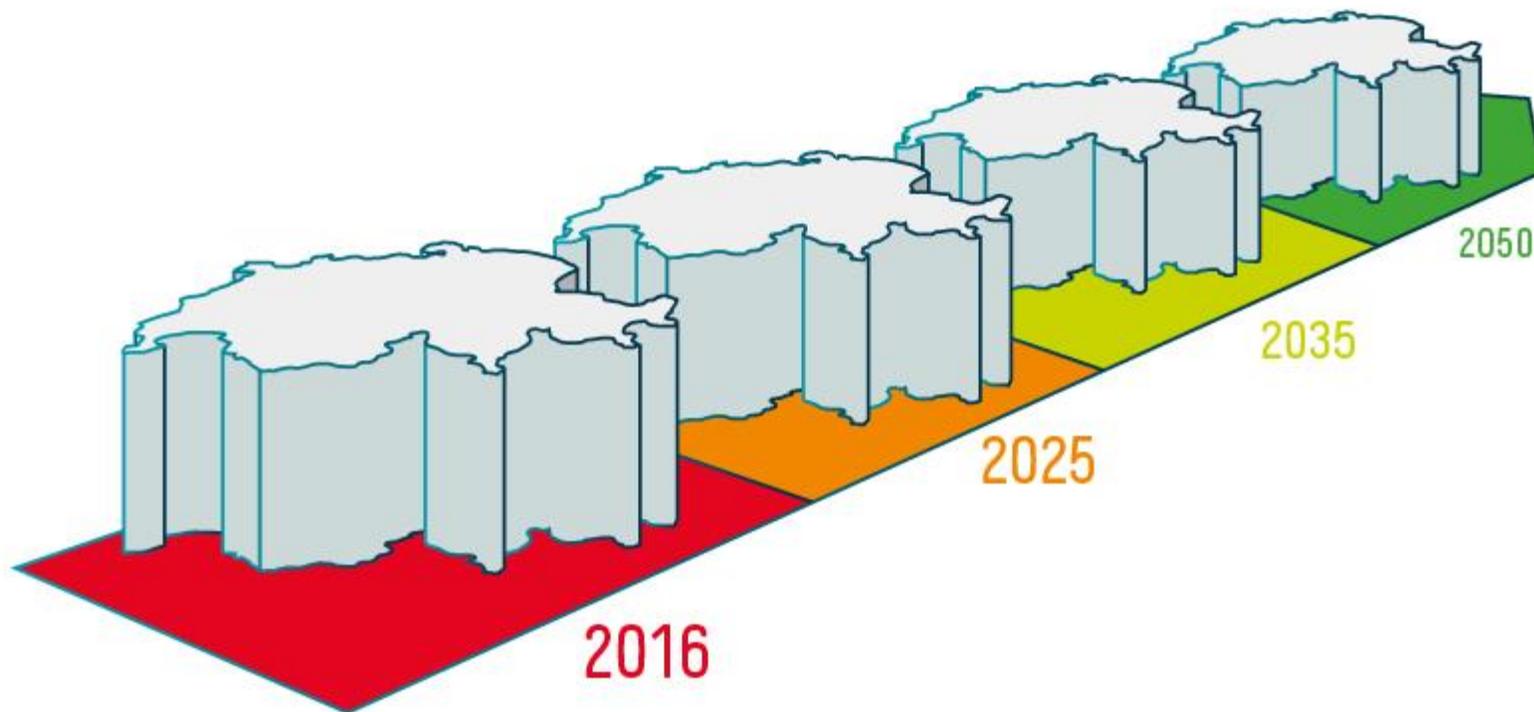




Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Bundesamt für Energie BFE
Office fédéral de l'énergie OFEN
Ufficio federale dell'energia UFE
Swiss Federal Office of Energy SFOE



