



# Report on the activities of ElCom 2012



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

**Federal Electricity Commission ElCom**

Published by  
Swiss Federal Electricity Commission ElCom  
Effingerstrasse 39, CH-3003 Bern  
Phone +41 31 322 58 33 · Fax +41 31 322 02 22  
info@elcom.admin.ch · www.elcom.admin.ch

Illustrations    Axpo (pp. 1, 43)  
                      ElCom (pp. 5, 20, 31)  
                      Repower (pp. 7, 10)  
                      Fotoagentur Ex-Press AG (p. 26)  
                      Rosmarie Flückiger (p. 44)

Edition            D: 250, F: 150, I: 50, E: 50  
Available in German, French, Italian and English · 6/2013

# Contents

## Foreword

## Background information

### Transfer of transmission network to Swissgrid

- 7 Transmission network transfer modalities
- 7 Legal competence
- 7 Financing structure
- 8 Evaluation
- 8 Not-yet-transferred network components
- 9 Delimitation of transmission network and distribution network

### Security of supply

- 10 Key data relating to the Swiss electricity network
- 14 Quality of supply in Switzerland
- 16 Monitoring of the market
- 18 Ancillary services
- 19 Energy policy

### Grid expansion and planning, network level allocation

- 20 Investments in the network
- 21 Long-term planning
- 22 Recoverable costs
- 22 Network reinforcements
- 24 Network level allocation, change of network level

### International activities

- 26 Congestion management
- 27 Auction revenues
- 28 Market transparency

- 29 International bodies
- 30 International legal developments

## Costs and tariffs

- 31 Market situation
- 33 Overview of tariffs
- 37 Judicial practice with respect to tariffs
- 38 Transmission network tariffs
- 39 Distribution network tariffs

## Closed distribution networks – Areal networks

## Feed-in remuneration at cost

## About ElCom

- 44 Duties
- 46 Organisation and personnel
- 47 Electricity Commission
- 47 Technical Secretariat

## Appendix

- 49 Facts and figures for 2012
- 49 Appeal statistics
- 50 Meetings
- 50 ElCom events
- 50 ElCom 2012 Forum
- 51 Information events for network operators
- 51 Finance
- 51 Key financial data for 2012
- 51 Budget for 2013
- 52 Publications

# Foreword



ElCom has completed its fifth year as Switzerland's independent regulatory authority in the electricity sector. One of its principal duties is to accompany the transition from a monopolistic electricity supply system to a competition-based electricity market. The liberalisation of the electricity market poses a variety of challenges for decision-makers in the energy industry: in a highly complex environment, tried-and-tested strategies in the areas of acquisition, distribution and sales have to be carefully reconsidered and adapted to the changing market circumstances. ElCom approaches its duties as regulator with the necessary degree of diligence and a strong sense of responsibility. It is particularly pleasing to be able to report that electricity prices have fallen: this will additionally encourage large-scale consumers to choose the best offer that is available on the market. On the other hand, network tariffs are likely to increase in the next few years.

One of the main features of 2012 was the "GO!" project (GO stands for Grid Ownership). The Swiss transmission network was successfully transferred to the national transmission network operator, Swissgrid AG,

as of the end of 2012 – a highly complex transaction in the course of which numerous issues needed to be clarified. The cooperation between ElCom and Swissgrid was both intensive and productive. Another of ElCom's main mandates is to verify the safety and efficiency of the electricity network. The results of its analyses are pleasing: the supply of electricity in Switzerland meets the highest European standards, and the country's energy supply companies are highly capitalised in comparison with other European countries, which means they are well protected against risks.

ElCom also has the important duty of coordinating its activities with foreign regulatory authorities, and in 2012 it was granted observer status at the CEER (Council of European Energy Regulators). The various workgroups within this body form an ideal platform for ElCom to pursue its cross-border coordination activities. The EU wants to increase the degree of transparency on the wholesale energy market by banning insider trading and market manipulation, and by introducing a reporting requirement for wholesale trading data. The Federal Council is taking the necessary steps to introduce the same degree of transparency in Switzerland in order to create a non-discriminatory and smoothly functioning electricity market.

I hope you will find this 2012 report on ElCom's activities both interesting and informative.

A handwritten signature in black ink, reading "Schmid-Sutter".

Carlo Schmid-Sutter, ElCom President

# Background information

In 2007, Parliament formally adopted the Federal Electricity Supply Act, which entered into force at the beginning of 2009. The main objective was to bring about the liberalisation of the electricity market, provided that it would still be possible to guarantee the security of supply, i.e. to ensure that a sufficient quantity of electricity will be available at all times. Other objectives included placing the transmission network in the hands of a single national transmission system operator, called Swissgrid AG, giving large-scale consumers the option of free choice of supplier, and enabling all electricity producers to feed their electricity into the grid at uniform conditions.

After a transitional period of more than three years, the Swiss transmission network valued at around 2 billion Swiss francs has been successfully transferred to Swissgrid.

The associated process was extremely complex and called for concerted action on the part of all involved players at the operational, technical, financial and legal levels.

The monopolistic structures of the networks have been kept intact, and ElCom's principal mandate is to monitor the associated activities and secure an adequate electricity supply. It is also responsible for monitoring compliance with the Federal Energy Act. In this connection, ElCom pursues a policy of transparency and publishes its rulings on its homepage.

The information presented in this report is intended to provide an overview of the diverse activities carried out by ElCom during the year under review in the performance of its mandate.

# Transfer of transmission network to Swissgrid



*High voltage transmission Network on the Bernina Pass*

## Transmission network transfer modalities

### **Legal competence**

In accordance with Article 33, paragraph 4 of the Electricity Supply Act, electricity supply companies are obliged by law to transfer their transmission network to Swissgrid AG as the national operator of the Swiss transmission network. If any of these companies fail to comply with this legal requirement, ElCom is empowered to issue the necessary rulings upon request by Swissgrid or on its own initiative (Article 33, paragraph 5, Electricity Supply Act). On an informal basis, ElCom supported the transfer preparations until 2011. Then, in spring 2011, it opened formal proceedings, at the request of a number of parties, and formally declared its

responsibility for the procedure in an interim ruling. Following an appeal against this ruling, the Federal Administrative Court examined the question of official responsibility and found that, in accordance with the relevant legislation, ElCom is duly empowered to monitor compliance with the legal provisions and issue the necessary rulings for this purpose.

### **Financing structure**

In 2009, Swissgrid and the owners of the transmission networks joined forces in a so-called "GO!" project (short for "Grid Ownership") with the aim of smoothly and efficiently planning and implementing

the transfer of the networks in accordance with their legal obligations. A great deal of progress was achieved within the electricity sector as a result of this move, including the development of the contractual bases for the transfer of ownership. It was agreed that all shares in companies operating the respective transmission networks are to be exchanged for new shares in Swissgrid and for shareholder loans. The proposal was to compensate the companies with shareholder loans (70 percent) and new shares in Swissgrid (30 percent). ElCom, which closely monitored the transaction process, intervened in spring 2011 in connection with the compensation structure and modality, in particular in order to examine their legality, as well as the financial stability and risk capacity of Swissgrid. Following intensive clarifications and the consultation of external expert reports, the following agreement was reached: 30 percent of compensation in the form of shares in Swissgrid, 35 percent with compulsory convertible loans with equity character, and 35 percent with shareholder loans with no conversion obligation. The agreement also included a longer-term step-by-step repayment of shareholder loans, the refinancing of the latter via long-term debt and the provision of an appropriate level of risk capital. ElCom concluded its proceedings in September 2012, and 17 of the 18 major transmission network owners signed the relevant contracts at the end of the year.

### **Evaluation**

In a second ruling, ElCom specified the level at which the parent companies of the previ-

ous transmission network owners are to be compensated for the transaction. Here the basis is the level specified by ElCom within the scope of its examination of network level 1 tariffs (regulated value). As the new owner of the transmission network, Swissgrid is only permitted to use its network within the framework specified in the relevant legislation. In view of this, the regulated value for the individual network components is to serve as the basis for Swissgrid to calculate the legally recoverable costs. An appeal against this ruling was lodged with the Federal Administrative Court, and a decision was still pending as of the end of 2012.

### **Not-yet-transferred network components**

If the electricity supply companies failed to transfer their transmission network to Swissgrid by the end of 2012, ElCom was legally empowered to pronounce the necessary rulings. Except for one of the companies concerned, all parties complied with their legal obligations. In November 2012, Swissgrid petitioned ElCom to order the transfer of the network of the owner concerned who had failed to sign the contract on contributions in kind. ElCom subsequently initiated formal proceedings, which were still pending as of the end of the year under review.

In addition, certain network components have not yet been transferred to Swissgrid since they are the subject of pending proceedings to determine whether they do in fact belong to the transmission network.



## Delimitation of transmission network and distribution network

ElCom already defined the delimitation between the transmission network and the distribution network in 2010, and thus answered the question as to which components of the Swiss electricity network have to be transferred to Swissgrid. Several of the parties involved in the proceedings appealed against this ruling. The court confirmed the fundamental allocation of the 220/380 kV network to the transmission network. ElCom did not recognise stub lines, which are primarily used for the transport of locally produced electricity or for local supply, as components of the transmission network. However, the Federal Administrative Court found that these stub lines (with and without supply character) are in fact part of the

transmission network. One transmission network owner lodged an appeal against this ruling, but the petition was rejected by the Federal Supreme Court. The Federal Administrative Court also found that certain connections in cross-border areas belong to the transmission network. This means that, in accordance with the ruling of the Federal Supreme Court, those switchgears and switching fields that are subject to reversion of licence (i.e. retransfer of right of use to the community or state) have to be transferred to Swissgrid. In other words, reversionary right of the community or state does not preclude the transfer of these elements to Swissgrid AG.

# Security of supply



*The switching station Robbia (GR)*

## Key data relating to the Swiss electricity network

In 2012, ElCom collected again cost-accounting data from all network operators. The compilation of these data provides a complete overview of the most important installations in the Swiss distribution network. The table below contains data col-

lected from more than 680 of the 730 network operators, including all large ones. It should be noted here that these figures are based on self-declarations by the operators which have only been verified by ElCom to a limited extent.

| Type of installation   | 2010    | 2011    | Measurement unit |
|--|---------|---------|------------------|
| Pipe system, high voltage (NL 3), medium voltage (NL 5) and low voltage (NL 7) | 101'409 | 102'832 | km               |
| Cable (NL 3)   | 1'893   | 1'917   | km               |
| Cable, medium voltage (NL 5)   | 30'607  | 31'370  | km               |
| Cable, low voltage (NL 7)  | 72'852  | 72'491  | km               |
| Cable, connection to household (NL 7)  | 45'926  | 46'454  | km               |
| Supply line (NL 1)   | 6'750   | 6'750   | Line km          |

| Type of installation                       | 2010    | 2011    | Measurement unit |
|--|---------|---------|------------------|
| Overhead line (NL 3)                       | 7'057   | 6'935   | Line km          |
| Overhead line, medium voltage (NL 5)       | 12'232  | 11'888  | Line km          |
| Overhead line, low voltage (NL 7)          | 11'558  | 11'117  | Line km          |
| Substation, NL 2, NL 3, NL 4 and NL 5      | 1'114   | 1'192   | Quantity         |
| Transformer, NL 2                          | 150     | 158     | Quantity         |
| Switching field, NL 2                      | 139     | 164     | Quantity         |
| Transformer, NL 3                          | 92      | 96      | Quantity         |
| Switching field, NL 3                      | 1'917   | 2'268   | Quantity         |
| Transformer, NL 4                          | 1'117   | 1'140   | Quantity         |
| Switching field, NL 4                      | 1'384   | 1'781   | Quantity         |
| Transformer, NL 5                          | 1'067   | 785     | Quantity         |
| Switching field, NL 5                      | 27'467  | 27'811  | Quantity         |
| Transformer station, NL 6                  | 48'985  | 49'190  | Quantity         |
| Mast transformer station, NL 6             | 6'287   | 6'150   | Quantity         |
| Cable distribution box, low voltage (NL 7) | 155'764 | 158'937 | Quantity         |
| No. of network operators considered        | 687     | 683     |                  |

Table 1: Installations in the Swiss electricity network

The total value of the installations in the distribution network is around 17 billion Swiss francs, while network utilisation revenue amounts to 3.2 billion Swiss francs per annum. Figures 1 and 2 show the distribution of these two totals by size of company. The 100 biggest operators have been formed into groups of 10, while the remainder have been grouped in a separate category. The graphs show that the 10 biggest network

operators (dark blue) account for more than 40 percent, the 50 biggest (dark blue, brown, green, violet and light blue) for 75 percent and the next 50 for 10 percent of all declared installations and generate the corresponding network utilisation revenue. This means that the remaining 600 network operators merely account for around one-sixth of the total value of the installations in the distribution network.

