

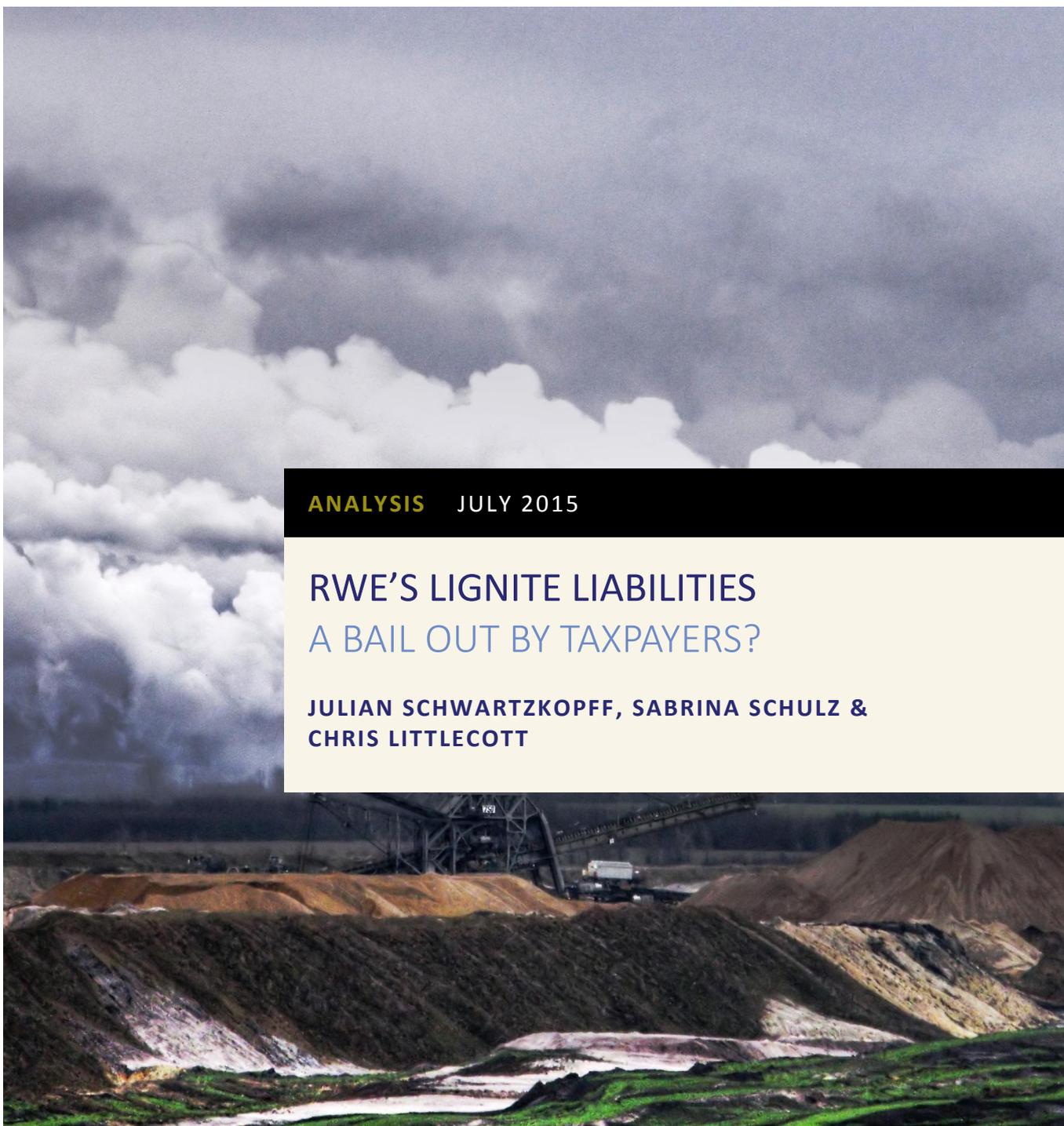


E3G

ANALYSIS JULY 2015

RWE'S LIGNITE LIABILITIES A BAIL OUT BY TAXPAYERS?

**JULIAN SCHWARTZKOPFF, SABRINA SCHULZ &
CHRIS LITTLECOTT**



This version has been revised on 9 July 2015 to incorporate a new Figure 3 and associated commentary. The original version was published on 5 July 2015.

About E3G

E3G is an independent, non-profit European organisation operating in the public interest to accelerate the global transition to sustainable development. E3G builds cross-sectoral coalitions to achieve carefully defined outcomes, chosen for their capacity to leverage change. E3G works closely with like-minded partners in government, politics, business, civil society, science, the media, public interest foundations and elsewhere. More information is available at

<http://www.e3g.org>

E3G
Neue Promenade 6
Berlin, 10178
Germany
Tel: +49 (0) 30 2887 3405
www.e3g.org

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Cover image: Flickr, taken by Henning Mühlinghaus. Garzweiler open pit mine and Niederaußem plant, one of Germany's oldest lignite power stations. Located in NRW and operated by RWE.

Acknowledgements: Special thanks to Dave Jones of Sandbag for providing background analysis. Any errors remain our responsibility.

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Introduction

On 1st July 2015, the German government agreed to introduce a new strategic reserve instead of the previously-proposed climate levy. The financial markets saw this as a successful result for the aggressive lobbying strategy of energy utility RWE, with the group's shares seeing an immediate increase in value of 6.4%.¹ Instead of facing additional costs for its dirtiest lignite power stations, RWE will now be paid by German taxpayers to withdraw these plants from the market.

If introduced, this approach would perversely reward RWE for its past record of economic mismanagement and opposition to climate policies and energy market reforms. But the European Commission still needs to consider whether the strategic reserve is compatible with regulations that limit state aid to failing companies. The Commission must therefore scrutinise RWE's recent activities.

