



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Bundesamt für Energie BFE
Office fédéral de l'énergie OFEN
Ufficio federale dell'energia UFE
Uffizi federal d'energia UFE



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DATA CENTERS IN SWITZERLAND ENERGY RELATED FACTS AND FIGURES



SWISS DATA CENTERS - POWER CONSUMPTION



Source: swisscom.ch



Source: sbb.ch

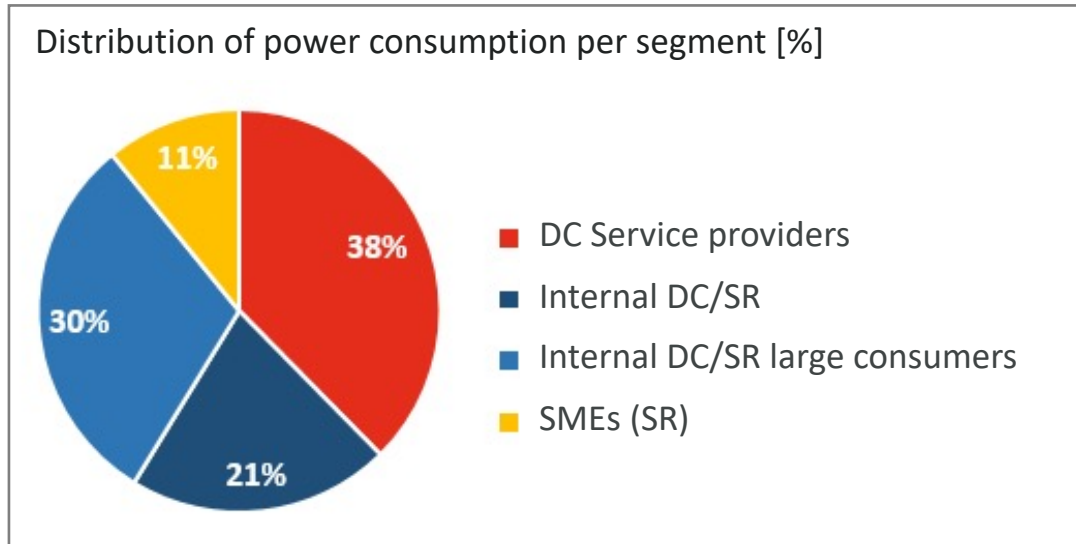
- 2.1 TWh in 2019, or
- 3.6% of Switzerland's electricity consumption*

Source: Rechenzentren in der Schweiz - Stromverbrauch und Effizienzpotenzial, BFE Report 2021



SWISS DATA CENTERS - EFFICIENCY POTENTIAL

Data centers (DC) and **server rooms (SR)** –
distribution of power consumption



Efficiency potential: Power consumption could be decreased by around 46% through suitable measures:

- ~20% on **DC infrastructure**
 - High system temperatures
 - Rack enclosure
 - Separation of warm and cold isles
 - Free cooling
- ~26% on **IT infrastructure**
 - Virtualization
 - Utilization
 - Efficient IT-equipment



SWISS DATA CENTERS – EVOLUTION

Past development

- Power consumption of Swiss DC/SR :
- moderate increase since 2013, **above average compared to the EU**

Outlook

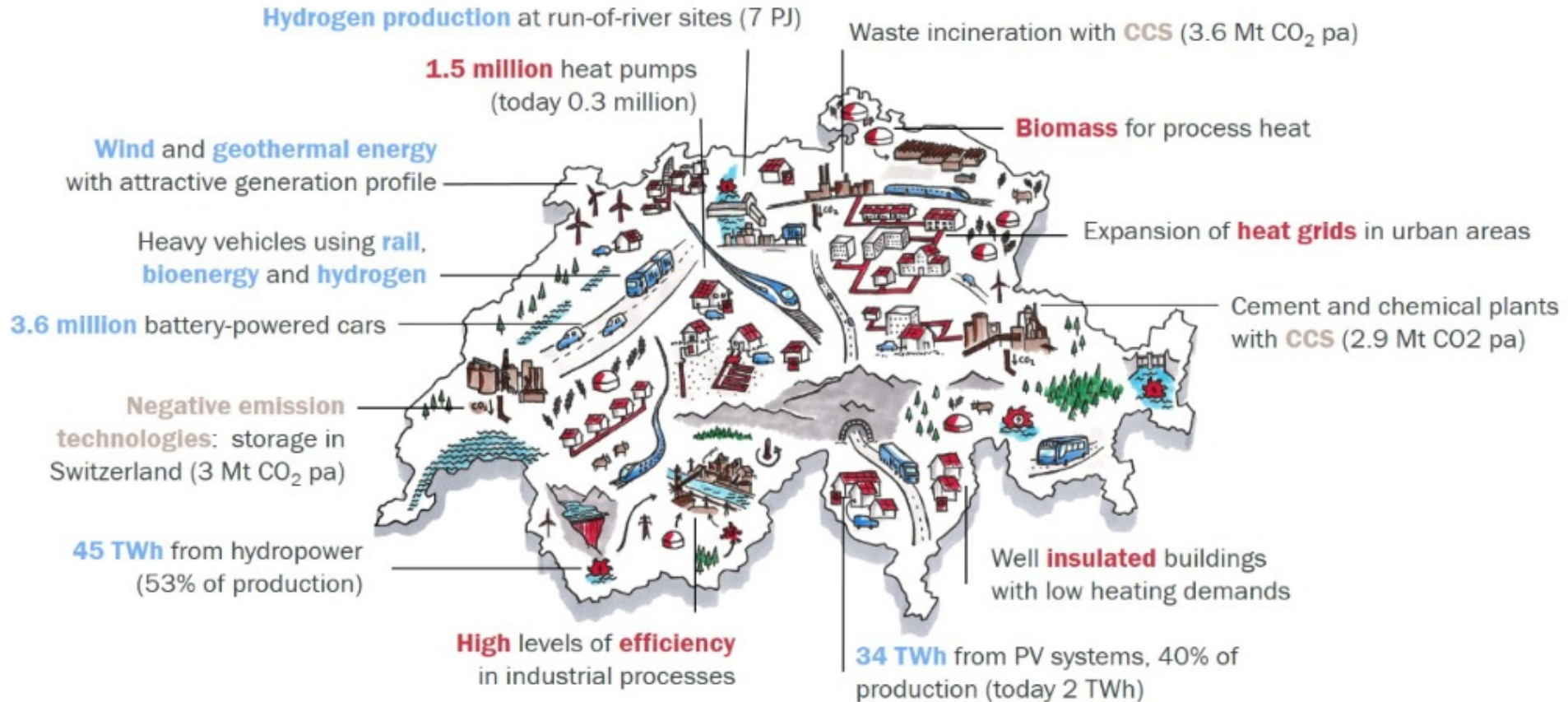
- Many new DCs in planning - especially in the Zurich and Lake Geneva areas;
- Large public-cloud providers entering the market (e.g. Microsoft, Oracle, Amazon etc.);
- Power consumption DC/SR **could increase from 2.1 to around 3 to 4 TWh in the next 5 years**

Digitalization effects – positive or negative?

- Direct consumption
- Efficiency gains
- Production and consumption patterns
- Rebound
- Substitution



ENERGY PERSPECTIVES 2050+



Graphics: Dina Tschumi; Prognos AG

www.energy-perspectives.ch



Production d'électricité selon les technologies

Évolution de la production d'électricité annuelle selon les technologies, en TWh

Scénario: Zero Basis

Variante stratégique: Bilan annuel équilibré en 2050

Durée de vie centrales nucléaires: 50

