figure shows the development of the German power plant fleet and the expected shortfall in electricity coverage from 2006 to 2030. This assessment was determined by the company BET (*Beratung für die Transformation der Energiewirtschaft*)⁹⁸, a consulting firm specializing in the transformation of the energy sector, and was considered within the feasibility study⁹⁹ for TKL.



Development of the power plant portfolio in Germany up to 2030

96 [REDACTED]
 [REDACTED] Rule 66(f)
 [REDACTED]

97 [Exhibit C-0068-DE](#) / [Exhibit C-0068-EN](#): TKL, *Feasibility study for coal-fired power plant*, 14 March 2006 (excerpts), p. 5.

98 [Exhibit C-0069-DE](#) / [Exhibit C-0069-EN](#): BET Energie, *Holistic consulting for the transformation of the energy industry*, available at <https://www.bet-energie.de/> (last accessed on 24 July 2024).

99 [Exhibit C-0068-DE](#) / [Exhibit C-0068-EN](#): TKL, *Feasibility study for coal-fired power plant*, 14 March 2006 (excerpts), p. 6.

113 At this time, several companies announced plans to develop new power plant projects in Germany. This was also intended to reduce dependence on the concurrently rising market prices, especially for those without their own production capacities.

“Motivated by the rising electricity prices in recent years and the general need to build new power plants, various electricity producers have now announced new power plant projects.”¹⁰⁰

114 In the evaluation within the feasibility study concerning market conditions, technology, investment, profitability etc., a technical and economic lifespan of 40 years was assumed as the timeframe for the power plant.¹⁰¹

115 In total, the feasibility study comprehensively analysed various risks, including the obligation to pay for Emissions Allowances and potential increases in ETS prices driven by rising CO2 emission certificate costs and the necessity to replace aging power plants due to the German government's nuclear phase-out decision. These analyses aimed to evaluate the financial viability and potential future costs associated with regulatory changes in the energy market, considering factors such as investment and operating costs, electricity prices, and the advancement of modern coal power plant technologies. However, they did not account for an exit from coal, as this risk was not foreseeable at that time. The focus at that time was on the nuclear phase-out. The study concludes that German energy policy requires the construction of new power plants and that participation in one or more power plants was almost essential for municipal utilities to remain competitive and to act as independently as possible from rising market prices.¹⁰²

116 Also AET used the results of the feasibility study, in which they were directly involved, as the basis for its own risk assessment on the potential diversification into international base-load energy and the risks of participating in this project in Germany.¹⁰³

117 A key factor of AET's assessments was therefore again the Federal Government's decision to shut down all nuclear power plants by 2040. The resulting increase in electricity demand in the coming years forced Germany to build new generation capacities of around 2 GW per year.¹⁰⁴

100 [Exhibit C-0068-DE / Exhibit C-0068-EN: TKL, Feasibility study for coal-fired power plant, 14 March 2006 \(excerpts\)](#), p. 7.

101 [Exhibit C-0068-DE / Exhibit C-0068-EN: TKL, Feasibility study for coal-fired power plant, 14 March 2006 \(excerpts\)](#), pp. 3, 4, 6, 7, 34.

102 [Exhibit C-0068-DE / Exhibit C-0068-EN: TKL, Feasibility study for coal-fired power plant, 14 March 2006 \(excerpts\)](#), p. 1.

103 [REDACTED]
[REDACTED] Rule 66(f)
[REDACTED]

104 [REDACTED] Rule 66(f)

118 The need for around 2 GW of new generation capacity per year was significant. At that time, this demand could only be reliably met by base-load energies, particularly coal-fired power plants.¹⁰⁵ The total installed capacity of all power generation plants in Germany in 2004 was approximately 120 GW. An annual increase of 2 GW corresponded to a capacity increase of about 1.7%, which was significant due to the need for stable base-load power, the ongoing energy transition, and the substantial investment required for infrastructure development.

119 After evaluating the results of the feasibility study, analysing the potential costs of the power plant, and considering the findings of both the TKL and AET business plans, AET management reiterates that this project represents a prudent investment. It aims to guarantee the canton's security of supply, stabilize user prices over the medium to long term, and rebalance technological and geographic risks.¹⁰⁶

b) AET becomes one of the two largest shareholders

120 AET ultimately decided to invest in the project, and thus in a highly efficient coal-fired power plant. The board approved AET's participation in Trianel Power Projektentwicklungsgesellschaft Kohlekraftwerk GmbH & Co. KG on 29 March 2006, and thereby authorized AET's management to sign the necessary contracts.¹⁰⁷

121 With the partnership agreement dated 9 August 2006 ("**2006 Partnership Agreement**")¹⁰⁸, the project partners established Trianel Power Projektentwicklungsgesellschaft Kohlekraftwerk mbH & Co. KG, now known as "Trianel Kohlekraftwerk Lünen GmbH & Co. KG ("**TKL**")¹⁰⁹. AET participated as a limited partner.

Rule 66(f)

105 [Exhibit C-0070: Fraunhofer Energy-Charts, Germany Installed Power in 2004, available at www.energy-charts.info/charts/installed_power/chart.htm?l=en&c=DE&year=2004&chartColumnSorting=default](https://www.energy-charts.info/charts/installed_power/chart.htm?l=en&c=DE&year=2004&chartColumnSorting=default) (last accessed on 25 June 2024).

Rule 66(f)

107 Rule 66(f)

108 [Exhibit C-0072-DE](#) / [Exhibit C-0072-EN: TKL 2006 Partnership Agreement, 9 August 2006](#). This partnership agreement established the company TKL and was concluded on 9 August 2006. It was first revised on 8 May 2008 and again on 7 July 2011.

109 Originally based in Aachen, the "*Trianel Power Projektentwicklungsgesellschaft Kohlekraftwerk mbH & Co. KG*" was first renamed to "*Trianel Power Kohlekraftwerk Lünen GmbH & Co. KG*" on 12 September 2008. Following another name change on 9 March 2009, it acquired its current name, "*Trianel Kohlekraftwerk Lünen GmbH & Co. KG*". The company's headquarters were subsequently relocated to Lünen on 17 August 2009 (responsible registry court: Amtsgericht Dortmund HRA 16922). For further details, please

122 TKL follows a unique contractual structure among the shareholders. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] Rule 66(f)
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

c) The Planning Phase ended successful

123 The subsequent planning phase for the coal-fired power plant focused on securing the site, the financing, and the necessary contracts for construction and operation.

124 Already at the beginning of 2006, TKL had secured the Lünen site for the power plant project through option agreements¹¹². As explained, the Lünen site is characterized by its advantageous position in an industrial area with ample space and immediate proximity to the harbour *Stummhafen* on the Datteln-Hamm Canal (see **Section C.I.1**).

125 In April 2007 TKL requested a market analysis and strategic assessment of the Lünen Projekt by Enervis Energy Advisors GmbH. That analysis confirmed the main findings of the previous feasibility study. Enervis found that without the construction of new power plants, the capacity development in the German electricity generation market would decrease significantly, highlighting a large capacity gap and a substantial need for building new power plants (see light green highlighted area in the following figure).¹¹³

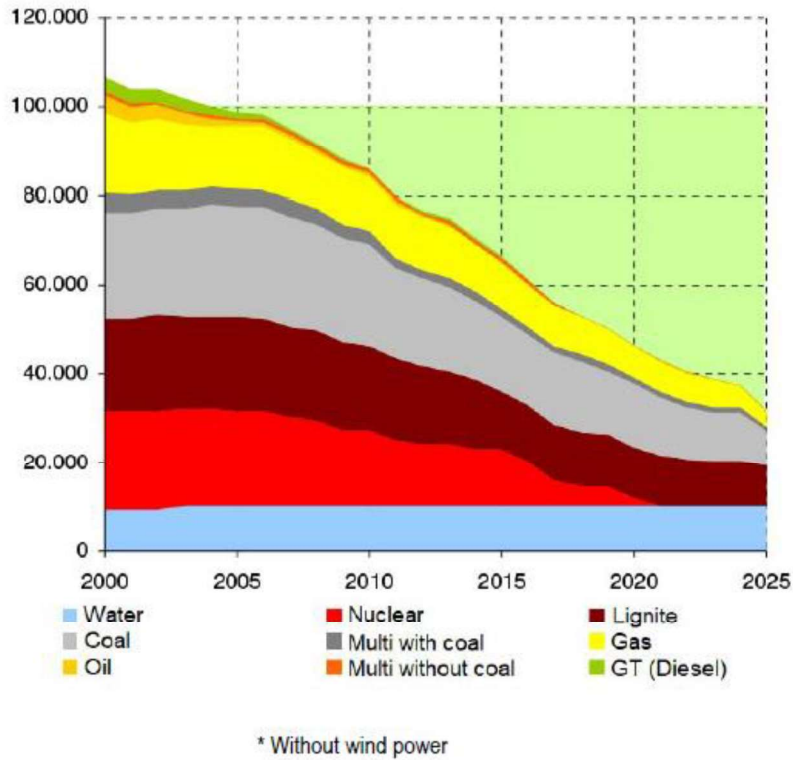
refer to the company history provided as [Exhibit C-0073-DE / Exhibit C-0073-EN: North Data, TKL's registration history, available at https://www.northdata.de/Trianel+Kohlekraftwerk+L%C3%BCnen+GmbH+%26+Co.+KG,+L%C3%BCnen/Amtsgericht+Dortmund+HRA+16922](#) (last accessed on 24 June 2024).

110 [Exhibit C-0074-DE / Exhibit C-0074-EN: TKL 2006 Consortium Agreement, 9 August 2006.](#)

111 [REDACTED]
[REDACTED] Rule 66(f)
[REDACTED]

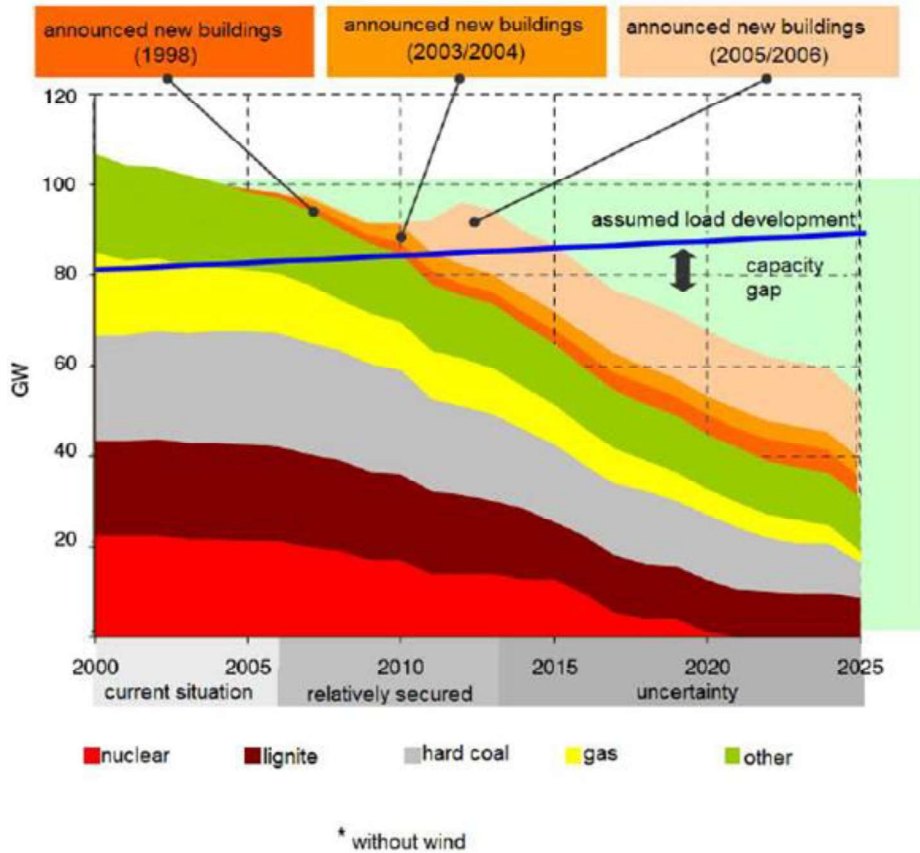
112 [REDACTED]
[REDACTED] Rule 66(f)
[REDACTED]

113 [Exhibit C-0076-DE / Exhibit C-0076-EN: Enervis, Report on the Involvement in the generation market, 26 April 2007 \(excerpts\)](#), p. 3.



126 As the following figure by Enervis¹¹⁴ shows, by 2005/2006, the clear direction set by German energy policy had encouraged many companies to announce the building of new power plants.

¹¹⁴ [Exhibit C-0076-DE / Exhibit C-0076-EN: Enervis, Report on the Involvement in the generation market, 26 April 2007 \(excerpts\)](#), p. 6.



127 On 20 September 2007, TKL also signed the Engineering, Procurement, and Construction (“EPC”) contract for the turnkey realization of a 750 MW coal-fired power plant at the Lünen site. ¹¹⁵ [REDACTED] Rule 66(f)

[REDACTED] Rule 66(f) The implementation of the coal-fired power plant project thus took shape. The Lünen City Council also welcomed the project and unanimously decided to support it on 14 June 2007. ¹¹⁷

128 To secure the financing for the large-scale project, TKL signed a financing agreement [REDACTED] Rule 66(f) on 5 March 2008. ¹¹⁹ The financing was for

115 [REDACTED] Rule 66(f)

116 [REDACTED] Rule 66(f)

117 [REDACTED] Rule 66(f)

118 [REDACTED] Rule 66(f)

119 The loan agreement was originally concluded on 26 July 2008, amended multiple times in the following years, and the latest version is dated 17 November 2023, see [Exhibit C-](#)

66(f) of the investment and a term of 66(f) years. Accordingly, the equity share of the investment into the Lünen plant amounted to 66(f) of the construction costs. Pursuant to the financing agreement, [REDACTED] Rule 66(f)
[REDACTED] Rule 66(f)

3. Claimant operates a “power plant slice”

129 When Claimant invested in the Lünen plant, it did not become simply a shareholder in TKL but obtained a slice (“Kraftwerksscheibe”) of the power plant. Power plant slices are a standard concept in the energy industry. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] Rule 66(f)
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] 122

130 [REDACTED]
[REDACTED]
[REDACTED] Rule 66(f)
[REDACTED]
[REDACTED]

[0078-DE / Exhibit C-0078-EN: TKL Financing Agreement, 17 November 2023 \(excerpts\)](#). [REDACTED]
[REDACTED] Rule 66(f)
120 [REDACTED]
[REDACTED] Rule 66(f)
[REDACTED]
[REDACTED]

121 [REDACTED]
[REDACTED]
[REDACTED] Rule 66(f)
[REDACTED]
[REDACTED]
[REDACTED]

122 [Exhibit C-0080-DE / Exhibit C-0080-EN: TKL 2008 Partnership Agreement, 8 May 2008 \(excerpts\)](#), Sections 19(2), 16(2) as well as [REDACTED]
[REDACTED] Rule 66(f)

123 [REDACTED] Rule 66(f)
[REDACTED]

124 [REDACTED] Rule 66(f)
[REDACTED]

131 [REDACTED]
[REDACTED]
[REDACTED] Rule 66(f)
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

132 [REDACTED]
[REDACTED]
[REDACTED] Rule 66(f)
[REDACTED]
[REDACTED]
[REDACTED]

133 Figuratively speaking, TKL consists of several individual, independent small plants, each controlled differently by the respective shareholders.

4. The Lünen plant obtained all relevant permits for the construction

134 Due to their environmental and safety relevance, the construction and operation of power plants are subject to strict permit requirements within a rather complicated legal and procedural framework of the FICL, the Federal Immission Control Law. All FICL permits granted for the Lünen Plant were issued for an indefinite period and were declared to be immediately enforceable. As of today, the FICL permits are irrevocable and legally binding.

a) Legal and procedural framework for the FICL Permits

135 Usually, permits for large and complicated projects as new coal power plants are granted in a staged procedure. Pursuant to Section 8 FICL, Partial Permits will be issued for individual parts of the project in order to expedite the process.¹²⁵ They enable the examination and realization of separate parts of the project, while always including a so-called Preliminary Positive Overall Evaluation (*vorläufiges positives Gesamturteil*) in regard to the entire power plant. These partial permits are final with regard to their subject matter.

136 Further, according to Section 9 FICL¹²⁶ an Advance Decision can be issued for individual permit requirements provided in Section 6 FICL and on location. Unlike partial

¹²⁵ [Exhibit C-0026-DE](#) / [Exhibit C-0026-EN: Federal Immission Control Law - FICL \(Bundesimmissionsschutzgesetz - BImSchG\)](#), BGBl. 15 March 1974, (excerpts), Section 8.

¹²⁶ [Exhibit C-0026-DE](#) / [Exhibit C-0026-EN: Federal Immission Control Law - FICL](#)

permits, which concern individual parts of the Lünen plant, Advance Decisions rule on individual permit requirements. Although the Advance Decision does not yet authorize the execution of the whole project, it is used to obtain legal certainty on certain critical issues and thus investment security at the same time.

- 137 For the FICL Permits, substantial requirements set out in Section 6 FICL must be fulfilled. Section 6 FICL stipulates:

“Section 6 Permit requirements

(1) The permit shall be granted if

1. it is ensured that the obligations arising from Section 5 and an ordinance issued on the basis of Section 7 are fulfilled, and

2. Other regulations under public law and occupational health and safety concerns do not conflict with the construction and operation of the installation.”

- 138 According to Section 6 (1) No. 2 not only the requirements under the FICL but also the requirements according to other relevant public laws must be met. Relevant to the construction and operation of a power plant are the Nature Conservation Law (*Bundesnaturschutzgesetz*), the Greenhouse Gas Emission Trading Law (*Treibhausgas-Emissionshandelsgesetz – “TEHG”*) and other applicable public law regulations.

- 139 When issuing the FICL permits, the Arnsberg District Government ruled that TKL fulfilled all the requirements, including the strict environmental and emission related requirements according to the aforementioned laws.

b) The permits confirmed the relevance of the Lünen Plant

- 140 The Advance Decision from 2008 and the Advance Decision from 2013 both confirm the environmental and emission related permissibility of the Lünen plant.¹²⁷

- 141 The District Government stressed the importance of the Lünen Power Plant and, when issuing the permits, confirmed Germany's energy policy, which supported the construction of highly efficient and modern coal-fired power plants to reduce CO2 emissions

[\(Bundesimmissionsschutzgesetz - BImSchG\), BGBl. 15 March 1974, \(excerpts\)](#), Section 9. An Advance Decision pursuant to section 9 (1) FICL will be granted, if the requirements for the concerned legal issue within the framework of section 6 FICL are met, the impact of the entire plant can be sufficiently assessed (preliminary positive evaluation) and when there is a legitimate interest of the applicant for granting the advance decision. Further, the entire plant must appear to be eligible for approval on the basis of the submitted concept documents.

¹²⁷ [Exhibit C-0033-DE / Exhibit C-0033-EN: District Government of Arnsberg, 2008 Advance Decision for the construction and operation of the Lünen hard coal-fired power plant \(Vorbescheid\) and First Partial Permit, 6 May 2008 \(excerpts\)](#), p. 8, 10; [Exhibit C-0030-DE / Exhibit C-0030-EN: District Government of Arnsberg, 2013 Advance Decision \(Vorbescheid\), 20 November 2013, \(excerpts\)](#), p. 1.

and ensure energy supply (see **C.II.**).¹²⁸ Consistent with the German energy policy, it repeatedly highlighted the important role of the Lünen Power plant and other new coal-fired power plants when issuing the permits.¹²⁹

- 142 The indispensability of the Lünen plant as a hard coal-fired power plant for the future of energy security in Germany was emphasized since green power would depend on weather conditions:

“Due to their flexibility, they [coal-fired power plants] will be increasingly demanded now and in the future when wind and solar power can only make a small contribution to electricity generation due to weather conditions. This means that modern coal-fired power plants with large capacities will be indispensable for the foreseeable future. Due to their greater flexibility, new modern power plants will better meet the requirements of the market than old plants, also in view of the nuclear power plant capacities to be shut down by 2022.”¹³⁰ (Emphasis added)

- 143 The District Government stressed that the Lünen Power plant was crucial to provide security of energy supply and system stability:

“This demonstrates the necessity of putting into operation both, the power plants currently under construction, including the Lünen plant, and other generation capacities independent from renewable energy [dargebotsunabhängig] in order to ensure both the security of electricity supply for consumers as well as system stability of the electricity grid in the short and medium term. Not putting this power plant into operation would therefore further aggravate the already tense situation with regard to security of supply and system stability.”¹³¹ (Emphasis added)

- 144 Consequently, at any given time during the permit procedure, there was no discussion of the phase-out of coal-fired power plants. On the contrary, the necessity and desirability of constructing new coal power plants were repeatedly stressed, and the public interest in such new plants was affirmed over all the years during the permit procedure.

¹²⁸ [Exhibit C-0033-DE](#) / [Exhibit C-0033-EN](#): District Government of Arnberg, *2008 Advance Decision for the construction and operation of the Lünen hard coal-fired power plant (Vorbescheid) and First Partial Permit*, 6 May 2008 (excerpts), p. 160; [Exhibit C-0030-DE](#) / [Exhibit C-0030-EN](#): District Government of Arnberg, *2013 Advance Decision (Vorbescheid)*, 20 November 2013, (excerpts), p. 290.

¹²⁹ E.g., [Exhibit C-0030-DE](#) / [Exhibit C-0030-EN](#): District Government of Arnberg, *2013 Advance Decision (Vorbescheid)*, 20 November 2013, (excerpts), p. 290.

¹³⁰ [Exhibit C-0030-DE](#) / [Exhibit C-0030-EN](#): District Government of Arnberg, *2013 Advance Decision (Vorbescheid)*, 20 November 2013, (excerpts), p. 289, in regard to future power generation and in regard to climate protection requirements.

¹³¹ [Exhibit C-0030-DE](#) / [Exhibit C-0030-EN](#): District Government of Arnberg, *2013 Advance Decision (Vorbescheid)*, 20 November 2013, (excerpts), p. 290.

5. AET secures major investment: contracts signed for construction and operation of the coal-fired power plant

145 Once the competent authority had confirmed with its Advance Decision (*Vorbescheid*) of 5 May 2008 that the Lünen plant fulfilled all essential legal requirements, the shareholders of TKL unanimously decided to commence the construction of the power plant on 8 May 2008. On the same day, the shareholders also signed updated partnership and consortium agreements. The construction phase now involved a total of 28 companies with a combined capital of **EUR 147,944,200.00**.¹³²

146 AET's capital share amounted to **EUR 23,433,611.40**, representing 15.84% of the total capital¹³³. [Redacted] Rule 66(f)
[Redacted].¹³⁴

147 Also on 8 May 2008, AET concluded the [Redacted] Rule 66(f)
[Redacted]
(see Section C.III.3).¹³⁵

148 During the conclusion of the contracts, AET held a special status. [Redacted]
[Redacted]
[Redacted]
[Redacted] Rule 66(f)
[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]

¹³² [Exhibit C-0080-DE](#) / [Exhibit C-0080-EN: TKL 2008 Partnership Agreement, 8 May 2008 \(excerpts\)](#), pp. 2-3, and [Exhibit C-0081-DE](#) / [Exhibit C-0081-EN: TKL 2008 Consortium Agreement, 8 May 2008 \(excerpts\)](#), pp. 1-2.

¹³³ [Exhibit C-0080-DE](#) / [Exhibit C-0080-EN: TKL 2008 Partnership Agreement, 8 May 2008 \(excerpts\)](#), p. 2.

¹³⁴ [Redacted] Rule 66(f)
[Redacted]

¹³⁵ [Redacted] Rule 66(f) [Redacted]

¹³⁶ [Exhibit C-0081-DE](#) / [Exhibit C-0081-EN: TKL 2008 Consortium Agreement, 8 May 2008 \(excerpts\)](#), section 4.

¹³⁷ [Redacted] Rule 66(f)
[Redacted]

- 149 The evaluation by the Department of Finance and Economic Affairs of the Canton of Ticino also supported AET's participation in TKL and, on 23 February 2010, recommended the approval by the Canton of Ticino:

“AET's main purpose is to ensure the long-term coverage of Ticino's energy needs at competitive prices. [...]

We must be realistic about saving on energy consumption. Whatever measures we take, a drastic reduction in consumption in the short to medium term is not possible. Certainly, we must pursue this strategy vigorously. [...]

These band energy production volumes could, for example, be covered by nuclear power, but popular support and consensus for this energy vector is very weak. Another alternative could be gas-fired power stations. However, the gas comes from countries that do not hesitate, if they feel it necessary, to take measures that range from turning off the tap to the outright use of weapons. This energy source therefore also appears to be unsafe for geopolitical reasons.

The large slice of band energy that could be added to the company's production portfolio and the fact that energy could be made available at production prices support our participation in the Lünen plant [...]

In Germany, hard-coal is a central element in the energy mix of the future. In order to ensure a secure, competitive and environmentally sustainable energy supply, the (German) Federal Government centres its integrated energy and climate programme on the construction of highly efficient coal-fired power plants. The same power plants are also being promoted on a European basis within the framework of the full tender of EU emission allowances from 2013 with the proceeds (from the tender) being used to support investment costs by 15%. [...]

With this in mind, a majority of the Special Energy Commission calls on the Grand Council to approve only the share already invested in the first block (EUR 23,433,611 for the Lünen plant rounded up to EUR 24,000,000).”¹³⁸ (Emphasis added)

- 150 The actual construction of the power plant also started in May 2008 with clearing and preparation work. Construction of the first block began in September 2008. The construction of the facility took a total of 5 years and was completed in 2013.¹³⁹

¹³⁸ [Exhibit C-0084-IT / Exhibit C-0084-EN: Department of Finance and Economic Affairs of the Canton of Ticino, Special Energy Commission: Majority Report on AET's Message No. 6091 concerning its Participation in TKL 23 February 2010](#), pp. 1, 7, 10, 24. Originally, TKL had planned to build two coal-fired power plants.

¹³⁹ [Exhibit C-0085-DE / Exhibit C-0085-EN: TKL, Power plant: The project process, available at https://www.trianel-luene.de/kraftwerk/projektverlauf](https://www.trianel-luene.de/kraftwerk/projektverlauf) (last accessed on 24 July 2024).

6. TKL commenced permanent operation of the Lünen Plant in 2013

151 The construction lasted until 2013. After obtaining all further permits, particularly the Seventh Partial Permit necessary for the operation of the power plant, TKL was able to commence permanent operation of the Power Plant on 3 December 2013.¹⁴⁰

152 Like all coal-fired power plants of the latest generation, the Lünen Plant is technically designed for an operation period of at least 40 years.¹⁴¹ In fact, coal-fired power plants are usually operated beyond this period, for up to 50 years.¹⁴²

153

[REDACTED]
Rule 66(f)
[REDACTED]
[REDACTED].

154 The coal-fired power plant is still operated today by TKL, which continues to consist solely of municipal utilities. The 750-megawatt unit of the power plant continues to play an essential role in securing base-load electricity supply with an electrical efficiency of 45.95%.¹⁴³

IV. Respondent continued to stress the importance of the ETS to reduce emissions of power plants even after the Lünen plant was put into operation

155 Claimant has explained in **Section C.II** above that Respondent consistently repeated the need for coal-fired electricity generation for Germany's energy supply and the importance of the ETS in the time period between 2000 and 2008. Both were considered crucial by Respondent to achieve its emission targets. This position was maintained

¹⁴⁰ [Exhibit C-0086-DE / Exhibit C-0086-EN: District Government of Arnberg, Seventh Partial Permit, 22 November 2013 \(excerpts\)](#), p. 92, which is granting the operation of the hard coal-fired plant for an indefinite period. It explicitly authorizes the emission of CO2 gases: "*The plant is to be assigned to the activity of Annex 1 Part 2 No. 2 Greenhouse Gas Emission Trading Law in which the greenhouse gas CO2 is emitted. According to Section 4 (1) Greenhouse Gas Emission Trading Law, the plant operator needs a permit from the competent authority under emission control law for the release of greenhouse gases, which is issued with this decision.*"

¹⁴¹ [Exhibit CER-0002: Frontier Report](#), p. 25, 27, Frontier assumes 40 - 45 years or more in regard to operation duration; See also [Exhibit C-0087-DE / Exhibit C-0087-EN: Letter by TKL to the Federal Minister of Economics and Technology Peter Altmaier, 18 June 2021](#), p. 2.

¹⁴² [Exhibit CER-0002: Frontier Report](#) pp. 25, 27, Frontier assumes 40 - 45 years or more in regard to operation duration; See also [Exhibit C-0087-DE / Exhibit C-0087-EN: Letter by TKL to the Federal Minister of Economics and Technology Peter Altmaier, 18 June 2021](#), p. 2.

¹⁴³ [Exhibit C-0028-DE / Exhibit C-0028-EN: TKL, Power plant: The Trianel Lünen coal-fired power plant, available at <https://www.trianel-luenen.de/kraftwerk>, \(last accessed on 24 July 2024\)](#).

during the construction of the Lünen plant and even after it was put into operation in 2013.

- 156 In 2009, after the start of constructing of the Lünen plant and the federal elections, the victorious political parties CDU and FDP set out their energy program in their coalition agreement. On emission reduction, the coalition partners agreed to primarily use market mechanisms. Both confirmed that the ETS will remain the main instrument that should prospectively be developed into a global carbon market:

“Emissions trading is the primary climate protection instrument. It is to be expanded into a global carbon market in the future. We will take initiatives to connect regional trading systems and gradually include other sectors, such as aviation and shipping into the international trading system.”¹⁴⁴ (Emphasis added)

- 157 The coalition also stressed the importance of continuing the construction of new highly efficient coal-fired power plants, noting that they “*want to continue to facilitate the construction of highly efficient coal-fired power plants.*”¹⁴⁵ In contrast, the ban on the construction of new nuclear power plants was maintained. The lifetime of existing plants should only be extended if it was required to secure the energy supply. Hence, while nuclear power plants were referred to as a “*bridging technology*”,¹⁴⁶ highly efficient coal-fired power plants such as the Lünen plant constituted an important pillar of Respondent’s energy strategy at the time.

- 158 These holdings are also reflected in Respondent’s Energy Concept of September 2010. In this concept, Respondent defined its guidelines for a reliable, affordable and environmentally friendly energy supply and outlined its overall energy strategy up to 2050 for the first time.¹⁴⁷ Although the government announced its aim to generate the majority of electricity from renewable energies by 2050, investments in new, modern coal-fired power plants were still considered to be crucial.¹⁴⁸ Particularly, with regard to sufficient balancing and reserve capacities, these plants were deemed to play an important role for Germany’s energy mix.

¹⁴⁴ [Exhibit C-0088-DE / Exhibit C-0088-EN: Coalition Agreement between the CDU, CSU and FDP, "Growth, Education, Cohesion", 26 October 2009 \(excerpts\)](#), p. 26.

¹⁴⁵ [Exhibit C-0088-DE / Exhibit C-0088-EN: Coalition Agreement between the CDU, CSU and FDP, "Growth, Education, Cohesion", 26 October 2009 \(excerpts\)](#), p. 28.

¹⁴⁶ [Exhibit C-0088-DE / Exhibit C-0088-EN: Coalition Agreement between the CDU, CSU and FDP, "Growth, Education, Cohesion", 26 October 2009 \(excerpts\)](#), p. 29.

¹⁴⁷ [Exhibit C-0089-DE / Exhibit C-0089-EN: Ministry of Economic Affairs and Technology, Energy Concept for an environmentally friendly, reliable and affordable energy supply, 28 September 2010 \(excerpts\)](#), p. 3.

¹⁴⁸ [Exhibit C-0089-DE / Exhibit C-0089-EN: Ministry of Economic Affairs and Technology, Energy Concept for an environmentally friendly, reliable and affordable energy supply, 28 September 2010 \(excerpts\)](#), p. 16.

159 The government also particularly highlighted and welcomed the investments by municipalities in new highly efficient power plants, including coal-fired power plants, and encouraged them to continue such investments:

“Municipal enterprises in Germany are already investing heavily in the use of renewable energies and in highly efficient power plants. This is set to continue in the future.”¹⁴⁹

160 Accordingly, also Chancellor Merkel stated in 2010 that coal will remain a major energy source in Germany for a long time:

“There will also be a bridging function for coal and gas as energy sources in the long term. I believe that we will need these energy sources for some time to come; that is also part of reality.”¹⁵⁰

161 In 2011, the Federal Network Agency (*Bundesnetzagentur*) (“**BNetzA**”) even highlighted the need for new highly-efficient conventional power plants. It concluded that on top of the conventional power plants already under construction at the time and independently from developments in the renewable sector, 16.600 MW of new, conventional power plant capacities would be required by 2022 in order to avoid a supply energy shortage.¹⁵¹

162 In 2013, also the new government coalition formed by CDU and SPD recalled once again that electricity generation from renewable energies was unable to significantly contribute to the security of energy supply. Accordingly, the coalition stressed again that “[c]onventional power plants (lignite, hard coal, gas) as part of the national energy mix will be indispensable for the foreseeable future.”¹⁵²

163 In addition, the coalition agreement flagged the importance of effective emission trading at European level and that governments should not interfere with the ETS except in exceptional circumstances. At the time, there was a discussion at the European level to “backload” 900 million emission allowances. In response to this, the new government stressed that it “*must [be] ensure[d] that this will remain a singular intervention in the system*” and

¹⁴⁹ [Exhibit C-0089-DE / Exhibit C-0089-EN: Ministry of Economic Affairs and Technology, Energy Concept for an environmentally friendly, reliable and affordable energy supply, 28 September 2010 \(excerpts\)](#), p. 16.

¹⁵⁰ [Exhibit C-0090-DE / Exhibit C-0090-EN: Chancellor Dr Angela Merkel, Speech at the tenth annual conference of the German Council for Sustainable Development, Bulletin of the Federal Government No. 94-1 of 28 September 2010 \(excerpts\)](#), p. 4.

¹⁵¹ [Exhibit C-0091-DE / Exhibit C-0091-EN: Federal Network Agency, Report on the Effects of the Nuclear Phase-out on the Transmission Grids and Security of Supply, 31 August 2011](#), pp. 72-73.

¹⁵² [Exhibit C-0092-DE / Exhibit C-0092-EN: Coalition Agreement between CDU, CSU and SPD, Shaping Germany's Future, 18th legislative period, 16 December 2013 \(excerpts\)](#), p. 41.

“that the allowances are not permanently withdrawn from the market and that adverse effects on the competitiveness of the affected sectors and industrial jobs are ruled out.”¹⁵³

- 164 In line with the repeated statements of the government, the Action Program Climate Protection 2020 (in German, *Aktionsprogramm Klimaschutz 2020*), introduced by the German government in December 2014, also emphasised the importance of emission trading to achieve the emission targets in the energy sector.¹⁵⁴ Apart from calling for further technical development, conventional power plants were not explicitly mentioned.¹⁵⁵
- 165 The importance of the ETS was further underlined in the Climate Action Plan 2050 (*Klimaschutzplan 2050*) from November 2016. The Climate Action Plan outlines the German government's climate protection policy principles and goals and describes how the goals of the Paris Agreement are to be implemented at national level. For the first time, climate targets are defined for individual sectors (energy, buildings, transport, trade and industry, agriculture and forestry).¹⁵⁶
- 166 Although it stated that coal-fired power generation must be gradually reduced and replaced by renewable energies in the long term,¹⁵⁷ it stressed that the ETS “*remains the key European climate instrument*”, ensuring that the European climate targets will be achieved.¹⁵⁸ Despite the fact that the ETS would be “*not structurally designed to achieve targeted emissions reductions in individual countries and sectors*”, the government announced that the ETS would be “*very important to intensify the pricing signals sent by emissions trading*” and emphasised its efforts “*to make the ETS more effective.*”¹⁵⁹

153 [Exhibit C-0092-DE / Exhibit C-0092-EN: Coalition Agreement between CDU, CSU and SPD, *Shaping Germany's Future*, 18th legislative period, 16 December 2013 \(excerpts\)](#), p. 37.

154 [Exhibit C-0093-DE / Exhibit C-0093-EN: Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, *Action Program Climate Protection 2020*, 3 December 2014 \(excerpts\)](#), p. 26.

155 [Exhibit C-0093-DE / Exhibit C-0093-EN: Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, *Action Program Climate Protection 2020*, 3 December 2014 \(excerpts\)](#), p. 19.

156 [Exhibit C-0094-EN: Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, *Climate Action Plan*, November 2016](#), p. 6.

157 [Exhibit C-0094-EN: Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, *Climate Action Plan*, November 2016](#), p. 35.

158 [Exhibit C-0094-EN: Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, *Climate Action Plan*, November 2016](#), p. 37.

159 [Exhibit C-0094-EN: Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, *Climate Action Plan*, November 2016](#), p. 41.

167 At national level, the ETS should be accompanied by the promotion of renewable energies, the expansion of the electricity grid and the lignite security reserve introduced with the Electricity Market Act.¹⁶⁰ Mandatory shutdowns for coal-fired power plants are not mentioned. Instead, the Respondent referred to the most modern coal-fired power plants, such as the Lünen plant, as important bridging technologies until 2050:

*“As transitional technologies low-CO2 natural gas power stations and the most modern existing coal-fired power stations have an important function”.*¹⁶¹

168 However, despite these continuously repeated statements on the importance of the ETS and new, highly efficient coal-fired power plants to achieve its emission targets, Respondent fundamentally changed its energy policy shortly afterwards.

V. With the establishment of the Coal Commission, Respondent's course started to change fundamentally

169 Only five years after the Lünen plant's putting into operation, Respondent fundamentally changed its energy policy by establishing the Commission on Growth, Structural Change and Employment (*Kommission "Wachstum, Strukturwandel und Beschäftigung"*, the **"Coal Commission"**).

170 The Coal Commission, comprising representatives from environmental associations, the public sector, industry, business, trade unions, and science,¹⁶² was established on 6 June 2018. It was tasked explicitly, inter alia, with proposing a plan for the reduction and phase-out of coal-fired power generation:

“4. Measures to ensure that the energy sector is on a reliable course to reach the 2030 target, including a comprehensive impact assessment. The target established by the Climate Action Plan is for the energy sector to reduce emissions by 61% to 62% by 2030 compared with 1990 levels. For the contribution resulting from coal-fired power generation, the [Coal] Commission should propose appropriate measures for the energy sector to meet the 2030 target for inclusion in the programme of measures to reach the 2030 targets in implementation of the Climate Action Plan.

5. In addition, a plan for the step-by-step reduction and termination of coal-fired power generation, including an end date and the necessary legal, economic, social, renaturation and structural policy support measures.”¹⁶³ (Emphasis added)

¹⁶⁰ [Exhibit C-0094-EN: Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, *Climate Action Plan*, November 2016](#), p. 38.

¹⁶¹ [Exhibit C-0094-EN: Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, *Climate Action Plan*, November 2016](#), p. 35.

¹⁶² [Exhibit C-0014: Final Report of the Coal Commission, January 2019](#), p. 2.

¹⁶³ [Exhibit C-0014: Final Report of the Coal Commission, January 2019](#), p. 6.

- 171 On 25 January 2019, the Coal Commission adopted its non-binding final report. It proposed that coal-fired power generation should be prohibited after 2038.¹⁶⁴
- 172 To achieve this, the Coal Commission recommended two separate shutdown paths for the lignite and hard coal sector. It set different intermediate reduction targets for the capacity of power plants active in the market for 2022 and 2030. By 2022, a reduction to 15 GW for each hard coal- and lignite-fired power plants should be achieved and by 2030, a reduction to 9 GW for lignite- and 8 GW for hard coal-fired plants.¹⁶⁵
- 173 Between the intermediate reduction targets the capacities of lignite¹⁶⁶ and hard coal-fired power plants¹⁶⁷ should be reduced as linearly as possible. This proposal aimed at ensuring that emissions are reduced continuously and effectively throughout the whole period and not just merely in the end.¹⁶⁸ In 2032, it should be examined whether the complete phase-out could be brought forward to 2035, albeit only in negotiations with the operators.¹⁶⁹
- 174 The Coal Commission proposed to only shut down power plants capacities in agreement with the operators of lignite and coal-fired power plants. Solely where an amicable solution could not be achieved, it suggested to shut them down through mandatory administrative acts and subject to compensation payments:

“To ensure legal certainty in the procedure and an effective impact on the climate policy situation, the commission recommends the closure of power station capacity by agreement with the relevant power station operators.

[...]

Insofar as no mutual agreement is achieved, the commission recommends a regulatory solution with compensation payments in the framework of the legal requirements.”¹⁷⁰ (Emphasis added)

¹⁶⁴ [Exhibit C-0014: Final Report of the Coal Commission, January 2019](#), p. 64.

¹⁶⁵ [Exhibit C-0014: Final Report of the Coal Commission, January 2019](#), pp. 62-63.

¹⁶⁶ “To ensure the reliability of the supply and an orderly structural transition, this agreement should as far as possible include a constant reduction of the lignite capacity in the market.” ([Exhibit C-0014: Final Report of the Coal Commission, January 2019](#), p. 63).

¹⁶⁷ [Exhibit C-0014: Final Report of the Coal Commission, January 2019](#), p. 64, “In the area of coal-fired power stations, the Federal Government should ensure a constant reduction of capacity in the market as far as possible.”.

¹⁶⁸ [Exhibit C-0095-DE / Exhibit C-0095-EN: Dr. Felix Matthes, Statement on the hearing of the Committee on Economic Affairs and Energy of the 19th German Bundestag on 25 May 2020, Öko-Institut, 19 May 2020](#), pp. 5-8.

¹⁶⁹ [Exhibit C-0014: Final Report of the Coal Commission, January 2019](#), p. 64.

¹⁷⁰ [Exhibit C-0014: Final Report of the Coal Commission, January 2019](#), p. 62. This holding was later expressly reiterated for coal-fired power plant capacities: [Exhibit C-0014: Final Report of the Coal Commission, January 2019](#), p. 64: “If a mutual agreement with the operators of the hard coal capacity is not reached in time, the commission recommends

175 As regards the lignite sector, the Coal Commission proposed seeking a sector agreement. For the hard coal sector, the Coal Commission suggested voluntary shutdowns in the period from 2023 up to 2030, which should be awarded with appropriate and annually decreasing voluntary shutdown premiums.