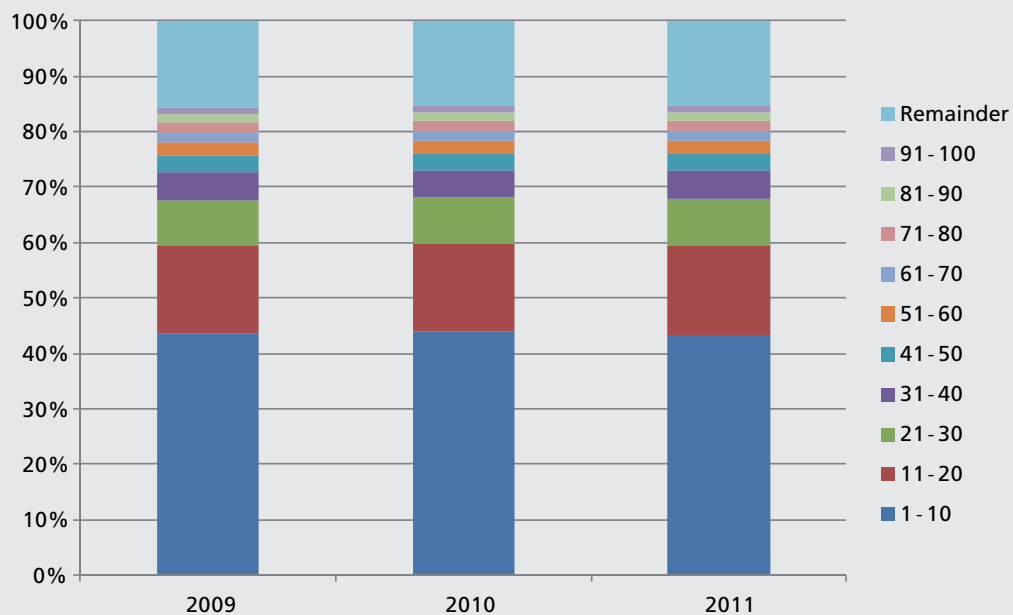


Figure 1: Residual values in the distribution network by size of company

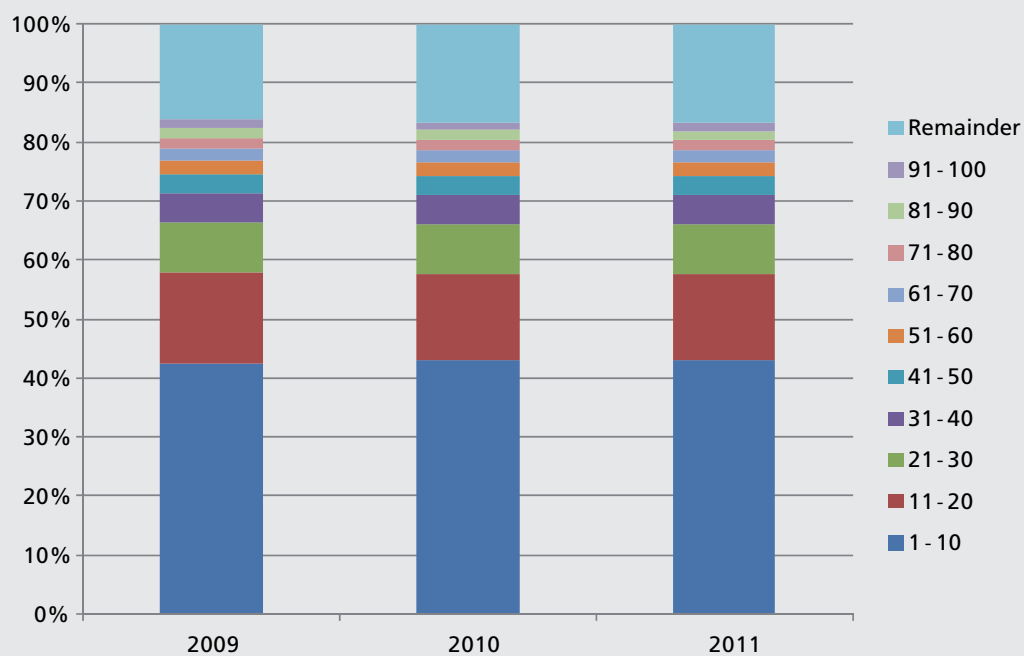


Figure 2: Network utilisation revenue in the distribution network by size of company

Figure 3 shows a breakdown of network costs. Operating and capital costs each account for around 40 percent, while the remainder concerns fees and public service obligation to the community or state, plus direct taxes. The relatively low figure for 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. The graph also shows that the proportion of fees and payments to the state rose from around 13 percent in 2009 to 16 percent in 2011.

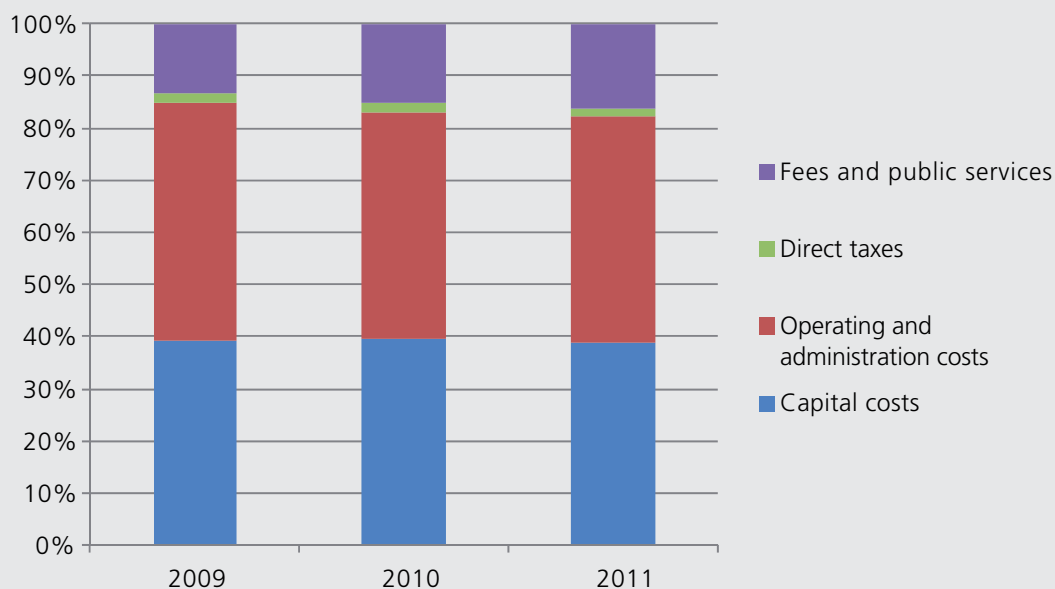


Figure 3: Breakdown of network costs

## Quality of supply in Switzerland

A high quality of electricity supply calls for a high degree of network availability and a level of supply that is sufficient to meet overall demand. In the year under review, ElCom further extended its analyses of Switzerland's electricity supply, based on the two internationally standard key data: average network interruption duration (SAIDI, System Average Interruption Duration Index) and average interruption frequency per

end consumer (SAIFI, System Average Interruption Frequency Index). Here, the main focus is on the frequency of unscheduled interruptions. The analysis encompasses data from the 84 biggest Swiss network operators, which account for around 85 percent of the electricity supply of all network operators in Switzerland, and takes account of interruptions that lasted longer than 3 minutes. The findings are shown in Table 2.

|       | 2010 | 2011 | Unit                        |
|-------|------|------|-----------------------------|
| SAIDI | 14   | 16   | Minutes per end consumer    |
| SAIFI | 25   | 28   | Percentage of end consumers |

Table 2: SAIDI and SAIFI figures for 2010 and 2011

In 2011, the average duration of unscheduled interruptions increased slightly versus 2010 to 16 minutes (+ 2 minutes). As before, this is a very good result compared with those of other European countries: according to official figures, the average duration of interruptions in the top 5 countries

in 2010 ranged from 15 (Germany) to 48 minutes (Italy). In Switzerland, approximately 25 percent of end consumers were affected by unscheduled interruptions in 2010, while the corresponding figure for 2011 was 28 percent.

Alongside a high degree of network availability, the level of available import capacity is also a key factor with respect to security of supply. In view of this, ElCom is keeping a close eye on the development of available cross-border capacity (referred to as “net transfer capacity”, or NTC). NTC indicates how much cross-border transport capac-

ity is available with neighbouring countries without breaching safety standards. Swiss-grid specifies this figure for all four main Swiss borders together with the neighbour transmission network operators. Table 3 presents an overview of the trend in available capacity.

| <b>NTC</b>               | <b>2008</b> | <b>2009</b> | <b>2010</b> | <b>2011</b> | <b>2012</b> | <b>Unit</b> |
|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| France                   | 3116        | 3116        | 3116        | 3116        | 3109        | MW          |
| Germany                  | 977         | 1018        | 1055        | 1087        | 895         | MW          |
| Austria                  | 280         | 275         | 305         | 312         | 456         | MW          |
| Italy                    | 1383        | 1513        | 1721        | 1721        | 1724        | MW          |
| <b>Total Switzerland</b> | <b>5756</b> | <b>5922</b> | <b>6197</b> | <b>6236</b> | <b>6184</b> | <b>MW</b>   |

*Table 3: Trend in import capacity (NTC)*

Between 2008 and 2011, the volume of import capacity rose from 5,756 to 6,236 MW. This increase was attributable to an optimisation of permissible imports from Germany, Austria and Italy. In 2012, the im-

port capacity fell slightly versus the previous year. The increased option of resorting to available foreign production capacities contributes to a high-quality and secure electricity supply in Switzerland.

## Monitoring of the market

### **Network stability during the winter 2011/2012**

In February 2012, a period of extremely cold weather posed a major challenge in many regions of Europe in terms of maintaining network stability. The situation was also tense in Switzerland, and in order to make a more accurate assessment of the developments, ElCom carried out a close examination of the conditions and circumstances during this period.

The unusually low temperatures, which were well below  $-10^{\circ}\text{C}$ , resulted in an extremely sharp increase in electricity consumption, which in turn gave rise to a pronounced rise in prices on the electricity exchanges. On the French exchange (EPEX), for example, prices increased tremendously to well above their usual level on a number of days, and on 9 February a peak price of more than 600 euros per MWh was paid on average.

