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# THE RESPONSE OF INCUMBENT UTILITIES TO THE CHALLENGE OF RENEWABLE ENERGY

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## INTRODUCTION

Renewable energy sources such as biomass, wind and solar power are relatively new means of generating electricity. Until recently, electricity was typically dominated by fossil fuels (coal, gas and oil), large-scale hydro and nuclear power in centralised systems of very large, GW-scale generation units. In contrast, new renewable power is typically built in smaller units and can attract investors outside the traditional circle of utilities and industrial self-generators.<sup>1</sup> Whilst renewables rely heavily on public funding to support their further development and deployment, they are becoming more competitive with traditional electricity generation technologies and can seriously affect their profitability, even their survival.<sup>2</sup> Together these factors mean that incumbent utilities (i.e. major companies that dominate conventional electricity production) have been forced to respond to something we refer to as the 'renewable challenge'.

Since the 1990s, when many European electricity markets were 'liberalised', there has been a trend towards further market concentration. This means that some incumbents are now among the most highly capitalised companies in the world.<sup>3</sup> Prior to liberalisation, many European utilities had close links to the state via public ownership and via sub-national or national monopolies. Utilities were seen as a key

1 Large-scale, centralised concepts such as offshore wind or [DESERTEC](#) (solar power) do exist, but most renewable installations are on a smaller scale.

2 Rogol, M. (2011) *Explosive Growth*. Austin, TX, USA: Live Oak Book Company (see Chapter 2).

3 Thomas, S. (2003) The seven brothers. *Energy Policy* 31(5):393-403.

infrastructure industry and offered career opportunities to former political leaders and bureaucrats. Hence one would expect that utilities could face the renewable challenge from a position of strength. Surprisingly this has not always been the case. Incumbents in Germany and Sweden – the two countries discussed here – demonstrate a wide range of responses to the renewables challenge.

In this chapter we analyse utilities' responses to the renewable challenge using the reactive-defensive-accommodative-proactive scale as popularised by research on Corporate Social Responsibility.<sup>4</sup> By responses, we refer primarily to incumbents' 'nonmarket' strategies for dealing with renewables. Generally speaking, nonmarket strategies are typically those that seek to influence "the social, political, and legal arrangements that structure interactions outside of, although in conjunction with, markets and private agreements".<sup>5</sup> Since public policy is a major determinant of market opportunities related to renewable energy, we focus particularly on incumbents' attempts to influence renewable energy policies. However, in some instances we describe how incumbents have sought to influence renewables through court cases (legal arrangements) and the media (social arrangements). We trace incumbents' nonmarket strategies in Germany and Sweden through time to show that responses to the renewable challenge vary according to different social and political contexts.

### PATTERNS OF RESPONSES

We apply the reactive-defensive-accommodative-proactive (RDAP) scale to examine how incumbent utilities respond to renewable energy developments. The scale is commonly used to examine companies' social responsibility (see Figure 13.1), and is a means of analysing corporate behaviour. Here we characterise utilities that are *supportive* of renewable energy developments as *proactive*. In contrast, utilities that *oppose* renewable energy developments are *reactive*, in that they attempt to block or limit renewable energy policies, for instance, via non-market strategies.



**Figure 13.1** The RDAP scale for corporate social responsibility. Adapted from Carroll (1979).

In the *proactive* mode, one would expect incumbents to actively participate in policymaking for new renewable technologies. Incumbents can do this by supporting policy developments and by providing key inputs to policy design. They can also encourage renewable technologies and new business models. As part of a proactive approach, incumbents can form alliances with powerful actors such as political parties, energy intensive industries, and labour unions; foster direct contacts to ministries and MPs; and seek to positively influence public opinion via media and other channels.

4 Carroll, A.B. (1979) A Three-Dimensional Conceptual Model of Corporate Performance. *The Academy of Management Review*, 4(4):497-505

5 Baron, D.P. (2003) *Business and its environment*. Upper Saddle River, NJ, USA: Prentice Hall.

We would expect incumbents to be *accommodative* if they are satisfied with existing public policies, or otherwise if attempts at proactive influence did not achieve their primary goals. Accommodative incumbents may also see new renewables as an opportunity for their own business and thus accept rather than oppose the adoption of renewables among actors outside the utility sector.