ENERGY STRATEGY 2050 ONCE THE NEW ENERGY ACT IS IN FORCE

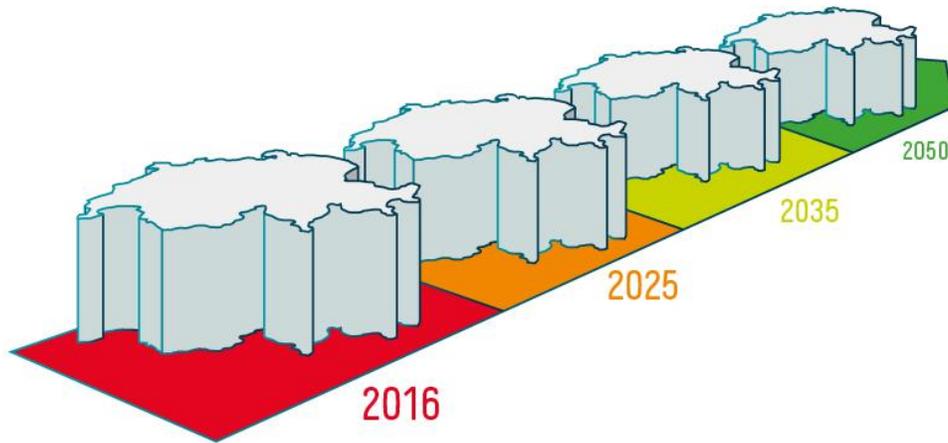


CONTENTS

1. Current status of Energy Strategy 2050
2. New Energy Act
3. Electricity Networks Strategy



CURRENT STATUS OF ENERGY STRATEGY 2050



4 September 2013

Federal Council adopts Dispatch to Parliament on new Energy Act



30 September 2016

Final vote in Parliament



21 May 2017

Referendum



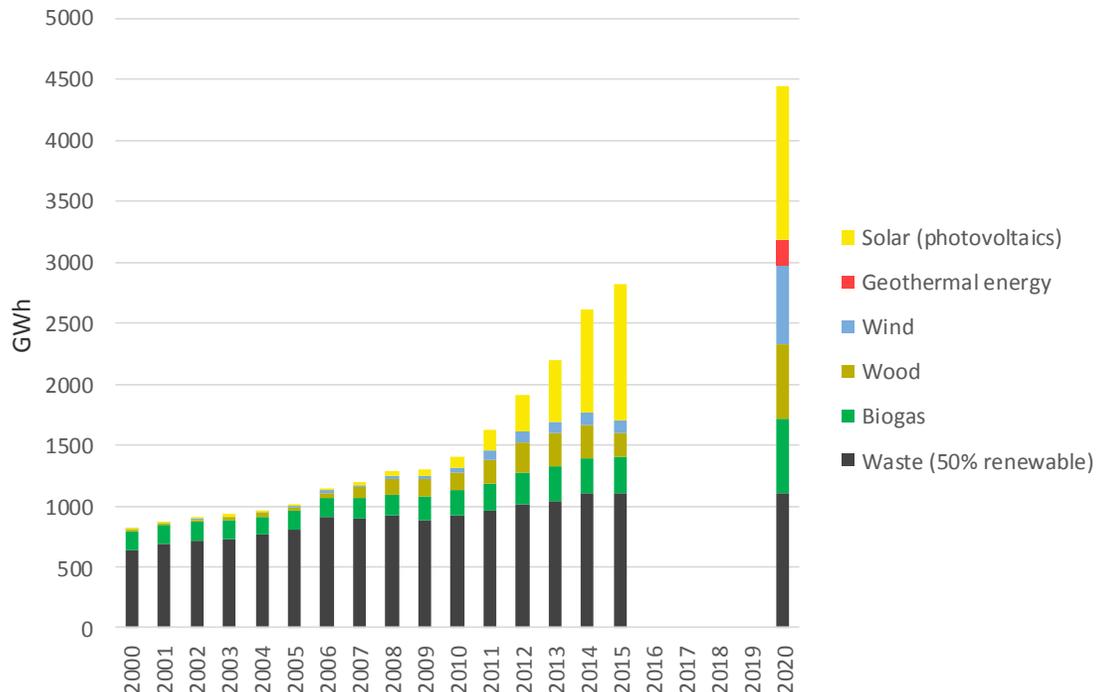
1 January 2018

Entry into force of revision of applicable legislation*

* The revised law on the federal direct tax enters into force the 1 January 2020.

ENERGY STRATEGY 2050 FURTHER DOSSIERS

Renewable energy – electricity (excluding hydropower)



Energy research

“Coordinated Energy Research in Switzerland” action plan – Swiss Competence Centres for Energy Research

Innovation promotion

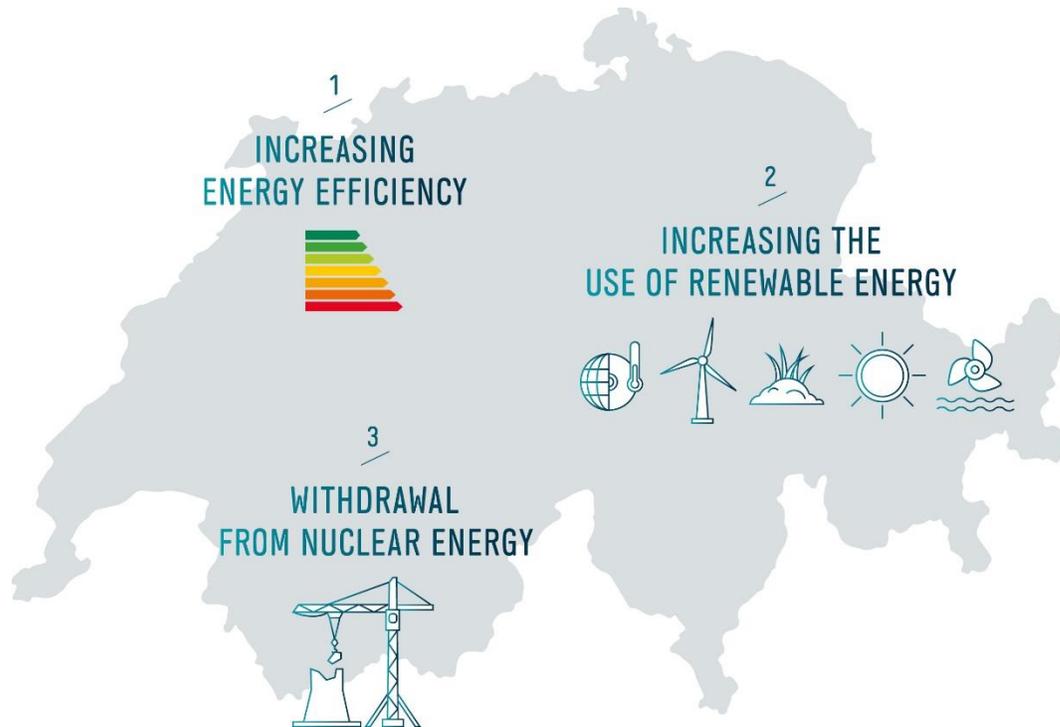
- Promotion of pilot, demonstration and flagship projects by the SFOE
- Market launch support by SwissEnergy
- Competitive tenders

