



Energy

2019

Seventh Edition

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Switzerland

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Overview of the current energy mix, and the place in the market of different energy sources

Switzerland's final energy consumption totalled 854,300 Terajoules (TJ) in 2016. The energy mix consisted of motor fuels (34.2%), stationary fuels (16.1%), electricity (24.5%), gas (13.7%) and other (11.5%). The final sectoral consumption was split between transport (36.0%), households (28.2%), industry (18.2%) and services (16.6%).

While electricity demand in Switzerland can be met by domestic production, Swiss oil and gas demands fully depend on imports. This is due to the fact that Switzerland has no domestic production of crude oil and natural gas. Therefore, energy-related regulations in Switzerland are mainly focused on the electricity sector.

Electricity consumption reached 58.5 billion kWh (or 62.9 billion kWh, taking into account the losses due to transport and pumping for pump storage plants) in 2017. On the supply side, national production amounted to 57.3 billion kWh. The main source for electricity production is hydropower, which represented 59.0% of production in Switzerland. Moreover, electricity production in Switzerland consists of nuclear power (32.8%), non-renewable conventional thermal power (3.1%) and renewable energy other than hydropower (5.1%).

Switzerland aims to phase out nuclear power and to increase its electricity production from renewable energy sources, in particular from solar power. This process is known as the "Energy Strategy 2050". Renewable energy sources therefore benefit from state support. The main instrument for the promotion of electricity production from renewable energy sources is a feed-in tariff system, which has been revised recently as described below. The government's intention to "green" the national electricity production has led to a significant increase of electricity production from solar power since 2012. Today, solar power is the most important renewable energy source other than hydropower. However, solar power accounts for only 2.2% of the total electricity production in Switzerland and therefore still plays a minor role.

Changes in the energy situation in the last 12 months which are likely to have an impact on future direction or policy

In general, Switzerland has a stable energy mix and the shares of oil, electricity and gas alter only slightly from year to year. With regard to electricity production, however, hydropower is under increasing pressure. There are external and internal reasons for the increasing pressure on hydropower.

Externally, overcapacities due to subsidies for renewable energy sources in several EU Member States (in particular, Germany), as well as faltering demand, have led to low

prices in European electricity trading. The low electricity prices in the European electricity market have put Swiss hydropower producers in financial difficulties, as they are no longer able to cover their production costs. Since hydropower is a mainstay of Swiss electricity supply, the financial difficulties of hydropower producers calls for state support, which has been granted as described below.

Internally, the proposal of a temporary reduction of the “water royalty” (i.e. a compensation paid to the communities for the use of water), which accounts for up to 25% of production costs, did not receive majority backing in the consultation phase. Moreover, duties and taxes such as a ‘renaturation tax’ have been increased or newly introduced through federal legislation, which increases the financial burden for hydropower producers. Lastly, some cantons and communities have refused to renew water concessions and intend to take over electricity production from hydropower from private producers.

These developments in the field of hydropower may have various policy impacts in the future, in particular in the field of trade policy. Internally, it is generally agreed that hydropower shall remain the mainstay of Swiss electricity supply and shall be supported accordingly. However, there is disagreement on which measures suit best, as e.g., the revision of the “water royalty” shows. With regard to the external perspective, it remains open, to what extent Switzerland may keep up with the subsidy race in Europe, as EU Member States have been increasing subsidies for renewable energy sources (in particular, Germany). In order to protect its hydropower producers from low electricity prices in Europe, Switzerland may take trade measures (such as an import tax on electricity produced from fossil energy sources). Moreover, Switzerland may question the consistency of certain EU subsidies for renewable energy sources with international trade agreements by invoking the state aid provision under the Swiss-EU Free Trade Agreement (art. 23), or by submitting a complaint with the World Trade Organization (WTO) against the EU regarding a violation of the Agreement on Subsidies and Countervailing Measures. However, whether Switzerland will use these options depends on political feasibility and opportunity.

Nevertheless, hydropower producers in Switzerland, in particular pumped-storage plants, may also benefit from the increasing electricity production from renewable energy sources in Europe. The restructuring of the electricity supply infrastructure throughout Europe, with increasingly irregular and distributed sources of supply, is leading to a Europe-wide increase of demand for storage. Pumped storage power stations allow spontaneous compensation for over-production or under-production from wind and solar energy sources and, if necessary, permit the temporary storage of electricity for days or weeks. In Switzerland, hydropower producers are able to provide a substantial number of pumped storage power stations. Moreover, a number of pumped storage power stations are under construction as well. Still, the total Swiss storage capacity can only meet a fraction of the Europe-wide demand for storage.

