

# How will mergers and acquisitions impact on the generation, distribution and supply of power in the next five years?

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**INTRODUCTION**

The transition from public to private ownership and the creation of integrated power utilities has been driving consolidation in the generation, distribution and supply space since the late 1990s. As European governments embraced the trend toward privatisation and unbundling of their national electricity monopolies, opportunities were created for utilities to capture economies of scale, diversify risks, and optimise their balance sheets via a range of M&A activity.

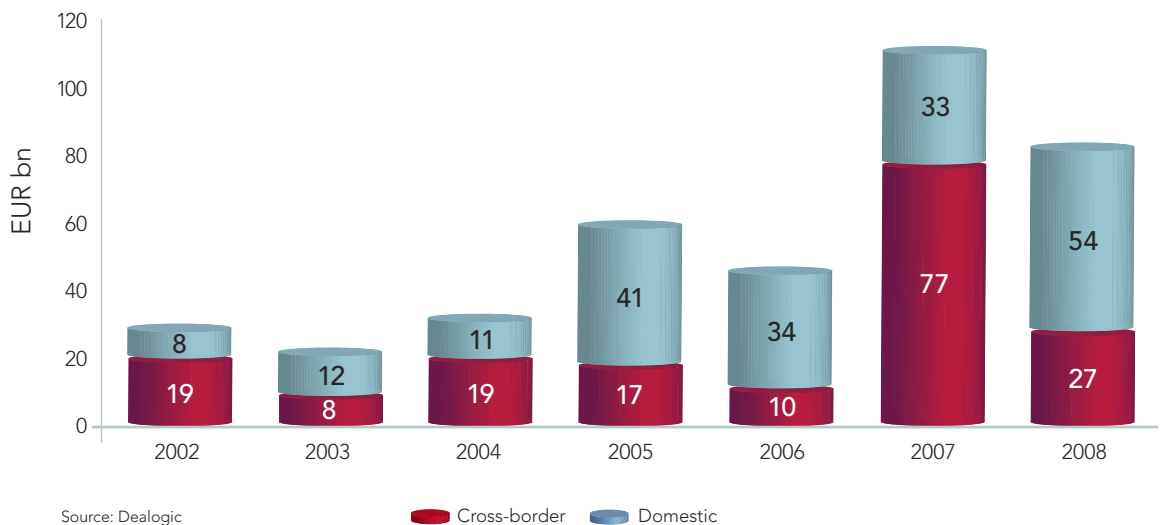
**POWER SECTOR M&A IN EUROPE IN RECENT YEARS**

Today's European power sector has been created through a series of mergers and acquisitions carried out over the last ten years. Since 2002, there have been over EUR 370bn transactions in the sector. Of these 52% have been domestic and 48% cross border.

Initially transactions were about securing strong domestic positions. These included:

1. Vertical integration moves to create what has become the dominant economic model in Europe, the vertical integrated generation/supply company, predominantly also bundling regulated distribution and/or transmission assets. Examples include:
  - Acquisitions of distribution/supply RECs in the UK by Innogy and PowerGen
  - Endesa's buyout of its distribution affiliates FECSA and Sevillana; and
2. Horizontal consolidation to create major players with significant scale economies at the national level. Early examples include the Viag/Veba merger which created EON in Germany along with RWE's acquisition of VEW.