Parliamentary Initiative 12.400

- Increase in network surcharge to 1.5 cents/kWh
- Partial to full refund for companies with high electricity consumption
- Regulation governing own consumption



NEW ENERGY ACT: THREE STRATEGIC OBJECTIVES



Measures to increase energy efficiency

- Buildings
- Mobility
- Industry
- Appliances

Measures to increase the use of renewable energy

- Promotion
- Improvement of legal framework

Withdrawal from nuclear energy

- No new general licences
- Step-by-step withdrawal – safety as sole criterion



NEW ENERGY ACT: ENERGY EFFICIENCY – GUIDELINES



Average per capita energy consumption

Reduction versus level in 2000

- 16% in 2020
- 43% in 2035

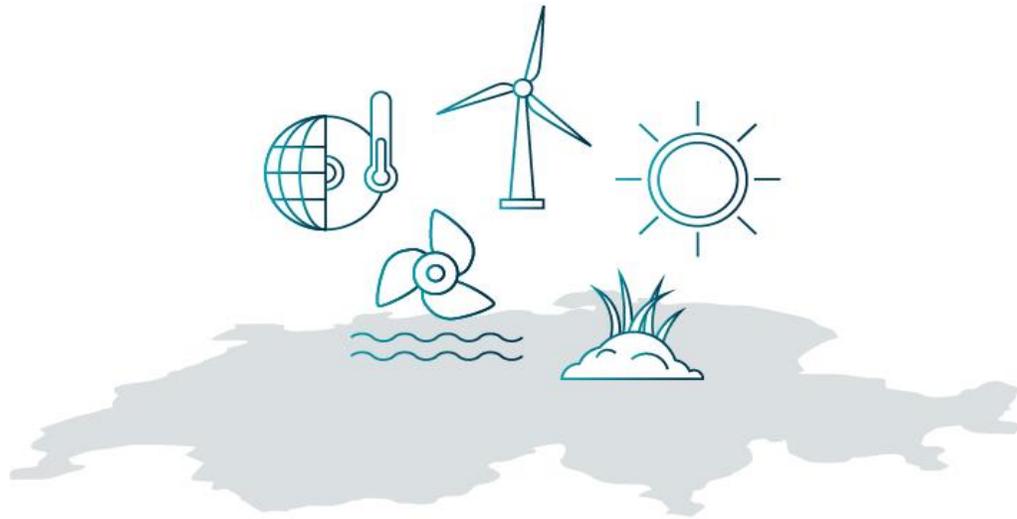
Average per capita electricity consumption

