

Regulatory challenges in shaping the energy transition



Building Competence. Crossing Borders.

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CO2 emission reduction

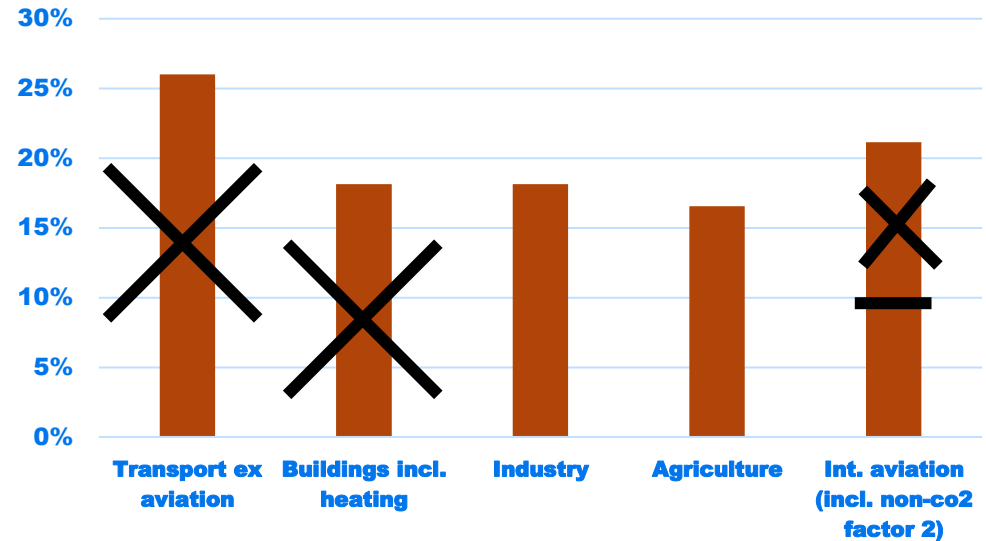
now (!)

- Electric cars (or bike/public transport)
- Heat pumps
- Airplane contrail avoidance

prepare:

- Agriculture
- Cement, waste incineration, chemicals
- Aviation

CO2e Emissions Switzerland 2022



Three statements

Electricity market core is fit for the future

- In a decentralized system, we need fine-grained price signals
- These will continue to form in the wholesale market

Renewable generation must respond to prices

- Equal treatment of self-generation and other production
- Support contracts for solar and wind without market distortion

Demand must respond to prices

- Dynamic tariffs for electric cars and heat pumps
- Secured through price insurance

Problem today: Solar at negative prices

Prices are low at mid-day

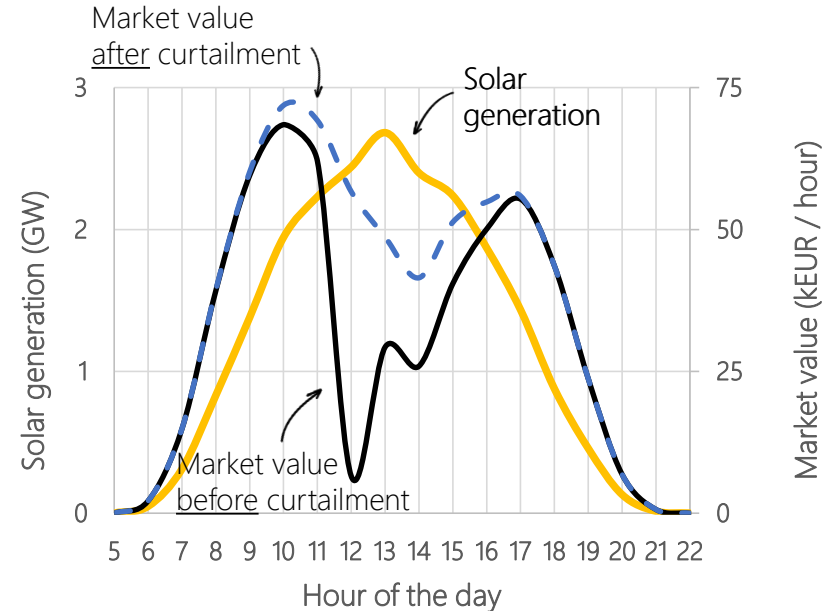
- Reduces solar market value
- Shoulder times generate higher revenues despite lower volumes

Stop producing at negative prices!

- Increases the market value by $\frac{1}{4}$ in July 24
- Otherwise, negative prices "spoil" revenues

→ Prices are important

Solar generation and market values
(July 2024, hourly averages, Switzerland)



