Report on the activities of ElCom 2010

Schweizerische Eidgenossenschaft
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Confederazione Svizzera
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Contents

Pricing and tariffs

International activities

Feed-in remuneration at cost

Appendix

About ElCom

Duties

The Swiss Federal Electricity Commission (ElCom) is responsible for monitoring the Swiss electricity market and securing compliance with the Swiss Federal Electricity Supply Act. As an independent state regulator, ElCom is playing an active role in the transition from a monopolistic electricity supply system to a competition-based electricity market. Here, one of its duties is to monitor the electricity tariffs for end users with basic supply, a function that it has adopted from the price regulator (ombudsman). On the other hand, ElCom also has to ensure that the network infrastructure is properly maintained and is expanded as required so that future supply can be guaranteed.

In order to fulfil these duties, ElCom has been endowed with wide-ranging competencies:

» It supervises electricity tariffs for fixed end users (households and other end users with an annual consumption below 100 MWh) and end users who do not choose to gain access to the network. It also examines network utilisation remuneration. It may prohibit unjustified electricity price increases, or if tariffs are too high it is empowered to order price reductions. It may take steps in response to complaints or requests or on its own initiative in its official capacity as regulator.

» It mediates in, and rules on, disputes associated with free access to the electricity network. With effect from 1 January 2009, large-scale consumers (i.e. those with an annual consumption of at least 100 MWh) have been able to freely choose their electricity supplier. Consumers with an annual consumption below

100 MWh will only be able to gain free access to the electricity market from 2014, providing that full liberalisation is not rejected by the electorate in a referendum.

» ElCom is empowered to rule on disputes relating to remuneration at cost for feed-in to the grid, which was introduced on 1 January 2009 for producers of electricity from renewable energy sources.

» ElCom monitors electricity supply security and the status of the electricity networks.

» It defines the procedures for the allocation of network capacities in the event of shortfalls in cross-border transmission lines, and co-ordinates its activities with European electricity market regulators.

» ElCom also has to ensure that ownership of the transmission network is transferred to the national operator, Swissgrid AG, by the end of 2012 (separation process).

Supply security

Key data relating to the Swiss electricity network

Thanks to the collection of cost-accounting data from all network operators, during the period under review ElCom was for the first time able to gain a complete overview of the most important installations in the Swiss electricity network. The table and illustrations below contain figures for 675 out of a total of 730 network operators, and include the 85 largest operators. It is possible that the figures for the lower network levels have been slightly underestimated, since they are based on self-declarations by network

Installations in the Swiss electricity network (as of 31 December 2009)

Type of installation	No. of installations	Measurement unit
Pipe system, high voltage (NL 3), medium voltage (NL 5) and low voltage (NL 7)	85,798	km
Cable (NL 3)	1,843	km
Cable, medium voltage (NL 5)	29,629	km
Cable, low voltage (NL 7)	78,837	km
Cable, connection to household (NL 7)	37,089	km

Type of installation	No. of installations	Measurement unit
Supply lines (NL 1)	6,750	Line km
Overhead line (NL 3)	7,238	Line km
Overhead line, medium voltage (NL 5)	13,042	Line km
Overhead line, low voltage (NL 7)	12,720	Line km
Substation, NL 2, NL 3, NL 4 and NL 5	1,063	Quantity
Transformer, NL 2	148	Quantity
Switching field, NL 2	158	Quantity
Transformer, NL 3	80	Quantity
Switching field, NL 3	1,911	Quantity
Transformer, NL 4	1,098	Quantity
Switching field, NL 4	1,349	Quantity
Transformer, NL 5	1,524	Quantity
Switching field, NL 5	26,377	Quantity
Transformer station, NL 6	46,419	Quantity
Mast transformer station, NL 6	6,515	Quantity
Cable distribution box, low voltage (NL 7)	151,328	Quantity

operators which have only been partially verified by ElCom.

The declared original acquisition and production costs of the distribution network (excluding the transmission network) amount to 33 billion Swiss francs, while the remaining costs total 17 billion. The residual value of the transmission network is around 2 billion Swiss francs. From these figures it may be deduced that the total residual value of the Swiss electricity network is approximately 19 billion Swiss francs and that the network has been depreciated by around fifty percent.

Figure 1 shows the declared residual values by network level. It only shows the residual values of the 85 largest network operators. The remaining operators normally only operate at the lower network levels, and their residual values of around 3 billion Swiss francs therefore had to be added to the figures for network levels 6 and 7. We can then see that network levels 6 and 7 on their own account for approximately fifty percent of the total residual values. Supply lines and cables account for around five-sixths of the installation values.

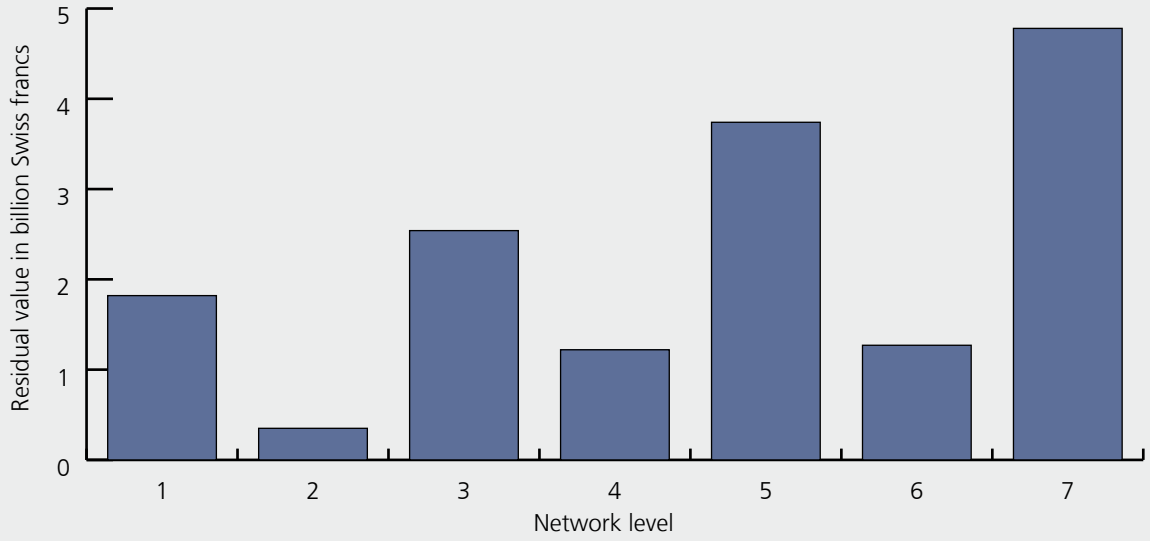

Figure 1: Residual values by network level

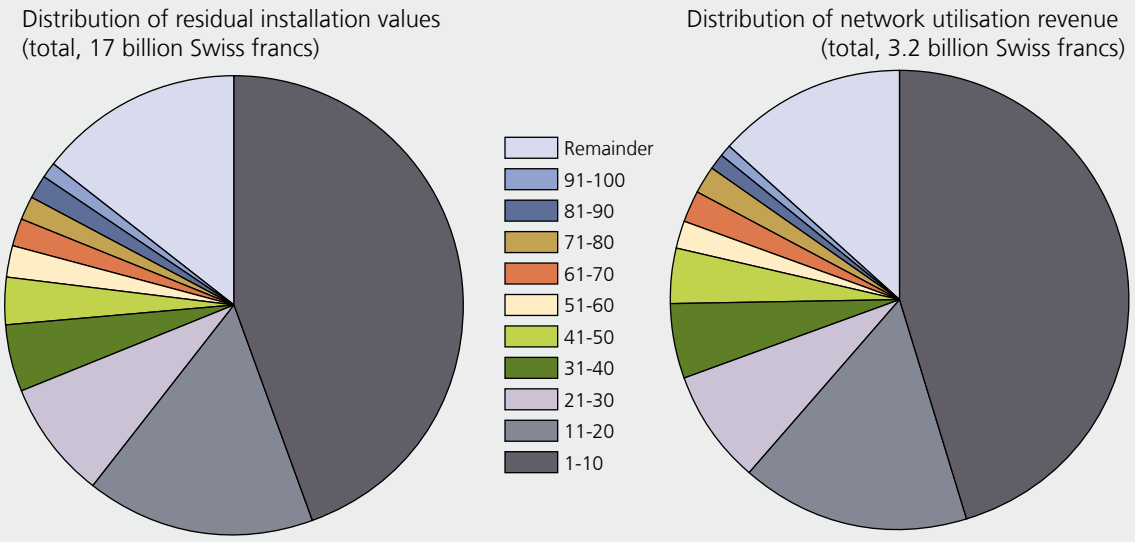

Figure 2: Residual values and network utilisation revenue (distribution network) by size of operator

