

Tackling the future of electricity through innovation

Annual results media
conference



Aarau, 23rd April 2020

swissgrid

Key milestones

Security of supply

Very high availability of the transmission grid



Grid expansion

Progress in strategic projects and a first with the underground cabling of a section in the 380-kV grid in Bözberg



Innovation

Milestones in market development

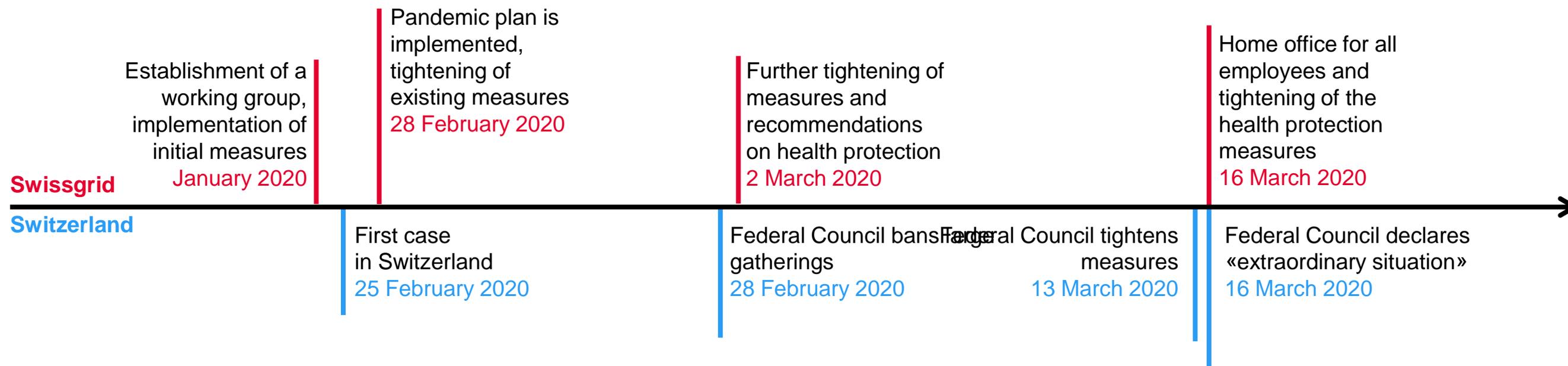


Switzerland in Europe

Constructive solutions thanks to intensive collaboration with European partners

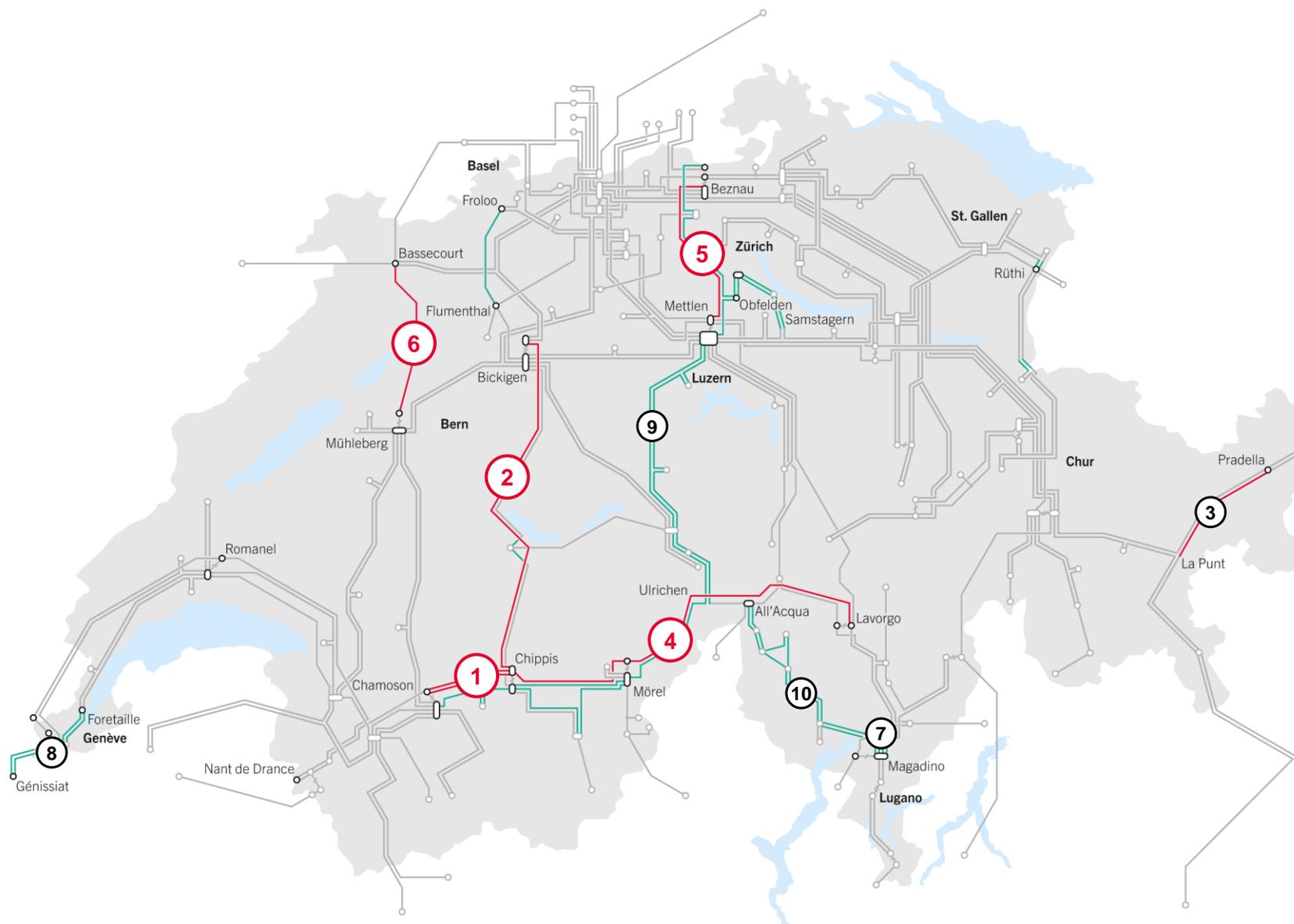


Corona pandemic: security of supply ensured at all times



- Swissgrid's essential role in the supply of electricity as the operator of a critical infrastructure in Switzerland.
- Thanks to a flexible and digital work environment, employees whose role and tasks did not require their presence at the locations were able to switch to working from their home offices without any issues.
- Swissgrid introduced preventive measures early on to ensure the stable operation of the transmission grid and to protect employees and their family members.
- Measures were constantly proactively adapted as the pandemic progressed in Switzerland.

Important progress achieved in grid expansion



Progress in «Strategic Grid 2025» line projects

- ① Chamoson – Chippis
- ② Bickigen – Chippis
- ③ Pradella – La Punt
- ④ Chippis – Lavorgo
- ⑤ Beznau – Mettlen
- ⑥ Bassecourt – Mühleberg
- ⑦ Magadino
- ⑧ Génissiat – Foretaille
- ⑨ Mettlen – Ulrichen
- ⑩ All'Acqua – Maggia Valley – Magadino

- Existing
- 380 kV
- 220 kV
- Substations
- /○ Substations with transformers

A first in line construction in the canton of Aargau