The recent reality has been that RWE is losing money on many of its old and inefficient lignite plants. Despite having committed to deep cost reductions amid falling profits and massive write-downs, the company has resisted calls to close them. Why has RWE been willing to incur these losses? Our analysis suggests that RWE has kept uneconomic lignite plants open with the intent of receiving a public bail out.

RWE is losing money on its old lignite plants

RWE admitted in 2015 that their total conventional generation fleet was making zero cash.² Figure 1 below shows that when "day-to-day capital expenditure" is included (i.e. the costs of maintaining and upgrading equipment), their entire 43GW conventional generation portfolio is not making money. This assumed a power price of €32/MWh, which is exactly in line with market prices now and for the foreseeable future.³

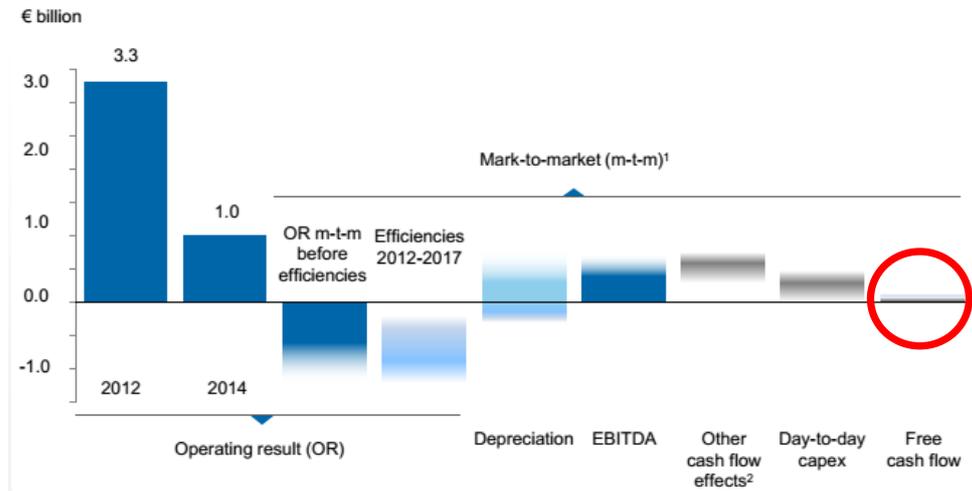
Proponents of lignite power generally argue that lignite is the only profitable and secure domestic energy source that Germany has left. However, the current difficulties of RWE, which owns almost half of Germany's lignite capacity, show that this is not automatically true. Many of RWE's older lignite plants are very likely running at a loss.

¹ <http://www.bloomberg.com/news/articles/2015-07-02/germany-to-close-coal-plants-in-effort-to-curb-pollution>

² See **slide 8** of the RWE presentation "Paving the way for growth with continued focus on financial discipline". The conventional fleet includes fossil fuel as well as nuclear power plants.

³ At 30-June, the average power price for 2016 to 2020 was also €32/MWh. See <https://www.eex.com/en/market-data/power/derivatives-market/phelix-futures#!/2015/07/01>

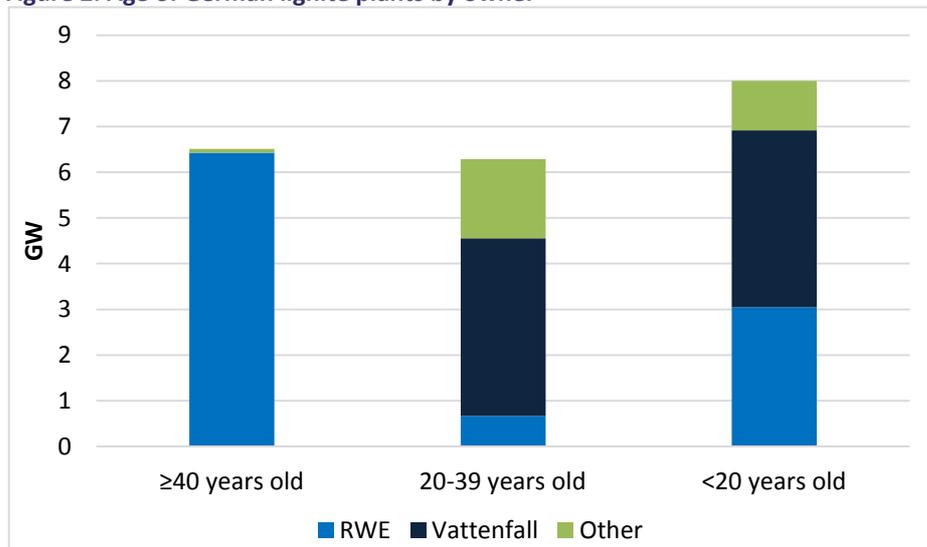
Figure 1: RWE cash flow for conventional power generation (mark-to-market)



Source: RWE

RWE’s CEO, Peter Terium, has admitted that 35 to 45% of their current conventional fleet is unprofitable.⁴ The profitability of RWE’s lignite in particular is not immediately transparent as RWE does not publish a detailed breakdown for all units. However, lignite accounts for 10GW out of 43GW of the company’s total conventional capacity. 6.3GW of the 10GW is 40 years or older. This will go up to 7GW next year with the Neurath unit E turning 40. With an estimated efficiency factor of only 34%,⁵ these plants are very inefficient. They also have high operating and electricity self-consumption costs, compared to their output. RWE also owns the oldest lignite plants in the country – the plants owned by RWE’s competitors, mainly Vattenfall and some municipal utilities, are generally much younger (see Figure 2 below).

