



SWISS COMPETENCE CENTER for ENERGY RESEARCH  
SUPPLY of ELECTRICITY

## Presentation of SCCER-SoE

By: Ueli Wieland

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In cooperation with the CTI

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**Energy**

Swiss Competence Centers for Energy Research

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Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Swiss Confederation

Commission for Technology and Innovation CTI

## Energy Strategy 2050

➔ **Federal Council finances 8 Swiss competence centers for energy research:**

➔ **Innovation and transfer to practice**

- Energy efficiency of buildings, districts
- Energy efficiency of industrial processes
- Grids and its components; energy systems
- Storage of heat and electricity
- **Supply of Electricity**
- Economy, environment, law and behavior
- Mobility: Efficient concepts, processes and components
- Biomass
- (Photovoltaic cells)

### 3. SCCER-SoE supports research for hydropower and geothermal energy with ~100 R&D positions

- Swiss competence center ‘supply of electricity’ 2014 – 2016 - 2020
- Concentration on hydropower and deep geothermal energy
- 13 academic and 10 industrial partners, lead by the ETHZ.
- 5 new professors in ‘Geoenergies’, 55 new and 35 transferred R&D positions.
- Target for 2050:  
10% more electricity from hydropower (3TWh),  
5 – 10% of the electricity production from deep geothermal energy (4.4TWh).



# Targets for Hydropower

- Additional Electricity up to 2050
  - New large hydropower plants 1430 GWh
  - New small hydropower plants 1600 GWh
  - Extension and adaptation of existing large hydropower plants 1530 GWh
  - Effect of 'Gewässerschutzgesetz' -1400 GWh
- Challenges:
  - Climate change
  - Electricity demand and energy market
  - Winter and peak energy production
  - Environmental flow, hydro- and thermp-peaking
  - Severe operation conditions

# Offene Fragen

- Warum werden nicht mehr Kleinwasserkraftwerke gebaut?  
Unsicherheit beim Bewilligungsverfahren?  
Gefahr von Umwelteinsparungen?  
Finanzielle Unterstützung?
- Welche Unterstützung hat den grössten Effekt?  
SCCER-SoE unterstützt mit 'Manpower'.
- Welche KWKW Typen werden hauptsächlich gebraucht?  
Welche Entwicklung hat den grössten Effekt?
- ?

# Contact point

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