The reason for the extremely high prices on the spot market was a production shortfall in France. Due to the large number of electrical heating systems in use in France, it was no longer possible to meet domestic demand through the country's own production capacities. This resulted in the fact that France found itself in the unusual position of having to import power of up to 7,000 MW, which led to a general increase

in prices both at home and in the exporting countries. This situation eased again once temperatures began to rise.

The price increases on the electricity exchanges are therefore at least to some extent attributable to high demand, which subsequently had a negative effect on security of supply and could only be met with the aid of extraordinary measures. In Switzerland, greater use had to be made of storage power plants, and this resulted in much lower water levels in lakes and reservoirs. This demonstrates that sustained periods of cold weather can theoretically give rise to a situation in which the reserves required for the continued operation of storage power plants could be rapidly depleted. However, according to the analysis carried out by ElCom, last year's period of cold weather did not threaten the network security at any time.

In addition to production shortfalls, the behaviour of individual trading departments could also result in a destabilisation of the network, but ElCom's analysis did not identify any direct signs of inappropriate behaviour in Switzerland. During the period in question there was in fact a considerably greater necessity to call on control reserve energy (which is intended to help compensate short-term fluctuations in the electric-



ity network), but this is plausible that, in many models, insufficient attention tends to be paid to extraordinary temperature fluctuations when calculating end consumer's demand. ElCom also did not identify any clear correlations between recourse to reserve energy and its price on the exchange.

By way of conclusion it may be stated that, in the period from 7 to 9 February 2012, Switzerland's electricity network came un-

der a certain amount of pressure, but the figures available show that there was never an immediate threat to security of supply. In terms of hourly resolution, the maximum level of reserve energy that was called on was around 480 MW (secondary and tertiary reserve power), compared with a maximum available capacity of 900 MW. In other words, there were always adequate reserve power available for maintaining the stability of the network.

#### **Development of reserve power price**

Reserve energy is expensive and thus is a major factor in the costs of ancillary services. ElCom therefore keeps a constant eye on the development of the associated costs of keeping reserve energy available. Reserve energy is required in order to be able to constantly secure the necessary physical balance between supply and demand in the electricity network. Swissgrid calculates the price for the required reserve capacity on the basis of a "pay-as-bid" auction procedure. In 2012, these prices fell significantly compared with the previous year. Figure 4 shows, for example, the trend in average prices of the highest-priced 20 MW secondary reserve power, which accounts for the largest proportion of reserve power costs.

In 2012, these were often well below the levels recorded in the previous year. It was only in May that there was a brief extraordinary price increase, and this was attributable to the low water levels in the reservoirs. The increased production of electricity from storage power plants during the cold spell in February caused the water levels to fall more rapidly than normal, and this meant that the storage power plants, which are especially suitable for supplying reserve power, were only available to a limited extent in the spring. This situation was immediately eased once the annual thaw set in. Altogether, the generally pleasing trend in the prices of reserve power brought about a decrease in the costs of procuring ancillary services.

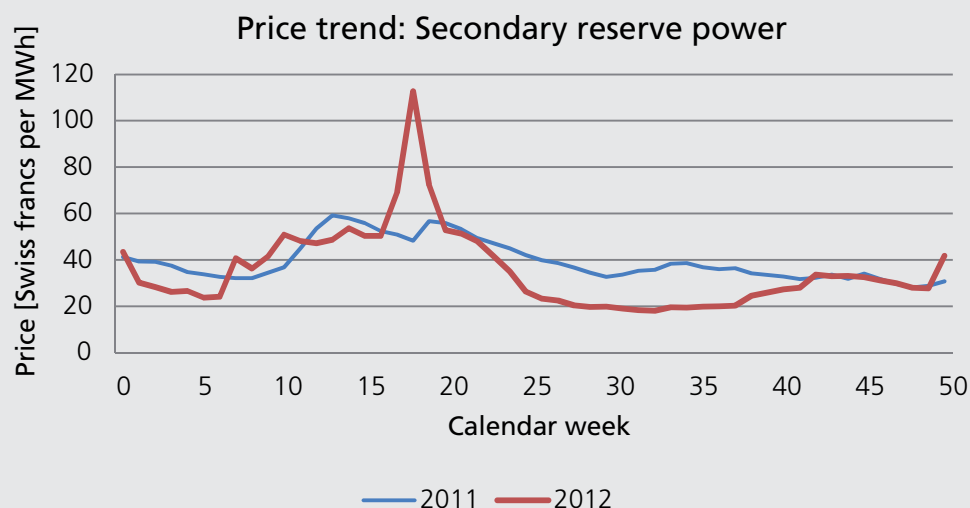


Figure 4: Price trend in the highest-priced 20 MW secondary reserve power market

## Ancillary services

A few years ago, in its capacity as regulator ElCom examined the tariffs at which the costs of ancillary services can be charged to distribution network operators, to end consumers directly connected to the transmission network, and to power plant operators. It then specified the tariffs in two rulings (in 2009 and 2010), against which several power plants lodged an appeal. The Federal Administrative Court subsequently pronounced in various rulings of its own that the corresponding Article 31b, paragraph 2

of the Electricity Supply Ordinance is unlawful and unconstitutional. This means that ancillary services general costs cannot be charged to power plants.

Various other power plant operators then submitted an application for a refund of the ancillary services costs they had paid in 2009 and 2010. ElCom rejected these on the grounds that the power plant operators should have contested the tariff rulings by lodging an ordinary appeal.

## Energy policy

Following the nuclear reactor disaster that occurred in Japan in 2011 as a consequence of a tsunami triggered by a major earthquake, Germany reviewed the situation regarding its nuclear power plants and decided to impose a nuclear energy moratorium. In Switzerland, in 2011 the Federal Council and Parliament decided in favour of a gradual withdrawal from nuclear energy. The existing 5 nuclear power plants are to be decommissioned when they reach the end of their service life as defined through technical security standards, and will not be replaced. This change in strategy means that Switzerland's energy system will have to be restructured on a step-by-step basis by 2050. The necessary measures have been summarised in the "Energy Strategy 2050" report, which the Federal Department of the Environment, Transport, Energy and Communications (DETEC) prepared at the request of the Federal Council and was submitted for consultation at the end of 2012.

As an essential link between production and consumption, the electricity networks are a key element in the "Energy Strategy 2050" and are therefore of national interest. In view of this, the Swiss Federal Office of Energy (SFOE) has formulated an "Elec-

tricity Networks Strategy" concept, which outlines how the future framework conditions, processes and distribution of roles have to be structured in order to secure the development of the networks in line with needs and without delay. In order to accelerate their development in the targeted direction, the following objectives will have to be pursued: increased planning certainty (fundamental criteria based on the guidelines); further clarification of the framework conditions (detailed energy scenario); increased acceptance thanks to transparent determination of needs with the involvement of all involved stakeholders and the general public; increased investment security (ex-ante confirmation of fundamental demand); optimised spatial coordination with early involvement of the cantons; and optimised licensing procedures.

ElCom welcomes the efforts that are being made to develop the legal and political framework conditions, efforts that will contribute towards the improvement of planning certainty and investment security. From a regulatory point of view, ElCom points out that the stability of these framework conditions is also of great importance.

# Grid expansion and planning, network level allocation



*In various rulings, ElCom has developed principles for network level allocation and for changing network levels*

## Investments in the network

Within the scope of its regulatory duties, ElCom verifies whether enough investments are being made in order to keep the electricity network in good condition. In their cost accounting for the period from 2009

to 2011, the distribution network operators reported annual investments of around 1.4 billion Swiss francs, and write-offs amounting to approximately 800 million Swiss francs (cf. Figure 5).

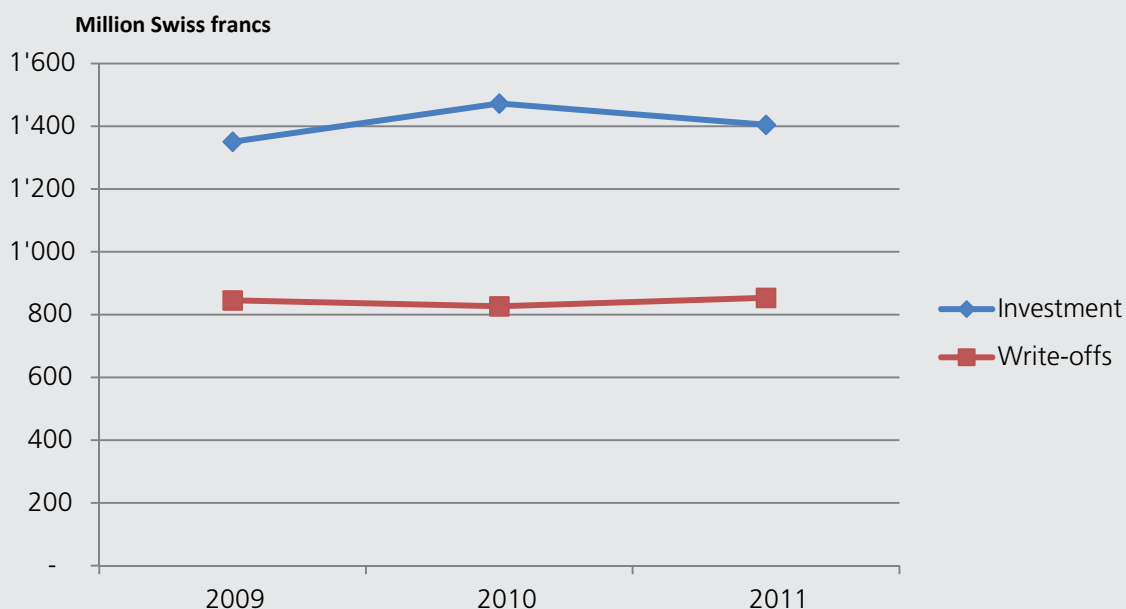


Figure 5: Trend in investments and write-offs in the distribution network

## Long-term planning

Network operators are required to draw up long-term plans regarding the expansion of the network infrastructure, while Swissgrid is responsible for the planning of the overall 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. ElCom assists Swissgrid with the preparation of its long-

term planning and evaluates the plans from the point of view of recoverability for tariff calculation, and in order to ensure that investments are well-balanced across all regions of the country. ElCom commented on the expansion plans produced by distribution network operators whenever this was required if there were any uncertainties regarding the recoverability of the costs of the various expansion possibilities.

## Recoverable costs

For the calculation of network costs the operating and capital costs of a safe and efficient network have to be taken into account. The question arose as to whether the higher manufacturing costs for cabling the high-voltage transmission lines can be regarded as recoverable, since cabling costs more than overhead lines. In this connection, ElCom proposed that the aspect of economic efficiency should be incorporated into the new model for evaluating transmission lines, which was developed by the SFOE at the request of DETEC and takes account of aspects such as the environment, spatial development and technology.

The extent to which the costs of smart grids and smart metering can be included in the

calculation of recoverable costs is not directly regulated in the applicable legislation. However, regulations exist with respect to security of supply, efficiency and the proper allocation of costs based for example on the user pays principle, which concern smart grids and smart metering. The aims here are to avoid cross-subsidisation from the electricity network to energy and other business lines and guarantee security of supply at all times. Costs relating to pilot projects in the areas of smart grids and smart metering may be included in the calculation of recoverable costs if the projects have been judged by the SFOE to be sufficiently innovative and cannot be financed in other ways.

## Network reinforcements

Network reinforcements may become necessary in order to connect electricity producers to the grid. These costs are refunded by Swissgrid in that they are included in the calculation of the ancillary services tariff. For this reason, reimbursement has to be approved by ElCom. Based on its initial practical experience, ElCom has revised the corresponding directive, taking previous practice as well as the interests of the network operators into account. This directive

provides guidelines to network operators for submitting applications, and specifies the principles for their assessment. It also specifies the requirements with respect to documentation and the reporting of reimbursement in the cost accounting statement in greater detail, and outlines the procedure for the step-by-step expansion of decentralised energy production capacities.