Figure 2 shows the distribution of the installation values amounting to 17 billion Swiss francs and the utilisation revenue of 3.2 billion Swiss francs from the distribution network by size of operator. The 100 biggest operators have been formed into groups of 10, while the remaining 630 have been grouped in a separate category. As we can see, the 10 largest network operators (dark blue) own approximately half, and the 40 largest operators (dark blue, brown, light yellow and light blue) around three quarters, of all declared installations, and they generate corresponding levels of network utilisation revenue. The residual value of the largest distribution network operator is approximately 75 times higher than that of the 100 largest network operators, and 25,000 times higher than that of the smallest network operator.

Figure 3 shows a breakdown of network costs. Operating and capital costs each account for almost half, and the remainder of network costs concern direct tax, fees and services. The high proportion of operating costs is to some extent attributable to the fact that some operators have very high capitalisation levels. The relatively low importance of taxes can primarily be explained by the fact that two-thirds of network operators in the distribution network are not subject to taxation. However, taxes account for a significantly higher proportion among those operators who are subject to taxation.

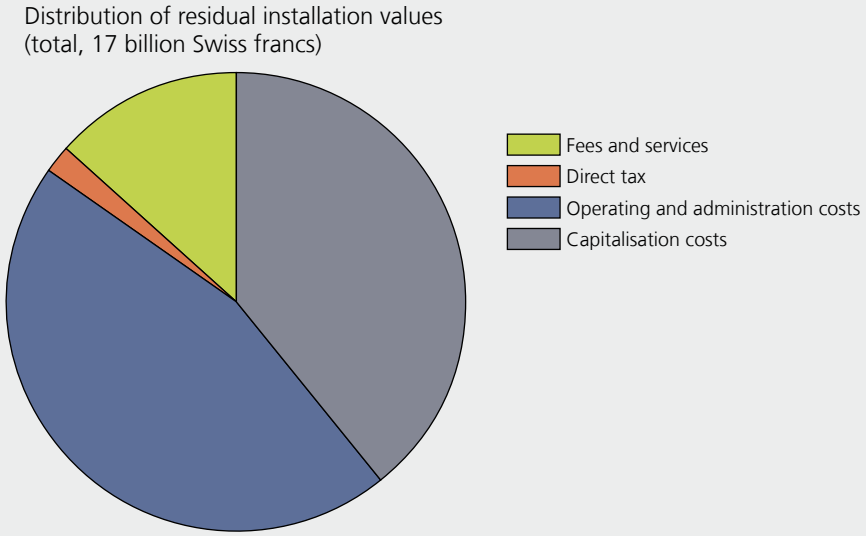

Figure 3: Breakdown of network costs

Investment security

In accordance with Article 15, paragraph 1 of the Electricity Supply Act, only the costs of a safe, productive and efficient operation of the network are recoverable. ElCom has received a variety of requests for an explanation of what makes a network efficient. In particular, this question arises in connection with the cabling of high-voltage supply lines, which gives rise to higher costs in comparison with overhead lines. Do the costs of cabling count as recoverable costs, even if there is a cheaper alternative? In the view of some network operators, the uncertainty over this and similar issues is resulting in a degree of reticence with respect to investment.

At a workshop held in October, ElCom invited three network operators to outline and discuss their concerns relating to the question of investment security versus efficiency. The following stance was then communicated within the framework of the ElCom Forum:

1. The network operator decides on investments and bears the associated entrepreneurial responsibility. ElCom's subsequent examination of investment decisions within the scope of its tariff audit is carried out on the basis of the information that was available at the time of the investment. This means that there will be no subsequent "penalisation" due to unforeseeable developments. But it is up to the network operators to draw up systematic and objective decision-making criteria and document them for later verification.
2. Investment projects that are based on legally binding decisions of the relevant federal authorities (Federal Council, Federal Supreme Court) will not be placed in question by ElCom (e.g. strategic transmission network, cabling projects).
3. Investments which are classed as recoverable also always have to be carried out in accordance with the principles of efficiency and economy.

Supply quality

In accordance with Article 6, paragraph 2 of the Electricity Supply Ordinance, all network operators are required to submit the internationally customary key data relating to supply security to ElCom on an annual basis. For this purpose ElCom calculates the key data itself, and thus needs network operators to supply basic data relating to their supply interruptions. In 2009, all network operators with an annual energy turnover greater than 200 GWh (a total of 46) were required to record interruptions in their supply area and report them to ElCom, which used these figures for calculating the key data of network operators. The average length of interruptions of an average end user in a network operator's supply area during the period in which data were recorded (System Average Interruption

Duration Index) accurately reflects the degree to which end users are affected. The average in 2009 was 18 minutes, which is a good result in an international comparison. However, the significance and comparability of calculated key data directly depend on the quality of the input of data. The figures are based on self-declarations by network operators. An evaluation of interruptions to supply in 2009 revealed that there is room for improvement in terms of completeness, uniformity and degree of detail.
In 2010, the circle of involved end users was widened versus 2009: the 85 largest network operators are now required to report supply interruptions to ElCom.

Long-term plans

In the past, transmission line projects have often met with immense opposition by both the general population and politicians. For this reason it is necessary for ElCom to be firmly integrated into the planning and implementation of projects so that it can identify and avoid any potential threats to supply security. In accordance with Article 8, paragraph 2 of the Electricity Supply Act, network operators are required to draw up long-term plans concerning the expansion of the network infrastructure. In accordance with Article 20, paragraph 2 of the Electricity Supply Act, the national network operator is responsible for planning the entire transmission network. The aim here is to ensure that the network is constantly maintained and expanded so that secure, productive and efficient operation can be assured at all times. In the year under review, ElCom did not explicitly request the above information, and limited itself to examining the expansion plans for the transmission network. Swissgrid continued to develop the long-term planning in 2009, which encompassed a timeframe up to 2020 and a total of 52 projects. While the timeframe remained unchanged, the planning underwent further refinement. Here, Swissgrid classified projects that are interdependent and can only lead to benefits if implemented together, into development programmes. Individual projects were allocated to categories (“Supply”, “Europäischer Verbund” and “Power plant connection”) and in addition renovation projects were listed and allocated to the categories “Supply lines”, “Sub-stations” and “Transformers”. Estimates of costs were made for all projects and a start-up date was specified on the basis of past experience.

Supervision of electricity trading

In March 2010, together with the Swiss Financial Market Supervisory Authority (FINMA) and the Swiss Federal Office of Energy (SFOE), ElCom introduced a mechanism for monitoring the market from the point of view of potential risks in the area of energy trading. Trading in energy has been gaining in importance over the past few years, during which time we have also witnessed the development of energy derivatives trading. The idea here is that the joint monitoring of the market by these three federal authorities should facilitate the assessment of risks associated with energy trading activities. From ElCom's point of view, the main focus is on potential risks to supply security, for example in the event that an electricity supply company should run into liquidity problems. It is also important to clarify whether energy trading could give rise to problematic gaps in the supervisory process. In spring 2010, a questionnaire was distributed to all electricity supply companies that are active in the area of electricity trading. And in the autumn, additional and more detailed clarifications were carried out among larger trading companies. The first findings will be available in the course of 2011 after the returned documentation has been evaluated.