“For the implementation, the Commission recommends voluntary measures, such as a mutually agreed negotiated solution with the operators of the lignite mines and a voluntary close-down premium for the hard coal capacity. The solution should include not only provisions for a socially compatible organisation of the phase-out but also a reasonable compensation payment scheme based on objective criteria for the operators.”¹⁷¹ (Emphasis added)

176 These shutdown premiums should be offered through tenders¹⁷² and should provide a special regulation for young coal-fired power plants (“**New Plants**”). Power plants that are less than 25 years old at the time of the shutdown should be excluded from the degressive premiums.

“Based on these criteria, the compensation payment reduces over time, i.e. the later the power stations are closed down, the lower the compensation payment will be. This degression of payments does not apply to plants which are less than 25 years old at the time of closure.”¹⁷³

177 Based on these recommendations, Respondent drafted the Coal Ban Law. As explained in the next chapter, crucial recommendation by the Coal Commission, in particular regarding the shutdown path for hard coal capacities, have been ignored in this draft.

VI. In 2020, Respondent adopts the Coal Ban Law

1. Introduction

178 On 31 January 2020 and 24 February 2020, the German government introduced identical draft bills of the Coal Ban Umbrella Law (*Gesetz zur Reduzierung und Beendigung der Kohleverstromung und zur Änderung weiterer Gesetze (Kohleausstiegsgesetz)*) to the two chambers of the German Parliament, *Bundesrat* and *Bundestag*, respectively.¹⁷⁴ Article 1 of the Coal Ban Umbrella Law introduced the Coal Ban Law (*Gesetz*

that a regulatory solution be implemented with compensation payments in the framework of the legal requirements in accordance with the above reduction plan.”

¹⁷¹ [Exhibit C-0014: Final Report of the Coal Commission, January 2019](#), January 2019, p. 63.

¹⁷² [Exhibit C-0014: Final Report of the Coal Commission, January 2019](#), January 2019, p. 64.

¹⁷³ [Exhibit C-0014: Final Report of the Coal Commission, January 2019](#), January 2019, p. 63.

¹⁷⁴ [Exhibit C-0096-DE / Exhibit C-0096-EN: Parliamentary Paper BR-Dr. 51/20, Draft of a Law Reducing and Ending the Use of Coal for the Generation of Electricity, 31 January 2020 \(excerpts\)](#); and [Exhibit C-0097-DE / Exhibit C-0097-EN: Parliamentary Paper BT-](#)

zur Reduzierung und zur Beendigung der Kohleverstromung (Kohleverstromungsbeendigungsgesetz – KVBG)) and amended existing laws in the subsequent articles, which are not relevant to the case at hand. Both chambers adopted the Coal Ban Law on 3 July 2020. It was published in the Federal Law Gazette (*Bundesgesetzblatt*) on 13 August 2020 and entered into force on 14 August 2020.¹⁷⁵

179 In brief, the core provisions of the Coal Ban Law are the following:

- Sections 2 and 4 set the end date for the generation of electricity by firing of hard coal or lignite to 2038 and set intermediary reduction targets. The end date can be moved forward to 2035, which would also move forward the shutdown dates of plants otherwise closed after 2030 by three years (Section 56). Contrary to the recommendation of the Coal Commission,¹⁷⁶ this decision does not need to involve negotiations with the power plant operators. Moreover, the Coalition Agreement of the current government even calls for accelerating the end of all coal-fired power generation to 2030.¹⁷⁷
- The shutdown of lignite-fired power plants is regulated by Part 5 of the Law, reflecting an agreement concluded between the government and the lignite industry. It sets out which plants are to be shut down when (Section 40 in conjunction with Annex 2) and provides EUR 4.35 billion in compensation for the shutdown (Section 44).
- The shutdown path for hard coal-fired power plants depends on the shutdown path agreed between the government and the lignite sector (Section 4). As a result, hard-coal fired power plants must be shut down earlier than the older and more polluting lignite-fired power plants.
- Hard coal-fired power plants are to be shutdown based on their age since the start of operations, starting with the oldest (Sections 27, 29, 33, 35). Generally, no compensation is provided for these shutdowns. Only power plants participating in a tender to shut down already between 2021 and 2027 can obtain a certain shutdown incentive (Part 4).

[Dr. 19/17342, Explanatory Memorandum and Draft Coal Ban Law, 24 February 2020 \(excerpts\).](#)

¹⁷⁵ [Exhibit C-0098-DE / Exhibit C-0098-EN: First Chamber of the German Parliament \(Bundestag\), Parliamentary Process of the Law to reduce and end coal-fired power generation and to amend other laws \(Coal Ban Umbrella Law\), available at <https://dip.bundestag.de/vorgang/.../258735> \(last accessed on 24 July 2024\).](#)

¹⁷⁶ [Exhibit C-0014: Final Report of the Coal Commission, January 2019](#), p. 64.

¹⁷⁷ [Exhibit C-0099-EN / Exhibit C-0099-DE: Coalition Agreement between SPD, Bündnis 90 / Die Grünen and FDP, "Dare More Progress", 7 December 2021](#), pp. 5, 59.

- The shutdown of hard coal-fired plants is effected through an administrative act prohibiting the plant to fire hard coal for the generation of electricity (Sections 35, 51). Where a power plant is considered essential for functioning of the electricity grid, the shutdown order can be suspended as long as the reduction targets for 2030 or 2038 continue to be met (Sections 34(3), 35(2)).

180 The Coal Ban Law marked a fundamental change in Germany's energy policy. Germany decided to ban all coal-fired electricity generation, irrespective of existing permits and emission allowances. It did so disregarding crucial recommendations by the Coal Commission concerning the shutdown path to be adopted, instead favouring lignite-fired power plants and harming particularly newly constructed hard-coal fired power plants like Claimant's (2). Under the Coal Ban Law, the Lünen plant is expected to be shut down in 2031, i.e. after less than half its expected minimum lifetime (3), and - once again against the recommendation of the Coal Commission – without any compensation (4).

181 Respondent did so contrary to the recommendations of the Coal Commission, despite broad criticism of the disproportional effects on new hard coal-fired power plants, and although it knew about the particular situation of these plants (5). Yet, it made no attempt to even assess the effect of the Coal Ban Law on such plants (6). What is more, instead of compensating these modern, highly efficient power plants for being shut down after only about half of their expected minimum lifetime, it established a system compensating old, polluting plants which it assumed to be already amortised in any event (7).

2. Coal Ban Law establishes a Shutdown Path forcing hard coal-fired plants to shut down years earlier than the more polluting lignite-fired power plants

182 The Coal Ban Law regulates the rate at which coal-fired electricity generation is to be reduced ("**Shutdown Path**") as well as the order in which (individual) power plants must be shut down ("**Shutdown Order**").

183 The Shutdown Path adopted by Respondent extends the lifetime of lignite-fired power plants at the expense of the hard coal-fired power plants, like Lünen (a)). Although the Coal Ban Law aims to reduce CO2 emissions, the Shutdown Path chosen by Respondent leads to significantly higher emissions than the one proposed by the Coal Commission (b)), showing that political considerations and interests of individual Federal States home to the lignite industry were outweighing climate concerns (c)). Moreover, despite this already more favourable Shutdown Path for the lignite sector, only lignite-fired power plants were compensated for the shutdown while hard coal-fired power plants were not.

a) The Shutdown Path favours lignite-fired power plants

184 The Coal Ban Law stipulates that, latest by the end of 2038, all power plants in Germany may no longer generate electricity by burning coal and sets the following intermediate reduction targets:

- (i) by 31 December 2022, the capacity of hard coal- and lignite-fired power plants active in the market must be reduced to 15 GW each;
- (ii) by 1 April 2030, the capacity of lignite-fired power plants active in the market must be reduced to 9 GW and that of hard coal-fired power plants to 8 GW.¹⁷⁸

185 The above reflects the recommendations of the Coal Commission. Already this recommendation by the Coal Commission meant a steeper Shutdown Path for hard coal-fired power plants than for lignite-fired power plants despite the higher CO₂ emissions of lignite-fired power plants.

186 As can be seen from the following figure,¹⁷⁹ in 2020, when the Coal Ban Law was adopted, the installed capacity of hard coal-fired power plants (22,161 MW)¹⁸⁰ was significantly higher than that of lignite-fired power plants (17,249 MW)¹⁸¹. Yet, within two years, both types of power plants had to be reduced to 15 GW each. This meant for hard coal-fired power plants a reduction of over 7 GW within two years while lignite-fired power plants only had to be reduced by slightly over 1 GW within the same period. Also, thereafter, the hard coal capacity had to be reduced slightly faster than the lignite capacity (namely a further 7 GW of hard coal capacity compared to only a further 6 GW of lignite capacity by 2030).

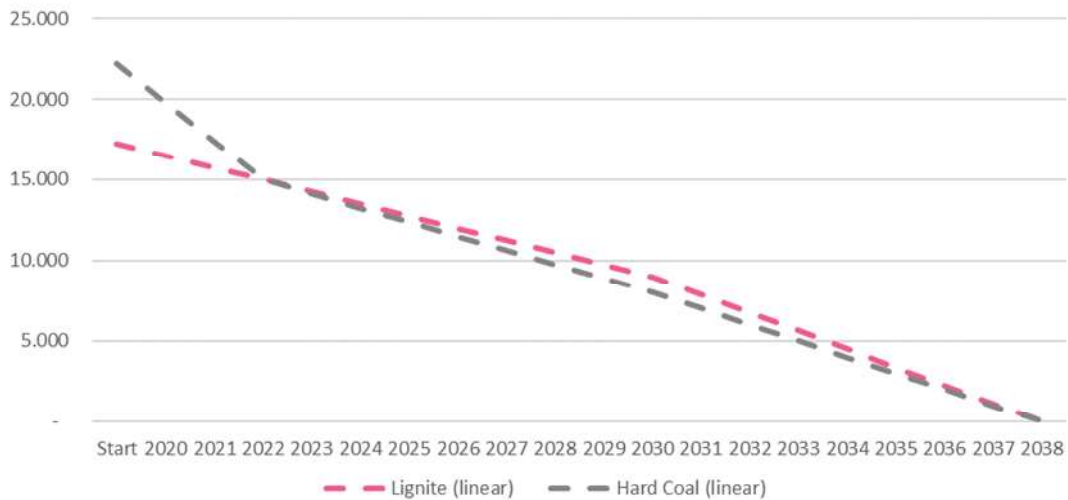
¹⁷⁸ [Exhibit C-0100-DE / Exhibit C-0100-EN: Coal Ban Law, BGBl. 8 August 2020 \(excerpts\)](#), Sections 2(2) and 4.

¹⁷⁹ Figure shows a linear degeneration for each lignite- and hard-coal fired power plants between the following dates: Start of 2020 (22,161 MW hard coal and 17,249 lignite), end of 2022 (15 GW each of hard coal and lignite), end of 2030 (8 GW hard coal and 9 GW lignite) and end of 2038 (0 GW each of hard coal and lignite).

¹⁸⁰ **Exhibit FE-0005**, Tab “Decommissioning Path”, identifying the maximum hard coal capacity based on the 2020 power plant list was 22,161 MW.

¹⁸¹ Sum of all lignite capacity to be shut down according to Coal Ban Law, Annex 2.

Shutdown Path (Coal Commission)



- 187 Moreover, while the Coal Commission had recommended a linear reduction for each type of power plant between these intermediary targets, Germany did not do so in the Coal Ban Law. Instead, Section 4(1) of the Coal Ban Law provides that only the combined capacity of hard coal- and lignite-fired power plants is to be decreased linearly.¹⁸²
- 188 What is more, under the Coal Ban Law, the capacity reduction for hard coal-fired power plants is made dependent on the reductions of lignite-fired power plants.¹⁸³ These reductions had been previously agreed between the lignite industry and the government. According to this agreement, almost half (7.8 GW) of the total 16 GW lignite capacity is to be shut down only in the last four years (i.e. between 2035 and 2038).¹⁸⁴

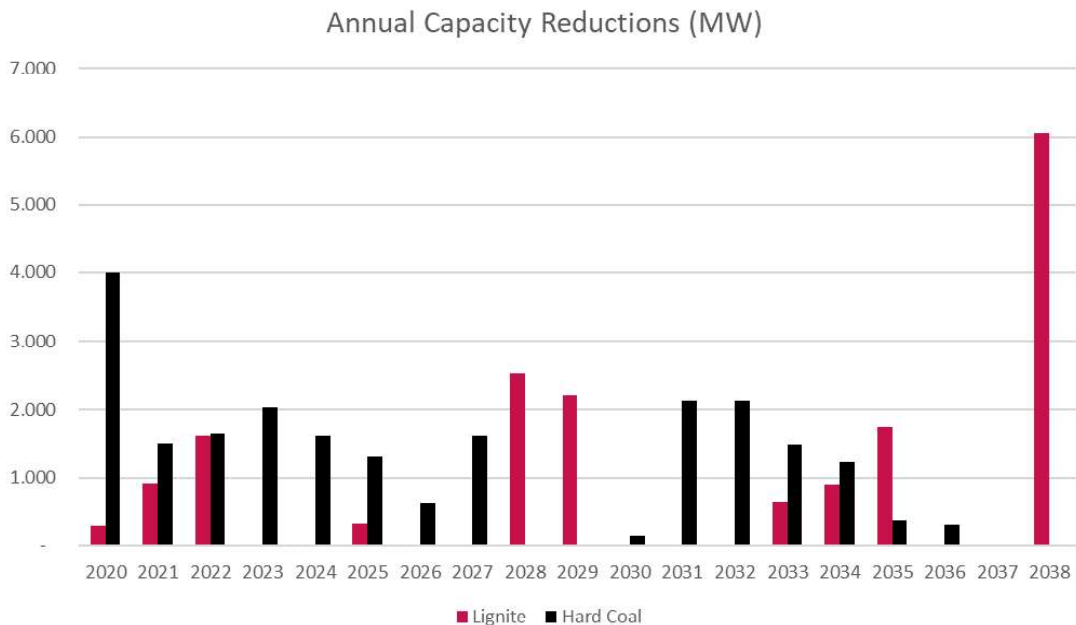
¹⁸² [Exhibit C-0100-DE / Exhibit C-0100-EN: Coal Ban Law, BGBl. 8 August 2020 \(excerpts\)](#), Section 4(1): “The target level for the reduction and termination of coal-fired power generation is 30 gigawatts by 31 December 2022 (target date 2022), 17 gigawatts by 1 April 2030 (target date 2030) and 0 gigawatts no later than 31 December 2038 (target date 2038) of remaining net nominal power of hard coal fired power plants and lignite-fired power plants on the electricity market. This target level decreases between the target data 2022 and 2030 and between the target data 2030 and 2038 by equal volumes of net nominal power each year. [...]” (emphasis added).

¹⁸³ [Exhibit C-0100-DE / Exhibit C-0100-EN: Coal Ban Law, BGBl. 8 August 2020 \(excerpts\)](#), Section 4(2): “Insofar as the remaining net nominal power of the hard coal-fired power plants for a target date is not explicitly mentioned in sentence 1, the remaining net nominal power of the hard coal-fired power plants is determined at the annual target level according to paragraph 1 (target level for the reduction of hard coal-fired power generation), by deducting the sum of the net nominal power of the lignite-fired power plants from the annual target level pursuant to paragraph 1, which still generate electrical energy by using lignite on the electricity market pursuant to Part 5 and Appendix 2 as well as the public law contract concluded pursuant to § 49 at the end of the calendar year, in which the respective target date lies. [...]” (emphasis added).

¹⁸⁴ Cf. [Exhibit C-0100-DE / Exhibit C-0100-EN: Coal Ban Law, BGBl. 8 August 2020 \(excerpts\)](#), Annex 2.

189 Considering the linear capacity reduction of roughly 2 GW per year mandated by the Coal Ban Law for the period 2022 to 2038 (17 GW combined capacity over eight years), this means that during the last four years only lignite-fired power plants will be shut down. Consequently, the last hard coal-fired power plant will already have to be shut down by 2034 – not 2038. Moreover, of the roughly 4 GW to be shut down in 2033 and 2034, approximately 1.5 GW are again lignite-fired power plants¹⁸⁵ and only 2.5 GW hard coal-fired power plants.

190 The same phenomenon can be observed prior to the intermediate target for 2030. From 2023 to 2027 hardly any lignite-fired power plants are shut down. Consequently, again almost all of the 6 GW of lignite capacity to be reduced is shut down immediately prior to the 2030 intermediate target. Thus, also in the period up to 2030, the hard coal-fired power plants are to be shut down first, as can also be seen from the following figure¹⁸⁶:

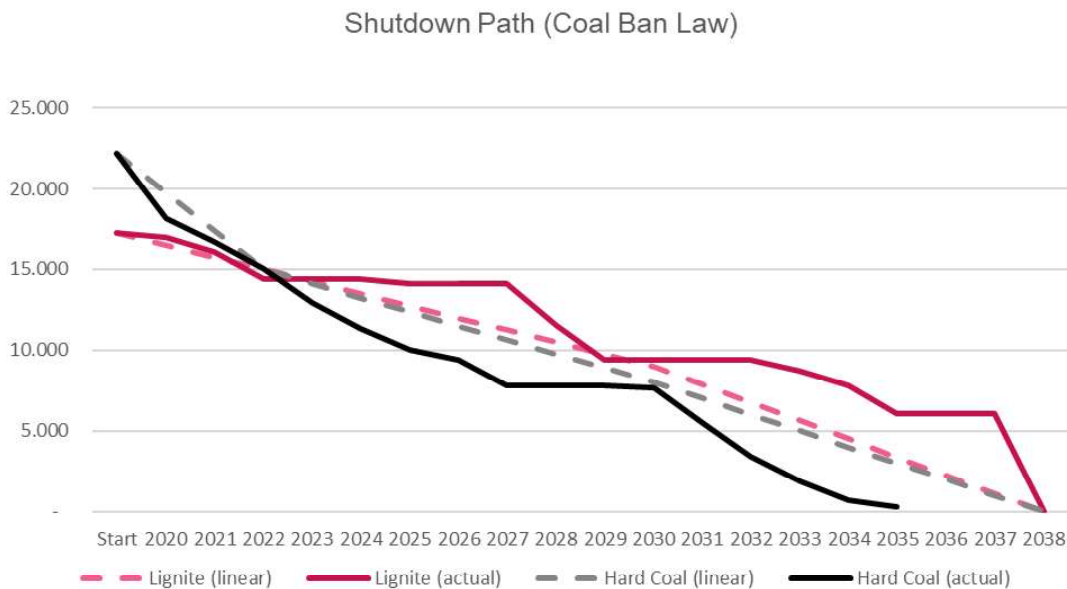


191 Overall, this shows that the lignite-fired power plants are shut down in three waves, always just before the target dates 2022, 2030 and 2038 set by the Coal Ban Law. Due to the linear Shutdown Path for the combined lignite and hard coal capacities, this means that – throughout the entire Shutdown Path – hard coal-fired power plant are shut down earlier and faster than lignite-fired power plants and that the last hard coal-

¹⁸⁵ Cf. [Exhibit C-0100-DE](#) / [Exhibit C-0100-EN: Coal Ban Law, BGBl. 8 August 2020 \(excerpts\)](#), Annex 2.

¹⁸⁶ Figure based on Shutdown Path table in **Section 3** below.

fired power plant must already be shut down four years prior to the end date for all coal-fired electricity generation.¹⁸⁷



b) The Shutdown Path leads to additional emissions and was subject to heavy criticism

192 While under this Shutdown Path chosen by the government the total combined capacity of lignite- and hard coal-fired plants is reduced more or less linearly, the CO₂ emissions are not reduced in a linear manner. Rather, the delayed and wave-like Shutdown Path for lignite-fired power plants leads to a significant increase in CO₂ emissions since lignite-fired power plants emit more CO₂ than hard coal-fired power plants. This is not only contrary to the recommendations by the Coal Commission but also to the purpose of the Coal Ban Law “to reduce emissions”¹⁸⁸ and contradicts Respondent’s own requirements. In the Explanatory Memorandum to the latest amendment of the Climate Protection Law, Respondent expressly emphasised that

“[f]or the energy sector, specific annual emission quantities are not specified for each year, but only for the years 2020, 2022 and 2030 (so-called support years). For the energy sector, greenhouse gas emissions are to fall as steadily as possible between these specified annual emission volumes for the period up to 2030. This regulation corresponds to the implementation of the results of the Commission on Growth, Structural Change and Employment (known as the “Coal Commission”).”¹⁸⁹

¹⁸⁷ Figure based on Shutdown Path table in **Section 3** below.

¹⁸⁸ [Exhibit C-0100-DE](#) / [Exhibit C-0100-EN: Coal Ban Law, BGBl. 8 August 2020 \(excerpts\)](#), Section 2(1).

¹⁸⁹ [Exhibit C-0101-DE](#) / [Exhibit C-0101-EN: Parliamentary Paper BT-Dr. 20/8290, Explanatory Memorandum and Draft of the Amendment of the Federal Climate Protection](#)

193 Former members of the Coal Commission expect that Respondent's wave-like Shutdown Path results, by 2030, in additional emissions of at least around 40 million tons of CO₂ compared to separate, linear Shutdown Paths for each type of power plant:

*"In the particularly relevant period from 2023 onwards, there will only be minor power plant shutdowns before 2028 and very extensive shutdowns in 2028 and at the end of 2029 in order to meet the 2030 target. In the years 2018 to 2020, there will also only be a single, symbolic shutdown of 300 MW for lignite instead of the planned significant contributions to the 2020 climate protection target. Overall, compared to the steady reduction path recommended by the Coal Commission, lignite-fired power plants alone will emit an additional 40 million tons by 2030."*¹⁹⁰

194 The German Institute for Economic Research (*Deutsches Institut für Wirtschaftsforschung*) even assumes that, compared to the Coal Commission's recommended Shutdown Path, the Coal Ban Law leads to additional emissions of 134 million tons of CO₂ in the period between 2020 and 2040.

*"Compared to the Commission scenario [Recommendation of the Coal Commission], the Government scenario [Coal Ban Law] emits around 134 million tonnes more CO₂ between 2020 and 2040. Although the rapid shutdown of hard coal capacities reduces emissions in the short term, the late shutdown of lignite-fired power plants leads to significantly higher emissions, particularly after 2030."*¹⁹¹

195 During the parliamentary process, this point was repeatedly highlighted and criticised by experts in the hearings of the Committee on Economic Affairs and Energy.

196 Dr Roda Verheyen pointed out that the Shutdown Path in the Coal Ban Law "*significantly favours lignite over hard coal*" and that this "*unequal treatment can hardly be justified*".¹⁹² She also stressed that the Shutdown Path "*contradicts the logic of greenhouse gas budgets*" since, "*between 2020 and 2040, around 134 million tons of carbon dioxide will be emitted in addition to the Commission's recommendations.*"¹⁹³

197 Similarly, the Association of German Chambers of Industry and Commerce criticised Respondent's disregard of the Coal Commission's recommendation and the discriminatory treatment of hard coal-fired power plants compared to lignite-fired power plants:

[Law.11 September 2023 \(excerpts\)](#), p. 27.

¹⁹⁰ [Exhibit C-0102-DE / Exhibit C-0102-EN: Statement of the former members of the Coal Commission, 21 January 2020](#), p. 2.

¹⁹¹ [Exhibit C-0103-DE / Exhibit C-0103-EN: Report of German Institute for Economic Research, February 2020](#), p. 10.

¹⁹² [Exhibit C-0104-DE / Exhibit C-0104-EN: Statement of Dr. Roda Verheyen, Lawfirm Günther, 25 May 2020](#), p. 6.

¹⁹³ [Exhibit C-0104-DE / Exhibit C-0104-EN: Statement of Dr. Roda Verheyen, Lawfirm Günther, 25 May 2020](#), p. 6.

“One clear recommendation of the Coal Commission, was that hard coal-fired power plants should not be shut down without compensation. Furthermore, the Commission's report provided for special regulations for power plants that have been in operation for less than 25 years. In contrast, the German government's shutdown path provides for faster shutdowns of efficient hard coal-fired power plants than lignite-fired power plants. [...] The draft bill therefore falls considerably short of the consensus of the Coal Commission and creates a clear disadvantage for hard coal-fired power plants in relation to lignite-fired power plants when dealing with the coal ban.”¹⁹⁴ (Emphasis added)

198 The power plant operator STEAG added:

“The multiple discrimination against hard coal compared to lignite is neither comprehensible nor acceptable. In view of the legal risks, compensation payments must also be provided for in the event of statutory closures in the hard coal sector”¹⁹⁵

c) The Shutdown Path shows that regional political interests outweighed climate considerations

199 Although Respondent knew that the delayed and wave-like Shutdown Path for lignite-fired power plants would lead to more emissions compared to the Coal Commission's recommendations, it decided to ignore this.

200 Instead, various other factors than emission reduction considerations played a decisive role when drafting the Coal Ban Law, such as the interests of the Federal States home to the lignite industry. Although the strengthening of these regions was already addressed in the Structural Strengthening Law for Coal Regions (*Strukturstärkungsgesetz Kohleregionen*),¹⁹⁶ adopted together with the Coal Ban Law, also the Shutdown Path clearly reflects these regional interest. This was also expressed in recent statements made by the Minister Presidents of such Federal States (namely, Saxony and Brandenburg). In response to renewed discussions to accelerate the coal ban to 2030, they highlighted that they had *“negotiated the lignite phase-out by 2038, ‘also because the interests of the regions were important to us’”*.¹⁹⁷

¹⁹⁴ [Exhibit C-0105-DE](#) / [Exhibit C-0105-EN](#): Statement of Detlef Raphael, Federal Association of Municipal Umbrella Organizations, 19 May 2020, pp. 1-2. See also [Exhibit C-0106-DE](#) / [Exhibit C-0106-EN](#): Statement of Dr Sebastian Bolay, Association of German Chambers of Industry and Commerce, 19 May 2020, p. 6.

¹⁹⁵ [Exhibit C-0107-DE](#) / [Exhibit C-0107-EN](#): Statement of Joachim Rumstadt, STEAG, 18 May 2020, p. 2.

¹⁹⁶ [Exhibit C-0108-DE](#) / [Exhibit C-0108-EN](#): Structural Strengthening Law for Coal Regions, BGBl. 8 August 2020 (excerpts), Section 1(1).

¹⁹⁷ [Exhibit C-0109-DE](#) / [Exhibit C-0109-EN](#): Zeit Online, *Kretschmer and Woidke: Criticising debates on coal phase-out*, 30 April 2024.

201 Hence, contrary to what Respondent might argue, CO2 emission reduction was not its primary concern. This was outweighed by regional interests.

202 As a consequence of this favouritism, Claimant's clean and highly efficient power plant put into operation in 2013 will be shut down even earlier than more polluting and up to 39 years older lignite-fire power plants (see para. 213 below).

3. For the Lünen plant, the Shutdown Path results in a shutdown by 2031, i.e. after less than half of its expected minimum lifetime

203 In addition to the Shutdown Path, the Coal Ban Law regulates the order in which (individual) coal-fired power plants must be shut down. For the lignite-fired power plants, the sector agreement stipulates which power plant is to close in which year and the Coal Ban Law reflects this agreement in Annex 2.

204 For hard coal-fired power plants, the government did not even try to reach such an agreement but set the Shutdown Order unilaterally in the Coal Ban Law. Section 29(4) provides for an age-based Shutdown Order with the oldest power plants closing first. The age of a power plant is determined by reference to the date it was put into operation.

205 The relevant order is to be determined based on the power plant list published by the Federal Network Agency (*Bundesnetzagentur*, "**BNetzA**").¹⁹⁸ This list has been maintained by the BNetzA already prior to the Coal Ban Law as part of its task to monitor the electricity market under Section 35 of the Energy Industry Law (*Energiewirtschaftsgesetz*, **EnWG**).¹⁹⁹ According to Section 29(2) of the Coal Ban Law, plant operators have an opportunity to submit corrections to this list.²⁰⁰

206 Considering the Shutdown Path and this Shutdown Order, the amount of annual hard coal shutdowns is set out in the following table:

- The column "Total Target Capacity" shows the required linear reduction of combined lignite and hard coal capacities between the fixed target capacity for 2022, 2030 and 2038 which are marked in bold (see section 4 of the Coal Ban Law).

¹⁹⁸ [Exhibit C-0100-DE](#) / [Exhibit C-0100-EN: Coal Ban Law, BGBl. 8 August 2020 \(excerpts\)](#), Section 29(1).

¹⁹⁹ [Exhibit C-0110-DE](#) / [Exhibit C-0110-EN: Energy Industry Law, BGBl. 7 July 2005 \(excerpts\)](#), Section 35(1) no. 11.

²⁰⁰ In addition, they may request that new investments made between 2010 and 2019 in an existing plant can be recognised. In that case, the official start date may be shifted by up to three years.

- Second, the columns “Lignite Capacities” and “Lignite Shutdown” are taken from Annex 2 of the Coal Ban Law. As the tribunal will recall, Annex 2 contains specific shutdown dates for individual lignite-fired power plants.
- Third, in accordance with section 6(2) of the Coal Ban Law, the column “Hard Coal Target Capacity” shows the target capacity for hard coal-fired power plants, calculated as the difference between the “Total Target Capacity” and the “Lignite Capacity” subject to the following specifications:
 - (i) in 2022, 2030, and 2038, at least the target capacities (15 GW in 2022, 8 GW in 2030 and 0 GW in 2038) stipulated by section 4(2) of the Coal Ban Law must be reached;
 - (ii) for the target years 2020 and 2021, the reduction volumes are set in accordance with section 6(3) of the Coal ban Law); and
 - (iii) in the target years 2023, 2024, and 2025, 1 GW is added to the difference between “Total Target Capacity” and “Lignite Capacity” (see section 6(5) of the Coal Ban Law).
- Fourth, the annual reduction resulting from the above calculation is shown in the column “Hard Coal Shutdown”.

Year	Total Target Capacity	Lignite Capacity	Lignite Shutdown	Hard Coal Target Capacity	Hard Coal Shutdown
<i>(all capacities in MW)</i>					
2020		16,952	297	18,161	4,000
2021		16,042	910	16,661	1,500
2022	30,000	14,417	1,625	15,000	1,661
2023	28,375	14,417		12,958	2,042
2024	26,750	14,417		11,333	1,625
2025	25,125	14,096	321	10,029	1,304
2026	23,500	14,096		9,404	625
2027	21,875	14,096		7,779	1,625
2028	20,250	11,573	2,523	7,779	
2029	18,625	9,359	2,214	7,779	
2030	17,000	9,359		7,641	138
2031	14,875	9,359		5,516	2,125
2032	12,750	9,359		3,391	2,125
2033	10,625	8,711	648	1,914	1,477
2034	8,500	7,811	900	689	1,225
2035	6,375	6,061	1,750	314	375
2036	4,250	6,061			314

2037	2,125	6,061		
2038	0	0	6,061	

207 In reality, the annual shutdown of hard coal capacity will differ slightly from the above table since a power plant can only be shut down completely or not at all. Therefore, rather slightly more capacity than needed will be closed down in one year,²⁰¹ thereby slightly reducing the capacity that must be shut down in the next year. Claimant's expert Frontier have set out the precise Shutdown Order from a 2020 perspective in their expert report.²⁰²

208 What can also be seen from this table is that the government did not abide by its own law. The lignite Shutdown Path in the sector agreement concluded between the government and the lignite sector leads to a remaining lignite capacity in 2030 of 9,359 MW although Section 2(2) of the Coal Ban Law provides for a reduction of lignite capacity to 9,000 MW. Therefore to limit the total coal-fired power plant capacity active in the market to 17,000, as required by Section 4(1) of the Coal Ban Law, additional hard coal capacity must be closed. The lignite sector agreement is thus again to the detriment of the hard coal-fired power plants.

209 In any event, determining the shutdown date for the Lünen plant is straightforward. Given that Lünen is a very new plant, one simply needs to add together the capacity of Lünen and of all even newer hard coal-fired power plants from the power plant list. These are²⁰³:

Power Plant	Start of Operation	Capacity (MW)
Lünen	20 Jul 2013	735
Walsum 10	20 Dec 2013	725
Westfalen Block E	02 Jul 2014	764
RDK 8	03 Jul 2014	834
Moorburg Block B	28 Feb 2015	800
Großkraftwerk Mannheim	02 May 2015	843
Moorburg Block A	31 Aug 2015	800
Wilhelmshaven	30 Oct 2015	731
Datteln 4	31 May 2020	1,052
Total		7,284

²⁰¹ Pursuant to Section 33 of the Coal Ban Law, for each shutdown date, the BNetzA – following the Shutdown Order – will add power plants to the list of to be closed until it either exactly meets or for the first time passes the capacity level mandated by the Shutdown Path.

²⁰² [Exhibit CER-0002: Frontier Report](#), para. 56-59.

²⁰³ Table based on Federal Network Agency, Power Plant List 2020.

- 210 This shows that the Lünen plant is among the last 7,290 MW of hard coal-fired power plants to be shut down. This means that it does not need to be shut down in 2030 since in 2030 still 7,641 MW of hard coal capacity may remain actively in the market (see table above). However, by 1 April 2031, the hard coal capacity needs to drop to 5,516 MW. Hence, by that time, the Lünen plant needs to be shut down.²⁰⁴
- 211 This means that under the Coal Ban Law, it is expected that the Lünen plant will need to be shut down after 17 years of operation and, thus, after less than half of its expected 40-year minimum lifetime.
- 212 Moreover, should one of the reviews in 2026, 2029, or 2032 pursuant to section 56 of the Coal Ban Law lead to the conclusion that the Shutdown Path should be accelerated to 2035, the Lünen plant might have to shut down even earlier.
- 213 Compared to the Shutdown Order of the lignite-fired power plants, this means that Claimant's clean and highly efficient hard coal-fired power plant will be shut down earlier than up to 39 years older and more polluting lignite-fired power plants as can be seen from the following list:

Power Plant	Shutdown Date ²⁰⁵	Start of Operation ²⁰⁶	Age Difference to Lünen Plant
Niederaußem G or Niederaußem H	31 Dec 2033	23 Oct 1974	39 years
Schkopau A	31 Dec 2034	01 Jan 1996	18 years
Schkopau B	31 Dec 2034	01 Jan 1996	18 years
Lippendorf S	31 Dec 2035	01 Dec 1999	14 years

²⁰⁴ The result would be the same, even if one did not consider Datteln 4, which only started operations in mid-2020. In that case, the Lünen plant would be among the last 6,238 MW, which would still be below 7,641 MW and above 5,516 MW. Due to developments after the entry into force of the Coal Ban Law (namely the outcome of the tender processes, see paras. 272-273 below), the Lünen plant is now among the last 4,926 MW to be closed down. Based on these capacities active in the market, Lünen's shutdown date may be postponed to 1 April 2032. However, since the current government is considering to accelerate the shutdown of coal-fired power plants in general to 2035 or even 2030, the Lünen plant may in reality still close in 2031 or even earlier. While Respondent agreed with RWE in 2022 to accelerate the shutdown of the lignite-fired power plants in the Rhenish Region from 2038 to 2030, this does not affect the Shutdown Path provided in the Coal Ban Law. [Exhibit C-0111-DE](#) / [Exhibit C-0111-EN: Law to Accelerate the Lignite Phase Out in the Rhenish Region, BGBl. 19 December 2022 \(excerpts\)](#), Article 1(2) states that the respective lignite-fired power plants will be treated as if they were still shut down by the target date of 2038.

²⁰⁵ According to [Exhibit C-0100-DE](#) / [Exhibit C-0100-EN: Coal Ban Law, BGBl. 8 August 2020 \(excerpts\)](#), Annex 2.

²⁰⁶ According to [Exhibit C-0112-DE / EN: Federal Network Agency, Power Plant List, 1 April 2020](#).

Lippendorf R	31 Dec 2035	20 Jun 2000	13 years
Schwarze Pumpe A	31 Dec 2038	15 Dec 1997	16 years
Schwarze Pumpe B	31 Dec 2038	25 May 1998	15 years
Boxberg Q	31 Dec 2038	01 Oct 2000	13 years
Niederaußem K	31 Dec 2038	30 Aug 2002	11 years
Neurath F	31 Dec 2038	08 Jul 2012	1 year
Neurath G	31 Dec 2038	03 Aug 2012	1 year
Boxberg R	31 Dec 2038	06 Nov 2012	1 year

214 What is more, the Coal Ban Law does not provide any compensation for operators of hard coal-fired power plants – while it does for lignite-fired power plants.

4. Coal Ban Law does not provide for compensation

215 For this forced shutdown after less than half of its expected minimum lifetime, Claimant is not and will not be compensated. While the agreement between the government and the lignite sector provides for **EUR 4.35 billion** in compensation, the Coal Ban Law does not contain compensation provisions for the forced shutdown of hard coal-fired power plants (a). It only includes a tender mechanism offering certain shutdown incentives if a plant is closed down between 2021 and 2027. However, these shutdown incentives are aimed primarily at old hard coal-fired power plants because they are so low that for new, efficient plants, like Lünen, the continued operation is more attractive than closing them even earlier than required by the age-based Shutdown Path (b)).

a) Mandatory shutdowns of hard coal-fired power plants are not compensated

216 Contrary to the lignite sector, the Coal Ban Law does not envisage any compensation payment to hard coal-fired power plants when they are being shut down.

217 Under the agreement with the lignite sector, and as reflected in Section 44(1) of the Coal Ban Law, two operators of lignite power plants, namely RWE and LEAG, will receive together **EUR 4.35 billion** in compensation of the early closure of their lignite-fired power plants:

“For the final and socially acceptable shutdown of lignite-fired power plants by the end of 31 December 2029 in accordance with Appendix 2, RWE Power AG is entitled to compensation in the amount of a nominal amount of EUR 2.6 billion for the lignite-fired power plants in the Rhineland and Lausitz Energie Kraftwerk AG is entitled to payment of compensation in the amount of a nominal amount of EUR 1.75 billion for the lignite-fired power plants in the Lausitz. Interest is not accrued. Subject to § 43, no compensation is granted for small lignite-fired power plants.”²⁰⁷ (Emphasis added)

²⁰⁷ [Exhibit C-0100-DE / Exhibit C-0100-EN: Coal Ban Law, BGBl. 8 August 2020 \(excerpts\)](#), Section 44(1).

- 218 This agreement with the lignite sector was not only concluded between the German Federal Government and the lignite sector but also with the Federal States which are home to the lignite industry. As evidenced by recent statements by two Minister Presidents of these Federal States, the favourable treatment of the lignite sector was also owed to local favouritism.²⁰⁸ To support these regions, as part of the Coal Ban Umbrella Law, the Federal Government had additionally agreed to provide the Federal States with **EUR 14 billion** for particularly important investments in the region to offset the negative structural effects of the Coal Ban Law on the coal regions.²⁰⁹
- 219 For the hard coal-fired power plants, the situation is different: Here, the Coal Ban Law does not offer any compensation for the mandatory shutdowns. This was a conscious decision by Respondent which states in its Explanatory Memorandum that “[i]n principle, the statutory reduction is ordered without compensation.”²¹⁰
- 220 What is more, Respondent not only failed to provide any compensation for the mandatory shutdowns, it even specifically manipulated its existing legal framework in order to allow it to shut down the hard coal-fired power plants without providing for compensation. Under the Federal Immission Control Law, which governs the operating permits of the hard coal-fired power plants, a revocation of a final permit is only possible, if at all, against compensation. This obligation is contained in Section 21(4) of the FICL.
- 221 Respondent was well aware that it could not shutdown a power plant, which holds permits, without compensation. That was also the reason why it did not stop the new hard coal-fired power plant Datteln 4 to start operations in 2020. It argued that, since Datteln 4 already had a FICL permit, it would have to pay “massive compensation” if it would shut it down:

“How can this [= the shutdown of coal-fired power plants] be reconciled with the start-up of the Datteln IV anthracite- [i.e. hard coal-] fired station?”

Since the permit for the start-up of Datteln IV had already been issued before the plans were produced for phasing out coal-fired power generation, any subsequent decision to ban the start-up would have entailed paying massive compensation.”²¹¹ (emphasis added)

²⁰⁸ See para. 200 above.

²⁰⁹ [Exhibit C-0108-DE](#) / [Exhibit C-0108-EN: Structural Strengthening Law for Coal Regions, BGBl. 8 August 2020 \(excerpts\)](#), Section 1(1).

²¹⁰ [Exhibit C-0097-DE](#) / [Exhibit C-0097-EN: Parliamentary Paper BT-Dr. 19/17342, Explanatory Memorandum and Draft Coal Ban Law, 24 February 2020 \(excerpts\)](#), p. 83.

²¹¹ [Exhibit C-0113-DE](#) / [Exhibit C-0113-EN: Federal Government, FAQs to ending the use of coal: Ending coal-generated power, 29 January 2020, available at <https://www.bundesregierung.de/breg-de/schwerpunkte/klimaschutz/kohleausstiegsgesetz-1716678> \(last accessed on 24 July 2024\).](#)

222 Yet, thanks to the Coal Ban Law, shutting down such new plants after only 13 to 17 years of operation, shall now be possible without paying any compensation, Therefore, Section 59 of the Coal Ban Law, specifically dealing with the effect of the mandatory shutdown on existing permits, stipulates that only Section 21(1) to (3) of the FICL shall apply – but not Section 21(4) dealing with compensation. Also this was intentional as Respondent explicitly stated in its Explanatory Memorandum that “[s]ection 21(4) of the Federal Immission Control Law does not apply.”²¹²

223 Hence, no compensation will be awarded to TKL when the Lünen power plant has to shut down in 2031.

224 As indicated in **Section C.V.** above, this contradicts the recommendation of the Coal Commission which made mandatory shutdowns subject to compensation payments.²¹³

225 What is more, in combination with the steeper Shutdown Path for hard-coal fired power plant compared to lignite this means that Claimant suffers twice while Respondent profits: First, Claimant suffers because it can only operate for an even shorter period than if there had been a linear hard coal Shutdown Path as recommended by the Coal Commission. It, thus, has even less time to recoup their investment. Second, Claimant suffers because it does not receive any compensation. For Respondent, this is good. It does not need to compensate Claimant and, very likely, had to pay less compensation to the lignite-fired power plants since they could still operate longer.