In the *defensive* mode, incumbents typically aim to protect their own turf by making things difficult for challengers. For example, incumbents may demand complicated and unfavourable contracts from generators; delay the connection of renewable generation facilities via bureaucratic or 'invented' technical problems; make grid access difficult or very expensive; delay payments to generators or question their own obligations; charge excessive balancing costs; withhold merit order savings by new renewables from consumers; and so on.

Incumbents are likely to resort to the *reactive* mode if they did not achieve their regulatory policy goals, or if they feel sufficiently threatened by new market entrants. In such situations incumbents may take strong, hostile action by questioning the legal basis of the policy to which they are averse; by pressuring governments to modify legislation or decrees in order to slow down renewables deployment or to make it less profitable; by discrediting new renewables as backwards, messing up the landscape, or overly expensive; or by discrediting the particular regulation as a risk to industrial competitiveness and to the market economy.

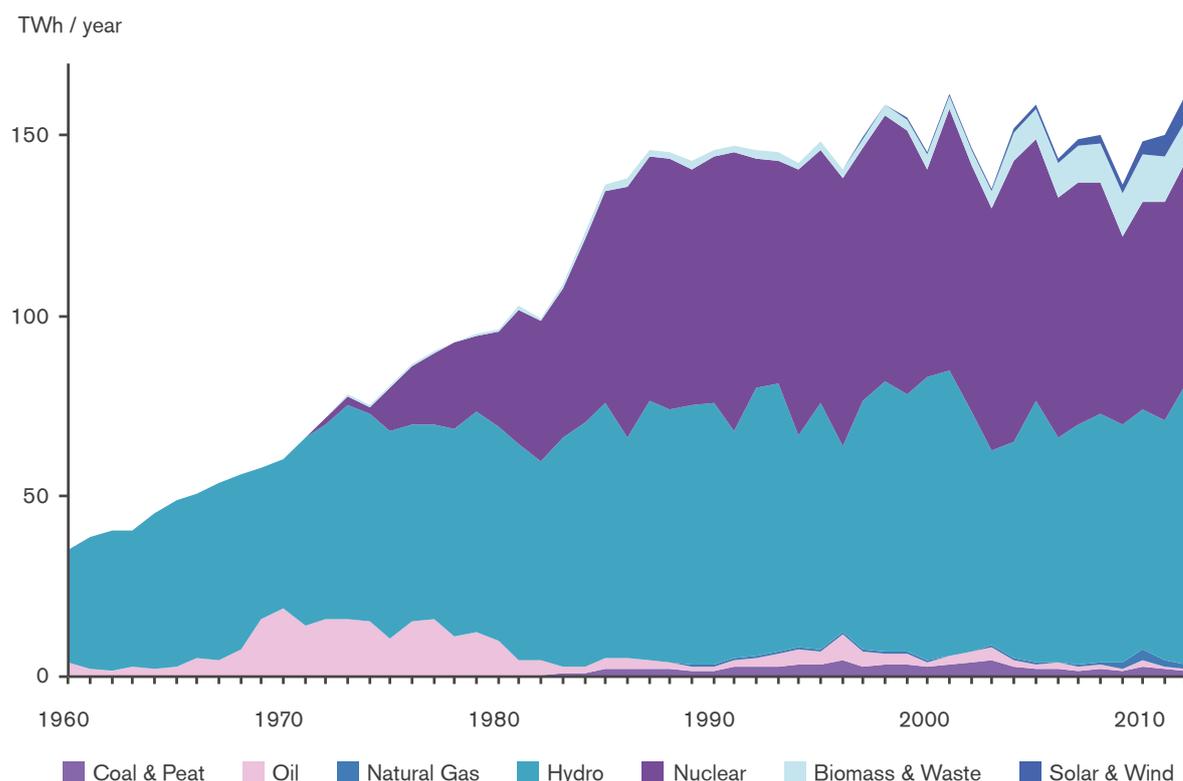
The choice of these modes partly depends on how individual incumbents respond to the opportunity structure (political, technical, economic, natural resources, public acceptance etc.) they are confronted with. Incumbents' choices will be guided by their profit orientation, but also by different views of the profit potential of new renewables given the business model of the incumbent concerned.

