Utilities Policy 17 (2009) 258–266

Contents lists available at ScienceDirect

Utilities Policy

journal homepage: www.elsevier.com/locate/jup

The internationalization of the European electricity industry: The case of Vattenfall

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ARTICLE INFO

Article history:
Received 12 September 2008
Received in revised form
23 December 2008
Accepted 31 December 2008

Keywords:
Electricity market
Internationalization
Vattenfall
Germany

ABSTRACT

This article explains how the Swedish state-owned electricity company Vattenfall managed to become the most successful foreign player on the German electricity market. It does so by providing an in-depth historical analysis of Vattenfall's transformation from a national into an international actor, a process that proved long and difficult. The article starts out by identifying the transformation pressures that Vattenfall faced in the late 1980s. It then continues with a detailed analysis of Vattenfall's response to these pressures, culminating in a seemingly sudden wave of major acquisitions in Germany in the period 1999–2002.

1. Introduction

During the past two decades the European electricity industry – defined in terms of the production, transmission, distribution and sale of electricity – has gone through what may be called an 'institutional revolution'. Politically, this revolution has centred around the issue of liberalization and cross-border integration of electricity markets, with – failed and successful – attempts to create new legal frameworks, new regulatory mechanisms and new marketplaces. From a business perspective, the institutional revolution has taken the form of new firm strategies, new competitive and cooperative relations among actors and not least a radical wave of mergers and acquisitions. The ownership landscape in the European electricity market has been radically altered, both within individual countries and through a far-reaching internationalization.

The political process of establishing new markets and regulatory frameworks for electricity has been studied from a variety of perspectives in recent years. The parallel process of internationalization in the electricity business, however, has not been subjected to the same scrutiny. Exceptions include the recent study by Haar and Jones (2008) of the entry and exit of American energy utilities in Europe during the past 20 years and del Sol's (2002) account of Endesa's transformation into an international company in South America. There have also been some studies of the response of electricity companies to regulatory reform, which have sometimes included internationalization efforts at the firm level (e.g. Midttun, 2001). All in all, however, we do not know much about the microdynamics of internationalization processes in the electricity business.

The purpose of this article is to contribute to filling this gap. It does so by offering an historical account of the highly successful internationalization of the Swedish state-owned electricity company Vattenfall. Vattenfall is one of the most radically internationalized electricity companies in Europe. It has a much larger share of its sales and employees abroad than in Sweden. In 2007, net sales from the Nordic region amounted to 31% of Vattenfall's total sales (Vattenfall, 2008). It has become the most successful foreign electricity company in both Poland and Germany – markets in which a number of other, larger companies have sought to penetrate, though without much success. How can this, as it seems, unique success of a Swedish state-owned electricity company on continental markets be explained?

The study builds on 20 in-depth interviews with top-level managers within Vattenfall and some of its partner organizations in Sweden and Germany, as well as on documentary material in the form of annual reports, press releases, internal Vattenfall news reports and related sources.

The article is structured as follows. Section 2 outlines the historical background of Vattenfall as the dominant electricity company in Sweden. Section 3 addresses the transformation pressures that the company came to experience from the mid-1980s,

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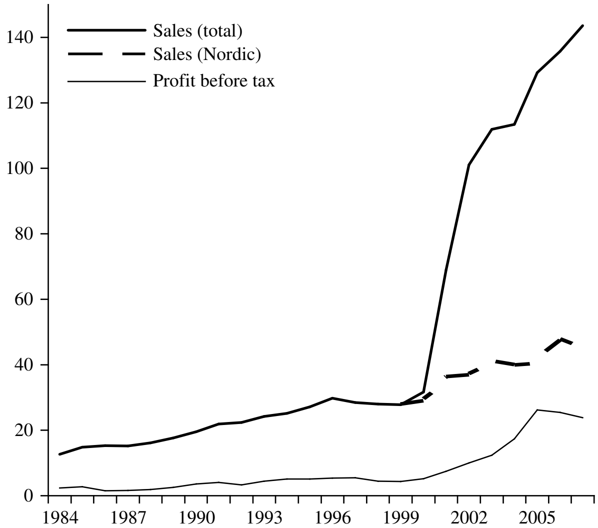
doi:10.1016/j.jup.2008.12.001



Source: Based on Vattenfall annual reports, 1984-2007.

Fig. 1. Vattenfall's sales and profit, 1984–2007 (billion current SEK).

while Sections 4 and 5 describe how Vattenfall responded to these pressures by formulating and implementing a new growth strategy based on internationalization. Section 6 consists of a more detailed case study of Vattenfall's expansion to Germany, while Section 7 provides a concluding discussion.

2. Vattenfall up to the 1980s

Vattenfall was formed in 1909 as a Swedish government agency, whose task was to exploit large-scale hydropower. A few years earlier, several private hydropower companies had been formed, but the government was worried that these would not suffice to guarantee cheap and easy access to the country's abundant hydropower resources. This was so particularly in view of the rapidly growing demand for electricity in Sweden's young and booming energy-intensive industry. Although the formal possibilities for direct competition between generators were limited at that time, the government instructed Vattenfall to act as a price leader and thereby make it more difficult for private actors to abuse their monopoly positions that had been granted through special area concessions.

Vattenfall quickly grew to become the dominant electricity producer in Sweden, with a market share in generation of around 30% in the 1930s and around 50% in the 1980s. In contrast to countries such as France, Great Britain and Italy, however, the Swedish electricity industry was never nationalized, and the private companies thus retained their positions as independent actors in terms of both generation and distribution of electricity. The only part of the system that was nationalized was the transmission grid, for which Vattenfall alone was responsible from 1949 (Högselius and Kaijser, 2007).

Through its advanced technological cooperation with Sweden's leading electrical engineering company, ASEA, Vattenfall came to enjoy a high international reputation within international organizations in the field of electricity, such as the World Energy Council (WEC), the International Union of Producers and Distributors of Electric Energy (UNIPEDE), and the International Council on Large Electric Systems (CIGRÉ). Leading engineers and R&D managers from Vattenfall participated regularly in important conferences and became well-known around the world (Lalander, 2004).