Reporting procedure for unusual occurrences

In accordance with Article 8, paragraph 3 of the Electricity Supply Act, network operators are obliged to inform ElCom on an annual basis about the operation and load of the networks, as well as about any unusual occurrences. In the year under review, ElCom did not request the above information from all network operators, and focused on occurrences in the transmission network. Swissgrid submits a monthly report to ElCom listing a variety of key data relating to the transmission network (e.g. vertical network load, feed-in to the network, cross-border exchange, network losses and (n-1) loads). These monthly reports also include details concerning special occurrences such as "endangered network status", "critical network situation", "topological measures", "special load flows", "line-related supply line interruptions", "switched off supply lines due to n-1 violations" and "activation of procedures". ElCom periodically discusses these reports with Swissgrid in order to be able to bring about improvement measures. In addition, the content of the monthly reports is being continually improved by both parties.

Allocation of network zones

In order to perform its duties, ElCom needs to be able to identify a network operator with responsibility for a given zone, for example for dealing with questions regarding connection obligation and cost solidarity, or issues relating to site networks. Article 5, paragraph 1 of the Electricity Supply Act states that the cantons are responsible for designating the zones in their sovereign territory in which network operators are active. Designation of network zones must be made unambiguously and must encompass the entire supply area. Each block of land has to be allocated to a network operator. There must not be any "orphan" zones or zones for which more than one operator is responsible.

ElCom examined the current situation regarding the process of allocation of network zones by the cantons and found that, as of the end of 2010, approximately half had designated their network zones. Some cantons are close to completing this process, while a few others will still require more time. Generally speaking, network zones have been designated in accordance with the status quo without any problems. However, certain problems arose in cases in which the connection obligation needed to be determined in a previous "orphan" zone, e.g. regarding the connection of a future wind power plant.

Separation and transfer of transmission network to Swissgrid

Separation of transmission network from distribution network

In accordance with Article 33, paragraph 4 of the Electricity Supply Act, electricity supply companies are required to hand over the nation-wide transmission network to the national network operator (Swissgrid) by not later than the end of 2012. As of the middle of 2010, Swissgrid and the existing owners of the transmission network had not been able to reach agreement on which supply lines and installations belong to the transmission network. In view of this, Swissgrid and NOK Grid AG each submitted a request for a declaratory ruling to ElCom. ElCom then initiated a consultation process with more than thirty involved parties and organised in-depth discussions on this matter at a variety of meetings and a special workshop. Then in a ruling dated 11 November 2010, ElCom specified the separation criteria and thus brought this complex process to a conclusion within approximately five months.

ElCom found that the entire mesh 220/380 kV network belongs to the transmission network. This includes T connections, switchboard sections, certain cross-border lines, and installations that are used together with other network levels and are

mostly used in connection with the transmission network, without which it would not be possible to operate the latter safely and efficiently. Stub lines that are connected to the mesh transmission network with only one connection point are not part of the transmission network.
Several of the involved parties lodged appeals against the decision of ElCom with the Federal Administrative Court, and for this reason the ruling is not yet legally binding. However, the basic principle of allocating the 220/380 kV network to the transmission network was not contested.

Transfer of transmission network to Swissgrid

For the transfer of the transmission network to Swissgrid, the present-day owners are to be allocated shares in the latter, plus any other applicable rights. Any further-reaching diminution in value is to be offset by the network operator (Article 33, paragraph 4). In the event that the owners of the transmission network should fail to meet their obligations, ElCom is to take the necessary legal measures at the request of the national network operator or on its own initiative. In the event of any disputes or if the project comes to a halt, ElCom is also empowered to intervene by pronouncing rulings.
The transfer of the transmission network to the national network operator is above all the responsibility of Swissgrid and the current owners of the transmission network. A project called "GO!" has been launched under the leadership of Swissgrid. In August 2010, Swissgrid and the owners of the transmission network signed a declaration of intent, and in November that same year a due diligence process was initiated with six companies.
In the year under review, ElCom closely monitored the "GO!" project, called for the submission of all the most important documentation and held periodical meetings with the "GO!" project team. ElCom is ensuring that the transfer will be effected in accordance with the relevant legal provisions. For ElCom it is also particularly important to ascertain that the medium-term to long-term financing of Swissgrid is secured. This is a decisive factor in terms of the forthcoming investments in the transmission network and ensuring supply security.

System services

The term "system services" refers to the auxiliary support services that are required for the safe operation of electricity networks. ElCom examined the tariffs for system services as part of its audit of transmission network tariffs.

General system services

Since in an electricity network at any given time the same quantity of electricity has to be fed in as is taken out, in the control zone of Switzerland power plant capacities amounting to around 900 MW are kept in reserve in order to offset any fluctuations in consumption and production. This reserve capacity is the main cost component of general system services and accounts for 80 to 90 percent of the costs. The power plant capacities to be kept in reserve are procured by Swissgrid on the basis of calls for tenders.

Within the scope of its review of tariffs for 2011, ElCom examined the calculation of costs for general system services and carried out a number of adjustments. On the one hand, the portions of the costs for reserve capacity which can unambiguously be allocated to the Gösgen and Leibstadt nuclear power plants are to be billed to the corresponding balance groups. Based on the reduction of the reserve capacity during audits of these two power plants it was established that the retention of the corresponding capacities is clearly attributable to these two entities. This means that, in accordance with Article 15, paragraph 1b of the Electricity Supply Ordinance, these costs have to be billed individually and may not be charged to the general system services

(Article 15, paragraph 2a, Electricity Supply Ordinance).
The same applies with respect to the costs for timetable management: in accordance with Article 15, paragraph 1b of the Electricity Supply Ordinance, these costs have to be billed to the balance groups based on the principle of "user pays". In ElCom's ruling, Swissgrid was thus required to charge the costs of timetable management to the balance groups and to carry out a corresponding amendment for the 2012 tariffs.

Individual system services

In accordance with Article 15, paragraph 1a of the Electricity Supply Ordinance, the costs for offsetting active current losses and for the supply of idle energy have to be billed individually on the basis of "user pays" to those network operators and end users that are directly connected to the transmission network.

Tariff for compensation of active current losses

Swissgrid feeds additional electricity into the grid in order to compensate for active current losses arising during transport. Swissgrid procures this electricity via calls for tenders. Within the scope of its March 2010 ruling regarding 2010 tariffs, ElCom closely examined the tariff for active current losses for the first time and adjusted it downwards from 0.3 to 0.15 cents per kWh. In its examination, ElCom came to the conclusion that the calculation presented by Swissgrid regarding the anticipated costs needs to be strongly adjusted in some points, hence the cited reduction. For 2011, Swissgrid then announced a tariff of 0.15 cents per kWh. Following a summary examination, ElCom found that no further adjustments are required.

Tariff for the purchase of idle energy

The term "idle energy" refers to the portion of electrical energy that is not converted into useful energy (active current), but is used for building up electromagnetic fields. It is measured in kilovar hours (kVarh). Swissgrid procures idle energy from the power plants that are connected to the transmission network, and compensates them. In its review of 2010 tariffs, ElCom examined this remuneration and reduced it from 0.35 to 0.3 cents per kVarh, which resulted in a corresponding reduction of costs for idle energy. These costs are partially covered via a tariff for obtaining idle energy from the transmission network, but since the principle of "user pays" can only be clearly applied for a portion of idle energy acquisition, the remaining costs are charged to general system services. Within the scope of its review

of tariffs for 2011, ElCom made an adjustment to the allocation of the costs, since with the option foreseen by Swissgrid the "user pays" principle was not duly applied. This resulted in a reduction of the tariff for the procurement of idle energy from 3.0 to 0.61 cents per kVarh.

Increases in network capacity

In accordance with Article 22, paragraph 3 of the Electricity Supply Ordinance, increases in network capacity that become necessary as the result of input by electricity producers in accordance with Articles 7, 7a and 7b of the Energy Act form an integral part of system services. Remuneration for necessary increases in network capacity requires the approval of ElCom (Article 22, paragraph 4, Electricity Supply Ordinance). During 2010, ElCom completed its examination of four applications for remuneration of costs for necessary increases in network capacity, and ordered corresponding payments to be made to the involved network operators. The total remuneration that was granted amounted to approximately 320,000 Swiss francs. In two cases, the full amount was not granted since the option cited by the operators concerned was not the most favourable one. In view of this, ElCom reduced the remuneration to the costs of the most favourable option.