Reduction versus level in 2000

- 3% in 2020
- 13% in 2035



NEW ENERGY ACT: RENEWABLE ENERGY – GUIDELINES



Average domestic production of renewable energy excluding hydropower

- in 2020: 4'400 GWh
- in 2035: 11'400 GWh

Hydropower

37'400 GWh in 2035



NEW ENERGY ACT: NETWORK SURCHARGE

2.3 cents per kWh

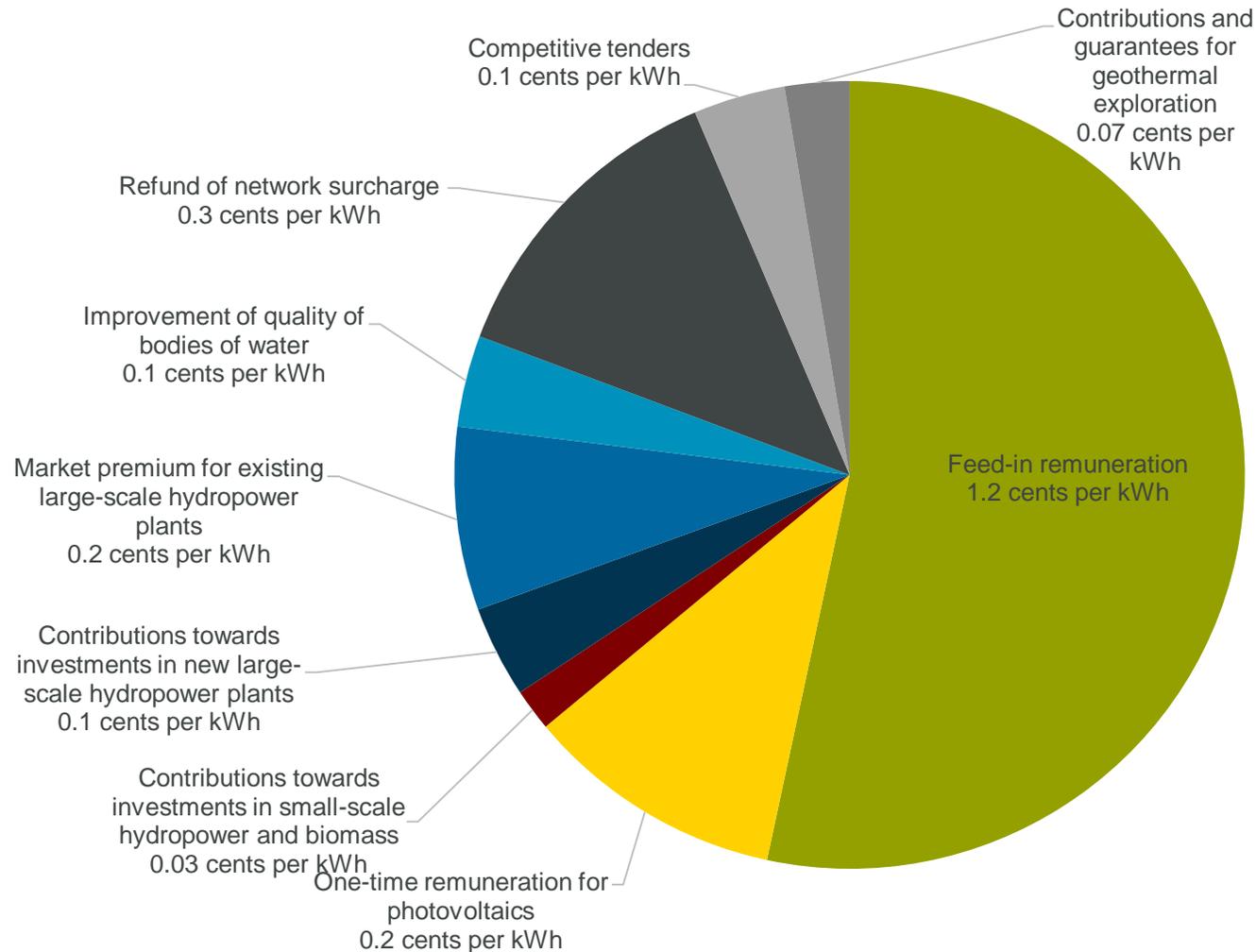


Network surcharge for promotion of electricity from renewable energy, energy efficiency and improvement of quality of bodies of water

- new surcharge: 2.3 cents/kWh
- including 0.2 cents for market premium to existing large hydropower plants



NEW ENERGY ACT: NETWORK SURCHARGE – USE

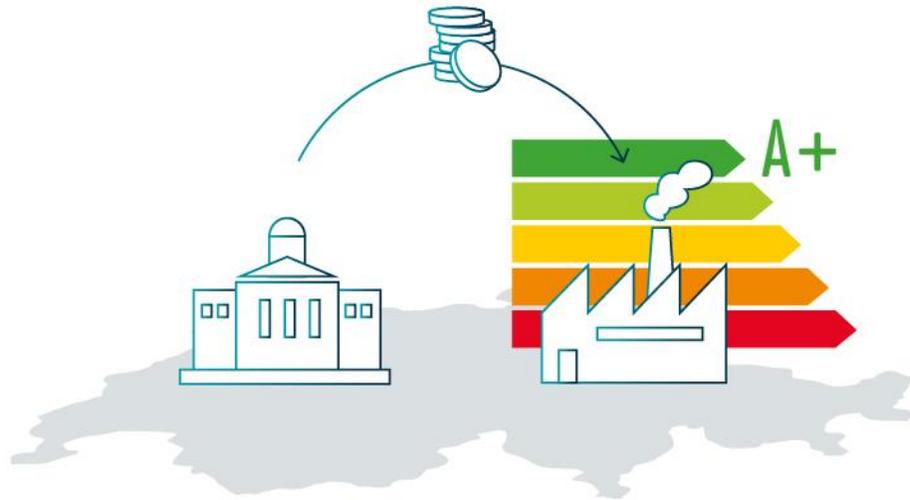


Use of network surcharge (2.3 cents/kWh)

Timeframe: For the duration of market premium for large hydropower plants (2018 to 2022), i.e. reduced one-time remuneration, geothermal energy contributions, investment contributions for small hydropower plants and biomass



NEW ENERGY ACT: NETWORK SURCHARGE – REFUND



Lower prerequisites for refund to companies with high electricity consumption

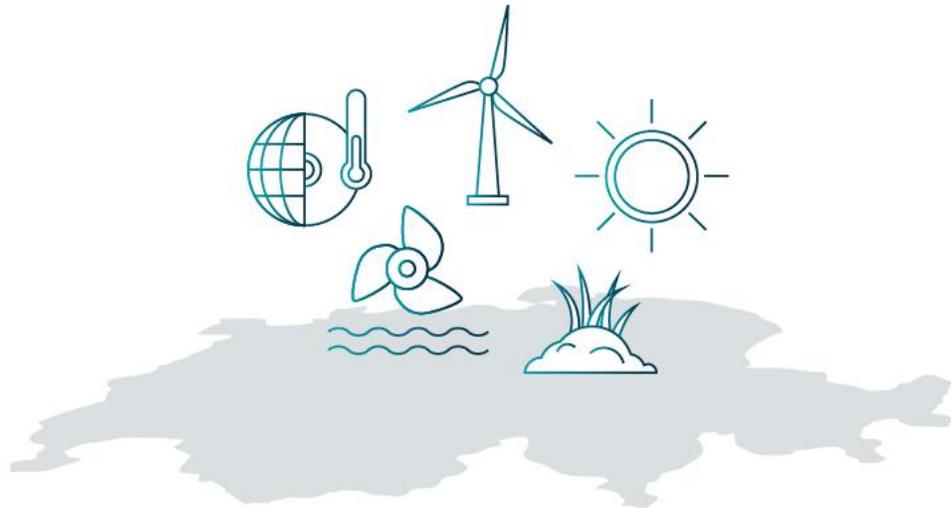
Repeal of requirement to use part of refunded network surcharge for energy-efficiency measures

Old Energy Act:

At least 20% of the refunded amount must be used for energy-efficiency measures.