Figure 2: Age of German lignite plants by owner



Source: BnetzA Kraftwerksliste

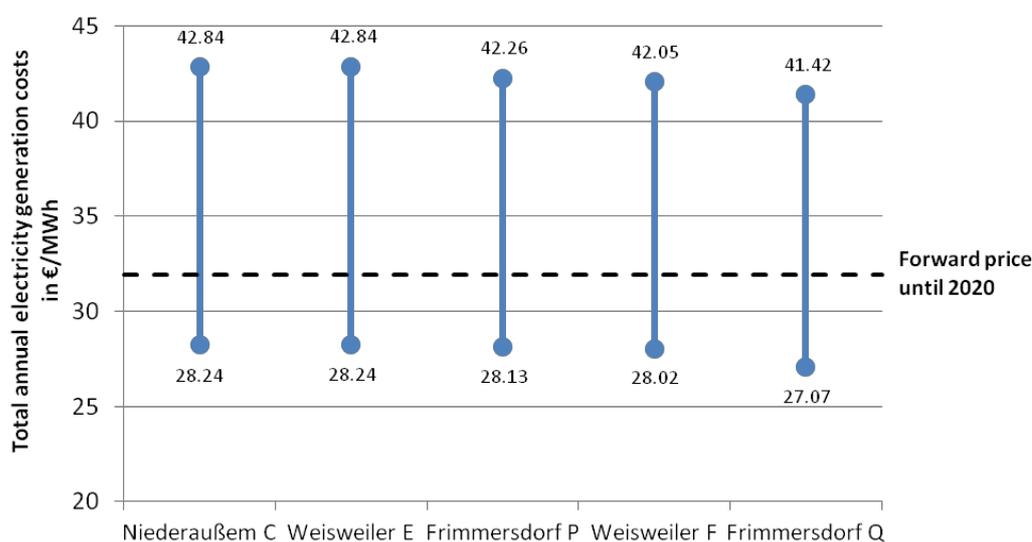
⁴ <http://www.wsj.com/articles/rwe-plans-further-cost-cuts-1425968788>

⁵ http://www.bund.net/fileadmin/bundnet/pdfs/klima_und_energie/140828_bund_klima_energie_laufzeitbegrenzung_kohlekraftwerke.pdf

More specifically, RWE’s 300MW lignite units are almost certainly unprofitable. Back in 2013, the CEO of RWE Generation said that their 300MW lignite units had “massive difficulties to earn their full costs.”⁶ At that time, the electricity price was at €38/MWh. Today, with power prices 16% lower, i.e. at €32/MWh, it is almost certain that these power plants are unprofitable. RWE owns 11 such units, all of which are located in the region of North-Rhine Westphalia (NRW) and were built in the 1960 and 1970s.

The situation seems to be particularly bad regarding RWE’s oldest units in Niederaußem, Weisweiler and Frimmersdorf. In May 2015, RWE (alongside MIBRAG and Vattenfall) disclosed their cost structure to investment bank Lazard. Lazard subsequently aggregated and published the data providing an insight into the profitability of these companies’ lignite.⁷ E3G estimates that the electricity generation costs at these three power stations lie in the range of €27 to €43/MWh (see Figure 3). **Compared to current and forward electricity prices of €32/MWh it is highly questionable whether these units are profitable.** The difference between the lower and upper estimates is “fixed fuel and mining costs”. These relate to costs such as machinery and land purchasing. In the short-term, many of these costs may not be avoidable. However, in the medium-term, most of them should be avoidable – not least because closing the oldest units will leave more lignite for the remaining units, making further expansion of mines unnecessary. Vattenfall has already recognised this, and stopped future expansion of mines. Since this data was published as late as May 2015 it can be assumed that it already includes the extensive cost-cutting measures that RWE has conducted over the last few years. This leaves little ambiguity that - if these units are not unprofitable - they are at best operating at the margin of profitability.

Figure 3: Profitability of RWE’s oldest lignite units



Source: E3G estimate

⁶ <http://www.ingenieur.de/Branchen/Energiewirtschaft/Unrentabel-RWE-ueberprueft-Kraftwerk>

⁷ Lazard (2015) **Potentielle Auswirkungen des “Nationalen Klimaschutzbeitrags” auf die Braunkohlewirtschaft**

RWE outage data furthermore reveal that four of RWE's most inefficient lignite units are each having major outages, lasting at least five weeks this year.⁸ Regular outages are mandated for maintenance reasons. Extraordinarily long outages imply that additional maintenance work is necessary to retain the operating permit. This affects two units (300MW and 600MW) at the Niederaußem plant, as well as 300MW at Neurath and 600MW at Weisweiler. It is questionable whether these plants are profitable enough in current market conditions to justify this capital expenditure.

All this is happening despite RWE's announcement, back in 2013, that it would undertake "selective capex".⁹ Selective capital expenditure implies that units not justifying capital expenditure will be closed. Units P and Q in Frimmersdorf in particular had already been cited as "under intense review" for profitability reasons back in August 2013.¹⁰ RWE has also long been aware of the development of electricity prices, with RWE Generation CEO, Matthias Hartung, stating in 2013 that "the only direction for electricity prices is down".¹¹ Given this background, it would seem only logical to close at least some unprofitable lignite plants. Yet all these units are still open and RWE has been opaque about what it wants to do with them. It has announced neither closure dates nor any kind of transition plan.