## **INCUMBENTS' RESPONSES TO THE RENEWABLE CHALLENGE IN SWEDEN**

In Sweden, three multinational energy companies produce around 90% of the country's electricity (Vattenfall, E.On and Fortum). Whilst these companies currently dominate the electricity market, municipal energy companies have existed in most Swedish towns and cities for a long time. These smaller utilities are primarily responsible for the provision of district heating, but around 35 municipal companies also produce electricity. Hundreds of landowners also produce electricity in Sweden, though on a much smaller scale. Hence the term 'incumbent utilities' refers to the three main electricity producers together with municipal energy companies that produce both electricity and district heating.

Sweden has a long tradition of hydroelectric power, owing to the fact that the country has a huge resource endowment in the form of large rivers and lakes. The first hydropower plant was built in 1906 and nearly half of the electricity produced in Sweden today comes from hydropower. However, the current debate on renewable electricity has roots in the 1970s, when the oil crises brought about a major reorientation of Swedish energy policy. In order to reduce dependency on imported oil, the government financed research in renewable technologies and

energy saving programmes<sup>6</sup> and stepped up the deployment of nuclear power. The major utilities were *accommodative* of these measures, despite the fact that energy savings could potentially reduce revenues. One reason for this is that reducing oil dependency could potentially strengthen major utilities given that municipal companies were heavily reliant on oil. The other reason is that the most significant response to the oil crises was the construction of 12 Swedish nuclear power plants from 1972-1985 – a move that was supported by the major utilities. Despite the fact that renewables offered a potential alternative to oil, Sweden experienced little growth in renewable capacity in the 1970s (see Figure 13.2).



**Figure 13.2** Swedish electricity generation 1971-2012. Sources: Data for 1960-2011 from IEA (2014), 2012 adapted from the Swedish Energy Agency (2014).

Alongside its expansion, nuclear power became a politicised issue, and in 1980 it was decided via a national referendum that nuclear power plants should be phased out in Sweden by the end of their operational lives (i.e. 2010). This gave a renewed impetus to the possibility of growth in renewables. Other environmental issues (e.g. acid rain, the ozone problem, climate change) climbed the Swedish political agenda towards the end of the 1980s. Hence in 1991, the government introduced a new long-term energy policy that sought to reaffirm the nuclear phase-out; protect unexploited rivers; and tackle climate change.<sup>7</sup> As part of these changes, the Swedish government sought a unilateral approach on climate change via a carbon tax. In addition to the CO<sub>2</sub> tax, the 1991 energy bill established a new

<sup>6</sup> Nilsson, L.J. et al. (2004) Seeing the Wood for the Trees: 25 years of Renewable Energy Policy in Sweden. *Energy for Sustainable Development*, 8(1):67-81; Åstrand, K. and Neij, L. (2006) An Assessment of Governmental Wind Power Programmes in Sweden in Sweden Power Programme. *Energy Policy*, 34(3):277-296.

<sup>7</sup> Nohrstedt, D. (2008) The Politics of Crisis Policymaking: Chernobyl and Swedish Nuclear Energy Policy. *The Policy Studies Journal*, 36(2):257-278.

energy efficiency programme alongside further investments in renewable energy technology.<sup>8</sup> The CO<sub>2</sub> tax did not favour wind power, however, and piecemeal subsidisation policies made investments risky.<sup>9</sup> Major utilities were *defensive* towards the CO<sub>2</sub> tax (by opposing it, together with export-oriented energy intensive industries) but in the end had to settle for tax exemptions. Moreover, utilities were opposed to Sweden's unilateral approach to climate change and were *reactive* towards a government attempt to double taxation levels. As part of their reactive strategy, incumbents questioned the validity of climate science and emphasised risks to Swedish industrial competitiveness.

