ENERGY

Industry overview

Hydro sources energy for its worldwide aluminium operations through external, long-term supply arrangements, self-generated power and short-/medium-term market contracts. In Norway, about 50 percent of the energy consumption of our wholly-owned smelters is covered by internal contracts from Hydro's own hydropower operations. While the primary part of our power production is supplied internally, shortages and surplus in the Norwegian power portfolio are balanced in the traded Nordic electricity market.

Nordic electricity market developments

Norway was one of the first countries to liberalize its electricity market and introduce competition in the generation and trade of electricity. The Norwegian electricity market was deregulated in 1991 based on the implementation of a uniform tariff system for grid transmission supervised by an independent system operator, Statnett. With the establishment of the Nord Pool power exchange and the subsequent deregulation and integration of the electricity markets in Sweden, Finland and Denmark, a common Nordic electricity market emerged in 1999.

In 2007, the Nordic generation mix was comprised of hydropower (54 percent), nuclear power (22 percent) and other sources (24 percent), mainly thermal power. In Norway, nearly all power generation is based on hydroelectric power. The market price for power is set by a multitude of supply and demand factors, including hydrological conditions, fuel generation costs, CO_2 emission costs, export/import prices and temperature/weather conditions influencing consumption patterns.

Partly due to the strong influence of hydrological conditions, there have been large variations in the Nordic power price during the last several years, both on a quarterly and annual basis. Driven by increased interconnector transmission capacity and through common pricing of CO_2 emission rights, the Nordic power price is increasingly influenced by power prices on the European continent, particularly in Germany.

Total electricity consumption in the Nordic region amounted to 396 TWh in 2007, of which Norway accounted for 32 percent. Total Nordic power production was 393 TWh in 2007, up 3 percent from 2006 primarily because of increased hydropower production in Norway. Net imports to the Nordic region was 3 TWh, a decrease from 11 TWh in 2006.

Continued focus on renewable energy

Worldwide interest in new energy solutions continued to increase in 2007 due to an increasing awareness of the seriousness of climate change. The EU, in particular, has put these issues high on its energy agenda and this is expected to influence the energy markets in the future.

The EU has set ambitious goals for its energy and climate change policies. On 23 January 2008, the European Commission presented a package of proposals which outline the concrete measures needed to put these goals into practice. The proposals have an important impact on our business because they are expected to have a significant influence on power prices and environmental regulations in Europe. Important issues for Hydro are:

- The review of the EU greenhouse gas emission allowance trading scheme (ETS), which is set to include aluminium production (primary and secondary) beginning from 2013
- The new directive on the promotion of renewables, which will be a determining factor in achieving the EU's 20 percent emissions reduction target by 2020
- The effects of these proposals on energy-intensive industries, and possible mitigation measures.

Growth prospects in the solar industry

Significant technological developments, efficiency increases and improved regulatory incentive schemes in key countries, such as Germany, Spain and the US, have supported annual growth rates of more than 30 percent in the solar photovoltaic industry over the last five years. Technology and scale-driven cost savings for solar systems are expected to open an increasing number of additional markets for solar energy products. Industry observers and analyst consensus indicate continued support for high growth up to 2020, with attractive opportunities across different technologies and along the value chain.

The solar photovoltaic industry is today developing around two leading technologies: solar cells made from crystalline silicon wafers and thin film technologies based on ultra thin layers of semiconductor compounds. Crystalline silicon is by far the leading technology, today accounting for more than 80 percent of the world market for solar cells. Crystalline silicon-wafer based solar cells are made from solar-grade silicon and through a multi-step manufacturing process from drawing and cutting ingots, sawing wafers, surface treatment and the mounting of cells to form solar panels and modules. Thin-film modules are constructed by depositing thin layers of photosensitive materials on, for example, flexible plastics. Thin-film technologies are expected to have increasing importance due to lower cost per watt and flexible applications.