- Grid project between Beznau and Birr: construction of the first underground cable in Switzerland's 380-kV grid along a partial section in Bözberg in the canton of Aargau.
- Construction of two transition structures (TS) for connection with the new overhead line sections.
- Construction work is almost complete. The new line will enter into operation at the end of May 2020.
- Dismantling the old line will relieve the burden on the villages.
- Swissgrid is providing scientific support for the project.

Voltage level: 380 and 220 kV

Number of underground cables: 12

Weight of the underground cables: 21 kg per metre

Total weight of the underground cables: around 380 tons

Costs of the underground cable section: CHF 20 million
(incl. TS)



Additional market-based measures successfully introduced in 2019

- Preparation of the new Transmission Code
- New voltage support concept in force from 1 January 2020
- Integrated market redispatch energy and manually retrieved control energy (schedule activated tertiary control reserve)
- New products in the international primary control energy market: new daily instead of weekly product



Constructive solutions thanks to international collaboration

- Further intensification of the committee work in 2020 to ensure collaboration at the technical level.
- «Switzerland clause» in the new framework agreement for the transmission system operators (Synchronous Area Framework Agreement, SAFA).
- Recognition of Switzerland's important role in ensuring grid security in Europe by the EU Commission and ACER. Welcoming of collaboration at the technical level.
- Challenges remain due to the EU's Clean Energy Package and the associated provisions.