On the business side, however, Vattenfall remained an exclusively Swedish actor. The only exception was a small consultancy company, SwedPower, which was formed in 1976 and in which Vattenfall was the main owner. The company provided electricity-related consultancy services to developing countries. SwedPower was a success, though on a very small scale, its sales correspond to around 0.5% of Vattenfall's total sales (Lalander, 1996).

Sweden's electricity consumption grew at an exponential rate during most of the 20th century. Consumption roughly doubled every 12 years. This meant that Vattenfall (as well as other electricity companies) lived in a world where the volume of upcoming construction projects for the next 12 years was roughly the same as the already installed capacity in terms of power plants, transmission grid, distribution networks, etc. In other words, the electricity industry was characterized by an impressive dynamism in terms of both technological development and material growth (Högselius and Kaijser, 2007).

3. Positive and negative transformation pressures

The exponential trend in the growth of electricity consumption was abruptly broken in the late 1980s. From 1920 to 1987 consumption had grown at an average rate of 6.2% a year, but from 1988 to 2007 the corresponding figure was only 0.3%, as shown in Fig. 2.

The new trend was mirrored by a corresponding decline in construction. In 1985 Sweden's last two nuclear reactors went online and no further large projects were planned. Within Vattenfall this new situation was reflected in a rapidly decreasing share of employees in construction. Whereas in the mid-1970s nearly half of Vattenfall's employees had been devoted to construction, this share had decreased to 16% by 1986 (Fig. 3).[1]

With the stagnation coming on the Swedish electricity market, Vattenfall found itself in a difficult situation. It had to decide whether it wished to consolidate what it had achieved during the past 80 years and thereby, for the first time in its history, turn its main focus to administer the existing system, or rather look for new growth opportunities.

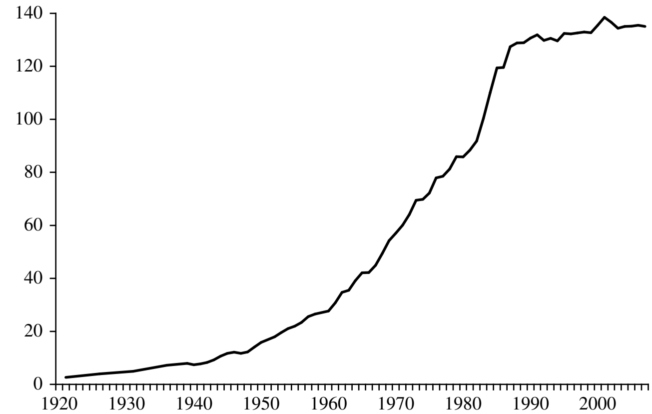
Using a distinction introduced by Schumpeter (1947), the first option may be seen as equivalent to an 'adaptive response' to the stagnation, whereas the second option would require a more 'creative response'. It turned out that the management board was keen to support Vattenfall's continued growth. A company without growth would not be able to survive on the long-term, it was argued. The decision to seek new growth opportunities may also be explained in cultural terms: Vattenfall had always been an enterprise whose internal culture was heavily oriented towards expansion and growth, and it did not fit well with this culture to become a company focused on administering a system already in place (L. Lundberg, interview).

There seemed to be two major options for future growth: either through diversification into new technological and business areas, or through expansion to foreign markets. Both can be interpreted as 'creative responses' to the stagnation.

Initially much emphasis was put on the first option (diversification), which manifested itself in Vattenfall's new company profile launched in the late 1980s: it no longer presented itself as an 'electricity company', but as an 'energy services company' (Vattenfall, 1990). It signalled a broadening of scope from producing, transmitting and distributing electricity to (also) selling energy- and environmental-related services.[2]

[1] It should be emphasized that in contrast to, for example, the case of Endesa in Chile, the decline of construction was not the result of outsourcing (cf. del Sol, 2002).

[2] This trend coincided with the tremendous rise of environmental issues in the overall political debate in the late 1980s; the public's concern for the environment peaked in 1988, when 62% of the Swedish population considered the environment the most important societal issue (Holmberg and Weibull, 2001).



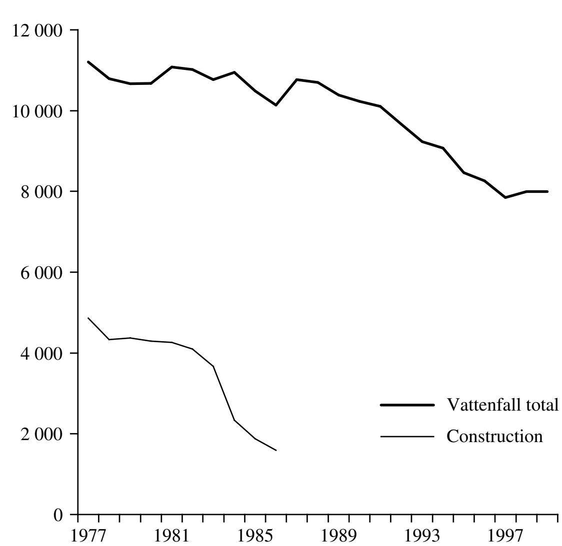
Source: Statistical Yearbook of Sweden (selected years).

Fig. 2. Sweden's electricity consumption, 1920–2007 (TWh, excluding losses).

The internationalization trend was initially much weaker than the diversification trend, but in the years around 1990 it became increasingly obvious that the internationalization option was becoming more popular with the management board. This shift in emphasis resulted from the emergence of several new transformation pressures, as will be discussed in the following.

Following Dahmén's (1988) economic–historical conceptualization of industrial change, we may distinguish between *positive* and *negative* transformation pressures. Dahmén used the concept of transformation pressure in connection with developments at the industry level, but I will here use it with the level of the individual firm, i.e. Vattenfall. It should be emphasized, however, that whether a transformation pressure is to be interpreted as positive or negative ultimately depends on how actors themselves perceive the situation.

A first *positive* transformation pressure, as experienced by Vattenfall, stemmed from the fact that the Commission of the European Communities pursued an offensive strategy aimed at the creation of a 'Single Market'. In 1988 a discussion paper was presented in which it was proposed that electricity and gas be included into this market (EC Commission, 1988). If realized, this would open up interesting opportunities for expansion of national electricity companies' activities to other EC member states. Sweden was not yet a member of the EC at the time, but it was generally expected that the country would still adapt and link itself to the EC in this respect.