The strong long-term prospects and the current shortage in polysilicon supplies have recently attracted many new entrants to the solar industry, including key industrial players. Significant capacity increases have been announced within polysilicon, cell manufacturing, thin film and other technologies, but recently observed capacity constraints from key technology providers question the scope and pace of these developments. The cost position, technology platform and market presence will be of critical importance for sustaining competitiveness in the solar industry.

Operational information
Power activities

Hydro operates 17 hydroelectric power plants in Norway, with a total installed capacity of 1,762 MW and an annual normal production of 9.0 TWh. In 2007, which was characterized by record high inflow of water into our reservoirs during the summer months, we produced 11.0 TWh – the second highest recorded production in our history.

Our power plants are located in three main areas, Telemark, Sogn and Røldal-Suldal, and are managed from a common operations center at Rjukan, in Telemark. Administration and commercial operations are located in Oslo. In addition to our own power plants, we hold a 20.9 percent interest in SKS Production AS, a regional hydropower producer in Northern Norway with 1.7 TWh of normal production capacity, and a 33 percent interest in Skafså Kraftverk ANS located in Telemark.

Telemark

The power system in Telemark is Hydro's oldest and consists of six stations: Frøystul, Vemork, Såheim, Moflåt, Mæl and Svelgfoss. Svelgfoss began operations in 1907 to supply power to Hydro's first potassium nitrate fertilized production at Notodden, Norway. Vemork was constructed in 1911 and was, at the time, the world's largest hydropower plant. When Såheim was added in 1915, the two plants were the foundation for the industrial development of Rjukan. All the power stations along the Måna river from Møsvatn to Tinnsjøen were modernized between 1990 to 1996.

The catchment area for the power plants in Rjukan totals 4,108 square kilometers, of which the Møsvatn field constitutes 1,509 square kilometers. Møsvatn is Norway's third-largest reservoir, with an energy storage potential of 2,200 GWh – enough to power 90,000 homes for a year.

Sogn

Hydro's power system in Sogn consists of the four power stations at Tyin and Fortun. A completely new Tyin power station, with higher installed capacity and production than the original plant constructed in 1944, was opened in 2004. There are plans to re-use the original plant by moving the water intake further down-stream to Holsbruvann in the Tya river. The power stations at Fortun were built to satisfy increased energy demands for Hydro's Årdal aluminium plant.

The catchment areas for the power stations at Tyin and Fortun are 387 and 374 square kilometers, with reservoir capacity of 369 and 292 million cubic meters, respectively. The Sogn hydropower facilities have remaining concession periods ranging from 44 to 50 years.

Røldal-Suldal

Hydro's power system in Røldal-Suldal consists of reservoirs and seven power plants along the Røldal and Suldal watershed and terminating at Suldal Lake. The development of the Røldal power plant and the other power facilities in Røldal-Suldal during 1963-1968 was closely linked to the need for electric power at Hydro's aluminium plant at Karmøy. Hydro owns 95.2 percent of the power plants at Røldal and Suldal with Statkraft owning the remainder. The companies use power from plants based on the same ratio.

The power plants at Røldal-Suldal have a catchment area of 793 square kilometers and a reservoir capacity of 833 million cubic meters. Røldal-Suldal has a remaining concession period of 15 years.

Reversion of power plants to the Norwegian state

Under the current legislation, Hydro's power plants at Røldal-Suldal, with a normal annual production of 2.7 TWh, may be the first significant production facilities to revert to the