In the early 1990s, Sweden suffered a major economic crisis that resulted in recession. The Swedish government responded by initiating a range of neoliberal market reforms and became a member of the EC as part of a new Swedish growth strategy.<sup>10</sup> The Swedish energy industry linked deregulation to European proposals to harmonise European energy markets. The latter were supported by large utilities such as Vattenfall, given the possibility of expanding into the German electricity market. However, smaller utilities raised concerns that power companies which are forced to compete on price are likely to invest in the cheapest energy sources, with negative effects for the environment, resource use and energy security. At this point the dominant view within the energy industry was that there was a need for long-term, coherent and politically stable policy instruments that would ensure that renewables such as wind turbines could compete with fossil fuels. In other words, incumbents were, together with other electricity producers, *proactive* as regards the introduction of renewable energy policies.

Towards the end of the 1990s, the Swedish government took up an initiative from the European Commission and proposed that an electricity certificate scheme (ECS) replace subsidies for renewables. At this stage incumbents restated their support for renewables and nicknamed the ECS the 'green certificate system'. In the consultation phase that preceded the establishment of the ECS, only one stakeholder group opposed the scheme as part of a *reactive* strategy. The Swedish association of small energy producers (SERO) argued instead for a feed-in tariff, a stance they maintained deep into the next decade. SERO was concerned that small electricity producers would not be able to compete with large utilities in the context of a quota-certificate system, due to their lack of financial capital.

Around 2006, climate change became a salient energy policy issue. During this period, the Swedish government sought to re-establish its unilateral approach to tackling climate change, embodied in ambitious emission reduction targets and further growth in renewables.<sup>11</sup> The EU emission-trading scheme was implemented in Sweden as part of this approach, which was met with opposition from large utilities and energy intensive industry. Together these industries pursued a *defensive* strategy and argued that climate and energy policies should create a level

8 Nilsson, L.J. et al. (2004) Seeing the Wood for the Trees: 25 years of Renewable Energy Policy in Sweden. *Energy for Sustainable Development*, 8(1):67-81; Åstrand, K. and Neij, L. (2006) An Assessment of Governmental Wind Power Programmes in Sweden in Sweden Power Programme. *Energy Policy*, 34(3):277-296.

9 Åstrand and Neij (2006); Wang, Y. (2006) Renewable Electricity in Sweden: An Analysis of Policy and Regulations. *Energy Policy*, 34(10):1209-1220.

10 Nordhaus, W.D. (1997) *The Swedish Nuclear Dilemma*. Washington, DC, USA: Resources for the Future.

11 Sarasini, S. (2009) Constituting Leadership via Policy: Sweden as a Pioneer of Climate Change Mitigation. *Mitigation and Adaptation Strategies for Global Change*, 14(7):635-653.

playing field for industries exposed to international competition. The government responded by providing further exemptions, this time by relaxing allocation criteria for emission permits to energy intensive industries.

The three multinational energy companies that operate in Sweden have on other occasions sought to hamper the government's unilateral approach. Particularly Vattenfall, whose portfolio includes coal-fired power in Germany and Poland, forced *Svensk Energi* (the main industry association for the Swedish energy industry) to be more liberal in their stance towards ETS permit allocations. Vattenfall also launched a lobby coalition called '3C' prior to the Copenhagen climate summit that advocated a global climate treaty with emission trading as the main instrument. In doing so, Vattenfall sought to: 1) ensure a level playing field between electricity producers and 2) allay fears that European energy intensive manufacturers may lose out to competition from their Asian or North American counterparts with access to cheaper energy. Whilst the 3C initiative is part of a proactive climate policy strategy, Vattenfall wanted to secure its international customer base (i.e. industrial customers in Sweden and other European countries) in light of the EU's unilateral approach to climate mitigation.