226 Respondent thus achieved its aim of ending coal-fired power generation with minimal compensation payments – but at Claimant's expense.

b) The tender procedure does not compensate Claimant

227 Under the Coal Ban Law, operators of hard coal-fired power plants can only obtain a payment for the closure of their power plants if they participate in a tender to close the power plant even earlier than under a mandatory shutdown. This possibility is only available for shutdowns between 2021 and 2027²¹⁴ (whereas the Coal Commission had recommended to offer this possibility until 2030²¹⁵).

²¹² [Exhibit C-0097-DE](#) / [Exhibit C-0097-EN: Parliamentary Paper BT-Dr. 19/17342, Explanatory Memorandum and Draft Coal Ban Law, 24 February 2020 \(excerpts\)](#), p. 146.

²¹³ [Exhibit C-0014: Final Report of the Coal Commission, January 2019](#), pp. 62 and 64.

²¹⁴ [Exhibit C-0100-DE](#) / [Exhibit C-0100-EN: Coal Ban Law, BGBl. 8 August 2020 \(excerpts\)](#), Section 5(1). Also, Section 10(2) of the Coal Ban Law states that the annual tenders started in 2020. In July 2021, section 5(1) of the Coal Ban was amended according to which the end year of the tenders was brought forward to 2026 (instead of 2027).

²¹⁵ Due to an amendment of the Coal Ban Law in July 2021, the period for the annual tenders in the current version of the Coal Ban Law are even shortened to 2026.

- 228 In the case at hand, this would mean that the Lünen plant would have to be closed already 8 to 14 years after the start of its operation, i.e. after only less than one fourth to about one third of its expected 40-year minimum lifetime. It will also be shut down well before the investment into the Lünen plant has been amortised.
- 229 The monetary incentive offered for such an even earlier shutdown are very limited. Bids are to be made as EUR per MW of capacity to be shut down, capped at a certain amount of EUR per MW. Moreover, this cap decreases over time.²¹⁶ For Lünen, as a new, efficient power plant, these amounts were no incentive to shut down even earlier.
- 230 At most, the Lünen plant – having just been constructed for **EUR 1.4 billion** – could have obtained **EUR 123 million**²¹⁷ in exchange for closing after only 8 years of operation, or 32 years prior to the end of its expected minimum lifetime. This would however require the Lünen plant is not outbid by other plants, offering a lower amount in EUR/MW. Moreover, even in relation to the otherwise remaining 10-year lifetime²¹⁸ under the Coal Ban Law, the shutdown incentive was no incentive and even less so a compensation. Claimant's experts from Secretariat determined that participating in the first tender to shut down the Lünen plant would not reduce Claimant's damages due to the Coal Ban Law, but actually increase them by EUR 46.8 million.²¹⁹
- 231 The economics of closing down only in 2027 are equally bad. If not outbid, at most, Lünen could obtain **EUR 66 million** for closing after only 14 years of operations, or 26 years prior to the end of the expected minimum lifetime. Moreover, not even for closing four years prior to the mandatory shutdown, this amount would exceed the value that could be generated from operating the Lünen plant over these years. Instead, it would increase Claimant's damages by EUR 23.1 million.²²⁰

²¹⁶ [Exhibit C-0100-DE / Exhibit C-0100-EN: Coal Ban Law, BGBl. 8 August 2020 \(excerpts\)](#), 8 August 2020, Section 19.

²¹⁷ 746 MW multiplied with a maximum bid cap of 165,000 EUR/MW results in EUR 123 million.

²¹⁸ While the tender takes place in 2020, the actual shutdown for plants participating in this tender will only take place in 2021 and, hence, 10 years prior to the expected shutdown under the Coal Ban Law in 2031.

²¹⁹ According to [Exhibit CER-0001: Secretariat Report](#), Table 6 at para. 6.20, the Actual value of the Lünen plant, considering a shutdown in 2031, is Rule 66(f). Even taking into account the EUR 123 million shutdown incentive, a 10 year earlier shutdown would make the Actual value Rule 66(f). Claimant's share in this value reduction would be 15.84%, i.e. Rule 66(f).

²²⁰ According to [Exhibit CER-0001: Secretariat Report](#), para. 6.19, the Actual value of the Lünen plant would be Rule 66(f) (Rule 66(f) instead of Rule 66(f)).

Shut-down	Max. EUR/MW	Max. incentive amounts (EUR) ²²¹	Initial investment costs compensated	Remaining Investment Costs	
				(EUR)	(%)
2020	165.000	123.09 million	8.79 %	1,155 million	82,5%
2021	155.000	115.63 million	8.26 %	1,120 million	80,0%
2022	155.000	115.63 million	8.26 %	1.085 million	77,5%
2023	116.000	86.54 million	6.18 %	1.050 million	75,0%
2024	107.000	79.82 million	5.70 %	1.015 million	72,5%
2025	98.000	73.11 million	5.22 %	980 million	70,0%
2026	89.000	66.39 million	4.74 %	945 million	67,5%
2027	89.000	66.39 million	4.74 %	910 million	65,0%

232 The Coal Commission had already pointed out that – due to the short time since the start of operations and, thus, to earn the investment costs – the degression of the incentive amounts should not apply to power plants which are less than 25 years old at the time of their shutdown.²²² Yet, this recommendation was ignored by Respondent. However, for the Lünen plant this would not have changed much. Neither 4.8% nor 8.8% would be appropriate compensation.

233 This uncompensated shutdown of particularly New Plants was subject to strong criticism and will be illustrated in the following.

5. Respondent was repeatedly criticised for not providing compensation for power plants put into operation after 2010

234 After the government had introduced the draft of the Coal Ban Law to the German Parliament in January 2020, the failure to provide compensation for highly efficient hard coal-fired power plants put into operation after 2010 was heavily and broadly criticised.

235 Invited by the parliamentary Committee on Economic Affairs and Energy, numerous experts emphasised that the shutdown of hard coal-fired power plants without compensation would result in "*hardly calculable legal risks [...] up to the level of international arbitration*"²²³ and would present a "*bad signal for investment security far beyond the*

²²¹ Based on a capacity of 746 MW.

²²² [Exhibit C-0014: Final Report of the Coal Commission, January 2019](#), p. 64.

²²³ [Exhibit C-0107-DE / Exhibit C-0107-EN: Statement of Joachim Rumstadt, STEAG, 18 May 2020](#), p. 3.

energy sector in Germany",²²⁴ a "massive loss of confidence"²²⁵ and a "threat to the investment security of Germany as a business location"²²⁶.

236 Strong criticism was also voiced by German municipalities. Just some years earlier, the German government had expressly welcomed the investments by municipalities in highly efficient coal-fired power plants and encouraged them to make further such investments (see **Section C.I.3** above). This was also highlighted in the expert hearings, which pointed out that – in response to the government's calls – eight new hard coal-fired power plants with a total of 6,200 MW had been constructed for about **EUR 10 billion**:

"Not least in response to many requests from politicians to modernize the German power plant fleet, also and especially to reduce CO2 emissions, a total of 8 hard coal-fired units of the latest generation with a combined net output of 6,200 MW were put into operation in Germany between 2013 and 2015. The speech by the German Chancellor quoted above [Chancellor Dr Angela Merkel, Speech at the laying of the cornerstone of blocks D and E of the Westfalen power plant, 29 August 2008]²²⁷ impressively underlines the political support for the construction of new power plants, as do countless other visits by high-ranking political decision-makers in connection with the construction work. A good EUR 10 billion was invested in these units."²²⁸

237 Now, particularly such recent investments were particularly harmed by the Coal Ban Law. Therefore, the Federal Association of Municipal Umbrella Organizations (*Bundesvereinigung der kommunalen Spitzenverbände*) demanded that compensation must be paid for the forced early shutdown of such new, highly efficient power plants:

"It is unacceptable that municipal property should be expropriated without any financial compensation. Many power plants were only built a few years ago and ensure an efficient supply of electricity and heat in towns and municipalities. These power plants also emit less CO2 than lignite-fired power plants. In our view, it is therefore imperative that the Coal Commission's demand to combine regulatory closures with compensation payments is also enshrined in the law for hard coal-fired power plants. There must be no coal ban at the expense of municipal supply structures."²²⁹ (Emphasis added)

224 [Exhibit C-0106-DE](#) / [Exhibit C-0106-EN](#): Statement of Dr Sebastian Bolay, Association of German Chambers of Industry and Commerce, 19 May 2020 p. 1.

225 [Exhibit C-0114-DE](#) / [Exhibit C-0114-EN](#): Statement of Stefan Körzell, German Trade Union Confederation, 19 May 2020 p. 3.

226 [Exhibit C-0115-DE](#) / [Exhibit C-0115-EN](#): Statement of Kerstin Andreae, Federal Association of Energy and Water Industries, 15 May 2020 p. 5.

227 [Exhibit C-0013](#): Chancellor Dr Angela Merkel, *Speech at the foundation stone ceremony for blocks D and E of the Westfalen power plant*, Bulletin of the German Federal Government Nr. 86-1 of 29 August 2008 [EN/DE] (excerpts).

228 [Exhibit C-0107-DE](#) / [Exhibit C-0107-EN](#): Statement of Joachim Rumstadt, STEAG, 18 May 2020, p. 3.

229 [Exhibit C-0105-DE](#) / [Exhibit C-0105-EN](#): Statement of Detlef Raphael, Federal Association of Municipal Umbrella Organizations, 19 May 2020, p. 2.

238 Similarly, the Association of Municipal Enterprises (*Verband Kommunalen Unternehmen*, "VKU") highlighted that, for New Plants, the low incentive amounts of the tender would not be sufficient and that such plants would not be able to earn back even their refinancing costs:

*"We are of the opinion that, as with lignite, a regulation must be found, especially for young coal-fired power plants, which leads to appropriate compensation. The background to this is that the young power plants, especially those built in 2013 or later, will not be able to earn back their refinancing costs until the statutory reduction, i.e. until they are obliged to leave the market. And that means that considerable losses are to be expected. We are talking about a three-digit million amount per power plant. And in this respect, we are saying that we need to find a different regulation than the one provided for in the tender system with maximum prices and strong degres-
sion."²³⁰ (Emphasis added)*

239 The VKU further warned Respondent that the non-compensation of New Plants would lead to stranded investments and prevent future investments by municipalities in the energy sector:

"Instead, we need to ensure that agreements are reached with the operators of hard coal-fired power plants similar to those in the lignite sector, as otherwise not only will the companies suffer economic losses directly, but of course also the municipalities that own them. And this in turn would have a considerable impact on the decreasing confidence of local authorities and municipal owners in additional investments. This would not only lead to "stranded investments" in the area of hard coal-fired power plants, but it would certainly also significantly reduce the willingness of municipal owners to invest money in order to improve energy generation, which is also geared towards climate policy."²³¹ (Emphasis added)

240 Also the Federation of German Industries (*Bundesverband der Deutschen Industrie e.V.*) criticised the government for its failure to provide for compensation by emphasizing the adverse consequences for operators:

"Furthermore, the combination of potentially excessively low maximum prices and statutory shutdowns without compensation from 2024 or 2027 will contradict the principle of voluntariness. Operators may find themselves forced to bid below their costs."²³²

241 It called on Respondent that

"the opportunity costs of all plants subject to the statutory reduction, i.e. the lost profits from theoretical continued operation measured against the

²³⁰ [Exhibit C-0116-DE](#) / [Exhibit C-0116-EN](#): Michael Wuebbels, Protocol Nr. 19/72 of the 72nd session of the Committee on Economic Affairs and Energy, 25 May 2020, p. 25.

²³¹ [Exhibit C-0116-DE](#) / [Exhibit C-0116-EN](#): Michael Wuebbels, Protocol Nr. 19/72 of the 72nd session of the Committee on Economic Affairs and Energy, 25 May 2020, p. 25.

²³² [Exhibit C-0117-DE](#) / [Exhibit C-0117-EN](#): Statement of the Federation of German Industries (BDI), 22 January 2020, p. 4.

lifetime specified by the Federal Network Agency, should be compensated, as should the additional costs of early shutdowns."²³³

- 242 Similarly, the Association of German Chambers of Industry and Commerce (*Deutscher Industrie und Handelskammertag e.V.*) concluded that especially New Plants are severely affected by the low incentive amounts of the tenders and the lack of any compensation mechanism:

*"The principle of no compensation from 2026 for the eight blocks of the latest generation of hard coal is particularly problematic. Successful participation in the tenders until 2026 is unlikely due to the short lifetimes (11 to 13 years), as the opportunity costs are higher than those of older plants."*²³⁴

- 243 STEAG, a non-municipal operator of coal-fired power plants, also reached the same conclusion and emphasised that the participation in the tenders could not be considered a serious alternative for New Plants:

"Due to the shutdown path linked to lignite in accordance with Section 4(2) of the draft bill of the Coal Ban Law, all of these units will have to be shut down between 2030 and 2033, after just 17 to 18 years of operation on average. And in principle without compensation. Participation in tenders for shutting down until 2026 is not an alternative due to the short lifetimes and low maximum price limits.

*A statutory shutdown of these young power plants without compensation would put the affected municipal companies in particular, and therefore the municipalities themselves, in financial difficulties."*²³⁵ (Emphasis added)

- 244 Respondent's disadvantageous treatment of New Plants was also pointed out by the Federal Association of Energy and Water Industries (*Bundesverband von Energie und Wasserwirtschaft, "BDEW"*). It reminded Respondent that regulatory shutdowns mandated compensation and that the operators trusted that CO₂ reductions would solely be regulated by the ETS and thus ensure a smooth transition:

*"If power plants are to be shut down under regulatory law, compensation payments are required for constitutional reasons, as regulatory shutdown represent a serious encroachment on the operators' ownership position. In addition, in the energy sector, the EU ETS provides a basis of trust for a gradually dwindling right and therefore a right to a smooth transition. Compliance with the constitutional requirements for the deprivation of ownership positions is the cornerstone for maintaining investment security in Germany and is therefore indispensable."*²³⁶ (Emphasis added)

²³³ [Exhibit C-0117-DE](#) / [Exhibit C-0117-EN](#): Statement of the Federation of German Industries (BDI), 22 January 2020, p. 5.

²³⁴ [Exhibit C-0106-DE](#) / [Exhibit C-0106-EN](#): Statement of Dr Sebastian Bolay, Association of German Chambers of Industry and Commerce, 19 May 2020 pp. 1-2.

²³⁵ [Exhibit C-0107-DE](#) / [Exhibit C-0107-EN](#): Statement of Joachim Rumstadt, STEAG, 18 May 2020, p. 3.

²³⁶ [Exhibit C-0115-DE](#) / [Exhibit C-0115-EN](#): Statement of Kerstin Andrae, Federal Association of Energy and Water Industries, 15 May 2020 p. 8.

245 The BDEW also outlined that the maximum incentive amounts of the tenders are too low:

“Maximum prices can generally be a useful means of preventing disproportionate bids in a tender [...]. However, the maximum prices proposed in the draft bill for power plant operators – most of which are municipal utilities – within the framework of the tenders, would lead to considerable losses.”²³⁷

246 In conjunction with the non-compensation in the event of mandatory shutdowns, they would lead to massive financial losses for municipalities:

“Furthermore, there is a risk that some of the plants – depending on the course of the previous tenders – would even be shut down without compensation. However, shutdowns without compensation are unacceptable and call into question the voluntary nature of participation in the tender. Both the excessively low maximum prices and the threat of statutory shutdowns would pose a massive risk of financial difficulties for those affected – especially municipal utilities and local authorities.”²³⁸ (Emphasis added)

247 This would apply, in particular, to New Plants put into operation after 2010 at Respondent's request:

“This applies in particular to new hard coal-fired power plants under 25 years old constructed in the 2010s at the explicit request of politicians, i.e. the most modern and efficient hard coal-fired power plants in Germany. The total investment volume of these new plants is just under EUR 12 billion. These plants are usually operated for at least 40 years; the companies base their investment decisions on the specific expected useful life. However, if the draft bill is implemented, the affected power plant operators would have less than half of this period to cover the investment volume.”²³⁹ (Emphasis added)

248 The BDEW estimated that at the time the last of these New Plants is shut down approximately a total of EUR 7.4 billion of the initial investment costs would not yet have been recouped:

“Assuming an even return of the investments made, this means that the remaining value of the total initial investments for the eight young power plants (based on an expected useful life of at least 40 years) would still amount to EUR 9.4 billion in 2027, the year in which forced shutdowns without compensation begins. This value will fall to EUR 7.4 billion by the time the last hard coal-fired power plant is shut down in 2033.

Thereby, the linear approach is appropriate and objectively suitable because the useful life assumed when the investment decision is made does not have to be the same as the amortisation period for tax or commercial law purposes. If a power plant were to be shut down without compensation, this

²³⁷ [Exhibit C-0115-DE / Exhibit C-0115-EN: Statement of Kerstin Andreae, Federal Association of Energy and Water Industries, 15 May 2020](#), p. 10.

²³⁸ [Exhibit C-0115-DE / Exhibit C-0115-EN: Statement of Kerstin Andreae, Federal Association of Energy and Water Industries, 15 May 2020](#), p. 11.

²³⁹ [Exhibit C-0115-DE / Exhibit C-0115-EN: Statement of Kerstin Andreae, Federal Association of Energy and Water Industries, 15 May 2020](#), p. 10.

would result in impairment losses or significant write-downs of the carrying amounts still existing."²⁴⁰ (Emphasis added)

- 249 In order to illustrate the inadequate compensation regulation in the Coal Ban Law for New Plants, the BDEW expressly referred to the Lünen plant:

"Take the example of the Lünen hard coal-fired power plant: 28 municipal utilities are involved in the ultra-modern plant, and a total of around EUR 1.4 billion was invested. The participating municipal utilities are threatened with a loss in value of around EUR 800 million as a result of the early exit, which will have a direct impact on the budgets of the municipalities behind the municipal utilities.

A separate regulation is therefore required for these young hard coal-fired power plants, whereby a mere exception to the degeneration provided for in this draft bill is not sufficient, as the maximum price of 165,000 euros/MW provided for is also too low for these plants and the tendering period is too short. Instead, there must be a solution for these young power plants under 25 years of age that enables a transparent and appropriate calculation of compensation."²⁴¹ (Emphasis added)

- 250 The BDEW was not the only association that emphasised the severe impacts on New Plants by referring to the Lünen plant. The Association of German Chambers of Industry and Commerce (*Deutscher Industrie und Handelskammertag e.V.*) equally concluded:

"The law [the Coal Ban Law] establishes the principle of shutting down hard coal-fired power plants without compensation. The Association of German Chambers of Industry and Commerce is critical of this approach and expects a wave of lawsuits from operators of hard coal-fired power plants. In any case, this approach will not create legal certainty. It also results in unequal treatment with operators of lignite-fired power plants, who will be compensated for shutdown at least until 2030. Hard coal-fired power plant operators will also lose revenue after 2030. According to an analysis by frontier economics, the loss for the Lünen hard coal-fired power plant alone amounts to almost EUR 600 million. If this sum is also applied to the other new hard coal-fired power plants, the damages resulting for the operators is over EUR 4 billion."²⁴² (Emphasis added)

6. Despite criticism, Respondent did not consider the economic impact on power plants put into operation after 2010

- 251 Although Respondent was heavily criticised for its failure to provide compensation for New Plants during the parliamentary process, Respondent ignored this.

²⁴⁰ [Exhibit C-0115-DE / Exhibit C-0115-EN: Statement of Kerstin Andreae, Federal Association of Energy and Water Industries, 15 May 2020](#), p. 10.

²⁴¹ [Exhibit C-0115-DE / Exhibit C-0115-EN: Statement of Kerstin Andreae, Federal Association of Energy and Water Industries, 15 May 2020](#), p. 10.

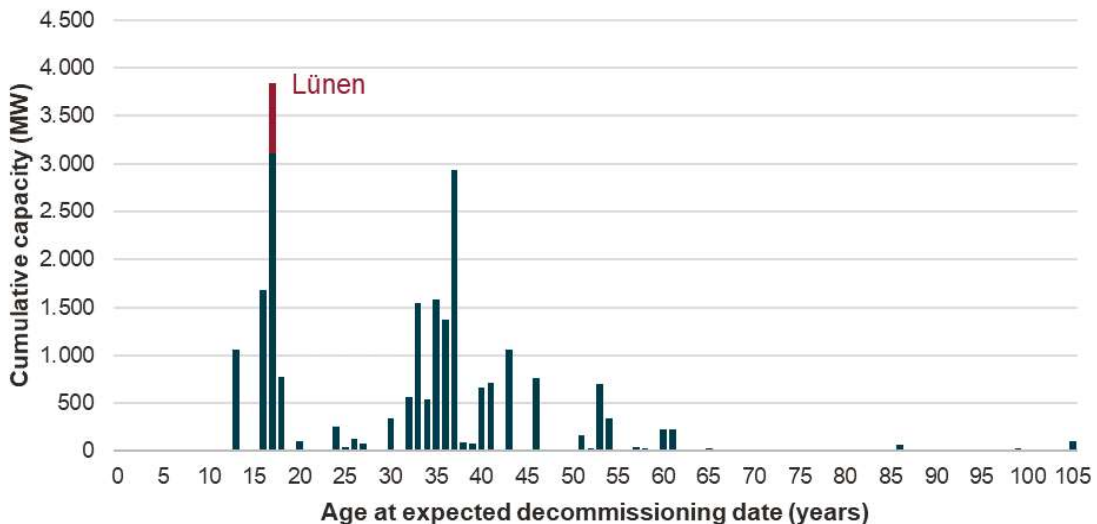
²⁴² [Exhibit C-0106-DE / Exhibit C-0106-EN: Statement of Dr Sebastian Bolay, Association of German Chambers of Industry and Commerce, 19 May 2020](#) p. 4.

252 It failed to examine the economic impact of the Coal Ban Law on New Plants, although it acknowledged that these plants may not be amortised when mandatorily shutdown.

253 According to the Explanatory Memorandum, the age-based Shutdown Path foreseen by the Coal Ban Law means that generally only fully amortised power plants will be shut down. Nevertheless, Respondent noted that this would not be the case for New Plants put into operation after 2010, like the Lünen plant:

“The regulation technique of the age-based ranking is fundamentally constitutional. As a result, only power plants that are fully amortised are expected to be shut down. An exception may be the hard coal-fired power plants put into operation after 2010.”²⁴³

254 The difference between these two groups of power plants – the New Plants and the old ones – is also clearly visible from the following figure showing the age of power plants when they are expected to be shut down.²⁴⁴ It shows that there is a group of New Plants, which will be around 16-17 years when shut down but not receive any compensation, and another group which has (almost) reached 40 years when shut down. As will be shown in **Section C.VI.7** below, it is overwhelmingly the latter power plants which successfully participate in the shutdown tenders.



255 In its Explanatory Memorandum to the Coal Ban Law, the German government merely reasoned that, contrary to the recommendations of the Coal Commission, no compensation for forced shutdowns would be required.²⁴⁵ Yet, the government did not even

²⁴³ [Exhibit C-0097-DE](#) / [Exhibit C-0097-EN: Parliamentary Paper BT-Dr. 19/17342, Explanatory Memorandum and Draft Coal Ban Law, 24 February 2020 \(excerpts\)](#), p. 87.

²⁴⁴ Frontier Report, Figure 3 at para. 59.

²⁴⁵ [Exhibit C-0097-DE](#) / [Exhibit C-0097-EN: Parliamentary Paper BT-Dr. 19/17342, Explanatory Memorandum and Draft Coal Ban Law, 24 February 2020 \(excerpts\)](#), pp. 87-88.

assess the economic impact on these newer power plants, alleging that it would not be able to do so on individual plant level:

“Not directly focusing on the emission levels and degree of amortisation, but using these criteria indirectly via the indicator of age is appropriate and thus lawful, because the emission levels are hardly precise and the degree of amortisation cannot be determined precisely, neither by the parliament in the legislative nor by a regulatory authority in the application of the law.

Because the age-based ranking represents an indicator for the degree of amortisation, the legislator also bases a flat-rate amortisation period for hard-coal-fired power plants. The legislator makes the structural decision on the basis of empirical data and for objective reasons, without having to determine the amortisation period for each individual case or even being able to determine it.”²⁴⁶ (Emphasis added)

256 Hence, although the government itself is aware that plants which started operations after 2010 may not be amortised and various associations have demonstrated that the Coal Ban Law would mean that those plants would not be able to earn back large parts of their investment costs, the government tries to hide behind the alleged difficulty to assess the damage on an individualised level as if this would relieve it of its duty to provide compensation.

257 What is more, the only further justification offered for not providing compensation is that, if these plants consider the shutdown incentives too low, they could operate until their forced shutdown:

“In the opinion of the Federal Government, an exception to the degression of the maximum price for power plants under 25 years of age is not necessary. Younger power plants benefit from the age ranking in regulatory law so that they have a longer transitional period until they are shut down, during which they can continue to generate revenue on the electricity market. Each operator of a power plant can decide for themselves whether it is more attractive for them to participate in a tender or to continue operating the plant.”²⁴⁷

258 This statement demonstrates that the government chose to completely close its eyes and to ignore the economic situation of these New Plants. As highlighted by the associations, a forced shut down after less than half of the expected lifetime without a possibility to even earn back the financing costs, requires compensation.

259 Respondent's failure to consider the severe financial impacts on New Plants also becomes evident in the considered regulatory alternatives to reduce and end coal-fired power generation in the Explanatory Memorandum. Inter alia, Respondent compared

²⁴⁶ [Exhibit C-0097-DE / Exhibit C-0097-EN: Parliamentary Paper BT-Dr. 19/17342, Explanatory Memorandum and Draft Coal Ban Law, 24 February 2020 \(excerpts\)](#), p. 87.

²⁴⁷ [Exhibit C-0097-DE / Exhibit C-0097-EN: Parliamentary Paper BT-Dr. 19/17342, Explanatory Memorandum and Draft Coal Ban Law, 24 February 2020 \(excerpts\)](#), [Exhibit C-0019-DE / Exhibit C-0019-DE: Statement of the Bundesrat and counter-statement of the Federal Government on the Coal Ban Draft, 8 April 2020](#), p. 27.

the risks of implementing the coal ban through mandatory shutdowns from the beginning without a tender mechanism with the option of a tender mechanism until 2027 with subsequent mandatory shutdowns. In the end, it opted for the latter option because the first option “*would be accompanied by greater interference in the rights of plant operators*”.²⁴⁸

260 However, from the perspective of New Plants both options are equally restrictive since the tenders are too low to be considered an economical option. Again, the government did not take into account that New Plants would not be amortised when participating in the tenders.

261 Also after Respondent had introduced the draft to the Coal Ban Law to the German Parliament, it did not significantly amend the situation for New Plants during the parliamentary process. Besides minor amendments,²⁴⁹ all that was included shortly before the German Parliament adopted the Coal Ban Law in July 2020, was section 54(2) of the Coal Ban Law.

262 Section 54(2) of the Coal Ban Law is a last minute fig leaf trying to camouflage the gaping hole in the law relating to the lack of compensation for the hard coal-fired power plants put into operation after 1 January 2010. All it does is to oblige the government to reevaluate the situation of these plants on 15 August of 2022, 2026, and 2029. Moreover, the provision is completely open and unspecific. It does not specify under which circumstances how much compensation would be offered when.

263 However, Section 54(2) is a non-starter in the literal sense. Also almost two years after the first re-evaluation date, no such assessment has actually taken place. Since then, Respondent has been hiding behind flimsy excuses as to why the report has not yet been finalised and published. In August 2022, the government only published a preliminary status report. It announced that a finalisation of the report would have proved to be too difficult.²⁵⁰ Instead, it unilaterally postponed the publication without any legislative approval until the beginning of 2023.²⁵¹ However, Respondent did not meet that

²⁴⁸ [Exhibit C-0097-DE](#) / [Exhibit C-0097-EN: Parliamentary Paper BT-Dr. 19/17342, Explanatory Memorandum and Draft Coal Ban Law, 24 February 2020 \(excerpts\)](#), p. 86.

²⁴⁹ Compared to the draft introduced to the German Parliament in January 2020, the Coal Ban Law extended the period of the annual tenders from 2026 to 2027 and regulated that mandatory shutdowns shall be take place from 2031 on (instead of 2027). Both amendments were taken back in July 2021. Additionally, the maximum prices per MW of the tender mechanism were increased in 2024 (from EUR 87.000 to EUR 107.000), 2025 (from EUR 65.000 to EUR 98.000) and 2026 (from EUR 49.000 to EUR 89.000).

²⁵⁰ [Exhibit C-0118-DE](#) / [Exhibit C-0118-EN: Interim Report to Section 54\(2\) of the Coal Ban Law, August 2022](#), p. 3.

²⁵¹ [Exhibit C-0118-DE](#) / [Exhibit C-0118-EN: Interim Report to Section 54\(2\) of the Coal Ban Law, August 2022](#), p. 3.

deadline either. Instead, Respondent again reiterated in December 2023 that the evaluation report would be still in progress.²⁵²

264 What is more, despite polite assurances to the contrary, the current government has already proclaimed that it will not make provisions for any additional compensation.

265 Still before the first evaluation report was due, TKL emphasised in its letter to the Ministry for Economic Affairs and Energy of 18 June 2021 the severe financial impacts of the Coal Ban Law and its lack of compensation on Lünen as a New Plants and on its shareholders.²⁵³ In its response letter of September 2021, the Ministry acknowledged the concerns of TKL and confirmed that “*these aspects are of great importance with regard to the evaluation*” report under section 54(2) of the Coal Ban Law.²⁵⁴

266 However, only two month later, and half a year before the first evaluation report was due, Respondent made clear that, as a matter of principle, it will not provide any compensation. In the coalition agreement from December 2021, the new German government excluded from the outset any additional compensation schemes for power plants. While the new government even proclaimed to accelerate the exit from coal-fired power generation, if possible, not only to 2035 (as provided for in the Coal Ban Law as a possibility) but even to 2030, it also explicitly announced

“not to pay any additional compensation to companies as part of the coal ban in addition to the benefits already promised to municipalities under the Law.”²⁵⁵ (Emphasis added)

267 Respondent’s unwillingness to provide for compensation for New Plants becomes also apparent in light of the fact that Respondent did not show any reaction when Claimant requested for an amicable settlement pursuant to Article 26 of the ECT with its Notice of Dispute of November 2022.

7. Shutdown incentives are ineffective and increase financial inequality between old and new power plants to the detriment of the latter

268 As already set out above, the shutdown incentives are primarily aimed at incentivising old, polluting power plants to shut down early. This aim is clearly reflected in the

²⁵² [Exhibit C-0119-DE](#) / [Exhibit C-0119-EN](#): Parliamentary Paper BT-Dr. 20/9662, *Written questions with the answers by the Federal government regarding the evaluation report on Section 54(2) Coal Ban Law*, 8 December 2023, p. 21.

²⁵³ [Exhibit C-0087-DE](#) / [Exhibit C-0087-EN](#): Letter by TKL to the Federal Minister of Economics and Technology Peter Altmaier, 18 June 2021, pp. 13-14.

²⁵⁴ [Exhibit C-0120-DE](#) / [Exhibit C-0120-EN](#): Letter of the Ministry of Economic Affairs and Energy to TKL, 16 September 2021, p. 3.

²⁵⁵ [Exhibit C-0099-DE](#) / [Exhibit C-0099-EN](#): Coalition Agreement between SPD, Bündnis 90 / Die Grünen and FDP, “*Dare More Progress*”, 7 December 2021, p. 59.

Explanatory Memorandum and the Coal Ban Law itself. Namely, according to Section 14(1) of the Coal Ban Law, where a tender is oversubscribed, the bid is not awarded simply based on the price but on the lowest price in relation to the average annual CO2 emissions over the last three years. Hence, power plants with high emissions are more likely to be awarded a bid than clean and highly efficient power plants.

269 This intention is confirmed by the Explanatory Memorandum:

“In the case of oversubscription of a tender, the bids will be accepted in the order for which the highest emission savings for the offered price are considered first (modified price bidding). This is based on the certified historical emissions level. This reduces the total costs of the measure and takes into account the greenhouse gas emissions saved.”²⁵⁶

270 The objective to attract particularly old and more polluting power plants is later reiterated again:

“In the case of identical bids, bids of operators of hard coal-fired plants with a high carbon dioxide emission will be accepted first through this method. This is a cost effective way of avoiding carbon dioxide emissions. The favorable emission saving option is given priority by setting the bid and emission saving in relation to each other and basing the acceptance of the bid on this index number.”²⁵⁷

271 As also already explained, it is Respondent's own understanding that the old, polluting power plants are generally already amortised by the time they would be mandatorily shut down. It is also Respondent's own understanding that new power plants will not be amortised yet. Hence, by preferably granting the shutdown incentives to old, polluting plants, Respondent improves the financial situation of already amortised plants even further while it fails to offer compensation to new, highly efficient power plants which are not yet amortised.

272 The results of the tender process confirm this unfair and ineffective outcome. Shutdown incentives are mainly paid to plants which, due to their age, were due to shut down soon in any event. About one quarter of the plants which received a shutdown incentive were already over 50 years old when closing down. Also, about half the plants received a shutdown incentive for closing down in the same year or even later than Respondent had opted to close them down based purely on the age-based Shutdown Path:

²⁵⁶ [Exhibit C-0097-DE / Exhibit C-0097-EN: Parliamentary Paper BT-Dr. 19/17342, Explanatory Memorandum and Draft Coal Ban Law, 24 February 2020 \(excerpts\)](#), p. 83.

²⁵⁷ [Exhibit C-0097-DE / Exhibit C-0097-EN: Parliamentary Paper BT-Dr. 19/17342, Explanatory Memorandum and Draft Coal Ban Law, 24 February 2020 \(excerpts\)](#), p. 123.

Power Plant	Capacity (MW)	Start of Operation ²⁵⁸	Shutdown Path ²⁵⁹	Shutdown Incentive ²⁶⁰
Deuben	67	09 Oct 1936	31 Dec 2022	31 Dec 2021
Warburg	5	01 Sep 1954	31 Dec 2022	31 Dec 2021
HKW Magirusstraße	8	05 Apr 1957	31 Dec 2022	31 Dec 2022
Brottewitz	4	07 Oct 1957	31 Dec 2022	31 Dec 2021
Schöneweide	10	04 Feb 1964	31 Dec 2022	01 Apr 2026
Farge	350	01 Jan 1969	31 Dec 2022	31 Dec 2022
Scholven C	345	01 Jan 1969	31 Dec 2022	31 Dec 2022
Euskirchen	14	30 Sep 1970	31 Dec 2022	01 Jul 2023
Kraftwerk I	225	03 Feb 1971	31 Dec 2022	31 Dec 2022
Wessling 2	26	26 Nov 1972	31 Dec 2022	01 Jul 2024
Gesamt-Sammelschienen-KW - Konventionelles HKW	27	09 Aug 1978	31 Dec 2022	31 Dec 2022
Mehrum 3	690	01 Jun 1979	31 Dec 2022	31 Dec 2021
Anlage 80	36	22 Nov 1979	31 Dec 2022	31 Dec 2022
KW Hafen 6	303	01 Dec 1979	31 Dec 2022	31 Dec 2021
Bergkamen A	717	07 Jul 1981	31 Dec 2022	31 Dec 2022
Völklingen	179	15 Aug 1982	31 Dec 2022	31 Dec 2022
Kohleblock HKW	51	20 Dec 1983	31 Dec 2022	31 Dec 2021
Zolling 5	472	01 Jan 1985	31 Dec 2022	01 Apr 2025
Ibbenbüren	794	19 Jun 1985	31 Dec 2022	31 Dec 2021
RDK 7	517	21 Jun 1985	31 Dec 2022	01 Jul 2024
Ochsenfurt	16	08 Arp 1986	01 Jul 2023	01 Jul 2024
Heyden	875	01 Jan 1987	01 Jul 2023	31 Dec 2021
Oberkirch	19	26 May 1987	01 Jul 2024	01 Apr 2026
Walsum 9	370	01 Jun 1988	01 Jul 2024	31 Dec 2021
GKH 1	136	26 Jan 1989	01 Jul 2024	01 Apr 2026
Völklingen HKW	211	30 Nov 1989	01 Apr 2025	31 Dec 2022
Venator 1	19	20 Mar 1990	01 Apr 2025	31 Dec 2022
KWK Kohlekessel	3	25 Sep 1990	01 Apr 2025	01 Apr 2026
BNA 1500 – Dampfsammelschienenblock	37	10 Oct 1991	01 Apr 2025	01 Apr 2026
Staudinger 5	510	01 Jan 1992	01 Apr 2025	01 Jul 2023

²⁵⁸ [Exhibit C-0112-DE / EN: Federal Network Agency, Power Plant List, 1 April 2020.](#)

²⁵⁹ [Exhibit FE-0005 to the Exhibit CER-0002: Frontier Report](#)

²⁶⁰ [Exhibit C-0121-DE / Exhibit C-0121-EN: Federal Network Agency, Overview of all Accepted Tenders, available at <https://www.bundesnetzagentur.de/DE/Fachthemen/ElektrizitaetundGas/Kohleausstieg/BeendeteAusschreibungen/start.html>, \(last accessed on 22 July 2024\).](#)

Könnern 1	8	15 Aug 1993	01 Apr 2027	01 Jul 2023
Könnern 2	20	28 Sep 1993	01 Apr 2027	01 Jul 2024
DSA 8	435	05 Apr 1993	01 Apr 2027	01 Jul 2024
Jülich	23	18 Apr 2005	01 Apr 2031	31 Dec 2021
K06	14	02 Aug 2010	01 Apr 2031	31 Dec 2022
Merkenich 6	75	16 Dec 2010	01 Apr 2031	01 Apr 2026
Greiz	1	23 Mar 2011	01 Apr 2031	01 Jul 2024
Westfalen	763	02 Jul 2014	01 Apr 2031	31 Dec 2021
Moorburg B	800	28 Feb 2015	01 Apr 2032	31 Dec 2021
Moorburg A	800	31 Aug 2015	01 Apr 2033	31 Dec 2021

273 These results also confirm that the shutdown incentives are indeed not attractive for new, highly efficient power plants. Merely three new hard coal-fired power plants (Westfalen and Moorburg A & B) were closed down based on the tender mechanism. This decision must however be seen in the context of the overall strategy of the operating companies (RWE and Vattenfall) to become carbon neutral rather than as an economically driven decision. For example, Vattenfall has pledged to reduce 77% of its greenhouse gas emissions (including those related to the sale of electricity) compared to 2017 by 2030 which it aims to achieve by “*rapidly phasing-out use of fossil fuels to generate electricity*”.²⁶¹ Moreover, Vattenfall stated that its participation with Moorburg A and B in the tender mechanism was part of the company’s strategy to enable a life without fossil fuels within a generation.²⁶² Similarly, RWE highlights that the shutting down of its hard coal-fired power plants in Germany was a concrete measure in its pursuance of its “net zero” strategy.²⁶³

274 However, the low incentive amounts of the tender are not the only treatment that is detrimental to New Plants, not yet amortised coal-fired power plants. As demonstrated in the following, the non-separate and dependent Shutdown Paths of lignite and hard coal capacities disadvantage the operators of coal-fired power plants and contradict the Coal Ban Law’s objective to reduce emissions.

²⁶¹ [Exhibit C-0122-DE / Exhibit C-0122-EN: Vattenfall, CO2 roadmap, available at: https://group.vattenfall.com/what-we-do/roadmap-to-fossil-freedom/co2-roadmap/, \(last accessed on 24 July 2024\).](https://group.vattenfall.com/what-we-do/roadmap-to-fossil-freedom/co2-roadmap/)

²⁶² [Exhibit C-0123-DE / Exhibit C-0123-EN: Der Spiegel, State pays 317 million euros for shutting down coal-fired power plants, 1 December 2020.](#)

²⁶³ [Exhibit C-0124-DE / Exhibit C-0124-EN: RWE, Climate Protection, available at: https://www.rwe.com/en/responsibility-and-sustainability/environmental-protection/climate-protection/, \(last accessed on 24 July 2024\), Exhibit C-0125-DE / Exhibit C-0125-EN: RWE Generation SE, End of an era: RWE hard coal-fired power plants in Hamm and Ibbenbüren finally go offline, 8 July 2021, available at https://www.rwe.com/presse/rwe-generation/2021-07-08-ende-einer-aera/, \(last accessed on 8 May 2024\).](https://www.rwe.com/en/responsibility-and-sustainability/environmental-protection/climate-protection/)

VII. The Coal Ban Law destroys the value of Claimant's investment

- 275 The Coal Ban Law had a devastating impact on Claimant's investment, as it destroyed the value of the Lünen plant.
- 276 As described above, due to its vintage and high efficiency, the Lünen plant was discriminatorily punished by the shutdown tender mechanism adopted under the Coal Ban Law and mandated to shut down in 2031 without any compensation.
- 277 After the draft Coal Ban Law was announced in 30 January 2020, the Lünen plant lost 100% of its value. This corresponds to an overall loss of value of Claimant's investment, as a shareholder of 15.84 % of TKL's shares, estimated to amount to Rule 66(f) ██████████ (including interest until the date of this Memorial) compared to the value of the investment before the Coal Ban Law.
- 278 This will be set out further below in **Section F**.

D. THE TRIBUNAL HAS JURISDICTION

279 The Arbitral Tribunal has jurisdiction. Its jurisdiction is derived from Article 25(1) of the ICSID Convention. This article reads:

“The jurisdiction of the Centre shall extend to any legal dispute arising directly out of an investment, between a Contracting State (or any constituent subdivision or agency of a Contracting State designated to the Centre by that State) and a national of another Contracting State, which the parties to the dispute consent in writing to submit to the Centre. When the parties have given their consent, no party may withdraw its consent unilaterally.” (Emphasis added)

280 These conditions are met. This is a legal dispute (I.), which arises directly out of Claimant's investment (II.). It also is a dispute between a Contracting State and a national of another Contracting State (III.) and the parties have consented in writing to submit it to ICSID arbitration (IV.).