NEW ENERGY ACT: PROMOTION SYSTEM – DIRECT MARKETING



Changeover from current feed-in remuneration at cost scheme to feed-in remuneration with direct marketing

- Better market integration
- Direct marketing as basic principle, exemptions for small facilities



NEW ENERGY ACT: LIMITATION OF PROMOTION

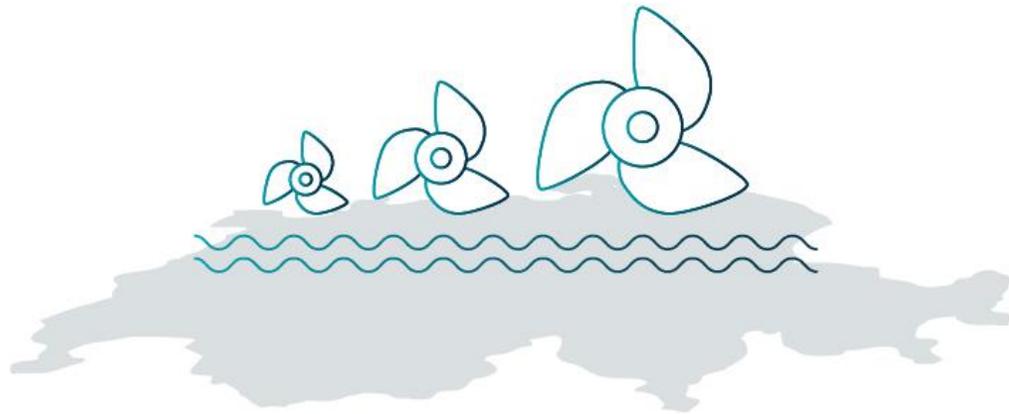


Limitation of promotion in legislation

- With effect from the sixth year after entry into force of the initial package of measures, no new commitments in the feed-in premium scheme
- With effect from 2031, no new investment contributions / one-time remuneration



NEW ENERGY ACT: LARGE-SCALE HYDROPOWER PRODUCTION



Market premium for existing power plants

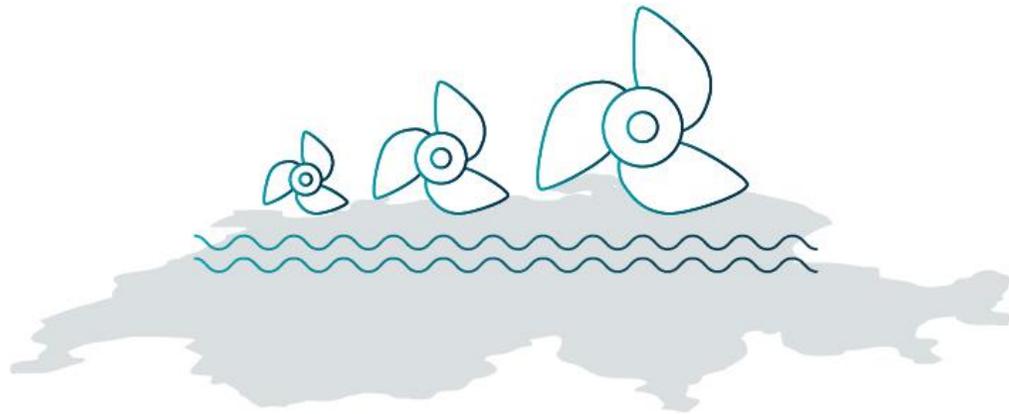
- Compensation of difference between production costs and lower market price
- Power plants receive a premium of max. 1 cent/kWh for electricity they sell on the free market below production cost
- Financing via network surcharge (0.2 cents/kWh)

Investment contributions for new power plants

- Amount to be specified on a case-by-case basis; max. 40% of recoverable investment costs
- Financing via network surcharge (max. 0.1 cents/kWh)



NEW ENERGY ACT: SMALL-SCALE HYDROPOWER PRODUCTION



Lower limit for promotion of small-scale hydropower production: 1 MW

- Only hydropower production facilities with an output of at least 1 MW will be able to participate in the feed-in remuneration scheme
- Exceptions apply for facilities with low environmental impacts



NEW ENERGY ACT: NATIONAL INTEREST



The use and continued expansion of renewable energy are in Switzerland's national interest

- Improved basis for weighing up interests
- Shift of focus in favour of renewable energy
- Exclusion of new facilities in biotopes of national importance and in certain nature reserves



NEW ENERGY ACT: LICENSING PROCEDURES



Renewable energy: shortening and streamlining

- Cantons must endeavour to speed up licensing procedures
- Federal government as single point of contact
- Deadline for assessments by the Federal Commission for the Protection of Nature and Cultural Heritage

Networks: acceleration of licensing procedure

- Shortening of appeals procedure thanks to restriction on access to the Federal Supreme Court
- Official time limits for sectoral plan and planning approval procedures