RWE is in deep trouble

RWE's current conventional power generation business is barely breaking even. This is against a backdrop of suffering a €2.7bn loss, the biggest in the company's history, in 2013. The record loss was largely due to a massive write-down of its existing coal capacity. While RWE did again post a profit in 2014, its operating revenue decreased again by approximately 25%.¹² The fall in revenue from conventional power was even steeper, at 29% compared with 2013. The company expects revenue to keep falling over the course of 2015.¹³

This situation has forced RWE to cut costs by selling off its oil and gas unit, Dea, and slashing jobs. In 2014, RWE's workforce shrank by 5,100 to under 60,000 for the first time in the history of the company. Investments over 2015 to 2017 will be half what they were over the last three years.¹⁴ The company plans further cuts amounting to €2bn in costs per year until 2017.¹⁵ Yet these cuts have so far not led RWE to consider closing its oldest lignite power plants. RWE have announced the closure of over 8GW of capacity between 2013 and 2016. Most of these closures have already been completed.¹⁶ Yet only 150MW of this comes from lignite, from its two smallest units at the Goldenberg power station. At the same time, RWE has shut down over 3.7GW of much less polluting gas stations.

⁸ Gathered from **outage data** published by RWE

⁹ See slide 12 of RWE **presentation** "3 steps to long term value"

¹⁰ See slide 5 of RWE **presentation** "3 steps to long term value"

¹¹ <http://www.ingenieur.de/Branchen/Energiewirtschaft/Unrentabel-RWE-ueberprueft-Kraftwerk>

¹² RWE annual reports

¹³ Reuters (2015) **RWE says worst not over yet**

¹⁴ RWE 2014 annual report

¹⁵ <http://www.nasdaq.com/article/rwe-to-shrink-administration-as-part-of-costcutting-program-20150413-00072>

¹⁶ See **slide 9** of the RWE presentation "Paving the way for growth with continued focus on financial discipline".

It should be noted that RWE had already shut down 13 unprofitable lignite power units of ca. 150 MW each in 2011 and 2012. However, RWE had been forced to close these units as part of a deal with the city administration of Duesseldorf to obtain an environmental permit for building two new 1.1GW lignite blocks at its Neurath power plant.¹⁷ This wave of closures affected RWE's oldest and most inefficient units at the time, all built in the 1950s and 1960s. **This shows that RWE can indeed close lignite plants if this is required by government decisions, but beyond this the company has done virtually nothing to develop a phase-out programme for its high-carbon assets.**

To make matters worse, it seems that RWE will struggle to shift to a more sustainable path given its current business model. Indeed, it moved aggressively to expand its coal and lignite fleet only a few years ago. In 2012, two lignite blocks of 1.1GW each came online at RWE's Neurath power plant. RWE has also invested in two new hard coal units of 765MW capacity each at its Westfalen plant. While unit E has started producing electricity in 2014, unit D has been bedevilled by technical problems which have increased costs from €2bn to €3bn – and it still has not been connected to the grid.¹⁸ All these new power plants will likely end up as stranded assets, i.e. without recovering their investment costs.

RWE's renewables business RWE Innogy, on the other hand, has posted an operating result of only €186m in 2014, which is a tiny fraction of the company's overall revenue. **RWE is not alone among the 'Big Four' German utilities having missed the opportunity to invest in renewables, which is now a major growth area.** While it has been clear since the entry into force of the German Renewable Energy Act (EEG) in 2000 that the power sector would need to undergo significant change, Germany's big utilities continued to invest heavily in fossil power while largely shunning renewables – despite the availability of support through the EEG. As a result, E.ON, RWE, EnBW and Vattenfall today own merely 5% of all installed renewable electricity generation capacity in Germany.¹⁹

However, E.ON, EnBW and Vattenfall are reading the signs of the times and re-orienting their business models. While Vattenfall is looking to divest its lignite assets in Germany, EnBW was bidding, albeit unsuccessfully, to acquire renewable energy company Prokon and its 500 MW onshore wind park. E.ON has even taken the radical step of spinning off its conventional power generation business into a new company, Juniper, while re-focusing on renewables and demand side solutions. **RWE is growing increasingly isolated in resisting change.**

RWE's CEO, Terium, has announced that RWE is looking to grow in the areas of retail, grids and renewables.²⁰ At the same time, however, the company has cut staff numbers of its renewables unit in half²¹ and is turning off the tap for new investment in renewables. While RWE still invested around €1bn in renewables in 2013, this had fallen to €723m in 2014. This

¹⁷ http://www.brd.nrw.de/umweltschutz/immissionsschutz/pdf/Genehmigungsbescheid_RWE_Power_BoA.pdf

¹⁸ http://www.nw-news.de/owl/regionale_wirtschaft/11252141_Maengel_im_Kraftwerk_Hamm_RWE_droht_Milliardenverlust.html

¹⁹ http://www.agora-energiewende.de/fileadmin/downloads/publikationen/CountryProfiles/Agora_CP_Germany_web.pdf

²⁰ <http://www.rwe.com/app/Pressecenter/Download.aspx?pmid=4012733&datei=2>

²¹ <http://www.bloomberg.com/news/articles/2013-11-06/rwe-s-innogy-renewables-unit-to-cut-almost-half-of-jobs>

represents a 33% drop in one year.²² Between 2015 and 2017, the company is planning to spend only €1bn in total on renewable energy – or roughly €333m per year.²³

To be fair, **RWE's company structure is more complicated than that of its competitors. It is not well suited to react flexibly to new trends.** The RWE group encompasses eight subsidiary companies many of which have subsidiary companies themselves. In total, around 100 companies are part of the RWE empire, and they all have their own boards of up to 20 people. Since municipalities hold 25% of RWE's shares the company cannot easily pull out of some locations, in particular North-Rhine Westphalia. However, one way or the other, RWE will need to find a way to adapt to the necessities of the *Energiewende*. Because if its lignite fleet is in trouble now, the situation is only going to get worse in the future.