I. This is a legal dispute

281 The dispute submitted to the Arbitral Tribunal is a legal dispute. There is disagreement between Claimant and Germany about whether Germany breached its obligations towards Claimant under the ECT and is obliged to pay compensation for losses incurred as a consequence of Germany's breaches of the ECT. Such disagreement does not require explicit contradictory positions. It is sufficient that the investor asserts a claim and the State does not respond to it, thus implicitly rejecting it.²⁶⁴

282 Claimant informed Germany about the dispute under the ECT by letter dated 1 November 2022 and, in this context, requested negotiations for an amicable settlement (see **Exhibit C-0015**). Germany did not respond. On 11 January 2023, Claimant sent a reminder letter to Respondent (see **Exhibit C-0017**). Again, Germany did not respond. When Claimant sent the Request for Arbitration, Germany did not suddenly initiate arbitration. It is evident that Germany was unwilling to discuss an amicable settlement, and the requirement under Article 26(1) of the ECT is fulfilled.

II. The dispute arises directly out of Claimant's investments

283 This dispute arises directly out of Claimant's investments. AET owns and controls 15.84 % of the shares in TKL, the owner of the Lünen plant.

284 This is an investment under Article 25(1) of the ICSID Convention. The ICSID Convention itself does not provide a codified definition of the term “investment”. It should be

²⁶⁴ [Exhibit CLA-0006: Schill et al \(eds.\), *Schreuer's Commentary on the ICSID Convention*, Vol. I Third Ed. Cambridge University Press, 2022, Article 25 para. 72.](#)

undisputed, however, that an investment into a locally incorporated company such as TKL is an investment under Article 25 of the ICSID Convention.

285 Claimant's participation in the Lünen plant in 2008 would even fulfil the 'Salini'-criteria²⁶⁵ sometimes invoked by respondent states. By participating in TKL, AET made a significant financial contribution of **EUR 23.433.611,40** and took on an entrepreneurial risk to support a state-of-the-art power plant. The approval process for the Lünen coal power plant demonstrated that its construction and operation served a public interest (see above, **Section C.I.4**), extending its impact beyond mere economic interests. The authorities underlined the great importance of new hard coal-fired power plants with regard to climate protection, and concluded in the Advance Decision from 2013 that

"new highly efficient power plants are of overriding public interest in order to fulfil the objectives of Section 1(1) EnWG to secure the supply of electricity to the general public while at the same time safeguarding the constitutional interest of climate protection."²⁶⁶ (Emphasis added)

286 The legal dispute also directly arises from these investments. The Coal Ban Law impairs the operating lifetime of the Lünen power plant and thus of AET's investments in Germany as a whole. The Coal Ban Law rendered the AET's shares in TKL worthless, as the operation of the Lünen plant is TKL's sole business activity and the purpose of TKL's establishment.

III. The dispute is between a Contracting State and a national of another Contracting State

287 Both the Respondent, Germany, and the home country of the Claimant, Switzerland, are Contracting States of the ICSID Convention.²⁶⁷

288 The Claimant is a legal entity established under Swiss law and therefore qualifies as a "*national of another Contracting State*" than Germany within the meaning of Article 25(2)(b) of the ICSID Convention.

289 The fact that AET is a public law entity does not preclude this qualification. The clear wording, the legislative history of the Convention, and the established jurisprudence do not exclude the application in such a case. It is widely recognized that Article 25 of the

²⁶⁵ [Exhibit CLA-0007: Salini Costruttori S.p.A. and Italstrade S.p.A. v. Kingdom of Morocco, ICSID Case No. ARB/00/4, Decision on Jurisdiction, 23 July 2001](#), para 52 ff.

²⁶⁶ [Exhibit C-0030-DE / Exhibit C-0030-EN: District Government of Arnsberg, 2013 Advance Decision \(Vorbescheid\), 20 November 2013, \(excerpts\)](#), page 289.

²⁶⁷ Germany signed the ICSID Convention on January 27, 1966, and ratified it on April 18, 1969. The Convention has been in force for Germany since May 18, 1969. Switzerland signed the ICSID Convention on September 22, 1967, and ratified it on May 15, 1968. The Convention has been in force for Switzerland since June 14, 1968. See [Exhibit CLA-0003: List of Contracting States to the ICSID Convention as of 25 October 2022](#).

ICSID Convention is not limited to privately-owned companies.²⁶⁸ AET neither acts as a representative of the Swiss Government nor does it fulfil public functions with the investment or this arbitration.

IV. The parties have consented in writing to ICSID arbitration

290 The Parties have consented in writing to submit this dispute to the Centre.

291 Germany's written consent to arbitrate is contained in Article 26(3)(a) of the ECT. Germany consented that disputes under Article 26(1) of the ECT, between an Investor of a Contracting Party and itself, which relate to an Investment of the former in the Area of Germany, and concern an alleged breach of its obligations under Part III of the ECT, could be submitted to ICSID arbitration.

292 These preconditions are fulfilled. Claimant submitted its own consent to submit this dispute to ICSID Arbitration, with letter of 2 November 2022 ("**Notice of Dispute**")²⁶⁹ (see Request of Arbitration, para 81). By submitting its Request of 29 September 2023 Claimant reaffirmed its consent for this dispute to be submitted to ICSID arbitration.

293 Claimant's consent matched Respondent's consent.

294 AET is a company registered under the laws of Switzerland and thus an Investor of a Contracting Party.²⁷⁰

295 Germany was a Contracting Party to the ECT until 19 December 2023, when its withdrawal notification of November 2022 became effective. Due to the "Sunset Clause" stipulated in Article 47(3) of the ECT, the provisions of the ECT bind a Contracting State for 20 years after its withdrawal for investments made before the withdrawal. This clearly applies in this case, as AET's investment was made in 2008 through its participation in the construction and operation of TKL, thus the ECT continues to bind Germany.

296 The dispute concerns an Investment of AET within the meaning of Article 1(6) of the ECT. Its participation in TKL constitutes

(b) a company or business enterprise, or shares, stock, or other forms of equity participation in a company or business enterprise, and bonds and other debt of a company or business enterprise;

²⁶⁸ [Exhibit CLA-0006: Schill et al \(eds.\), *Schreuer's Commentary on the ICSID Convention*, Vol. I Third Ed. Cambridge University Press, 2022](#), Article 25 para. 574-588.

²⁶⁹ [Exhibit C-0015: Notice of Dispute of 1 November 2022, incl. Power of Attorney and Proof of Delivery on 2 November 2022](#).

²⁷⁰ [Exhibit CLA-0005: Contracting Parties and Signatories of the Energy Charter Treaty](#).

297 [REDACTED]
[REDACTED] Rule 66(f) [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED].

298 The conclusion of the [REDACTED] 66(f), with a term of [REDACTED] Rule 66(f) and subsequent renewal options²⁷¹, made possible by AET's investment in the Lünen coal power plant, [REDACTED] Rule 66(f) [REDACTED] Rule 66(f), thus constitutes

(c) claims to money and claims to performance pursuant to contract having an economic value and associated with an Investment;

and thus also an investment under Article 1(6) of the ECT. As the share in TKL, [REDACTED] Rule 66(f) and the power plant slice form an indivisible economic operation, they jointly constitute the Investment under Article 1(6) ECT.

299 Lastly, the dispute concerns Germany's breaches of its obligations and standards set forth in Part III of the ECT, namely:

- Breach of the prohibition of Expropriation, Article 13 of the ECT
- The failure to uphold commitments to investors (breach of Umbrella Clause), Article 10(1) ECT
- Breach of the guarantee of Fair and Equitable Treatment (FET), Article 10(1) of the ECT
- Breach of the guarantee of Full Protection and Security, Article 10(1) of the ECT
- Breach of the prohibition of Unreasonable Treatment, Article 10(1) of the ECT
- Breach of the principle of Non-Discrimination, Article 10(1) of the ECT.

300 Pursuant to Article 26(5)(a)(i) of the ECT, Germany's consent and Claimant's written consent together satisfy the requirement for "written consent" under Article 25 of the ICSID Convention.

301 The specific allegation of Germany's breach of its obligations under the ECT is described in **Section E** (Germany breached the ECT).

271 [REDACTED]
[REDACTED] Rule 66(f) [REDACTED]
[REDACTED]

E. GERMANY BREACHED THE ECT

I. Introduction

302 Article 42(1) of the ICSID Convention provides that “[t]he Tribunal shall decide a dispute in accordance with such rules of law as may be agreed by the parties [...]”. In this case, the rules of law chosen by the Parties are set out in the ECT.

303 According to Article 26(6) of the ECT, the Arbitral Tribunal “shall decide the issues in dispute in accordance with this Treaty and applicable rules and principles of international law.” Thus, the rules of law applicable to the present dispute are the substantive provisions of the ECT as well as applicable rules and principles of public international law.

304 The Energy Charter Treaty is a unique investment treaty tailor-made for the Energy Sector. It puts a considerable emphasis on stability for long-term energy investments. Even measures necessary to protect human life or health do not release a Contracting Party from state responsibility incurred under Part III of the ECT (see further section II.).

305 Germany has breached Articles 13 and 10(1) of the ECT.

306 Article 13 of the ECT prohibits direct and indirect expropriation except where such expropriation is (a) for a purpose which is in the public interest (b) not discriminatory (c) carried out under due process of law and (d) accompanied by the payment of prompt, adequate and effective compensation. By adopting the Coal Ban Law, Germany:

- Made the irrevocable permits for the operation of Lünen subject to revocation;
- Set out a Shutdown Order which will lead to a shutdown of Lünen before Claimant – as a partner of TKL – will have earned a return on its investment;
- Intentionally decided not to compensate new power plants such as TKL (and thereby indirectly its partners like Claimant) for the losses incurred by that premature shutdown;
- And thereby discriminated against the Lünen Plant and its owners, since lignite power plants (which have the highest CO₂-emissions) were compensated.

307 Germany’s actions amount to an expropriation under the ECT. Prompt, adequate and effective compensation was neither offered nor paid. The expropriation was thus unlawful (see further Section III.).

308 Article 10(1) of the ECT sets out the standards of treatment that must be accorded to a foreign investment by a host state, including the obligations to: (i) observe any obligations entered into with a foreign investor, (ii) accord at all times fair and equitable treatment, (iii) refrain from unreasonable and discriminatory measures, and (iv) offer most constant protection and security.

309 The violation of only one of these standards of protection is sufficient to establish a breach of the ECT. Germany has breached several standards in this case. In summary, Germany has breached Article 10(1) of the ECT by:

- failing to comply with its obligations towards Claimant's investment, i.e. TKL, under the permits issued for the construction and operation of the Lünen plant;
- failing to treat Claimant and its investments fairly and equitably by:
 - o fundamentally changing the legal framework which was the basis for Claimant's investment. Until shortly before the Coal Ban Law, Germany had emphasised that the European Emissions Trading System (ETS) would be its method of choice to reduce CO₂ emissions. The Coal Ban Law fundamentally deviates from that, as a coal-fired power plant will not be allowed to operate even if it has sufficient emission allowances (see further in **Section E.V.2**);
 - o Harming Claimant – as a shareholder of TKL – unnecessarily and disproportionately by refusing to grant compensation to New Plants (see further in **Section E.V.3**);
- violating its obligation to provide Claimant the most constant protection and security by not ensuring legal security for Claimant and its investments (see further in **Section E.VI**); and by
- treating Claimant differently from its competitors without any justifiable reason and impairing Claimant's investments by unreasonable and discriminatory measures (see further in **Section E.VII**).

II. The ECT is a unique treaty requiring Contracting Parties to provide stable investment conditions

310 The ECT is not a standard investment treaty. It has been tailor-made to promote long-term cooperation in the Energy Sector. That is confirmed in the Final Act of the European Energy Charter Conference (by which the ECT was adopted):

"The representatives underline that the provisions of the Treaty have been agreed upon bearing in mind the specific nature of the Treaty aiming at a legal framework to promote long-term cooperation in a particular sector and

as a result cannot be construed to constitute a precedent in the context of other international negotiations.”²⁷² (Emphasis added)

311 It is also outlined in the ECT's purpose, which is found in Article 2 of the ECT:

“This Treaty established a legal framework in order to promote long-term cooperation in the energy field, based on complementarities and mutual benefits, in accordance with the objectives and principles of the Charter.”

312 The “*Charter*” refers to the 1991 European Energy Charter which formed the political basis for the ECT. It already emphasised the Contracting Parties’ focus on the creation of stable investment conditions to ensure long-term cooperation in the energy sector:

“In order to promote the international flow of investments, the signatories will at national level provide for a stable, transparent legal framework for foreign investments, in conformity with the relevant international laws and rules on investment and trade.”²⁷³

313 The ECT's focus on stability is not only apparent in its Article 2 and the European Energy Charter, but also in one of its key substantive provision on investment protection. Unlike many other investment treaties, Article 10(1)(1) of the ECT establishes a specific obligation to provide stable investment conditions for investors:

“Each Contracting Party shall, in accordance with the provisions of this Treaty, encourage and create stable, equitable, favourable and transparent conditions for Investors of other Contracting Parties to make Investments in its Area.” (Emphasis added)

314 Article 10(1) of the ECT aims to address foreign investors’ concerns with respect of the energy sector’s special circumstances. In this sector, investments are often scheduled for decades and cannot be easily removed from the host country. Therefore, investors are tied to the host country and exposed to unexpected changes in the legal framework that may adversely affect their investment.

315 The *Encavis v. Italy* tribunal summarised this as follows:

“In a highly regulated sector such as energy, legal security and regulatory stability are permanent concerns for investors. Depending on the energy source, the energy sector may require investors to make long-term capital commitments, which are sunk into fixed assets that cannot be removed from the host State.

Once an investor makes an investment into a national energy sector, relying on the legal and regulatory framework at the date of investment for its financing and economic feasibility analysis, it is vulnerable to regulatory change going forward. The purpose of Art. 10(1) of the ECT is to assuage investors’ fears: the Contracting States undertake to promote a “stable” legal framework commensurate with the relevant energy sector or source. This is why

²⁷² [Exhibit CLA-0002: Energy Charter Treaty](#), Understanding 1, p. 37.

²⁷³ [Exhibit CLA-0002: Energy Charter Treaty](#), p. 18, European Energy Charter, title 2, section 4; see also [Exhibit CLA-0008: Silver Ridge Power BV v. Italian Republic, ICSID Case No. ARB/15/37, Award of 26 February 2021](#), para. 399.

the ECT places greater emphasis on stable conditions for investments than other treaties.²⁷⁴ (Emphasis added)

316 This emphasis on stability is also reflected in Article 24 of the ECT, which regulates exceptions to the Contracting Parties' obligations. Article 24(2)(b) of the ECT stipulates that measures "*necessary to protect human, animal or plant life or health*" do not justify a breach of the obligations under Part III of the ECT:

"(2) The provisions of this Treaty other than

[...]

(b) with respect to subparagraph (i), Part III of the Treaty shall not preclude any Contracting Party from adopting or enforcing any measure

(i) *necessary to protect human, animal or plant life or health;*" (Emphasis added)

317 It means that a Contracting State cannot escape its liability to pay compensation for breach of an obligation under Part III of the ECT by arguing that the measure adopted was necessary to protect the environment or human life or health. Even if that was the case, the measure can still be in breach of Part III of the ECT. This exception from an exception is highly unusual and evidences the particular protection enjoyed by investors under the ECT. It is precisely what the parties intended and reflects a compromise of the Contracting Parties found during the ECT's drafting process.²⁷⁵

318 The Energy Charter Treaty created a special regime for energy investments and emphasises the importance of stable legal frameworks. Both Article 10(1) ECT and Article 24 ECT are evidence of that purpose which needs to be taken into consideration when interpreting the ECT pursuant to Article 31(1) of the VCLT.

III. Respondent breached Article 13 of the ECT by indirectly expropriating Claimant's investments without compensation

319 By adopting the Coal Ban Law, Respondent has expropriated Claimant's investments in the Lünen plant in breach of Article 13 of the ECT.

²⁷⁴ [Exhibit CLA-0009: Encavis AG and others v. Italian Republic, ICSID Case No. ARB/20/39, Award, 11 March 2024](#), para. 651; see also: [Exhibit CLA-0010: R. Dolzer, Fair and Equitable Treatment: Today's Contours](#), 12 Santa Clara Journal of International Law 7 (2014), p. 23; [Exhibit CLA-0011: PV Investors v. Kingdom of Spain, PCA Case No. 2012-14, Final Award, 28 February 2020](#), para. 566; [Exhibit CLA-0012: LSG Building Solutions GmbH et al v. Romania, ICSID Case No. ARB/18/19, Decision on Jurisdiction, Liability and Principles of Reparation, 11 July 2022](#), para. 1014.

²⁷⁵ [Exhibit CLA-0013: C. Bamberger, 'An Overview of the Energy Charter' in: T. Wälde \(ed.\), The Energy Charter Treaty: An East-West Gateway for Investment & Trade. \(Kluwer Law International 1996\)](#), p. 22.

320 The protection against uncompensated expropriation is among the fundamental rights the ECT grants to foreign investors with regard to their investment in the host country.²⁷⁶

321 Article 13(1) of the ECT provides a guarantee that:

“Investments of Investors of a Contracting Party in the Area of any other Contracting Party shall not be nationalized, expropriated or subjected to a measure or measures having effect equivalent to nationalization or expropriation (hereinafter referred to as “Expropriation”) except where such Expropriation is:

(a) for a purpose which is in the public interest;

(b) not discriminatory;

(c) carried out under due process of law; and

(d) accompanied by the payment of prompt, adequate and effective compensation.”

322 In the following, we will demonstrate that: Respondent's Coal Ban Law amounts to indirect expropriation of Claimant's investments **(1)**; and Respondent's expropriation was unlawful as it was discriminatory and not accompanied by any sort of compensation **(2)**.

1. The Coal Ban Law amounts to an indirect expropriation of Claimant's investment

323 Article 13 (1) ECT protects investors not only against **direct**, but also **indirect** expropriation, described as “*a measure or measures having effect equivalent to nationalization or expropriation*”.

324 Tribunals and academic commentators agree that indirect expropriation exists where a state conduct that ‘affects the property rights’ to such an extent that these rights are ‘rendered useless’, and the investor is ‘substantially’ deprived of the economic value of the investment, or the use or enjoyment of its benefits.²⁷⁷ The tribunal in *Charanne and Construction Investments v. Spain* summarized this as follows:

“461. The Arbitral Tribunal shares the position adopted by several arbitral tribunals that standard of indirect expropriation under international law implies a substantial effect on the property rights of the investor. Such an effect can materialize in the case of an effective deprivation of all or part of the

²⁷⁶ [Exhibit CLA-0014: Reinisch A. and Schreuer C. *International Protection of Investments: The Substantive Standards*. \(Cambridge University Press 2020\). p. 5, paras. 1-5; and \[Exhibit CLA-0015: Energy Charter Secretariat, *Expropriation Regime under the ECT*, 2012, p. 6.\]\(#\)](#)

²⁷⁷ [Exhibit CLA-0016: *Plama Consortium Limited v. Republic of Bulgaria*, ICSID Case No. ARB/03/24, Award, 27 August 2008, paras. 191-193.](#)

*assets constituting the investment, or a loss of value that could be equal by its magnitude to a deprivation of the investment.*²⁷⁸ (Emphasis added)

325 Any determination whether a measure amounts to indirect expropriation will thus necessarily depend on an analysis of the measure itself, its effects as well as the fact and specific circumstances of each case. The decisive element under Article 13 ECT is however not the nature or intent behind the State conduct or measures taken, but rather the **effect of such measures** as expressly indicated in its wording “*measures having effect equivalent to nationalization or expropriation*”, an approach known as ‘sole effects’ approach.

326 The public interest aim of the measure is only one of the four preconditions for a lawful expropriation, but does not exempt any measures from being considered expropriatory. In that regard, Christoph Schreuer notes in relation to Art. 13 ECT:

“It follows from provisions such as this one that the fact that a measure is in the public interest and non-discriminatory cannot be the answer to the question whether an expropriation has occurred. An expropriation may take place under perfectly legitimate circumstances. Arbitrariness, bad faith, lack of proportionality and other improprieties are not constitutive elements of expropriation. Their absence does not mean that an expropriation could not have taken place.”²⁷⁹ (Emphasis added)

327 Under the ECT, there is no blanket exception for regulatory measures, neither for regulatory measures in general nor for environmental measures in particular. In fact, as seen above (see **Section E.II**, para. 311), the ECT in Article 24 explicitly provides for the contrary: measures designed to protect life and health of humans or animals can still amount to be breach of Part III of the ECT. Climate change measures are exactly that: measures with the purpose to protect life and health of humans and animals. Given this clear provision, it is not possible to interpret the ECT *contra legem* to argue that climate change measures could not constitute an expropriation.

328 Following the ‘sole effects’ approach, a number of arbitral tribunals have held that environmental measures – such as for climate protection – are not automatically excluded from the scope of indirect expropriation, but rather on par with other expropriatory measures. These tribunals often refer to the position famously adopted in *Santa Elena v. Costa Rica*, in which the tribunal held that “*the purpose of protecting the environment*

²⁷⁸ [Exhibit CLA-0017: Charanne B.V. Construction Investments S.A.R.L. v. The Kingdom of Spain, SCC Case No. V 062-2012, Award, 21 January 2016, \(as per the unofficial English translation by Mena Chambers\)](#), para. 461.

²⁷⁹ [Exhibit CLA-0018: C. Schreuer, The Concept of Expropriation under the ECT and other Investment Protection Treaties, 2005](#), paras. 110-111.

which the Property was taken does not alter the legal character of the taking for which adequate compensation must be paid".²⁸⁰

329 Thus, the fact that the Coal Ban Law aims at combatting climate change and serves a legitimate public purpose, is irrelevant to the decision whether the measure constitutes indirect expropriation.

330 It is conversely the case-specific interplay between the measure and the investment, the effect of the measure on each investment, and the *de facto* deprivation of use and destruction of the economic or commercial value of the investment that are at the core of most attempted definitions.²⁸¹

331 In this sense, there is a broad consensus that a certain severity or intensity of interference is required in order for a measure to qualify as expropriatory.²⁸² Thus, the greater the economic and financial effect, the higher the likelihood that the measure is considered tantamount to an expropriation.

a) The standard of substantial deprivation of value

332 While there is no definition of the precise threshold of what is considered a „substantial“ deprivation of value, arbitral tribunals agree that measures which result in “*a complete or near complete deprivation of value*”²⁸³ have an effect equivalent to an expropriation.

²⁸⁰ [Exhibit CLA-0019: *Compañía del Desarrollo de Santa Elena S.A. v. Republic of Costa Rica*, ICSID Case No. ARB/96/1, Final Award dated 17 February 2000](#), para. 71. The tribunal held that “*While an expropriation or taking for environmental reasons may be classified as a taking for a public purpose, and thus may be legitimate, the fact that the Property was taken for this reason does not affect either the nature or the measure of the compensation to be paid for the taking. That is, the purpose of protecting the environment for which the Property was taken does not alter the legal character of the taking for which adequate compensation must be paid. The international source of the obligation to protect the environment makes no difference. Expropriatory environmental measures—no matter how laudable and beneficial to society as a whole—are, in this respect, similar to any other expropriatory measures that a state may take in order to implement its policies: where property is expropriated, even for environmental purposes, whether domestic or international, the state’s obligation to pay compensation remains*”.

²⁸¹ [Exhibit CLA-0014: Reinisch A. and Schreuer C. *International Protection of Investments: The Substantive Standards*. \(Cambridge University Press 2020\)](#), para. 206.

²⁸² [Exhibit CLA-0014: Reinisch A. and Schreuer C. *International Protection of Investments: The Substantive Standards*. \(Cambridge University Press 2020\)](#), p. 112, para. 512.

²⁸³ [Exhibit CLA-0020: *Compañía de Aguas del Aconquija S.A. and Vivendi Universal S.A. v. Argentine Republic*, ICSID Case No. ARB/97/3, Award, 20 August 2007](#), para. 7.5.11; similarly also [Exhibit CLA-0021: *Total S.A. v. Argentine Republic*, ICSID Case No. ARB-04-01, Decision on Liability, 27 December 2010](#), para. 196; [Exhibit CLA-0022: *Caratube International Oil Company LLP and Devincci Salah Hourani v. Republic of Kazakhstan*, ICSID Case No. ARB/13/13, Award, 27 September 2017](#), para. 822; [Exhibit CLA-0023:](#)

333 The tribunal in *LG&E v. Argentina* considered the threshold of a substantial deprivation to be reached if the interference was so severe as to warrant compensation:

“191. In considering the severity of the economic impact, the analysis focuses on whether the economic impact unleashed by the measure adopted by the host State was sufficiently severe as to generate the need for compensation due to expropriation.”²⁸⁴ (Emphasis added)

334 A similar test has been consistently applied by recent ECT and non-ECT tribunals.²⁸⁵ The tribunal in *RENERGY v. Spain* synthesized this as follows:

The criterion of substantial deprivation addresses the intensity or severity of the economic impact of the disputed measures. This severity may manifest itself in a loss of control over the investment or a substantial, i.e. total or near total, loss of its value. In this way, an indirect expropriation may occur even though formal ownership has not been affected.”²⁸⁶ (Emphasis added)

335 In *AES v. Hungary*, the tribunal considered that while not every state's act that has a negative effect on an investment is automatically to be considered an expropriation,

“[f]or an expropriation to occur, it is necessary for the investor to be deprived, in whole or significant part, of the property in or effective control of its investment: or for its investment to be deprived, in whole or significant part, of its value.”²⁸⁷ (Emphasis added)

[Louis Dreyfus Armateurs SAS v. Republic of India, PCA Case No. 2014-26, Award, 11 September 2018](#), para. 412.

²⁸⁴ [Exhibit CLA-0024: LG&E Energy Group v. Argentine Republic, ICSID Case No. ARB/02/1, Decision on Liability of 3 October 2006](#), para. 191; also [Exhibit CLA-0025: Metalpar S.A. and Buen Aire S.A. v. Argentine Republic, ICSID Case No. ARB/03/5, Award on the Merits, 6 June 2008 \(unofficial translation\)](#), para. 173.

²⁸⁵ [Exhibit CLA-0026: Eurus Energy Holdings Corporation v. Kingdom of Spain, ICSID Case No. ARB/16/4, Decision on Jurisdiction and Liability, 17 March 2021](#); paras: 257-258; [Exhibit CLA-0027: Cavalum SGPS, S.A. v. Kingdom of Spain, ICSID Case No. ARB/15/34, Decision on Jurisdiction, Liability and Directions on Quantum, 31 August 2020](#), para. 652; [Exhibit CLA-0028: Philip Morris Brand Sàrl \(Switzerland\), et al v. Oriental Republic of Uruguay, ICSID Case No. ARB/10/7, Award, 8 July 2016](#), para. 192; [Exhibit CLA-0029: UAB E Energija \(Lithuania\) v. Republic of Latvia, ICSID Case No. ARB/12/33, Award, 22 December 2017](#), para. 1074; [Exhibit CLA-0030: Peter A. Allard v. Government of Barbados, PCA Case No. 2012-06, Award, 27 June 2016](#), para. 263.

²⁸⁶ [Exhibit CLA-0031: RENERGY S.à r.l. v. Kingdom of Spain, ICSID Case No. ARB/14/18, Award, 6 May 2022](#), para. 994.

²⁸⁷ [Exhibit CLA-0032: AES Summit Generation Limited and AES-Tisza Erömu Kft v. The Republic of Hungary, ICSID Case No. ARB/07/22, Award, 23 September 2010](#), para. 14.3.1.

336 The tribunal in *Metalclad v. Mexico* referred to governmental interference “*which has the effect of depriving the owner, in whole or in significant part, of the use or reasonable-to-be-expected economic benefit of the property*”.²⁸⁸

337 In *Compañía de Aguas de Aconquija S.A and Vivendi Universal v. Argentina*, the tribunal found that an indirect expropriation occurs where the investors

*“were radically deprived of the economic use and enjoyment of their investment, the benefits of which [...] had been effectively neutralized and rendered useless.”*²⁸⁹

338 In the case at hand, this threshold is achieved. The Coal Ban Law is a measure having an equivalent to an expropriation of Claimant’s investments as it substantially deprives Claimant of the value of its Investments.

b) The Coal Ban Law deprives Claimant’s Investments of their value

339 As explained above (**Section C.VI**), a Shutdown Order under the Coal Ban Law will prohibit the Lünen plant from doing what its irrevocable permits allow it to do: to generate electricity by firing coal, and to emit the resulting CO2 as long as sufficient emissions certificates exist. Hence, as a result of the Coal Ban Law, the Lünen plant will have to be shut down more than twenty years prior to the expected end of its at least 40-year lifetime. The Coal Ban Law did not only fail to provide any compensation for this but even expressly determined that the standard compensation provisions applicable when revoking irrevocable permits shall not apply.

340 Since the value of an operating asset results from its ability to generate income, it is clear that depriving the Lünen plant of more than half of its expected lifetime – without any compensation – will significantly impact its value.

341 Unsurprisingly, therefore, also the Coal Commission set up by Respondent considered the effects of the Coal Ban Law so severe that they require compensation. Accordingly, the Coal Commission, which Respondent had tasked with proposing a plan for ending coal-fired power generation, proposed to only shut down power plants either in agreement with the plant operators or subject to compensation payments:

“If a mutual agreement with the operators of the hard coal capacity is not reached in time, the commission recommends that a regulatory solution be

²⁸⁸ [Exhibit CLA-0033: *Metalclad Corporation v. The United Mexican States*, ICSID Case No. ARB\(AF\)/97/1, Award dated 30 August 2000](#), para. 103.

²⁸⁹ [Exhibit CLA-0020: *Compañía de Aguas del Aconquija S.A. and Vivendi Universal S.A. v. Argentine Republic*, ICSID Case No. ARB/97/3, Award, 20 August 2007](#), para. 7.5.34.

implemented with compensation payments in the framework of the legal requirements in accordance with the above reduction plan.”²⁹⁰

342 As explained above (**Section C.VI**), Germany however dismissed this recommendation and deliberately decided not to provide for any compensation.

343 Claimant have asked its expert Secretariat to determine the value of Claimant's investment with and without the Coal Ban Law. This assessment (see **Section F** for a detailed explanation of Secretariat's assessment) shows that the value of Claimant's investment has been completely destroyed. But for the Coal Ban Law, the value of the Lünen plant was [Redacted] Rule 66(f) (“**But-for value**”).²⁹¹ The Coal Ban Law not only destroyed this [Redacted] Rule 66(f) value [Redacted] Rule 66(f) [Redacted] Rule 66(f) (“**Actual value**”).²⁹² Correspondingly, Claimant's investment had a value of [Redacted] Rule 66(f) without the Coal Ban Law.²⁹³ Due to the Coal Ban Law, this value dropped to [Redacted] Rule 66(f), i.e. was completely destroyed by the Coal Ban Law.²⁹⁴

344 This negative value reflects that the expected cash flows generated by the Lünen plant until its shutdown mandated by the Coal Ban Law will not even be sufficient to repay the loan, let alone Claimant's Investment. In order to recover the investment, a significantly longer lifetime would be required.

345 What is more, due to the Coal Ban Law, also Claimant's entire equity investment is lost. Claimant had invested EUR 23 million (see **Section C.III.5** above). As a result of the Coal Ban Law, Claimant will now not only not receive this investment back [Redacted] Rule 66(f) [Redacted] Rule 66(f).

346 Therefore, the Coal Ban Law has completely destroyed Claimant's Investment.

c) Damage mitigation is not possible

347 The conclusion that the Coal Ban Law completely destroyed Claimant's investment also remains true when taking into account potential mitigation measures. Claimant's expert Secretariat have considered a participation in the annual tenders for shutting down a power plant even earlier in exchange for some compensation and the possibility to [Redacted] Rule 66(f) [Redacted] Rule 66(f). However, none of this would have a positive effect on the Actual value of the Lünen plant.

²⁹⁰ [Exhibit C-0014: Final Report of the Coal Commission, January 2019](#), p. 64.

²⁹¹ [Exhibit CER-0001: Secretariat Report](#), para. 5.40.

²⁹² [Exhibit CER-0001: Secretariat Report](#), para. 6.14.

²⁹³ [Exhibit CER-0001: Secretariat Report](#), para. 5.40.

²⁹⁴ [Exhibit CER-0001: Secretariat Report](#), para. 6.14.

348 Through participation in the shutdown tenders, the maximum payment theoretically achievable for a closure already in 2027, i.e. four years prior to the expected shutdown, would have been **EUR 66.4 million**²⁹⁵. Secretariat determined that value of the cash flows, which Lünen could have realised in these four years, even discounted to the valuation date would be higher than this maximum achievable price. Thus, a participation in this tender would have further reduced, not increased, the value of the Lünen plant by [Redacted] **Rule 66(f)**.²⁹⁶ Moreover, due to the competitive tender process, it would have been uncertain whether the Lünen plant would have been at all successful in the tender process and, if so, at what discount to the maximum achievable price. These considerations are equally true for later shutdown tenders. Therefore, also with the Coal Ban Law in place, it was economically the better option to keep operating the Lünen plant until its expected mandatory shutdown than to shut it down early against some compensation.²⁹⁷ In other words, had Secretariat assumed a successful participation in the shutdown tenders, the Actual value would have been even smaller (i.e. more negative). Moreover, any voluntary early closure of the Lünen plant under the tender procedure would require the agreement of the financing banks.

349 Similarly, also the theoretical possibility to convert the Lünen plant [Redacted] **Rule 66(f)** would not have increased the Actual Value. Such conversions would not only require significant further investments ([Redacted] **Rule 66(f)**)²⁹⁸, but would also significantly increase the operating costs. Both, [Redacted] **Rule 66(f)**, are substantially more expensive as a fuel than hard coal. [Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted] **Rule 66(f)**
[Redacted]
[Redacted]
[Redacted]
[Redacted]

²⁹⁵ [Exhibit CER-0001: Secretariat Report](#), para. 6.19.

²⁹⁶ [Exhibit CER-0001: Secretariat Report](#), para. 6.19. See also **Section C.VI.4.b** above.

²⁹⁷ [Exhibit CER-0001: Secretariat Report](#), Section 6.E, paras. 6.16-6.20.

²⁹⁸ [Exhibit CER-0001: Secretariat Report](#), Section 6.E, paras. 6.25 and 6.27; See also [Exhibit CER-0002: Frontier Report](#), Section 5.3 (Economic viability of converting Lünen into a [Redacted] **Rule 66(f)** power plant), para. 153 for **Rule 66(f)**, and para. 159 for **Rule 66(f)**.

²⁹⁹ [Exhibit CER-0001: Secretariat Report](#), Section 6.E, paras. 6.25; See also [Exhibit CER-0002: Frontier Report](#) Section 5.3 (Economic viability of converting Lünen into a [Redacted] **Rule 66(f)** power plant), paras. 153.

Rule 66(f)

300

d) Summary

350 By enacting the Coan Ban Law, Respondent has substantially deprived Claimant from the value of its Investments as it rendered them worthless. This amounts to an indirect expropriation of AET's Investment.

351 The Coal Ban Law has also exposed Claimant to financial debt by foreseeing the closure of the Lünen plant before the end of its financing agreements, as well as preventing Claimant from recouping any of its invested capital. The mitigation options considered, i.e. participating in the Government tenders, or converting the Lünen plant to be able to fire Rule 66(f) are incapable of reducing Claimant's losses.

352 The public interest aim of the Coal Ban Law is irrelevant and insufficient to exempt it from being considered an expropriatory measure under Article 13 of the ECT.

2. Germany's expropriation of AET's Investments was unlawful

353 While expropriations are not per se unlawful under the ECT, Article 13 of the ECT provides that investments shall not be expropriated except where such expropriation is

- a) *for a purpose which is in the public interest;*
- b) *not discriminatory;*
- c) *carried out under due process of law; and*
- d) *accompanied by the payment of prompt, adequate and effective compensation.*

354 To be considered unlawful, it is sufficient that one of the four requirements is not met. Thus, even when a measure is considered to be in the public interest, non-discriminatory and having been carried out under the due process of law, the failure to provide compensation suffices as a condition for the lawfulness of an expropriation under Article 13 of the ECT.

355 As to the Coal Ban Law, Claimant does not dispute Respondent's right to regulate and adopt measures as it deems adequate, also to combat climate change. However, this does not exempt it to fulfill its obligations under the ECT. In this sense, while the early shutdown of the coal-fired power plants to reduce the CO₂ emissions serves a public interest, and the measure was adopted after public consultation in line with its parliamentary process, it is an unlawful measure as it does not fulfil all necessary

³⁰⁰ [Exhibit CER-0001: Secretariat Report](#), Section 6.E, paras. 6.22; See also [Exhibit CER-0002: Frontier Report](#), Section 5.3 (Economic viability of converting Lünen into a Rule 66(f) power plant), paras. 151-152, 157-158.

requirements under Article 13(1) of the ECT. It is **discriminatory**, as it discriminates against new, highly efficient power plants such as the Lünen plant (see in more detail **(b)** below) and **provides no compensation**, let alone prompt, adequate and effective compensation as would have been required (see **(c)** below).

a) Respondent failed to provide compensation

356 Under Article 13 of the ECT, a direct or indirect expropriation is only lawful if it is accompanied by the payment of prompt, adequate and effective compensation. The compensation must amount to the fair market value of the investment at the time immediately before the Expropriation or impending Expropriation became known in such a way as to affect the value of the Investment (hereinafter referred to as the '**Valuation Date**').

357 Prompt, adequate and effective compensation is not has not been provided to the Lünen plant or to Claimant.

358 As explained above³⁰¹, the foreseen Shutdown Path for the Lünen plant results in a shutdown by April 2031, meaning that it will have to cease operation after less than half of its expected lifetime. Coal-fired power plants have a minimum lifetime of 40 years, and when the Coal Ban Law entered into force, the Lünen plant had been in operation for eight years only. Claimant's experts have calculated the fair market value ("**FMV**") of the Lünen plant and of Claimant's investments at the Valuation Date – just before the Coal Ban Law was announced – and concluded that the Coal Ban Law did not only substantially deprive Claimant of the value of its investments but it completely destroyed it,³⁰² leaving a significant debt exposure for Claimant and the other shareholders of TKL to pay.

359 Still, contrary to the recommendation of its own Coal Commission, Respondent adopted a Coal Ban Law which provides for no compensation for the shutdown of the Lünen plant. Respondent expressly stated this in the Explanatory Memorandum of the Coal Ban Law:

"In principle, the statutory reduction is ordered without compensation."³⁰³

360 More so, the Coal Ban Law explicitly excluded coal-fired power plant operators from receiving the compensation otherwise provided for in the FICL in case their permits are revoked.³⁰⁴

³⁰¹ See above **Section C.VI.3**.

³⁰² [Exhibit CER-0001: Secretariat Report](#), para. 7.2.

³⁰³ [Exhibit C-0097-DE](#) / [Exhibit C-0097-EN: Parliamentary Paper BT-Dr. 19/17342, Explanatory Memorandum and Draft Coal Ban Law, 24 February 2020 \(excerpts\)](#), p. 83.

³⁰⁴ [Exhibit C-0026-DE](#) / [Exhibit C-0026-EN: Federal Immission Control Law - FICL](#)

361 The law gives a possibility for plant operators to join the annual tenders which will happen until 2027 and could hypothetically “compensate” TKL for an even earlier closure of its power plant. This option, as demonstrated by Claimant’s Experts Secretariat, would not be able to remotely mitigate its losses, let alone be comparable to a prompt, adequate or effective compensation.³⁰⁵

362 Finally, the option under section 54(2) of the Coal Ban Law, in which Germany foresees a possibility for granting compensation, deferred to be decided to later years, including August 2022, is equally unfit. Firstly, this cannot be deemed as “*prompt, adequate and effective compensation*” as it’s been deferred to be analysed in an indefinite future - Germany in any case let slip the possibility to decide about it in August 2022. And secondly, given that section 54(2) only offers compensation for “*undue hardships*”, focuses primarily on plants that will be able to convert to fire other fuels ██████████

██████████
Rule 66(f)
██████████

██████████ and only sees granting some compensation as an ultimate option, this also does not qualify as “*prompt, adequate and effective*”.

b) The Coal Ban Law is a discriminatory measure

363 Article 13(1)(b) of the ECT requires that to be lawful, an expropriatory measure cannot be discriminatory, i.e. the investor must not be treated differently than other investors in a similar situation.

364 As it will be further detailed below (see **Section E.VII**), the Coal Ban Law constitutes a discriminatory measure vis-à-vis AET because it treats new, highly efficient power plants like the Lünen plant less favourable than old, polluting power plants.

365 According to the Explanatory Memorandum (see also **Section C.VI** above), the age-based Shutdown Path foreseen by the Coal Ban Law would mean that generally only fully amortised power plants will be shut down. The government acknowledges that this would not be the case for plants commissioned after 2010, like the Lünen plant. However, the Coal Ban Law does not remedy this difference in treatment although the Coal Commission had made suggestions to remedy this at least partially. Quite to the contrary, the compensation regime under the Coal Ban Law rather enables old power plants to make even more money, thus exacerbating the unequal treatment (see also **Section E.VII**).

366 While the aim of this measure – closing down the more polluting plants faster – is understandable, this does not justify not compensating new power plants for the even

[\(Bundesimmissionsschutzgesetz - BImSchG\), BGBl. 15 March 1974, \(excerpts\), Section 21\(4\).](#)

³⁰⁵ [Exhibit CER-0001: Secretariat Report](#), Section 6.E, paras. 6.16-6.20.

higher damage they suffer. It is also irrelevant whether Germany *intentionally* discriminated against coal-fired power plants commissioned after 2010, since intent or bad faith is not required. As the arbitral tribunal in *Kardassopoulos v. Georgia* explained, a measure “*can be considered discriminatory absent an intention to discriminate against an investor*”.³⁰⁶ It is sufficient that there is an unequal treatment of investors in similar situations.