**Figure 1** European utility sector M&A volumes (2002-2007)



Source: Dealogic

■ Cross-border ■ Domestic



Figure 2 Selected major European utility M&A transactions

Date of launch	Target	Bidder	Deal Value(USDm)
Nov 1998	London Electricity	EDF	3,174
Aug 1999	Tractebel	Suez	7,326
Sept 1999	Viag	Veba	18,176
Oct 1999	VEW	RWE	4,605
Nov 1999	EnBW	EDF	2,485
Apr 2001	PowerGen	E.ON	13,815
Nov 2001	Birka Energi	Fortum	3,054
Nov 2001	Eastern Electricity	EDF	2,078
Mar 2002	Innogy	RWE	7,375
Apr 2002	Lattice	National Grid	17,442
Jun 2002	SEEBOARD	EDF	2,059
Jul 2004	Hidro Cantabrico	EDP	2,899
Dec 2004	Sydkraft	E.ON	2,914
Feb 2006	GdF	Suez	58,705
Nov 2006	Scottish Power	Iberdrola	22,955
Apr 2007	Endesa	Enel/Acciona	54,656
Apr 2007	Endesa Europa	E.ON AG	16,906
Jun 2007	ASM Brescia	AEM	5,721
Jul 2008	Union Fenosa	Gas Natural	35,855
Jan 2009	Essent	RWE	12,426
Feb 2009	Nuon	Vattenfall	10,789

Source: Equity Research, Dealogic

This trend has been seen in most markets from the Nordics to Italy and continues today with transactions such as Gas Natural’s recent acquisition of Union Fenosa in Spain.

Increasingly though, we have seen the emergence of significant cross border acquisitions. These have been to either link up neighbouring markets such as Spain and Portugal (EDP-Hidrocantabrico) or France and Belgium (Suez/Tractebel). However, they have also often been to establish “beachheads” into geographically distinct markets (e.g. moves into the UK by EON, RWE, EDF and Iberdrola) as well as CIS/CEE investments by most of the European

major. The recently announced acquisition of Dutch generation/supply players Nuon and Essent by Vattenfall and RWE illustrate both of these trends.

European mergers have created a group of major utilities with strong domestic positions, rapidly developing international arms and ambitions to grow further as Europe continues to consolidate. It is this area that we expect to see develop further in the years to come. The potential for this can be seen by looking at the current market structures across European countries and for the EU as a whole.

Figure 3 EU-wide market shares (2007)

Utility	Power generation	Power supply	Countries
EDF	16.8%	17.4%	France, Germany, UK, Italy, CEE
Enel/Endesa	8.8%	14.5%	Italy, Spain, CEE, Ireland
RWE	5.9%	8.8%	Germany, UK, Netherlands, CEE
EON	5.5%	7.5%	Germany, UK, Nordics, CEE
Vattenfall/Nuon	4.3%	5.0%	Nordics, Netherlands, Germany, CEE
Iberdrola	3.3%	4.5%	Spain, UK
GDF Suez	2.4%	1.9%	Belgium, France
Top 7	47.0%	59.6%	

Source: Capgemini, company data, EC

STRUCTURE OF THE CURRENT EUROPEAN POWER SECTOR

Notwithstanding the substantial cross border investments to date, the European power market taken as a whole is still relatively fragmented. Many argue that the natural market structure for a competitive power industry tends towards an oligopoly, and indeed across Europe there are a large number of utilities dominant in their domestic market. However, these players typically have low market shares on a Europe wide basis. The sector as a whole is likely under-capturing the economies of scale that could be achieved by deploying expertise and capital across borders in larger economic units.

The estimated EU-wide market shares of the top tier of European utilities in both the generation and supply sectors are set out in the table below. The combined market