Power production

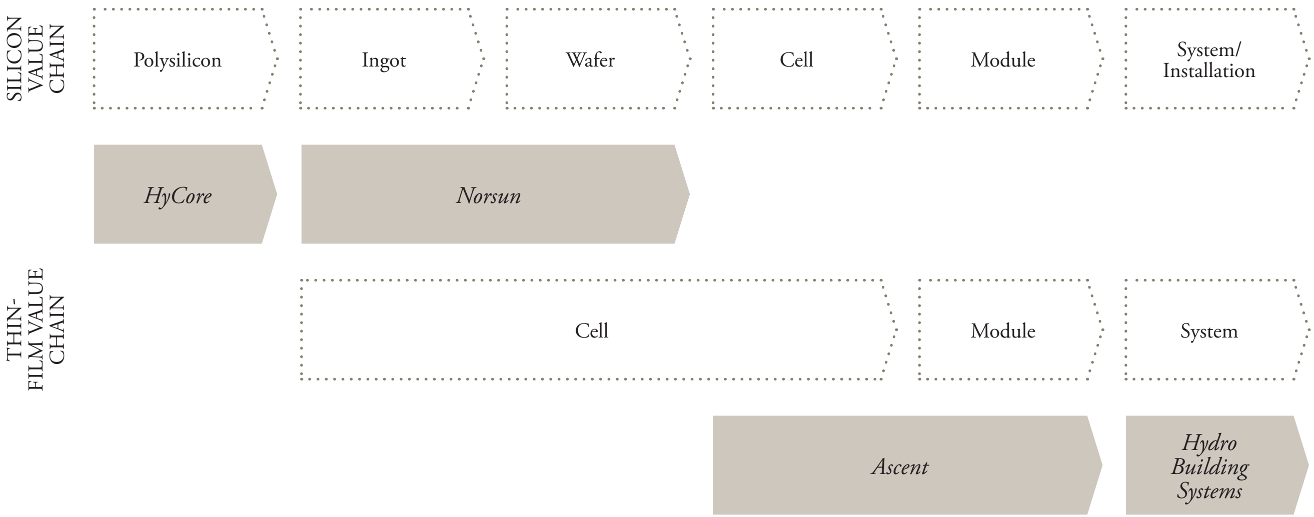
	2007	2006	2005
Power production (GWh)	**11,018**	8,326	10,728

Overview power plants

	No. of power stations	Installed capacity (MW)	Normal annual production (TWh)	No. of employees
Telemark	6	500	3.3	36 1)
Sogn	4	682	3.0	27
Røldal-Suldal	7	580	2.7	33
Total	17	1,762	9.0	96

1) Incl. common operations center at Rjukan.

Solar positioned in both silicon and thin/film value chains



Norwegian state in 2023 (see also discussion included in "The Norwegian regulatory system for hydropower production" in the following section "Regulation and taxation" – "Energy regulation and taxation"). In total, about two-thirds, or 6.0 TWh per year, of our normal annual production operates under terms of Norwegian state reversion, with individual concessions expiring in two main parts around 2023 and 2050. Title concessions on the remaining part of our hydropower production capacity, approximately 3 TWh per year, do not contain a compulsory reversion to the Norwegian government.

Solar activities

During 2007, we strengthened Hydro's foothold in the solar industry, building on our industrial and technological competence base and our investments in associated partnership companies.

Ascent Solar Technologies Inc.

Hydro has invested NOK 118 million for a 22 percent ownership interest in the NASDAQ listed solar energy company Ascent Solar Technologies Inc., a Colorado, US-based producer of flexible solar modules. Ascent has developed a cost-efficient roll-to-roll process during which copper, indium, gallium, and selenium (CIGS) are deposited on a flexible plastic foil which is then encapsulated in a protective material. The active layers in the thin film, which convert sunlight into electricity, are only three micrometers thick (three-thousandths of a millimeter), only a fraction of the thickness of conventional silicon wafer-based solar cells which are around 200 micrometers thick. Ascent's solar modules are flexible and can easily be applied to curved surfaces, in addition to more conventional uses. This flexibility makes the Ascent solar cells particularly suitable for building integrated solutions. Hydro is currently developing building solutions such as facade systems with integrated solar solutions.

Norsun AS

Hydro has invested NOK 150 million in the Norwegian solar energy company Norsun AS. Norsun is currently constructing a plant in Årdal, Norway for the production of monocrystalline silicon wafers for solar cells. Monocrystalline silicon wafers are made of pure silicon and used in the manufacture of energy-efficient solar cells and panels. The silicon wafers will be sold on the international solar energy market. Hydro holds a 16 percent interest in the company, which is also investing in complementary solar energy technologies. Norsun was formed by Mr. Alf Bjørseth, well-known within the international solar energy community and one of the founders of the Renewable Energy Corporation AS (REC).