NEW ENERGY ACT: BUILDING PROGRAMME



Partial earmarking of revenue from CO₂-levy for improving energy-efficiency in buildings

- Increase in upper limit from the present-day 300 million to 450 million SFr./annum (as before 1/3 of revenue)
- Increase in CO₂-levy as before if interim targets are not reached (current levy 96 SFr./tonne of CO₂)

Modification of “Buildings” programme

- Payout in the form of global contributions; cantons responsible for implementation
- New requirements placed on the cantons



NEW ENERGY ACT: TAX INCENTIVES FOR BUILDING RENOVATION

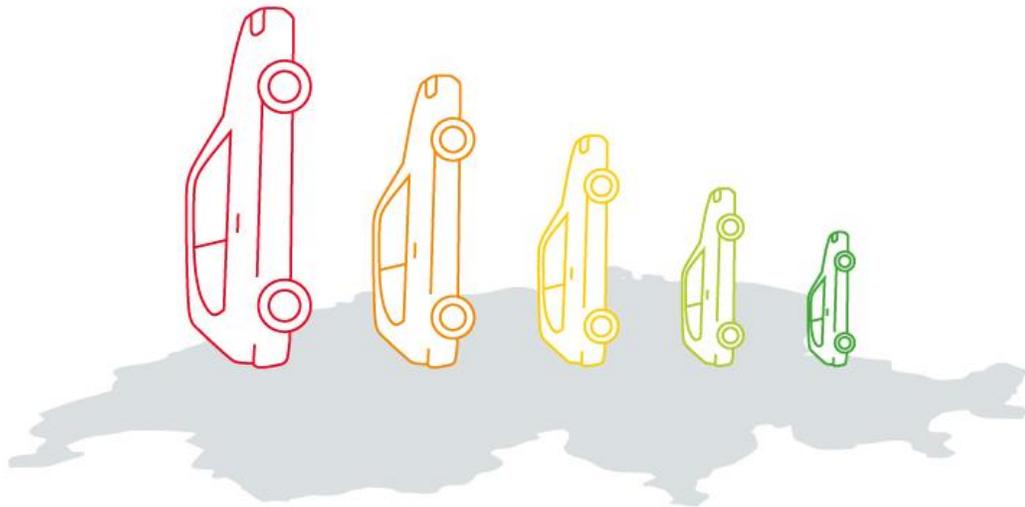


Higher tax incentives for improving energy efficiency in buildings

- Option of allocating energy-efficiency investment costs to the two following tax periods
- Tax deduction of demolition costs when replacing old buildings



NEW ENERGY ACT: MOBILITY



More stringent emission regulations for cars

- Reduction to 95 g CO₂/km by the end of 2020
- Harmonisation with the EU

Extension of emission regulations to utility vehicles and light semi-trailers

Reduction to 147 g CO₂/km by the end of 2020

Old CO₂ Act:

Reduction of emissions to 130 g CO₂/km by the end of 2015



NEW ENERGY ACT: SMART METERING



Basis for introduction of Smart Metering

- Clear framework conditions for introduction of Smart Metering
- Intelligent control and adjustment mechanisms



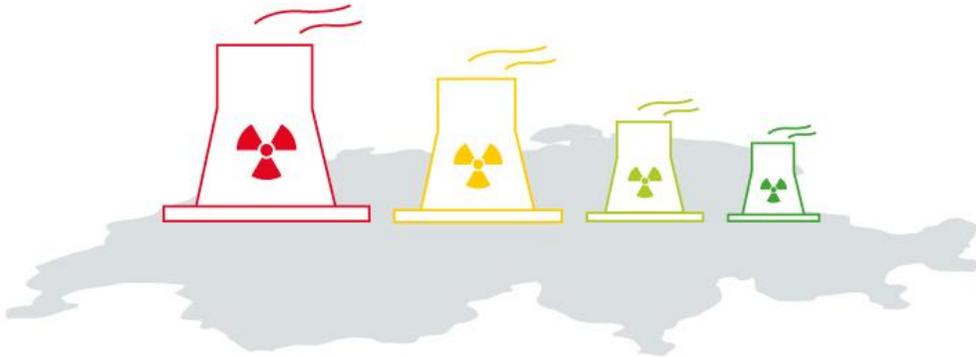
NEW ENERGY ACT: WITHDRAWAL FROM NUCLEAR ENERGY

No new general licences for nuclear power plants

- No ban on nuclear technology
- Continued operation of existing power plants as long as their safety is guaranteed
- Long-term operation to be regulated by Ordinance