Emergency concept for system services

Swissgrid's emergency concept for system services regulates the procedure to be applied if it is not possible to obtain sufficient reserve capacity via the standard bidding procedure. This concept had to be implemented for the first time in March 2010: several providers of system services were compelled to retain reserve energy because it was not possible to obtain the necessary quantity via the bidding procedure. Some providers then lodged an appeal with ElCom against this move, and contested both the current version of the concept as well as its specific application. They also petitioned for a ruling on provisional measures. The latter request was turned down. The proceedings relating to the main issue are still pending, but were suspended at the request of the involved parties.

Allocation to a network level

ElCom is responsible for reviewing network utilisation tariffs and remuneration in the event of disputes or on its own initiative (Article 22, paragraphs 2a and 2b, Electricity Supply Act). The relevant electricity supply legislation includes various provisions concerning the calculation of remuneration for network utilisation and the allocation of end users and network operators to a network level (Article 5, paragraph 5 and Article 14 f., Electricity Supply Act; Article 3, Electricity Supply Ordinance).

Allocation on the basis of technical criteria

In a dispute that was handled by ElCom, the opinions of a municipal electricity works and a regional supplier differed regarding the network level to which the municipality was to be allocated. Essentially it is the main connections which are of relevance in terms of allocation, while emergency connections also have to be taken into account. Since the emergency connection primarily benefited the municipal operator, in keeping with the principle of "user pays" the latter was also obliged to bear the costs of network level 5. In its ruling dated 11 February 2011, ElCom confirmed that the municipal operator also has to bear the costs for network level 5. An appeal against this ruling was lodged with the Federal Administrative Court.

In a second ruling on this issue, on 11 November 2010 ElCom ordered another network level allocation in line with its past practice. Further to its rulings of 14 May 2009 and 11 February 2010, it confirmed that the previously specified criteria for al-

location to a network level apply not only to network operators, but also to end users. In a third ruling dated 9 December 2010, ElCom specified that an electricity supply company is not obliged to permit a change of connection to a higher network level. In a shopping centre, a retail chain wanted to reactivate a decommissioned transformer so that it could be connected to a higher network level. The intended change to a higher level was motivated by economic considerations, and the aim was to avoid paying network utilisation remuneration for level 7. Due to insufficient grounds, there was no supply-related obligation for the network operator to permit the requested connection to a higher network level.

Allocation on the basis of contribution to costs

Another ruling dated 11 November 2010 concerned the relationship between two distribution network operators. The dispute was over the issue of allocation of transformer stations to a network level. The upstream network operator had carried out investments in the transformer station in question, and thus did not want to pay network utilisation remuneration for network levels 6 and 7.

ElCom made a distinction between newly connected and renovated transformer stations. The new connections were mostly financed by the upstream network operator, whose share was also considerably greater than the average share of other upstream network operators. Since, in accordance with the relevant electricity supply legislation, recoverable network costs arise for the network operator who pays for the development and maintenance of a given network level, ElCom ruled that a medium voltage tariff (connection to network level 5) applies, and thus confirmed its ruling. This ruling is not yet legally binding since the upstream network operator lodged an appeal with the Federal Administrative Court.

Pricing and tariffs

Market situation

In the initial phase of liberalisation of the market, only large-scale consumers with consumption of more than 100 MW per annum have the right to choose between basic supply and free market access. This group of consumers accounts for approximately half the total level of consumption in Switzerland (around 58 TWh). The question arises as to how many end users actually have free market access. As we can see from Figure 4, in the first two years after the opening of the market, very little use was made of this choice, and only 4 percent of energy is supplied on the basis of free market access. Another question concerns the dominance of the largest energy suppliers in Switzerland. Figure 5 shows that the 10 largest network operators (blue) account for around half the total electricity supply, and if we extend this to the 40 largest network operators (blue, brown, light yellow, light blue), the corre-

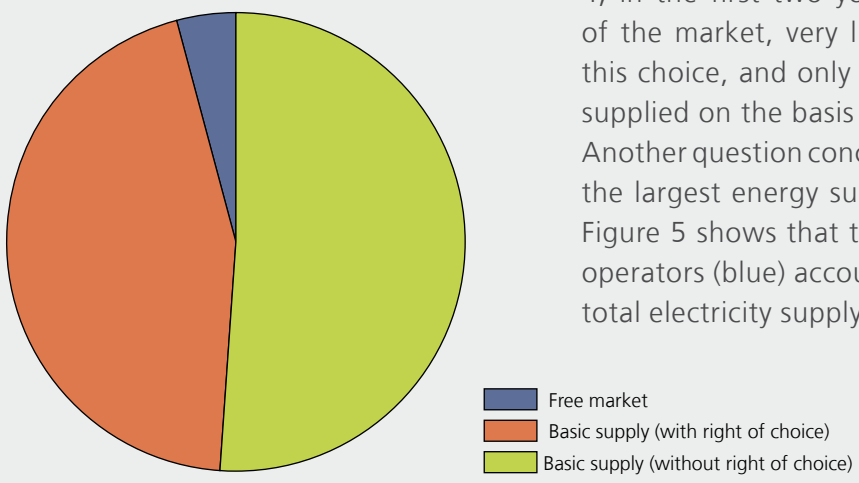

Figure 4: Supplied energy by end user category

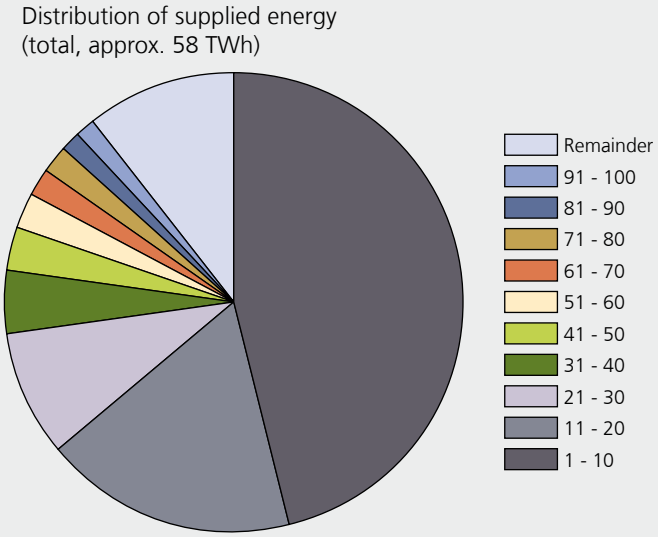

Figure 5: Energy supply by size of end user

sponding figure is three-quarters of the total electricity supply. How are electricity tariffs composed? Which components contributed towards the price increases in the past few years? With the introduction of the Electricity Supply Act, network operators were obliged to show the four tariff components separately (network use, energy, fees and payments to the state, and contribution for feed-in remuneration at cost). Figure 6 shows that the price increases during the past three years for households (taking category H4 as an example) were almost entirely attributable to higher energy costs (which on average rose from 8.4 to 9.0 cents per kWh). By contrast, the other three components remained unchanged for households. Figure 6 also shows that the total price is primarily influenced by prices for the network and energy of around 8 to 10 cents per kWh each, whereas fees and payments to the state and the contribution for feed-in remuneration at cost account for less than 10 percent together (0.9 and 0.45 cents per kWh on average).