The market outlook is set to become worse for lignite

Falling electricity demand and increasing deployment of renewables, operating at near-zero marginal cost, continue to cast shadows over the market outlook for lignite. Upcoming reform of the EU Emissions Trading System (ETS) could result in a considerable cost increase for lignite, the most polluting of all fossil fuels. Some of RWE's old lignite plants will also have to make additional investments in the coming years to comply with new pollution limits under the EU Industrial Emissions Directive, which are expected to bite after 2020.

Moreover, analysis confirming that current measures are not enough to deliver the 40% emissions reduction that Germany aims for by 2020 made additional emissions cuts from the power sector necessary.²⁴ The coalition government therefore agreed, as part of the Climate Action Programme adopted in December 2014, to reduce power sector emissions by 22 Mt until 2020.

Under normal conditions, the combination of these drivers would likely result in these plants being retired over the coming years. But a new capacity reserve, to be introduced to deliver emissions savings of 11 to 12.5m t of CO₂ by 2020, could see some of them receiving a financial reward to reduce operations and then be decommissioned. Thus, taxpayers will end up subsidising a reduction in capacity that should have happened anyway, while consumers will have to contend with higher electricity prices as a result.

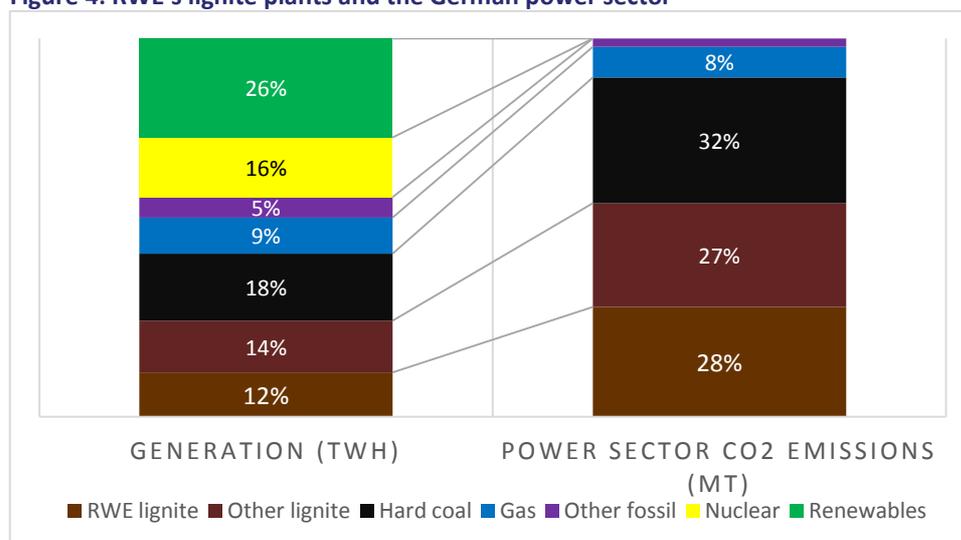
Under the new capacity reserve for lignite plants, the power sector will deliver only slightly more than half the level of emissions reductions that would have been delivered under an alternative proposal, the climate levy (*Klimabeitrag*), with an additional burden being placed on other sectors. This means that **Germany will still have to deal with power sector emissions in the near future.** The mitigation potential in other sectors like transport and buildings is much harder to unlock. As Figure 4 illustrates, lignite is the logical first place to start reducing power sector emissions.

²² RWE 2014 Annual Report

²³ <http://www.wsj.com/articles/rwe-plans-further-cost-cuts-1425968788>

²⁴ FÖS (2014) Klimaschutzplan lässt zu viel offen; DIW (2014) Wochenbericht Nr. 47

Figure 4: RWE's lignite plants and the German power sector



Sources: UBA, EU ETL, BNetzA, RWE Annual Report 2014

Lignite is by far the most emissions-intensive one of all fossil fuels. This becomes particularly apparent when comparing electricity generation with power sector emissions. Lignite accounts for 55% of power sector emissions, but only 26% of electricity generation. This amounts to 18% of all German emissions.

RWE's lignite power plants alone are responsible for 28% of German power sector emissions – or almost 10% of total German CO₂ emissions – despite only supplying 12% of electricity.

Across their portfolio, RWE emit more than any other company in Europe. In 2014, the company alone was responsible for 15% of all emissions registered under the ETS.²⁵ Over half of these emissions came from their German lignite portfolio. In this regard, RWE cannot wriggle out of the necessary structural transformation of its portfolio. The company will continue to have a legislative target pinned to its back.

In the public debate as well, the case against lignite is growing stronger. Independent analyses by a range of stakeholders from academia, NGOs, the energy sector, and the Federal Environment Agency have concluded that a transition out of unabated coal is both necessary and achievable. The vast majority of the analyses point to the feasibility of a complete German coal phase-out by 2040 at the latest.²⁶ **This can be interpreted as general agreement that lignite would need to go first, with its exit completed as early as 2030.** Several studies have also modelled the economic implications of shutting down large amounts of coal capacity (10-

²⁵ EU ETL and RWE 2014 Annual Report

²⁶ See e.g. Enervis (2014): **Der „ideale Kraftwerkspark“ der Zukunft; Flexibel, klimafreundlich, kosteneffizient – Maßstab für einen optimierten Entwicklungspfad der Energieversorgung bis 2040**, Greenpeace/Ecofys (2012): Kohleausstiegsgesetz - Verteilung der Reststrommengen und Folgenabschätzung für den Kohlekraftwerkspark, FVEE (2010): **Eine Vision für ein nachhaltiges Energiekonzept auf Basis von Energieeffizienz und 100 % erneuerbaren Energien**, UBA (2010): **Energieziel 2050 – 100% Strom aus erneuerbaren Quellen**, Sachverständigenrat für Umweltfragen (2011): **Sondergutachten: Wege zur 100 % erneuerbaren Stromversorgung**, WWF (2009): **Modell 2050 – Klimaschutz vom Ziel her denken**, BUND (2015): **Abschaltplan: Laufzeitbegrenzung für die ältesten Braunkohleblöcke bis 2020**

15GW) in a short time frame and found that consumer electricity prices and security of supply would not be negatively affected.²⁷

In the face of current unprofitability and future risks, it is curious that RWE are not taking proactive decisions to close lignite power stations. By keeping near-zero profit generation open, they arguably cause problems for themselves as this reduces the power price and load factor for their other lignite power stations, and indeed for all their German coal and gas power stations. RWE's lobbying strategy over recent years provides a possible explanation for this stance.