HyCore ANS

In 2007, Hydro established the HyCore ANS partnership with the Belgian industrial company Umicore SA for the development of new manufacturing processes for solar-grade polysilicon used in solar cells. HyCore's first milestone will be to construct a pilot plant at Hydro's industrial park at Herøya in Porsgrunn. The pilot plant, which is expected to be completed in 2008, will have an annual capacity of around 20 tonnes of solar-grade silicon. If the pilot program is successful, the intention is to construct a larger facility with the capacity to produce industrial-scale volumes by 2010.

REGULATION AND TAXATION

Hydro is subject to a broad range of laws and regulations in the countries and legal jurisdictions in which we operate. These laws and regulations impose stringent standards and requirements and potential liabilities regarding accidents and injuries, the construction and operation of our plants and facilities, oil spills or discharges, air and water pollutant emissions, the storage, treatment and discharge of waste waters, the use and handling of hazardous or toxic materials, waste disposal practices, and the remediation of environmental contamination, among other things. We believe we are in compliance with currently applicable laws and regulations.

Aluminium – regulation

Environmental matters

Hydro's aluminium business is subject to a wide range of environmental laws and regulations in each of the jurisdictions in which it operates. These laws and regulations, as interpreted by relevant agencies and the courts, impose increasingly stringent environmental protection standards regarding, among other things, emissions, the storage, treatment and discharge of wastewater, the use and handling of hazardous or toxic materials, waste disposal practices, and the remediation of environmental contamination. The costs of complying with these laws and regulations, including participation in assessments and remediation of sites, could be significant.

Aluminium production is an energy-intensive process that has the potential to produce significant environmental emissions, especially air emissions. Carbon dioxide, a greenhouse gas, is a major emission from primary aluminium production. The European Commission adopted a directive that limits carbon dioxide emissions from a broad range of industries and establishes an internal emission trading system (ETS). So far, the aluminium industry has not been included in the emission-trading directive, but has been exposed to the EU emission-trading system through the indirect effects of regulation of the power generation industry and the resulting increase in power prices. The European Commission has recently proposed to amend these rules to include primary and secondary aluminium production in the ETS for the post 2013 period for the direct emissions of CO_2 and PFC gases.

In the European Union and other jurisdictions, various protocols address transboundary pollution controls, including the reduction in emissions from industrial sources of various toxic substances such as polyaromatic hydrocarbons, and the control of pollutants that lead to acidification.

The European Union has a framework of environmental directives integrated into the Water Framework Directive (2000/60/EC) regarding discharges of dangerous substances to water. The implementation of the Directive has started in Europe and must be finalized by 2009. The manner in which this Directive will be interpreted and enforced cannot be predicted. However, based upon the information currently available, Hydro's management does not believe it will have a material negative impact on its business. The United States has a regulatory permit system limiting discharges from facilities to water bodies and publicly-owned treatment works, as well as regulations to prohibit discharges of hazardous substances into groundwater.

Hydro has a number of facilities that have been operated for a number of years or have been acquired after operation by other entities. Subsurface contamination of soil and groundwater has been identified at a number of such sites and may require remediation under the laws of the various jurisdictions in which the plants are located. Hydro has made provisions in its accounts for expected remediation costs relating to sites where contamination has been identified that, based on presently known facts, it believes will be sufficient to cover the cost of remediation under existing laws. Because of uncertainties inherent in making such estimates, it is possible that such estimates could be revised and increased in the future. In addition, contamination may be determined to exist at additional sites that could require future expenditure. Therefore, actual costs could be greater than the amounts reserved.

Hydro believes that it is currently in material compliance with the various environmental regulatory and permit systems that affect its facilities. However, the effect of new or changed laws or regulations or permit requirements, or changes in the ways that such laws, regulations or permit requirements are administered, interpreted or enforced, cannot be predicted.

