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Owners and organisation of power supplies

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5.1 Owners and forms of business organisation

5.1.1 Owners

All parties supplying or trading electricity must hold a trading licence as specified in chapter 4.3.4. As at 1 January 2006 there were in total 345 companies with trading licences in Norway[5]. Holding companies without licence requiring activities are not included in this figure.

Table 5.1 breaks down companies holding trading licences by ownership. It shows that 232 companies are wholly or partly owned by local authorities, and that 143 of these are wholly owned by such authorities. A company which is wholly local-authority-owned may nevertheless have several local authorities as shareholders. The table gives no information on the number of owners in each company: Many have several owners, and cross-ownership is on the increase in the sector.

Local authorities and county councils own around 50 per cent of Norway's electricity generation capacity. Central government – through Statnett SF – about 37 per cent and private companies roughly 13 per cent[6].

The central government owns a large proportion of the central grid. Private companies, counties and local authorities own the remainder. Central government ownership of the national grid is administered through Statkraft SF. Local authorities and county councils own most of the regional and distribution grids.

Private ownership is found in all areas of the power supply sector (generation, trading and transmission). Around 49 per cent of the companies wholly in private ownership are solely engaged in trading.

Foreign ownership of the Norwegian power supply system is relatively limited, but some foreign companies have secured a trading licence in Norway. These concentrate mainly on the wholesale and spot markets. In addition, foreign enterprises have bought into Norwegian companies with trading licences or established their own Norwegian-registered subsidiaries. Foreigners have concentrated largely on trading companies, but foreign holdings can also be found in generating or network operations.

Table 5.1 Ownership as at 1 January 2006

Ownership	Stake	Sole owner
Local authorities	232	143
County municipality	35	12
Centtral government	28	9
Private	159	83

Source: Norwegian Water Resources and Energy Directorate

5.1.2 Forms of business organisation

In recent years, many power utilities have converted from local authority ownership to limited companies, and the latter mode of organisation is now used by 74 per cent of all enterprises in the Norwegian power sector. Figure 5.1 illustrates forms of company organisation at 1 January 2006.

One reason why many owners opt for limited company status is that the regulations pursuant to the Energy Act require the holder of a trading licence to keep accounts in accordance with the Accounting Act. A limited company also allows owners to restrict their personal financial liability. They are liable for their share of the paid-up capital, but not for any debts. Companies owned by counties or local authorities, on the other hand, have unlimited liability for all their operations – including debts.

Central government ownership is managed through the Statnett and

[5] Municipalities which trade and sell power under licence to electricity companies in which they do not own stakes and companies which have a licence with simplified conditions (as specified in chapter 4.3.4) are not included (industrial enterprises).

[6] Several companies have mixed county municipal, municipal, state and private ownership. The per cent distribution is linked to the majority owner.

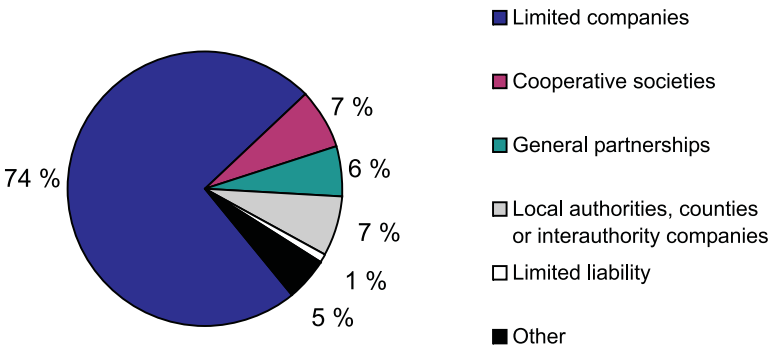

Figure 5.1 Forms of company organisation
Source: Norwegian Water Resources and Energy Directorate

Statkraft state enterprises. For a company to be organised as a state enterprise, the government must be the sole owner. The differences between state enterprises and limited companies are otherwise not great. Stakraft was reorganized to become a limited liability company on 1 October 2004, as a wholly owner subsidiary of Statkraft SF.