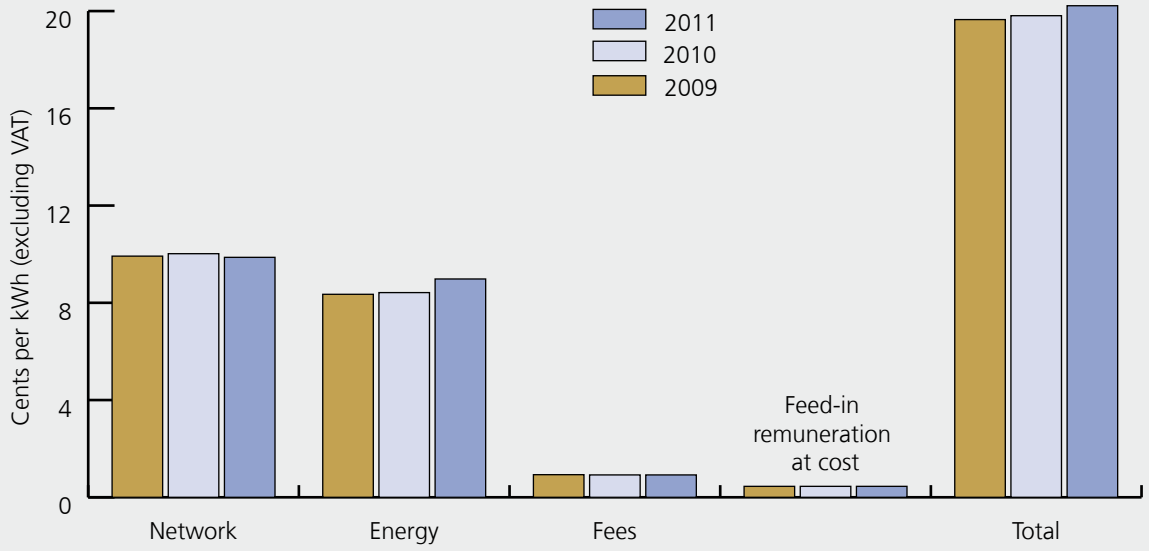

Figure 6: Cost components of the end user price for households (category H4)

Access of end users to the free market

In a ruling dated 9 December 2010, ElCom had to decide on the question of whether a large-scale end user which has been supplied with electricity for more than 30 years on the basis of an individual agreement is a recipient of basic supply or has free market access. No feed-through ever occurred during the entire period, and the end user in question had also never actively tried to benefit from market mechanisms. In the view of ElCom, this means that the end user in question had not yet made use of its right to choose, and therefore has to be qualified as an end user with basic supply in accordance with Article 6, paragraph 1 of the Electricity Supply Act. ElCom pointed out that agreements that take the place of a tariff can help reduce the overall burden on the network and ensure efficient network operation. This ruling is not yet legally binding since an appeal was lodged with the Federal Administrative Court.

In a ruling dated 25 June 2009 concerning a matter of a similar nature, in proceedings between Stahl Gerlafingen AG and AEK Energie AG, ElCom found that Stahl Gerlafingen already has free market access and therefore cannot revert to basic supply. However, on 19 August 2010 the Federal Administrative Court annulled ElCom's ruling. The ruling of the Federal Administrative Court means that Stahl Gerlafingen could benefit from the currently lower tariffs applicable to basic supply, and in view of this the Federal Department of the Environment, Transport, Energy and Communications (DETEC) lodged an appeal against this ruling with the Federal Supreme Court in Lausanne.

Fundamental issues

Compensation of differences in cover

Energy consumption, and thus sales figures of distribution network operators, depend on a variety of factors such as temperature (heating and air-conditioning appliances) and economic development. It is therefore impossible for network operators to make accurate predictions regarding consumption. As a result of forecasting errors, it is often the case that considerable shortfalls or surpluses of up to 20 percent can occur in network tariffs. These discrepancies subsequently have to be compensated, and ElCom has issued a directive on calculating differences in cover.

Price indices for valuation of installations

Depreciation and interest on residual values of installations represent a major portion of network costs. Residual values are calculated on the basis of utilisation-based write-offs on the original acquisition and production costs. If these figures are no longer available (for example because the

documentation has meanwhile been lost), Article 13, paragraph 4 of the Electricity Supply Ordinance permits the application of the synthetic valuation method by way of exception. With this method, the values of installations are calculated back to the time of acquisition with the aid of appropriate indices based on present-day reacquisition figures. But suitable indices for this purpose have not been available to date. In cooperation with the electricity sector, the Swiss Association of Electricity Producers (VSE) and the Basel Institute of Economic Studies (IWSB), ElCom has now developed indices for the most important installation categories and issued a corresponding directive.

Fibre optics networks

Numerous network operators have announced they are developing a fibre optics communications network through to end users (fibre to the home) in their electricity network. For cost reasons, it clearly makes sense to utilise synergies and lay fibre optics cables in the existing channels of electricity networks. But at the same time there is a danger that competing fibre optics networks will not pay an appropriate proportion of the costs of these cabling channels and will thus be cross-subsidised by the monopolistic electricity network, which is not permissible.

For this reason, ElCom questioned 30 network operators that are planning or operating a fibre optics network about the distribution of costs between the fibre optics and the electricity network. It turned out that the network operators are aware of the problem and want to prevent cross-subsidisation through cost coding or compensation of the electricity network by the fibre optics network. ElCom decided to verify that no cross-subsidisation takes place between electricity and telecommunications network by monitoring the situation within the scope of its tariff examination procedure.

Measurement costs

In the year under review, several distribution network operators were reported to ElCom for market obstruction due to excessive measurement costs and hampering access to measurement data. Excessive measurement costs or non-standardised data formats obstruct customer changeover processes and thus access to the market. In response to these reports, ElCom conducted a survey among various network operators, the result of which is presented in Figure 7 below. The total measurement costs of seven of the selected network operators were two to five times higher than the reference level specified by ElCom. The greatest proportion of the costs is attributable to measurement services.

Network operators are required to take all necessary steps to operate their network efficiently (Article 8, paragraph 1a, Electricity Supply Act). If they are unable to economically operate a system for the management of measurement data themselves, they are

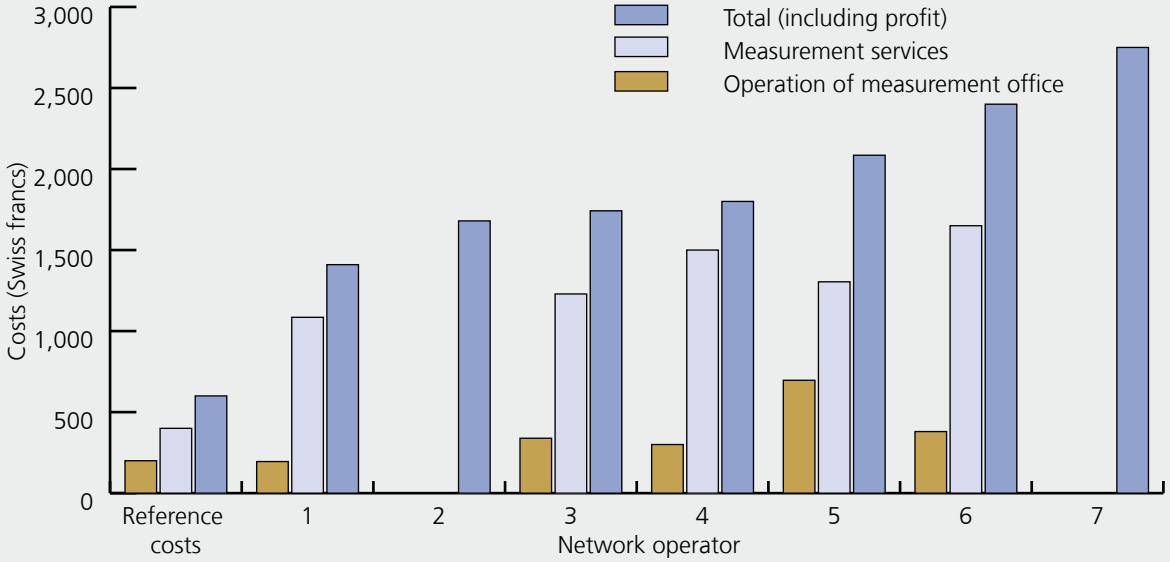

Figure 7: Measurement costs of seven selected network operators

obliged to find an alternative solution such as cooperation or outsourcing.

In the year under review, ElCom also focused on the topic of smart metering. In connection with the partial or comprehensive introduction of intelligent electricity meters, ElCom is responsible for implementing the existing legislation. Alongside supply security, the main focus here is on the level and allocation of the costs. In keeping with the relevant legislation, ElCom's main aims are to ensure efficient network operation, prevention of cross-subsidisation and an appropriate distribution of costs.

Operating profit

The maximum profit a network operator may make from the sale of energy is not specified by law, but an excessive profit can cause excessive tariffs. The question therefore arises concerning the maximum permissible level of operating profit.