In spite of industry opposition to Sweden's unilateral approach, the electricity industry has for the most part supported the two main policy instruments that currently promote investments in renewable electricity production. The main reason for this is that the combination of the EU ETS and the Swedish ECS has resulted in windfall profits for most energy companies, who are able to take advantage of the fact that around 90% of Swedish electricity is produced from nuclear and hydropower. Increased revenues are mainly the result of price-setting mechanisms in the context of Nordpool (the Nordic electricity market). Particularly the ETS allows Swedish electricity producers to charge the additional costs of marginal fossil fuel production onto consumers, which means that electricity from hydropower (which is typically much cheaper than coal-fired power) is sold at a higher rate than if the ETS did not exist.

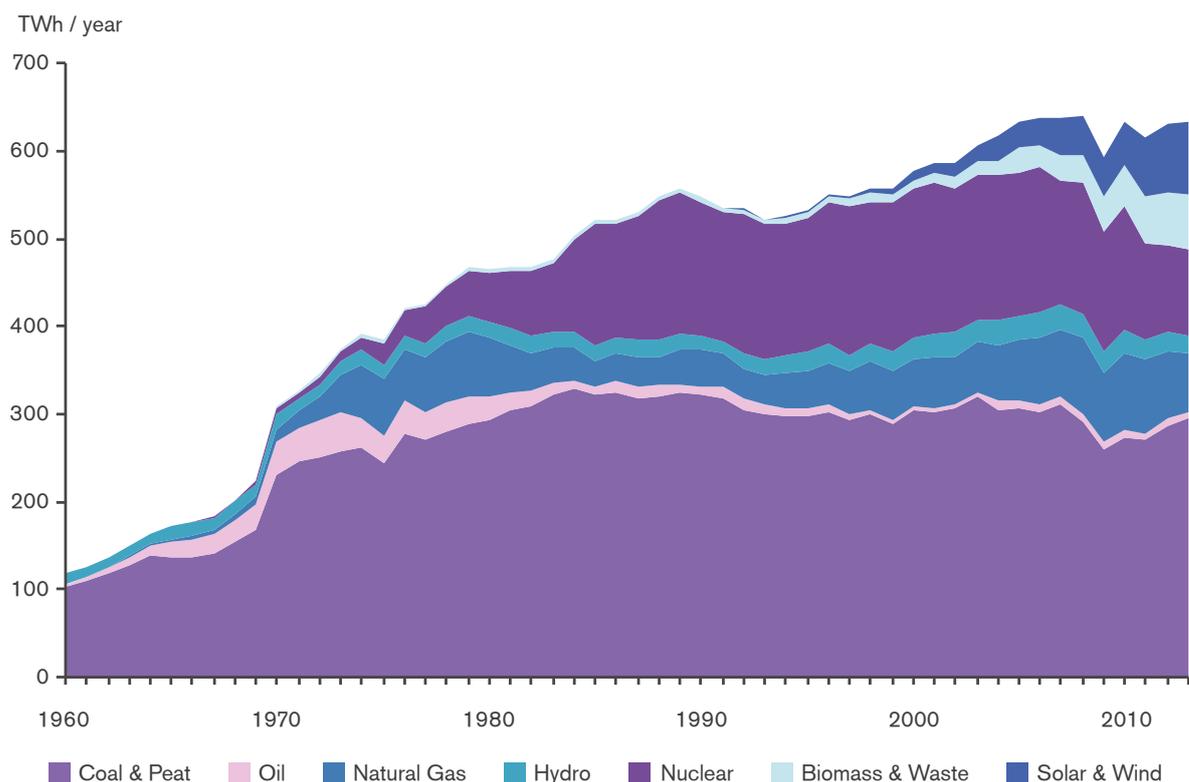
One of the main impacts of the ECS has been growth in wind power, from 0.9 TWh in 2004 to 7 TWh in 2012. Whilst this statistic could in theory placate renewable suppliers, small electricity producers have continued to advocate the introduction of a feed-in tariff, albeit as part of a modified political strategy. Having realised that the certificate scheme is here to stay, SERO have instead begun to argue proactively for a parallel FIT system that complements the ECS. Their main argument is that the ECS precludes smaller electricity producers, who struggle to raise the capital required to invest in wind power – especially since the financial crisis. However SERO is still defensive as regards the ECS, having opposed its recent expansion to include Norway. SERO fears that Norway will attract more renewable investments than Sweden given higher potentials for wind power. In doing so, SERO sought the support of the Swedish Wind Power Association and has also established ties with the European Wind Energy Association (EWEA) and the European Renewable Energy Federation (EREF).<sup>12</sup> One reason for this is