Source: Based on Vattenfall annual reports, 1977-1999.

Fig. 3. Number of employees within Vattenfall as a whole and within construction, 1977–1999.

A second positive transformation pressure suddenly emerged in 1989 through the collapse of communism in Central and Eastern Europe. The electricity industry there was in severe need of investment, and given the economic collapse in the whole region it was hardly realistic that the former communist countries would be able to provide the necessary capital themselves for reconstructing and upgrading their electricity infrastructure. Given the liberal economic policies in most post-communist countries, the scope for foreign participation seemed promising (Nyquist, interview).

A third positive transformation pressure originated from outside the energy sector. During the 1980s Vattenfall was increasingly inspired by a large number of Swedish industrial companies that experienced an international boom in terms of foreign direct investment. Up to the 1970s, Swedish investments abroad on average amounted to 0.5–1.0% of GDP, but during the late 1980s a significant shift took place, raising foreign investments to around 5% of GDP (Schön, 2000). It reflected a rapidly growing Swedish industrial activity abroad. The new trend inspired Vattenfall (and other large electricity companies) to believe that they, too, could become internationally successful – and thereby also use the international arena to compensate for stagnation in domestic demand.

At the same time, Vattenfall experienced *negative* transformation pressures. Apart from the stagnation in electricity consumption, the most important negative pressure had to do with the increasing international activities of major European electricity companies. One example was Vattenfall's counterpart in Finland, the state-owned Imatrain Voima (IVO, now Fortum), which at an early stage launched activities in England, whose electricity market was being liberalized. Vattenfall felt that it might lose its respected position in the community of major European electricity companies unless it, similarly to IVO and others, became more internationally active.

A further negative transformation pressure stemmed from the interesting development of Vattenfall's largest Swedish competitor, Sydkraft, which was substantially smaller than Vattenfall but which dominated the market in southern Sweden. In 1985 Sydkraft got a new CEO, Göran Ahlström, who had earlier been a high-level manager at Sandvik, a highly internationalized Swedish engineering company. Ahlström initiated a transformation of Sydkraft, seeking a more business-like company and opening up for far-reaching international activities. A cooperation was launched in 1990 with PreussenElektra in Germany, foreseeing joint ownership of power plants, production cooperation, construction of a new HVDC link between the two countries, among other things. Vattenfall observed this development with great interest. The future scenario of a powerful Swedish–German actor in the south of the country was identified by Vattenfall as a threat to its dominant position in Sweden. It was a challenge to which Vattenfall would have to respond (L. Lundberg, interview; Lubitz, interview).

4. Lobbying for a new organizational form

To understand Vattenfall's response to the transformation pressures discussed above, we may follow Dahmén's (1988) suggestion to analyze two broad dimensions: (1) the prevailing *institutional conditions* in the Swedish electricity sector and (2) Vattenfall's *entrepreneurial capabilities*. Both dimensions posed considerable problems to Vattenfall.

In terms of institutional conditions, one problem for Vattenfall was its organizational status. Vattenfall had for decades had the form of an 'affärsverk' ('commercial government agency'), which among other things meant that all major investment decisions had to be formally approved by the Swedish Parliament. This could be a tedious process. For an international expansion to be possible, it seemed obvious that the agency would have to be organizationally transformed, preferably into a joint stock company.

As a matter of fact, Vattenfall had for decades lobbied for such a 'corporatization', arguing that the government agency form reduced its flexibility. In summer 1990, Vattenfall initiated a new lobbying campaign for changing its organizational status. General director Carl-Erik Nyquist published a long debate article in the leading Swedish daily, Dagens Nyheter. He took as his point of departure the ongoing developments in Britain, Norway and above all within the EC, where the Commission aimed at creating a liberalized and internationalized electricity market in Europe. Nyquist noted that this would create totally new conditions for producing and selling electricity in Europe, and he argued that Vattenfall must be given the same possibilities as other large European electricity companies to take part in this new market. Therefore it was necessary to 'corporatize' Vattenfall by transforming it into a joint stock company. Nyquist wrote that the 'pace of development' was very high within the EC, and although Sweden itself, as mentioned above, was at this time not part of the EC he saw it as necessary that the country adapt to the European development (Nyquist, 1990).[3]

The transformation of Vattenfall into a joint stock company had traditionally been opposed by the Social Democrats and the Left Party, who feared that the state would lose control of electricity prices. These arguments did not disappear, but in 1990 Sweden headed into a serious economic crisis, and in this connection the political mindset seemed to be changing. In September 1990 the social-democratic government presented a 'crisis package' of measures and reforms to counteract the negative economic development. Electricity did not at all play any decisive role in this context, but the package nevertheless included a proposal that Vattenfall be corporatized. The formal argument was that it would make the administration of the state's property more efficient (Swedish Government, 1990). But the proposal could also be interpreted as a first step towards a privatization of Vattenfall and a liberalization of the Swedish electricity market.

For Vattenfall, this was a historical moment of change, and the government's proposal, which was confirmed through a parliamentary decision in spring 1991, was seen as paving the way for a freer and more flexible organization. The price Vattenfall had to pay for the new organizational form was that the national high-voltage electricity grid was separated out from Vattenfall. The national grid was transformed into a new government agency, Svenska Kraftnät.[4]

5. Renewing managerial competencies

Let us now turn to Vattenfall's *entrepreneurial capabilities* and thereby look in particular at the evolution of its *managerial competencies* as a key resource for international expansion.

At the time of the formal implementation of Vattenfall's new corporate form in January 1992, it was not yet clear how Vattenfall actually envisioned the international market of which general director Nyquist had spoken so vividly when arguing for a corporatization. There was a remarkable uncertainty and confusion with which international initiatives were discussed within the company. Accordingly, there was disagreement in terms of the type of competencies that would be crucial for implementing the emerging internationalization strategy. Judging from the arguments put forward in Vattenfall's annual reports and internal news, 'going international' could mean different things:

1. Expansion of the NORDEL cooperation (aimed at the efficient exchange of electricity among the Nordic countries) to include new member states, focusing on production optimization across national borders;
2. Joint, transnational ownership of new power plants in order to minimize economic risks in power plant investments during periods of stagnating demand;
3. Export of Swedish electricity to customers abroad, profiting from the lower production costs in Sweden as compared to most other European countries;
4. Participation, mainly in the form of consultancy services, in the construction of new power plants and transmission systems abroad (as had SwedPower done with some success, though on a modest scale);
5. Direct investments in already existing electricity companies and power plants abroad.