Oslo and Paris Convention (OSPAR)

The Oslo and Paris Convention for the Protection of the Marine Environment of the North-East Atlantic has resulted in new discharge levels for the aluminium industry, related to the prevention of marine pollution, which were scheduled for implementation by all signatories to the Convention by 2007. In accordance with the Oslo and Paris Convention regulations, the Norwegian Pollution Authority has issued stricter emission permits for primary aluminium plants. As a result, the Søderberg primary aluminium production line in Høyanger was shut down in February 2006, and the Søderberg line in Årdal was closed in June 2007.

Integrated pollution prevention and control

Under the EU Directive on Integrated Pollution Prevention and Control 1996/61/EC (the "IPPC Directive"), from October 2007 existing industrial installations will require national operating permits based on best available techniques (BAT) for pollution prevention and control. The IPPC Directive already applies to all new installations. The European Commission has issued a guidance document relevant for the aluminium industry: Best Practice Reference (BREF) for the Non-Ferrous Metals Industries (2001). In 2000, the Norwegian authorities established stricter emission limits for the aluminium industry in Norway from 1 January 2007 in line with the IPPC Directive. Hydro's aluminium production facilities comply with the new requirements except for the Søderberg facilities at Karmøy, which have been granted an exception until the end of 2009 respecting dust and PAH.

Climate gases

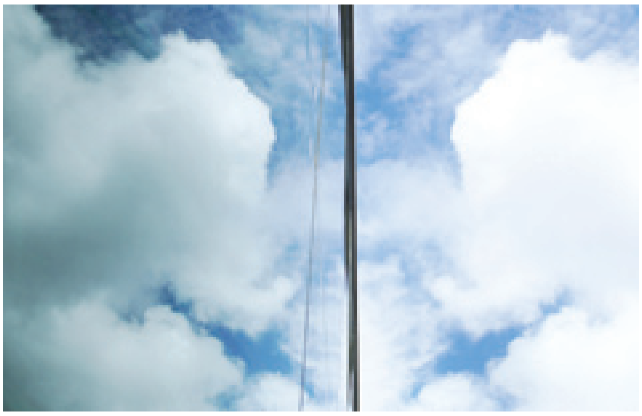
The EU Emissions Trading Directive 2003/87/EC (the ETS Directive) establishes a scheme for trading greenhouse gas emission allowances. The ETS Directive introduces limited allowances of carbon dioxide from emissions for combustion plants and certain specified industry sectors effective as of 1 January 2005, and has established a trading system whereby regulated facilities may procure and sell allowances depending on whether their emissions exceed or fall below the allowances allocated to them. The implementation of the ETS Directive in Germany, which resulted in a major pass-through of CO_2 allowance prices by producers to customers, together with little progress in energy market liberalization throughout Europe, has led to significant increases in the price of power, which again have necessitated restructuring throughout Germany's aluminium industry. All EU Member States' national authorities have set up National Allocation Plans and registries of carbon dioxide emission allowances, and the plans for the second trading period 2008-2012 have now been approved by the European Commission.This EU Directive is also relevant for the EEA and Norway will join the EU ETS in 2008.

Although emissions from aluminium production are currently excluded, the ETS Directive presently impacts production costs at Hydro's facilities in the EU indirectly through increased electricity costs. Meanwhile, the European Commission has recently proposed to amend the ETS Directive for the period beginning in 2013 including a proposal to include direct emissions of CO_2 and PFC gases from primary and secondary aluminium production in the ETS. The number of emission allowances and the method by which they will be distributed (gratuitously or against payment) could have a relatively high impact on Hydro operations both in Norway and in the EU from 2013 onwards.

EU aluminium tariffs

In 2007, the EU reduced the import duty on non-EU imports of primary aluminium from six percent to three percent. The EEA, of which Norway is a member, is exempt from such duty for aluminium metal produced in the EEA.