One of ElCom's initial deliberations was to calculate the maximum profit in line with the network. Here it became clear, however, that this criterion led to a level that many felt was too low. In view of this, the following solution was conceived: the balance between operating costs and operating profit is divided by the number of customers, and

the result is then compared with an internally specified upper limit. If the figure is above this limit, the costs are subjected to an intensive review. With this method, network operators have an incentive to operate their network as efficiently as possible so that they can attain a higher profit.

Transmission network

2009 tariffs: rulings of the Federal Administrative Court

In the year under review, the Federal Administrative Court pronounced two pilot rulings on the 2009 tariffs of the transmission network. In its ruling dated 8 July 2010, the Court found that the provision of the Ordinance which stipulates that the operators of power plants with an output of at least 50 MW have to pay a portion of the costs of general system services is neither lawful nor constitutional. It upheld all the contested formal points of ElCom's ruling, and its decision is legally binding.

In its ruling of 11 November 2010, the Federal Administrative Court rejected all main points in the appeal by BKW FMB Energie AG and BKW Übertragungsnetz AG. The Court came to the conclusion that ElCom was justified in significantly reducing the recoverable costs for the remuneration of network utilisation. It also found that the provisions governing the synthetic valuation method (Article 13, paragraph 4, Electricity Supply Ordinance) and the calculation of imputed interest (Article 31a, Electricity Supply Ordinance) are both lawful and constitutional. In particular, ElCom is entitled to make a 20.5-percent deduction as well as impose a 20-percent penalty on synthetically calculated capital costs. The petitioner has lodged an appeal against this ruling with the Federal Supreme Court.

2010 tariffs

With its ruling dated 4 March 2010, ElCom brought its examination of 2010 tariffs for network utilisation at level 1 and system services to a conclusion and found that the provisional reduction of tariffs it ordered in July 2009 was justified. ElCom reduced the declared costs for network utilisation and system services by approximately 13 percent, or 130 million Swiss francs.

The main focus of the examination was on network valuation and the resulting capital costs and on operating costs. Here, ElCom compared companies' operating costs per line kilometre. In cases of unjustifiably high operating costs, it made an inefficiency deduction of 25 percent. ElCom also ordered deductions for synthetic valuation of networks, and reduced the recoverable costs for

system services by approximately 58 million Swiss francs. These reductions were carried out in particular in the area of costs for active current losses, which ElCom examined for the first time in the year under review.
Several appeals against the ruling by ElCom were lodged with the Federal Administrative Court, which suspended proceedings partly at the request of the petitioners, but also on its own initiative, until a legally binding ruling is made on the 2009 tariffs of the transmission network. ElCom also nullified the postponement effect on any appeal against its ruling of 4 March 2010. Petitions to reinstate the postponement effect were rejected by the Court.

2011 tariffs

In May 2010, the national network operator published the tariffs for utilisation of the transmission network for 2011. Following a summary examination, in a ruling dated 10 June 2010 ElCom provisionally reduced these tariffs to the level that was applicable in 2010.
The definitive results of the examination that were included in the ruling dated 11 November 2010 showed that the tariffs of the transmission network for 2011 should have been reduced still further. As was already the case with the 2009 and 2010 tariffs, ElCom made deductions for the synthetic valuation of the networks, but by contrast the tariffs for system services were generally maintained at the same level as those published by the national network operator. But these tariffs were significantly higher than in the previous years since, in accordance with the ruling by the Federal Administrative Court dated 8 July 2010, the national network operator has to repay a number of power plants the amounts they overpaid for system services. These amounts now have to be borne by end users. For the first time, balance groups are required to assume the costs for the retention of positive tertiary reserve energy (around 12 million Swiss francs). These costs can be allocated individually to power plants that belong in these balance groups.
Several appeals against ElCom's ruling dated 11 November 2010 were lodged with the Federal Administrative Court.

Distribution network

Completed projects

In the year under review, two reviews of distribution network tariffs were brought to a conclusion. In one case this involved an examination of electricity tariffs. Here

the focus was on issues relating to coding of costs between the company's various areas of activity and the network valuation. It was found that the network costs in the period concerned were too high. In accordance with the directive on differences in cover, the company concerned will have to repay this amount to its customers within the scope of the 2011 to 2013 tariffs.
The second case concerned distribution costs and profit. Here it was found that the reported costs and profit were in line with the internal upper limit, and thus no further action was required.

Pending tariff review

As of the end of the year under review, 14 distribution network tariff reviews were still pending. This mainly concerns large regional distributors and municipal works. In addition to the aspects of network valuation, recoverability and level of operating costs and cost coding, in a variety of cases the acquisition costs need to be closely examined in accordance with Article 4 of the Electricity Supply Ordinance. This involves questions such as the valuation of power plants, interest, and the differences between the consumption profiles of end users and the production profiles of power plants. ElCom is confident that most of the tariff reviews can be completed in the course of 2011.

Network cost contributions

In the same way as network utilisation remuneration, network cost contributions help finance the electricity network. However, contrary to the situation concerning network utilisation remuneration, the legislation governing electricity supply does not oblige ElCom to examine the level of network cost contributions. Numerous complaints have been received, however, from which it has become clear that these contributions need to be examined by ElCom. ElCom has requested the Swiss Federal Office of Energy in writing to examine the question of network cost contributions within the scope of the revision of the Electricity Supply Act.

International activities

Market situation

The main objective of the EU is to create a genuine single energy market. It wants to establish fair competition and adequate consumer protection. The ongoing development of shortfall management throughout Europe is an important step towards the completion of the European energy market. This involves the management of capacity shortfalls in cross-border electricity supply lines. Here an important element is the linking of national electricity spot markets. On 9 November 2010, a price coupling of the electricity markets was created between Germany, France and the Benelux states (Central West Europe region, CWE). This grouping was immediately linked with the already existing electricity market in northern Europe. This means that a cross-border market which encompasses half of Europe already exists today, and it is to be expanded still further. Alongside the closer coupling of CWE with northern Europe, the possibility of bringing together the Central South Europe (CSE) and South West Europe (SWE) regions or other countries (UK, Switzerland) is currently under discussion.

The European regulations do not directly apply to capacity shortfalls at Switzerland's borders. However, due to its geographical location and availability of (supplementing) power plants, Switzerland is an important partner for Europe and is thus affected by developments within the EU. In accordance with Article 17 of the Electricity Supply Act, ElCom is responsible for processes relating to the management of shortfalls. ElCom therefore actively participates in the committees of the Council of European Energy Regulators (CEER) and the EU (CWE and CSE regional initiatives),

as well as in the form of bilateral contacts with national regulatory authorities.
Figure 8 shows which methods are currently in use at the borders for managing capacity shortfalls. Capacities at the borders of the countries depicted in orange are separately (explicitly) auctioned, whereas implicit auctions are held at the borders of those countries shown in light blue, in which energy volumes and the corresponding transport capacities are traded jointly on an exchange. In the future, the