The situation was complicated by the fact that Vattenfall already regarded itself as an internationally active company. As noted above, it already worked together with a variety of large foreign electricity companies within the frameworks of UNIPEDE, CIGRÉ, WEC and other international organizations, although this rarely involved any business relations. Through the NORDEL system for exchanging electric power, Vattenfall had since the 1960s also been working closely together with its Nordic counterparts in Finland, Norway and Denmark.

Vattenfall's intuitive reaction was to use these existing cooperative frameworks for expanding its international activities in the new era that seemed to be approaching. Especially the generation of managers at Vattenfall who had 'grown up' with the established cooperative traditions considered it self-evident to draw on those existing communities and organizations of which Vattenfall was already part, and try to build on successful international initiatives from the past. This corresponded to a smooth, incremental continuation of earlier international activities and provided the motivation for the first two of the above international visions listed above.

In contrast, the last three international options corresponded to a more aggressive business thinking.

Inspiration for the electricity export vision came from France, which already had a long tradition of sizable electricity exports, but also from Norway, which, given its overcapacity in hydroelectricity, hoped to sell power on continental markets.

The fourth option, focused on building new power plants and transmission systems abroad, was inspired by in-house experiences from the small but dynamic consultancy firm SwedPower, in which Vattenfall owned the majority of shares and which operated mainly in third world countries, particularly Asia.

Regarding the fifth option, focused on direct investments abroad, post-communist Central and Eastern Europe seemed to offer the best opportunities. Given the bad physical condition of their electricity systems, these countries were in need of both capital and knowledge, which Vattenfall might provide in exchange for partial ownership. In Western Europe, some opportunities seemed to open up in Britain through the privatization process launched there in 1990, and possibly within the EC as a whole,

[3] The fast political development with respect to electricity in the EC was also emphasized regularly in Vattenfall's internal newspaper, thus preparing employees for a turbulent future.

[4] This reform was inspired by ongoing developments in Britain and the EC and aimed at separating the natural monopoly parts of the electricity industry (transmission and distribution) from those parts in which competition could be introduced (generation and supply).

although in most EC countries the electricity business was still nationally protected and the scope for foreign ownership therefore limited.

In summer 1991, Vattenfall announced that its goal was to have 10 billion SEK in annual sales outside Sweden by the end of the millennium (Vattenfall, 1991). It seemed an enormous amount given the company's total net sales in 1991, 21.8 billion SEK (cf. Fig. 1). Nothing concretely was said, however, about *how* the foreign billions were actually going to be earned. Vattenfall did not make any clear choice between the different visions listed above, but pursued a rather diverse internationalization path without a clear focus. Following the first and second options, Vattenfall saw important opportunities in using its existing competencies and experiences from large-scale planning and engineering projects. But at the same time the management board perceived a need to acquire additional competencies for trying out the more radical strategies discussed above. Such competencies would be in fields such as branding and marketing, European law, international finance, corporate governance, etc. In these fields Vattenfall's existing competencies were very limited.

Vattenfall responded to the competence gap in these fields by using the internal reorganization, which was carried out in connection to the corporatization in 1991–1992, to acquire new competencies and employ new managers. Historically, Vattenfall had employed managers who already had a long previous experience from working within the group or at least within the electricity industry. Most of them had an engineering background. This pattern was now deliberately altered under the lead of CEO Carl-Erik Nyquist. Nyquist employed a new human resources manager from IBM, a new CFO from ABB, a new chief lawyer from Ericsson and a new sales director from Shell. Further important persons were recruited from other Sweden-based multinationals, such as Pharmacia and Electrolux.

In addition younger managers from within the group were promoted. The new leaders in turn employed new mid-level managers, and as a result a whole new leadership was created in the early 1990s. This meant that a competence shift and also a generation shift was on its way within Vattenfall – a shift which was driven in a very conscious way by the older generation of leaders, with Carl-Erik Nyquist on the top.

Two years later, in October 1993, the by then largely renewed Vattenfall leadership managed to agree on a somewhat more concrete internationalization strategy. The aim was to conquer market shares in geographical proximity of Sweden and more precisely in countries at 'a cable length's distance', i.e. to which it would be possible to directly transfer electricity. In practice this was equivalent to the Baltic Sea region. Head of Electricity Supply Anders Hedenstedt explained that in this way Vattenfall would 'increase its freedom of action in an always uncertain future'. Vice President Lennart Lundberg further explained that Vattenfall in the neighbouring countries would act as a 'producer and seller of electricity. We also see opportunities to become a local distributor. We can sell electricity to and from Sweden from our own facilities by way of cables but also sign cooperative agreements at different levels with local generators'. In the new growth strategy that was elaborated, 30 billion SEK were to be invested over a period of five years. Half of this amount, 15 billion SEK, was to be invested abroad (Vattenfall, 1993).

The decision about the new strategy was followed by the creation of a new business area, Vattenfall International, which was to form the platform for international activities. At this time, however, Vattenfall had still almost no activities at all abroad. Getting from vision to actual commercial projects was a long and tough learning process, with considerable experimentation and trial-and-error. In the following section this process is concretized through an in-depth study of Vattenfall's difficult expansion to Germany. As we will see, the expansion to Germany involved elements from all five international visions listed above, although in the end it was the last one – direct acquisitions – which became the key to Vattenfall's success.

6. Vattenfall in Germany

6.1. *Seeking cooperation with 'old friends'*

Entering the German electricity market was Vattenfall's greatest dream already at an early stage, this country being the clearly largest electricity market 'at a cable length's distance'. Vattenfall had been exchanging electricity with West German utilities for three decades by way of Denmark, using an HVDC link called Konti-Skan. Through this cable, which was the only physical connection between the Nordic and the continental electricity systems up until 1994, Vattenfall built up a trustful cooperation with PreussenElektra, Hamburgische Electricitäts-Werke (HEW) and Nordwestdeutsche Kraftwerke on the German side (L. Lundberg, interview).