367 As explained above(see also **Section C.VI**) it was not necessary for Germany to exclude any compensation for mandatory shutdowns from the Coal Ban Law. A regulatory act is necessary if no other alternatives exists that are equally effective to achieve the public policy objective, but less restrictive. Respondent has recognized that New Plants, put into operation after 2010, would not be amortised when mandatorily shut down. In order to reduce emissions, it would have been equally effective and less restrictive, to compensate these power plants.

c) **Conclusion**

368 The expropriation is thus unlawful and in breach of Article 13(1) of the ECT.

3. **Summary**

369 The Coal Ban Law amounts to an indirect expropriation of Claimant's investments as it deprives Claimant of their use and value, in breach of Article 13(1) of the ECT. It is an unlawful measure since it discriminates new, highly efficient coal-fired power plants such as the Lünen plant and does not provide for prompt, adequate and effective compensation to Claimant, and thus does not fulfil all four criteria for a lawful expropriation in Article 13(1) of the ECT.

IV. **Germany breached the Umbrella Clause**

1. **Introduction**

370 By enacting the Coal Ban Law, Germany breached its obligation under Article 10(1) last sentence ECT. According to the so-called “umbrella clause” in Article 10(1)(5) of the ECT (“**Umbrella Clause**”),

“[e]ach Contracting Party shall observe any obligations it has entered into with an Investor or an Investment of an Investor of any other Contracting Party.”³⁰⁷

³⁰⁶ [Exhibit CLA-0034: Ioannis Kardassopoulos v. Georgia, ICSID Case Nos. ARB/05/18 and ARB/07/15, Award, 3 March 2010](#), para. 393.

³⁰⁷ [Exhibit CLA-0002: Energy Charter Treaty](#), Article 10(1)(5).

371 The Umbrella Clause is not limited to contractual obligations, but applies to “any” obligation the Contracting Party has “entered into” regardless of its nature. Therefore, not only contractual but also contract-like obligations are covered (2.). According to the permits in the case at hand, Respondent was obliged to let the Lünen Plant, of which Claimant owns a “virtual slice”, operate and only to interfere with the operation in accordance with the existing regulatory framework governing the permits. These obligations could not be entered into by contract due to domestic law (3.). Since these permit obligations serve as a functional substitute for an Investor-State contract, they are covered by the last sentence of Article 10(1) ECT (4.). By enacting the Coal Ban Law without any compensation for the Claimant irrespective of valid and irrevocable permits, Respondent failed to observe these obligations, and thus breached the Umbrella Clause (5.).

2. Contractual and contract-like obligations are obligations “entered into” protected under Article 10(1) last sentence ECT

372 Besides contractual obligations, also contract-like obligations of a Contracting Party fall within the scope of the Umbrella Clause. This follows from an interpretation of the clause in accordance with international law. As a provision in an international treaty, the scope of the Umbrella Clause must be determined by applying the principle rule of treaty interpretation, codified in Article 31(1) of the Vienna Convention on the Law of Treaties (“VCLT”):

“A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose.”³⁰⁸ (Emphasis added)

373 An interpretation of Article 10(1)(5) of the ECT based on these principles leads to two conclusions: First, the wording of the Umbrella Clause does not contain any limitation as to the type of obligations covered. It may thus also apply to contract-like obligations (a)). Second, permit obligations are obligations “entered into”, particularly since they are comparable to contractual obligations (b)).

a) The Umbrella Clause applies to non-contractual obligations

374 In Article 10(1)(5) of the ECT, the terms of the treaty refer to “any obligations”. This is not limited to contractual obligations, but also covers contract-like obligations.³⁰⁹ There is no restriction in regard to the nature of the obligation.

³⁰⁸ [Exhibit CLA-0035: Vienna Convention on the Law of Treaties \(VCLT\)](#), Article 31(1).

³⁰⁹ [Exhibit CLA-0036: Sun Reserve Luxco Holdings SRL v Italy, SCC Case No. 1322016, Award, 25 March 2020](#), para. 991; [Exhibit CLA-0037: Greentech Energy Systems A/S, et al v. Italian Republic, SCC Case No. V 2015/095, Final Award, 23 December 2018](#), para. 464, [Exhibit CLA-0038: SGS Société Générale de Surveillance S.A. v. Islamic](#)

375 In general, investment arbitration tribunals have applied a broad reading of the Umbrella Clause.³¹⁰ Even obligations under laws and regulations have been included in the scope of protected obligations under the Umbrella Clause and have given rise to a breach of the clause.³¹¹

376 The tribunal in *Plama v. Bulgaria* came to this conclusion when analysing the ECTs Umbrella Clause:

“The Arbitral Tribunal can limit itself to noting that the wording of this clause in Article 10(1) of the ECT is wide in scope since it refers to “any obligation.” An analysis of the ordinary meaning of the term suggests that it refers to any obligation regardless of its nature, i.e., whether it be contractual or statutory.”³¹² (Emphasis added)

[Republic of Pakistan, ICSID Case No. ARB/01/13, Decision of the Tribunal on Objections to Jurisdiction, 6 August 2003, 6 August 2003, paras. 163, 166.](#)

³¹⁰ [Exhibit CLA-0036: Sun Reserve Luxco Holdings SRL v Italy, SCC Case No. 1322016, Award, 25 March 2020, para. 991; Exhibit CLA-0039: Khan Resources Inc., Khan Resources B.V., and Cauc Holding Company Ltd. v. The Government of Mongolia, UNCITRAL PCA Case No. 2011-09, Decision on Jurisdiction, 25 July 2012, para. 438, Exhibit CLA-0040: Mohammad Ammar Al-Bahloul v. The Republic of Tajikistan, SCC Case No. V \(064/2008\), Partial Award on Jurisdiction and Liability, 2 September 2009, para. 257; Exhibit CLA-0016: Plama Consortium Limited v. Republic of Bulgaria, ICSID Case No. ARB/03/24, Award, 27 August 2008, para. 186; Exhibit CLA-0041: Ioan Micula, Viorel Micula, S.C. European Food S.A, S.C. Starmill S.R.L. and S.C. Multipack S.R.L. v. Romania, ICSID Case No. ARB/05/20, Final Award, 11 December 2013, para. 415; Exhibit CLA-0042: Noble Energy, Inc. and Machalapower Cia. Ltda. v. The Republic of Ecuador and Consejo Nacional de Electricidad, ICSID Case No. ARB/05/12, Decision on Jurisdiction, 5 March 2008, para. 157; Exhibit CLA-0043: Enron Creditors Recovery Corporation \(formerly Enron Corporation\) and Ponderosa Assets, L.P. v. Argentine Republic, ICSID Case No. ARB/01/3, Award, 22 May 2007, para. 274, 275, Exhibit CLA-0044: SGS Société Générale de Surveillance S.A. v. Republic of the Philippines, ICSID Case No. ARB/02/6, Decision on Jurisdiction, 29 January 2004, para.121; Exhibit CLA-0038: SGS Société Générale de Surveillance S.A. v. Islamic Republic of Pakistan, ICSID Case No. ARB/01/13, Decision of the Tribunal on Objections to Jurisdiction, 6 August 2003, para. 166; Exhibit CLA-0045: CMS Gas Transmission Company v. The Argentine Republic, ICSID Case No. ARB/01/8, Award, 12 May 2005, para. 303; Exhibit CLA-0046: M.C. Gritón Salias, *Do Umbrella Clauses apply to unilateral undertakings?*, in: Binder/Kriebaum/Reinisch/Wittich, *International Investment Law for the 21st Century: Essays in Hon-our of Christoph Schreuer* \(Oxford University Press: Oxford, 2009\), p 496; Exhibit CLA-0014: Reinisch A. and Schreuer C. *International Protection of Investments: The Substantive Standards.* \(Cambridge University Press 2020\), p. 891, para 145.](#)

³¹¹ [Exhibit CLA-0045: CMS Gas Transmission Company v. The Argentine Republic, ICSID Case No. ARB/01/8, Award, 12 May 2005, para. 303; Exhibit CLA-0024: LG&E Energy Group v. Argentine Republic, ICSID Case No. ARB/02/1, Decision on Liability of 3 October 2006, para. 175; Exhibit CLA-0043: Enron Creditors Recovery Corporation \(formerly Enron Corporation\) and Ponderosa Assets, L.P. v. Argentine Republic, ICSID Case No. ARB/01/3, Award, 22 May 2007, para. 277.](#)

³¹² [Exhibit CLA-0016: Plama Consortium Limited v. Republic of Bulgaria, ICSID Case No. ARB/03/24, Award, 27 August 2008, para. 186.](#)

377 This broad interpretation was also confirmed more recently by the tribunal in *Greentech Energy Systems A/S, et al v. Italian Republic*:

*[...] the Tribunal majority is inclined to interpret “obligations” referred to in the ECT’s Umbrella Clause as sufficiently broad to encompass not only contractual duties but also certain legislative and regulatory instruments that are specific enough to qualify as commitments to identifiable investments or investors.*³¹³ (Emphasis added)

378 Similar conclusions were reached by other tribunals in cases with similarly-worded Umbrella Clause. In *Eureko v. Poland*, the tribunal held:

*“The plain meaning – the “ordinary meaning” – of a provision prescribing that a State “shall observe any obligations it may have entered into” with regard to certain foreign investments is not obscure. The phrase, “shall observe” is imperative and categorical. “Any” obligations is capacious; it means not only obligations of a certain type, but “any” – that is to say, all – obligations entered into with regard to investments of investors of the other Contracting Party.”*³¹⁴(Emphasis added)

379 Moreover, in *Enron v. Argentina*, the tribunal explicitly affirmed that obligations under an Umbrella Clause may also be assumed through laws and regulations:

*“Under its ordinary meaning the phrase ‘any obligation’ refers to obligations regardless of their nature. Tribunals interpreting this expression have found it to cover both contractual obligations such as payment as well as obligations assumed through law or regulation.”*³¹⁵ (Emphasis added)

380 Similarly, also leading authorities in the field of investment law such as Rudolf Dolzer and Christoph Schreuer concur that

*“[c]ase law indicates that Umbrella Clauses are not restricted to contractual obligations but are capable of protecting obligations of the host state assumed unilaterally through legislation or executive acts.”*³¹⁶

³¹³ [Exhibit CLA-0037: *Greentech Energy Systems A/S, et al v. Italian Republic*, SCC Case No. V 2015/095, Final Award, 23 December 2018](#), para. 464.

³¹⁴ [Exhibit CLA-0047: *Eureko B.V. v. Republic of Poland*, Partial Award, 19 August 2005](#), para. 246.

³¹⁵ [Exhibit CLA-0043: *Enron Creditors Recovery Corporation \(formerly Enron Corporation\) and Ponderosa Assets, L.P. v. Argentine Republic*, ICSID Case No. ARB/01/3, Award, 22 May 2007](#), para. 274.

³¹⁶ [Exhibit CLA-0048: R. Dolzer, U. Kriebaum and C. Schreuer, *VIII Standards of Protection, in: Principles of International Investment Law*, \(Oxford: Oxford Public International Law, 2nd ed., 2022\)](#), p. 285. See also [Exhibit CLA-0041: *Ioan Micula, Viorel Micula, S.C. European Food S.A, S.C. Starmill S.R.L. and S.C. Multipack S.R.L. v. Romania*](#), ICSID Case No. ARB/05/20, Final Award, 11 December 2013, para. 415; [Exhibit CLA-0049: *Continental Casualty Company v. Argentine Republic*](#), ICSID Case No. ARB/03/9, Award, 5 September 2008, paras. 297, 301; [Exhibit CLA-0043: *Enron Creditors Recovery Corporation \(formerly Enron Corporation\) and Ponderosa Assets, L.P. v. Argentine Republic*](#), ICSID Case No. ARB/01/3, Award, 22 May 2007, paras. 274–5.

b) Non-contractual obligations must have been “entered into” with an investment or an investor

381 In order to qualify as a contract-like obligation, it must have been “entered into”. The tribunal in *Eskosol v. Italy* held that:

*“The very notion of ‘enter[ing] into’ an obligation ‘with an investor’ implies, as a matter of ordinary meaning, that there has been some interaction between the State and the investor, from which a particular obligation results. In most cases, that interaction presumably would be direct, such as through a contract or an investment authorization.”*³¹⁷ (Emphasis added)

382 This was also shared by the tribunal in *Stadtwerke München GmbH and others v. Spain*:

*“A literal reading of this sentence, and particularly of the words “entered into with an Investor,” leads one to conclude that the ECT negotiators intended the Umbrella Clause to cover only contractual obligations or contractual-like arrangements, that is to say obligations assumed specifically in respect of a particular individual or legal person. The words “enter into” are normally used to refer to the process of making contracts with other persons.”*³¹⁸ (Emphasis added)

383 Therefore, “entered into” requires specific obligations in respect to a specific investor or to a specific investment. Both tribunals specifically do not rule out, that other obligations than contractual ones can be included in the scope of the Umbrella Clause as long as they are specific.

c) Contract-like permit obligations are obligations “entered into”

384 Permit obligations are obligations “entered into” under the Umbrella Clause, particularly since they are comparable to contractual obligations. While the words ‘entered into’ may limit the scope of the Umbrella Clause, permit obligations are covered when they comprise specific commitments on behalf of the host State towards the Investor or their Investment.

385 Umbrella clauses were originally developed out of the concern to effectively protect the rights of investors against unilateral abrogation of rights by host States.³¹⁹ The primary and original purpose of Umbrella Clauses was to ensure that the commitments on the

³¹⁷ [Exhibit CLA-0050: *Eskosol S.p.A. in liquidazione v. Italian Republic*, ICSID Case No. ARB/15/50, Award, 4. September 2020](#), para. 462.

³¹⁸ [Exhibit CLA-0051: *Stadtwerke München GmbH and others v. Kingdom of Spain*, ICSID Case No. ARB/15/1, Award, 2 December 2019](#), para. 380.

³¹⁹ [Exhibit CLA-0014: Reinisch A. and Schreuer C. *International Protection of Investments: The Substantive Standards*. \(Cambridge University Press 2020\)](#), p. 889, para. 135; see also [Exhibit CLA-0048: R. Dolzer, U. Kriebaum and C. Schreuer, *VIII Standards of Protection, in: Principles of International Investment Law*, \(Oxford: Oxford Public International Law, 2nd ed., 2022\)](#), p. 273, 282.

level of national law are turned into obligations under the treaty containing an Umbrella Clause in order to ensure that breaches of such commitments amount to treaty violations.³²⁰ Therefore, the object and purpose of the Umbrella Clause is to ensure that the host State complies with agreements entered into with and with other commitments assumed towards Investors or their Investments.

386 Such interpretation is also mandated by the basic principle of *effet utile* or *ut res magis valeat quam pereat*, according to which a treaty provision should be interpreted in a way that it is effective, and should ensure that is interpreted as meaningful instead of meaningless.³²¹ A number of investment tribunals have rejected a limiting interpretation that would lead to a meaningless Umbrella Clause.³²² In *Eureko v. Poland* the tribunal concluded that

“It is a cardinal rule of the interpretation of treaties that each and every operative clause of a treaty is to be interpreted as meaningful rather than meaningless. It is equally well established in the jurisprudence of international law, particularly that of the Permanent Court of International Justice and the International Court of Justice, that treaties, and hence their clauses, are to be interpreted so as to render them effective rather than ineffective.”³²³

387 Excluding non-contractual, but contract-like obligations under domestic law from the scope of the Umbrella Clause would greatly reduce its effectiveness. In highly regulated areas such as a power plant construction and operation, the rule of law might prevent the conclusion of contracts. When instead the State enters into a relationship with the investor (or its investment) through specific and tailor-made permits addressed to the investor, and issued only upon prior application by the investor, these must be part of “any obligations” entered into by a State.

388 This view is shared by authorities such as Professor Stephan Schill. He explains that the form of an obligation does not matter; what is decisive is that the State has undertaken a commitment with the purpose to induce investments:

*“Furthermore, the functional understanding of Umbrella Clauses as backing up private ordering between host States and foreign investors also militates for a broad scope of application *ratione materiae* of the clauses. What is decisive from this perspective is not the form of the host State's commitment, but whether it is at the basis of an investment-related and transaction-specific relationship between the foreign investor and the host State,*

³²⁰ [Exhibit CLA-0048: R. Dolzer, U. Kriebaum and C. Schreuer, VIII Standards of Protection, in: Principles of International Investment Law, \(Oxford: Oxford Public International Law, 2nd ed., 2022\), pp. 273-274.](#)

³²¹ [Exhibit CLA-0014: Reinisch A. and Schreuer C. International Protection of Investments: The Substantive Standards. \(Cambridge University Press 2020\), page 881, para 102.](#)

³²² [Exhibit CLA-0047: Eureko B.V. v. Republic of Poland, Partial Award, 19 August 2005, para. 248.](#)

³²³ [Exhibit CLA-0047: Eureko B.V. v. Republic of Poland, Partial Award, 19 August 2005, para. 248.](#)

independent of its legal basis in an investor-State contract, a concession, a license, an administrative act, or legislation. Instead from an economic perspective, it makes no difference whether an investor starts carrying out a specific investment on the basis of an investor-State contract or a specific commitment of the host State in another legal instrument. As long as the administrative or legislative promise by the host State was the reason an investment was made and was intended to induce such investment, such promises should, just like contractual promises, qualify as commitments for the scope of application of Umbrella Clauses. [...]

What is decisive for a commitment to be covered is whether the host State's act contains a specific commitment that serves as a functional substitute for an investor-State contract.

[I]t will usually be necessary that the legislative commitment confers specific and individual rights upon investors as an incentive to invest or makes specific promises in return for certain actions an investor engages in. This is the case, for example, if the host State passes general legislation that intends to promote investments in a specific economic sector and is fully aware of the fact that the stability of the legislative promise is the precondition for investors to engage in the desired activity. What will, by contrast, not be sufficient as constituting a commitment covered by an Umbrella Clause are rules of the general legal framework that merely aim at regulating certain investment activities without intending to create reliance of the investor in the stability of this framework or intending to create a deliberate incentive for certain investment activities.³²⁴ (Emphasis added)

389 Similarly, Newcombe and Paradell note:

“So far, the case law indicates that legislative provisions on the calculation and adjustment of utility tariffs would constitute obligations with regard to foreign investment (e.g. shareholdings acquired by foreign investors) in utility companies, in particular where the provisions were aimed at attracting such investment in the context of privatization.”³²⁵ (Emphasis added)

390 It is clear and undisputed, however, that such obligations must be specific. General commitments and statements in legal regulations of a general nature are not sufficient. This was affirmed by the tribunals in *LG&E v. Argentina*,³²⁶ and in *Noble Ventures v. Romania*.³²⁷

391 The *Sun Reserve v. Italy* tribunal required privity between Contracting Party and Investor or investment in question.³²⁸ Privity would “require[s] that obligations be specifically

³²⁴ [Exhibit CLA-0052: S. Schill, 'Enabling Private Ordering – Function, Scope and Effect of Umbrella Clauses in International Investment Treaties', 18 Minnesota Journal of International Law \(2009\) 1](#), pp. 90, 92.

³²⁵ [Exhibit CLA-0053: Andrew Newcombe and Lluís Paradell, Law and Practice of Investment Treaties \(Alphen aan den Rijn, Netherlands: Kluwer Law International, 2009\)](#), p. 459.

³²⁶ [Exhibit CLA-0024: LG&E Energy Group v. Argentine Republic, ICSID Case No. ARB/02/1, Decision on Liability of 3 October 2006](#), para. 174.

³²⁷ [Exhibit CLA-0054: Noble Ventures, Inc. v. Romania, ICSID Case No. ARB/01/11, Award, 12 October 2005](#), para. 51.

³²⁸ [Exhibit CLA-0036: Sun Reserve Luxco Holdings SRL v Italy, SCC Case No. 1322016](#).

directed at, and accepted or relied upon by, the investor or investment in question."³²⁹

Permit obligations are specifically directed at the investment *and* relied upon by the investment and therefore by Claimant.

392 However, there are also tribunals that applied a restrictive interpretation of the clause, e.g. the tribunal in *Encavis and others v. Italy* ruled that acts that do not require any action from the Investor or Investment are not covered.³³⁰

393 This shows that even this strict interpretation does not rule out that obligations other than contractual ones can be included in the scope. Rather only general and unspecified laws and regulations are not included. Even this restrictive interpretation leads to the applicability of the Umbrella Clause to permit obligations that are specific in their nature and not of general kind.

d) Conclusion

394 The Umbrella Clause applies to any kind of obligation, insofar as it has been entered into with investors or their investment.

3. The obligations in regard to the construction and operation of a power plant could not be entered into by contract due to domestic law

395 Respondent set out in the Federal Immission Control Law (FICL) that permits were required in order to construct and operate a power plant. These permits were to be issued upon application and to be granted if the legal requirements were met. There was no regulatory space for contracts and a *quid pro quo*. Due to the permit requirement pursuant to Section 4(1) of the FICL, a public-law contract³³¹ with regard to the conditions for construction and operation of a Power Plant would not be permissible.

4. Permit obligations serve as functional substitutes for Investor-State contract obligations

396 Permits granted under the FICL constitute a sufficient substitute for a bilateral contract in terms of the Umbrella Clause. Especially when there is no essential difference

[Award, 25 March 2020](#), para. 989.

329 [Exhibit CLA-0036: *Sun Reserve Luxco Holdings SRL v Italy*, SCC Case No. 1322016, Award, 25 March 2020](#), para. 991.

330 [Exhibit CLA-0009: *Encavis AG and others v. Italian Republic*, ICSID Case No. ARB/20/39, Award, 11 March 2024](#), para. 552.

331 [Exhibit C-0126: Federal Administrative Procedure Act \(VwVfG\), 1 July 2004](#), Section 54 Sentence 1.

between the States form of act and a bilateral contract, obligations arising from the States' contract-like conduct amount to obligations "entered into".

397 The existence of such obligations must be determined under the applicable law, usually the domestic law of the host State.³³² In the present case, Respondent entered into obligations for the construction and operation of the Lünen Plant, when legally binding, irrevocable and indefinite permits were issued (a). They serve as a functional substitutes to a contract (b)).

a) The irrevocable and indefinite permits entail specific, legally binding obligations

398 The Advance Decision from 2013 and the Seventh Partial Permit from 2013 are administrative decisions in the field of public law addressed to TKL by the competent authorities to regulate the individual case of the Lünen Plant in regard to its construction and operation. They intended to have a direct external legal effect. These permits are not only *inter partes* legally binding, but – as administrative acts – are of binding force generally towards all German authorities (*Tatbestandswirkung*). They entail the enforceable and specific obligations of Respondent to allow the construction and operation of the Lünen Plant for an indefinite period of time and only to interfere with the permit regulations according to the already existing regulatory framework of the FICL and general administrative law.

399 According to Section 6 of the FICL, a permit must be issued if the project applied for meets the substantive requirements of the relevant regulations. This is a non-discretionary decision, i.e. if the substantive requirements are fulfilled, the applicant is entitled to an FICL permit and the approving authority has a duty to issue such permit.

400 The application for the Lünen Plant demonstrated the planned project in detail and was submitted with the required documents and plans in accordance with Section 10 of the FICL. After submitting the application the competent authorities examined the planned project under the FICL and concluded that the planned project meets the high threshold of the permit requirements in accordance with Section 6 of the FICL. This process lasted years, while the Lünen plant operators were in a constant dialogue with the competent authorities. In the end, the District Government of Arnsberg issued the permits to the satisfaction of Claimant. It entails binding, specific obligations in regard to the construction and operation of the Lünen plant owed by the host State to the Lünen plant operators. Thereby, an individual relationship between the District Authority and the Investment emerged.

³³² [Exhibit CLA-0044: SGS Société Générale de Surveillance S.A. v. Republic of the Philippines, ICSID Case No. ARB/02/6, Decision on Jurisdiction, 29 January 2004](#), para. 117.

401 By issuing the permits, provisions of the FICL also directly became applicable in the legal relationship between TKL and the German authorities. The authorities can only legally interfere with the permits regulations, when there is a legal basis for such interference. The FICL entails a special regime in Section 21 with a high threshold for a revocation of permits. The reasons for which an FICL permit may be revoked are exhaustively listed in Section 21(1) of the FICL:

“(1) A lawful permit granted under this Law may only be revoked in whole or in part with effect for the future, even after it has become incontestable,

- 1. if revocation is reserved pursuant to Section 12 (2) sentence 2 or (3);*
- 2. if a condition is attached to the permit and the beneficiary has not fulfilled it or has not fulfilled it within a deadline set;*
- 3. if the permit authority would be entitled not to grant the permit due to facts that have subsequently arisen and if the public interest would be jeopardized without the revocation*
- 4. if the licensing authority would be entitled, on the basis of an amended legal provision, not to grant the license if the operator has not made use of the license and if the public interest would be jeopardized without the revocation;*
- 5. to prevent or eliminate serious disadvantages for the common good.”³³³*

402 These reasons do not apply for the coal ban. If that were the case, which it is not, then the whole Coal Ban Law would be unnecessary. However, neither are revocations reserved or respective conditions attached, nor do the conditions in 3 to 5 exist. Nothing has changed since the permits were issued, except the political evaluation of coal-fired power plants.

403 Since none of the reasons of revocation according to Section 21(1) FICL apply to the case at hand, no termination agreement was concluded and no waiver was declared, there is no legal possibility to revoke these permits.

404 In any case, if one of the conditions in Section 21(1) 3 to 5 were to exist, and a permit could be revoked, then the holder of the permit would have a claim for compensation under Section 21(4) FICL.³³⁴

b) The issued permits are functional substitutes to a contract

³³³ [Exhibit C-0026-DE / Exhibit C-0026-EN: Federal Immission Control Law - FICL \(*Bundesimmissionsschutzgesetz - BImSchG*\), BGBl. 15 March 1974, \(excerpts\)](#), Section 21(1).

³³⁴ If the permit is revoked in the cases referred to in paragraph 1 numbers 3 to 5, the permit authority shall, upon application, compensate the person concerned for the pecuniary loss suffered by him/her as a result of having relied on the continuation of the permit, insofar as his/her reliance is worthy of protection. However, the pecuniary disadvantage shall not be compensated beyond the amount of the interest that the person concerned has in the continuation of the permit.

- 405 Contractual obligations covered by the Umbrella Clause usually emerge by an individual relationship between the State and the Investor or Investment and are therefore owed by the host State to a specific addressee. These kind of obligations are specific and not general guidelines, have a connection to the investment and are granting subjective rights to the addressee.
- 406 After the application process for the Lünen Plant, the District Government of Arnsberg issued the relevant permits for the construction and operation of the Lünen Plant. Thereby a bilateral legal relationship formed between the competent authorities and TKL in regard to the Lünen Plant, granting subjective public rights to TKL.
- 407 These rights and obligations arising from the permits are attributable to Germany under international law. The principal rules of international law on attribution is set forth in Article 4 of the International Law Commission's ("ILC") Draft Articles on Responsibility of States for Internationally Wrongful Acts ("ASR").³³⁵ It stipulates that the conduct of any organ of a State regardless of whether it's a legislative, executive, judicial or other measure shall be considered as an act of that State under international law. The Arnsberg District Authority is part of the executive power of Germany. Therefore its conduct needs to be considered an act of the State according to Article 4(1) ASR.
- 408 Furthermore, the permits do not exclusively concern the public-law status of the Lünen plant as an object. Rather, they are addressed to a specific addressee in regard to a specific planned project, making them more comparable to a contract.
- 409 Since the permits were granted specifically to TKL, TKL holds the ownership of the permits like a contract party. This becomes evident when examining the possibility of transferring a permit with regard to plant operation. The transfer of ownership is regulated under civil law and not under public law. The permits issued under the FICL are not solely connected to the planned project or property, but to the owner of the specific plant project. Also, the FICL does not stipulate that the permit is linked to the ownership of the site property. On the basis of this legal analysis of the transfer of the permit ownership, it can be concluded that there are significant parallels to a contractual relationship with regard to the contract-like status of the permits in this case.
- 410 By issuing the permits with its regulations in regard to the Lünen Plant, the competent authorities created a legal basis that is similar in nature to a contract. In particular, the competent authorities have made specific, individual regulations for the Lünen Plant through the issuance of the permits and thereby for Claimant. While Claimant relied

³³⁵ [Exhibit CLA-0055: International Law Commission's Draft Articles on Responsibility of States for Internationally Wrongful Acts, with commentaries, 2001.](#)

upon these permits, Respondent simultaneously obliged itself to comply with the permit.³³⁶

411 Unlike general regulations or laws, the permits even comply with the formalisation and/or signature that is characteristic for contracts. The competent authorities signed all permits and included specific information e.g. the administrative case number for each permit, contact information of the public authority employees issuing the permits, the day the permit was issued, TKL as the specific addressee and the Lünen Plant as the specifically authorized power plant.

412 All essential elements of contracts are given in the permits at hand, leading to the conclusion that, even from a formal perspective, the permits are equivalent to bilateral contracts. This analysis leads to the conclusion that it makes no significant difference in fact or in law whether the same regulations are set out in a contract or regulated by a permit. Therefore, the permit obligations are similar to bilateral contract obligations.

413 Hence, the permit obligations are obligations entered into protected under the Umbrella Clause.

5. By regulating the shutdown of hard coal-fired power plants irrespective of their permits, Germany breached its obligations under the Umbrella Clause

a) The FICL entails a self-contained regime

414 When the District Government of Arnsberg issued all necessary permits for the construction and operation of the Lünen Plant (see **Section C.III.4** and **6**), it allowed the Lünen plant to operate within the regime of the FICL for an indefinite period.

415 German authorities can only legally interfere with the permit regulations, when there is a legal basis for the interference. The FICL entails a special regime in Section 21 with a high threshold for a revocation of permits. The reasons for which a FICL permit may be revoked are exhaustively listed in Section 21(1) FICL. None of the listed reasons apply to the Lünen Plant. If the validity of a lawfully granted permit is to be eliminated due to grounds other than those contained in Section 21(1) FICL, only a termination agreement may be concluded or a waiver may be declared. Since none of the reasons of revocation according to Section 21(1) FICL apply to the case at hand, no termination agreement was concluded and no waiver was declared, there is no legal possibility to revoke the binding, indefinitely issued permits.

³³⁶ [Exhibit C-0030-DE / Exhibit C-0030-EN: District Government of Arnsberg, 2013 Advance Decision \(Vorbeseheid\), 20 November 2013, \(excerpts\)](#), p. 306.

416 In any event, if there was a reason applicable according to Section 21(1) FICL, the Plant Operators would be entitled to claim compensation in accordance with Section 21(4) FICL, which provides

“If the permit is revoked in the cases referred to in paragraph 1 numbers 3 to 5, the permit authority shall, upon application, compensate the party concerned for the pecuniary disadvantage suffered by the latter as a result of having relied on the continuation of the permit, insofar as such reliance is worthy of protection. However, the pecuniary disadvantage shall not be compensated beyond the amount of the interest that the person concerned has in the continued existence of the permit. The pecuniary disadvantage to be compensated is determined by the permit authority. The claim can only be asserted within one year; the period begins as soon as the permit authority has informed the affected party of this.”

b) The Coal Ban Law illegally interferes with the FICL regime

417 The Coal Ban Law specifically provides that the firing of coal for generation of electricity is prohibited at the latest by 2038³³⁷ regardless of existing legally binding and indefinite permits.³³⁸ According to the Shutdown Path provided in the Coal Ban Law, the Lünen Plant only may operate until 2031 (see **Section C.VI**). Unlike the legal framework of the FICL, the Coal Ban Law does not provide any compensation for the Power Plants which will be forced to shut down. It even explicitly excludes the possibility of compensation. In Section 59 of the Coal Ban Law, the authorities responsible for the implementation of the FICL are also charged to enforce the prohibition to burn coal. For that purpose, the Coal Ban Law in Section 59 declares Section 21(1) – (3) FICL applicable *mutatis mutandis* – but not the duty to pay compensation under Section 21(4) FICL.

418 The Coal Ban Law thus deviates from the FICL by excluding compensation, which is in breach of the legal regime constituted under the FICL permits.

³³⁷ [Exhibit C-0100-DE](#) / [Exhibit C-0100-EN: Coal Ban Law, BGBl. 8 August 2020 \(excerpts\)](#), Section 2 (2) No. 3.

³³⁸ [Exhibit C-0100-DE](#) / [Exhibit C-0100-EN: Coal Ban Law, BGBl. 8 August 2020 \(excerpts\)](#), Section 59.

419 As can be seen in the table below, the Coal Ban Law changed crucial regulations in the FICL permits and regulations applicable thereto on which Claimant's investment decision was based:

FICL Permits and Regulations	Coal Ban Law
Seventh Partial Permit from 2013 allows the Lünen Plant to operate for an indefinite period of time.	The Shutdown Path set out in Sections 35 (1), 33 (2), 51 of the Coal Ban Law mean that the Lünen Plant is only allowed to operate until 2031 (see Section C.VI).
The Seventh Partial Permit from 2013 and the Advance Decision from 2013 allow the Lünen Plant to fire hard coal .	Section 51 (1) Coal Ban Law prohibits the firing of hard coal .
The FICL Permits can only be revoked under the specific regime of Section 21 FICL and therefore with the possibility to get compensation .	Section 59 Coal Ban Law allows revocation of legally binding, irrevocable FICL permits without compensation .

c) By enacting the Coal Ban Law Respondent breached the Umbrella Clause

420 Respondent breached its obligations under the issued permits by enacting the Coal Ban Law. Those obligations exist towards TKL and the power plant, of which Claimant owns a slice. Respondent thereby breached the Umbrella Clause.

421 Respondent might argue that its regulatory changes did not violate the Umbrella Clause because they were made in accordance with domestic law. If national law would determine whether a violation of international law occurred, the host State could change its law, thereby avoid any liability and render the Umbrella Clause obsolete. The Umbrella Clause is a treaty claim governed by international law. Anthony Sinclair explains that, in the absence of other specific wording,

*"[I]nternational law ultimately governs the merits of Umbrella Clause claims, thereby lending additional security to any specific stabilisation or intangibility clauses the State may have agreed, and providing protection against any attempt to extinguish its obligations by manipulation of its own laws. Any reference to national law must be taken to mean only the legitimate pronouncements of the competent judicial authorities as to which the international tribunal must be entitled to decide."*³³⁹ (Emphasis added)

422 Only wrongful non-observance will breach the Umbrella Clause. Respondent might argue, that the breach of its permit obligations is justified and therefore does not breach the Umbrella Clause. Like any other treaty obligation, non-observance of an Umbrella Clause obligation may be excused at the international level, for instance on grounds of

³³⁹ [Exhibit CLA-0056: A. Sinclair, Umbrella Clause, in Bungenberg/Griebel/Hobe/Reinisch, International Investment Law \(Nomos:Baden-Baden, 2015\)](#), para. 93 and, paras. 81-86.

necessity or fundamental change of circumstances (*rebus sic stantibus* concept, enshrined in Article 62 of the VCLT³⁴⁰). Those grounds are not applicable in this case.

V. Respondent breached its obligation under Article 10(1) ECT to accord at all times fair and equitable treatment to Claimant's investments

423 Germany has breached its obligation under Article 10(1) of the ECT. Article 10(1) of the ECT obligates a host state such as Germany “to accord at all times to Investments of Investors of other Contracting Parties fair and equitable treatment”.

424 This obligation (the “**FET-Standard**”) protects investors against fundamental or radical changes in the regulatory regime, or disproportionate burdens put on them. In the case at hand, both forms of the FET standards have been breached.

1. The FET standard protects investors against fundamental changes or disproportional burdens.

425 Numerous tribunals held that the FET standard must be interpreted in light of the Contracting Parties' stability commitment in Article 10(1)(1) of the ECT.³⁴¹ As explained above, Article 10(1)(1) of the ECT takes account of the main purpose of the ECT to ensure a stable and transparent legal framework for long-term investments in the energy sector.

426 The Contracting Parties' commitment to provide stable investment conditions does not mean that the legal framework cannot evolve at all. It is part of States' inherent sovereignty that they can regulate legitimate public policy objectives. However, if States accord rights to foreign investors in investment treaties such as the ECT, thereby burdening themselves with international obligations with which they must comply, they

³⁴⁰ [Exhibit CLA-0035: Vienna Convention on the Law of Treaties \(VCLT\)](#), Art. 62.

³⁴¹ [Exhibit CLA-0016: Plama Consortium Limited v. Republic of Bulgaria](#), ICSID Case No. ARB/03/24, Award, 27 August 2008, paras 172-173; [Exhibit CLA-0057: Electrabel S.A. v. The Republic of Hungary](#), ICSID Case No. ARB/07/19, Decision on Jurisdiction, Applicable Law and Liability, 30 November 2012, para. 7.73; [Exhibit CLA-0058: Isolux Infrastructure Netherlands B.V v. Kingdom of Spain](#), SCC Case No. V2013/153, Award (Extracts) dated 12 July 2016 and Dissenting Opinion, 6 July 2016 (Unofficial Translation), para. 765; [Exhibit CLA-0059: Antin Infrastructure Services Luxemburg S.a.r.l v. Kingdom of Spain](#), ICSID Case No. ARB/13/31, Award, 15 June 2018, para 529; [Exhibit CLA-0060: Athena Investments AS \(formerly Greentech Energy Systems AS\) and others v. Kingdom of Spain](#), SCC Case No. V 2015-150, Final Award, 23 December 2018, para. 457; [Exhibit CLA-0051: Stadtwerke München GmbH and others v. Kingdom of Spain](#), ICSID Case No. ARB/15/1, Award, 2 December 2019, para. 195; [Exhibit CLA-0011: PV Investors v. Kingdom of Spain](#), PCA Case No. 2012-14, Final Award, 28 February 2020, para. 567; [Exhibit CLA-0012: LSG Building Solutions GmbH et al v. Romania](#), ICSID Case No. ARB/18/19, Decision on Jurisdiction, Liability and Principles of Reparation, 11 July 2022, para. 1020.

simultaneously limit their sovereign right to regulate. The arbitral tribunal in *ADC v. Hungary* spelt this out as follows:

*“It is the Tribunal’s understanding of the basic international law principles that while a sovereign State possesses the inherent right to regulate its domestic affairs, the exercise of such right is not unlimited and must have its boundaries. As rightly pointed out by the Claimants, the rule of law, which includes treaty obligations, provides such boundaries. Therefore, when a State enters into a bilateral investment treaty like the one in this case, it becomes bound by it and the investment-protection obligations it undertook therein must be honoured rather than be ignored by a later argument of the State’s right to regulate.”*³⁴² (Emphasis added)

427 This was relied on subsequently both by non-ECT³⁴³ and ECT-tribunals.³⁴⁴

428 To balance States’ right to regulate against investors’ right of a fair and equitable treatment, many tribunals under the ECT³⁴⁵ and other investment treaties³⁴⁶ have examined whether the change of the legal framework has exceeded an acceptable margin. The tribunal in *El Paso v. Argentina*, which was identically cited by the *Masdar* tribunal, described this as it reads:

“The Tribunal will thus consider whether any of the measures complained of by El Paso [claimant] can be considered as adopted outside the acceptable margin of change that must be taken into account by any investor and therefore be characterised as unfair and inequitable treatment, before considering

³⁴² [Exhibit CLA-0061: *ADC Limited and others v. Republic of Hungary*, ICSID Case No. ARB/03/16, Award, 2 October 2006, para. 423.](#)

³⁴³ [Exhibit CLA-0062-FR / Exhibit CLA-0062-EN: *Meerapfel v. Central African Republic*, ICSID Case No. ARB/07/10, Excerpts of Award, 12 May 2011, para. 312; \[Exhibit CLA-0063: *Occidental and others v. Republic of Ecuador*, ICSID Case No. ARB/06/11, Award, 5 October 2012, paras. 529, 530.\]\(#\)](#)

³⁴⁴ [Exhibit CLA-0064: *Eiser Infrastructure Limited and Energia Solar Luxembourg S.A.R.L. v. Kingdom of Spain*, ICSID Case No. ARB/13/36, Award, 4 May 2017, para. 371; \[Exhibit CLA-0065: *Foresight Luxembourg Solar S.a.r.l. and others v. Kingdom of Spain*, SCC Case No. V\\(2015150\\), Final Award, 14 November 2018, para. 364; \\[Exhibit CLA-0066: *Watkins Holdings S.à r.l. and others v. Kingdom of Spain*, ICSID Case No. ARB/15/44, Award, 21 January 2020, para. 521.\\]\\(#\\)\]\(#\)](#)

³⁴⁵ [Exhibit CLA-0032: *AES Summit Generation Limited and AES-Tisza Erömü Kft v. The Republic of Hungary*, ICSID Case No. ARB/07/22, Award, 23 September 2010, para. 9.3.73; \[Exhibit CLA-0067: *Antaris GmbH et al v. Czech Republic*, PCA Case No. 2014-01, Award, 2 May 2018, para. 360\\(7\\); \\[Exhibit CLA-0068: *Masdar Solar & Wind Cooperatief U.A. v. Kingdom of Spain*, ICSID Case No. ARB/14/1, Award, 16 May 2018, para. 505; \\\[Exhibit CLA-0031: *RENERGY S.à r.l. v. Kingdom of Spain*, ICSID Case No. ARB/14/18, Award, 6 May 2022, para. 642.\\\]\\\(#\\\)\\]\\(#\\)\]\(#\)](#)

³⁴⁶ [Exhibit CLA-0069: *El Paso Energy v. Argentina*, ICSID Case No. ARB/03/15, Award, 31 October 2011, para. 402; \[Exhibit CLA-0028: *Philip Morris Brand Sàrl \\(Switzerland\\), et al v. Oriental Republic of Uruguay*, ICSID Case No. ARB/10/7, Award, 8 July 2016, para. 433.\]\(#\)](#)

*the issue of a possible violation of the FET standard by the accumulation of all the measures complained of.*³⁴⁷

- 429 As to when this acceptable margin is exceeded, two different approaches have emerged.³⁴⁸ Some tribunals have focused on whether the regulatory change has been fundamental (see Section 2). Other tribunals have assessed whether the legal change disproportionately affected the investor (see Section 3).
- 430 Based on both standards, Respondent has breached its obligation to treat Claimant's investment fairly and equitably.