<sup>12</sup> Sarasini, S (2013) Institutional work and climate change: Corporate political action in the Swedish electricity industry. *Energy Policy*, 56:480-489.

that smaller energy producers feel ostracised from Swedish policy-making, which is typically performed in a corporatist fashion and led by the agencies of the state in a manner that benefits established industrial actors.<sup>13</sup>

### INCUMBENTS' RESPONSES TO THE RENEWABLE CHALLENGE IN GERMANY

By comparison, the German incumbent response to the renewable challenge is far more antagonistic than its Swedish counterpart. There are four big utilities in Germany today (RWE, E.on, EnBW and Vattenfall), down from about a dozen before (incomplete) liberalisation in the late 1990s. They generate electricity mostly on the basis of soft and hard coal, nuclear and gas (in this order) and have a very small share in renewables generation (Figure 13.3). In the energy crisis of the 1970s, the government favoured expanding nuclear and coal generation, also adding modest R&D for renewables. Nuclear and coal however soon became the target of a powerful movement for *Energiewende* (energy transformation towards renewables and efficiency). This social movement held strong anti-nuclear views (majoritarian after Chernobyl 1986) and also opposed coal power – first for its SO<sub>2</sub> emissions, later mostly for CO<sub>2</sub>.



**Figure 13.3** German electricity generation 1960-2013. Sources: Data for 1960-2011 from IEA (2014), 2012-2013 adapted from AGEBA (2014).

This movement was taken up by parliament (against the preferences of the government and the incumbents) which in 1990 passed a law on a feed-in tariff to support market creation for non-utility, decentralised renewables installations. Ten years later, a Social Democratic-Green government adopted the Renewable Energy Act (EEG – *Erneuerbare Energien Gesetz*) as well as a nuclear phase-out

13 Uba, K. (2010) Who Formulates Renewable-Energy Policy? A Swedish Example. *Energy Policy*, 38(11):6674–6683.

law. The former provided for the transition to renewable electricity (but without a time horizon yet) by granting guaranteed twenty-year, highly differentiated tariffs and priority access to renewables. The scope of this law was further expanded in 2004 and 2008 and resulted in the steep growth of wind, biomass and PV power through 2012. In 2013, PV growth was more than halved.

From the beginning, the incumbents had been sceptical or outright hostile towards renewables. Small installations did not fit their centralised paradigm or their business culture. In the absence of sympathy from the government (except for some measures in favour of coal), they resorted to both defensive and reactive approaches. They challenged feed-in tariffs in various court venues; tried to replace them with a quota-cum-certificates system;<sup>14</sup> harassed generators; and tried to turn public opinion against wind and solar. For a long time though these efforts were unsuccessful; even the Conservatives came to support EEG after the 2005 election.

Things changed only in 2009 with a new Conservative-Liberal coalition, which remained in place until 2013. Back in 2000, these two parties had opposed the nuclear phase-out.<sup>15</sup> Now they decided to postpone it by about a decade so that cheap nuclear power could form a bridge to the age when renewables would be affordable and market competitive. This postponement was barely adopted when the Fukushima accident took place, leading to a reversal of the government position. Now it proposed to accelerate *Energiewende*, while at the same time making it affordable by supposedly subjecting it to market discipline.

