

RES Support Schemes: Impact on Energy Transition and Fossil Fuel Substitution

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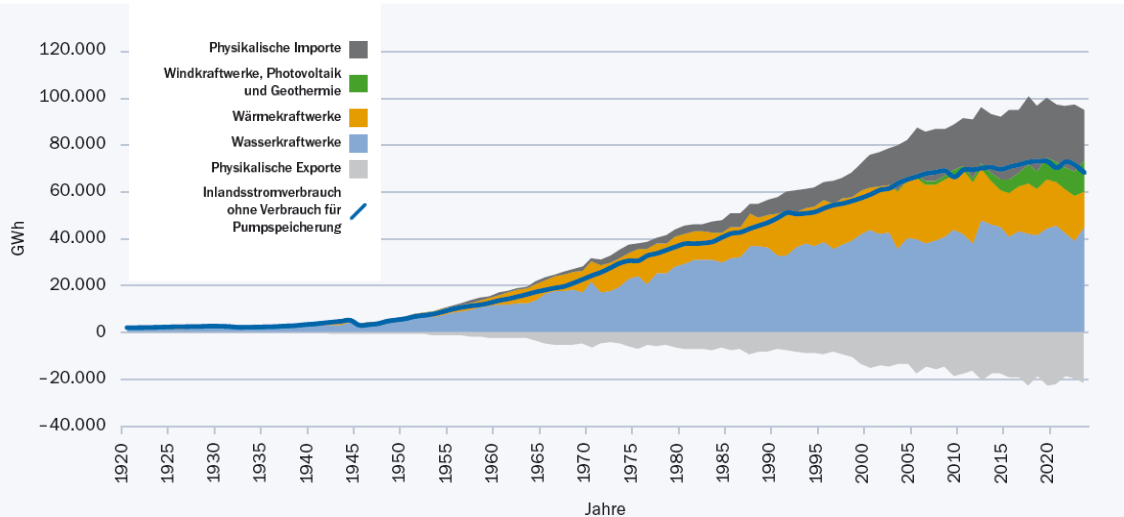
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Key Figures: Renewable Energy

Electricity: total supply and demand



Quelle: E-Control

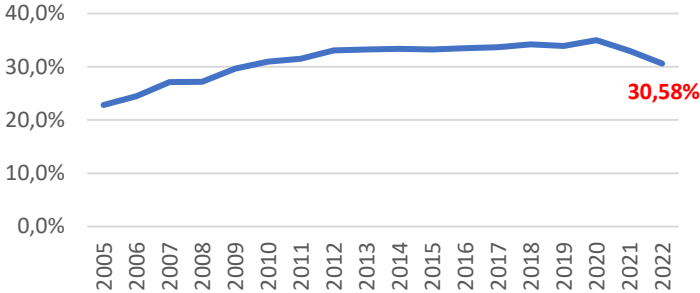
- National electricity demand (without pump storage): 67,7 TWh
- 62,2 TWh generation with RES

