HEXOLOGY

Regulatory tools to promote renewables in Switzerland

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Due to economic and technological developments, as well as various political initiatives, in the energy sector, the Federal Council has developed the Energy Strategy 2050. The strategy aims to maintain Switzerland's high supply standard but also to reduce Switzerland's energy-related environmental impact. The strategy forms the basis for various regulatory tools that aim to support renewables and increase their share in total energy consumption (currently approximately 25%, which represents an increase of over 10% since 1990). Against this background, this article aims to provide an overview of the main regulatory tools currently used in Switzerland to promote renewable energy.

Definition of renewables

The definition of "renewables", under the Swiss Electricity Supply Act (ESA) and the Swiss Energy Act (EA), generally includes:

- hydropower;
- solar energy;
- geothermal energy;
- wind energy; and
- biomass energy.

This definition is more limited than the corresponding definition under the EU Renewable Energy Directive (RED) II, which further includes:

- tide, wave and other ocean energy;
- landfill gas;
- wastewater plant gas; and
- biogas.

Accordingly, the Swiss renewables sector mainly focuses on converting water, wood, sunlight and ambient heat into electricity and district heating, with hydroelectric power taking the lead (approximately 60%). Renewables are predominantly used to produce electricity (approximately 80%).

The share of solar energy of Switzerland's aggregate energy production is low, but its increase over the last few years ranks top in absolute terms compared with other renewables used for both private consumption and industrial use. Solar farms in elevated Alpine areas in particular are expected to play a key role since they also produce energy during the winter season. Biomass is, however, expected to remain at a rather low level due to

Switzerland's limited (production) quantities. Similarly, the share of renewables used for heating in residential and other buildings is still low. However, this is also expected to increase since approximately 75% of buildings built over the past decade use heat pumps.

The regulatory tools under Swiss law to promote renewables can be divided into "direct measures" and "indirect measures", which include carbon dioxide emission targets for vehicles, programmes and tax reliefs for energy-efficient renovations of buildings and smart metering. All measures are based on guideline values for the expansion of electricity production from renewables laid down in the ESA. All financial incentives are generally financed via a surcharge for the use of the grid, which is imposed on the grid operators and deposited in a grid surcharge fund, whereby the grid operators may pass on the grid surcharge to the end consumers.

Direct measures

Faster approval procedures

The cantons are required to provide for timely approval procedures concerning renewables installations. Furthermore, with respect to wind energy installations of national interest, it is currently planned that the possibility to appeal planning approvals be restricted such that the Supreme Court only decides on questions of fundamental importance and not on cases of minor importance.

Obligation to accept and compensate

Grid operators have an obligation to accept renewable energy and biogas in their grid area and to appropriately compensate the producer, provided that the plant does not exceed certain thresholds. The EA further provides for fallback rules if the grid operator and the producer do not reach an agreement on the compensation.

Self-consumption

Any person or entity that produces its own energy has the right to consume and sell this self-produced energy (either fully or partially) at the production location. These selling activities (eg, to neighbours) still qualify as self-consumption, irrespective of whether such person or entity participates in the feed-in tariff system or receives other incentives.

Feed-in tariff system with direct marketing

Certain operators of installations producing energy from renewables, which started operations after 1 January 2013, may participate in a feed-in tariff system. While electricity producers must market the energy that they produced (ie, search for and select the highest bidding buyer), such producers may apply to receive a feed-in premium as a return for the ecological benefit.

The feed-in premium is calculated based on the difference between a predefined, technology-specific compensation rate and a reference market price. The compensation rate is based on the production costs of reference plants applicable at the time. Reference plants are the most efficient technology and must be economically viable in the long term. If the operator can feed in at a higher price than the reference market price, the operator generates a higher income than the feed-in premium without direct marketing. If, on the other hand, the operator feeds in at a lower price than the reference market price, the producer will generate lower income than with a cost-covering feed-in compensation without direct marketing.

Since the marketing of electricity is also subject to various other obligations and requirements (eg, reporting obligations), most producers mandate a specialised direct marketer. The relationship between the producer and a direct marketer is governed by private law.

Investment contributions

Photovoltaic, hydropower, biomass, wind and geothermic installations can apply for investment contributions (ie, one-off payments). For photovoltaic installations without self-consumption, the Federal Council decided to grant

investment contributions via an auction mechanism. The maximum contribution amounts can be summarised as follows:

- photovoltaic installations the maximum is 30% of the investment costs of reference installations or a maximum of 60% if an installation feeds in all its energy produced;
- hydropower installations the maximum is 40% or 60% of certain eligible investment costs;
- biomass the maximum is 60% of eligible investment costs, whereby installations that also use fossil fuel are excluded. In addition, these installations may receive a contribution to operating costs, which is the difference between the contribution rate and the reference market price;
- wind installations the maximum is 60% of eligible investment costs, provided that the installation produces at least two megawatts;
- geothermic installations an investment contribution may be granted for the prospection, the tapping of resources, and the construction of the installation. Each investment contribution amounts to a maximum of 60% of eligible investment cost.

Support for existing large-scale hydropower installations

Operators of large hydropower plants with a capacity of more than 10 megawatts may apply for a market premium to the extent they sell their energy on the market below cost-covering prices. The market premium is intended to compensate for the uncovered production costs but amounts to a maximum of one centime per kilowatt-hour. If the owners instead of the operators bear the risk of uncovered production costs, the owners are entitled to the market premium instead of the operators. The same principles apply to suppliers in relation to the owners if they are contractually obliged to purchase the electricity at production costs or similar conditions.

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