More and more energy utilities are being organised as groups. This applies to almost 48 per cent of all holders of trading licences. About 61 per cent of parent companies are themselves involved in activities which require licences. The remainder do not operate activities of this type.

As at 1 January 2006, 56 groups had a total of 143 subsidiaries. Subsidiary companies which intend to engage in activities which require a licence must hold their own trading licences. The formation of groups accordingly increases the number of licensees.

5.2 Organisation and restructuring of the power supply sector

5.2.1 Organisation

The power supply sector is organised in various ways around electricity generation, trading and transmission activities. Depending on which activity is being pursued, companies can be designated as generating, grid or trading enterprises, vertically-integrated utilities or industrial undertakings. In some cases, they are described collectively as energy utilities. Companies have also been established solely to negotiate power contracts.

Everyone supplying or trading electricity must hold a trading licence. Figure 5.2 shows the number of companies with a trading licence by activity as at 1 January 2006. The circles which overlap illustrate the extent to which companies operate different forms of activities. The figure shows that 72 companies are engaged in electricity generation, trading, and grid management and operation, for instance, while 47 are only involved in grid management and operation. A total of 345 companies hold trading licences.

Figure 5.3 presents trends in the various operating categories during 1998-2005. This shows that the number of vertically-integrated utilities[7] has declined, partly as a result of mergers which have formed larger vertically-integrated companies. The number of companies (legal entities) engaged solely in operations subject to competition has been rising since 1998, with the exception of 2001. The number of such licensees that only

[7] Vertically integrated companies refers to companies that operate distribution, trading and/or generation activities within a single legal entity.

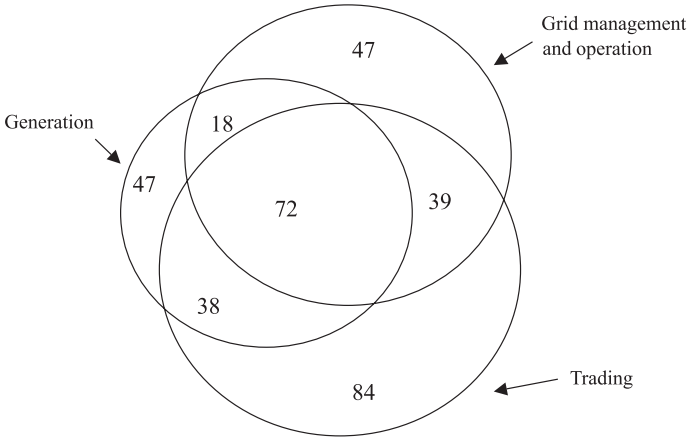

Figure 5.2 Companies holding trading licences by activity
Source: Norwegian Water Resources and Energy Directorate

operate competition exposed activities in 2005 rose to 169, from 87 in 1998.

To implement the new electricity market directive (Directive 2003/54/EC) into Norwegian law, a proposal for changes to the Energy Act was presented to parliament in the spring of 2006. The proposal contains requirements for company/function division between distribution companies and competition exposed activities in power companies.

5.2.2 Restructuring the power industry

In response to the deregulation of the energy sector in Europe, a substantial restructuring of the power industry is taking place in most European countries, also across national borders.