Developments in government policy/strategy/approach

In 2011, the Federal Council and Parliament, triggered by the Fukushima nuclear incident, decided to progressively abandon nuclear electricity production in Switzerland. As nuclear energy provides around 30% of total electricity production, the decision to phase out nuclear electricity production means a complete restructuring of the Swiss energy mix with regard to electricity production. This restructuring process is called the “Energy Strategy 2050”. The Energy Strategy 2050 aims at replacing nuclear electricity production with renewable energy sources and will be implemented in phases. An initial package of measures that aim

to reduce energy consumption, increase energy efficiency and promote renewable energies such as water, solar, wind and geothermal power, and biomass fuels, has been introduced by the Parliament. In this regard, the Parliament has adopted new legislation, which was endorsed in a referendum on 21 May 2017. The new legislation will be described in more detail below. The further phases have yet to be elaborated, but it is intended to phase out the promotion of renewable energy.

As an essential link between production and consumption, networks are pivotal for electricity supply. Together with the Energy Strategy 2050, the Federal Council developed an “Electricity Grid Strategy”. This strategy introduces a new legal framework for grid development. It aims at ensuring that grids are timely developed in order to secure a sufficient energy supply at all times. Measures include e.g. optimisation of approval procedures. The respective legislation was adopted by the Parliament in December 2017 and is expected to enter into force in the second quarter of 2019.

With regard to gas, the Federal Council stated in early 2014 that it will examine the opening of the Swiss gas market. Moreover, the Federal Council intends to present a draft gas supply act within the current legislative period (i.e. 2015–2019) in order to update the existing Federal Act on Pipeline Systems for the Transport of Liquid or Gas Fuel, and to seek compliance with EU standards.

Lastly, Switzerland is interested in participating in the EU energy market, in particular in the electricity market. A mutual free market access would strengthen the position of Swiss electricity producers in the European electricity market and increase the security of supply. The integration of Switzerland into the EU electricity market is also important for a successful implementation of the Energy Strategy 2050. Therefore, Switzerland and the EU started negotiations on an electricity agreement in 2007. In 2010, the negotiations were extended and other energy sources such as gas were included. However, the conclusion of the electricity agreement is uncertain. In order to grant further market access to Switzerland, the EU insists on concluding an institutional agreement, which should establish a general legal framework for Switzerland’s participation in the EU common market. However, this agreement is controversial in Switzerland as it requires Switzerland to adopt EU legislation. Therefore, the institutional agreement has not been concluded yet.

Developments in legislation or regulation

In the context of the Energy Strategy 2050, the Federal Energy Act has been completely revised in order to introduce initial measures aimed at implementing the Energy Strategy 2050. The new Energy Act and the required amendments in related legislations were endorsed in a referendum on 21 May 2017. The new Energy Act and the correspondent Ordinances entered into force on 1 January 2018.

The new Energy Act introduces measures to reduce energy consumption, increase energy efficiency and promote renewable energies. Moreover, temporary support is granted to existing large-scale hydropower plants due to their financial pressure.

The new Act sets indicative consumption, production and emissions targets. Compared to 2000, energy consumption *per capita* should diminish by 16% in 2020 and 43% by 2035. With regard to electricity, consumption *per capita* should diminish by 3% in 2020 and by 13% in 2035. On the production side, electricity production from renewable energies other than hydropower should rise from 2,830 GWh in 2015 to 4,400 GWh in 2020, and 11,400 GWh in 2035. Hydropower production should diminish slightly from 39,500 GWh in 2015 to 37,400 GWh in 2035.

The intended increase of electricity production from renewable energies other than hydropower requires state support. In Switzerland, the main instrument for the promotion of electricity production from renewable energy sources is a feed-in tariff (FIT), which was introduced in 2009. The Swiss FIT is available for hydropower with a capacity of up to 10 MW, solar energy, wind energy, geothermal energy as well as energy from biomass and biological waste. It is paid directly to the producers as a fixed remuneration at a cost that covers the difference between the production cost and the market price. This guarantees the producers of electricity from renewable energies a price that covers their production costs. The FIT is financed through a grid surcharge imposed on electricity consumers. The maximum amount of the grid surcharge is defined in the Energy Act. The Federal Council may define the exact amount of the grid surcharge within this maximum amount. In 2018, the grid surcharge amounted to CHF 2.3 cents/kWh, which is the maximum amount as defined in the Energy Act.