2. Respondent has fundamentally changed the legal framework

- 431 By enacting the Coal Ban Law, Respondent fundamentally changed its regulatory framework.
- 432 Respondent abandoned its approach to combat climate change by regulating CO₂-emissions via the European ETS. It decided to prohibit the firing of coal to produce electricity, and to regulate coal-fired power plants irrespective of CO₂ allowances or even CO₂ emissions. With the Coal Ban Law, Claimant's formerly irrevocable permits can and will be revoked. The operation of a coal-fired power plant, an economic activity which it previously had desired and encouraged, is now subject to prohibition.

a) The FET standard protects against fundamental changes

- 433 Many tribunals have accepted that the FET standard protects against fundamental or radical changes. The tribunal in *Eiser v. Spain* set this out in the following:

*"However, the Article 10(1) obligation to accord fair and equitable treatment means that regulatory regimes cannot be radically altered as applied to existing investments in ways that deprive investors who invested in reliance on those regimes of their investment's value."*³⁴⁹

³⁴⁷ [Exhibit CLA-0069: *El Paso Energy v. Argentina*, ICSID Case No. ARB/03/15, Award, 31 October 2011](#), para. 402; the tribunal concluded that the measures alleged by Claimant only cumulatively constituted a breach of the FET standard ([Exhibit CLA-0069: *El Paso Energy v. Argentina*, ICSID Case No. ARB/03/15, Award, 31 October 2011](#), para. 519); [Exhibit CLA-0068: *Masdar Solar & Wind Cooperatief U.A. v. Kingdom of Spain*, ICSID Case No. ARB/14/1, Award, 16 May 2018](#), para. 505.

³⁴⁸ [Exhibit CLA-0070: M. Aggarwal and R. Kabra, *Regulating for Climate Change Without Breaching Investment Treaties*, in A. Ipp and A. Magnusson \(eds\) *Investment Arbitration and Climate Change \[2024\]*, p. 168](#); see also [Exhibit CLA-0009: *Encavis AG and others v. Italian Republic*, ICSID Case No. ARB/20/39, Award, 11 March 2024](#), para. 656.

³⁴⁹ [Exhibit CLA-0064: *Eiser Infrastructure Limited and Energia Solar Luxembourg S.A.R.L v. Kingdom of Spain*, ICSID Case No. ARB/13/36, Award, 4 May 2017](#), para. 382.

434 Equally, the *Foresight Luxembourg v. Spain* tribunal stated:

“[T]he FET standard in the ECT protects investors from a radical or fundamental change in the legal or regulatory framework under which the investments are made.”³⁵⁰

435 These holdings have been reiterated by many other tribunals under the ECT.³⁵¹

436 To assess whether a regulatory change has been fundamental, tribunals examine the extent to which a regulatory measure departs from the previous legal regime. The *Eiser* tribunal accordingly considered whether the regulatory change constituted an “unprecedented and wholly different regulatory approach, based on wholly different premises”.³⁵² Also the *Renergy* tribunal focused on the magnitude of a change.³⁵³

437 The *Renergy* tribunal also provides an illustrative list of criteria that have been referred to by tribunals when examining the fundamentality of a change. They include the prior legislative practice of a host state as well as the extent to which host states made “repeatedly [...] legislative and other public statements that underlined the Respondent’s awareness of the importance of regulatory stability”.³⁵⁴

438 The same tribunal concluded that the scope of States’ acceptable margin depends on whether the regulatory change presents a reaction to external circumstances laying beyond host state’s control or merely constitutes an internal policy change:

³⁵⁰ [Exhibit CLA-0065: Foresight Luxembourg Solar S.a.r.l. and others v. Kingdom of Spain, SCC Case No. V\(2015150\), Final Award, 14 November 2018](#), para. 359.

³⁵¹ [Exhibit CLA-0071: Cube Infrastructure Fund SICAV and others v. of Spain, ICSID Case No. ARB/15/20, Decision on Jurisdiction, Liability and Partial Decision on Quantum, 19 February 2019](#), para. 354; [Exhibit CLA-0072: OperaFund Eco-Invest SICAV PLC and Schwab Holding AG v. Kingdom of Spain, ICSID Case No. ARB/15/36, Award, 6 September 2019](#), Award, 6 September 2019, para. 508; [Exhibit CLA-0073: SolEs Badajoz GmbH v. Kingdom of Spain, ICSID Case No. ARB/15/38, Award, 31 July 2019](#), para. 315; [Exhibit CLA-0066: Watkins Holdings S.à r.l. and others v. Kingdom of Spain, ICSID Case No. ARB/15/44, Award, 21 January 2020](#), para. 521; [Exhibit CLA-0008: Silver Ridge Power BV v. Italian Republic, ICSID Case No. ARB/15/37, Award of 26 February 2021](#), paras. 416-417; [Exhibit CLA-0012: LSG Building Solutions GmbH et al v. Romania, ICSID Case No. ARB/18/19, Decision on Jurisdiction, Liability and Principles of Reparation, 11 July 2022](#), para. 1042; [Exhibit CLA-0009: Encavis AG and others v. Italian Republic, ICSID Case No. ARB/20/39, Award, 11 March 2024](#), para. 659.

³⁵² [Exhibit CLA-0064: Eiser Infrastructure Limited and Energia Solar Luxembourg S.A.R.L. v. Kingdom of Spain, ICSID Case No. ARB/13/36, Award, 4 May 2017](#), para. 365.

³⁵³ [Exhibit CLA-0031: RENERGY S.à r.l. v. Kingdom of Spain, ICSID Case No. ARB/14/18, Award, 6 May 2022](#), paras. 681 and 717.

³⁵⁴ [Exhibit CLA-0031: RENERGY S.à r.l. v. Kingdom of Spain, ICSID Case No. ARB/14/18, Award, 6 May 2022](#), para. 909; the *Renergy* tribunal did not cumulatively apply these criteria ([Exhibit CLA-0031: RENERGY S.à r.l. v. Kingdom of Spain, ICSID Case No. ARB/14/18, Award, 6 May 2022](#), para. 897).

“The more the legislative changes were triggered by a change of external circumstances, i.e. circumstances largely beyond the control of the host State, as opposed to a mere change of internal policy, the more likely such legislative changes are to remain within the acceptable margin of change.”³⁵⁵

b) The Coal Ban Law fundamentally changed the regulatory framework

439 Based on these holdings, Respondent has fundamentally changed the regulatory framework for operating coal-fired power plants, by enacting the Coal Ban Law.

440 The regulatory framework for operating coal-fired plants was mainly formed by the FICL. Claimant made its investment decision after TKL obtained the Advance Decision (see **Section C.III**) for the power plant, making clear that the authorities saw no serious obstacles to granting the final permits. Those final FICL permits, once irrevocable, would allow TKL to operate the Lünen plant provided they had sufficient carbon allowances.

441 These were granted in 2013 and became irrevocable. Before the Coal Ban Law, Claimant thus had irrevocable permits allowing it to operate a coal-fired power plant for as long as it had allowances under the ETS. It was a market-based approach, and the price of allowances was the main future-related risk.

442 While persistently highlighting its need for these plants over the years, Respondent constantly stressed the importance of the ETS as the main instrument to regulate power plants' CO₂ emissions (see **Sections C.IV** and **C.VI**).

443 However, Respondent made a complete turn-around. Instead of directly regulating or even prohibiting CO₂ emissions, the firing of coal is now simply forbidden as soon as the mandatory shutdown is issued:

“If [...] the statutory reduction pursuant to section 35 paragraph 1 or paragraph 2 sentence 5 is ordered for the hard coal-fired power plant [...], hard coal may no longer be burned in the hard coal-fired power plant [...] from the calendar day applicable pursuant to paragraph 2 [...].”³⁵⁶

444 Hence, it does no longer matter that power plants, such as the Lünen plant, have obtained valid permits to fire coal until the end of their lifetimes. Respondent simply ignores that these permits confirm that the respective power plants fulfil all environmental and emission related requirements (see **Section C.III**). The Coal Ban Law provides that the permits will be revoked to enforce the shutdown although a revocation would not be possible under the FICL. Neither does it concern whether power plants have

³⁵⁵ [Exhibit CLA-0031: RENERGY S.à r.l. v. Kingdom of Spain, ICSID Case No. ARB/14/18, Award, 6 May 2022](#), para. 681.

³⁵⁶ [Exhibit C-0100-DE / Exhibit C-0100-EN: Coal Ban Law, BGBl. 8 August 2020 \(excerpts\)](#), Section 51(1).

acquired CO2 certificates through the ETS. Respondent completely undermined these previous requirements.

445 This complete turn-around in Respondent's energy policy is not forced by any circumstance beyond Respondent's control. After years of emphasising that the ETS will remain the main instrument to govern power plants' CO2 emissions, Respondent simply changed its opinion. It now assumes that the prohibition to fire coal and shutdowns are the "*most effective, cost-efficient and proportionate regulatory alternative*".³⁵⁷ This however, is nothing else than a change of its own internal assessment how to achieve its climate goals. It is also clearly incorrect unless, as Germany has done, one disregards the need to pay compensation.

446 Claimant does not deny Respondent's right to do so. Yet, merely changing internal policies, however legitimate they might be, does not prevent that Respondent has to pay compensation. In particular, if this means that a long desired and needed economic activity will be simply forbidden.

3. Coal Ban Law fails to find a proportionate balance

447 The Coal Ban Law does not find a proportional balance between the Coal Ban Law's objective and Claimant's right of a fair and equitable treatment of its investment.

a) FET standard protects investor against disproportional changes of the regulatory framework

448 Numerous tribunals have recognised under the ECT that the FET standard includes the obligation to act proportionately.³⁵⁸ The tribunals in *Hydro Energy v. Spain* and *Cavalum v. Spain* stated that

³⁵⁷ [Exhibit C-0097-DE / Exhibit C-0097-EN: Parliamentary Paper BT-Dr. 19/17342, Explanatory Memorandum and Draft Coal Ban Law, 24 February 2020 \(excerpts\)](#), p. 86.

³⁵⁸ **Exhibit:** EDF (Services) Limited v. Romania, ICSID Case No. ARB/05/13, Award, 8 October 2009, para. 293; [Exhibit CLA-0074: The AES Corporation and Tau Power B.V. v. Republic of Kazakhstan](#), ICSID Case No. ARB/10/16, Award of 1 November 2013, para 403; [Exhibit CLA-0075: RREEF Infrastructure \(G.P.\) Limited and RREEF Pan-European Infrastructure Two Lux S.à r.l. v. Kingdom of Spain](#), ICSID Case No. ARB/13/30, Decision on Responsibility and on the Principles of Quantum, 30 November 2018, para 324; [Exhibit CLA-0076: RWE Innogy GmbH v. Kingdom of Spain](#), ICSID Case No. ARB/14/34, Decision on Jurisdiction, Liability, and Certain Issues of Quantum of 30 December 2019, para. 598; [Exhibit CLA-0077: Hydro Energy 1 S.à r.l. and Hydroxana Sweden AB v. Kingdom of Spain](#), ICSID Case No. ARB/15/42, Decision on Jurisdiction, Liability and Directions on Quantum, 9 March 2020, para. 573; [Exhibit CLA-0027: Cavalum SGPS, S.A. v. Kingdom of Spain](#), ICSID Case No. ARB/15/34, Decision on Jurisdiction, Liability and Directions on Quantum, 31 August 2020, para. 414.

*“the requirement of proportionality is part of the reasonableness standard and of the fair and equitable treatment standard”.*³⁵⁹

449 To be proportional, a regulatory measure must be suitable to achieve a legitimate policy objective, necessary for that objective, and not excessive considering the relative weight of each interest involved (proportionality *stricto sensu*).³⁶⁰ Necessity presupposes that no other less restrictive measures exist being equally effective.³⁶¹ Proportionality *stricto sensu* requires a balancing exercise *“to ensure that the effects of the intended measure remain proportionate with regard to the affected rights and interests.”*³⁶²

450 In order to balance these rights, the tribunal in *EDF v. Romania* focused on the degree of weight imposed on the investor. It held *“that proportionality would be lacking if the person involved “bears an individual and excessive burden”.*³⁶³ The tribunal in *RWE Innogy v. Spain* made an identical statement.³⁶⁴

451 While analysing whether the burden on the investor has been excessive, the *EDF* tribunal took recourse to the holdings of the European Court for Human Rights (**ECtHR**).³⁶⁵ The ECtHR examined whether and to which extent compensation has been

³⁵⁹ [Exhibit CLA-0077: *Hydro Energy 1 S.à r.l. and Hydroxana Sweden AB v. Kingdom of Spain*, ICSID Case No. ARB/15/42, Decision on Jurisdiction, Liability and Directions on Quantum, 9 March 2020, para. 573; Exhibit CLA-0027: *Cavalum SGPS, S.A. v. Kingdom of Spain*, ICSID Case No. ARB/15/34, Decision on Jurisdiction, Liability and Directions on Quantum, 31 August 2020, para. 414.](#)

³⁶⁰ [Exhibit CLA-0078: B. Kingsbury and S. Schill, *Public Law Concepts to Balance Investors' Rights with State Regulatory Actions in the Public Interest – The Concept of Proportionality*, in S. Schill, *International Investment Law and Comparative Public Law* \(2010\), pp. 86-87; Exhibit CLA-0014: Reinisch A. and Schreuer C. *International Protection of Investments: The Substantive Standards*. \(Cambridge University Press 2020\), p. 345, para. 459.](#)

³⁶¹ [Exhibit CLA-0078: B. Kingsbury and S. Schill, *Public Law Concepts to Balance Investors' Rights with State Regulatory Actions in the Public Interest – The Concept of Proportionality*, in S. Schill, *International Investment Law and Comparative Public Law* \(2010\), pp. 86-87.](#)

³⁶² [Exhibit CLA-0077: *Hydro Energy 1 S.à r.l. and Hydroxana Sweden AB v. Kingdom of Spain*, ICSID Case No. ARB/15/42, Decision on Jurisdiction, Liability and Directions on Quantum, 9 March 2020, para. 574.](#)

³⁶³ [Exhibit CLA-0079: *EDF \(Services\) Limited v. Romania*, ICSID Case No. ARB/05/13, Award, 8 October 2009, para. 293.](#)

³⁶⁴ [Exhibit CLA-0076: *RWE Innogy GmbH v. Kingdom of Spain*, ICSID Case No. ARB/14/34, Decision on Jurisdiction, Liability, and Certain Issues of Quantum of 30 December 2019, para. 598.](#)

³⁶⁵ [Exhibit CLA-0080: *Sporrong and Lönnroth v. Sweden*, ECtHR Application no. 7151/75; 7152/75, ECtHR 1982, Judgment, 23 September 1982, para. 73; Exhibit CLA-0081: *Case of James and Others v. The United Kingdom*, Application no. 8793/79, ECtHR 1986, Judgment, 21 February 1986, para. 50; see also for further references to the ECtHR by other tribunals: Exhibit CLA-0082: *Técnicas Medioambientales Tecmed, S.A. v. The*](#)

provided. In the *Case of the Holy Monasteries v. Greece* and in the *Case of the former King of Greece* the ECtHR stated that, unless in exceptional cases, the total lack of compensation constitutes a disproportional burden for the investor.³⁶⁶

*“Compensation terms under the relevant legislation are material to the assessment whether the contested measure respects the requisite fair balance and, notably, whether it does not impose a disproportionate burden on the applicants. In this connection, the taking of property without payment of an amount reasonably related to its value will normally constitute a disproportionate interference and a total lack of compensation can be considered justifiable under Article 1 (P1-1) only in exceptional circumstances.”*³⁶⁷ (Emphasis added)

452 Equally, the *Tecmed* tribunal referred to the ECtHR's holdings and considered the degree of deprivation of the investment and whether compensation was provided for it:

*“There must be a reasonable relationship of proportionality between the charge or weight imposed to the foreign investor and the aim sought to be realized by any expropriatory measure. To value such charge or weight, it is very important to measure the size of the ownership deprivation caused by the actions of the state and whether such deprivation was compensated or not.”*³⁶⁸ (Emphasis added)

453 In the decisions of the ECtHR and in the *Tecmed* case the principle of proportionality was applied in a different context (to examine whether an expropriation can be justified or whether a measure constitutes a unlawful indirect expropriation). However, these holdings are also applicable under the FET standard. In all cases it is ultimately decisive to balance the regulatory act's purpose against individual interests.

454 Besides the impact of the regulatory measure, the assessment of proportionality *stricto sensu* involves various other factors. These include “[t]he degree of interference (minor versus major interference)” and “the length of interference (permanent versus temporary).”³⁶⁹ The tribunal in *RWE Innogy v. Spain* focused on the specific context of the

[United Mexican States, ICSID Case No. ARB\(AF\)/00/02, Award, 29 May 2003](#), para. 122; [Exhibit CLA-0083: Azurix Corp. v. The Argentine Republic, ICSID Case No. ARB/01/12, Award, 14 July 2006](#), para. 311; [Exhibit CLA-0063: Occidental and others v. Republic of Ecuador, ICSID Case No. ARB/06/11, Award, 5 October 2012](#), paras. 402, 403; [Exhibit CLA-0084: Electrabel S.A. v. Republic of Hungary, ICSID Case No. ARB/07/19, Award, 25 November 2015](#), para. 179.

³⁶⁶ [Exhibit CLA-0085: Case of the Holy Monasteries v. Greece, Application no. 13092/87; 13984/88 - ECtHR 1994, Judgment, 9 December 1994](#), paras. 70-71; [Exhibit CLA-0086: Case of the former King of Greece and others v. Greece, Application no. 25701/94, ECtHR 2000, Judgment, 23 Nov 2000](#), para. 89.

³⁶⁷ [Exhibit CLA-0085: Case of the Holy Monasteries v. Greece, Application no. 13092/87; 13984/88 - ECtHR 1994, Judgment, 9 December 1994](#), paras. 70-71.

³⁶⁸ [Exhibit CLA-0082: Técnicas Medioambientales Tecmed, S.A. v. The United Mexican States, ICSID Case No. ARB\(AF\)/00/02, Award, 29 May 2003](#), para. 122.

³⁶⁹ [Exhibit CLA-0078: B. Kingsbury and S. Schill, Public Law Concepts to Balance Investors' Rights with State Regulatory Actions in the Public Interest – The Concept of](#)

regulatory change. It examined if the host State assessed the financial impacts of the measure in question on the investor in its decision making process:

“The Tribunal’s task is to assess whether the Respondent State has acted fairly and equitably, and in considering this one important tool is an assessment of whether the change to a given tariff regime is disproportionate, which this Tribunal considers – in the current context – as entailing considerations both as to what is necessary and as to the financial burden that is being shifted to those investors who have committed substantial resources on the basis of the earlier regime. At the same time, it is important to assess whether the Respondent State took into account impacts to such investors in its decision-making process.”³⁷⁰ (Emphasis added)

b) Coal Ban Law without compensation is disproportional

455 Applying these standards to the case at hand, the ban on firing coal is neither necessary nor proportionate in *stricto sensu*.

456 The Coal Ban Law aims to reduce CO2 emissions pursuant to section 2(1) of the Coal Ban Law. It states:

“The purpose of the law is to reduce and end the generation of electrical energy through the use of coal in Germany in a gradual way that is socially compatible and is as continuous as possible, in order to reduce emissions, and to ensure a safe, affordable, efficient and climate-friendly supply of electricity to the general public.”

457 The prohibition of firing coal without providing for compensation is the most severe measure to achieve the Coal Ban Law’s objective. It totally changed the previous regulatory framework. Despite the fact that Claimant obtained a valid and irrevocable permit to operate a coal-fired power plant and to emit emissions (subject to the requirements of ETS), the Lünen plant will have to be shut down without any payment of compensation. However, to reduce emissions, it would be equally effective and less restrictive, to compensate these power plants. Even though Respondent knew that the impacts on new power plants such as the Lünen plant would be severe, it did not provide for compensation (see **Section E.V.2**).

458 Moreover, Respondent refused to consider these severe impacts during its decision-making process. It simply ignored the recommendations of the Coal Commission to find “a regulatory solution with compensation payments within the framework of the legal

[Proportionality, in S. Schill, International Investment Law and Comparative Public Law \(2010\)](#), p. 87.

³⁷⁰ [Exhibit CLA-0076: RWE Innogy GmbH v. Kingdom of Spain, ICSID Case No. ARB/14/34, Decision on Jurisdiction, Liability, and Certain Issues of Quantum of 30 December 2019](#), para. 462.

requirements".³⁷¹ In its Explanatory Memorandum, Respondent merely outlined that new coal-fired power plants would not be amortised when mandatorily shut down.³⁷²

*"The regulation technique of the age-based ranking is fundamentally constitutional. As a result, only power plants that are fully amortised are expected to be shut down. An exception may be the hard coal-fired power plants put into operation after 2010."*³⁷³

459 However, apart from merely acknowledging it, Respondent did not draw any conclusion from it. Instead, it refused to envisage any compensation and did not provide any reasoning as to why the severe impacts of the prohibition to fire coal would be proportionate to new power plants (see **Section C.VI**).

460 This is even further exacerbated by the fact that numerous experts outlined the serious effects of the prohibition to fire coal on New Plants and criticised the failure to provide for compensation. Several experts emphasised the massive financial losses for these operators, partially even with explicit reference to the Lünen plant (see **Section C.VI**).

461 All of this to no avail. Respondent just ignored the heavy criticism, although it knew that investors would be hit hard, and decided to adopt the law nevertheless without compensation. Instead, it simply included section 54(2) of the Coal Ban Law. As mentioned in **Section C.VI**, this provision merely presents an empty shell. Even before the first evaluation report was due, Respondent announced "*not to pay any additional compensation to companies as part of the coal ban*" than already promised under the Coal Ban Law.³⁷⁴ Thus, it is not surprising at all that it let slip the first deadline of 15 August 2022 for almost two years now.

4. Summary

462 The Coal Ban Law breaches Respondent's obligations to accord fair and equitable treatment to Claimant's investments. By prohibiting the firing of coal, irrespectively of the extent to which emissions are emitted, Respondent fundamentally changed the previous framework and completely ignored Claimant's existing permits. At the same time, this imposes an excessive burden on the investor due to the lack of compensation.

³⁷¹ [Exhibit C-0014: Final Report of the Coal Commission, January 2019](#), p. 62, p. 64.

³⁷² [Exhibit C-0097-DE / Exhibit C-0097-EN: Parliamentary Paper BT-Dr. 19/17342, Explanatory Memorandum and Draft Coal Ban Law, 24 February 2020 \(excerpts\)](#), p. 87.

³⁷³ [Exhibit C-0097-DE / Exhibit C-0097-EN: Parliamentary Paper BT-Dr. 19/17342, Explanatory Memorandum and Draft Coal Ban Law, 24 February 2020 \(excerpts\)](#), p. 87.

³⁷⁴ [Exhibit C-0099-DE / Exhibit C-0099-EN: Coalition Agreement between SPD, Bündnis 90 / Die Grünen and FDP, "Dare More Progress", 7 December 2021](#), p. 59.

VI. Respondent has breached its obligation to prove full protection and security

463 The Respondent has violated its obligation under Article 10(1) third sentence ECT to provide Claimant with most constant protection and security.

464 The standard of most constant protection and security enshrined in Article 10(1) third sentence ECT obliges the Respondent to provide both physical and legal protection and security to AET and its investments (1.). This standard is breached when a state completely dismantles the legal framework for the investment, as Germany did by adopting the Coal Ban Law without compensation (2.). The Respondent avoided the obligation to compensate the Claimant for the disadvantages resulting from the Coal Ban Law (3.).

1. Germany is obliged to ensure legal security according to the standard of full protection and security.

465 Article 10(1) third sentence of the ECT states: "[...] *Investments shall also enjoy the most constant protection and security* [...]" (Most Constant Protection And Security - "MCPS standard")

466 This provision encompasses the obligation for the Contracting State of both the physical protection of investments and the protection and security of the legal conditions of investment. This is particularly the case in instances where the investment treaty includes intangible assets within its definition of investment, as demonstrated in the case of *Siemens v. Argentina*³⁷⁵. The tribunal stated:

"As a general matter and based on the definition of investment, which includes tangible and intangible assets, the Tribunal considers that the obligation to provide full protection and security is wider than "physical" protection and security. It is difficult to understand how the physical security of an intangible asset would be achieved. In the instant case, "security" is qualified by "legal". In its ordinary meaning "legal security" has been defined as "the quality of the legal system which implies certainty in its norms and, consequently, their foreseeable application."

467 Recent tribunals have come to similar conclusions.³⁷⁶

³⁷⁵ [Exhibit CLA-0087: Siemens A.G. v. Argentine Republic, ICSID Case No. ARB/02/8, Award, 6 February 2007, para 303.](#)

³⁷⁶ [Exhibit CLA-0088: Global Telecom Holding S.A.E. v. Canada, ICSID Case No. ARB/16/16, Award, 27 March 2020, para. 664;](#) [Exhibit CLA-0077: Hydro Energy 1 S.à r.l. and Hydroxana Sweden AB v. Kingdom of Spain, ICSID Case No. ARB/15/42, Decision on Jurisdiction, Liability and Directions on Quantum, 9 March 2020, para. 565;](#) [Exhibit CLA-0089: Anglo American PLC v. Bolivarian Republic of Venezuela, ICSID Case No. ARB\(AF\)/14/1, Award, 18 January 2019, para. 482.](#)

468 Awards which concluded that the obligation to provide full protection and security would not involve legal protection are not convincing. They are mainly based on the assumption that the scope of the obligation then would overlap with the obligation to provide fair and equitable treatment.³⁷⁷ Avoiding an overlap, however, is not an established maxim of treaty interpretation. There is no rule that the obligations under an investment treaty may not overlap. To the contrary, it is not unusual that tribunals find multiple breaches.

469 The ECT protects both physical and intangible assets as investments. Intangible assets such as shares, participations, contractual rights, intellectual property, and licenses (Article 1(6) ECT) must be legally protected, as it is inherently impossible to provide physical protection for these assets.

470 The phrase „most constant protection and security“ for investments in Article 10(1) ECT inherently requires protecting intangible assets. The text should be interpreted in its natural and obvious meaning.³⁷⁸ The wording does not differentiate between physical and non-physical protection, nor does it exclude intangible assets. Article 10(1), third sentence, imposes an obligation to actively establish a framework that secures all kinds of investments. Limiting this protection to physical assets alone would leave intangible assets, recognized as investments under Article 1(6) ECT, unprotected.

471 This is even more pertinent considering that in other investment treaties, which use the weaker formulation “full protection and security”, the protection in the form of legal security has already been established by courts.³⁷⁹

“When the terms 'protection' and 'security' are qualified by 'full' and no other adjective or explanation, they extend, in their ordinary meaning, the content of this standard beyond physical security.”³⁸⁰

472 It would be overly restrictive to limit 'full security' to just one aspect of security, especially considering its use in a BIT aimed at protecting commercial and financial

³⁷⁷ See, e.g. [Exhibit CLA-0090: Gabriel Resources Ltd. And Gabriel Resources \(Jersey\) v. Romania](#), ICSID Case No. ARB/15/31, Award, 08 March 2024 [Redacted], para. 874; [Exhibit CLA-0091: Public Joint Stock Company Mobile TeleSystems v. Turkmenistan II](#), ICSID Case No. ARB(AF)/18/4, Award, 14 June 2023 [Redacted], para. 395.

³⁷⁸ [Exhibit CLA-0092: Asian Agricultural Products Ltd. \(AAPL\) v. Republic of Sri Lanka](#), ICSID Case No. ARB/87/3, Award, 27 June 1990, para. 40.

³⁷⁹ [Exhibit CLA-0083: Azurix Corp. v. The Argentine Republic](#), ICSID Case No. ARB/01/12, Award, 14 July 2006, para 406, [Exhibit CLA-0093: Biwater Gauff \(Tanzania\) Ltd. v. United Republic of Tanzania](#), ICSID Case No. ARB/05/22, Award, 24 July 2008, para. 729 *et seq.*, [Exhibit CLA-0094: Spyridon Roussalis v. Romania](#), ICSID Case No. ARB/06/1, Award 7 December 2011, para. 321; [Exhibit CLA-0089: Anglo American PLC v. Bolivarian Republic of Venezuela](#), ICSID Case No. ARB(AF)/14/1, Award, 18 January 2019, para. 482. *et seq.*

³⁸⁰ [Exhibit CLA-0083: Azurix Corp. v. The Argentine Republic](#), ICSID Case No. ARB/01/12, Award, 14 July 2006, para. 408.

investments.³⁸¹ A stricter protection standard with ‘*most constant protection and security*’³⁸² must therefore necessarily include the legal protection of intangible assets.

2. This standard is breached when a State dismantles the legal framework for the investment

473 The MCPS standard for providing legal protection and security for intangible assets as investments is breached when a State circumvents or completely abolishes the legal basis for the investment. This obligation does not imply an untouchable legal guarantee or the freezing of laws at any cost. It is possible to adjust the legal situation in light of compelling public state interests. However, the State remains obliged to legally uphold and protect foreign investments when it reforms its legal framework. Consequently, the State must implement protective measures when adjusting the legal framework, to achieve a reasonable balance between the duty of “most constant protection and security” for the investment and the need for legal adjustment due to compelling public interests.

474 Several tribunals have determined that circumventing or abolishing the legal basis for the investment constitutes a violation of the provision of legal protection and security under the MCPS standard.

475 In the *Siemens v. Argentina*³⁸³ case, the tribunal ruled that “legal security” in its ordinary meaning “implies certainty in its norms and, consequently, their foreseeable application”. A failure of the State to ensure this constitutes a breach of the standard.

476 The tribunal in the *CME v. Czech Republic*³⁸⁴ case identified a violation of Article 10(1) third sentence ECT in that the Czech Republic altered the legal bases upon which CME’s exclusive right to a broadcasting license was based, and ultimately CME was even completely deprived of this right. Similarly, in the *National Grid v. Argentina* case³⁸⁵, the tribunal recognized a breach of protection and constant security due to the effective circumvention of the legal framework regulating the investment. This led to significant legal uncertainties due to legislative reforms concerning currency

381 [Exhibit CLA-0093: *Biwater Gauff \(Tanzania\) Ltd. v. United Republic of Tanzania*, ICSID Case No. ARB/05/22, Award, 24 July 2008](#), para. 729.

382 [Exhibit CLA-0092: *Asian Agricultural Products Ltd. \(AAPL\) v. Republic of Sri Lanka*, ICSID Case No. ARB/87/3, Award, 27 June 1990](#), para. 40.

383 [Exhibit CLA-0087: *Siemens A.G. v. Argentine Republic*, ICSID Case No. ARB/02/8, Award, 6 February 2007](#), para 303.

384 [Exhibit CLA-0095: *CME Czech Republic BV v. Czech Republic*, Partial Award, UNCITRAL, 13 September 2001](#), para. 613.

385 [Exhibit CLA-0096: *National Grid P.L.C. v. The Argentine Republic*, UNCITRAL, Award, 3 November 2008](#), para. 189.

convertibility that affected the compensation system on which National Grid's investment was based.

"[The] changes introduced in the Regulatory Framework by the Measures, which effectively dismantled it, and the uncertainty reigning during the two years preceding the sale of its shares in Transener, with respect to any possible compensation on account of the impact of the Measures on Claimant's investment, are contrary to the protection and constant security which the Respondent agreed to provide for investments under the Treaty."³⁸⁶

477 The state is strictly liable for all actions of its own State organs, including its legislative bodies.

"The Arbitral Tribunal also does not consider that the 'full security' standard is limited to preventing actions by third parties but extends as well to actions by organs and representatives of the State itself."³⁸⁷

478 Consequently, Germany is directly liable without fault for actions of its competent organs, i.e., the German legislature consisting of the Bundestag and Bundesrat. Even if a fault-independent standard of liability for State organs' actions should not apply, Germany is still obligated to observe due diligence by acting reasonably and rationally in the specific circumstances of the case, which Germany has failed to do, as will be outlined below.

3. By adopting the Coal Ban Law, Germany dismantled the legal framework for the investment into TKL

479 By adopting the Coal Ban Law, Germany dismantled the legal framework for AET's investment into TKL.

480 The original legal framework for coal-fired power plants was determined by the FICL: once the permits were issued and became legally binding, a withdrawal was nearly impossible, and only under the requirement of compensation for the investor which in good faith had relied on the permit (see above, **Section C.III.4**). However, a prohibition to fire coal would not even have constituted a valid reason to withdraw the permit. This legal security is essential for any investor. As the Arbitral Tribunal will recall, the final decision to construct the Lünen plant was made when the Advance Permit had been obtained (**Section C.III.4**). Only then were the new Partnership Agreement and the contracts for the construction signed.

³⁸⁶ [Exhibit CLA-0096: National Grid P.L.C. v. The Argentine Republic, UNCITRAL, Award, 3 November 2008](#), para. 189.

³⁸⁷ [Exhibit CLA-0093: Biwater Gauff \(Tanzania\) Ltd. v. United Republic of Tanzania, ICSID Case No. ARB/05/22, Award, 24 July 2008](#), para. 730; Also cited by [Exhibit CLA-0097: Tenaris S.A. and Talta - Trading e Marketing Sociedade Unipessoal Lda. v. Bolivarian Republic of Venezuela I, ICSID Case No. ARB/11/26, Award, 29 January 2016](#), para. 439.

481 The Coal Ban Law thus dismantles the basis for the Claimant's investment in Germany. It does not only prohibit the firing of coal irrespective of lawful permits. It also explicitly creates a legal basis for withdrawing the permits, but excludes the possibility for the operator of the Lünen plant (i.e. TKL) to claim compensation.

482 Such circumvention of a State's own legal rules governing permits cannot be reconciled with due process and the rule of law. It is inherently incompatible with the obligation to provide the "most constant protection and security".

483 Germany thus breached its obligation under Article 10(1) of the ECT to provide the "most constant protection and security" to the Claimant's investments by enacting the Coal Ban Law.

VII. Respondent breached Article 10(1) of the ECT

484 In addition, Respondent's Coal Ban Law also constitutes an unreasonable as well as an discriminatory measure in breach of Article 10(1)(3) of the ECT, which stipulates that

"no Contracting Party shall in any way impair by unreasonable or discriminatory measures their [= the investments'] management, maintenance, use, enjoyment or disposal."

485 While Respondent's aim to reduce CO2 emissions is in principle a rationale policy, the Coal Ban Law is nonetheless unreasonable because it failed to have due regard for the severe consequences it has on investors in new, hard coal-fired power plants and, contrary to the aim of its measure, favoured more polluting (lignite-fired) power plants (1.). The Coal Ban Law is also discriminatory, in particular, since it treats new hard coal-fired power plants less favourably than old hard coal-fired power plants, depriving them of the possibility to recoup their investment costs (2.).

1. Shutting down the Lünen plant is unreasonable

486 To be reasonable, a regulatory measure must be the outcome of a rational decision-making process.³⁸⁸ It is well-established that, for this, a measure must meet two criteria:

³⁸⁸ [Exhibit CLA-0014: Reinisch A. and Schreuer C. *International Protection of Investments: The Substantive Standards*. \(Cambridge University Press 2020\)](#), page 828, para. 61; see also [Exhibit CLA-0024: *LG&E Energy Group v. Argentine Republic*](#), ICSID Case No. ARB/02/1, Decision on Liability of 3 October 2006, para. 158; [Exhibit CLA-0098: *Pawlowski AG v. Czech Republic*](#), ICSID Case No. ARB/17/11, Award, 1 November 2021, para. 301; [Exhibit CLA-0099: *Addiko Bank AG v. Montenegro*](#), ICSID Case No. ARB/17/35, Excerpts of Award, 24 November 2021, para. 737; [Exhibit CLA-0100: *Orazul International v. Argentine Republic*](#), ICSID Case No. ARB/19/25, Award, 14 December 2023, para. 750.

*“the existence of a rational policy; and the reasonableness of the act of the state in relation to the policy”.*³⁸⁹

487 While, in principle, the purpose of the Coal Ban Law “to reduce emissions” (Section 2(1)) is a rational policy, the Coal Ban Law fails to meet the second leg of the reasonableness test.

488 The *AES Summit v. Hungary* tribunal described this second requirement as follows:

“Nevertheless, a rational policy is not enough to justify all the measures taken by a state in its name. A challenged measure must also be reasonable. That is, there needs to be an appropriate correlation between the state’s public policy objective and the measure adopted to achieve it. This has to do with the nature of the measure and the way it is implemented.”³⁹⁰ (Emphasis added)

489 The tribunal in *Micula v. Romania (I)* reaffirmed this standard and further explained that, in order to meet the second part of the test, it would be crucial that the host State takes into account the consequences imposed on investors when implementing the regulatory measure:

“In other words, for a state’s conduct to be reasonable, it is not sufficient that it be related to a rational policy; it is also necessary that, in the implementation of that policy, the state’s acts have been appropriately tailored to the pursuit of that rational policy with due regard for the consequences imposed on investors.”³⁹¹ (Emphasis added)

490 In addition, the tribunal in *Watkins v. Spain* highlighted that a measure is unreasonable where the host State had encouraged an investment and, then, drastically changed the legal and regulatory framework:

“The Tribunal in order to determine if Spain’s measures are unreasonable, must identify a rational policy goal and it must then demonstrate that these measures were reasonable. The Tribunal is of the view that Spain cannot

³⁸⁹ [Exhibit CLA-0032: AES Summit Generation Limited and AES-Tisza Erőmű Kft v. The Republic of Hungary](#), ICSID Case No. ARB/07/22, Award, 23 September 2010, para. 10.3.7.

³⁹⁰ [Exhibit CLA-0032: AES Summit Generation Limited and AES-Tisza Erőmű Kft v. The Republic of Hungary](#), ICSID Case No. ARB/07/22, Award, 23 September 2010, para. 10.3.9.

³⁹¹ [Exhibit CLA-0041: Ioan Micula, Viorel Micula, S.C. European Food S.A., S.C. Starmill S.R.L. and S.C. Multipack S.R.L. v. Romania](#), ICSID Case No. ARB/05/20, Final Award, 11 December 2013, para. 525, confirmed by [Exhibit CLA-0077: Hydro Energy 1 S.à r.l. and Hydroxana Sweden AB v. Kingdom of Spain](#), ICSID Case No. ARB/15/42, Decision on Jurisdiction, Liability and Directions on Quantum, 9 March 2020, para. 569, and [Exhibit CLA-0027: Cavalum SGPS, S.A. v. Kingdom of Spain](#), ICSID Case No. ARB/15/34, Decision on Jurisdiction, Liability and Directions on Quantum, 31 August 2020, para. 412; [Exhibit CLA-0066: Watkins Holdings S.à r.l. and others v. Kingdom of Spain](#), ICSID Case No. ARB/15/44, Award, 21 January 2020, para. 596. See also: [Exhibit CLA-0024: LG&E Energy Group v. Argentine Republic](#), ICSID Case No. ARB/02/1, Decision on Liability of 3 October 2006, para. 158.

satisfy this test because having induced the Claimants to invest, there was a sudden and drastic change in Spain's policy with regard to RE industry and the legal and regulatory framework was amended over a period of time.³⁹² (Emphasis added)

491 The Coal Ban Law fails to meet this standard on multiple grounds:

492 First, as explained in **Section C.VI** above, Respondent failed to take into account the effect of the Coal Ban Law on Claimant and its investment. Respondent was well aware that hard coal-fired power plants put into operation after 2010 may not be amortised by the time they are forced to shut down, but failed to assess this and provide compensation. During the legislative process, Respondent was heavily criticised for this decision by numerous experts, business associations and third parties. However, Respondent chose to ignore this and instead, posited that it was sufficient to have the choice between continuing to operate until the forced shutdown and participating in the tender to receive a shutdown incentive for closing down earlier, without considering whether these alternatives address the problem faced by these New Plants. They do not. Neither alternative gives Claimant at least a chance to recoup its investment costs because the remaining lifetime until the forced shutdown is too short and the shutdown incentives are even less economically attractive.

493 Moreover, the mechanism in section 54(2) of the Coal Ban Law is not sufficient to remedy this shortcoming because it is merely a fig leaf trying to camouflage Respondent's failure to provide actual compensation to these New Plants. Section 54(2) of the Coal Ban Law does not provide any compensation and does not even set specific rules and criteria for the entitlement to and calculation of any compensation. Based on this provision, it would be pure speculation for any company to assume that it may receive compensation.

494 Second, Respondent did not only fail to provide a compensation for Claimant and its investment, but even modified existing laws in order to prevent that Lünen could be compensated for the withdrawal of its final operating permit under the FICL.

495 Third, Respondent implemented the Coal Ban Law in a manner that – contrary to the (alleged) purpose of Coal Ban Law “to reduce emissions” – favours more polluting lignite-fired power plants (see **Section C.VI** above). The Shutdown Path adopted by Respondent contrary to the Coal Commission's recommendations permits more polluting lignite-fired power plants to operate longer than hard coal-fired power plants in general. In case of the clean, highly efficient New Plants, the Shutdown Path even requires them to shut down earlier than up to 39 years older lignite-fired power plants. And, although these lignite-fired power plants can already operate longer than hard coal-fired power

³⁹² [Exhibit CLA-0066: Watkins Holdings S.à r.l. and others v. Kingdom of Spain, ICSID Case No. ARB/15/44, Award, 21 January 2020](#), para. 597.

plants, they receive in total of **EUR 4.35 billion** in compensation while the hard coal-fired power plants receive none.

496 Last but not least, Respondent did all of this, although it had encouraged precisely these investments in the newly constructed, highly efficient power plants (see **Section C.II.** above) to secure its energy supply after its nuclear phase-out and to achieve its climate targets. Now, when designing its Coal Ban Law, Respondent not only failed to protect particularly those plants but these plants are actually even those which now suffer most from Respondent's 180-degree turn in its energy policy to prohibit coal-fired power generation.