In the year under review, ElCom assessed 23 applications for reimbursement of costs for necessary network reinforcements. In the past 3 years it has ruled on a total of 34 applications for reimbursement of costs for network reinforcements amounting to

around 15 million Swiss francs and involving a total power production of 112.6 MW. The following table presents an overview of the key data relating to network reinforcements that are being financed via the system services tariff.

|   | <b>Total</b> | <b>Photovol-<br/>taics</b> | <b>Wind</b> | <b>Other</b> |
|---|--------------|----------------------------|-------------|--------------|
| Minimum generator power [kW]              | 18           | 18                         | 4'000       | 90           |
| Maximum generator power [kW]              | 74'000       | 509                        | 16'000      | 74'000       |
| Total generator power [kW]                | 112'612      | 2'633                      | 20'000      | 89'979       |
| Average generator power [kW]              | 3'312        | 98                         | 10'000      | 17'966       |
| Minimum costs [Swiss francs]              | 11'356       | 11'356                     | 1'805'003   | 19'311       |
| Maximum costs [Swiss francs]              | 9'262'389    | 178'979                    | 9'262'389   | 2'117'200    |
| Total costs [Swiss francs]                | 15'043'120   | 1'353'213                  | 11'067'392  | 2'622'515    |
| Average costs [Swiss francs]              | 442'445      | 50'119                     | 5'533'696   | 524'503      |
| Minimum relative costs* [Swiss francs/kW] | 3            | 25                         | 451         | 3            |
| Maximum relative costs* [Swiss francs/kW] | 1'594        | 1'594                      | 579         | 773          |
| Average relative costs* [Swiss francs/kW] | 134          | 514                        | 553         | 29           |

\*Relative costs = ratio of costs to installed capacity

Table 4: Figures relating to rulings on network reinforcements (status: 31 December 2012)

|              | <b>Total</b> | <b>2012</b> | <b>2011</b> | <b>2010</b> | <b>2009</b> |
|--------------|--------------|-------------|-------------|-------------|-------------|
| Applications | 56           | 37          | 11          | 5           | 3           |
| Rulings      | 34           | 20          | 10          | 4           | –           |
| Rejected     | 4            | 3           | 1           | –           | –           |
| Pending      | 18           | 17          | 1           | –           | –           |

Table 5: Development of number of rulings on network reinforcements (status: 31 December 2012)

## Network level allocation, change of network level

The Swiss electricity network comprises 7 network levels. Power plants and end consumers are connected to network levels depending on factors such as their power and location. In various rulings, some of which were contested and subsequently confirmed in court, ElCom has developed principles for network level allocation and for changing network levels:

- » Network use tariffs do not depend on ownership relationships. On the other hand, the question of who has to pay for the development and maintenance of a given network level has to be taken into account.
- » Here the user pays principle applies. Network operators or end consumers only pay for those network levels of another operator which they use or could use.
- » Connecting an end consumer to various network levels is possible if these are operated as electrically separated sub-networks. Here, any reserve and emergency connections between sub-networks have to be taken into account.
- » Allocation to the (even-numbered) network levels 2, 4 or 6 may be regarded as in line with the user pays principle if the connection is made on the secondary transformer side, the subordinated networks are operated on a galvanically separated basis and the transformer is used exclusively for that particular network operator or end consumer.
- » For the calculation and charging of network tariff it is normally the main connections that are of relevance. As a rule, if the reserve and emergency connections serve both network operators, no network tariff applies. If, however, reserve and emergency connections serve only one network operator, then this network level has to be paid in line with the user pays principle.
- » According to the applicable legislation it is possible to change connection level, but there has to be a justifiable reason for doing so, for example to enhance security of supply or increase overall efficiency. Here the capital costs can be claimed.



» Functional network level allocation, which can be proposed by the sector as a solution for charging the costs, is only permissible in accordance with the relevant legislation if the additional burden on end consumers is reduced. The prerequisites for a change of network connection also apply for a change of network operator.<sup>1</sup>

<sup>1</sup>cf. Brigitta Kratz: *Die Praxis der ElCom zu Fragen der Netzebenenordnung*, in: *Jusletter* 23 April 2012 (ElCom's practice regarding issues relating to network level allocation).

# International activities



*High-voltage transmission network in Laufenburg (AG)*

## Congestion management

Cross-border electricity trading is of great importance for Switzerland from an economic point of view as well as with respect to security of supply. The connection to the European grid has to be organised efficiently, and for this reason the auction rules at all the country's borders are now compatible with EU requirements.

In the year under review, two significant changes were made with respect to capacity allocation at Switzerland's borders. In the past, in the event of congestion the capacities between France and Switzerland were not allocated on the basis of market-oriented procedures. Since a long-term en-

ergy supply contract was due to expire at the end of 2011, however, and in view of the development of allocation procedures in Europe, an adaptation had to be made in Switzerland too. As of the beginning of 2012, available network capacities released on the cross-border network between Switzerland and France are allocated via explicit auctions.

In order to optimise the available network capacities between Switzerland and Italy, intraday auctions have been carried out since the middle of 2012. In this way, deviations from consumption forecasts can be

adjusted in the short term, which helps to reduce reserve power costs.

The EU wants to unify its electricity market by the end of 2014, and is currently implementing its third internal energy market package. Electricity is now being traded between some countries on the day-ahead market. This short-term form of trading

results in a more efficient use of the infrastructure, reduces transaction costs and increases liquidity. In order to be able to participate in such a market coupling, Switzerland will have to designate the relevant electricity exchange. The corresponding preparatory work was being carried out in the year under review.

## Auction revenues

In accordance with the applicable legislation, ElCom decides on the use of revenues from market-oriented allocation procedures (auction revenues). For example, 30 million Swiss francs from the auction revenues from 2009 were used for reducing recoverable costs, and the remainder is to be used for the maintenance and expansion of the transmission network. The transitional clause contained in Article 32 of the Electricity Supply Act would in fact permit ElCom to allocate the auction revenues from 2009 to the owners of the transmission network, but it decided not to do so. An appeal was lodged against this decision, and the case is still pending. ElCom used 40 million Swiss francs from the auction revenues from 2010 and 2011 for reducing the net-

work level 1 tariff, and the remainder is to be used for the maintenance and expansion of the transmission network. Since Swissgrid was not yet owner of the transmission network in 2011, this amount was allocated to the previous owners. ElCom also used 40 million Swiss francs from the auction revenues from 2012 for reducing the network level 1 tariff.

Figure 6 shows how the auction revenues generated at Switzerland's borders have been allocated. The increase in auction revenues is attributable to the general market situation, but also to the additional capacity that has been available on the market since 2012.

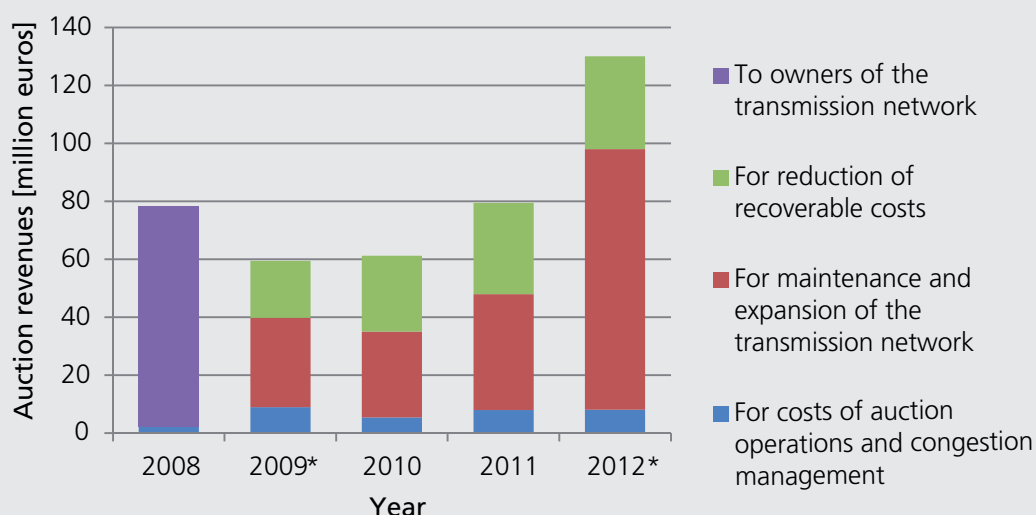


Figure 6: Total auction revenues generated at Switzerland's borders, and their allocation in accordance with the applicable legislation

\*The decision regarding the allocation of the auction proceeds from 2009 is not yet legally binding. Figures for 2012 are provisional.

## Market transparency

The EU wants to increase the degree of transparency and stability of the European energy markets, and in particular aims to combat insider trading and prevent market manipulation. For this purpose it introduced a new Regulation that entered into force at the end of 2011 (REMIT, which stands for Regulation on Wholesale Energy Market Integrity and Transparency). The aim here is to foster competition in the emerging European internal electricity market. Insider information (for example, unplanned unavailability of generation and network fa-

cilities) and fundamental data (for example, transmission capacities) now have to be published and wholesale transaction data (prices, quantities, dates and times, parties, etc.) have to be reported. The EU authority ACER (Agency for the Cooperation of Energy Regulators) is responsible for monitoring and regulating the market. The declaration procedure is currently being implemented.

The participation of the Swiss electricity industry in the European internal electricity market not only helps ensure a sufficient

supply of electricity for Switzerland, but is also of great importance in an economic perspective. However, full integration into this market means that certain transparency requirements will have to be met. Swiss companies will have to meet the requirements of REMIT if they want to carry out trading activities within the EU. This gives rise to a situation in which Swiss market data would be reported to foreign authorities, but would not be available to Swiss

authorities. ElCom is currently holding talks with other authorities and the electricity companies concerned, with the aim of finding a Swiss solution. As a useful step in this direction, measures are foreseen within the scope of the ongoing revision of the Electricity Supply Ordinance regarding the reporting of certain data. In the view of ElCom it is essential to create a legal basis in Switzerland for full data collection and for the potential exchange of data.

## International bodies

The Council of European Energy Regulators (CEER) comprises 31 members and is based on voluntary cooperation. Its declared goal is to facilitate and strengthen cooperation among national regulators. ElCom was granted observer status in the CEER in February 2012. It attends the monthly meetings of members, participates in various other activities and can attend all working groups. ElCom therefore utilises as much as possible its options for coordinating internationally-oriented activities, and in particular has contributed its know-how in the area of electricity quality of supply.

The creation of the EU authority ACER (Agency for the Cooperation of Energy Reg-

ulators) placed the cooperation between national regulatory authorities on a more formal basis. In its bilateral negotiations with the EU, Switzerland is seeking the full participation of ElCom with ACER.

ACER focuses on issues such as cross-border congestion management, and compensation mechanisms for transit and loop flows. The objective is to create a harmonised, competitive and sustainable electricity and gas market within the EU until 2014. Twice a year, the so-called Florence Forum (which ElCom also attends) discusses the ongoing developments in the direction of such an internal European energy market.

## International legal developments

The third EU energy liberalisation package entered into effect in 2011. One of its focal points concerns the development of uniform network codes which regulate the commercial and technical aspects of network operation. Uniform codes are a prerequisite for an internal European electricity market. Network codes are drawn up by ENTSO-E (European Network of Transmission System Operators for Electricity) and may be declared as legally binding for EU member states. To date, the EU has not formally adopted any network codes.