Too big to fail?

On the face of it, RWE's business strategy seems puzzling. Once the company's lobbying strategy is taken into account, the picture becomes clearer. RWE's generation portfolio is so carbon-heavy that it has persisted in defending its ageing assets – all the while counting on a government bailout as RWE would be too big to fail.

RWE has followed a two-pronged strategy in recent years. **On the one hand, the company has lobbied aggressively against virtually every climate policy measure in the EU and Germany.**²⁸

They have called for less ambition and more protection on a wide range of issues including ETS reform,²⁹ emissions performance standards,³⁰ Germany's EEG reform,³¹ electricity market reform,³² Germany's 2020 climate targets³³ and most recently the proposed climate levy.³⁴ Slowing down progress on European and German climate policy protects RWE's power generation portfolio, which is emissions-intensive even by the standards of most major utilities.

On the other hand, RWE has been outspoken in seeking the introduction of capacity payments in Germany.³⁵ After trying unsuccessfully to secure a capacity market as part of Germany's ongoing electricity market reform, RWE switched to supporting an enlarged capacity reserve to ward off the climate levy proposed in March 2015. A capacity mechanism, in whatever form, is a very attractive proposition for a company that is running unprofitable power plants.

²⁷ DIW (2014) Szenarien einer nachhaltigen Kraftwerkentwicklung in Deutschland, Greenpeace/Brainpool (2015) **Auswirkungen eines partiellen Kohleausstiegs**

²⁸ This approach has been such a continued part of RWE's approach that a senior manager at their UK subsidiary complained to an E3G colleague in 2008 that the German board of RWE were "only just emerging from climate denial". Little appears to have changed over the past 7 years in respect to their lobbying positions.

²⁹ http://ec.europa.eu/clima/consultations/docs/0017/organisations/rwe_en.pdf , <http://www.reuters.com/article/2015/05/20/climatechange-business-rwe-idUSL5N0YB51Y20150520>

³⁰ <http://www.publications.parliament.uk/pa/cm201011/cmselect/cmenergy/writev/523/eps14.htm>

³¹ <http://www.wiwo.de/unternehmen/energie/subventionen-industrie-fuerchtet-eeg-reform/9009070-3.html>

³² <http://www.bmwi.de/BMWi/Redaktion/PDF/Stellungnahmen-Gruenbuch/150210-rwe,property=pdf,bereich=bmwi2012,sprache=de,rwb=true.pdf>

³³ <http://www.tagesspiegel.de/politik/energie-wende-streit-um-das-deutsche-klimaziel-bis-2020/10934146.html>

³⁴ <http://www.rwe.com/web/cms/de/37110/rwe/presse-news/pressemitteilungen/pressemitteilungen/?pmid=4012792>

³⁵ <http://www.sueddeutsche.de/wirtschaft/streit-mit-bund-ueber-kosten-rwe-koennte-weitere-kraftwerke-stilllegen-1.2085448> , <http://www.wiwo.de/unternehmen/energie/energieversorger-grosse-resignation-bei-rwe/9567860.html>

Looking at RWE’s entire generation portfolio, capacity payments would turn RWE’s old lignite stations from a liability into an asset. RWE is basically asking the government to bail out its old lignite power plants as a means of rescuing its failed business model and record of obstructionism. But this only works if these plants are still open by the time a capacity mechanism is introduced. RWE seem to have made a bet that, due to their important position in certain regions and the jobs they provide there, they were too big to fail in the eyes of regional and national governments – and the introduction of a capacity reserve suggests that they have been partially successful.

In their submission to the green paper consultation on Germany’s future electricity market design from February this year,³⁶ RWE argued for a “decentralised capacity market” as proposed by the German energy industry association (BDEW) and the association of municipal utilities (VKU).³⁷ The strategy on the part of RWE and other utilities was to argue that security of supply was not ensured over the course of the *Energiewende* and that more expensive electricity was a price worth paying for the security which a capacity market would provide. RWE was, at that stage, part of a broader power sector coalition, even though Vattenfall had already broken ranks in 2014, arguing that a capacity market was unnecessary and uneconomic.³⁸

It is, however, doubtful whether Germany really has a security of supply problem. There is currently overcapacity of 10GW³⁹, and Germany has the lowest average grid interruption time in the entire EU.⁴⁰ Renewables are registering healthy growth and the Economics and Energy Ministry (BMWi) is currently drafting an electricity market reform that will provide more flexible grids to accommodate them.