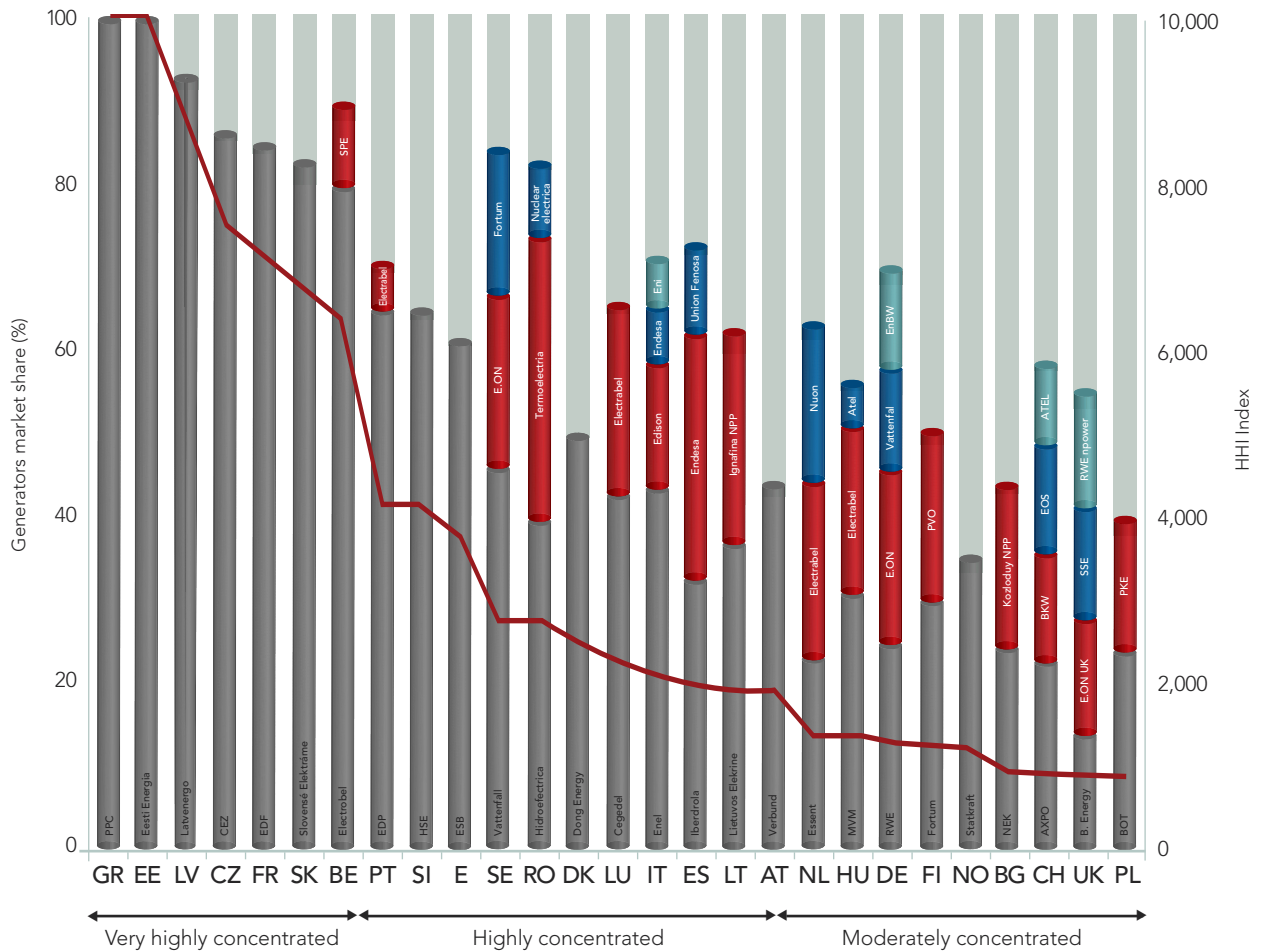
share of the top seven players is 47% in generation and 60% in retail supply, far lower levels than in many other capital intensive industries.

Despite these low EU-wide concentration levels, when looked at on a country-by-country basis, power generation and retail supply are more highly concentrated. Most markets are dominated by 1, 2 or 3 major players. As a result the HHI indices (sum of squared market shares) for most national markets, in both generation and supply, are well in excess of the 1,800 level that regulators denote as highly concentrated.

For the generation sector, the HHI index on a national level averages 3,602 versus 478 for Europe as a whole.