At this time the incumbents were urging a slowdown of renewables deployment. This deployment had become quite rapid and cut into their markets and their profits, partly as an effect of the merit order system (based on marginal costs of production) prioritising renewable electricity (see also Chapter 11 and 15). This eliminated the more expensive forms of fossil generation (i.e. oil, gas and some hard coal plants) and meant steadily falling prices on the electricity exchange from 2008 onwards. PV had the most devastating impact on incumbents' profits since it reduced demand for conventional generation at peak hours and peak prices. It grew by 22.5 GWp in just three years, 2010-2012, to reach about 35 GWp in 2013. Within a few years, profits and stock values of the incumbent utilities plummeted;<sup>16</sup> the outlook for the future seemed dim as the Renewable Energy Act of 2000 limited conventional generation to providing the 'residual load' that renewables could not yet meet.

The Conservative-Liberal government was willing to accommodate incumbents' demand for slowing down renewables, claiming that the latter's cost to consumers had become unacceptable while refusing to deal with the underlying problem of the EEG surcharge (see Chapter 15). Beginning in 2010, the government came

14 Compare the development of the ECS in Sweden. However, German supporters of quotas looked at the UK, not at Sweden. Quota systems are advantageous to incumbents as they tend to keep non-incumbents away, produce sizeable windfall profits and limit deployment overall. See Lauber, V. (2011) The European Experience with Renewable Energy Support Schemes and Their Adoption: Potential Lessons for Other Countries. *Renewable Energy Law and Policy Review*, 2(2):121-133.

15 Even the incumbents were not eager for new nuclear build given its controversial nature in Germany.

16 European utilities: How to lose half a trillion euros. Europe's electricity providers face an existential threat (2013) *The Economist*, Oct. 13.

up with a variety of initiatives to impose limits to deployment of renewables which it is true had exceeded expectations,<sup>17</sup> first by extending the lifetime of nuclear; in 2012-13 it attempted to introduce caps on deployment or on support. The more radical attempts were stopped by opposition from the regions. In late 2013 however, a similar approach was incorporated into the coalition agreement for the new Conservative-Social Democratic government.<sup>18</sup> First legislative drafts propose to contain growth of renewable electricity by a corridor that replaced former minimum targets that were regularly overshot, and to abolish feed-in tariffs within a few years in favour of market premiums set via bidding systems.

Incumbents also sought modifications of the electricity market framework to protect conventional generation from the advance of renewables, arguing that the declining profits of coal generation after 2008 endangered the security of electricity supply as it would inevitably lead to shutting down coal plants needed to guarantee against shortfalls of intermittent renewables. Yet a new wave of coal plants is coming online – one of the biggest expansions since the days of post-World War II reconstruction.<sup>19</sup> Despite this abundant supply of conventional generation the incumbents now demanded capacity payments to improve the economics of fossil standby plants. This solution was resisted by the Conservative-Liberal government but met with more sympathy from the Conservative-Social Democratic government that took office in 2013. In that year, the incumbents also proposed a new support system for renewables based on market premiums (to replace the EEG's feed-in tariffs) which would remove incentives to operate wind and solar plants during periods of oversupply resulting from the inflexibility of conventional plants (nuclear, soft coal, to some extent hard coal – see also Chapter 11).<sup>20</sup> First legislative initiatives in early 2014 incorporated those proposals.

Recently, incumbents have been moving hesitatingly into the renewables business themselves. For a long time they had fostered the dream of gigawatt-scale wind and solar farms in North Africa to transmit electricity to Europe (DERSERTEC) as part of their future business activity. With cheaper solar panels and the investment insecurity that followed the Arab spring, this dream has suffered a severe setback. Offshore wind in the North and Baltic seas is a European alternative but slow in coming (see Chapter 15 and 16); German incumbents prefer to build offshore plants in more profitable settings abroad. But in 2008 and again in 2013, at least some of the incumbents have indicated that they see a future for themselves in renewable energy and accept the progressive decline of conventional generation, as recently stated by RWE's chief executive.<sup>21</sup> Even solar PV seems to be on the incumbent agenda now, both in terms of big solar farms and rooftops.<sup>22</sup> But then the alternative – a radical shrinkage of incumbents' German operations – does not seem unlikely either.<sup>23</sup>

17 In its 2010 National Renewable Energy Action Plan to the EU (2010), Germany proposed a target for RES-E of 38.6%, slightly more than 10% higher than the 35% set in Energiekonzept 2010 and the 30% of EEG 2008.