When PreussenElektra in the late 1980s looked for a Scandinavian partner with which a more far-reaching cooperation could be built up, Vattenfall was identified by the German company as the most natural and suitable partner. It was envisaged that the cooperation could start with joint ownership of power plants and on the long-term perhaps even a merger. Under discussion was also a looser form of cooperation, something like the later cooperation between SAS, Lufthansa and other airlines in 'Star Alliance' (Stotz, interview).

However, PreussenElektra finally refrained from embarking on a partnership with Vattenfall, a major reason being that Vattenfall was not a joint stock company; for the Germans it was unclear what a Swedish 'commercial government agency' actually was and what the implications would be in the context of international business. When Vattenfall had solved this problem through its corporatization in 1992, PreussenElektra had already entered a far-reaching partnership with Vattenfall's largest competitor in Sweden, Sydkraft.

PreussenElektra was hence not an available partner for Vattenfall in its internationalization efforts. An exception was Vattenfall's joining PreussenElektra's and Sydkraft's 'Baltic Link' project, which was successfully completed in December 1994 and which substantially increased the import and export capacity between Sweden and Germany. But apart from this, Vattenfall had to look elsewhere for suitable partners. In the early 1990s, a leadership trio from Vattenfall consisting of Carl-Erik Nyquist, Lennart Lundberg and Anders Hedenstedt travelled around Europe in search of opportunities in this respect. They used their existing, dense contact networks that had been built up during several decades. The general respect that Vattenfall enjoyed abroad made it easy to initiate talks. Apart from PreussenElektra, promising partners seemed to be the largest German utility RWE as well as the local utilities in Berlin (BEWAG) and Hamburg (HEW).

The talks with RWE did not yield any results, but Vattenfall made more progress with BEWAG. BEWAG's CEO, Leonhard Müller, was an old friend of Lennart Lundberg's, and the atmosphere was positive. Rolf Falkenberg as head of Vattenfall Engineering also identified BEWAG as a suitable partner from an energy consultancy perspective (Falkenberg, interview). As a result, Vattenfall in 1992 bought 50% of the shares in a small consultancy and construction company, Energie-Anlagen Berlin GmbH (EAB), in which BEWAG held the remaining 50%. Vattenfall hoped that this would function as a first step towards a more far-reaching activity on the German market.

The actual success was limited. Vattenfall hoped for a fast liberalization process of the German electricity market in response to pressure from the EU Commission, giving foreign actors greater opportunities. The company became eager in this respect particularly after Sweden's 1994 decision to join the EU. However, in contrast to the development in Sweden and Finland, where decisions to liberalize the electricity industry were taken in 1994–1995, the liberalization process was much slower in Germany. Partly as a result of this institutional stagnation, Vattenfall had by 1996 still not expanded any further in Germany.

At that time, however, a new opportunity appeared as the Senate of Hamburg[5] showed signs of wishing to sell some of its shares in the regional Hamburg utility, HEW. Vattenfall got to hear about this opportunity through a Hamburg-based corporate finance firm which had helped Vattenfall with the EAB acquisition back in 1992. The owner of this firm was a friend of the mayor of Hamburg. The latter was a social democrat and had good relations to Sweden, a fact that made it easy for Vattenfall, as a state-owned Swedish firm, to present itself as a trustworthy partner. An advantage was also that Vattenfall had already cooperated with HEW through the Konti-Skan HVDC connection for more than 25 years.

However, Hamburg decided in late 1996 to sell 25.1% of the shares in HEW to Sydkraft and PreussenElektra (each firm acquiring 12.55%), rather than to Vattenfall. The reason for Vattenfall's failure was obviously that its bid was too low. This in turn seems to have been related to Vattenfall's problems to understand parts of the complex German accountancy rules, which led Vattenfall to seriously underestimate the value of HEW (Nyquist, interview). Some interviewees, however, also point at a politically rooted fear from the side of Vattenfall to invest in a German company with large stakes in a number of old nuclear power plants – a highly sensitive topic in Sweden, which had decided to phase out its nuclear power by 2010. Although Vattenfall's top managers – and more generally, its employees – had a pro-nuclear stance, top management, according to this interpretation, felt obliged to respect the official Swedish nuclear policy.

6.2. *From cooperation to confrontation*

Hence by the end of 1996, Vattenfall seemed to face a commercial fiasco in Germany. The Swedish company had spent more than six years trying to establish itself on the German market, though without any tangible result. EAB in Berlin did not generate profits and did not grow, and the HEW stake that Vattenfall had attempted to acquire had been lost to competitors. A drawback was also that at the level of the EU, the liberalization efforts had slowed down considerably after a very active period in the early 1990s, eventually leading to a weak compromise on the liberalization of electricity in late 1996 (European Parliament and the Council of the European Union, 1996).

In Sweden, the business press criticized Vattenfall for not being active enough on foreign markets – at a time when large foreign utilities such as PreussenElektra, EdF, Statkraft and IVO (Fortum) had started to acquire large stakes in the newly deregulated Swedish electricity market. Vattenfall had virtually no corresponding presence on foreign markets. What it did have were some not very well-coordinated investments in South-East Asia and stakes in a couple of small distribution companies in Finland. Similarly, years of efforts in the Baltic states and in Poland had not yielded any significant results.

In this situation Vattenfall's management board concluded that something must be done, and there was a period of serious internal discussions. An interesting aspect in this connection was the generation shift that Vattenfall at this time was going through at multiple levels. Earlier dominant personalities such as Nyquist and Lundberg were about to retire, and the new generation that was to take over was not only younger, but it also represented a culture and a thinking which differed from that of the traditional electricity company. Precisely the issue of the company's internationalization had the potential to become a springboard for a new generation of managers who had not necessarily made their earlier careers within the electricity industry, but who had been working within highly competitive and internationalized industries.

The failure in Germany gave the new managers more room for trying out their ideas, and they proposed a new approach to the German market. So far, Vattenfall had mainly followed a 'soft' internationalization path by seeking cooperation with already existing German electricity companies, such as BEWAG, PreussenElektra, RWE and HEW, trying to take advantage of earlier cooperation and existing communities and contacts. The new, more aggressive approach was, in contrast, based on establishing a presence *outside* the traditional German electricity industry. It aimed at *confrontation* rather than *cooperation* with Vattenfall's old partners in Germany.