**Swissgrid reliant on the
greatest possible political
support**

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Electricity flows through us.
For Switzerland.
Today and tomorrow.



Financial Report 2019

Financial Outlook

Doris Barnert, CFO / Head of Corporate Services
Aarau, 23rd April 2020

Key points of the 2019 annual financial statements

In millions of CHF	2019	2018	Diff.
EBIT	102.4	119.4	-17.0
Net income	28.8	65.6	-36.8
Total assets ¹⁾	2,994.0	3,004.9	-10.9
Equity ratio ²⁾	38.3%	38.0%	0.3
Distribution of profits	31.5	32.8	-1.3
Free cash flow	166.8	192.5	-25.7

- The **net income** before one-off special effects amounts to CHF 66.7 million and is slightly above the previous year. One-off special effects of CHF 37.9 million have a negative effect on the net income in 2019.
- The **equity ratio** increased slightly and amounts to 38.3% with total assets of CHF 2,897 million ²⁾

Swissgrid is economically strong and in an excellent position for the future.

1) Total assets not including fiduciary items

2) To calculate the equity ratio, the total assets are adjusted for fiduciary items and the net volume- and tariff-related timing differences are taken into account.

Outlook of financial expectations*

Key figure	2020	2021–2024	Expectation
EBIT	→	→	Slight rise for 2020, regulated WACC of 3.83% set by DETEC Moderate increase from 2021 with WACC of 3.83%
Net income	→	↗	Moderate increase for 2020 Increase from 2021
Equity ratio	→	↗	Moderate rise from the existing 38.3% to over 40%
Net financial debt	→	→	Stable at around CHF 1.4 billion
Interest coverage ratio	→	↗	Moderate increase for 2020 Increase due to falling financial expense and moderate rise in EBITDA

*ceteris paribus: compared to the previous year under equivalent conditions, excluding special effects



Equigy – the European Crowd Balancing Platform

Maurice Dierick, Head of Market
Aarau, 23rd April 2020

Transformation in the energy system moves on and must be supported

Changes in energy production

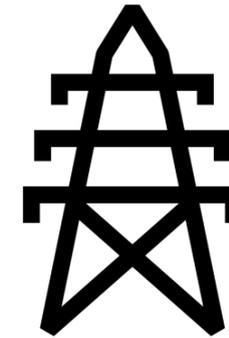
- More, smaller decentralised providers
- New technologies

Fragmentation of the electricity industry

- New players such as aggregators, bringing together small, decentralised providers

Further development and internationalisation of the electricity market

- More dynamism in electricity trading



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Consequences for grid operation

- Controllability of the grid becomes more challenging
- Every electric car, every battery and every PV system must support the energy turnaround
- This development is an urgent issue despite the current COVID 19 situation

Fast and european wide implementation by an international consortium



- Establishment of European, standardised and open access to the control energy market for manufacturers of electric cars and aggregators
- Leading TSOs in Europe with extensive experience: Mutual exchange / Transfer of know-how
- The climate goals of ES2050, CEP, and the Green Deal can only be achieved through transnational cooperation