497 Each of the above grounds would in itself be sufficient to render the Coal Ban Law unreasonable, even more so this is however true if one considers these grounds cumulatively. There is simply no reason why not providing compensation would be reasonable.

2. Shutting down the Lünen plant without compensation is discriminatory

498 Unlike Article 10(3) and (7) of the ECT, Article 10(1)(3) of the ECT is not a national or most-favoured-nation treatment clause but contains a general prohibition of discriminatory measures. Therefore, it covers any discriminatory treatment, not only discrimination based on nationality.³⁹³ The applicable standard for a discrimination in terms of Article 10(1)(3) of the ECT

*"corresponds to the negative formulation of the principle of equality of treatment. It entails like persons being treated in a different manner in similar circumstances without reasonable or justifiable grounds."*³⁹⁴

499 Moreover, it is widely recognised that a discriminatory intent of the State is not necessary. Instead, tribunals take an objective approach and focus on the practical impact of a state's measure. The tribunal in *Siemens v. Argentina* described this in the following terms:

*"The Tribunal concurs that intent is not decisive or essential for a finding of discrimination, and the impact of a measure on the investment would be determining factor to ascertain whether it had resulted in non-discriminatory treatment."*³⁹⁵

500 The Coal Ban Law constitutes such a discriminatory measure vis-à-vis Claimant. It blatantly discriminates against new coal-fired power plants, treating them significantly

³⁹³ [Exhibit CLA-0014: Reinisch A. and Schreuer C. *International Protection of Investments: The Substantive Standards.* \(Cambridge University Press 2020\), p. 836.](#)

³⁹⁴ [Exhibit CLA-0016: *Plama Consortium Limited v. Republic of Bulgaria*, ICSID Case No. ARB/03/24, Award, 27 August 2008, para. 184.](#)

³⁹⁵ [Exhibit CLA-0087: *Siemens A.G. v. Argentine Republic*, ICSID Case No. ARB/02/8, Award, 6 February 2007, para. 321.](#)

worse than old coal-fired power plants without any reasonable or justifiable grounds. It deprives clean, highly efficient power plants of the possibility to recoup at least their investment costs while old, polluting plants can do so. Moreover, it aggravates this discriminatory treatment by even offering the old, polluting plants a “golden handshake” when leaving the market – either by offering them shutdown incentives or, in case of the lignite-fired power plants, even billions in compensation. These old, polluting plants receive these amounts irrespective of whether their investment has already been fully amortised or not – while new, highly efficient hard coal-fired power plants receive no compensation at all.

In detail:

- 501 With the Coal Ban Law, Respondent has decided to shut down hard coal-fired power plants based on their age. That, by itself, is not discriminatory. However, the application of this approach to the existing power plants is patently discriminatory.
- 502 According to its Explanatory Memorandum, Respondent intended to use the age-based Shutdown Order to ensure that generally “*only power plants that are fully amortised are likely to be shut down*”.³⁹⁶ This, however, is not the case. While the older power plants to be shut down first, are or will already be amortised when they shut down, the new hard coal-fired power plants which started their operation only after 2010 will not have been amortised.
- 503 The first 20 (of over 100) power plants subject to the age-based Shutdown Order only need to close down after more than 50 – and even up to 100 – years!³⁹⁷ Conversely, the Lünen plant, will be shut down after only 17 years of operation. Claimant does not argue that equal treatment would require that the Lünen plant must also be afforded a lifetime of 50 or even 100 years. However, in line with Respondent’s aim with the age-based Shutdown Order, non-discriminatory treatment requires that Claimant is at least given a chance to recoup its investment costs and, like operators of older power plants, make a reasonable profit. If it is nevertheless necessary to shut down a plant before this is possible, then the State has to pay compensation.
- 504 Moreover, rather than rectifying this discriminatory treatment by providing compensation to New Plants, Respondent refused to provide any compensation and, with its tender process for shutdown incentives, even aggravated the discriminatory treatment.
- 505 As explained above (see **Section C.VI**), the shutdown incentives were aimed at encouraging old, polluting coal-fired power plants to shut down earlier than they would

³⁹⁶ [Exhibit C-0097-DE / Exhibit C-0097-EN: Parliamentary Paper BT-Dr. 19/17342, Explanatory Memorandum and Draft Coal Ban Law, 24 February 2020 \(excerpts\)](#), p. 87.

³⁹⁷ See table above.

have to shut down in the absence of any tender process purely under the Shutdown Order. As a result, about half of all shutdown incentives were awarded to power plants which will be at least 40-years old by the time they are shut down – about one quarter will even be over 50-year old. These power plants will thus have had the chance to recoup their investment costs over the full minimum expected lifetime of such plants – and even to earn a reasonable profit.

506 As also already explained above (see **Section C.VI**), for New Plants, like the Lünen plant, these shutdown incentives were not economically attractive since the value they could generated by continuing operations was higher than to shut down even prior to their expected shutdown date under the Shutdown Order.

507 Hence, under the Coal Ban Law, old, polluting power plants are enabled to shut down once fully amortised (and having earned a reasonable profit) while new, highly efficient power plants must shut down after half of their expected lifetime. Although Respondent, was fully aware of this, it provided shutdown incentives primarily aimed at power plants which are already fully amortised while not providing any compensation for new, highly efficient power plants which are far from being amortised.

508 When compared to the treatment of lignite-fired power plants, the treatment of new, highly efficient hard coal-fired power plants is also blatantly discriminatory. Here, the Lünen plant is not even treated remotely similar to plants of its age. Rather, the Lünen plant must close down earlier than up to 39 years older lignite-fired plants. Even apart from this extreme case, almost all lignite-fired power plants closing after the Lünen plant are between 11 and 17 years older (see **Section C.VI.3**, para. 213 above). Hence, even when looking only at this group of plants, the discriminatory treatment is unfathomable: The Coal Ban Law grants these significantly more polluting lignite-fired power plants a lifetime which is up to twice as long as the lifetime afforded to Lünen. Nonetheless, the Coal Ban Law even provides these lignite-fired power plants with billions in compensation while the clean and highly efficient Lünen plant receives none.

It goes without saying that, in either case, there are no reasonable or justifiable grounds to defend this discriminatory treatment. Respondent therefore breached its obligation under Article 10(1)(3) of the ECT.

F. QUANTUM – RESPONDENT MUST COMPENSATE CLAIMANTS FOR THEIR DAMAGES IN AN AMOUNT OF EUR Rule 66(f)

509 Under the ECT and under public international law, Respondent is obliged to fully compensate Claimant for the damages suffered due to its breaches of the ECT (I). To analyse and quantify the considerable damages suffered from these breaches, Claimant has instructed Mr Kiran P. Sequeira and Mr Stuart P. Dekker of Secretariat Advisors (collectively, “**Secretariat**”). Claimant also instructed Dr Christoph Riechmann and Dr Jens Perner of Frontier Economics (“**Frontier**”) to assess and model the energy market in an expert report (“**Frontier Report**”). In their extensive expert report (“**Secretariat Report**”), taking into account Frontier’s energy market input, Secretariat conservatively assess the loss in value of Claimant’s Investment to amount to Rule 66(f) (II). Full compensation also requires that Claimants are compensated for any additional tax liabilities resulting from the awarded damages, i.e. taxes Claimants must pay on the awarded damages which they would not have to pay had Respondent not breached its obligations under the ECT (III).

510 The damage arises as a consequence of the early shutdown of the Lünen plant in 2031 due to the Coal Ban Law. For the convenience of the Tribunal (but without prejudice to burden of proof lying with Respondent), Claimant has also asked Frontier and Secretariat to assess hypothetical damage mitigation measures. However, neither a participation in the shutdown tenders nor a conversion of the Lünen plant to a Rule 66(f) power plant would even conceptually qualify as a damage mitigation measure. Moreover, neither of these options would be a reasonable damage mitigation measure. Therefore, Claimant’s damages are not to be adjusted under the concept of damage mitigation (IV).

511 Finally, Secretariat also conclude that the 12-month EURIBOR rate plus four percentage points, compounded annually, would be the appropriate pre- and post-award interest rate to be applied to Claimant’s damages in this case. Therefore, considering interest until the date of this Memorial, i.e. 26 July 2024, Claimant’s damages amount to Rule 66(f) (V).

512 Claimant refers to the Secretariat and Frontier reports in their entirety and will only set forth a summary of Claimant’s case on these quantum issues in this Memorial.

I. Under the ECT and general international law, Respondent must fully compensate Claimant

513 The ECT sets out the applicable standard of compensation for expropriations (1.) but does not explicitly address the standard of compensation for breaches of the ECT. This is regulated under general international law by the principles of state responsibility. (2.). Yet, in the present case, both standards lead to the same results. In particular, both

standards require that Respondent fully compensates Claimant for its damage and that such compensation is to be based on the fair market value of Claimant's Investment.

514 Moreover, under both standards, the (loss in) fair market value to be compensated is to be assessed on an *ex ante* basis, i.e. before the impending Coal Ban started to affect the value of Claimant's Investment (3.). This date is 30 January 2020, i.e. the day before the Coal Ban Law was introduced to the German Parliament. Furthermore, both the ECT and general international law recognised that full compensation requires that Claimant is awarded pre- and post-award interest on the compensation due (4.).

1. Compensation for expropriation under the ECT

515 As the Tribunal knows, the applicable standard of compensation for lawful expropriations is set out in Article 13(1) of the ECT. It stipulates that any expropriation must *inter alia* be "accompanied by the payment of prompt, adequate and effective compensation".³⁹⁸ It further provides:

"Such compensation shall amount to the fair market value of the Investment expropriated at the time immediately before the Expropriation or impending Expropriation became known in such a way as to affect the value of the Investment (hereinafter referred to as the "Valuation Date").

Such fair market value shall at the request of the Investor be expressed in a Freely Convertible Currency on the basis of the market rate of exchange existing for that currency on the Valuation Date. Compensation shall also include interest at a commercial rate established on a market basis from the date of Expropriation until the date of payment."³⁹⁹ (Emphasis added)

516 Claimant has shown above (see **Section E.III**) that the Coal Ban Law amounts to an expropriation of its Investment. Consequently, it is entitled to be compensated with an amount corresponding to (i) the fair market value of the investment, (ii) determined as of the date immediately before the (impending) expropriation became known, (iii) in a freely convertible currency and (iv) which includes interest at a commercial rate from the date of expropriation until payment.

517 However, no compensation has been paid or even offered by Respondent.

2. Compensation for breaches of the ECT

518 The ECT does not explicitly address compensation for breaches of the ECT. Thus, the damage caused by Respondent's violations of its obligations under Article 10 of the ECT is to be determined in accordance with customary international law.⁴⁰⁰

³⁹⁸ [Exhibit CLA-0002: Energy Charter Treaty](#), Article 13(1)(d).

³⁹⁹ [Exhibit CLA-0002: Energy Charter Treaty](#), Article 13(1).

⁴⁰⁰ [Exhibit CLA-0101: Nykomb Synergetics Technology Holding AB v. The Republik of](#)

a) Compensation requires full reparation

519 It is well established that a breach of a treaty, such as a breach of Article 10(1) of the ECT, gives the aggrieved party a right to be compensated for the harm sustained, i.e. the full loss suffered.⁴⁰¹ This was established already in 1928 by the *Chorzow Factory* case in which the Permanent Court of International Justice concluded that:

“The essential principle contained in the actual notion of an illegal act – a principle which seems to be established by international practice and in particular by the decisions of arbitral tribunals – is that reparation must, as far as possible, wipe out all the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if that act had not been committed. Restitution in kind, or, if this is not possible, payment of a sum corresponding to the value which a restitution in kind would bear; the award, if need be, of damages for loss sustained which would not be covered by restitution in kind or payment in place of it—such are the principles which should serve to determine the amount of compensation due for an act contrary to international law.”⁴⁰² (Emphasis added)

520 The court's conclusion in the *Chorzow Factory* case has been widely embraced by subsequent arbitral tribunals.⁴⁰³

[Latvia, SCC Case, Award, 16 December 2003](#), p. 38; [Exhibit CLA-0061: ADC Limited and others v. Republic of Hungary, ICSID Case No. ARB/03/16, Award, 2 October 2006](#), p. 483.

401 [Exhibit CLA-0102: Campbell McLachlan et al, *International Investment Arbitration – Substantive Principles* \(2007\)](#), para. 9.78; [Exhibit CLA-0103: J. Salacuse, *The Law of Investment Treaties*, Oxford University Press 2010](#), p. 254; [Exhibit CLA-0104: S. Ripinsky with K. Williams, *Damages in International Investment Law*, London British Institute of International and Comparative Law, 2008](#), p. 89; [Exhibit CLA-0105: SD Myers Inc v. Canada, UNCITRAL, First Partial Award, 13 November 2000](#), paras 311-312.

402 [Exhibit CLA-0106: Factory at Chorzow, 1928 PCIJ Series A No 17](#), p. 47.

403 [Exhibit CLA-0107: MTD Equity Sdn Bhd and MTD Chile SA v. Chile, ICSID Case No ARB/01/7, Award, 25 May 2004](#), para. 238, stating that the standard set forth in the *Chorzow Factory* case is a “classic standard”; [Exhibit CLA-0105: SD Myers Inc v. Canada, UNCITRAL, First Partial Award, 13 November 2000](#), para. 311, which recognises the standard as “authoritative”; [Exhibit CLA-0108: Quiborax SA and Non Metallic Minerals SA v. Plurinational State of Bolivia, ICSID Case No ARB/06/2, Award, 16 September 2015](#) paras 327-328; [Exhibit CLA-0045: CMS Gas Transmission Company v. The Argentine Republic, ICSID Case No. ARB/01/8, Award, 12 May 2005](#), para. 400; [Exhibit CLA-0109: Franck Charles Arif v. Republic of Moldova, ICSID Case No ARB/11/23, Award, 8 April 2013](#), para. 559; [Exhibit CLA-0061: ADC Limited and others v. Republic of Hungary, ICSID Case No. ARB/03/16, Award, 2 October 2006](#), paras 484, which at para. 493 also lists jurisprudence of the International Court of Justice reaffirming this standard; [Exhibit CLA-0095: CME Czech Republic BV v. Czech Republic, Partial Award, UNCITRAL, 13 September 2001](#), paras 616-618; [Exhibit CLA-0110: Joseph C Lemire v. Ukraine, ICSID Case No. ARB/06/18, Award, 28 March 2011](#), para. 149; [Exhibit CLA-0111: British Caribbean Bank Ltd v. Government of Belize, PCA Case No. 2010-18BCB-BZ, Award, 19 December 2014](#), para. 288; [Exhibit CLA-0112: Gold Reserve Inc v. Bolivarian Republic of Venezuela, ICSID Case No. ARB\(AF\)/09/1, Award, 22 September 2014](#), para. 681; [Exhibit CLA-0033: Metalclad Corporation v. The United Mexican States, ICSID Case No. ARB\(AF\)/97/1, Award dated 30 August 2000](#), para. 122; [Exhibit CLA-0113: Petrobart](#)

521 This standard has also been recognised by the International Law Commission in its Articles on State Responsibility, which have been formally adopted by the United Nations General Assembly.⁴⁰⁴

522 It follows from the above that a host State that has committed a breach of its obligations under international law is obligated to repair the breach and to put the aggrieved party in the same situation as if the breach had never occurred (the principle of full compensation).⁴⁰⁵ This can be done either by restitution, if possible, or by monetary compensation for all costs incurred as well as all damages suffered, including lost profits. The injured party has the right to select between restitution and compensation.⁴⁰⁶

523 In the present case, Claimant choose compensation since, as set out in the introduction, Claimant only challenges the Coal Ban Law for the lack of compensation. Moreover, restitution is hardly desirous for Respondent since it would require the Tribunal to interfere with the sovereign decision of Respondent to prohibit the use of coal for electricity generation. Therefore, Respondent must pay full compensation to Claimant for the damage it has suffered resulting from its breaches of Articles 10(1) and 13 of the ECT. The damage corresponds to the value Claimant's investment lost as a result of the Coal Ban Law, i.e. the difference between the value of Claimant's investment with and without the Coal Ban Law.

b) The "fair market value" of the investment is the relevant standard for the quantification of damages

524 For the quantification of these damages, the fair market value is widely recognized as the value standard to be applied.⁴⁰⁷ For example, in his Commentary on the

[*Ltd v. Kyrgyz Republic*, SCC 126/2003, Award, 29 March 2005](#), pp. 77-78.

404 [Exhibit CLA-0114: United Nations General Assembly, Resolution 56 83: Responsibility of states for internationally wrongful acts](#), UN Doc. A/RES/56/83, 12 December 2001, Part Two, in particular Articles 31, 35-36.

405 [Exhibit CLA-0104: S. Ripinsky with K. Williams, Damages in International Investment Law](#), London British Institute of International and Comparative Law, 2008, p. 89.

406 [Exhibit CLA-0055: International Law Commission's Draft Articles on Responsibility of States for Internationally Wrongful Acts, with commentaries, 2001](#), Article 34, para. 4; [Exhibit CLA-0114: United Nations General Assembly, Resolution 56 83: Responsibility of states for internationally wrongful acts](#), UN Doc. A/RES/56/83, 12 December 2001, Article 43.

407 [Exhibit CLA-0115: M. Kantor, Valuation for arbitration](#), Kluwer Law International, 2008, pp. 33-34.

International Law Commission's 2001 Draft Articles on Responsibility of States for Internationally Wrongful Acts, *Professor Crawford* states that

*"[c]ompensation reflecting the capital value of property taken or destroyed as a result of an internationally wrongful act is generally assessed on the basis of the 'fair market value' of the property lost."*⁴⁰⁸ (Emphasis added)

525 This has also been affirmed for protection standards other than expropriation. The tribunal in *CMS v. Argentina* held that the proper approach to calculating compensation for damages caused by a breach of the FET standard and the umbrella clause was "by resorting to the standard of fair market value", highlighting in particular "important long-term losses", which also exist in this Arbitration.⁴⁰⁹ Similar findings have been made by the tribunals in *Azurix v. Argentina*, *Enron v. Argentina*, *Murphy v. Ecuador* and *Gold Reserve v. Venezuela*.⁴¹⁰ This has also been affirmed in the ECT arbitration *Stati v. Kazakhstan*.⁴¹¹

3. The (loss in) value of Claimant's Investment is to be assessed on an ex ante basis

526 In order to fully compensate Claimant for the loss in fair market value of its Investment, its value is to be assessed at the latest date before it was affected by the impending Coal Ban Law. For the situation of an expropriation, this is expressly stipulated in Article 13(1) of the ECT:

"compensation shall amount to the fair market value of the Investment expropriated at the time immediately before the Expropriation or impending Expropriation became known in such a way as to affect the value of the Investment (hereinafter referred to as the 'Valuation Date')."

408 [Exhibit CLA-0055: International Law Commission's Draft Articles on Responsibility of States for Internationally Wrongful Acts, with commentaries, 2001](#), Article 36, para. 22, with further references.

409 [Exhibit CLA-0045: CMS Gas Transmission Company v. The Argentine Republic](#), ICSID Case No. ARB/01/8, Award, 12 May 2005, paras. 410-411.

410 [Exhibit CLA-0083: Azurix Corp. v. The Argentine Republic](#), ICSID Case No. ARB/01/12, Award, 14 July 2006, para. 420-424; [Exhibit CLA-0043: Enron Creditors Recovery Corporation \(formerly Enron Corporation\) and Ponderosa Assets, L.P. v. Argentine Republic](#), ICSID Case No. ARB/01/3, Award, 22 May 2007, paras 359 - 363, 380; [Exhibit CLA-0116: Murphy Exploration and Production Company International v. Republic of Ecuador II](#), PCA Case No. 2012-16 (formerly AA 434), Partial Final Award, 6 May 2016, para. 482; [Exhibit CLA-0112: Gold Reserve Inc v. Bolivarian Republic of Venezuela](#), ICSID Case No. ARB(AF)/09/1, Award, 22 September 2014, para. 681.

411 [Exhibit CLA-0117: Anatolie Stati, Gabriel Stati, Ascom Group SA, Terra Raf Trans Trading Ltd v. Republic of Kazakhstan](#), SCC Case No. V (116/2010), Award, 19 December 2013, paras 1460-1461.

527 Article 13(1) of the ECT describes an *ex ante* valuation date. The same applies for other breaches of investment protection standards.⁴¹²

528 For the present case, this means that the valuation date is 30 January 2020, i.e. the date before the Coal Ban Law was submitted to the German Parliament. As Secretariat explain, already the introduction of the draft law impacted the value of Claimant's investment because any hypothetical buyer would consider the implications of the law and know what any operation beyond 2031 would be speculative.⁴¹³ 30 January 2020 thus represents a date where the value of the Lünen plant was not yet impacted by the impending Coal Ban Law. It therefore ensures a "clean" (i.e. unaffected) value for the damage assessment. This is important since any damage assessment must compare the value of the investment free from any effects of the impending measure to the value with of that investment with the effects of the measure.

529 Applying 30 January 2020 as the valuation date means that only information available or readily foreseeable as of that date is to be used in the valuation since the value of an asset can only be established with regard to a specific moment in time. At a different point in time, the value may be different.

4. Summary

530 Under the ECT and customary international law, Claimant must be fully compensated for the loss in fair market value of their investment due to the Coal Ban Law. This assessment is to be conducted based on information available as of the valuation date, namely 30 January 2020, which is the date when the Coal Ban Law was submitted to the German Parliament, affecting the value of the Lünen plant.

II. Claimant suffered damages of Rule 66(f) due to the Coal Ban

531 The Coal Ban adopted by Respondent has severely impacted the value of Claimant's Investment and caused Claimant damages of about Rule 66(f).

532 In this Arbitration, Claimant does not challenge the Coal Ban Law as such. Rather, as explained in **Section A** above, the dispute arises out of Respondent's failure to provide compensation in accordance with the ECT and customary international law.

⁴¹² [Exhibit CLA-0092: Asian Agricultural Products Ltd. \(AAPL\) v. Republic of Sri Lanka, ICSID Case No. ARB/87/3, Award, 27 June 1990](#), paras 3, 106-107; ; [Exhibit CLA-0045: CMS Gas Transmission Company v. The Argentine Republic, ICSID Case No. ARB/01/8, Award, 12 May 2005](#), para. 441; [Exhibit CLA-0083: Azurix Corp. v. The Argentine Republic, ICSID Case No. ARB/01/12, Award, 14 July 2006](#), para. 514418; [Exhibit CLA-0116: Murphy Exploration and Production Company International v. Republic of Ecuador II, PCA Case No. 2012-16 \(formerly AA 434\), Partial Final Award, 6 May 2016](#), para. 482-484.

⁴¹³ [Exhibit CER-0001: Secretariat Report](#), para. 4.10.

Accordingly, the aim of this Arbitration is to obtain the compensation Respondent should have provided already with the Coal Ban Law.

533 As set out in **Section F.I** above, the compensation due is the fair market value lost due to the early closure of the Lünen plant in 2031. This requires to compare the fair market value of Claimant's Investment in a world without – or “but for” – the Coal Ban Law (“**But-For**” case) with a world with the Coal Ban Law in place (“**Actual**” case). The only difference between these two scenarios is the impact the Coal Ban Law has on Claimant's Investment, i.e. the mandated shutdown of the Lünen plant already in 2031 (Actual scenario) rather than at the end of its expected at least 40-year lifetime in 2053 (**But-For scenario**).⁴¹⁴

534 For the convenience of the Tribunal, in the following, we summarize the main findings of the Secretariat Report: Secretariat calculate the Actual and But-For values of Claimant's Investment using the widely used and accepted Discounted Cash Flow (“**DCF**”) method (1). Based on Frontier's determination of the Lünen plant's principle cash flows (2), Secretariat model the value of Claimant's Investment in the Actual and But-For cases (3). Secretariat conclude that Claimant's damages (i.e. the difference between the discounted cash flows in the Actual and But-For cases) as of the valuation date conservatively amount to Rule 66(f) (4).

1. The DCF method is the most appropriate method to determine Claimant's damages

535 Secretariat determine Claimant's damages using the Discounted Cash Flow (“**DCF**”) method.⁴¹⁵ The DCF method is an income-based valuation approach, meaning that the value of an asset is determined by the cash flows expected to be generated by this asset in the future (i.e. the difference between incoming and outgoing future cash flows – in other words: revenue and costs).⁴¹⁶

536 The DCF method is the standard approach applied in the energy sector to determine the fair market value of power plants⁴¹⁷ and is also widely recognised as the preferred method for damage assessments in international arbitrations.

537 As Secretariat explain, the DCF method is also particularly appropriate in the present case since the Lünen plant derives its value from generating cash flows and its technical characteristics and value drivers are well understood:

⁴¹⁴ [Exhibit CER-0001: Secretariat Report](#), para. 4.4.

⁴¹⁵ [Exhibit CER-0001: Secretariat Report](#), para. 4.15.

⁴¹⁶ [Exhibit CER-0001: Secretariat Report](#), para. 4.14.

⁴¹⁷ [Exhibit CER-0001: Secretariat Report](#), para. 4.14.

"In the present case, the DCF Approach is the most reliable valuation approach to determine the FMV of Claimant's investment in TKL. This is because it is possible to reliably project the future cash flows that would be generated by the Plant and estimate an appropriate discount rate that reflects time value of money and the risk associated with those projected cash flows. We would also note that the DCF Approach is particularly reliable (and very widely used) when valuing commodity companies where the demand for and price of the commodity can be reliably established (such as, in this case, the demand for and price of electricity in Europe)."⁴¹⁸

538 Conversely, Secretariat conclude that other valuation methods (such as market or cost approaches) are not suitable for assessing the fair market value of Claimant's investment and the damage Claimant suffered:

- Assessing Claimant's damage through a market approach is not possible since it requires that the value of the asset to be valued is observable based on the value of publicly traded companies or transactions.⁴¹⁹ Both is not possible here. Firstly, the value of a power plant cannot be deduced from the value of publicly traded companies "because publicly traded power production companies generally have a large and diversified portfolio of assets and therefore are not reliable in estimating the value of a company with a single hard coal-fired power plant."⁴²⁰ Secondly, there are no comparable transactions around the valuation date whose transaction price could be used as a proxy for the value of the Lünen plant:⁴²¹ Moreover, any transaction would only reflect the value in either the Actual or But-For case but not in both and hence be insufficient to calculate damages.⁴²²
- Also a cost approach, i.e. determining the costs historically spent, is not suitable in the present case. When valuing a going concern with a track record of profitability, a cost approach is generally not considered reliable because the value of such assets is premised on the future financial performance of the asset.⁴²³

539 The DCF method is thus the most appropriate method to determine Claimant's damages. In particular, unlike other valuation approaches, it allows to accurately model the impact of the Coal Ban Law by creating two scenarios (Actual and But-For) where the only differences are the changes caused by the Coal Ban Law.

540 To determine the value of the Lünen plant using the DCF method, first Frontier project the Lünen plant's commodity margins in the Actual and But-For scenarios (2).

⁴¹⁸ [Exhibit CER-0001: Secretariat Report](#), para. 4.15.

⁴¹⁹ [Exhibit CER-0001: Secretariat Report](#), para. 4.16.

⁴²⁰ [Exhibit CER-0001: Secretariat Report](#), para. 4.17.

⁴²¹ [Exhibit CER-0001: Secretariat Report](#), para. 4.17.

⁴²² [Exhibit CER-0001: Secretariat Report](#), para. 4.17.

⁴²³ [Exhibit CER-0001: Secretariat Report](#), para. 4.18.

Secretariat then incorporate these cash flows – together with other, less significant cash flows – in their financial model to determine the value of the Lünen plant in the Actual and But-For scenarios (3), and, on this basis, the damages due to Claimant (4).

2. Frontier determine the commodity margins and model the electricity market and the plant's operation until 2053

541 The first and foremost inputs required for the DCF model are the commodity margins – or gross profits – the Lünen plant generates. These are defined as the difference between the revenues from the sale of electricity and the variable operating costs.⁴²⁴ The latter mainly consist of the fuel (coal) and CO₂ costs.⁴²⁵ These commodities costs, together with those for gas, are also the key drivers for electricity prices since they determine the costs of producing electricity of fossil fuel-fired power plants (which typically are the price setting power plants in the electricity market).⁴²⁶

542 Claimant has asked Frontier to determine these commodity margins in two scenarios (a). To do so, Frontier first derive the electricity prices in two counterfactual scenarios using their Combined Investment and Dispatch Model (“CID” or “Energy Market Model”) (b). Then, they use these electricity prices in their single unit dispatch model (“SPIRIT” or “Dispatch Model”) to model the expected operation and associated commodity margins of the Lünen plant in these scenarios (c).

a) But-For and Actual scenarios

543 As instructed, Frontier determine the commodity margins in two scenarios, one with the Coal Ban Law in place (“Actual” scenario) and one without – or but for – the Coal Ban Law (“But-For” scenario).

544 Most importantly, this means, that in the Actual scenario all lignite- and hard coal-fired power plants are closed in line with the provisions of the Coal Ban Law. In the But-For scenario, hard coal-fired plants (and small⁴²⁷ lignite-fired power plants) are closed at the end of their respective lifetime (or when the continued operation becomes economically non-viable) while the lignite-fired power plants are shutdown as provided in Annex 2 to the Coal Ban Law.

⁴²⁴ [Exhibit CER-0002: Frontier Report](#), para. 101.

⁴²⁵ [Exhibit CER-0002: Frontier Report](#), para. 92.

⁴²⁶ [Exhibit CER-0002: Frontier Report](#), para. 128 and, for further fundamental drivers, para. 99.

⁴²⁷ Up to 150 MW installed capacity, in line with the definition in the Coal Ban Law, see [Exhibit C-0100-DE](#) / [Exhibit C-0100-EN: Coal Ban Law, BGBl. 8 August 2020 \(excerpts\)](#), Section 3 no. 10.

545 The reason for this distinction is that, in this Arbitration, Claimant does not challenge the Coal Ban Law as such. Rather, as explained in **Section A** above, the dispute arises out of Respondent's failure to provide compensation in accordance with the ECT and customary international law.

546 Determining this compensation due requires to compare the fair market value of the Lünen plant with and without the closure mandated by the Coal Ban Law, irrespective of the closure of the lignite-fired power plants as agreed between the government and the lignite industry. Conservatively, the But-For scenario assumes that all other hard coal-fired power plants continue to operate until the end of their expected technical or economic life as does the Lünen plant. Had Claimant instead in the But-For scenario assumed a shutdown of these power plants in accordance with the Coal Ban Law, this would have increased the But-For value of the Lünen plant. The reasons for this is that less generation capacity in the market means, all else equal, less electricity supply while demand remains unchanged. This would result in higher electricity prices and, thus, higher revenues for the Lünen plant and, consequently, a higher But-For value, leading to higher damages.

547 In the following we will now proceed to explain how Frontier determined the commodity margins in the But-For and Actual scenarios.

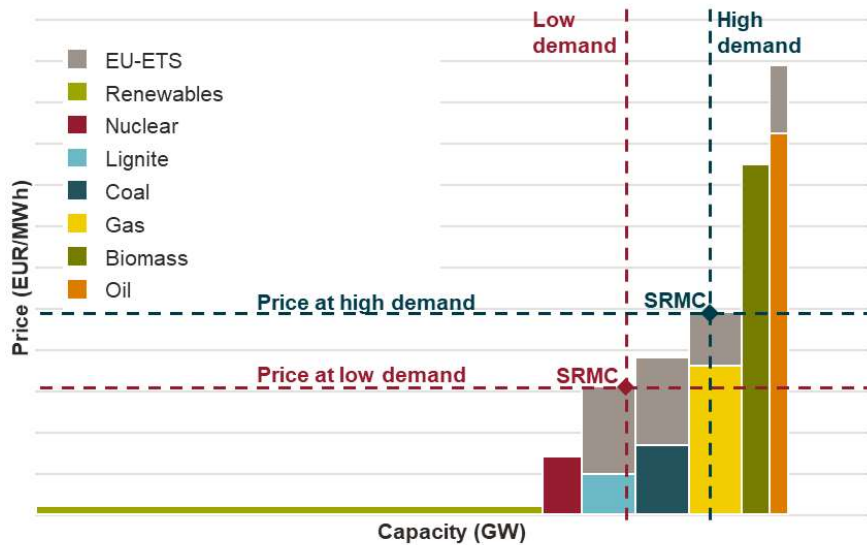
b) Determining electricity prices

548 As set out above, Frontier determine the commodity margins by using two proprietary models. The first one is their Energy Market Model which determines electricity prices. Electricity prices in Germany (and in the EU) are set as follows:⁴²⁸

549 Each plant operator offers to the wholesale electricity market a price at which it is willing to sell its electricity. Plant operators usually make offers equivalent to their marginal costs, i.e. their costs for producing a given unit of electricity. These costs are mainly made up by the respective commodity costs (fuel and CO2 prices). All offers are ranked from lowest to highest. The wholesale electricity price paid to all generators will be the price of the last offer needed to meet the given demand. This means that bid form plants with lower marginal costs will be more often successful than plants with higher marginal costs while plants with higher marginal costs may only be successful in times of high electricity demand. This mechanism is referred to as the "merit order" and can be illustrated by the following merit order curve:⁴²⁹

⁴²⁸ [Exhibit CER-0002: Frontier Report](#), paras. 89-91; [Exhibit CER-0001: Secretariat Report](#), para. 3.16.

⁴²⁹ [Exhibit CER-0002: Frontier Report](#), Figure 5.



550 Accordingly, this Energy Market Model requires a number of inputs, in particular (i) fuel costs; (ii) CO₂ prices; (iii) electricity demand; and (iv) electricity generation capacity.⁴³⁰ In principle, the electricity market assumptions for the Actual and But-For scenarios are identical, except, of course, that the Actual scenario takes into account the Shutdown Path and Order for hard coal-fired power plants.⁴³¹

551 To project fuel (i.e. coal and gas) costs as of the valuation date, Frontier relies on future price notations from coal and gas markets (for 2020 to 2023) and fuel price projections by International Energy Agency's ("IEA").⁴³² The IEA's World Energy Outlook ("WEO") is one of the most comprehensive and authoritative global energy studies. It sets out three different projections for fuel costs which are based on different energy policy assumptions. As Frontier explains, the IEA's Stated Policies scenario is the scenario which would be applied by buyer and seller in a fair market value transaction. It does not only take into account policies already in place (Current Policies scenario) but also policies already announced but not yet implemented.⁴³³

552 Next, Frontier project CO₂ prices. In the EU, power plants need to have EU emission allowances ("EUA") for each ton of CO₂ that is emitted. As for fuel costs, Frontier applies future price notations for the period 2020 to 2023.⁴³⁴ For the period thereafter,

⁴³⁰ [Exhibit CER-0002: Frontier Report](#), para. 128.

⁴³¹ [Exhibit CER-0002: Frontier Report](#), para. 156(d).

⁴³² [Exhibit CER-0002: Frontier Report](#), paras 130, 132-133, also taking into account transportation costs.

⁴³³ [Exhibit CER-0002: Frontier Report](#), para. 131.

⁴³⁴ [Exhibit CER-0002: Frontier Report](#), para. 136.

Frontier applies a carry-forward rate of 3.2% per year in real terms.⁴³⁵ This carry-forward approach is also applied in other studies and in the EU Reference Scenario. It is based on the fact that EUAs do not require storage place and, therefore, can be purchased already now with the buyer only incurring its cost of capital.⁴³⁶ Frontier concludes that its price projection is reasonable and consistent with price projection in other sources.⁴³⁷

553 In addition, Frontier project electricity demand in Germany as well as other European markets. For this, Frontier principally relies on a 2020 forecast prepared by the European Network of Transmission System Operators for Electricity (“**ENTSO-E**”).⁴³⁸ For the demand in the German market, which has highest impact on German electricity prices, Frontier additionally uses country-specific data for the period from 2035 onwards.⁴³⁹

554 On the basis of this data and starting from the existing capacity as of the valuation date, the model itself determines the future development of electricity generation capacity in the European energy market.⁴⁴⁰ In doing so, it takes into account existing decommissioning plans, such as those relating to German nuclear and lignite-fired power plants and, in the Actual scenario, the shutdown of hard coal-fired power plants under the Coal Ban law.⁴⁴¹ It also takes into account reasonable assumptions on minimum and maximum capacity additions. These are particularly relevant to ensure that renewable capacity developments reflect the politically driven expansion of renewables, while avoiding that capacity rises to implausible heights or exceeds geographical limitations.⁴⁴²

555 Finally, taking into account all of the above inputs, the model derives hourly electricity prices which are then transferred to Frontier’s Dispatch Model.

c) Modelling the dispatch of the Lünen plant

556 In a second step, Frontier use their proprietary Dispatch Model to project the dispatch of the Lünen plant.

⁴³⁵ [Exhibit CER-0002: Frontier Report](#), paras 136, 138, and Annex A, paras A.16 to A.18.

⁴³⁶ [Exhibit CER-0002: Frontier Report](#), para. 138.

⁴³⁷ [Exhibit CER-0002: Frontier Report](#), paras 140-141.

⁴³⁸ [Exhibit CER-0002: Frontier Report](#), paras 144-146.

⁴³⁹ [Exhibit CER-0002: Frontier Report](#), paras 147-153.

⁴⁴⁰ Only in non-core regions, generation capacity is taken directly from ENTSO-E’s TYNDP 2020: [Exhibit CER-0002: Frontier Report](#), paras 154-155, 157.

⁴⁴¹ [Exhibit CER-0002: Frontier Report](#), para. 156(d).

⁴⁴² [Exhibit CER-0002: Frontier Report](#), para. 156(a) to (c).

- 557 Their Dispatch Model is build so as to reflect the particular operational characteristics of the Lünen plant. This includes parameters such as the maximum and minimum electric capacity (Rule 66(f) MW, respectively), the efficiency depending on the load of the plant, heat required for starts as well as limitations as to the possibility of starting up and shutting down.⁴⁴³
- 558 In addition, the hourly electricity prices derived form the Energy Market Model and the commodity price projections are fed into the model.⁴⁴⁴ On this basis, the model then determines during which hours the Lünen plant would generate electricity so to operate as profitably as possible.⁴⁴⁵
- 559 In principle, the decision whether the Lünen plant operates or not is rather straightforward: It will operate when electricity prices are higher than the costs the Lünen plant would incur for producing said electricity (“**marginal costs**”; the difference between electricity prices and marginal costs is called “**clean dark spread**”, abbreviated as “**CDS**”).⁴⁴⁶ This principle is subject to certain limitations, for example costs for starting up the plant must also be considered.⁴⁴⁷ The Dispatch Model also takes into account unplanned outages of the plant.⁴⁴⁸ Planned outages (e.g. for maintenance) are taken into account separately.⁴⁴⁹
- 560 To verify that the Dispatch Model properly reflects the actual operation of the Lünen plant, Frontier successfully tested the dispatch results from the model against actual production data (so-called “back-testing”).⁴⁵⁰
- 561 By running the model, Frontier obtain a dispatch schedule (containing hourly and total generation, operating hours and starts) as well as financial outputs, such as annual revenues, annual costs of fuel and CO2 as well as annual gross profits.⁴⁵¹ The model does not provide these outputs for all years between 2020 and 2053 but, in accordance

⁴⁴³ [Exhibit CER-0002: Frontier Report](#), paras 162(a), 167, 169 (with Table 1) and Annex B.

⁴⁴⁴ [Exhibit CER-0002: Frontier Report](#), paras 162(b) and (c), 170.

⁴⁴⁵ [Exhibit CER-0002: Frontier Report](#), para. 163.

⁴⁴⁶ [Exhibit CER-0002: Frontier Report](#), para. 190.

⁴⁴⁷ Cf. [Exhibit CER-0002: Frontier Report](#), para. 179-180. Consequently, a plant may not generate electricity despite a positive CDS since the start-up costs are too high and the period of positive CDS too short. Conversely, a plant may decide to continue operating during a period with a negative CDS if the following periods have positive CDS again.

⁴⁴⁸ [Exhibit CER-0002: Frontier Report](#), para. 168.

⁴⁴⁹ [Exhibit CER-0002: Frontier Report](#), para. 168 and Annex B.

⁴⁵⁰ [Exhibit CER-0002: Frontier Report](#), para. 193.

⁴⁵¹ [Exhibit CER-0002: Frontier Report](#), para. 163.

with standard practices, only for every five years (“photo years”).⁴⁵² The selection of photo years reflects that also the studies and other sources relied on usually do not provide projections for all years but only data points for every 5, 10 or more years. Outputs of the model (including gross profits) between these photos years are interpolated⁴⁵³ and the projections for all years then provided to Secretariat for assessing Claimant’s damages.

3. Secretariat assess Claimant’s damages to be [Redacted] Rule 66(f) [Redacted] as of the valuation date

562 Taking into account all these inputs provided by Frontier, Secretariat build their full financial (i.e. DCF) model using the free cash flows to equity from the Lünen plant. These represent the cash generated by a business that is available to be distributed to the shareholders after covering operating costs, necessary investments, and debt service requirements.⁴⁵⁴

563 Secretariat’s DCF model determines the fair market value based on the market values provided by Frontier (e.g. electricity, fuel and CO2 prices). [Redacted]

[Redacted]
Rule 66(f)
[Redacted]

[Redacted]. This is economically the same determining all costs and revenues at the level of the power plant and then determining Claimant’s share therein.⁴⁵⁵ This does not mean that the [Redacted] 66(f) is irrelevant. Therefore, Secretariat consider the implications of the [Redacted] 66(f) where they affect their modelling, e.g. as regards the debt repayment (see **Section F.II.3.b** below).

564 To determine the value of Claimant’s Investment in the But-For and Actual scenarios, Secretariat follow the same three steps in for both scenarios:⁴⁵⁶

- (a) First, based on the input supplied by Frontier, Secretariat determines the net income of the Lünen plant;
- (b) Second, Secretariat projects the remaining cash flows, in particular the debt repayments; and

⁴⁵² In addition, a further photo year is added in 2023 as the last year when liquid market data (future price notations) are available. Accordingly, photo years are: 2020, 2023, 2025, 2035, 2040, 2045 and 2050, see Frontier Report, paras 114 (with fn 66), 153.