This was the background to Vattenfall's decision to join forces with a Hamburg-based independent businessman, Michael Saalfeld, with whom the Swedes formed a joint venture called *Vasa Energy*. Saalfeld, who himself had a Swedish wife, enjoyed a reputation for having been able, as one of very few, to make money on the post-communist East German energy market, and he had a dense personal network in Hamburg and elsewhere (Vernmark, interview; Saalfeld, interview).

Vasa Energy was to be based in Hamburg and sell energy- and energy-related services on the German market. Its links to Sweden, a country with an already liberalized market, were stressed. In 1997, a decision was taken by the German government to start liberalization of the German electricity market, and Vasa Energy sought in its marketing activities to take advantage of Vattenfall's experience from acting on the already liberalized Nordic market. Vasa was to be 'the new, modern actor from Scandinavia, with the intelligent products, with a small, flexible organization and with knowledge from an open, deregulated market' (Vernmark, interview).

Vasa Energy in this way challenged the established German electricity industry, which it sought to portray as overly conservative and anti-competitive. It also managed to receive attention in this respect in German media (May, interview). A problem was certainly that the venture was a pure trading company without any generation capacity, but Vasa was careful to point out that it, through Vattenfall, had access to the newly inaugurated Baltic Cable, through which electricity could be imported from Vattenfall's Nordic home market.

6.3. *Project 'Hansa Nord'*

Vasa Energy did not remain Vattenfall's platform in Germany for long. Vattenfall's approach changed again in response to market developments, particularly in connection with the liberalization of the German electricity market. Actors at different levels sought to reposition themselves so as to better adjust to a more competitive market. The most notable moves were the mergers between PreussenElektra and Bayernwerk in 1999, through which the giant utility E.ON was created, and RWE's acquisition of VEW (the fourth largest utility in West Germany). An important aspect was also that municipal owners felt increasingly uncertain about the future, and

[5] Hamburg is both a city and a *Bundesland* (federal state), and the Senate is, accordingly, the government of both the city and the Bundesland.

decided to fully or partly divest their stakes in local and regional energy companies.

Hamburg had embarked on this municipal trend in 1996, leading to the acquisition of 25.1% of HEW by PreussenElektra and Sydkraft, as discussed above. In 1998 the Senate proceeded with initiatives to sell out further HEW shares, and Vattenfall thereby seemed to get a second chance in Hamburg.

A large number of European electricity companies signalled their interests in HEW. The main bidding and negotiation process took place between May and November 1999. Vattenfall had now learnt its lesson from the earlier failure concerning the accountancy rules, and in addition it decided to risk employing leading German financial experts from Deutsche Bank as advisors, although Deutsche Bank had close historical relations with Vattenfall's main German competitors. Vattenfall was supported in its acquisition efforts by the chairman of its supervisory board, Jörgen Andersson, who was a former Swedish Minister for Energy and, similarly to Hamburg's Mayor Ortwin Runde, a social democrat (Nyquist, interview). The acquisition efforts were internally referred to as 'Project Hansa Nord'.

An interesting difference, as compared to the time of Vattenfall's first attempt to acquire a HEW stake in 1996–97, was that Germany following the elections in autumn 1998 had a new 'red-green' federal government which had a much more critical stance to the future of German nuclear power. In 1999 it was seen as highly probable that Germany would decide to phase out its nuclear power. Hence the argument from 1996 to 1997 that Vattenfall through its attempt to acquire HEW supported the future of German nuclear power was weakened.

In November 1999, it was announced that Vattenfall had won the bidding process and was to acquire 25.1% of HEW's shares. It was celebrated by Vattenfall as the company's so far clearly largest international investment. For Hamburg, the decision to sell the stake to Vattenfall was, as a matter of fact, directly related to the company's outspoken ambition to continue expanding in Germany. In the contract between Vattenfall and the City of Hamburg, the Swedes promised to use HEW, rather than Vasa Energy, as its platform for further expansion. This was seen by the Senate as a way to retain an important role for Hamburg in the German electricity industry. If, in contrast, the stake had been sold to PreussenElektra, Hamburg thought it probable that HEW end up as a small fraction within E.ON (Fagerlund, interview).

HEW, however, was furious about the Senate's decision. In their view, Hamburg had gone behind the back of its own municipal energy company, without consulting the company's management board (Lubitz, interview). The relationship between HEW and its new important minority owner was further infected when it was revealed that Vattenfall and the Senate had secretly agreed that Vattenfall be in charge of administering the rest of Hamburg's ownership, which amounted to another 25.1% (the remaining HEW shares were traded on the stock market). In return, Vattenfall promised to retain HEW as a trademark. It was also agreed that Vattenfall could acquire the City's remaining shares, if completed within a period of three years (Fagerlund, interview). Hence Vattenfall had in practice majority of control over HEW already in late 1999.

What were the deeper reasons for HEW's opposition to Vattenfall? The Hamburg company's long-term strategy had been to prevent majority ownership by any single owner, striving, instead, to balance different minority owners. In this way real control over HEW would remain with the company's own management board. As a matter of fact, HEW had far-reaching plans to expand domestically and perhaps also internationally. It aimed at making its own acquisitions, rather than being acquired itself. Formally, HEW was a relatively small player on the German energy market, but it had an impressive financial strength and far-reaching, though partly hidden, financial assets that had been built up during a long period of time. The management board planned to use these assets for acquisitions (Lubitz, interview).