We need long-term contracts

Linking producers to consumers

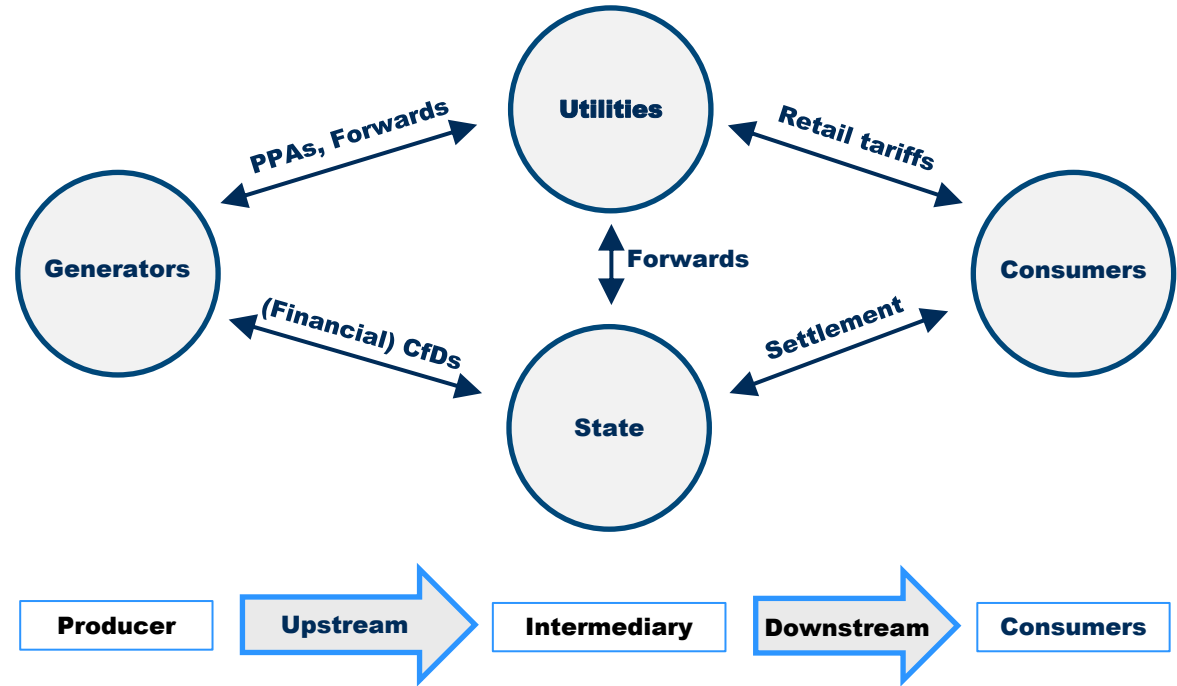
- Anti-correlated price risk
- Reduces investment risks
- Reduces consumer cost risks

Two main routes

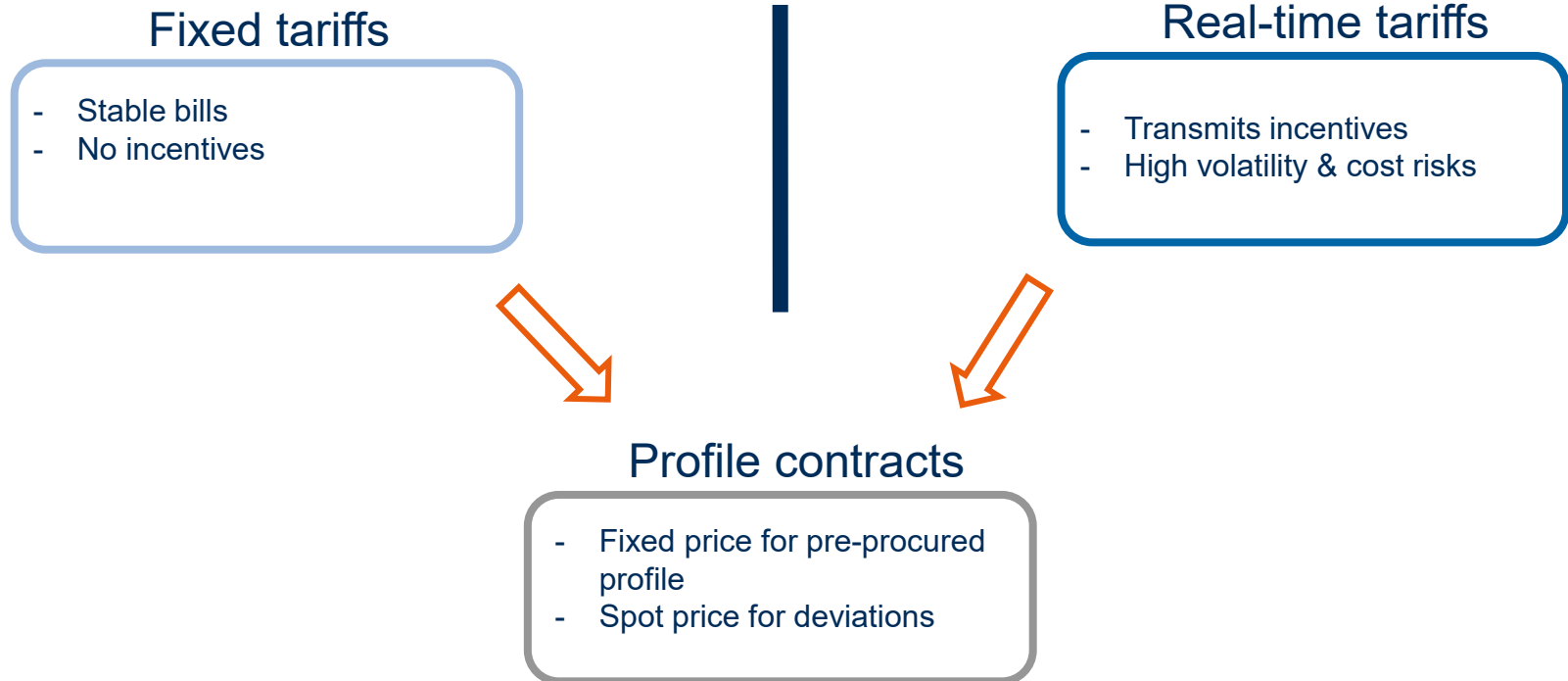
- Utilities as intermediary
- State as intermediary

Contract principles

- Allocating risk
- Preserving incentives
- Regardless of intermediary



Dynamic tariffs with a price insurance



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