Many local authorities and counties in Norway have sold holdings in power companies. At the same time, larger regional power companies have been established, partly by acquisition and partly through

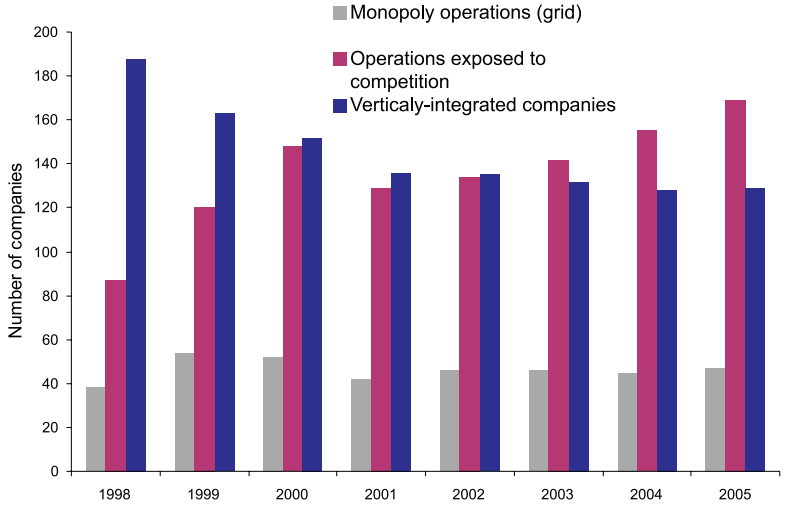

Figure 5.3 Trends in the various operation categories 1998 - 2005
Source: Norwegian Water Resources and Energy Directorate

mergers. Examples are Lyse Energi, Agder Energi, BKK and Skagerrak Energi.

In the four last years, there has been a significant fall in the rate of restructuring in Norway in relation to the 1999-2001 period. There was in 2005 a further fall in the rate of restructuring, both in the number of transactions and the values that changed ownership. Total value in 2005 was approximately NOK 1.5 billion, while in 2004 it was approximately NOK 16 billion. In 2003 it was approximately NOK 9 billion.

In 2005, shareholdings of NOK 0.9 billion were traded in Norwegian power companies. This was a reduction in relation to 2004, when shareholdings of almost NOK 9 billion were traded. A total of 8 transactions took place in 2005 as opposed to 15 in 2004. This compares with 60 in 2000, the peak year for such transactions, when traded shareholdings were worth about NOK 20 billion[8].

The restructuring outside of shareholding trading in the Norwegian power industry has also declined in relation to 2001 and 200. Values equivalent to around NOK 17 billion and NOK 30 billion were involved in mergers in Norway in 2001 and 2000 respectively. The equivalent amounts in 2005 and 2004 were around NOK 0.5 billion and NOK 7 billion.

8 Figures from Pareto Securities

5.3 Companies in the different operating categories

5.3.1 Generating companies

Of the ordinary trading licensees, a total of 175 generate electricity in Norway. 47 of these companies are engaged solely in generation.

Table 5.2 provides a summary of the 10 largest power producers in Norway as at 1 January 2006.

The 10 largest generating companies in Norway account for nearly 70 per cent of the country's total mean generating capacity, and about the same proportion of installed capacity.

Of the 175 Norwegian generating companies, 124 are organised as limited companies. Most of the generating companies are owned by counties or local authorities, often jointly by several of the latter in the same region.

Many of the privately-owned generating companies are industrial enterprises which primarily supply their own

Table 5.2 The 10 largest power producers in Norway at 1 January 2006.

Production company	Average annual production		Installed capacity	
	(TWh)	Market share (per cent)	MW	Per cent
Statkraft Energi AS/Statkraft SF	35.9	30.0	8 677	30.7
BKK Produksjon AS	6.9	5.8	1 612	5.7
Norsk Hydro ASA	6.9	5.8	1 527	5.4
E-CO Vannkraft AS	6.8	5.6	1 887	6.7
Lyse Produksjon AS	5.9	4.9	1 544	5.5
Agder Energi Produksjon AS	5.6	4.7	1 188	4.2
Skagerak Kraft AS	4.0	3.4	1 056	3.7
Nord-Trøndelag Elektrisitetsverk FKF	3.3	2.8	744	2.6
Trondheim Energiverk Kraft AS	3.2	2.7	746	2.6
Otra Kraft AS	2.6	2.2	870	3.1

The table does not include stakes in other companies, with the exception of Norsk Hydro, where the figures include Norsk Hydro Produksjon AS and Norsk Hydro ASA

Source: Norwegian Water Resources and Energy Directorate

operations. They are granted trading licences on simplified terms. See Chapter 4.3.4. The 35 companies which hold trading licenses on simplified terms are not included in table 5.2.