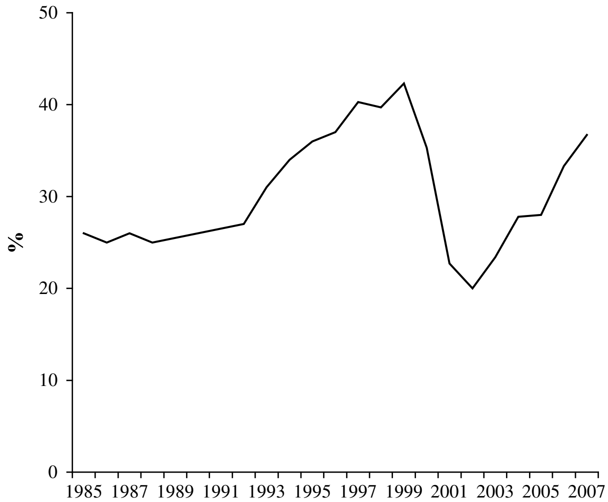
6.4. Taking control over eastern Germany

In autumn 1999, when Vattenfall made its HEW acquisition, HEW had already come far in its efforts to acquire majority ownership in BEWAG, the large municipal energy company in Berlin. It was the same company which Vattenfall in the early 1990s had tried to use as a springboard for its German activities. On the long-term HEW also hoped to get hold of VEAG, eastern Germany's dominant production and transmission company with a near-monopoly on the territory of the former GDR. HEW further hoped to continue this eastern-oriented growth by expanding beyond Germany to Poland, the Czech Republic and Slovakia. Scandinavia also seemed promising, and HEW had already accumulated a 17% stake in Sydkraft through transactions on the stock exchange (Lubitz, interview).

BEWAG had been partly privatized already a few years earlier, resulting in the acquisition of 26% of its shares by the American utility Southern Energy. In autumn 1999, however, HEW was close to a deal with the City of Berlin concerning the acquisition of another 25%. HEW was further helped by the merger between PreussenElektra and Bayernwerk and between RWE and VEW. These firms together owned the remaining 49% of the shares in BEWAG. The German and EU competition authorities ruled to accept the grand West German mergers only under the condition that the companies sell their stakes in eastern Germany, including Berlin. After intense negotiations, HEW in this connection managed to purchase E.ON's shares in BEWAG, whereby E.ON, among other things, in return acquired HEW's stake in Sydkraft.

In spring and summer 2000 HEW received massive media attention for its activities in eastern Germany. It was still not publicly known that Vattenfall actually had the control of HEW, and HEW's efforts were therefore publicized in German media as a West German company's efforts to grow in eastern Germany. This situation changed in October 2000, when it was revealed that E.ON and Sydkraft had agreed to sell their stakes in HEW, amounting to 37% of the shares (12% of which had been acquired through the stock market), to Vattenfall, thereby formally making Vattenfall the majority owner in HEW. In return Vattenfall sold minority stakes in Czech, Lithuanian, Norwegian and Swedish companies to E.ON and Sydkraft.

Vattenfall could now take formal control over HEW's intense growth in eastern Germany. HEW's management board, which had strongly opposed Vattenfall's growing role in the company, was replaced by a more loyal board. However, the new opportunities were a mixed blessing for Vattenfall. On the one hand, this was clearly a unique opportunity for Vattenfall to become one of the most powerful players in Germany and even in Europe as a whole. On the other hand, whereas BEWAG was a highly desired acquisition for Vattenfall, its sister company VEAG was in bad shape, both financially and materially. Above all, its generation capacity was to nearly 100% based on environmentally dubious brown coal power plants. Vattenfall was still 100% state-owned, and Sweden wished to portray itself as a leader in green energy developments. Both Vattenfall and the Swedish government were proud that electricity production in Sweden was almost exclusively based on non-fossil fuels. From this perspective, taking over VEAG was a highly controversial issue which started to be debated lively in Swedish media. The German growth prospects became even more difficult to handle when Vattenfall received strong political signals from the German government that the purchaser of VEAG would also be



Source: Vattenfall annual reports, 1985-2007.

Fig. 4. Vattenfall's equity/assets ratio, 1985–2007.

requested to buy LAUBAG, a company that operated most of eastern Germany's brown coal mines.

It appears improbable that Vattenfall's old CEO, Carl-Erik Nyquist, would have dared to take the step to expand Vattenfall's business into brown coal-fired power plants and mines. However, Nyquist had already made clear that he intended to retire from his position at the age of 65. He did so in April 2000, and a month later the 50-year-old Lars G. Josefsson was appointed Nyquist's successor. Josefsson, similar to the majority of new managers recruited by Nyquist in the 1990s, had no previous experience from working within the energy sector and no emotional ties to any particular type of power plants. Instead, he had been working abroad at leading positions within highly internationalized Swedish companies in the telecom and defence industries. At the same time, Jörgen Andersson, the former Minister for Energy, was succeeded as chairman of Vattenfall's supervisory board by the more business-oriented Gerhard Larsson.

With this new leadership in place, the aversion to brown coal – as well as the willingness to give into politically motivated (non-business) concerns – was substantially reduced. The possible political problems arising from a Swedish state-owned company's investment in brown coal abroad were reinterpreted as being much less important than the enormous business prospects that gave Vattenfall a one-time chance to grow really big. Vattenfall therefore decided to take the risk of acquiring not only BEWAG, but also VEAG and LAUBAG. The risk was both political, as illustrated by the debate on brown coal, and financial, since the acquisitions in eastern Germany led to a dangerously low equity/assets ratio for Vattenfall as a whole (see Fig. 4).[6]

In the bidding process for the three companies, Vattenfall's main competitor was Southern Energy. Vattenfall, wise from a decade of both failures and successes in doing business in the German electricity industry, managed to receive explicit support from high-level German political leaders, persuading these that it would be better for eastern Germany to be controlled by a Swedish state-owned company than by an American private firm. Vattenfall was in the end also helped by the turbulence in the American energy business following the Californian electricity crisis and the Enron scandal in 2001, which created difficulties for Southern Energy (renamed Mirant in early 2001) and contributed to the American company's surrender in the struggle against Vattenfall in Germany.

The Swedish–American struggle involved long and complicated negotiations and even processes in court.[7] By 2002, however, all the formal agreements had finally been completed, and Vattenfall could start to consolidate its new, strong position in Germany. Its German stakes, whether measured in sales or in number of employees, were then almost twice as large as its Swedish stakes.

7. Conclusion

Vattenfall experienced a tremendous breakthrough in Germany in the years 1999–2002, through the acquisition of HEW, BEWAG, VEAG and LAUBAG. However, it must be stressed that Vattenfall's acquisitions in Germany did not come easy. They were preceded by nearly a decade of intense and at times seemingly hopeless efforts to get a foothold in the difficult German market. This article has shown that in order to understand how Vattenfall eventually ended up as one of Germany's largest energy companies, we need to understand both the far-reaching internal transformation that Vattenfall went through from the late 1980s, and the company's incremental learning and experimentation process in Germany during the 1990s.