The revision of the Energy Act has also led to amendments of the Swiss FIT system. The FIT will be replaced by feed-in premiums. Eligible producers are required to market their electricity themselves. The difference between the market price and the production costs will still be compensated. However, producers are responsible to sell their electricity directly on the market. They should sell their electricity when demand is high, which gives them an incentive to produce electricity when supply is short and prices are high. The feed-in premium system is of limited duration and will only be granted for up to five years after the entry into force of the new Energy Act (i.e. until 2022). The new Energy Act also raises the grid surcharge to CHF 2.3 cent/kWh, which increases the financial resources for the promotion of renewable energies significantly. For electricity consumers, this means an additional financial burden of CHF 40.00 per year based on the consumption of a four-person family household.

For photovoltaic installations, the new Energy Act alternatively provides for an investment aid. The one-time subsidy covers a maximum of 30% of the investment costs of a reference installation. This applies to new hydropower stations with a capacity of more than 10 MW, and significant extensions of existing hydropower stations as well.

Due to the low European wholesale electricity prices and the resulting financial pressure on the existing hydropower plants in Switzerland (as mentioned above), the new Energy Act also provides for support to existing hydropower stations. Existing large-scale hydropower stations (i.e. with a capacity of more than 10 MW) will be able to claim a market premium for electricity, which must be sold for less than the cost of production. The premium is capped to CHF 1.0 cent/kWh and the total available financial resources are limited, as CHF 0.3 cent/kWh of the grid surcharge will be used for this support. This measure is valid for a period of five years.

Judicial decisions, court judgments, results of public enquiries

Costs of system services

In a recent ruling, the Federal Supreme Court stated that power plant operators are not obliged to pay a portion of the costs for the procurement of system services, and declared that the corresponding provision in the Energy Supply Ordinance (SR 734.71) is not applicable. In view of this, in its own ruling dated 4 July 2013, ElCom instructed the Swiss transmission system operator (i.e. Swissgrid) to refund all outstanding payments for system services for 2010 to the involved power plants. In the meantime, all power plants have received a refund of the amounts paid for system services in 2009 and 2010. Some power

plant operators also claimed late payment compensation, and EICOM ruled that Swissgrid has to pay them 5% interest with effect from the date of the reminder.

In two other rulings, the Federal Administrative Court stated that the balance groups to which the Gösigen and Leibstadt nuclear power plants are allocated may not be billed for the costs arising in association with the retention of positive tertiary reserve capacity, and it thus repealed the corresponding order issued by EICOM in 2010. As a consequence of this, EICOM reassessed another, similar case. In accordance with another ruling by the Federal Administrative Court, owners of a cross-border connecting line cannot be billed for costs associated with idle energy. The Court did not rule on the question of whether a sufficient legal basis exists for billing individual system services to parties that are not end consumers.

Ownership unbundling

As of January 2015, the majority of the transmission system grid was sold to Swissgrid. Swissgrid has taken over additional transmission system grid facilities per January 2016. Prior to the transmission network transaction, EICOM had specified the method of valuation of the facilities to be transferred. The associated ruling of September 2012 stipulated that the valuation of the various transmission network components was to be based on the regulatory criteria which are applicable for pricing in the electricity supply legislation. This would have amounted to a value of around CHF 2bn. Various companies lodged appeals against this ruling, so at the end of 2013 the Federal Administrative Court upheld these appeals and referred the matter back to EICOM for reconsideration. At the same time, it specified a variety of criteria regarding the valuation method to be applied.

In August 2013, EICOM also ruled that stub lines (with and without supply character) that are operated at the 220/380 kV level belong to the transmission network and have to be transferred to the ownership of Swissgrid. This ruling has become legally binding. This means that uniform criteria are applicable throughout the country with respect to the allocation of stub lines to the transmission network, which now encompasses all lines and installations at the 220/380 kV level.

Right of appeal by end consumers

Tariff audit proceedings may be opened on the basis of a report, or by EICOM in its capacity as regulator. In two rulings, the Federal Administrative Court found that EICOM was not authorised to rule in a specific case upon petition of end consumers regarding tariffs. While an end consumer is entitled to lodge a complaint with EICOM, it is EICOM which has to open proceedings in its capacity as regulator. As complainant, an end consumer does not have the rights of a party in the proceedings. The Federal Administrative Court subsequently qualified this ruling in a decision in which it noted, somewhat vaguely, that this restrictive description of the authority of EICOM was not binding. Thus the authority of EICOM and the status of end consumers in such proceedings will have to be defined more specifically in future rulings.