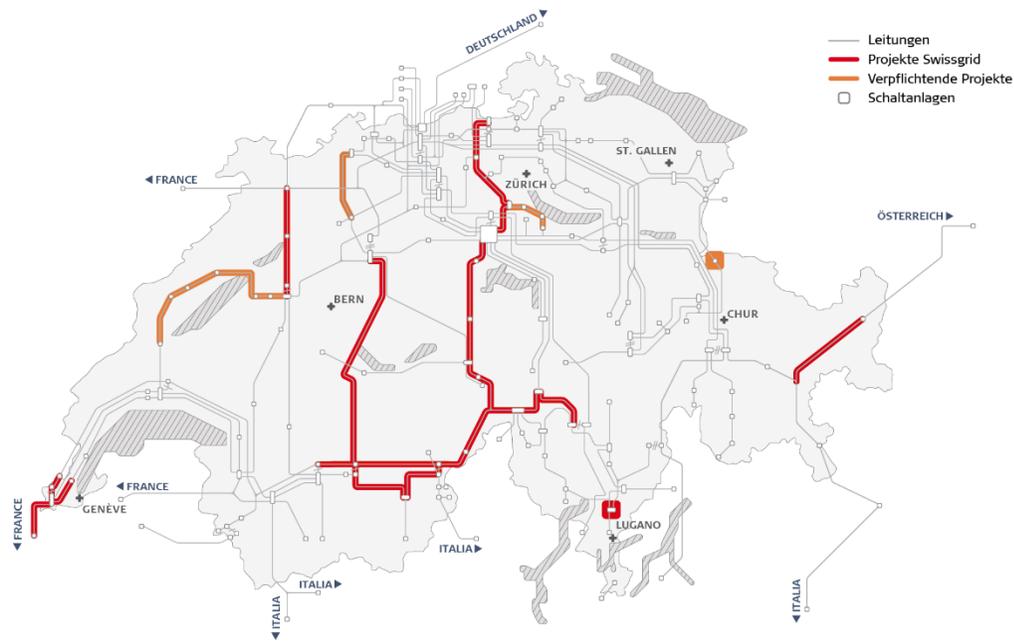
Reprocessing of spent fuel elements

- Ban instead of the existing moratorium
- Extension of moratorium until June 2020 (separate regulation in effect)





ELECTRICITY NETWORKS STRATEGY: CURRENT SITUATION



Source: Swissgrid

Need for action...

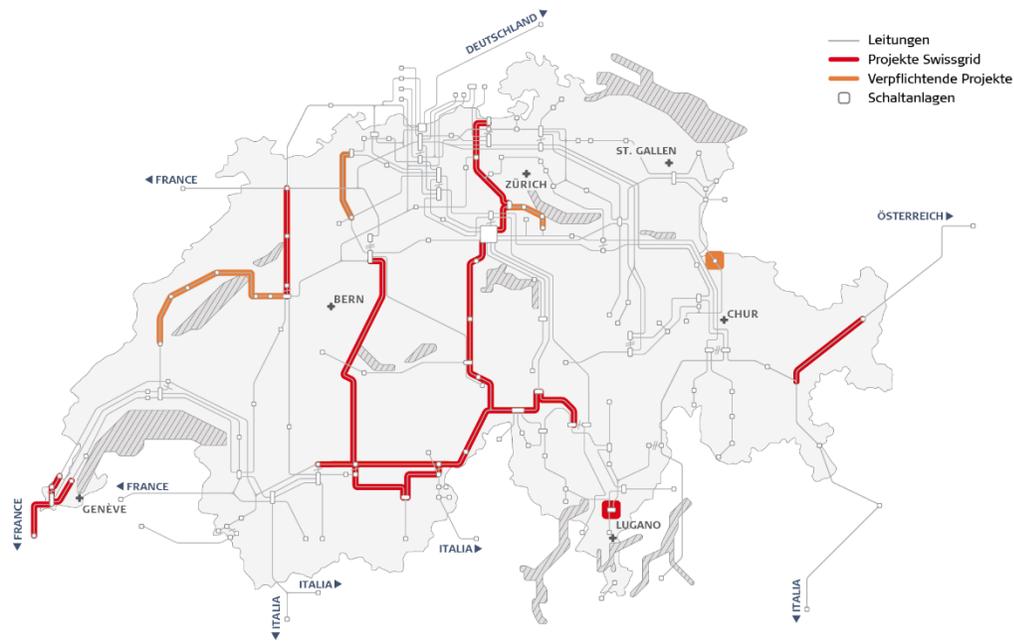
- Congestion in the transmission network, need for renovation
- Increasingly decentralised energy supply structure

... but slow progress

- Various conflicts of interest
- Insufficient transparency of processes
- Lack of understanding among the general population
- Lack of social acceptance



ELECTRICITY NETWORKS STRATEGY: STRATEGIC OBJECTIVES



Source: Swissgrid

Objective of revision

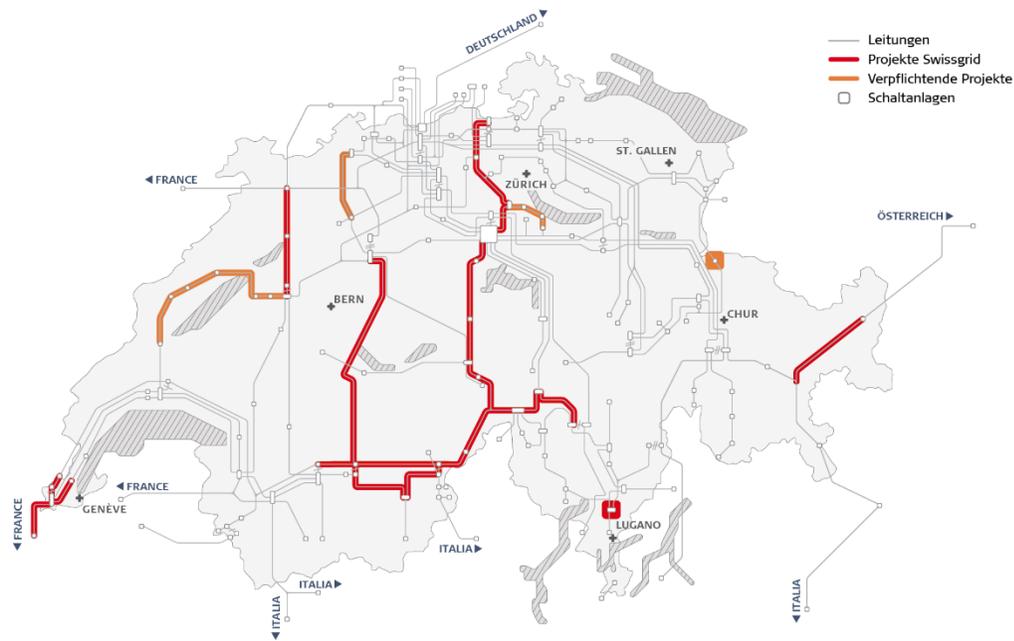
Availability of the right network at the right time