In an analysis published at the end of 2012, ElCom pointed out that, based on existing legislation, network codes are not binding for Switzerland. However, the Electricity Supply Ordinance expressly stipulates that the electricity industry and enforcement authorities must take international standards and recommendations of recognised technical bodies into account. ElCom is able to

treat network codes in the same way as it handles documentation of the Swiss Association of Electricity Producers (VSE), i.e. they can be taken into account if this contributes towards an appropriate solution in accordance with the principles of Swiss electricity supply legislation.

Within the EU, efforts to create a transparent electricity market are continuing to make progress. A new Regulation that was adopted by the Electricity Cross-Border Committee in 2012 supplements REMIT and contains provisions governing the transparency of fundamental electricity market data. The EU is also preparing another Regulation that favours the construction of trans-European energy infrastructure, for example gas or oil pipelines ("European corridors"). These developments will also influence the conditions on the Swiss electricity market, and ElCom is therefore closely monitoring and analysing them.

# Costs and tariffs



*On average, distribution network operators have only changed their tariffs to a minor extent in the past 5 years*

## Market situation

In the initial stage of market liberalisation, only large-scale consumers with an annual consumption exceeding 100 MWh may choose their supplier themselves. Large-scale consumers account for around half the total electricity consumption in Switzerland. In order to calculate the number of end consumers in the eligible market, ElCom conducted a survey among approximately 80 of the biggest distribution network operators. As we can see from Figure 7, in the first two years after the opening of the market (up

to and including 2011), very little use was made of this option: only 7 percent of end consumers in the distribution network with market access (red curve) actually exercised this right. At 13 percent, the proportion of energy volume (blue curve) is almost twice as high, which shows that the involved consumers were very large. In the course of the next two years, the corresponding proportions have doubled to 13 and 26 percent respectively.

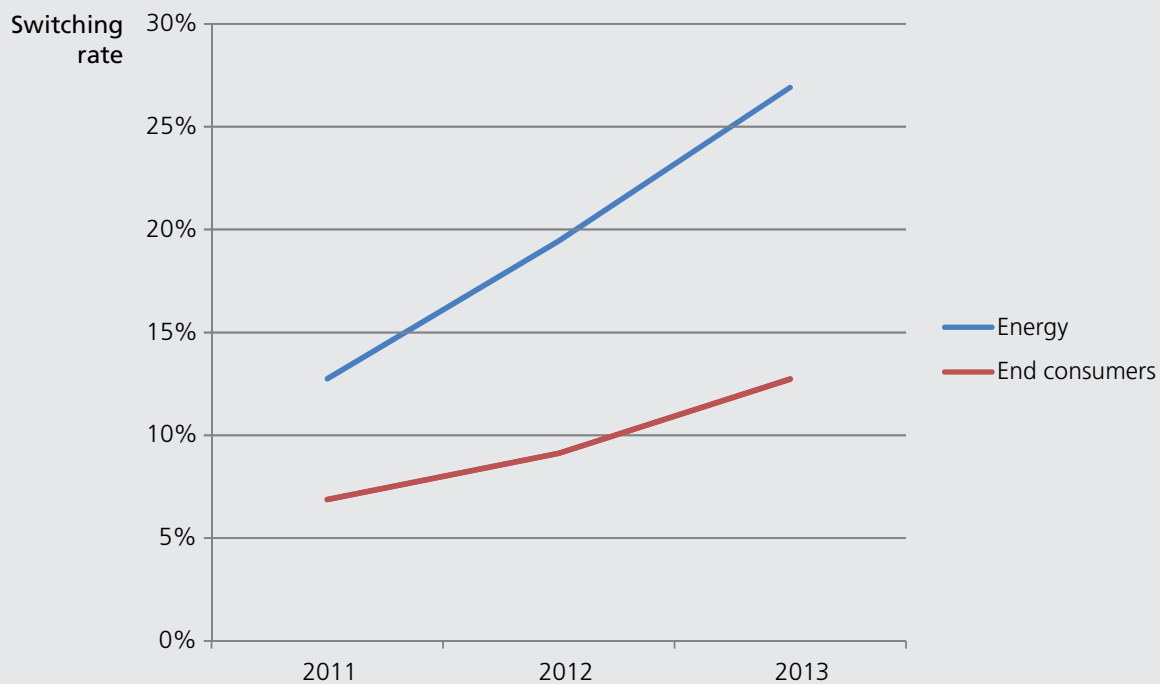


Figure 7: Switch to free market

As we can see from Figure 8, the 10 biggest network operators (dark blue) supply over 40 percent of the total quantity of electricity in the distribution network to end consumers. If we look at the figures for the 50 biggest network operators (dark blue, brown,

green, violet and light blue), we can see that they account for around three-quarters of the supplied energy. The next 50 network operators together account for 10 percent, and the remainder for one-sixth.



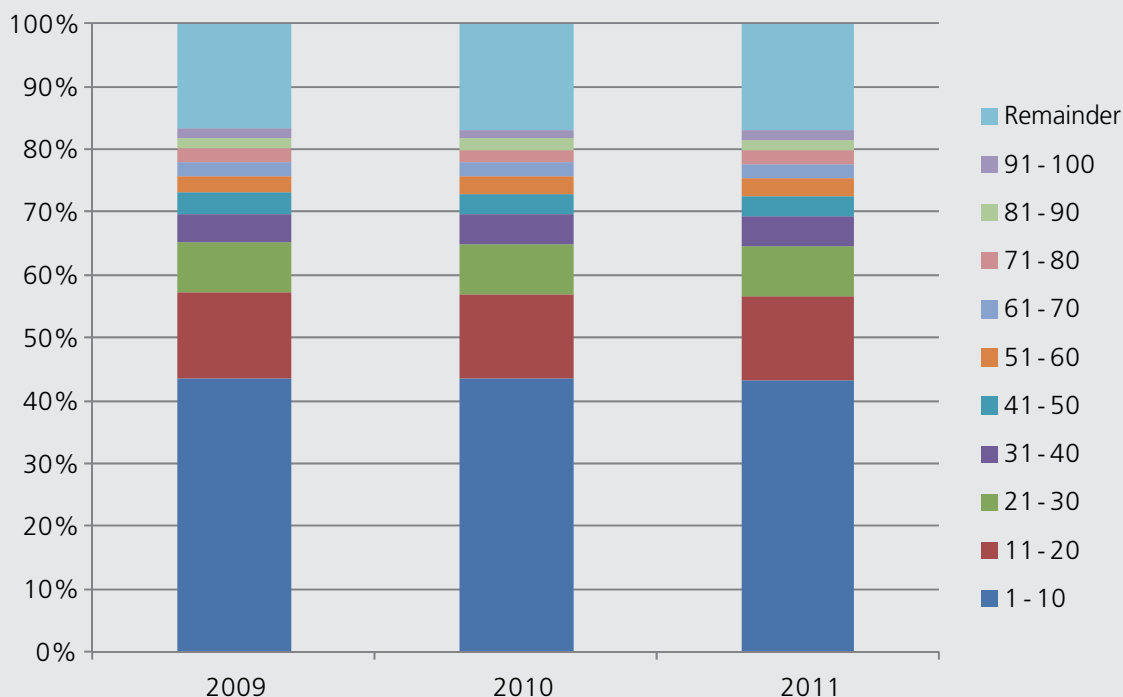


Figure 8: Energy sales in the distribution network by size of company

## Overview of tariffs

Since the tariffs for 2013 were already published at the end of August 2012, it is possible for them to be commented on here. The overall tariffs for households fell slightly for the second year in succession (cf. Figure 9, which shows the figures for consumer profile H4, i.e. an apartment with an annual consumption of 4,500 kWh). This reduction is attributable to slightly lower network tariffs and the renewed reduction of the tariff for

ancillary services (0.77 cents/kWh in 2011 versus 0.46 cents/kWh in 2012 and 0.31 cents/kWh in 2013). Energy prices, fees and public service obligation to the community or state have remained more or less constant since 2011, after having risen in the three previous years. By way of summary it may be stated that, on average, distribution network operators have only changed their tariffs to a minor extent in the past 5 years.

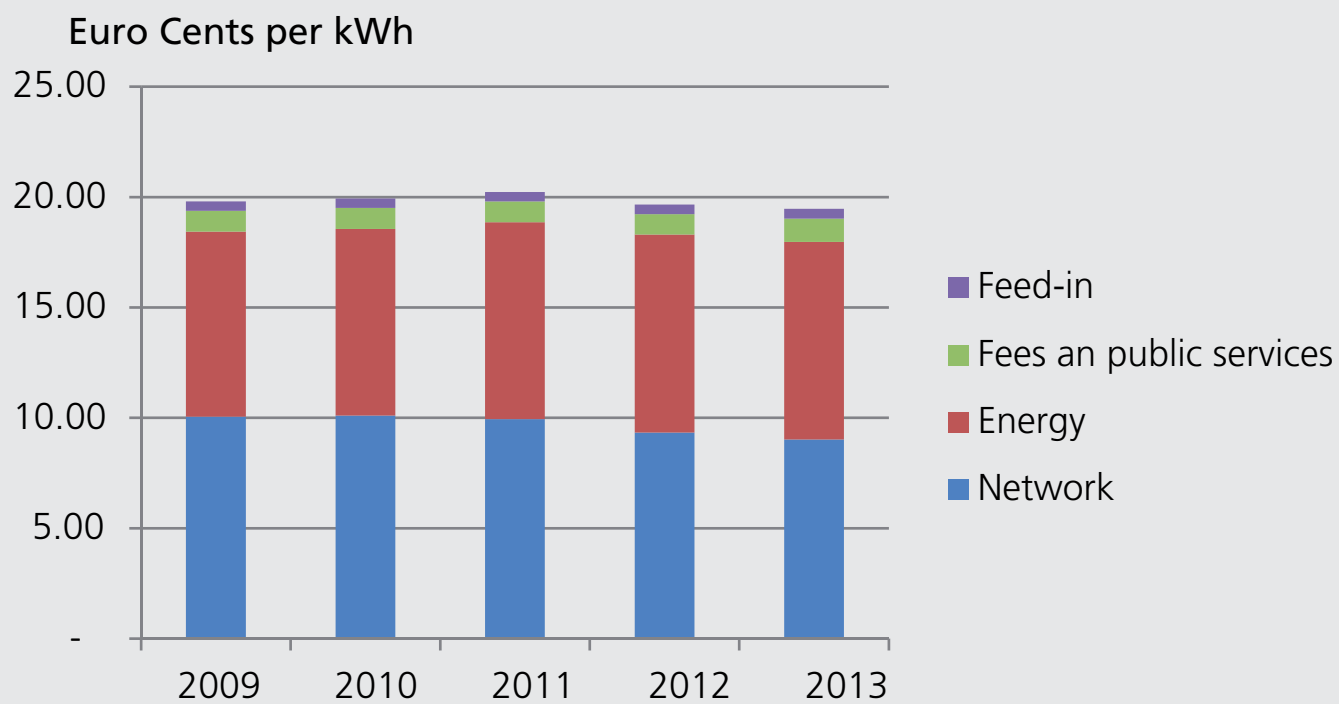


Figure 9: Cost components of the overall electricity price for consumer profile H4

In the course of the past 4 years the average costs at canton level for network use and energy have become more harmonised. Figure 10 shows that the network and energy tariffs for 2013 deviate to a significantly

lesser extent from the median than was the case in 2009 (red = much higher, dark green = much lower figures).