Water royalty

In May 2018, the Federal Council submitted its dispatch regarding its proposal on the revision of the Federal Act on the use of hydraulic power to the Parliament. The original proposal of the Federal Council to reduce the maximum amount of the water royalty, and to introduce a more flexible model, did not receive majority backing during the consultation phase. Therefore, the Federal Council proposes to maintain the current system including the maximum amount of the water royalty. In order to support the hydropower electricity producers, the Federal Council further proposes to exempt new or substantially modified

hydropower plants from the water royalty during 10 years. The draft legislation is now the subject of parliamentary debate. It is intended that the new legislation should enter into force in 2020.

Major events or developments

Currently, only industrial consumers with consumption of over 100,000 kWh a year may choose their electricity provider freely. A full liberalisation of the electricity market was planned for January 2018. However, following a public consultation, on 4 May 2016 the Federal Council decided to suspend indefinitely the full liberalisation of the electricity market. The Federal Council indicated that full liberalisation will depend on the following factors:

- conclusion of negotiations regarding an electricity agreement with the EU;
- progress achieved by the Energy Strategy 2050;
- prevailing market conditions; and
- revision of the Federal Electricity Supply Act.

On 16 August 2017, Switzerland and the EU took a step forward in linking the Swiss and European emissions trading system. Both parties agreed to sign a linking agreement, which has already been technically finalised one year ago and was on hold during the implementation of the “Stop Mass Immigration” in Switzerland. The agreement was signed in November 2017, and has to be ratified by the Swiss and European Parliaments. In this regard, the Federal Council submitted its dispatch on the approval of the agreement and the necessary partial revision of the CO₂ Act, to the Parliament in December 2017. The draft legislation is currently the subject of parliamentary debate. The linkage of both emissions trading systems enables Swiss companies to access a bigger and more liquid market and to benefit from same competition conditions. In compliance with the EU, Switzerland will also include emissions generated by aviation in its system upon entry into force of the agreement.

Proposals for changes in laws or regulations

In February 2014, the Swiss Federal Office of Energy (SFOE) resumed work on revising the Energy Supply Act which was suspended in 2011. The aim of the revision is to coordinate the Energy Supply Act and the Energy Strategy 2050, to close existing gaps in legislation and to examine new regulations for conformity with the changing industry conditions. The revision has no effect on the full liberalisation of the electricity market as a separate schedule has been established for this matter (see above).

Moreover, planning works with regard to legislation for the further implementation phases of the Energy Strategy 2050 are currently in progress.



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Markus Schott has broad experience in all kinds of regulatory and administrative law matters including governmental supervision, public procurement, and administrative sanctions. He advises and represents clients in the life science and food, banking, finance and insurance, transportation and infrastructure sectors. He also drafts expert opinions in these fields.

Markus Schott is also specialized in representing clients in administrative and civil litigation proceedings as well as international administrative and legal assistance proceedings.

He teaches public economic law at the University of Zurich and he publishes regularly in his fields of interest.

Markus Schott is singled out for his in-depth knowledge of the life science sector and is described as “a very efficient, highly flexible and accessible lawyer” (*Chambers Europe* 2015). *The Legal 500* 2015 highlights that he is “recommended for regulatory matters in the healthcare and life sciences sector”.



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Phyllis Scholl has broad experience in Company Law, Contract Law and Public Law. She also specialises in corporate governance matters.

She has unique experience with M&A transactions in the energy sector and, with more than 10 years of experience in the field, has gathered very broad industry knowledge in all areas of energy production and transportation (mainly electricity and gas).

Phyllis Scholl sits on the Board of Directors of a company quoted on the Swiss stock exchange (SIX) as well as on the Board of Directors of another Swiss-domiciled company. Before joining Baryon AG she was active for 15 years (6 of which as a partner) in a leading international business law firm.

Since 2012 Phyllis Scholl has been listed in the top tier by the Ranking Agencies. Clients describe her as: “very pragmatic, always develops solutions and is very quick”, “she doesn’t just consider the legal side and has a holistic approach”, “a leading figure for corporate and regulatory matters within the energy sector.”

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