18 The Social Democratic Party contains a 'coal fraction' sympathetic to coal power which came to the fore recently.

19 International Energy Agency (IEA) (2013) *Energy Policy of IEA Countries – Germany, 2013 Review*. Paris, France: OECD/IEA.

20 BDEW German Association of Energy and Water Industries (2013) *Proposals for a fundamental reform of the German Renewable Energy Source Act*. Position paper. Berlin, Germany: BDEW.

21 Terium, P. (2013) RWE-Chef Terium plant radikalen Strategiewechsel. *Handelsblatt*, Oct. 29 [accessed 2013-11-23]

22 International Energy Agency (IEA) (2013) *Trends in Photovoltaic Applications*. Paris, France: OECD/IEA.

23 Becker, P. (2011) *Aufstieg und Krise der deutschen Stromkonzerne*. Bochum, Germany: Ponte Press Verlag GmbH.

## CONCLUSIONS

Our analysis shows that incumbents have responded very differently to the renewable challenge in Sweden and Germany. As noted previously, the German case is far more antagonistic than its Swedish counterpart. These differences can be attributed in part to natural resource endowments. Germany, for instance, is a domestic producer of soft coal; has fewer sources of hydropower and biomass than Sweden; and there is little storage for solar and wind power, which aggravates the problem of intermittency. In contrast, Sweden has large potentials for wind power and biomass; a large proportion of Swedish electricity is produced from hydropower; and both biomass and hydro are largely regular or dispatchable. The composition of the electricity system in terms of installed technologies and fuels is thus also an important determinant of the incumbent response to renewables.

Another factor that differentiates the Swedish and German cases is the political, or energy policy-making system. We characterise the Swedish political system as a relatively closed corporatist system dominated by big industry, trade unions and the agencies of the state. In contrast the German system, despite also being largely corporatist, is more open and subject to influence from powerful social movements, which led to the introduction of a feed-in tariff and the subsequent deployment of renewable generation overwhelmingly by non-utility investors who despite lower rates of profitability are more committed to deployment than incumbents.

This difference in the political subsystem makes the German and Swedish cases in a sense mirror opposites in terms of regulation. In Sweden, incumbents have proactively influenced renewable energy policymaking, with the result that the existing quota system is financially beneficial for them. Feeling alienated, smaller electricity producers have pursued a reactive strategy, albeit with little success. In contrast, German incumbents were not able to impose their policy preferences, opposed the feed-in tariff throughout and largely missed the boat on deployment. Their reactive approach has included various nonmarket tactics that have sought at first to raise practical hurdles for private investors, and later to alter the political, legal, social and market arrangements for renewables in order to inhibit rapid deployment. When deployment had acquired substantial momentum, they shifted their focus to slowing it down via unfriendly regulation. Only very late in the game did they consider moving into the sector on their own.

Taken together, our cases suggest that incumbents respond according to their perceived financial interests, and their responses to the renewable challenge vary according to how they think they can maintain their market positions, including their profit expectations. Of course, these views reflect the bounded rationality of very large, centralised and cumbersome organisations. On the whole, their profit orientation was too short-term to envision active participation in the early phase of renewables development, whose then small installations seemed anti-modern and were easily identified with anti-nuclear positions that were anathema to the utilities in those days. In addition the latter needed to protect existing generation at

times of slow growth of electricity consumption. In Sweden, the utilities used their good access to politics to secure a quota-and-certificate system which selected technologies that were profitable and easily integrated. In Germany, utility refusal of a strong demand from society meant that they were eventually bypassed in a way that proved quite disruptive. The current government now appears determined to come to the help at the cost of slowing down the energy transition.