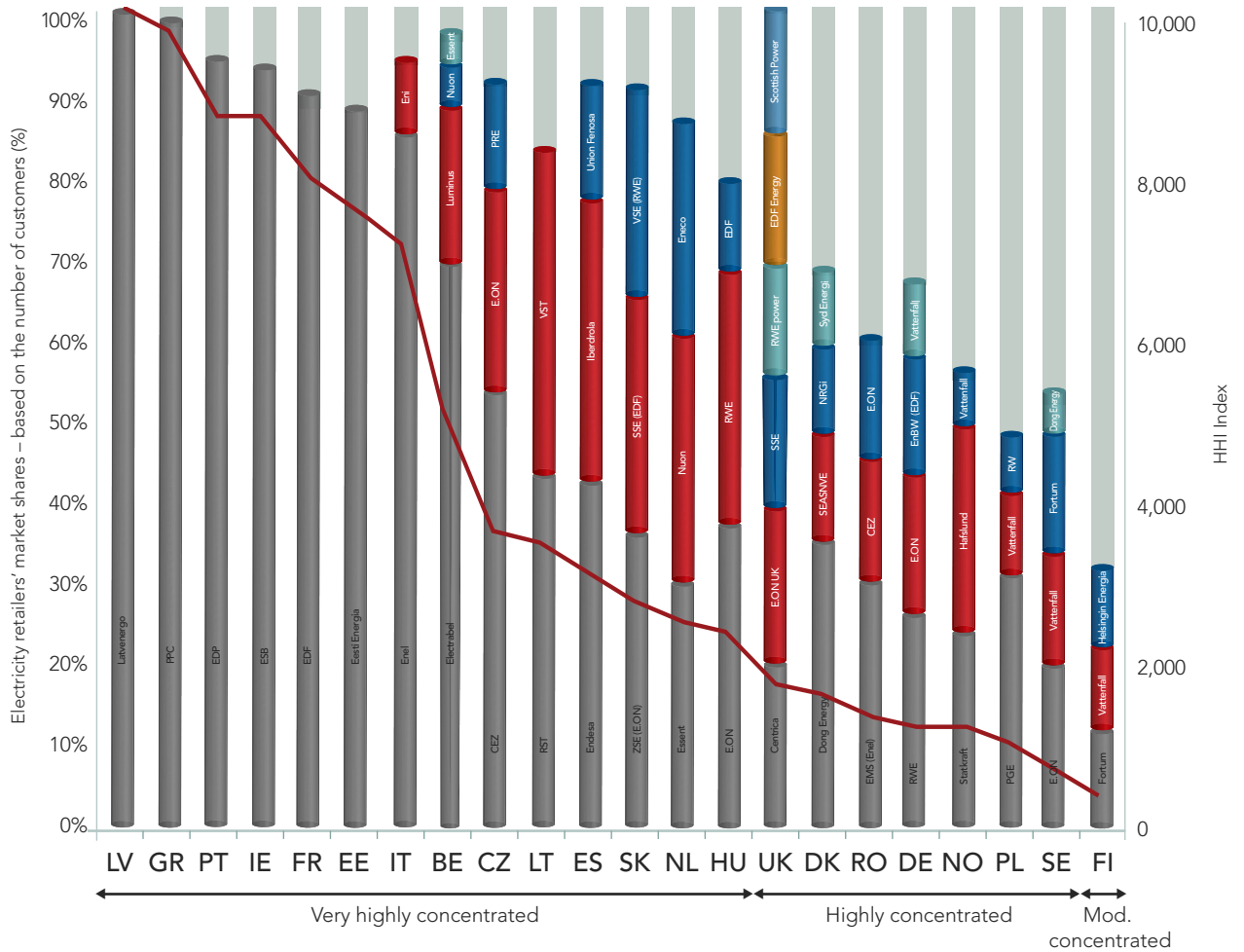
Similarly in the supply sector, the average HHI index for the national retail supply markets is 4,232 versus 722 at the European level.

Figure 4 Generation market concentration (2007)



Source: Capgemini, from company data

Figure 5 Electricity retail market concentration (2007)



Source: Capgemini, from company data

“However, major changes in the underlying structure of each country’s sector are unlikely.”

There are some limited moves to reduce concentration at the member state level, such as EON’s current EC-mandated generation sale and the divestiture of 1000MW of Irish capacity to Endesa by ESB earlier this year. However, major changes in the underlying structure of each country’s sector are unlikely.