Collaboration on a European level

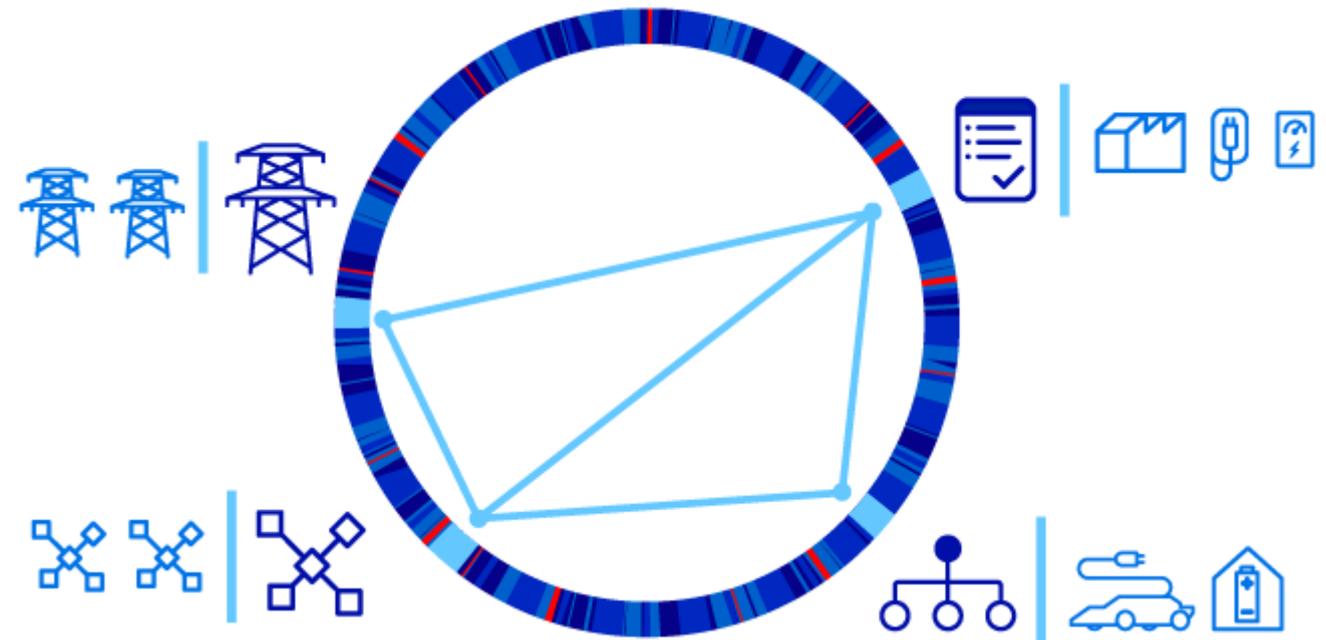
- Creation of a very large market and establishment of the conditions to enable, for example, manufacturers of electric vehicles and operators of storage technologies and aggregators to prequalify for this market.
- Standardization creates the conditions for the large manufacturers to participate.
- The larger the pool, the more providers and the more security for ensuring grid stability



Source: e-Highway 2050 – EU project

Blockchain technology allows everyone to participate in a fast and secure way

- The crowd balancing platform uses blockchain technology and the Internet of Things (IoT).
- Simple and standardized coordination of the many individual providers - electric cars, photovoltaic systems, battery storage
- Secure offer processes and protected use
- All energy transactions are validated and fully and clearly traceable
- An open source strategy is being pursued to guarantee freedom from discrimination and to enable the platform to spread more quickly



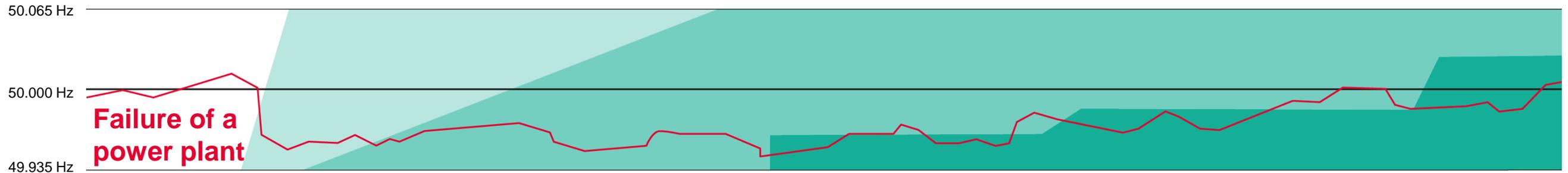
The Equigy pilot project in Switzerland



Primary control: 0.5 minutes after outage

- **Automatically** generated in seconds
- Rapid response due to frequency measurement in the power plants
- **Across Europe**

- Use of the Equigy crowd balancing platform in the market for primary control energy
- Opportunities for market players to work together to develop new models in the market for primary control energy
- Electric vehicles or other technologies can participate in the control energy market as flexibility resources.
- Control and coordination of the charging speed of electric vehicles could provide enough control power to be offered in the control energy market (pooling)



Conclusion

Swissgrid is developing innovative solutions to exploit the changes in the electricity system to ensure the secure operation of the grid.

The shift in electricity generation requires innovative thinking and action to ensure secure and stable grid operation in the long term.

Innovative solutions such as the Equigy Crowd Balancing Platform are needed to successfully implement the Energy Strategy 2050.

The approach has proven successful in other countries, and in Switzerland interested parties now have the opportunity to participate in the pilot project.



Thank you for your attention

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