5.3.2 Grid companies

A company in this category may own a local, regional or central grid. A total of 176 companies are engaged in grid management and operation at one or more levels. Of these, 47 are pure grid companies, with the remainder also engaged in electricity generation and/or trading. See figure 5.2. Most grid companies are wholly or partly owned by one or more local authorities. The Statnett SF state enterprise owns about 87 per cent of the central grid.

A total of 114 of the 176 grid enterprises are organised as limited companies and 22 as cooperatives, while 16 are under local authority, county council or joint local authority ownership.

Table 5.3 shows the 10 largest grid and distribution vertically-integrated companies with grid operations at 1 January 2005 by the number of customers and deliveries to end users.

5.3.3 Vertically-integrated companies

Vertically-integrated companies are engaged in grid, generation and/or trading activities. For example, if any of these companies sell power to end users in the area where they have a distribution network, they often compete for end users in other distribution companies' areas.

In all, 129 companies are engaged both in operations subject to competition (generation and/or trading) and in grid management and operation. Of these, 72 are engaged in generation, trading, and grid management and operation. 72 of the vertically integrated companies are organized as limited liability companies.

The formation of groups results in new types of vertical integration. Grid companies, for example, may be subsidiaries of a group which also embraces subsidiaries engaged in generation and trading. The figures above apply to vertically integrated companies which operate distribution activities and trading and/or production activities within one legal entity.

5.3.4 Trading companies

Trading companies buy power in the market and sell it further. These companies can, for example be individual companies or be a part of a vertically integrated unit.

A total of 233 companies are engaged in trading, and 84 of these have no other

Table 5.3 The 10 largest grid companies (distribution grid) as at 1 January 2005

Grid company	Number of customers	Amount transmitted GWh/year
Hafslund Nett AS	515 152	14 407
Agder Energi Nett AS	180 588	3 557
Skagerak Nett AS	176 302	4 546
BKK Nett AS	171 952	4 404
Lyse Nett AS	113 100	3 489
Eidsiva Energinett AS	102 995	2 489
Fortum Distribusjon AS	95 308	2 135
Trondheim Energiverk Nett AS	90 767	2 253
Nord-Trøndelag Elektrisitetsverk FKF	77 572	1 921
Troms Kraft Nett AS	62 247	1 905

Source: Norwegian Water Resources and Energy Directorate

Table 5.4 The 10 largest energy traders in 2004 (GWh/year)

Company	Total sales	Households Cabins/holiday homes	Other activities*
Statkraft SF**	18498	0	18498
Norsk Hydro Produksjon AS	14798	0	14798
Fjordkraft AS	8410	3944	4466
Hafslund Strøm AS	7266	3700	3566
LOS AS	3116	1594	1521
Lyse AS	3026	1650	1376
Troms Kraft Marked AS	2863	896	1967
Nord-Trøndelag Elektrisitetsverk FKF	2480	733	1747
Norske Shell AS	2038	1328	710
Fortum Markets AS	2018	902	1117

**Industry and other commercial activities*

***As from the conversion of Statkraft to a limited liability company in 2004, these sales are handled through Statkraft Energi AS*

Source: Norwegian Water Resources and Energy Directorate

activities. Most trading companies are organised as limited liability companies.

Table 5.4 shows the 10 largest electricity trading companies ranked by supplies to end users at 1 January 2004. The table shows both the total quantity of electricity traded and the split between electricity for households (including holiday cabins and second homes) and for other activities. The two largest trading companies, Statkraft and Norsk Hydro Produksjon, supply electricity only to industrial and commercial activities.