Rather, EU-wide consolidation is likely to occur from an acceleration of large scale cross border tie-ups of players with major positions in multiple EU markets.

FUTURE POWER SECTOR M&A ACTIVITY

Despite the credit crunch, M&A activity in the European power space continued at a high level in 2008 and into this year. The underlying themes of consolidation, security of supply and growth in renewable portfolios continues to attract CEO level attention and to be supported

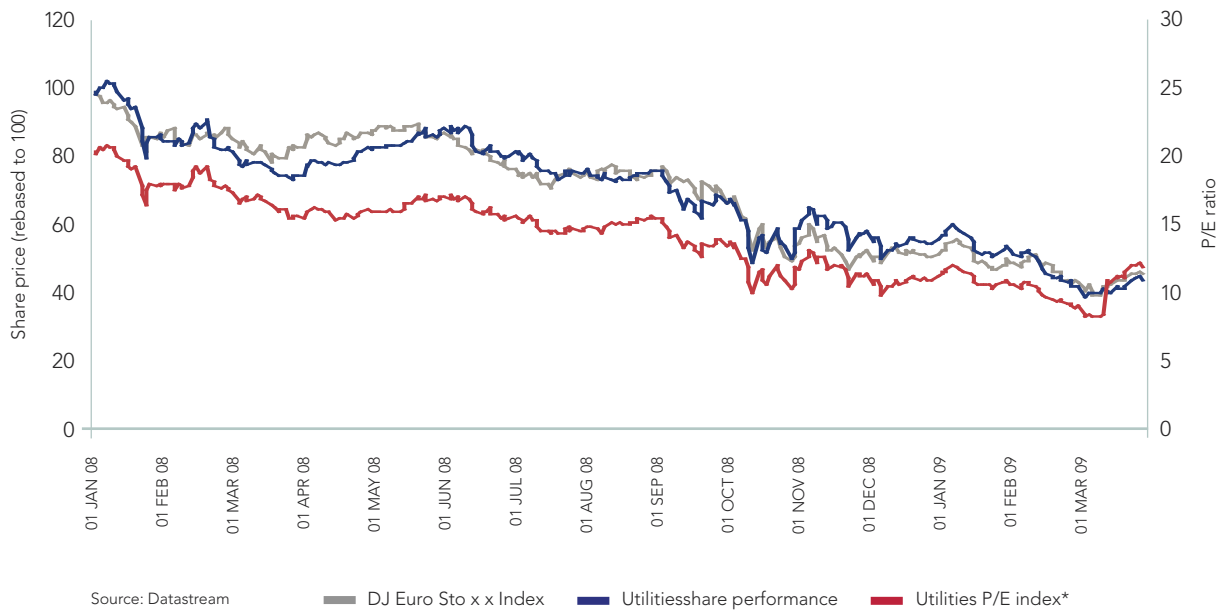
by shareholders. Europe is still engaged in plenty of consolidation among utilities as well as increasing interest in renewable generation from financial players. Examples include the sale of Dutch utilities Nuon and Essent, announced in January and February 2009, as well as the recent completion of last year’s bid for British Energy by EDF.

TWO NOTICEABLE CHANGES SINCE 2008 ARE:

1. an increasing shift from transformational cross border mergers to bolt-on acquisitions of individual assets and stakes; and
2. selective disposals by major utilities in order to strengthen balance sheets and, in some cases, to meet regulatory requirements.

Market conditions have opened up a range of opportunities, and while some players may be facing increasing liquidity constraints, utilities with strong cash balances will have a clear competitive advantage over their smaller competitors, which could bring further consolidation of the industry.