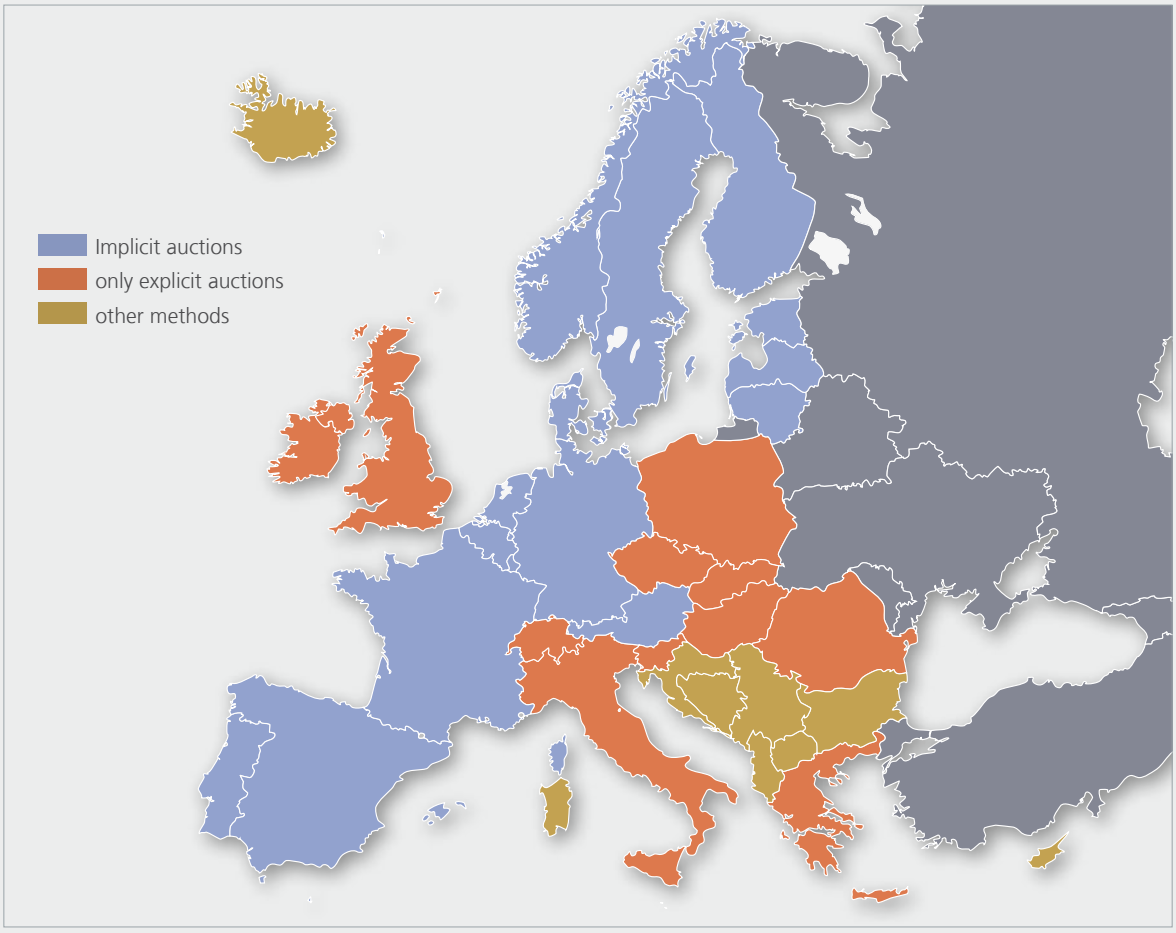

Figure 8: Shortfall processes in Europe in 2010

EU wants as much capacity as possible to be granted in the short term via implicit auctions so that a flexible market can be established.

Shortfall processes at Switzerland's borders

The network capacities of Switzerland's cross-border transmission lines are limited. Demand is higher than the available capacity. For this reason, these capacities are currently explicitly auctioned by Swissgrid at the borders with Germany, Austria and Italy. In 2010, intensive efforts were carried out at the southern border to improve the existing method of shortfall management. On 19 May 2010, Swissgrid and the transmission network operators of the CWE and CSE regions signed a memorandum of understanding in which they agreed on the following points:

» That with effect from 1 January 2011, the CASC (Capacity Allocation Service Company) of the CWE region will hold explicit auctions at all borders of the CSE and CWE regions, including all Swiss borders.

» That with effect from 1 January 2012, uniform auction regulations are to apply for all the above auctions.

However, despite this harmonisation the separation of electricity and capacity markets in explicit auctions nonetheless gives rise to inefficiencies (e.g. to unused capacities, even though there are price differences between the two countries). Furthermore, explicit auctions do not create incentives to reduce a capacity shortfall, since increasing shortfalls mean higher proceeds from auctions. With the introduction of implicit auctions, cross-border transmission capacities are utilised more efficiently and shorter-term auctions can be held. In the view of ElCom, efforts should be made to move in this direction. As a prerequisite for the introduction of implicit auctions at Switzerland's northern borders, however, it will be necessary to establish an electricity exchange that is subject to Swiss law.

Compensation of transit costs (ITC)

The aim of the ITC mechanism (ITC stands for inter-TSO compensation) between European transmission network operators is to compensate the additional network

costs that arise in transit countries. Higher costs arise partly because in some countries higher line capacities are required (i.e. infrastructure costs), but also because line losses are greater when the lines are more heavily loaded by transit electricity, and these costs have to be compensated.

For Switzerland, compensation from the ITC mechanism is currently inadequate. On the one hand, the total amount for infrastructure compensation was arbitrarily limited in 2010, and on the other hand Switzerland's proceeds have been cut by around half due to the reserved border capacities (long-term agreements).

In its ruling dated 4 March 2010 on the 2011 transmission network tariffs, ElCom therefore found that the costs resulting from long-term agreements (reduced revenue from the ITC mechanism) have to be borne by the holders of these agreements.

Third EU liberalisation package

The third EU energy liberalisation package entered into effect on 3 March 2011. Its main aims are to secure the more effective integration of the electricity and gas markets and the efficient use of connecting lines and to eliminate existing obstacles to cross-border trading and new investments in network infrastructure. A new European agency (ACER, based in Ljubljana) was created for promoting cooperation between energy regulators, and this agency is to be involved in the formulation of regulations to secure uniform shortfall management. ElCom's participation in ACER committees depends largely on the conclusion of an electricity agreement between the EU and Switzerland.

Feed-in remuneration at cost

ElCom is empowered to rule on disputes relating to remuneration at cost for feed-in to the grid, which was introduced in 2009 for producers of electricity from renewable energy sources (Article 25, paragraph 1bis, Federal Energy Act).

Since in the year under review Swissgrid again had to reject numerous new applications for remuneration or had to place them on a waiting list, ElCom in its turn again received and ruled on a large number of requests to reassess these decisions. All cases were settled without the pronouncement of contestable rulings. For the first time, cases had to be dealt with in which the deadlines for submitting project progress or start-up reports had expired. It also became apparent that, when producers of renewable energy are connected, measurement costs can represent a problem. ElCom has examined this issue in depth and will be announcing its initial decisions in the course of next year. In 2010, Parliament adopted a resolution to revise the Federal Energy Act. The maximum charge per consumed kilowatt hour is to increase to 0.9 cents with effect from 2013. This means that, from 2013 onwards, an annual amount of around 500 million Swiss francs will be available for the promotion of electricity from renewable energy. Thanks to this increase in funds, it will be possible to already start reducing the waiting list for feed-in remuneration in 2011, which currently includes approximately 7,000 projects that are waiting for a positive decision.

Appendix

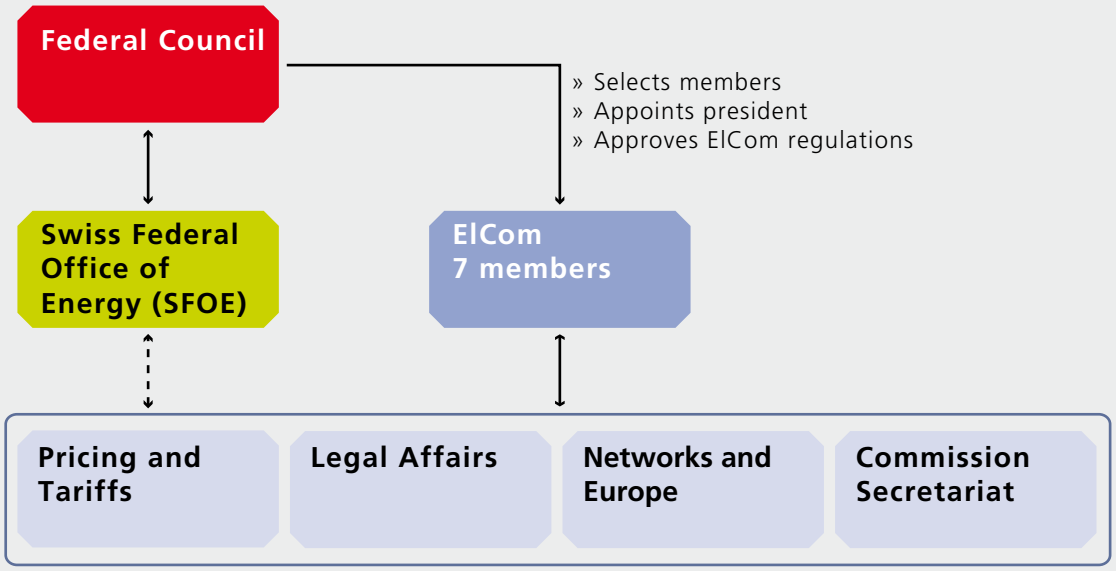

Figure 9: Structure of ElCom

Organisation and personnel

ElCom comprises seven independent members appointed by the Federal Council, plus a Technical Secretariat. It is not subject to any directives of the Federal Council, and it is independent of the administrative authorities.