However, the battle had already been lost when the green paper consultation was opened in early 2015. Two BMWi-commissioned studies in the second half of 2014 had concluded that capacity markets posed substantial risks to market efficiency without necessarily improving the reliability of the system or reducing CO₂ emissions. A reserve mechanism was proposed instead, where plants providing back-up capacity would not have access to the regular electricity market.⁴¹ As stated by Minister Gabriel on several occasions, the BMWi clearly favoured a capacity reserve over a capacity market.⁴²

The debate around the climate levy offered a second chance in this regard. **While the overwhelming majority of analyses agreed that the climate levy would be the least costly**

³⁶ <http://www.bmwi.de/BMWi/Redaktion/PDF/Stellungnahmen-Gruenbuch/150210-rwe,property=pdf,bereich=bmwi2012,sprache=de,rwb=true.pdf>

³⁷ [https://www.bdew.de/internet.nsf/id/3A90CD61C49A1952C1257D0E003A0C54/\\$file/BDEW-Positionspapier_Ausgestaltung%20eines%20dezentralen%20Leistungsmarkts_300614_oA.pdf](https://www.bdew.de/internet.nsf/id/3A90CD61C49A1952C1257D0E003A0C54/$file/BDEW-Positionspapier_Ausgestaltung%20eines%20dezentralen%20Leistungsmarkts_300614_oA.pdf)

³⁸ <http://www.spiegel.de/wirtschaft/unternehmen/energiewende-vattenfall-haelt-kapazitaetsmaerkte-fuer-ueberfluessig-a-960268.html>

³⁹ <http://foes.de/pdf/2015-03-Factsheet-Entwicklung-Kohlekraft-Kapazitaeten.pdf>

⁴⁰ http://www.ceer.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Electricity/Tab3/C13-EQS-57-03_BR5.1_19-Dec-2013_updated-Feb-2014.pdf

⁴¹ <http://www.frontier-economics.com/publications/security-of-supply-in-the-electricity-sector-does-the-german-energy-only-market-deliver/>

⁴² <http://www.welt.de/wirtschaft/energie/article136589614/Die-Strombranche-versteht-ihren-Minister-nicht-mehr.html>, <http://www.handelsblatt.com/politik/deutschland/strommarkt-reform-gabriel-will-kein-hartz-iv-fuer-kraftwerke/10905400.html>

and most effective means of reducing German power sector emissions⁴³, it posed a direct threat to RWE’s business model. Indeed, given the perilous profitability of their older lignite assets, RWE are probably correct in saying that too many of their plants would need to be shut down if reductions in generation were required through the climate levy – with cascading effects across their fleet.

When the proposal for the climate levy became public in March this year, RWE immediately reacted by putting out claims that the measure would put 100,000 jobs at risk; that it would not produce any net reduction in CO₂ emissions; and that it would result in “the phase-out of all German lignite in the near term”.⁴⁴ Each of these claims were proven to be false. A study commissioned by the German Federal Environment Agency put the number of jobs affected through the climate levy at 4,700.⁴⁵ The alleged displacement of emissions to other EU countries under the ETS would not have happened either, since the climate levy was designed to take the additional emissions certificates that utilities would have been required to buy for breaching emissions limits off the market. Finally, the claim that this measure would have initiated the end of all lignite in Germany was exaggerated, as it would only have affected the oldest and most inefficient plants.

However, it should be recognised that although the measure would have led to lower job losses than RWE claims, these would still have been significant – especially given that they would have been concentrated mainly in two regions: North-Rhine Westphalia and Lusatia in Eastern Germany. The lignite mines and power plants that RWE operates are intertwined with local jobs and industry, and RWE used this to force the hand of local politicians. **It would appear that over recent years RWE has been willing to keep old lignite plants open long past their due date, trusting that the government would be willing to bail them out with a capacity mechanism if necessary.**

These concerns over jobs saw RWE side with the energy and energy-intensives union (IG BCE) and local politicians in affected regions in arguing for a capacity reserve for old lignite plants as an alternative to the climate levy. **It is fortunate for RWE that the local and sectoral effects of the climate levy enabled the company to forge a new coalition, as it has become increasingly isolated among Germany’s major utilities.** RWE was the only big utility that publicly opposed the climate levy. While Vattenfall and E.ON stayed quiet, EnBW actually came out in favour of the proposal with a letter of support to Minister Gabriel.⁴⁶

Selling capacity, not power?

In the end, RWE’s lobbying strategy turned out to be partially successful. Their opposition helped kill the originally-proposed climate levy. Instead, there will now be a 2.7GW capacity reserve. Yet it will only achieve annual emissions reductions of 11 to 12.5 Mt CO₂ and at much higher cost than the initial proposal.⁴⁷ **The new proposal, agreed on 1 July, thus lightens the**

⁴³ <http://www.klimaretter.info/politik/hintergrund/19098-renaissance-des-klimaschutzbeitrages>, http://www.diw.de/sixcms/detail.php?id=diw_01.c.509353.de

⁴⁴ <http://www.rwe.com/web/cms/de/37110/rwe/presse-news/pressemitteilungen/pressemitteilungen/?pmid=4012792>

⁴⁵ UBA (2015) **Klimabeitrag für Kohlekraftwerke: Wie wirkt er auf Stromerzeugung, Arbeitsplätze und Umwelt?**

⁴⁶ Süddeutsche Zeitung (2015) **Dicke Luft in der Strombranche**

⁴⁷ http://www.claudiakemfert.de/fileadmin/user_upload/Inserts/Kurzbewertung_des_neuesten_Kompromissvorschlags.pdf

burden on the power sector while shifting the costs from the utilities to taxpayers. Instead of fining inefficient plants for polluting, the utilities will be paid by the government to only operate their plants in case of supply shortages.