The case of Vattenfall suggests that internationalization demands both institutional and entrepreneurial transformation. On the institutional side, Vattenfall realized that it had to push for a 'corporatization' of what until 1991 remained a 'commercial government agency'. Although this was a 'Swedish' problem, it can be interpreted more generally in terms of the need for electricity companies with international ambitions to adapt their organizational forms to international standards. Vattenfall's success in doing so meant that an important institutional bottleneck could be resolved.

On the entrepreneurial side, the case of Vattenfall suggests that internationalization is very much about building new competencies and that it may ultimately require a generation shift at the management level. This is an interesting issue particularly if seen against the background that Vattenfall thought that it already had considerable international experience and knowledge – though not so much on the business side as in technology and R&D. With hindsight, it appears that the company's historically inherited international presence and participation in a variety of communities of practice (Wenger, 1998) was more of a burden than an asset. Up to 1996, Vattenfall actively sought to use its existing networks and communities for expanding its business internationally, trying to establish cooperation with electricity companies with which it already had good relations. But its success came only after the company shifted strategy from cooperation to confrontation.

On the other hand, Vattenfall's early activities in Germany may be interpreted as an important period of learning, including far-reaching trial-and-error, which enabled the company to gain important tacit knowledge about market, legal and political conditions in Germany. Hence, the case of Vattenfall suggests that existing communities and networks can be actively used for learning during the internationalization process. This interpretation is in line with, for example, Johansson's and Vahlne's (1977) model of firm internationalization, which sees the process of expanding abroad as involving incremental, gradual processes of learning, whereas sudden attempts to quickly conquer new markets often

[6] The equity/assets ratio is defined as a company's total equity divided by its assets. It is of interest in our context as an indicator of the company's long-term payment ability and therefore also its prospects to receive new large credits. As a rule-of-thumb, an equity/assets ratio below 25% is usually considered problematic.

[7] Mirant argued that it, as a large shareholder in BEWAG, had first priority to buy the stakes. Vattenfall, in contrast, argued that priority rules did not apply.

fail. However, the case of Vattenfall also shows that, once the old communities and networks become too much of a burden, it is crucial to have the flexibility to shift focus from cooperation within old frameworks to direct confrontation with former ‘friends’.

Vattenfall’s growth in Germany was politically controversial in Sweden, particularly due to its commitments to East German brown coal and old West German nuclear power. During most of the 1990s, the acquisition of brown coal power plants and even mines would probably have been politically impossible for a Swedish state-owned energy company, and as late as in 2000, the management board of Vattenfall had considerable doubts about the appropriateness of investing in VEAG and LAUBAG.

In the end, however, business logics scored higher than political considerations – a new stance that was strongly facilitated by the internal generation shift within Vattenfall that took place in the 1990s and which culminated with the appointment of Lars G. Josefsson as CEO in mid-2000 – exactly at the time when the need for controversial decision-making in the context of Vattenfall’s engagement in eastern German brown coal was becoming increasingly acute. The new generation of managers saw the financial prospects and responded successfully to the new growth opportunities. They did not have any strong emotional ties to Vattenfall’s non-fossil traditions and they proved able to largely decouple the group’s business thinking from the Swedish energy policy agenda.

An issue that is likely to remain problematic in this connection is the tension between full state ownership in Vattenfall and the company’s enormous growth abroad. As suggested by Midttun (2001), ‘the more that public-owned Nordic companies engage outside of their polity, the less is the rationale for their public ownership’. Vattenfall and other Nordic electricity companies have traditionally sought to satisfy a variety of stakeholder interests – involving not only shareholders, but also its customers, employees, communities, suppliers and the broader society in which it is embedded – but ‘the more the companies activate themselves beyond their home-base, the more is the interest of its political owners transformed into ordinary stockholder interests’. This contradiction is clearly reflected in the ongoing media debate about Vattenfall’s role.

However, although the issue of privatization has been on the agenda from time to time, there are currently no concrete plans for privatizing Vattenfall. Since Vattenfall’s foreign investments, though at times regarded as highly risky, have turned out to generate very large profits, the Swedish government appears to be happy in receiving large dividends straight into the state budget. For the foreseeable future, therefore, it appears unlikely that Vattenfall would enter the sphere of privately owned electricity companies.

Acknowledgement

The author wishes to thank Arne Kaijser and an anonymous referee for useful comments on earlier drafts of this article, and the Swedish Energy Agency for financial support.

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List of interviewees

Falkenberg, Rolf, formerly President, SwedPower and Vattenfall Engineering.
Fagerlund, Mats, Chief Lawyer and Vice President, Vattenfall.
Hedenstedt, Anders, formerly Vice President, Vattenfall; formerly Vice President, BEWAG.
Helzén, Berndt-Olof, formerly Vice President, Vattenfall.
Jonsson, Helge, formerly Vice President and Head of Brussels Office, Vattenfall.
Lalander, Sven, formerly Vice President, Vattenfall; iniator of NORDEL and SwedPower.
Lundberg, Gunnar, Vice President, Vattenfall.
Lundberg, Lennart, formerly Vice President, Vattenfall; formerly President, UNIPEDE.
Lubitz, Joachim, formerly CFO, HEW and Vattenfall Europe.
May, Martin, Head of Media Relations, Vattenfall; formerly Head of Media Relations, Vasa Energy.
Mogren, Arne, Head of Climate Policy, Vattenfall; formerly Head of Brussels Office, Vattenfall.
Martiny, Martin, formerly Vice President, Vattenfall Europe.
Nyquist, Carl-Erik, formerly CEO, Vattenfall (1985–2000).
Saalfeld, Michael, formerly President, Vasa Energy.
Stadel, Hans-Christoph, MFC Corporate Finance.
Stotz, Jürgen, formerly President, VEAG; formerly Vice President, PreussenElektra.
Vallin, Gunnar, formerly Head of Vattenfall International.
Vernmark, Bengt, formerly Project Finance Manager, Vattenfall.
von Tschischwitz, Heiko, President, Lichtblick.
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