The Electricity Commission

The seven members of the Electricity Commission were appointed by the Federal Council until the end of 2011. All of them are independent of the electricity industry, and they all work on a part-time basis. On average, the Commission holds a plenary meeting once a month, and its members also attend meetings of the four committees: "Prices and Tariffs", "Networks and Supply Security", "Legal Issues", and "International Relations".

In the year under review, the composition of the Commission was as follows:

President

» Carlo Schmid-Sutter, attorney-at-law and notary public, president of the cantonal executive ("Landammann") of Appenzell Innerrhoden.

Vice Presidents

» Brigitta Kratz, attorney-at-law, tutor in private law at the University of St Gall.

» Hans Jörg Schötzau, doctor in natural sciences, titular professor at the Swiss Federal Institute of Technology, Zurich, former CEO of NOK (Networks, Trading, Sales).

Members

- Anne d'Arcy, Professor of Corporate Governance and Management Control, Vienna University of Economics and Business.
- Aline Clerc, degree in engineering from the Swiss Federal Institute of Technology, Lausanne, specialist in rural and environmental engineering, expert at the Consumers' Association of Suisse Romande (FRC) in Lausanne.
- Matthias Finger, PhD (political science), Professor of Management of Network Industries at the Swiss Federal Institute of Technology, Lausanne.
- Werner Geiger, degree in engineering from the Swiss Federal Institute of Technology, Zurich, independent business consultant.

Technical Secretariat

The Technical Secretariat provides the Commission with technical and specialised support and prepares the Commission's decisions and implements them. It conducts administrative proceedings and carries out the necessary clarifications. It is independent of any other authorities and is solely subject to the directives of the Commission. In the year under review, the number of employees of the Technical Secretariat remained unchanged at 34.

Head of the Technical Secretariat
Renato Tami, attorney-at-law and notary public

Prices and Tariffs (10 employees)
Stefan Burri

Legal Issues (8 employees)
Nicole Zeller, attorney-at-law

Networks and Europe (8 employees)
Michael Bhend, engineer (Federal Institute of Technology)

Commission Secretariat (7 employees)
Frank Rutschmann

Facts and figures for 2010

Complaints, etc.	Brought forward from previous years	Received in 2010	Dealt with in 2010	Carried forward to 2011
Specific matters relating to tariffs	200	221	159	262
Feed-in remuneration at cost	7	18	9	16
Other cases	83	181	86	178
Total	**290**	**420**	**254**	**456**

Meetings

The members of the Commission attend monthly plenary meetings. In addition, the four committees hold their own meetings and ElCom also organises workshops and other extraordinary meetings. In the year under review, the members of ElCom attended a total of 14 full-day and 28 half-day meetings within Switzerland.

ElCom events

ElCom 2010 Forum

On 25 November, ElCom organised its 2010 Forum at the College of Technology in Rapperswil. Around 150 representatives of the electricity sector, plus a variety of other participants, discussed the main topic, "The future of the transmission network".

In addition, speakers from Swissgrid, Alpiq, ESTI and Nexans AG presented their views relating to the backbone of the future electricity supply. ElCom introduced its decision regarding the separation of the transmission network from the distribution network.

In a panel discussion led by Davide Scruzze (NZZ), the issue of recoverability of investments was debated in depth. In addition, the importance of cross-border electricity transmission for supply security and the economic viability of the electricity sector were also addressed. Here, ElCom emphasised the importance of the role of the transmission network operator for maintaining secure network operation in the (trade-driven) European electricity market.

In its 2020 Forum, ElCom reminded the sector and the general public that supply security depends not only on the production of electricity, but also on its transmission and distribution via efficient networks, and here ElCom has a high degree of responsibility as supervisory authority. ElCom also pointed out that in the electricity sector the degree of supply security of a given country depends on the technological reliability of its neighbours, and on the readiness among neighbouring states to help one another in emergency situations. This means that harmonisation with foreign regulatory authorities is one of ElCom's official duties.

The next ElCom Forum will be held in Fribourg on 18 November 2011.

Information events for network operators

In the year under review, ElCom held 14 information events at various locations in Switzerland. The main topics were the collection of cost accounting data and current legal issues. Approximately 500 people attended the events (primarily representatives of small and large network operators), which were offered on a non-profit basis. For those in attendance, these events provided an excellent opportunity to meet and learn from ElCom's specialists.

Financial information

Key financial data for 2010

ElCom had a budget of 5.674 million Swiss francs at its disposal in 2010. This amount covered the fees and expenses of the Commission members, the salaries of the 34 employees of the Technical Secretariat, and external consulting fees. It does not include IT, logistics, human resources and real estate services, which are provided by the Swiss Federal Office of Energy with which the Technical Secretariat is affiliated until the end of 2011.

Revenue in the year under review amounted to 1.981 million Swiss francs, the sources of which were the supervisory fee collected from Swissgrid for co-operation between ElCom and foreign authorities (in accordance with Article 28 of the Electricity Supply Act) and procedural costs which were billed to the parties concerned upon the pronouncement of rulings.

Budget for 2011

Expenditure of 6.401 million Swiss francs has been budgeted for 2011 (excluding services provided by the Swiss Federal Office of Energy). The sources of revenue are the supervisory fee and income from procedural costs.

Publications

Directives

4.3.2010	1/2010	Publication of tariffs
8.4.2010	2/2010	Calculation of interest rate for assets required for operation
10.6.2010	3/2010	Differences in cover from previous years
10.6.2010	4/2010	Network valuation in accordance with Article 13, paragraph 4, Electricity Supply Ordinance
3.12.2010	5/2010	Obligation for network operators to record and submit supply quality data in 2011

Rulings

11.2.2010	Allocation to a network level, network utilisation remuneration
4.3.2010	Costs and tariffs for network utilisation at level 1 and system services
10.6.2010	Petition for ruling on provisional measures; emergency concept for procurement of system services

10.6.2010	Remuneration for increase in network capacity
10.6.2010	Remuneration for increase in network capacity
10.6.2010	Remuneration for increase in network capacity
10.6.2010	Ruling on provisional measures relating to 2011 costs and tariffs at network level 1
16.9.2010	Remuneration for increase in network capacity (photovoltaics system)
14.10.2010	Petition for ruling on provisional measures; additional costs of network utilisation
11.11.2010	Definition and delimitation of transmission network
11.11.2010	Connection to network level 6
11.11.2010	Allocation to a network level, network utilisation remuneration
11.11.2010	2011 costs and tariffs for network utilisation at level 1 and system services
9.12.2010	Allocation to a network level
9.12.2010	Qualification of X as end user waiving network access in accordance with the provisions of the Electricity Supply Act

Media releases

8.3.2010	2010 transmission network tariffs: ElCom prevents increase in costs of around 130 million Swiss francs
4.6.2010	Federal Council acknowledges receipt of report on the activities of ElCom
14.6.2010	ElCom provisionally cuts transmission network tariffs for 2011
14.7.2010	2009 electricity prices: ElCom acknowledges ruling of the Federal Administrative Court
7.9.2010	2011 electricity prices: average increase of around 2 percent for households, 3 to 4 percent for commercial companies
15.11.2010	2011 transmission network tariffs: ElCom completes review and reduces network utilisation costs by around 62 million Swiss francs

Newsletters

14.12.2010	Newsletter, 12/2010

Notifications

1.2.2010	Legal nature of guidelines and sector documentation
4.10.2010	Fibre optics cable networks – survey conducted by ElCom in 2010

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