Tasks and challenges of ElCom
Hans Jörg Schötzau, Vice President

ElCom Forum
Fribourg
18 November 2011

«Switzerland’s role in the European electricity market»
1. Introduction

2. Current challenges

3. Cross-border issues

4. New energy policy
1.01 Organisation of ElCom

ElCom is independent of the Federal Council and the administrative authorities

ElCom Members

Federal Council

Commission Secretariat

Networks and International Relations

Prices and Tariffs

Legal Affairs

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1.02 ElCom has the following powers:

- To decide as a court of justice on all matters relating to the implementation of the legislation
- To make decisions regarding tariffs for network use and electricity tariffs (ex-officio or in response to complaints)
- To regulate network access (switch to upper network level)
- To decide on the use of auction revenues
- To regulate market procedures for congestion management
- To ensure coordination with other national regulators
- To monitor and supervise the development of the electricity markets
- To monitor the quality and security of network supply
1. Introduction
2. Current challenges
3. Cross-border issues
4. New energy policy

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### 2.01 ElCom activity statistics

<table>
<thead>
<tr>
<th>Activity</th>
<th>Number since 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tariff complaints</td>
<td>2553</td>
</tr>
<tr>
<td>General complaints concerning power prices</td>
<td>737</td>
</tr>
<tr>
<td>Feed-in remuneration</td>
<td>170</td>
</tr>
<tr>
<td>Other requests</td>
<td>739</td>
</tr>
<tr>
<td>Applications in accordance with Art. 31a of the Electricity Supply Ordinance (interest rate for pre-2004 facilities)</td>
<td>106</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4305</strong></td>
</tr>
<tr>
<td>Settled</td>
<td>3805</td>
</tr>
<tr>
<td>Pending before the Federal Administrative Court</td>
<td>9</td>
</tr>
<tr>
<td>Pending before the Federal Supreme Court</td>
<td>4</td>
</tr>
</tbody>
</table>

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2.02 Examples of current issues

- Transfer of transmission network to Swissgrid
- Requests for reassessment of power station tariff for ancillary services
- Distribution of auction revenues for 2009 and 2010
- Feed-in remuneration: claim to compensation for electricity from renewable energies where the same turbine is used for simultaneous generation of steam from fossil fuels?
- Costs for grid reinforcement as a result of renewable energies
2.03 Examples of current issues

- At present, around 20 cases are pending with regard to tariffs at distribution network level:
  - Network: correction of synthetic valuations and operating costs
  - Energy costs: specification of the term „production costs“ in accordance with Art. 4 paragraph 1 of the Electricity Supply Ordinance
- Claim to basic supply of major consumers (around 20 cases)
- Monitoring of security of supply (in preparation)
2.04 Example of network strengthening: approval of costs for financing through ancillary services tariff

- Costs for grid reinforcement are part of Swissgrid’s ancillary services
- Requests have to be approved by ElCom
- Payment will be approved only for necessary network strengthening (projet-by-project evaluation)
- The connection point and the total costs are the decisive criteria
2.05 Example: monitoring risks regarding security of supply (in preparation)

Risk likelihood

Severity /Impact

- Network
- Production
- Price
- Environment

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Topics

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3.01 Participation of Switzerland in European agencies/bodies

- CEER
- EU Commission
- ENTSO-E
- Network Codes
- Framework Guidelines
- Comitology
- Legal effect in CH?

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3.02 Cooperation with CEER

- The Council of European Energy Regulators (CEER) is the voice of European national regulators of electricity and gas at EU and international level.

- CEER works closely with and supports the work of the Agency for the Cooperation of Energy Regulators (ACER).

- ElCom attends the Electricity Working Group (EWG). In 2011, EWG focused on the following areas of work:
  - Security of supply
  - Quality of supply
  - Sustainable development
  - Smart grids

  ➔ Application for observer status submitted
3.03 Balancing Market: Access / international coordination

Products and volumes:

+/- 77 MW Primary control power
+/- 400 MW Secondary control power
+ 510 MW Tertiary control power positive
- 460 MW Tertiary control power negative

c.a. 1 TWh Loss of energy per Year
ca. 8 TVarh Reactive energy per Year

➔ Since 2010: cross-border access France – Switzerland
  CH/FR: Balancing mechanism, FR/CH: Primary control power

➔ Planned for 2012: Common procedure Germany – Switzerland
  Primary control power (joint tender DE/CH: CH-part = 25 MW)
3.04 Monitoring balancing market: coordination with BNA and CRE

Primary (PRL) and Secondary (SRL) control power price changes in 2011

- PRL most expensive 20 MW
- SRL most expensive 20 MW

Source: Swissgrid data, own presentation

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3.05 Congestion management

### Installed thermal capacity

<table>
<thead>
<tr>
<th></th>
<th>FR</th>
<th>DE</th>
<th>AT</th>
<th>IT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer</td>
<td>3000</td>
<td>1100</td>
<td>2060</td>
<td>4400</td>
</tr>
<tr>
<td>Winter</td>
<td>3200</td>
<td>1100</td>
<td>1500</td>
<td>3500</td>
</tr>
</tbody>
</table>

Source: Swissgrid

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3.06 Development of transmission grid