⁴⁵³ [Exhibit CER-0002: Frontier Report](#), para. 188.

⁴⁵⁴ [Exhibit CER-0001: Secretariat Report](#), paras 5.2-5.3.

⁴⁵⁵ [Exhibit CER-0001: Secretariat Report](#), paras 4.8, 5.7.

⁴⁵⁶ [Exhibit CER-0001: Secretariat Report](#), paras 5.3-5.4, 6.1.

(c) Third, Secretariat discount the cash flows to the valuation date to determine the fair market value as of the valuation date.

565 Having determined the fair market value in the But-For and Actual scenario, Secretariat conclude that Claimant's damages as of the valuation date amount to Rule 66(f) [REDACTED].

a) Net income

566 Net income is calculated as revenues minus operating expenses, interest expenses, depreciation, and taxes.⁴⁵⁷

567 The principal revenues of the Lünen plant are the revenues from the sale of electricity.⁴⁵⁸ Secretariat determine these revenues based on the net electricity⁴⁵⁹ generated at a given time and the prevailing market price for electricity at that time,⁴⁶⁰ as determined and calculated by Frontier.⁴⁶¹ In addition, Secretariat take into account further revenues, such as insurance payouts due to repair work at the Plant, exchange rate gains from transactions in foreign currencies, and other minor income.⁴⁶²

568 Secretariat then account for the operating expenses, in particular the fuel and EUA costs based on the expected dispatch of the Lünen plant, all as determined by Frontier.⁴⁶³ In addition, Secretariat add other less significant operating costs such as maintenance, personnel, and insurance costs as well as operational and financial management costs.⁴⁶⁴

457 [Exhibit CER-0001: Secretariat Report](#), paras 5.5, 6.2.

458 [Exhibit CER-0001: Secretariat Report](#), paras 5.5, 6.2.

459 Net electricity is the total electricity generated by the plant minus the electricity consumed by the plant itself.

460 [Exhibit CER-0001: Secretariat Report](#), para. 5.6. Conversely, the revenues from the 66(f) are not relevant since the [REDACTED] Rule 66(f) while a hypothetical buyer would value the investment based on the revenue it could generate from the sale of the electricity on the market, [Exhibit CER-0001: Secretariat Report](#), para. 5.7.

461 [Exhibit CER-0001: Secretariat Report](#), paras 5.8-5.10, 6.3-6.4.

462 [Exhibit CER-0001: Secretariat Report](#), paras 5.12-5.13, 6.5, using the average of these revenues in the financial statements of the last three years prior to the valuation date (2017-2019) and projecting this into the future, increased by inflation. [Exhibit CER-0002: Frontier Report](#), para. 173, 197: Revenues from (commodity) trading activities and for ancillary services are currently not yet taken into account. Such trading is common industry practice and exploits price differentials of these commodities (e.g. at different points in time).

463 [Exhibit CER-0001: Secretariat Report](#), paras 5.14-5.17, 6.3.

464 [Exhibit CER-0001: Secretariat Report](#), paras 5.18, 6.2.

569 A further significant element in the Secretariat's net income calculation is the interest expense since the Lünen plants has been financed with significant debt.⁴⁶⁵ This expense reduces over time as more and more of the loan is repaid. The repayment of the principal is accounted for separately (see next subsection below).

570 Finally, Secretariat account for depreciation in order to determine taxes. In Germany, there are three types of taxes payable by companies, namely corporate income tax, solidarity surcharge, and trade tax. Since TKL is a tax transparent limited partnership, taxes are payable by the limited partners, not TKL, and have been taken into account accordingly by Secretariat.⁴⁶⁶ The only exception is the trade tax which accrues at the level of TKL. However, TKL operates essentially as a break-even company since it sells the electricity generated by the Lünen plant at cost to the shareholders. Therefore, Secretariat projects no trade tax payments.⁴⁶⁷

571 Overall, due to the **66(f)** debt interest payments, the net income determined by Secretariat **Rule 66(f)** in both the But-For and Actual scenarios.⁴⁶⁸ However, in the But-For scenario, after **66(f)** the net income is consistently positive.⁴⁶⁹

b) Debt repayment, working capital etc.

572 In a second step, Secretariat additionally take into account capital expenditure and working capital.⁴⁷⁰ Most importantly, however, Secretariat account for the repayment of the loan.

573 In the But-For scenario, Secretariat apply the ordinary debt repayment schedule. Under this schedule, the final repayment is made in **Rule 66(f)** at the end of the **66(f)** year loan period.⁴⁷¹

574 In the Actual scenario, as a result of the Coal Ban Law, the Lünen plant must shut down already in April 2031 and, thus, **Rule 66(f)** before the last payment under the Project Financing Agreement is due. The Coal Ban Law therefore significantly affects the possibility to repay the Project Financing.

⁴⁶⁵ [Exhibit CER-0001: Secretariat Report](#), paras 5.20-5.21, 6.2.

⁴⁶⁶ [Exhibit CER-0001: Secretariat Report](#), paras 5.25, 6.2.

⁴⁶⁷ [Exhibit CER-0001: Secretariat Report](#), paras 5.26, 6.2.

⁴⁶⁸ [Exhibit CER-0001: Secretariat Report](#), paras 5.27, 6.6.

⁴⁶⁹ [Exhibit CER-0001: Secretariat Report](#), para. 5.27.

⁴⁷⁰ [Exhibit CER-0001: Secretariat Report](#), paras 5.29-5.31, 6.7, where Secretariat also add back depreciation.

⁴⁷¹ [Exhibit CER-0001: Secretariat Report](#), para. 5.32.

575 [REDACTED]
[REDACTED] Rule 66(f)
[REDACTED]
[REDACTED]

576 As a special purpose vehicle whose sole business is the operation of the Lünen plant, it would not have the liquidity to repay the significant outstanding loan. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] Rule 66(f)
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

577 Also any informed, hypothetical buyer would be aware of these consequences of the Coal Ban Law on the Project Financing. [REDACTED]
[REDACTED] Rule 66(f)
[REDACTED]
[REDACTED]

c) Discount rate

578 The annual cash flows determined in the Actual and But-For scenario reflect the value of those cash flows in the given year. In order to account for the time value of money

472 [REDACTED] Rule 66(f)
[REDACTED]

473 [REDACTED] Rule 66(f)
[REDACTED]

474 [REDACTED]
[REDACTED] Rule 66(f)
[REDACTED]

475 [REDACTED] Rule 66(f)
[REDACTED]

476 [REDACTED] Rule 66(f)
[REDACTED]

477 [Exhibit CER-0001: Secretariat Report](#), para. 6.8.

(having GBP 1 now is worth more than having 1 GBP in the future) and risks related to realising these cash flows, Secretariat discount the annual cash flows to the valuation date, i.e. to their present value.⁴⁷⁸ The sum of the present values of the annual cash flows in the Actual or But-For scenario gives the fair market value for the given scenario.

579 Since Secretariat determined the free cash flows to equity (i.e. to the equity investor, not to the asset), the appropriate discount rate is the cost of equity (not the weight average cost of capital, WACC), i.e. the return that investors would require in order to induce them to invest.⁴⁷⁹

580 The cost of equity is determined based on the Capital Asset Pricing Model (“**CAPM**”).⁴⁸⁰ According to CAPM, when investing in a business an investor will require a return above the return for a risk-free asset in order to be compensated for the market risk it is exposed to.⁴⁸¹ Under the CAPM formula, the cost of equity consists of the risk-free rate of return plus an equity risk premium, the latter multiplied by the beta factor (reflecting a measure of systemic risk).⁴⁸²

581 In Germany, German government bonds are used to measure the return on a risk-free investment.⁴⁸³ Secretariat use bonds with a tenor consistent with the duration of the period over which cash flows are being projected.

582 In the But-For scenario, where cash flows up to 2053 are modelled, Secretariat use the longest available tenor, namely 20-year bonds.⁴⁸⁴ At the valuation date, the yield on German government bonds was slightly negative (negative 0.06%). Conservatively, Secretariat take into account that, at the time, German government bonds yields were depressed since the European Central Bank was purchasing large quantities of government bonds. Therefore, Secretariat instead apply the average yield over a 5-year period (0.8%).⁴⁸⁵

583 Accordingly, in the Actual scenario, where cash flows until 2031 are modelled, Secretariat use shorter term 10-year German government bonds, and likewise apply the

⁴⁷⁸ [Exhibit CER-0001: Secretariat Report](#), para. 5.34.

⁴⁷⁹ [Exhibit CER-0001: Secretariat Report](#), paras 5.2, 5.34.

⁴⁸⁰ [Exhibit CER-0001: Secretariat Report](#), para. 5.34.

⁴⁸¹ [Exhibit CER-0001: Secretariat Report](#), paras 5.35, 5.38.

⁴⁸² [Exhibit CER-0001: Secretariat Report](#), paras 5.34, 5.37.

⁴⁸³ [Exhibit CER-0001: Secretariat Report](#), para. 5.35.

⁴⁸⁴ [Exhibit CER-0001: Secretariat Report](#), para. 5.35.

⁴⁸⁵ [Exhibit CER-0001: Secretariat Report](#), para. 5.36.

average yield over a 5-year period, which yielded a return of 0.25% as of the valuation date.⁴⁸⁶

584 For both, the But-For and Actual scenario, Secretariat assess the equity risk premium on top of the risk-free rate to be 5.7 %.⁴⁸⁷ This reflects the general or systemic market risk. The risk of a given investment may however be higher or lower than this general risk. This is measured by the beta factor: a beta factor below 1 reflects a risk below the systemic market risk, a beta factor above 1 reflects a risk above the systemic risk. Secretariat derive the beta factor for investing in the Lünen plant from a group of publicly traded comparable companies for which this beta factor can be determined.⁴⁸⁸ They arrive at a levered (i.e. after debt) beta factor of **66(f)**.⁴⁸⁹

585 Using the CAPM formula set out above, Secretariat arrive at a discount rate of **66(f)** for the But-For scenario and of **66(f)** for the Actual scenario.⁴⁹⁰ They apply the respective discount rates to all annual cash flows in the corresponding scenario, resulting in the fair market value of the Lünen plant for each of these scenarios.

4. Claimant's damages amount to at least **66(f)**

586 In a final step Secretariat determine Claimant's damages. The damage is calculated by subtracting the Actual value from the But-For value.⁴⁹¹

587 Without the Coal Ban (i.e. in the But-For scenario), as of 30 January 2020, the fair market value of the Lünen plant was **Rule 66(f)** and of Claimant's share therein **Rule 66(f)**.⁴⁹² With the Coal Ban (i.e. in the Actual scenario), the fair market value of the Lünen plant is reduced to **Rule 66(f)** and of Claimant's share therein to **Rule 66(f)**.⁴⁹³ The Coal Ban has thus deprived the Lünen plant of all value.

588 Hence, Claimant's total damages amount to **Rule 66(f)**.⁴⁹⁴

⁴⁸⁶ [Exhibit CER-0001: Secretariat Report](#), paras 6.12-6.13.

⁴⁸⁷ [Exhibit CER-0001: Secretariat Report](#), para. 5.38.

⁴⁸⁸ [Exhibit CER-0001: Secretariat Report](#), para. 5.37.

⁴⁸⁹ [Exhibit CER-0001: Secretariat Report](#), para. 5.37.

⁴⁹⁰ [Exhibit CER-0001: Secretariat Report](#), para. 5.39 with Table 2, para. 6.13 with Table 3.

⁴⁹¹ [Exhibit CER-0001: Secretariat Report](#), para. 7.2.

⁴⁹² [Exhibit CER-0001: Secretariat Report](#), para. 5.40.

⁴⁹³ [Exhibit CER-0001: Secretariat Report](#), para. 6.14.

⁴⁹⁴ [Exhibit CER-0001: Secretariat Report](#), para. 7.2.

5. Summary

589 In summary, Claimant's damages of at least [REDACTED] Rule 66(f) have been robustly determined.

590 In particular, with the DCF method, Secretariat applied the most widely used and accepted valuation method for valuing operating assets in the energy sector. On this basis, Secretariat – together with Frontier – also derived corresponding electricity price paths and determined at what times it would be profitable for the Lünen plant to operate. Taking into account the revenues from electricity generation as well as other revenues and costs, Secretariat established the annual cash flows in the But-For and Actual scenario and discounted them to the valuation date, i.e. 30 January 2020, at a rate of [REDACTED] 66(f) in the But-for scenario and of [REDACTED] 66(f) in the Actual scenario.

591 Secretariat determined that the Coal Ban Law has destroyed all of the Lünen plant's fair market value, causing Claimant's damages in an amount of [REDACTED] Rule 66(f). This damage amount is also conservative for other reasons. Throughout their assessment, Secretariat made various choices leading to lower damage figure, such as "normalizing" the risk-free rate rather than using a negative one.

592 This damage (i.e. the difference between the fair market value in the Actual and But-For scenarios) derives mainly from the fact that, due to the Coal Ban Law, the Lünen plant has to shut down by 1 April 2031 while without the Coal Ban Law it could have operated for the remainder of its minimal lifetime, i.e. up to 22 years longer.

III. Claimant must also be compensated for any additional tax losses

593 The principle of full compensation requires that Claimants are put into "*the situation which would, in all probability, have existed if that [impugned] act had not been committed.*" Consequently, Claimant must also be compensated for any additional tax liabilities resulting from the awarded damages, i.e. taxes Claimant must pay on the awarded damages which they would not have to pay had Respondent not breached its obligations under the ECT ("**tax gross-up**").

594 Given that the exact amount of taxes can likely only be determined once tax authorities have assessed taxes after an award in favour of Claimant has been rendered, Claimants only request a declaratory award from the Tribunal finding that, in principal, Claimant is entitled to compensation for damages resulting from additional taxes.⁴⁹⁵ However, it reserve the right to amend its current requests.

⁴⁹⁵ Claimants' request thus significantly differs from claims filed, and denied, in other cases, where investors asked to be awarded specific amounts.

IV. Claimant is not obliged to take damage mitigation measures

595 For the convenience of the Tribunal – but without prejudice to the burden of proof – Claimant will set out in this section that the aforementioned damage is not to be adjusted on the basis of the concept of damage mitigation. Hence, while it is for Respondent to prove that reasonable damage mitigation measures could be or could have been taken (1), we will show that converting the Lünen plant to a Rule 66(f) power plant (2) or participating in the shutdown tenders (3) does not qualify as reasonable damage mitigation measure.

1. Respondent would have to prove that Claimant failed to act reasonably

596 Damage mitigation is an objection which can be raised by the party responsible to provide compensation. It requires an injured party to act reasonably when faced with an unlawful act and not to act against its own self-interest.⁴⁹⁶ The burden of proof for a failure to do so lies with the party invoking that failure⁴⁹⁷ and is a high one⁴⁹⁸.

597 The standard of reasonableness is understood to mean that a claimant should neither be “*unreasonably inactive following a breach of treaty*” nor “*engage[] in unreasonable conduct following a breach of treaty*”.⁴⁹⁹ Examples are that a claimant may be required to continue its business activity despite its business having been damaged or to cease its business activity if its continuation would only increase damages.⁵⁰⁰

⁴⁹⁶ [Exhibit CLA-0118: *William Richard Clayton et al. v. The government of Canada*, PCA Case No. 2009-04, Award on Damages, 10 January 2019](#), para. 204; [Exhibit CLA-0119: *Achmea B.V. v. Slovak Republic*, PCA Case No. 2008-13, Final Award, 7 December 2012](#), para. 320; [Exhibit CLA-0055: International Law Commission's Draft Articles on Responsibility of States for Internationally Wrongful Acts, with commentaries, 2001](#), vol. II, Part Two, pp. 31 et seqq., Article 31, para. 11.

⁴⁹⁷ [Exhibit CLA-0120: *Cairn Energy PLC and Cairn UK Holdings Limited \(CUHL\) v. Government of India*, PCA Case No. 2016-07, Award, 21 December 2020](#), para. 1887; [Exhibit CLA-0121: *AIG Capital Partners, Inc. and CJSC Tema Real Estate Company Ltd. v. The Republic of Kazakhstan*, ICSID Case No. ARB/01/6, Award, 7 October 2003](#), para. 10.6.4.4; [Exhibit CLA-0122: *Unión Fenosa Gas S.A. v. Arab Republic of Egypt*, ICSID Case No. ARB/14/4, Award, 31 August 2018](#), para. 10.126.

⁴⁹⁸ [Exhibit CLA-0120: *Cairn Energy PLC and Cairn UK Holdings Limited \(CUHL\) v. Government of India*, PCA Case No. 2016-07, Award, 21 December 2020](#), para. 1888; [Exhibit CLA-0123: C. Osborne, D. Grunwald and Ö. Kama, *Contributory Fault, Mitigation and other Defences to Damages*, *The Investment Treaty Arbitration Review*, 18 June 2021](#), p. 5.

⁴⁹⁹ [Exhibit CLA-0118: *William Richard Clayton et al. v. The government of Canada*, PCA Case No. 2009-04, Award on Damages, 10 January 2019](#), para. 204; affirmed in [Exhibit CLA-0120: *Cairn Energy PLC and Cairn UK Holdings Limited \(CUHL\) v. Government of India*, PCA Case No. 2016-07, Award, 21 December 2020](#), para. 1887.

⁵⁰⁰ See [Exhibit CLA-0124: *Middle Eastern Cement v. Arab Republic of Egypt*, ICSID Case ARB/99/6, Award of 12 April 2002](#), para. 168; [Exhibit CLA-0119: *Achmea B.V. v. Slovak Republic*, PCA Case No. 2008-13, Final Award, 7 December 2012](#), para. 320.

598 Rebuilding a destroyed business activity is however not required. A Respondent cannot demolish one business activity and then refuse to pay damages because the claimant did not build up a new business activity. As the tribunal in *AIG v. Kazakhstan* explains, this would “*only encourage Governments to breach with impunity solemn provisions of an international treaty and weaken the protection of foreign investors – which such a treaty is expressly designed to safeguard.*”⁵⁰¹

599 In particular, a claimant is not required to make alternative investments. Tribunals have even held that a claimant is not even required to accept an alternative site for the same investment.⁵⁰² Even less so a claimant can be required to make an additional investment to modify its existing business.

600 The standard of “reasonable” also means that a claimant is not required to take measures whose prospects are uncertain. For instance, in *Union Fenosa v. Egypt*, the tribunal held that a claimant could not even be expected to close down its business because it was “*not obvious that the overall amount of its claims would be reduced*”.⁵⁰³ This shows that tribunals expect a high degree of certainty that a proposed measure would have actually mitigated the damage.

601 While, as set out above, the burden of proof is on Respondent, it is clear that Respondent will not be able to meet this burden, as we will explain in the following.

2. Converting the Lünen plant to alternative fuels is not a damage mitigation measure, even less so a reasonable one

602 Based on this standard, converting the Lünen plant to alternative fuels goes already conceptually beyond the scope of damage mitigation (a). In any event, such a conversion would not be a reasonable damage mitigation measure to be taken by Claimant or a hypothetical buyer (collectively, “Investor”) (b)

501 [Exhibit CLA-0121: AIG Capital Partners, Inc. and CJSC Tema Real Estate Company Ltd. v. The Republic of Kazakhstan, ICSID Case No. ARB/01/6, Award, 7 October 2003, para 10.6.4\(5\)\(a\).](#)

502 [Exhibit CLA-0121: AIG Capital Partners, Inc. and CJSC Tema Real Estate Company Ltd. v. The Republic of Kazakhstan, ICSID Case No. ARB/01/6, Award, 7 October 2003, para 10.6.4\(4\); Exhibit CLA-0125: Southern Pacific Properties \(Middle East\) Limited v. Arab Republic of Egypt, ICSID Case No. ARB/84/3, Award, 20 May 1992, para. 172.](#)

503 [Exhibit CLA-0122: Unión Fenosa Gas S.A. v. Arab Republic of Egypt, ICSID Case No. ARB/14/4, Award, 31 August 2018, para. 10.128. Cf. also Exhibit CLA-0126: Hrvatska Elektroprivreda d.d. v. Republic of Slovenia, ICSID Case No. ARB/05/24, Award, 17 December 2015, para. 217.](#)

a) Converting the Lünen plant to alternative fuels is already conceptually beyond the scope of damage mitigation

603 Converting the Lünen plant to alternative fuels is already conceptually beyond the scope of damage mitigation.

604 First, neither Claimant nor a hypothetical buyer has the power to decide on such a conversion since Claimant only holds a minority share in TKL. An Investor would therefore need to speculate that a shareholder decision to convert the plant to alternative fuels would be taken at a later point.

605 Second, as just explained, damage mitigation does not require an injured party to make an investment or to change its business activity. Yet, a conversion would require an Investor to do precisely that.

606 Converting the Lünen plant into a [Redacted] Rule 66(f) power plant [Redacted] Rule 66(f) [Redacted] Rule 66(f) would go far beyond damage mitigation and essentially mean building a completely new power plant. An Investor cannot be expected to effectively tear down an existing power plant and invest hundreds of millions of euro to build a new one just to mitigate damages.

607 An Investor is not even required to make any – and even less so substantial – additional investments to mitigate damages. Even a conversion to a low-efficiency and, thus, significantly less competitive, [Redacted] Rule 66(f) power plant [Redacted] Rule 66(f) would cost approximately [Redacted] Rule 66(f) and a conversion to [Redacted] Rule 66(f), depending on the type of conversion carried out.⁵⁰⁴ These would be substantial investments amounting to up to approximately [Redacted] 66 (f) of the total equity investment by the shareholders in TKL.⁵⁰⁵

608 By prohibiting the firing of coal in Claimant's coal-fired power plant, Respondent has destroyed Claimant's existing business. Such a conversion would mean that an Investor would need to change its coal-fired power plant into a different type of plant. Otherwise, it would have no further business. However, as explained above, obliging an Investor to develop new business activities is beyond what is required under damage mitigation standards.

609 Third, to attribute any value to a potential conversion, an Investor would need to be confident that the capital for such a conversion could be obtained. Again, it would need to speculate that, about 11 years after Respondent destroyed the value of Claimant's

⁵⁰⁴ [Exhibit CER-0002: Frontier Report](#) paras 205(a), 216(a).

⁵⁰⁵ [Redacted] Rule 66(f), respectively, divided by the [Redacted] Rule 66(f) equity investment into TKL amounts to approximately [Redacted] 66(f).

Investment, banks would willing to provide an additional loan to TKL for this conversion – and to do this likely at a time when TKL's substantial existing outstanding loan is not yet fully repaid.⁵⁰⁶ Moreover, especially for a conversion [redacted 66(f)], this would presuppose that, at that time, banks would even still provide financing for fossil fuel-fired power plants.

610 Alternatively, an Investor would need to be willing to provide own equity for the conversion and speculate that also all other shareholders would be willing to do so. It would need to do so, knowing that the investment required for the conversion would amount to about up to [redacted 66(f)] of the equity provided for the construction of the full plant.

611 For all these reasons, taken individually, but even more so considered cumulatively, a conversion to a biomass- or gas-fired power plant would not be a reasonable damage mitigation measure.

b) In any event, an investment to convert the Lünen plant to alternative fuels cannot reasonably be expected

612 Even if converting the Lünen plant to alternative fuels would fall – in principle – in the scope of possible damage mitigation measures (*quod non*), Respondent further would need to establish that converting the Lünen plant would be a reasonable damage mitigation measure. It is not.

613 Even leaving aside whether a conversion would be legally and technically feasible, converting the Lünen plant to a [redacted Rule 66(f)] power plant could not be reasonably expected of an Investor.

614 Frontier and Secretariat assess three conversion options, [redacted Rule 66(f)]:

- [redacted Rule 66(f)] Option 1 would require an investment of [redacted Rule 66(f)] to establish the technical capabilities to burn [redacted Rule 66(f)] but make no investments to increase the possible fuel throughput.⁵⁰⁷ This would have required additional investments in [redacted Rule 66(f)]. Not investing in additional [redacted 66(f)] capacity therefore means that less thermal energy can be generated and, consequently, the Lünen plant could only operate at up to [redacted Rule 66(f)].

⁵⁰⁶ Cf. [Exhibit CER-0001: Secretariat Report](#), para. 6.33.

⁵⁰⁷ [Exhibit CER-0002: Frontier Report](#), para. 206(a).

of its maximum capacity (i.e. [Rule 66(f)] MW) and with reduced efficiency (up to [66(f)] instead of 46%).⁵⁰⁸

- Under [Rule 66(f)] Option 2, this investment [Rule 66(f)] would be made, increasing the necessary investment to [Rule 66(f)]⁵⁰⁹ and allowing the plant to operate at full capacity⁵¹⁰.
- For [Rule 66(f)] conversion option, Frontier and Secretariat assess only an adaptation of the existing plant to a [Rule 66(f)] power plant, not the construction of an essentially entirely new [66(f)] power plant.⁵¹¹ Even this would require an investment of [Rule 66(f)] for the entire plant.⁵¹² Such a conversion would permit to operate the plant at the same capacity (746 MW) and efficiency (up to 46%) as when burning coal.⁵¹³ Yet, such a power plant would be significantly less competitive compared both to a coal-fired power plant and a [Rule 66(f)] power plant.

615 However, none of these conversions could be reasonably expected from an investor. The variable operating (i.e. marginal) costs in all of these scenarios would significantly higher compared to those of the original coal-fired power plant.⁵¹⁴ This mean that generating electricity with the Lünen plant would only be profitable – and, hence, the plant will only operate – when electricity prices are particularly high.⁵¹⁵ As a consequence, its electricity generation drops by [66(f)] (Option 1), [66(f)] (Option 2), and [66(f)] ([Rule 66(f)] [Rule 66(f)]), respectively, compared to the operation as a coal-fired power plant.⁵¹⁶ Likewise, also the gross profits, decrease by [66(f)] (Option 1), [66(f)] (Option 2), and [66(f)]

⁵⁰⁸ [Exhibit CER-0002: Frontier Report](#), paras 206(b), 208 with Table 2.

⁵⁰⁹ [Exhibit CER-0002: Frontier Report](#), para. 206(a).

⁵¹⁰ [Exhibit CER-0002: Frontier Report](#), para. 206(b).

⁵¹¹ As explained above, damage mitigation cannot oblige an investor to tear down a power plant and build a completely new one for several hundred million euro.

⁵¹² [Exhibit CER-0002: Frontier Report](#), para. 216(a).

⁵¹³ [Exhibit CER-0002: Frontier Report](#), para. 216(b).

⁵¹⁴ For [Rule 66(f)], see [Exhibit CER-0002: Frontier Report](#), para. 206. In particular, shipping and unloading costs (lower energy density means larger volumes required) as well as fuel ([Rule 66(f)]) costs are higher. For example, in 2020, the price of [Rule 66(f)] to generate a megawatt of heat was almost [Rule 66(f)] higher than the price of coal to generate the same amount of thermal energy. This price difference could only be offset if prices for EUAs would be almost [Rule 66(f)] higher than they actually are ([Rule 66(f)] [Rule 66(f)]). For the [Rule 66(f)], see [Exhibit CER-0002: Frontier Report](#), para. 226. In particular, fuel costs are significantly higher than for coal-fired power generation. In 2020, these higher fuel costs would have again required CO2 prices being [Rule 66(f)] lower than in reality to offset the difference in fuel costs.

⁵¹⁵ [Exhibit CER-0002: Frontier Report](#), para. 210.

⁵¹⁶ [Exhibit CER-0002: Frontier Report](#), para. 209, 219 with Table 3.

(**Rule 66(f)**), respectively.⁵¹⁷ This would render such an conversion investment non-viable, or, if at all, only if one considered a long operating lifetime realistic.⁵¹⁸

616 Moreover, a new investment into a conversion would be a significantly riskier investment than investing in an already operating power plant as there may be e.g. technical issues which increase costs or delay the completion of the conversion.⁵¹⁹ In addition, as regards **Rule 66(f)**, there is evidence of a **Rule 66(f)** in the future which could lead to **Rule 66(f)** and/or significantly higher fuel prices.⁵²⁰

617 Beyond these economic considerations, a conversion would also not be reasonable for other reasons. In particular, an Investor would need to be willing to attribute value to such a conversion despite the increased regulatory risk in Germany that – as had just happened with the Coal Ban Law – also **Rule 66(f)** power plants would not be able to operate until 2053.⁵²¹ In order to take it into account, Respondent would need to establish that a hypothetical buyer would attribute value to this possible conversion already now, i.e. would be willing to pay a higher price for Claimant's investment in the Actual scenario because of this hypothetical conversion. No reasonable buyer would however attribute any value to this option.⁵²²

618 Hence, an investment to convert the Lünen plant to **Rule 66(f)** could not be reasonably expected.

3. Participating in the shutdown tenders would not have reduced Claimant's damages

619 In its explanatory memorandum, Respondent suggests that operators of New Plants would not require compensation because they could participate in the shutdown tenders and thereby obtain compensation. Respondent might therefore suggest that

⁵¹⁷ [Exhibit CER-0002: Frontier Report](#), para. 209, 220.

⁵¹⁸ [Exhibit CER-0001: Secretariat Report](#), paras 6.26, 6.30-6.31.

⁵¹⁹ [Exhibit CER-0001: Secretariat Report](#), para. 6.35.

⁵²⁰ [Exhibit CER-0002: Frontier Report](#), para. 212(a).

⁵²¹ [Exhibit CER-0001: Secretariat Report](#), para. 6.34; cf. Frontier Report, para. 212(b) and (c). Recent EU directives indicate an erosion of political support to use **Rule 66(f)** for electricity generation purposes. The permissibility of support schemes for the use of **Rule 66(f)** to generate electricity has already been significantly limited. Moreover, since due to the energy transition **Rule 66(f)** is also required in other areas (such as the industry), politicians consider that **Rule 66(f)** should be reserved for "higher value applications" instead of power generation.

⁵²² [Exhibit CER-0001: Secretariat Report](#), para. 6.32.

Claimant could and should have mitigated damages by participating in the shutdown tenders. However, such an argument would have no merit.

620 Firstly, participation in the shutdown tenders would not qualify as a damage mitigation measure in the first place because it is nothing which Claimant, as of the valuation date, could have done to reduce its damages. Any participation in a tender could have only occurred after the valuation date.

621 Secondly, and irrespective of the former, neither Claimant nor a hypothetical buyer would have the power to make the decision whether to participate in the shutdown tenders because Claimant only holds a minority interest in TKL.

622 Thirdly, nonetheless, Claimant has asked Secretariat to assess whether a participation in the tender would have reduced damages. The answer is clearly no. For their assessment, Secretariat conservatively assumed that the Lünen plant would be able to win the tender and would be able to do so at the maximum bid prices.⁵²³ Yet, even under such a favourable assumption, the Lünen plant would not have been able to increase its Actual value by participating in the shutdown tenders. As a clean, highly efficient power plant, it would have always been able to generate great value by continuing to operate until its forced early closure in 2031 than the shutdown incentives it could have received by closing 4 to 10 years earlier.⁵²⁴

Shut Down Date	Actual FMV of TKL (€ Millions)
July 2021	€
Dec 2021	€
July 2022	€
July 2023	€
July 2024	€
April 2025	€
April 2026	€
April 2027	€
April 2031	€

623 Thus, participating in the tender would not have reduced but rather increased Claimant's damages.

⁵²³ [Exhibit CER-0001: Secretariat Report](#), para. 6.17.

⁵²⁴ [Exhibit CER-0001: Secretariat Report](#), paras 6.19-6.20 with Table 6.

624 Therefore, the Actual value of [REDACTED] Rule 66(f) calculated by Secretariat for the Lünen plant is to be applied without adjustments for any damage mitigation measures.⁵²⁵

V. Claimant is entitled to pre- and post-award interest at the 12-month EURI-BOR rate plus four percentage points

625 In addition to compensation for the loss in value of their investment, Claimant is entitled to pre- and post-award interest.

626 It is also generally recognised that full compensation requires interest to be paid on the fair market value from the date of valuation.⁵²⁶ Pursuant to Article 38(1) of the Articles on State Responsibility, the rate of interest shall be set so as to “ensure full compensation”.⁵²⁷ For a commercial entity, this means that it must be compensated at a commercial rate. For lawful expropriations, this is also specifically stated in Article 13(1), subparagraph 3, of the ECT, which provides that “*compensation shall also include compensation at a commercial rate established on a market basis*”.⁵²⁸ There is no reason to apply a lesser standard in cases of unlawful expropriations or other acts unlawful under the ECT.⁵²⁹

627 It is also widely recognised, and even considered “*jurisprudence constante*”, that full compensation requires compound interest to be awarded, that is, interest accrues on interest owed.⁵³⁰

⁵²⁵ [Exhibit CER-0001: Secretariat Report](#), para. 6.36.

⁵²⁶ See only [Exhibit CLA-0055: International Law Commission's Draft Articles on Responsibility of States for Internationally Wrongful Acts, with commentaries, 2001](#), vol. II, Part Two, pp. 31 et seqq., Article 38, para. 2: “*As a general principle, an injured State is entitled to interest on the principal sum representing its loss, if that sum is quantified as at an earlier date than the date of the settlement of, or judgement or award concerning, the claim and to the extent that it is necessary to ensure full reparation. As explained in the footnote to this passage, the caveat “to the extent that it is necessary to ensure full reparation” refers simply to the situation no pre-award interest is required because “the loss is assessed in current value terms as at the date of the award”.*

⁵²⁷ [Exhibit CLA-0114: United Nations General Assembly, Resolution 56/83: Responsibility of states for internationally wrongful acts, UN Doc. A/RES/56/83, 12 December 2001](#), Annex, Article 38(1): “*Interest on any principal sum due under this chapter shall be payable when necessary in order to ensure full reparation. The interest rate and mode of calculation shall be set so as to achieve that result.* (emphasis added).

⁵²⁸ [Exhibit CLA-0002: Energy Charter Treaty](#), Article 13(1), subparagraph 3.

⁵²⁹ [Exhibit CLA-0127-ES / Exhibit CLA-0127-EN: STEAG GmbH v. Kingdom of Spain, ICSID Case No. ARB 15/4, Award, 17 August 2021 \(excerpts\)](#), para. 102.

⁵³⁰ That compounded – rather than simple – interest now represents a form of “*jurisprudence constante*” has been recognised, inter alia, by the tribunals in the following cases: [Exhibit CLA-0128: Gemplus, S.A., SLP, S.A. and Gemplus Industrial, S.A. de C.V. v. United](#)

628 Interest accrues from the moment the damage is caused⁵³¹ until full payment of the principal amount plus interest. Interest is also due on any costs awarded to Claimant, accruing from the date they are awarded until full payment.⁵³²

629 In their report, Secretariat determine that the 12-month EURIBOR rate plus four percentage points (equivalent to “*plus 400 basis points*”) constitutes a “*commercial rate established on a market basis*”.⁵³³ EURIBOR (European Inter-Bank Overnight Borrowing Rate) is one of the most commonly quoted commercial interest rate benchmarks. It is established on the basis of commercial, market-based agreements between large banks.⁵³⁴ However, other market participants cannot borrow at this rate but pay a premium on top of the EURIBOR rate – with four percentage points being a typical premium. Hence, EURIBOR plus four percentage points represents a typical commercial rate of interest.⁵³⁵ This assessment is consistent with the findings of many other

[Mexican States](#), ICSID Case No. ARB(AF)/04/3 & ARB(AF)/04/4, Award, 16 June 2010, para. 16.26; [Exhibit CLA-0129: Hulley Enterprises Limited \(Cyprus\) v. The Russian Federation](#), UNCITRAL, PCA Case No. 2005-03 AA226, Final Award, 18 July 2014, para. 1689; [Exhibit CLA-0130: Oko Pankki Oyj \(formerly called OKO Osuuspankkien Keskuspankki OYJ\) et al v. The Republic of Estonia](#), ICSID Case No. ARB/04/6), Award, 19 November 2007, para. 349; [Exhibit CLA-0108: Quiborax SA and Non Metallic Minerals SA v. Plurinational State of Bolivia](#), ICSID Case No ARB/06/2, Award, 16 September 2015, paras 523-524 (with further references). See also [Exhibit CLA-0131: Ol European Group B.V. v. Bolivian Republic of Venezuela](#), ICSID Case No. ARB/11/25, Award, 10 March 2015, paras 948-949, where the tribunal affirms that in “*recent arbitral practice, a preference towards compound interest exists*” and concludes that “*compound interest is indispensable to fully compensate the investor*”. This is also affirmed by distinguished scholars such as Irmgard Marboe and Sergey Ripinsky: [Exhibit CLA-0104: S. Ripinsky with K. Williams, Damages in International Investment Law](#), London British Institute of International and Comparative Law, 2008, footnote 135 at p. 386; [Exhibit CLA-0132: I. Marboe, Calculation of Compensation and Damages in International Investment Law](#), Oxford: Oxford University Press, 2009, para. 6.236, concluding, after reviewing arbitral practice, that “*compound interest as opposed to simple interest appears to be predominantly accepted as appropriate in recent international investment arbitration. It is regard as better reflecting actual economic realities both for the purpose of remedying the loss actually incurred by the injured party and for the prevention of unjustified enrichment of the respondent State.*”

531 [Exhibit CLA-0104: S. Ripinsky with K. Williams, Damages in International Investment Law](#), London British Institute of International and Comparative Law, 2008, footnote 135 at p. 376.

532 [Exhibit CLA-0133: S.D. Myers, Inc. v. Government of Canada](#), UNCITRAL, Final Award (Concerning the Apportionment of Costs Between the Disputing Parties), 30 December 2002, paras 50-51; [Exhibit CLA-0134: Walter Bau v. The Kingdom of Thailand](#), UNCITRAL, Award, 1 July 2009; [Exhibit CLA-0129: Hulley Enterprises Limited \(Cyprus\) v. The Russian Federation](#), UNCITRAL, PCA Case No. 2005-03 AA226, Final Award, 18 July 2014, para. 1690; [Exhibit CLA-0135: Olympic Entertainment Group AS v. Republic of Ukraine](#), PCA Case No. 2019-18, Award, 15 April 2021, para. 198.

533 [Exhibit CER-0001: Secretariat Report](#), paras 7.4-7.5.

534 [Exhibit CER-0001: Secretariat Report](#), para. 7.5.

535 [Exhibit CER-0001: Secretariat Report](#), para. 7.5.

investment tribunals which held that EURIBOR/LIBOR is the most appropriate basis for determining interest and applied an additional four percentage points as premium.⁵³⁶

630 Secretariat also confirm that compound interest is the norm for commercial loans and required to make a claimant whole.⁵³⁷ For the present case, Secretariat determine a compounding corresponding to the tenor of the interest rate (i.e. 12 months) to be appropriate.⁵³⁸

631 Thus, under the principle of full compensation, Claimant is entitled to interest at the 12-month EURIBOR rate plus four percentage points from the valuation date until full payment.

632 Including interest, Claimant's damage thus amounts to Rule 66(f) as of the date of this Memorial.⁵³⁹

⁵³⁶ [Exhibit CLA-0136-ES](#) / [Exhibit CLA-0136-EN: Flughafen Zürich A.G. v. Venezuela](#), ICSID Case No. ARB/10/19, Award, 18 November 2015, para. 965; [Exhibit CLA-0131: OI European Group B.V. v. Bolivian Republic of Venezuela](#), ICSID Case No. ARB/11/25, Award, 10 March 2015, paras 944-945; [Exhibit CLA-0137: Mobil Investments Canada Inc. and Murphy Oil Corporation v. Canada](#), ICSID Case No. ARB(AF)/07/4, Awards (excerpt), 20 February 2015, para. 170; [Exhibit CLA-0138: Olympic Entertainment Group AS v. Republic of Ukraine](#), PCA Case No. 2019-18, Award, 15 April 2021, para 185; [Exhibit CLA-0139: Rusoro Mining Ltd. v Bolivarian Republic of Venezuela](#), ICSID Case No. ARB(AF) 12 5, Award, 22 August 2016, para. 838; [Exhibit CLA-0116: Murphy Exploration and Production Company International v. Republic of Ecuador II](#), PCA Case No. 2012-16 (formerly AA 434), Partial Final Award, 6 May 2016, para: 517. See also [Exhibit CLA-0041: Ioan Micula, Viorel Micula, S.C. European Food S.A, S.C. Starmill S.R.L. and S.C. Multipack S.R.L. v. Romania](#), ICSID Case No. ARB/05/20, Final Award, 11 December 2013, paras 262, 1250.

⁵³⁷ [Exhibit CER-0001: Secretariat Report](#), para. 7.6.

⁵³⁸ [Exhibit CER-0001: Secretariat Report](#), para. 7.6.

⁵³⁹ [Exhibit CER-0001: Secretariat Report](#), para. 7.7.

G. PRAYERS FOR RELIEF

633 Claimant respectfully requests the Arbitral Tribunal to

- (A) **DECLARE** that the Respondent has breached its obligations towards Claimant under Part III of the Energy Charter Treaty;
- (B) **ORDER** the Respondent to pay to Claimant damages in the amount of Rule 66(f) together with interest thereon as from 30 January 2020 until the date of full payment, at a rate corresponding to the 12-month EURIBOR rate plus 4 percentage points and compounded annually;
- (C) **DECLARE** that the Respondent shall compensate Claimant for any and all tax that may be levied on any of the Claimants by German or Swiss tax authorities as a consequence of any damages being awarded by the Tribunal to the Claimant; and
- (D) **ORDER** the Respondent to compensate Claimant for its costs of arbitration in an amount to be specified later together with interest thereon and, as between the parties, alone to bear all costs for the arbitration, including compensation, fees and costs of the Tribunal and ICSID.

Claimant reserves the right to subsequently amend or supplement the relief sought in this arbitration.

Hamburg, 26 July 2024.

Luther Rechtsanwaltsgesellschaft mbH

[signed]

Dr Richard Happ



[signed]

Tim Rauschnig



[signed]

Vanessa Z. de Meireles