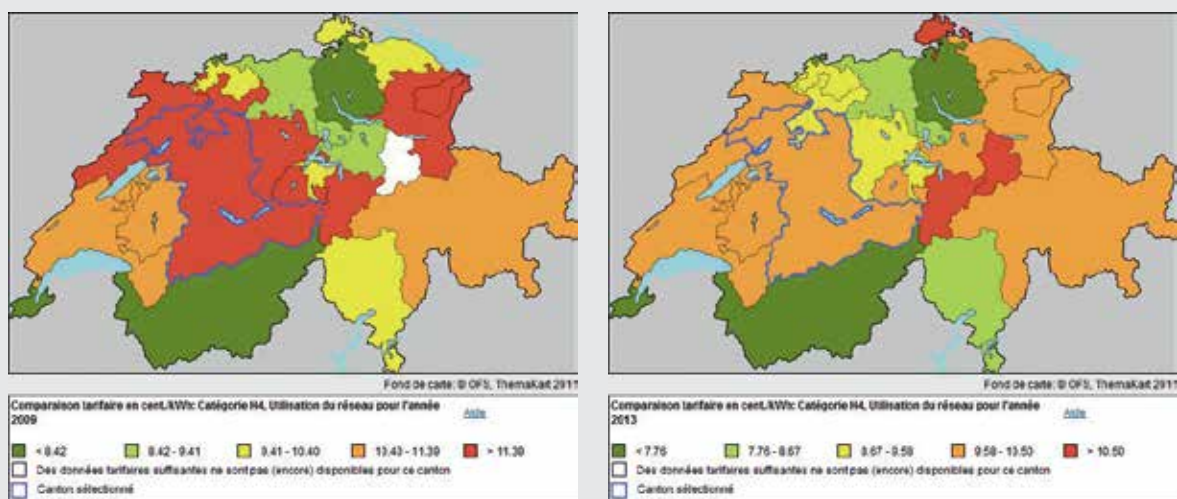


Figure 10: Comparison of average cantonal costs for network use for consumer profile H4 in 2009 and 2013

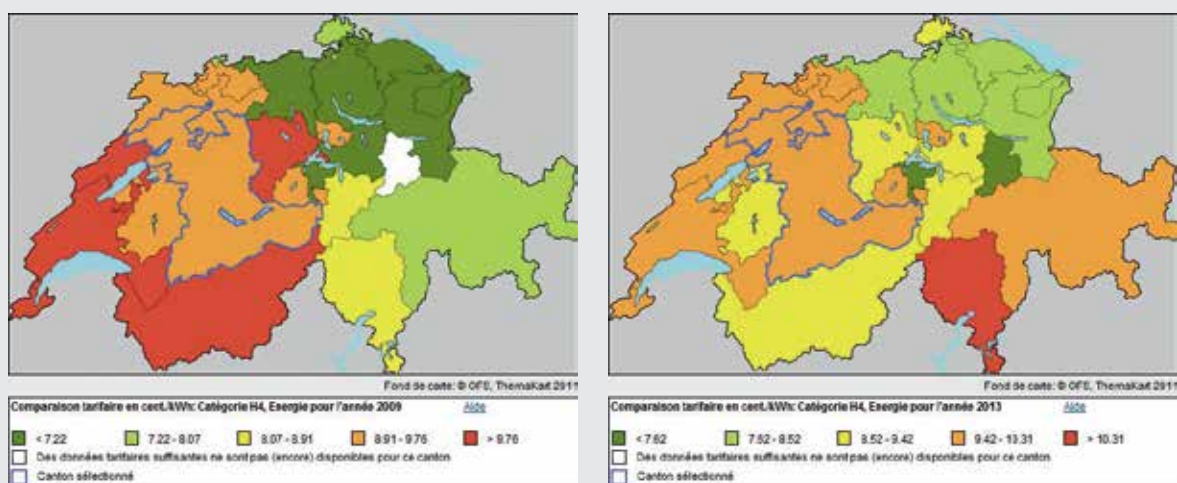


Figure 11: Comparison of average cantonal costs for energy for consumer profile H4 in 2009 and 2013

By contrast, the differences with respect to fees and public service obligation to the community or state are considerable:

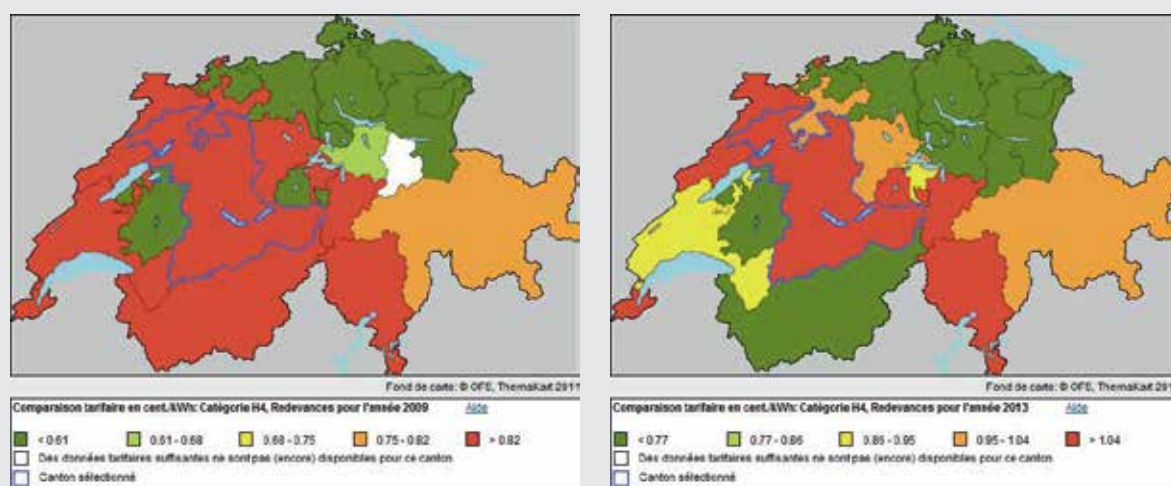


Figure 12: Comparison of average cantonal costs for fees and charges to the state for consumer profile H4 in 2009 and 2013

Unlike the costs for network use and energy, the level of fees and public service obligation to the community or state is not

determined by ElCom, but rather through the local political process.

## Judicial practice with respect to tariffs

In order to calculate the eligible capital costs of network infrastructure, the applicable legislation stipulates that the original acquisition or production costs of a given installation have to be taken into account. It is only in the event that the required documentation is no longer available that the principle of synthetic valuation may be applied. This principle is based on the back-indexed replacement price of an installation. In the year under review, the Federal Administrative Court and Federal Supreme Court pronounced 3 fundamental rulings on this matter, which can be summarised as follows:

- » A synthetic valuation of installations is the exception, not the rule. Anyone wishing to apply it has to demonstrate that the requirements have been met. If a network operator is unable to show how high the deduction has to be in order that the value corresponds to that of a similar installation, a flat-rate deduction of 20 percent applies.
- » In accordance with the relevant legislation, the value of an installation is not based on the acquisition price paid by the network operator, but on the original acquisition cost minus the calculatory depreciation.
- » The reduced interest rate on the synthetic value of installations that were put into operation prior to 2004 is in compliance

with the legislation. It is applied not only when installations are synthetically valued, but also in other cases of revaluation.

- » It is not book values that are relevant for the calculation of residual acquisition values, but rather the original acquisition and production costs. This means that the practice of capitalisation cannot be relevant either. This is in no way affected by Article 13, paragraph 4, section 3 of the Electricity Supply Ordinance, according to which already billed operating and capital costs are to be deducted. Whether too low book values result from the fact that the installations have never been capitalised, or arise because the installations have been capitalised but more quickly written off, is immaterial.

The following contested issues are still pending at the respective courts: Charging the loss in compensation of transit costs to holders of long-term contracts; charging costs for positive tertiary reserve capacity to the balance groups of nuclear power plants; individual tariffs for reactive energy for active and passive participants; differences in coverage; appreciation of real estate to market value; entitlement to synthetic valuation in individual cases; calculation of acquisition costs and weighted average cost of capital (WACC) of production units.

## Transmission network tariffs

The 2012 tariffs for the transmission network were enacted in the course of that year. Once again, the valuation of installations of owners was examined, which forms the basis for the calculation of capital costs. In most cases, the stated operating costs and other types of expenses were only subjected to a summary audit. The differences in coverage for the transmission network were audited for the first time. These differences arise when effective expenditure and income deviate from the calculation. In the same way as for the distribution network, the calculation is now also made for the transmission network on the basis of the actual comparison method. Summary audits were carried out regarding compensation of transit costs. Since the general tariff for ancillary services had been subjected to an

in-depth examination in the past few years, it was no longer included in the process this year.

In April 2012, Swissgrid published the 2013 tariffs for the use of the transmission network. After carrying out a summary examination, ElCom decided that no preventative reduction of tariffs was required for 2013. This means that the tariff audit can be carried out in retrospect, i.e. on the basis of actual costs, in the same way as it is carried out for the distribution network. In context with the transfer of the high-voltage transmission network to Swissgrid, a year-end statement for each tariff year will be required, which takes into account all final-instance rulings.

## Distribution network tariffs

ElCom examines the conformity of tariffs in the distribution network in four different ways:

- » All network operators receive a detailed assessment of their cost accounting. They are then asked to rectify any errors that have been identified and to check implausible figures and either substantiate them or, if necessary, adjust them. All network operators who submitted their cost accounting on time or after the first reminder received an assessment in the year under review.
- » If network operators submit implausible figures, they are audited in the specific areas in question. In 2011, for example, 17 network operators with a very high proportion of synthetic network values were requested to value their networks on the basis of the original acquisition or production costs in accordance with Article 15, paragraph 3 of the Electricity Supply Act. In the year under review, 9 cases were concluded without a formal ruling.
- » The entire range of issues relating to network and energy costs has to be examined in depth. 4 cases were fully concluded with a ruling, and in 3 cases rulings were pronounced regarding the scope of operating costs and energy.
- » The figures provided by the network operators are examined on the basis of 9 criteria, including level of tariff, type of valuation and applied interest rate. The complete documentation relating to the 2013 tariffs supplied by 86 of the 546 network operators which was available at the end of the year, was found to be in order. ElCom informed these operators that it would not be opening proceedings against their tariffs next year.

During the comprehensive audits the following specific aspects were examined:

**Network:** Alongside the areas that have already been examined in the past (valuation and operating costs), questions also arose regarding the tariffs by network level.

**Valuation:** Following the rulings by the Federal Supreme Court and the Federal Administrative Court, as of mid-2012 no further rulings regarding network values were pronounced, and the procedure for network valuation was revised. ElCom offered the distribution network operators the opportunity to resubmit their data, and this resulted in a delay in concluding the audits of network use tariffs.

**Operating costs:** Most of the corrections concerned the key factors for common costs, which in accordance with the Ordinance have to be presented plausibly and comprehensibly. It turned out that in many cases the common costs charged to the network were too high. In addition, costs had to be adjusted that have nothing to do with the operation of a safe and efficient network, for example marketing costs or the costs of public lighting. The latter belong to the category of fees and charges to the state. In one case, ElCom ruled that the dissolution of reserves has to be allocated to the relevant segments with a cost-reducing effect.

**Costs by network level:** As a rule, the recoverable costs of the entire network are audited, while audits of costs per network level are only carried out by way of exception. In the year under review, the tariffs at various network levels were examined in 3 cases in response to complaints. These cases involved the allocation of costs per network level and the passing on of costs to other levels. In one case, the recalculation based on the effective figures resulted in a significantly lower tariff than the one that was published. This problem has to be dealt with a network-level-related calculation of differences in coverage and correspondingly lower future tariffs. In another case it was found that the allocation of customers of the network level 7 did not always guarantee allocation in accordance with the user pays and equal treatment principles. The

network operator in question adjusted the tariff accordingly.