= Share RES: 92%

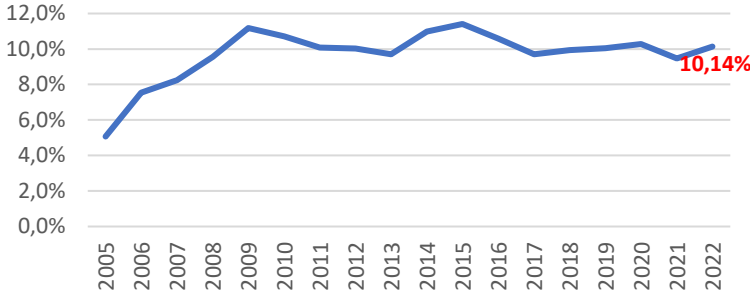
**Target until 2030:
100%**

Key Figures: Renewable Energy

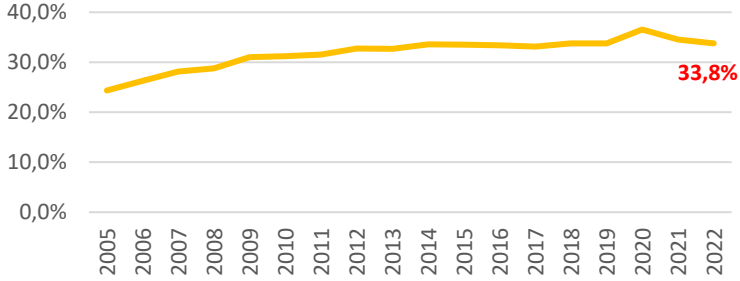
Share RES Heating/Cooling



Share RES Transport



Share RES TOTAL



Overview of Supporting Schemes: FiTs, FiPs, Auctions, etc.

- Electricity:
 - Before 2021: FiTs and Investment support
 - Since 2021: FiPs with Auctions and Investment support
- RES-Gas:
 - Investment support
 - In discussion: Quota system for suppliers
- Heating (biomass, heating-pumps, district heating)
 - Specific Investment support
 - Housing schemes
 - Ect.

Support Scheme “FiPs”: Technological Focus and Key Details

- Introduced 2021
- For wind, PV, biomass
- First auctions in 2022/2023
- Some details:
 - FiPs for 20 years
 - Auction-calendar
 - Specific available load in each round
 - Individual caps for all technologies
 - Temporary possibility to change from FiT to FiP
 - No more single buyer

Support Scheme “FiPs”: Technological Focus and Key Details

Example: Wind Auctions in 2023

Calendar	Available volume in kW	Volume of bids in kW	Number of projects	Lowest succeeding bid in Cent/kWh	highest succeeding bid in Cent/kWh	Weighted average in Cent/kWh
07.03.23	100.000	100.800	18	8,21	8,22	8,22
20.06.23	100.000	52.800	8	8,19	8,22	8,22
26.09.23	147.200	0	0	0,00	0,00	0,00
20.12.23	346.400	154.550	16	9,24	9,28	9,26

Support Scheme “Investment support”: Technological Focus and Key Details

- Introduced 2021
- For small wind, PV, small/medium hydro
- First auctions in 2022/2023
- Some details:
 - Auction-calendar
 - Individual caps for all technologies
 - Specific available load in each round

Support Scheme “Investment support”: Technological Focus and Key Details

Investmentsupport PV:

- 240 Mio. Euro available in 2022
- 328 Mio. Euro available in 2023

Per 31.12.2023 für PV:

- 153.609 PV-applications...
- ...with a total capacity of 3.420 MWp and
- ...59.460 storage systems with a capacity of 1.182 MWh

Support Scheme “FiP”: Strengths and Weaknesses and lessons learned

Strength

- Market based
- Competition

Weaknesses

- Size of the market
- Strategic behaviour
- Insider/market knowledge

Support Scheme “Investment support”: Strengths and Weaknesses and lessons learned

Strength

- One-time-payment very transparent
- Easy to handle for all operators
- No insider/market knowledge necessary
- Best for operators with minimum over-supply

Weaknesses

- Less suitable for those who sell to the market – high dependency/risk according market developments

Future Outlook: Future RES Support Schemes

- How long do we need RES support?
- When do we have full competition between all technologies?
- What targets need to be achieved in which period?
- Different market models require different kind of support – or no support (e.g. Energy Communities, PPAs, etc.)
- Which kind of technologies are necessary in which season/time of the day, etc. – German/Austrian-market: massive oversupply in summer 2024 due to PV → result: negative prices

Future Aspects: Changes Compared to Existing Schemes

- In Europe: transformation from FiT (administrative systems) towards market based systems
- Main questions:
 - Is it a useful transition for any economy?
 - Is this transition suitable to developments, potentials and targets?
- The more RES you need, and the faster it must be, the more 'security of investment' and 'stable and reliable market environment' is necessary

Thank You

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