5.3.5 Power brokers

Power brokers do not buy power themselves, but negotiate market-based offers and establish contact between buyers and sellers. Brokering activities do not require a trading licence.

5.4 Statnett SF

Statnett SF is responsible for construction and operation of the central grid, and operates the whole of this facility. As the transmission system operator (TSO) in Norway, it is also responsible for short- and long-term system coordination. This means that it coordinates the operation of the entire Norwegian power supply system so that the amount of electricity generated equals consumption at all times.

A clarification of the TSO's responsibilities when power is in very short supply was provided by Report no 18 (2003–2004) to the Storting on security of supply for electricity, etc. Statnett is responsible on a continuous basis for identifying and developing the instruments required to maintain a moment-to-moment balance between supply and demand at times when electricity supply is very tight. Its duties also include continuously evaluating the extent to which new measures are required in order to ensure that such a moment-to-moment balance is maintained in a better way than at present.

In addition, Statnett plays a central role in the development and operation of transmission connections to other countries, and must therefore cooperate closely with the system operators and the regulatory authorities in the other Nordic countries. This cooperation is an important basis for the Nordic power market. Cooperation

between the Nordic TSOs is also organised through the Nordel organisation. See the web site at www.nordel.org for further information. Cooperation between the Nordic regulators is also organised through the NordREG organisation. The Nordic power market is further discussed in Chapter 7.4 and 7.5.

Sweden's Affärsverket Svenska Kraftnät and Statnett SF currently own Nord Pool ASA on a 50-50 basis. Nord Pool is the Nordic power exchange, which organises markets for physical and financial trade in electric power. Nord Pool and the various markets are discussed further in Chapter 7.

5.5 Key financial data for the power supply sector

The power companies had in 2003 an operating profit of NOK 19.4 billion, as opposed to NOK 18.8 billion in 2002. The profit for the year was NOK 10.6 billion in 2003 as opposed to NOK 10.5 for the year before. Dividend paid in 2003 totalled NOK 5.4 billion, down from NOK 6.2 billion the year before. This was 51 per cent of the net profit for 2003. This is a reduction on 2002 when the dividend was approximately 59 per cent of the net profit for the year. The book value of assets in 2003 was NOK 280,3 billion, with a book equity ratio of about 48 per cent.

Total asset rate of return before tax – total rate of return[9] – was 8.1 per cent both in 2003 and 2002. When calculating total rate of return, financial income has been included but not extraordinary items. Return on equity after tax[10] was reduced from 9.4 per cent in 2002 to 8.2 per cent in 2003.

[9] Total rate of return = ((result before extraordinary items + interest costs)/average total assets) x 100. Average total assets is the average total assets as 1 January and 31 December.

[10] Return on equity after tax = ((result before extraordinary items – tax)/average shareholders' equity) x 100. Average shareholders' equity is the average shareholders' equity as at 1 January and 31 Decmber.

Table 5.5 Key accounting figures 2001 – 2003

Key accounting figures, NOK billion				2001	2002	2003
Operating income				90.5	98.7	122.1
Operating profit				17.9	18.8	19.4
Profit before extraordinary items				14.0	15.7	16.5
Profit before tax				14.0	15.4	17.0
Net profit				9.0	10.5	10.6
Dividends				6.8	6.2	5.4
Current assets	47.2	62.7	46.6			
Power stations, waterfall rights, regulation				89.6	109.9	93.5
Grid installations				47.7	48.5	48.3
Other fixed assets				67.8	81.4	91.9
Short term liabilities	38.8	49.3	39.4			
Long term liabilities				93.8	115.6	106.0
Shareholders' equity				119.8	121.6	134.9
Total assets				252.5	286.5	280.3
Total return on assets before tax, percent			8.0	8.1	8.1	
Total return on shareholders' equity after tax, per cent				7.9	9.4	8.2

Source: Statistics Norway