**Energy:** In order to be able to assess the part of the tariff for energy supply to end consumers, two questions had to be closely examined: How can the acquisition costs of efficient production be verified, and how much profit for a network operator in its role as energy supplier can be regarded as “appropriate”? No problems arose, however, in connection with long-term purchase agreements.

**Acquisition costs:** In the same way as with the network, the question of appropriate interest rates also arises in connection with production. Unlike the issue of network interest rates, for production this is not regulated in the Ordinance. For this purpose, ElCom applies the same procedure as the one used for determining the weighted average cost of capital (WACC) in the network, with correspondingly adapted parameters. For 2009 and 2010 the calculated WACC was 6.09 percent (i.e. around 1.5 percentage points higher than in the network).

In accordance with Article 4, paragraph 1, section 2 of the Electricity Supply Ordinance, this part of the tariff has to be oriented on market prices if these exceed the acquisition costs. ElCom resolved to no longer apply this rule, since over the long term it leads to losses for producers. Furthermore, for all exchange products it is wholesale prices that apply, which cannot be taken as the



basis for the price for end consumers – and in addition, wholesale prices refer to “grey electricity” products. But network operators may also offer products with a share of ecological value-added as basic products.

For a handful of network operators in mountain regions there is a special problem: on average throughout the year, they produce less energy than their end users consume. Due to the annual thaw, a certain proportion of production takes place at a time when their own end consumers do not require the produced energy. This poses the question of how the proceeds from the energy that has to be sold are to be used. In the view of ElCom, in this case the network operators can freely dispose of the proceeds and do not have to use them for covering the costs of the shortfall. Therefore, there was no need for any adjustment.

**Appropriate distribution profit:** In the year under review, the balance of costs and profit in the area of energy distribution had to be assessed in a number of cases. Very little capital is tied up in the area of energy distribution, and in view of this, a profit calculation similar to that which applies to the network or production would only permit minor gains. If, as various network operators are demanding, profit is calculated on the basis of return on sales, the resulting tariff would no longer be cost-based and

would be in conflict with the objectives of efficient electricity use. Furthermore, contrary to all economic logic, the higher the energy production and acquisition costs, the greater the profit would be. In view of this, ElCom applies a flat rate which covers the costs and includes an appropriate profit. Comparisons between network operators have shown that most of them do not charge more than 95 Swiss francs per end consumer for costs and profit relating to distribution. ElCom has therefore specified the above figure as the threshold. Balances below this level were not closely examined. In one case, the costs on their own were well below this threshold, but the balance of costs and profit was significantly higher. Here, ElCom reduced the chargeable amount to 95 Swiss francs per end consumer. In another case, only the costs were higher, and these were closely examined.

The results of the audits will be communicated to the involved parties in a separate report, and the parties concerned will have the opportunity to comment on the findings. Some network operators have already declared their readiness to implement the stated requirements without requesting a contestable ruling. In these cases, the procedure was closed with a concluding memo. ElCom asks all network operators to duly implement the results of the audit in the coming years.

# Closed distribution networks – Areal networks

“Areal network” is the commonly used term in Switzerland for the type of network which, in accordance with the Electricity Supply Act, comprises “electricity supply lines intended for local distribution within a limited area”. In the year under review, ElCom pronounced 3 rulings concerning the electricity supply situation in shopping centres. These rulings can be summarised as follows:

- » The Electricity Supply Act also applies to end consumers who are connected to an areal network. They are classified as end consumers in the area covered by the distribution network operator, who is responsible for providing their basic supply, as well as for their metering.
- » An areal network has to be connected to the distribution network as an end consumer.
- » The entitlement of an end consumer who is a tenant in the areal network to connection to that network is regulated under tenancy law. Tenants are officially connected to the distribution network as soon as the areal network is connected with them.

» The distribution network operator has the right to provide a basic energy supply up to the withdrawal point of the end consumer, and in accordance with tenancy law the areal network operator has to accept this.

» Both the areal network operator and the end consumers who are connected to the areal network are obliged to pay network tariff for those network levels to which the network consumer (i.e. the areal network operator) is connected to the distribution network operator. The costs for the use of the areal network are included in the rent.

» Due to the lack of access to the network, non-eligible end consumers who are connected to the areal network may only be supplied with energy by the distribution network operator (and not by the areal network operator). The bundling of end consumers in order to qualify for network access is prohibited.

The rulings concerned are not yet legally binding.

# Feed-in remuneration at cost



*The solar power plant Caischavedra (GR)*

ElCom is empowered to rule on disputes relating to feed-in remuneration at cost, which was introduced in 2009 for producers of electricity from renewable energy sources. In the year under review, Swissgrid again rejected numerous new applications for this form of remuneration, or placed them on the waiting list. As a consequence,

ElCom once again received petitions to review these decisions. One case concerned the question whether a planned dispensing hydropower plant can claim an entitlement to an additional hydraulic bonus. ElCom found that no such entitlement applies, referring to the legal situation in accordance with the Energy Ordinance.

# About ElCom



*ElCom (from left to right): Werner Geiger, Anne d'Arcy, Brigitta Kratz (Vice-President), Hans Jörg Schötzau (Vice-President), Matthias Finger, Aline Clerc, Carlo Schmid-Sutter (President)*

## Duties

The Swiss Federal Electricity Commission (ElCom) is responsible for monitoring the Swiss electricity market and securing compliance with the 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. Hence, one of its duties is to monitor the electricity tariffs for end users. Furthermore, ElCom also has to ensure that the network infrastructure is properly maintained, and is expanded as required so that the future supply can be guaranteed.

In order to fulfil these duties, ElCom has been endowed with wide-ranging decision-making and supervisory powers, in particular in the following areas:

- » It supervises electricity tariffs for non-eligible end consumers (households and other end users with an annual consumption below 100 MWh) and end consumers who do not choose to gain access to the network. It also examines network tariffs. It may prohibit unjustified electricity price increases, or if tariffs are too high it is empowered to enact price reductions. It

may take steps in response to complaints or requests, or on its own initiative in its official capacity as regulator. With respect to tariffs, ElCom may only intervene in the event of violations of legal provisions, and is not authorised to intervene in the exercising of discretion on the part of the network operators. Additional supervision of tariffs at the cantonal level is no longer in accordance with the law.

» ElCom rules on disputes associated with 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 the possibility to choose their electricity supplier. Consumers with an annual consumption below 100 MWh will probably only be able to gain access to the electricity market with effect from 2015 or 2016, providing that full liberalisation is not rejected by the electorate in a referendum.

» ElCom is empowered to rule on disputes relating to feed-in remuneration at cost, which was introduced on 1 January 2009 for producers of electricity from renewable energy sources. Following the revision of the Energy Act, as of 2009 there is no longer scope for higher cantonal feed-in-tariffs.

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

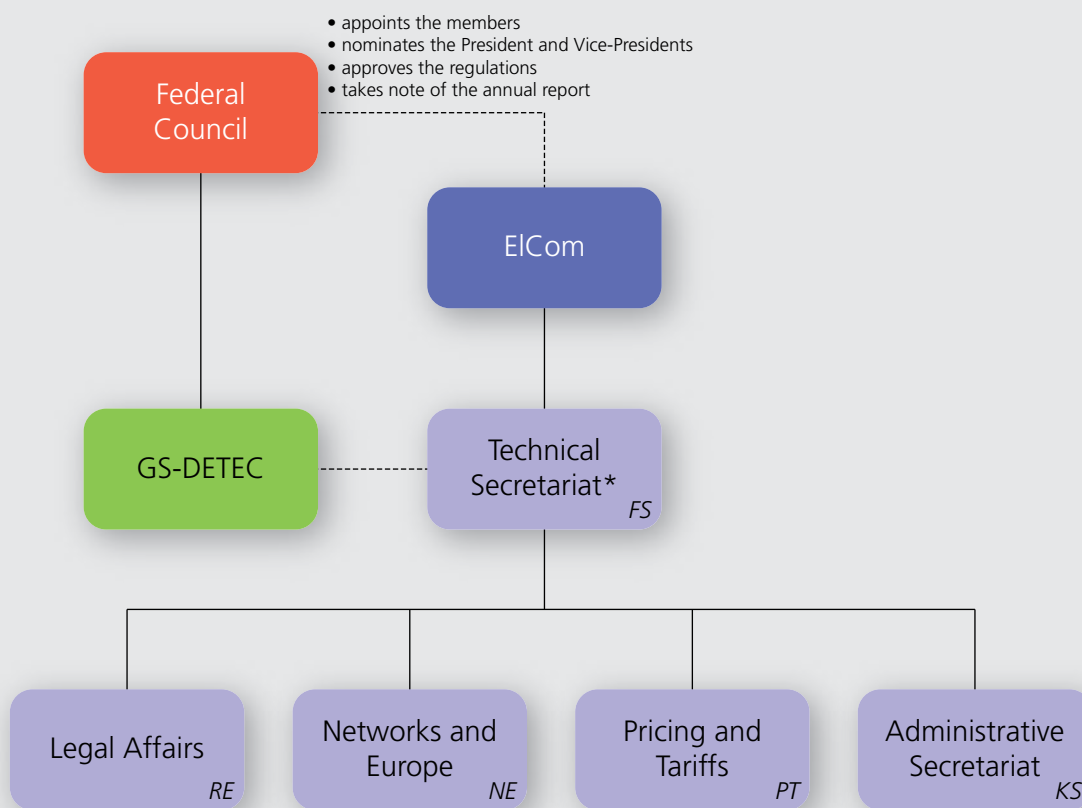
» It defines the procedures for the allocation of network capacities with congested cross-border transmission lines, and coordinates its activities with European national regulators.

» ElCom also had to ensure that ownership of the transmission network was transferred to the national transmission operator, Swissgrid AG, by the end of 2012 (unbundling process). Swissgrid is subject to comprehensive supervision by ElCom.

## Organisation and personnel

ElCom comprises of 7 independent members appointed by the Federal Council, and the Technical Secretariat. It is not subject to

any directives of the Federal Council, and is independent of administrative authorities.



\*Administrative linkage to the general secretariat of DETEC

Figure 13: Structure of ElCom

## Electricity Commission

At the end of 2011, the Federal Council confirmed the 7 existing members of the Electricity Commission for the 2012 to 2015 legislative period. All of them are independent of the electricity industry, and they all act on a part-time basis. On average, the Commission holds a plenary meeting once a month, and its members also attend meetings of the 4 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, PhD (natural science), titular professor at the Swiss Federal Institute of Technology, Zurich, former CEO of NOK (Networks, Trading and Sales).

### Members:

- » Anne d'Arcy, PhD (political science) 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, 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. Until the end of 2011, the Swiss Federal Office of Energy (SFOE) was responsible for the administration of the Technical Secretariat, thereafter the responsibility was transferred to the General Secretariat of the Federal Department of the Environment, Transport, Energy and Communications (DETEC). In the year under review, the number of employees of the Technical Secretariat remained unchanged at 34.

An authority's reputation and credibility mainly depend on the confidence that is shown in it. Any sign of bias or conflict of interests must be avoided. In view of this, the Commission closely examined the question of which regulations governing behaviour are required for the members and employees of the Technical Secretariat. An interdepartmental workgroup pursued the same goal at the federal level within the scope of a revision of the Federal Personnel Ordinance and the formulation of a code of conduct for employees of the federal administration. In view of this, and in order to avoid any differentiation of practice within the federal administration, ElCom decided not to introduce its own regulations.