Figure 6 Utility sector valuations (since 1 Jan 2008)



As valuations are driven down by pessimism on the economy as a whole, power companies may face temporary displacements from their fundamental values, potentially providing a brief opportunity for companies to acquire

RENEWABLES: CONTINUED INVESTMENT COUPLED WITH ASSET SALES

With 2020 approaching, utilities have been ramping up their exposure to renewables in order to meet the targeted 20% of generation mix by 2020. This has led to increasing acquisitions by major incumbents of renewable operators and technology providers to supplement their own clean energy programmes; transitioning renewables from a niche segment to a core part of the generation landscape. Apart from utilities, sovereign wealth funds and private equity houses have been increasing activity in the renewable space, a trend that is expected to continue as government support towards clean energy, such as feed-in tariffs, provide an attractive incentive and stable foundation for the industry.

The sale of distressed projects, including renewables, are likely to be a large part of the short term picture as deteriorating credit conditions and suppressed demand for electricity continue to place pressure on available financing for power projects, particularly those backed by smaller development companies.

TRANSMISSION AND DISTRIBUTION UNBUNDLING: AN IDEA WHOSE TIME HAS COME

Following the growth in renewables, investments in transmission networks will be necessary to connect distant generation assets, particularly offshore wind farms, to the grid. However, the regulatory pressure for unbundling combined with reassessment of corporate strategies and reduced financing capacity, may see these networks designated as potential disposal assets. As power grids receive set tariffs and hence a stable revenue stream, they are less affected by market conditions compared to other parts of the power sector, making grids attractive to financial players such as infrastructure funds.

The infrastructure capital sector continues to have significant levels of equity to invest, although associated debt financing is harder to structure and more expensive than 12 months ago. Key areas of infrastructure fund activity include: high voltage grid networks, gas distribution and, increasingly, electricity distribution. The UK shows that distribution ownership is not necessary for success in the generation/supply sector and a number of major utilities are considering the sale of distribution activities previously regarded as core.

#### MAJOR CROSS BORDER GENERATION/SUPPLY CONSOLIDATION: TO RE-EMERGE MORE STRONGLY THAN EVER

The ongoing development of open European markets, with interconnections increasing between countries and regulatory changes to improve competition, should result in continued generation and supply consolidation. Volatility in fuel and electricity prices, as seen in the past year, favours integrated generation-supply business models that have a natural hedge. Geographical diversification and financial scale are also key to surviving and flourishing in volatile conditions. As a result, the consolidation in Europe's national power markets can be expected to mirror continued oligopoly positions in supply. New supply entrants have struggled recently (e.g. in the UK and France) and will continue to do so.

Consolidation on a European scale has accelerated in the past 2-3 years. We are likely to see a pause in the current environment as major utilities have reduced equity and debt firepower, so are conserving cash reserves, investing more in small scale and/or distressed assets.

In the mid-term, and well within our five year horizon, the impact of mergers and acquisitions in the power sector will again be felt. The credit crunch is likely to lead to perceived losers, whilst the strong will grow at their expense, strengthening core positions on a Pan-European basis. Over a five year period, there will be increased opportunities for financials and strategic players to enter and consolidate the sector as utilities reorganise their portfolios and projects are temporarily distressed due to the current market turmoil.

#### CONCLUSIONS

It has been a busy ten years for European utility sector M&A, accelerating particularly since 2006. We have seen major privatisations, hostile takeovers and state-sponsored

mergers. The vision of an integrated European power market is slowly taking shape and we have seen the emergence of major multinational European utilities (of which there are arguably seven at present).

Looking ahead to the next five years, there will continue to be activity across all segments of the energy value chain, although at varying levels of intensity. To speculate, one might expect:

- Slower but by no means insignificant activity for the next two years, with a focus on opportunistic in-fill acquisitions.
- Major acceleration of grid spin-offs, both transmission and distribution, across power and gas.
- A slowdown in renewable build-out but a consolidation of the sector as it matures and becomes increasingly mainstream.
- The re-emergence within our five year period of transformational mergers as the EU consolidation endgame begins to play itself out and the sector shakes down into 4-5 "super-majors" who between them have 75%+ aggregate European market shares in generation and supply.

In summary, it promises to be a busy five years for all of us. <