The World Trade Organization (WTO) round of negotiations on tariff and non-tariff barriers on industrial products may ultimately lead to further reduction, and perhaps an elimination, of aluminium tariffs. However, it is likely that changes arising from WTO commitments will not likely be phased in until 2009, at the earliest. Thus, the WTO negotiations are not expected to have a substantial impact on Hydro in the near



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future. The current level of the EU duty will be revised in 2010, when a further reduction may take place.

Energy taxation

An EU directive on the taxation of energy products became effective on 1 January 2004. The directive expanded the minimum tax system of energy products from mineral oils to all energy products, including coal, coke, natural gas and electricity, and sets forth a minimum level of taxation of energy products in the EU. The directive has so far not made an impact on our operations, since the taxation level in Germany is higher than the level provided by the directive, and our electrolysis production in Norway benefits from an exemption from the Norwegian energy tax.

Chemicals legislation – REACH

The European Union Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (known as "REACH") was adopted in late 2006 and entered into force in the EU on 1 June 2007. Aluminium is covered by this regulation and it will become applicable in Norway through the EEA-agreement, but the effective date has yet to be determined.

The main aim of REACH is to protect European citizens and the environment from exposure to hazardous chemicals. This will be achieved by requiring producers and importers of chemicals to register them formally and to evaluate their health and safety impacts. In some cases, REACH may require producers and importers to replace hazardous chemicals with those of less concern. Registration of chemicals will be a lengthy process (over a number of years) and will be prioritized by volumes produced.

Although REACH compliance is in its early stages of planning, we expect Hydro to be prepared to meet the legal requirements under REACH.

Energy – regulation and taxation

The Norwegian regulatory system for hydropower production

Although some of Hydro's waterfalls were acquired before concession laws were enacted in Norway, the majority of Hydro's hydropower resources depend on concession terms that include reversion to the state without compensation at the end of the concession period (usually 60 years).

The EFTA court in 2007 found the Norwegian system in conflict with the EEA agreement due to the indirect discrimination between privately owned hydropower resources, and publicly owned resources to which reversion does not apply. The Norwegian government has passed an interim decree prohibiting new concessions being given to private owners for large scale hydropower developments and the sale of hydropower plants to from public to private owners, while continuing the principle of reversion for private owners. A proposal for permanent legislation is expected to be presented for public consultation during the first half of 2008.

Taxation of hydropower production in Norway

Profits from Hydro's hydropower production in Norway are subject to ordinary corporate income tax, currently at 28 percent. Revenue for ordinary income tax purposes is based on realized prices. Dams, tunnels and power stations are for tax purposes depreciated linearly over 67 years, and machinery and generators over 40 years. However, such fixed assets are depreciated over the concession period if that is shorter. Transmission and other electrical equipment is depreciated at a 5 percent declining balance.

A natural resource tax of NOK 13 per MWh is currently levied on hydro-generated electricity. The tax is fully deductible from the ordinary income tax.

In addition, a special resource rent tax is imposed on hydropower production in Norway. The tax rate has been increased from 27 percent for 2006 to 30 percent for 2007 and 2008. Unlike the ordinary income tax, financial costs are not deductible against the basis for the resource rent tax. Uplift is a special deduction in the net income computed as a percentage of the average tax basis of fixed assets (including intangible assets and goodwill) for the income year. The percentage, which is determined annually by the Ministry of Finance, essentially provides for a certain return on fixed assets above which income becomes subject to the resource rent tax. The percentage used to calculate the uplift for 2007 was 4.9 percent.

Revenue for resource rent tax is, with certain exceptions, not calculated based on realized prices but on the plant's hourly production, multiplied by the area spot price in the corresponding hour. Revenues from power supplies used for a company's own industrial production facilities and from sales under certain long-term contracts are not subject to spot price assessment. As most of Hydro's hydroelectric production is used for its own industrial production or sold under qualifying contracts, only a minor portion of the production is subject to spot price taxation. Revenue from power production supplied to Hydros's own industrial use in Norway was, for the purpose of calculating the resource rent tax, assessed at 203.52 NOK/MWh in 2007.