#### **Head of the Technical Secretariat**

Renato Tami, attorney-at-law and notary public

#### **Prices and Tariffs Section**

(10 employees)

Stefan Burri, PhD (economics)

#### **Legal Affairs Section**

(8 employees)

Nicole Zeller, attorney-at-law

#### **Networks and Europe Section**

(8 employees)

Michael Bhend, engineer Federal Institute of Technology, Zurich

#### **ElCom Administrative Secretariat Section**

(7 employees)

Dario Ballanti, PhD (natural sciences) Federal Institute of Technology, Zurich



# Appendix

## Facts and figures for 2012

| Complaints, etc.                     | Brought forward from previous years | Received in 2012 | Dealt with in 2012 | Carried forward to 2013 |
|--------------------------------------|-------------------------------------|------------------|--------------------|-------------------------|
| Specific matters relating to tariffs | 99                                  | 147              | 111                | 135                     |
| Feed-in remuneration at cost         | 18                                  | 80               | 52                 | 46                      |
| Other cases                          | 95                                  | 254              | 140                | 209                     |
| <b>Total</b>                         | <b>212</b>                          | <b>481</b>       | <b>303</b>         | <b>390</b>              |

Table 6: ElCom activities – statistics for 2012

## Appeal statistics

During the period from 2008 to 2012, ElCom pronounced a total of 153 rulings. Appeals were upheld in 4 cases, and partially upheld in a further 3 cases.

|   | No appeal to date | Appeals to Fed. Admin. Court | Appeals to Fed. Supr. Court | Total no. of appeals |
|---|-------------------|------------------------------|-----------------------------|----------------------|
| <b>Rulings pronounced between 2008 and 2012</b> | 118*              | 35                           | 9                           | 153                  |

\*In 14 cases, the deadline for appeals is still open.

Table 7: Rulings pronounced between 2008 and 2012

|                              | Rejected    | Upheld     | Partially upheld | Written off | Not accepted | Pending     |
|------------------------------|-------------|------------|------------------|-------------|--------------|-------------|
| Appeals to Fed. Admin. Court | 14<br>(17*) | 4<br>(16*) | 3<br>(9*)        | 8<br>(14*)  | 0            | 13<br>(44*) |
| Appeals to Fed. Supr. Court  | 4<br>(6*)   | 2          | 1                | 0           | 1            | 5           |

\*For each ElCom ruling the Federal Administrative Court and Federal Supreme Court may conduct separate proceedings, for example in the case of tariff audits involving several parties.

Table 8: Appeal statistics

## Meetings

The members of the Commission hold discussions at monthly plenary meetings. In addition, the 4 committees hold their own meetings and ElCom also organises workshops and other extraordinary meetings. In

the year under review, the members of ElCom – in various combinations – attended a total of 14 full-day and 28 half-day meetings.

## ElCom events

### **ElCom 2012 Forum**

The third ElCom Forum was held on 16 November 2012 at the Culture and Congress Centre in Thun. The impending challenges associated with the change in energy strategy were discussed under the heading of “Impacts of the changed energy environment on the distribution networks, producers and consumers”. The cornerstones of Switzerland’s new energy policy are a step-by-step withdrawal from nuclear energy and the Federal Council’s “Energy Strategy 2050”. The various impacts will be felt in the coming few years by all players in the electricity market, as well as by ElCom as supervisory authority. The distribution networks will be affected to a particularly notable extent, since they will have to handle the increasing decentralised feed-in of electricity produced from renewable energy sources. Around 300 representatives of the

electricity industry attended the 2012 Forum, together with a variety of other participants. Speakers included Suzanne Thoma (CEO of BKW AG), André Hurter (Director General of Geneva utilities company SIG) and Pascal Previdoli, Deputy Director of the Swiss Federal Office of Energy. The impacts of the change in energy strategy were debated from various viewpoints at a panel discussion led by Gabriela Weiss (journalist at the Neue Zürcher Zeitung). ElCom cited various practical examples to draw attention to its role as credible, competent and reliable regulatory authority.

The next ElCom Forum will be held at the Swiss Transport Museum in Lucerne on 25 November 2013.

### **Information events for network operators**

In 2012, ElCom organised 9 information events for network operators at various locations in Switzerland. The main topics were the collection of cost accounting data and legal issues. A total of 500 people at-

tended these sessions, which were offered on a non-profit basis. These events provided a welcome opportunity for the participants as well as the involved ElCom employees for exchanging professional views and experiences.

## **Finance**

### **Key financial data for 2012**

On 1 January 2012, the administration of ElCom was transferred to the General Secretariat of the Department of the Environment, Transport, Energy and Communications (DETEC). In the year under review, ElCom had a budget of 8.1 million Swiss francs at its disposal. Its effective expenditure amounted to 7.7 million Swiss francs, which covered its entire personnel and operating costs.

On the income side, ElCom received a total of 4.1 million Swiss francs. The main sources were payments of supervisory fees by Swissgrid for ElCom's cooperation with foreign authorities, and court costs paid by parties involved in legal proceedings.

### **Budget for 2013**

For 2013, expenditure has been budgeted at 8.2 million Swiss francs. As in the past, the sources of revenue are the supervisory fee and income from procedural costs.

# Publications

All publications may be viewed on the official ElCom web site ([www.elcom.admin.ch](http://www.elcom.admin.ch)).

## Decisions

|            |   |
|------------|---|
| 21.12.2012 | Network access, petition to decree super-provisional measures   |
| 21.12.2012 | Network access, petition to decree super-provisional measures   |
| 13.12.2012 | Verification of costs and 2009 and 2010 tariffs for use of distribution network (operating costs) and for energy  |
| 13.12.2012 | Remuneration for utilisation of site network installations at a shopping centre   |
| 13.12.2012 | Compensation for electricity supply lines intended for local distribution within an areal network   |
| 13.12.2012 | Remuneration for increase in network capacity (photovoltaic and biogas plant)   |
| 13.12.2012 | Remuneration for increase in network capacity (photovoltaic system)   |
| 13.12.2012 | Remuneration for increase in network capacity (photovoltaic system)   |
| 13.12.2012 | Remuneration for increase in network capacity (photovoltaic system)   |
| 15.11.2012 | Use of proceeds from market-oriented allocation procedures dating from 2011   |
| 15.11.2012 | Qualification of electricity supply lines at a shopping centre as electricity supply lines in accordance with Article 4, paragraph 1a of the Electricity Supply Act, and consequences of this qualification |
| 15.11.2012 | Refund of 2010 ancillary service costs  |
| 15.11.2012 | Remuneration for increase in network capacity (photovoltaic system)   |
| 15.11.2012 | Remuneration for increase in network capacity (photovoltaic system)   |
| 15.11.2012 | Remuneration for increase in network capacity (photovoltaic system)   |
| 18.10.2012 | Remuneration for increase in network capacity (photovoltaic system)   |
| 18.10.2012 | Remuneration for increase in network capacity (photovoltaic system)   |

|            |   |
|------------|---|
| 20.09.2012 | Transmission network transaction / closure of proceedings concerning financing structure  |
| 20.09.2012 | Transmission network transaction / applicable value   |
| 20.09.2012 | Remuneration for increase in network capacity (photovoltaic system)   |
| 20.09.2012 | Remuneration for increase in network capacity (photovoltaic system)   |
| 16.08.2012 | Remuneration for increase in network capacity, Mont-Crosin 2 wind park (1st partial application)  |
| 16.08.2012 | Reimbursement for increase in network capacity (photovoltaic system)  |
| 16.08.2012 | Reimbursement for increase in network capacity (photovoltaic system)  |
| 05.07.2012 | Reimbursement for increase in network capacity (photovoltaic system)  |
| 05.07.2012 | Reimbursement for increase in network capacity (photovoltaic system)  |
| 14.06.2012 | Feed-in remuneration at cost, expansion of Windisch hydropower plant, hydraulic engineering bonus   |
| 14.06.2012 | Reimbursement for increase in network capacity (biogas plant)   |
| 14.06.2012 | Partial reassessment of ElCom ruling of 4 March 2010 regarding 2010 costs and tariffs for network use (network level 1) and system services           |
| 16.04.2012 | Partial reassessment of ElCom ruling of 12 March 2012 regarding 2012 costs and tariff for network use (network level 1); adaptation of service tariff |
| 16.04.2012 | Verification of 2009 network and electricity tariffs  |
| 16.04.2012 | Confirmation ruling on CCF network  |
| 16.04.2012 | Use of proceeds from market-oriented allocation procedures dating from 2009   |
| 16.04.2012 | Reimbursement for increase in network capacity (photovoltaic system)  |
| 16.04.2012 | Reimbursement for increase in network capacity (photovoltaic system)  |
| 12.03.2012 | Submission of cost accounting for 2012 tariffs and 2010 annual accounts   |
| 12.03.2012 | Trasmissione delle tariffe dell'energia elettrica per il 2012, del calcolo dei costi per le tariffe 2012 e del conto annuale per il 2010              |
| 12.03.2012 | Reimbursement for increase in network capacity (photovoltaic system)  |

|            |   |
|------------|---|
| 12.03.2012 | Examination of 2010 and 2011 network use and electricity tariffs, adjustment of documentation                     |
| 12.03.2012 | 2012 costs and tariffs for network use (network level 1)  |
| 16.02.2012 | 2009 and 2010 power plant tariff (Article 31b, paragraph 2, Electricity Supply Ordinance / application for refund |

## Directives

|            |        |   |
|------------|--------|---|
| 13.12.2012 | 5/2012 | Obligation for network operators to record and submit quality of supply data in 2013  |
| 31.10.2012 | 4/2012 | Increases in network capacity   |
| 14.05.2012 | 3/2012 | Acquisition costs and long-term purchase agreements in accordance with Article 4, paragraph 1 of the Electricity Supply Ordinance |
| 28.02.2012 | 2/2012 | Calculation of interest rate for assets required for operation  |
| 19.01.2012 | 1/2012 | Differences in cover – directive and forms  |

## Notifications

|            |  |
|------------|--|
| 18.12.2012 | Comments by ElCom concerning the “Energy Strategy 2050” consultation procedure   |
| 05.12.2012 | Evaluation of ElCom survey on power supply interruptions in 2011   |
| 23.11.2012 | Consultation regarding the question of an electricity exchange with a view to potential market coupling<br>ElCom and SFOE questionnaire concerning consultation on electricity exchange (23 November 2011) |
| 24.04.2012 | Letter to electricity supply companies concerning prerequisites for market access  |
| 01.03.2012 | Legal nature and main content of ENTSO-E network codes   |

## Newsletters

|            |                    |
|------------|--------------------|
| 03.12.2012 | Newsletter 08/2012 |
| 06.11.2012 | Newsletter 07/2012 |
| 15.10.2012 | Newsletter 06/2012 |
| 31.05.2012 | Newsletter 05/2012 |
| 10.05.2012 | Newsletter 04/2012 |
| 27.03.2012 | Newsletter 03/2012 |
| 28.02.2012 | Newsletter 02/2012 |
| 01.02.2012 | Newsletter 01/2012 |

## Press releases

|            |   |
|------------|---|
| 05.12.2012 | High level of electricity supply quality in Switzerland                                   |
| 27.09.2012 | Transfer of transmission network to Swissgrid according to schedule                       |
| 07.09.2012 | 2013 electricity prices: tariffs for households and business down by 1 percent on average |
| 11.06.2012 | ElCom publishes its 2011 activities report  |
| 20.03.2012 | Market study on risks in energy trading   |
| 25.01.2012 | ElCom granted observer status at CEER   |



**Swiss Federal Electricity Commission ElCom**  
Effingerstrasse 39, CH-3003 Bern  
Phone +41 31 322 58 33, Fax +41 31 322 02 22  
[info@elcom.admin.ch](mailto:info@elcom.admin.ch) · [www.elcom.admin.ch](http://www.elcom.admin.ch)