RWE is set to be the single largest beneficiary of the reserve. According to DIW, old lignite stations owned by RWE will likely account for roughly 1.5 GW of the 2.7 GW reserve (see table 1). The reserve is set to be phased in from 2017 onwards, with closure of the plants required by 2020. According to Energy Minister Gabriel, the level of capacity payments will be €230m per year.⁴⁸ It is not clear yet on what basis the payments will be calculated; the agreement from 1 July only states that “operators can get cost-based compensation based on available market data at the time of negotiations”.⁴⁹

Table 1: Provisional list of units to be included in the capacity reserve

Plant	Unit	Owner	Region	Start-up date	Age in 2020	Capacity (MW)
Niederaußem	C	RWE	NRW	1965	55	294
Weisweiler	E	RWE	NRW	1965	55	312
Frimmersdorf	P	RWE	NRW	1966	54	284
Weisweiler	F	RWE	NRW	1967	53	304
Frimmersdorf	Q	RWE	NRW	1970	50	278
Jänschwälde	C	Vattenfall	Lusatia	1984	36	465
Jänschwälde	D	Vattenfall	Lusatia	1985	35	465
Buschhaus	D	MIBRAG	Centr. Germany	1985	35	352
Total						2,754

Source: DIW

If these €230m are allocated proportionally to the capacity provided, this would mean that **RWE could receive about €130m per year from German taxpayers.** This is not peanuts for the company – it amounts to 13% of RWE’s of the 2014 operating result from its entire conventional generation business.⁵⁰ Given that the runtime of the reserve is from 2017 to 2020, the total payment to RWE would amount to €511m. It seems that RWE has managed to secure a golden handshake for at least some of its old lignite power stations.

This is only a partial success, however, because RWE was first aiming for a full capacity market and then for a much larger capacity reserve. Back in 2013, there were still a variety of different capacity market design proposals on the table.⁵¹ The field was wide open and RWE may have felt that their chances for securing a favourable deal for their old lignite plants in Germany were rather good. Even in the past few weeks, a 6GW capacity reserve was still being seriously considered.⁵² **The capacity reserve that will now be introduced will still leave RWE with the**

⁴⁸ <http://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/WWF-Stellungnahme-Ein-neues-Klimaschutzinstrument-fuer-den-Stromsektor.pdf>

⁴⁹ Eckpunkte für eine erfolgreiche Umsetzung der Energiewende- Politische Vereinbarungen der Parteivorsitzenden von CDU, CSU und SPD vom 1. Juli 2015

⁵⁰ This is before day-to-day expenditure, taxes, etc. are subtracted (see Figure 1).

⁵¹ http://www.energybrainpool.com/fileadmin/download/Aktuelles/2013-12-12_BMU_Vergleich_Kapazit%3%A4tsmechanismen_EnergyBrainpool.pdf, <http://www.bmwi.de/BMWi/Redaktion/PDF/C-D/studie-clearing-studie-kapazitaetsmaerkte,property=pdf,bereich=bmwi2012,sprache=de,rwb=true.pdf>

⁵² http://www.claudiakemfert.de/fileadmin/user_upload/Inserts/Kurzbewertung_des_neuesten_Kompromissvorschlags.pdf

problem of what to do with a further 5.5GW of old lignite capacity. Furthermore, many details of the new proposal, such as the level of capacity payments, which plants it will contain, and the rate at which the measure will be phased in, are not finalised yet.

It appears that RWE has decided to bet on being too big to fail rather than listen to what both the market and the regulatory environment were telling them. This is a short-sighted strategy and it is unclear whether it will pay off. The strategy does nothing to put the company on a sustainable path. As a result, while it might have saved some jobs in the short term, it does not help advance the long-term interests of coal sector workers, who want employment security or, failing that, a transition perspective.

Sooner or later, the imperative of action on climate change will catch up with RWE's lignite assets. **The impending transition needs to be organised in an orderly and fair manner, rather than being abrupt and driven by events. The course RWE is pursuing now, clinging to its old business model and resisting change, is likely setting it up for a crash that will hit workers much harder than the climate levy ever would have.**

Not yet over the line: state aid approval required

Across Europe, a number of utilities have complained about lost profit, which has principally resulted from a combination of the economic crisis, structural overcapacity and their own incompetence. RWE has notably been at the front of these calls for support, which have typically claimed that there was a need for governments to act to ensure that "the lights stay on". **Capacity mechanisms have therefore emerged as a convenient fig leaf that disguises recompense to generators as a means of addressing security of supply concerns.** The European Commission has, however, rightly warned of the negative impacts that such measures would have on the Internal Energy Market, and has set out guidance that would limit negative impacts.

More recently, in April 2015 the European Commission announced a sectoral investigation into proposed capacity markets spanning 11 EU member states.⁵³ With increased regional cooperation on electricity transmission and interconnection, the Commission is keen to ensure that national capacity measures do not distort market signals, and are compatible with EU decarbonisation objectives. This investigation already includes Germany, so the proposed new strategic reserve is already slated for review. This was acknowledged by the German government in its announcement on the new agreement.⁵⁴

As the guardian of Europe's internal market, the European Commission does not only have to consider Germany's policy proposals but also take into account RWE's approach over recent years. As the Commission has stated:

⁵³ <http://uk.reuters.com/article/2015/04/29/uk-eu-energy-competition-idUKKBN0NK0YV20150429>

⁵⁴ Eckpunkte für eine erfolgreiche Umsetzung der Energiewende- Politische Vereinbarungen der Parteivorsitzenden von CDU, CSU und SPD vom 1. Juli 2015

“In liberalised markets, investments are not guaranteed by the State. Only where there is a real threat to generation adequacy and security of supply as a result of closure or mothballing does the financial viability of existing plants become a matter of public concern. It is very important that there should not be state support to compensate operators for lost income or bad investment decisions.”⁵⁵

On the currently available evidence it appears that the strategic reserve is principally a means of bailing out RWE’s business model, with the lifetime of old lignite plants deliberately lengthened in an attempt to secure financial support. It is not the fault of taxpayers and consumers that RWE pursued a high-carbon strategy and then dug its heels in to defend it. This is a bad use of public money. RWE shouldn’t celebrate too soon.

⁵⁵ European Commission, 2013. SWD(2013) 438 final, p10