- Swissgrid: > 200 extension projects, grouped into expansion programmes

Available import/export capacities and allocation procedures at the borders are also linked with congestion within CH and/or within DE/FR/AT/IT

Investment plan to be coordinated at EU-level (ENTSO-E)

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3.07 Congestion Management: relevant regions for CH

Central West

Central South

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3.08 Price differentials and price convergence between CH and DE / FR / IT

Price convergence 2010-2011 (+/- 1 €/MWh)

<table>
<thead>
<tr>
<th></th>
<th>CH-DE</th>
<th>CH-FR</th>
<th>CH-IT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source:</td>
<td>Swissgrid data, own presentation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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### 3.09 Evolution: from explicit to implicit auctions

<table>
<thead>
<tr>
<th>Intraday</th>
<th>Explizit Y / M / D</th>
<th>Implizit ATC</th>
<th>Implizit FB</th>
</tr>
</thead>
<tbody>
<tr>
<td>FR-CH</td>
<td>DBS</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>DE-CH</td>
<td>DBS</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>AT-CH</td>
<td>APG</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>IT-CH</td>
<td>?</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

**Price convergence D-1**

<table>
<thead>
<tr>
<th>CH:</th>
<th>CWE*:</th>
<th>CWE**:</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-20%</td>
<td>50-60%</td>
<td>80-90%</td>
</tr>
</tbody>
</table>

* CWE Market Coupling Operational Report (28th of October 2011)
**Study: CWE Enhanced Flow-Based MC feasibility report (19th of October 2011)
### 3.10 Efficiency in interconnection uses: methodology

#### Programmes / NTC: Rate of use [%]

<table>
<thead>
<tr>
<th>Rate of use [%]</th>
<th>100%</th>
<th>50%</th>
<th>0%</th>
<th>21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programmes / NTC</td>
<td>«Switzerland's role in the European electricity market», 18 November 2011</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.10 Efficiency in interconnection uses: methodology

- Imports into CH: 50%
- Exports from CH: 100%

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3.10 Efficiency in interconnection uses: methodology

![Graph showing rate of use and price differential]

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3.10 Efficiency in interconnection uses: methodology

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### 3.10 Efficiency in interconnection uses: methodology

<table>
<thead>
<tr>
<th>Rate of use [%]</th>
<th>Imports against price differential</th>
<th>Under-use of import capacity</th>
<th>Under-use of export capacity</th>
<th>Exports against price differential</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Imports against price differential
- Under-use of import capacity
- Under-use of export capacity
- Exports against price differential

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3.10 Efficiency in interconnection uses: methodology

- Ideal situation
- Rate of use [%]
- Imports against price differential
- Under-use of import capacity
- Under-use of export capacity
- Exports against price differential

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3.10 Efficiency in interconnection uses: methodology

Each dot represents 1h out of 8760h in total

Rate of use = 40%

$\Delta P = -30 \, €/MWh$

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3.11 DE-CH use of capacities 2010 (D-1, without Intraday)

Source: Swissgrid data, own presentation

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3.12 CH-IT use of capacities 2010 (D-1, without Intraday)

Source: Swissgrid data, own presentation

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3.13 Implication for congestion management

1. Legal obligations for ElCom and Swissgrid
   ➔ in accordance with Articles 8 and 20 of the Electricity Supply Act: to ensure an efficient, highly performing grid operation

2. Evolution from explicit to implicit auctions

3. The requirements for implicit auctions are:
   ➔ Power Exchange
   ➔ CH-Northern border: contract with CWE-Partner

4. Support from BNA and CRE, i.e. favourable time window

5. ElCom conclusion: essential to strive for coupling to CWE by mid 2012.
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4.01 Nuclear phase-out

- In response to the incidents in Japan, the intention is to phase out nuclear power in Switzerland.
- The existing power plants will be closed down at the end of their working life and will not be replaced by new nuclear power plants.
- Security of supply is to be guaranteed by:
  - energy efficiency
  - further expansion of hydropower and other renewable energies
  - fossil power production (where necessary)
  - imports
  - grid development
4.02 Technical considerations regarding the German and Swiss decision to phase out nuclear power

- BNA Report “Auswirkungen des KKW-Moratoriums”
- CEER: Ad Hoc Group on Nuclear Shutdown (AHGNS)
- ENTSO-E: Generation adequacy (Winter Outlook Report)
- DE/CH-TSO: joint declarations concerning the grid situation
- DETEC: establishment of a working group
4.03 ElCom findings regarding the new Energy Policy

- Effects on security of supply is on our radar screen
- Grid development planning is rendered more difficult:
  - focus on decentralised production?
  - focus on imports?
  - connection to supergrid?
  - smart grid?
- Stable framework conditions are crucial for investment security (e.g. base load production)
- Limits of the current Electricity Supply Act in regards to claimable costs (e.g. electro mobility and nationwide smart metering can currently not be financed via the network use tariff)

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Summary

Future challenges for ElCom:

• Various domestic issues, namely
  – grid tariff audit / grid strengthening
  – Transfer of TSO ownership

• Cross-border issues are becoming ever more important, namely
  – further development of congestion rules (e.g. implicit auctions)
  – cooperation with other regulators and CEER / ACER

• Energy policy, namely
  – monitoring of the security of supply
  – impact on grid development
Thank you for your attention!