Key points

- Criteria for further development of electricity networks
- Optimisation of licensing procedures for transmission line projects
- Criteria for decision concerning use of cabling or overhead lines
- Better acceptance of transmission line projects



ELECTRICITY NETWORKS STRATEGY: STATUS OF DEBATE



Source: Swissgrid

13 April 2016

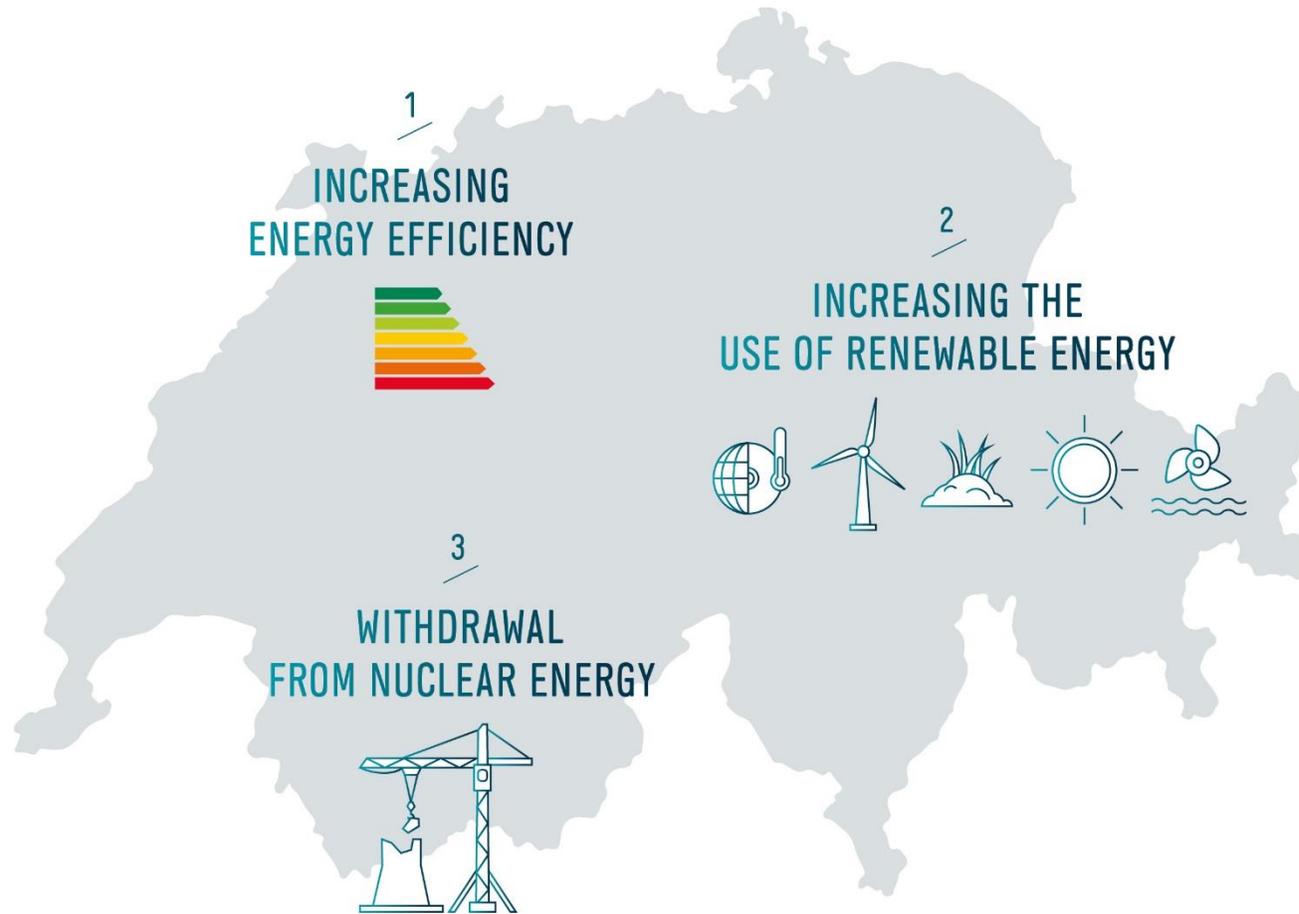
Adoption by Federal Council of Dispatch to Parliament

15 December 2017

Adoption by Parliament in final vote



FURTHER INFORMATION



ENERGIESTRATEGIE2050.CH
BFE.ADMIN.CH