Energy communities in Germany

Development and outlook für electricity and heat

Expectations towards energy communities in Moldova

Agenda

- Genesis of electricity energy communities in Germany
- The role of capital costs
- Heating communities

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- The role of capital costs
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Back in the days…

- **Model VWW Herkules**
- **Year of construction: 1921**
- **Operator: Energy Cooperative Großbardorf, Bavaria, Germany**

Picture Source: Agnes Monkelbaan: Nature reserve Petgatten De Feanhoop

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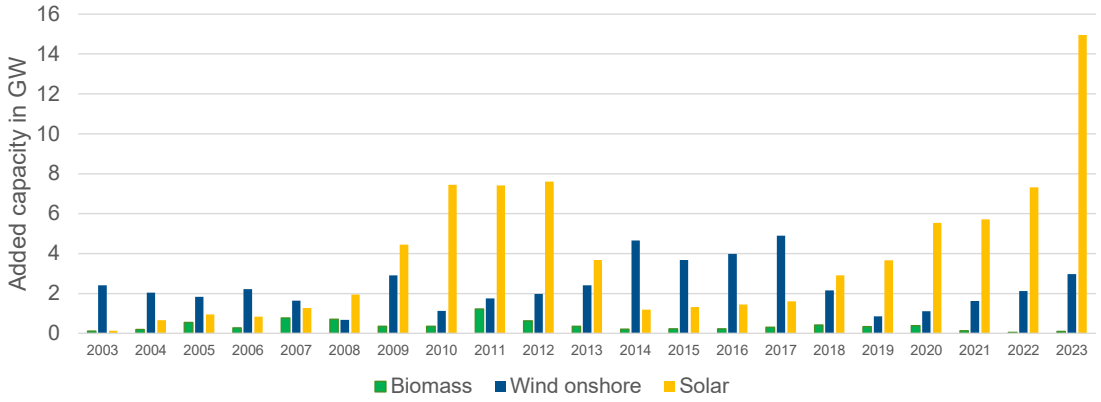
2000 – today: energy transition in waves



Source: Fraunhofer ISE on energy-charts.info

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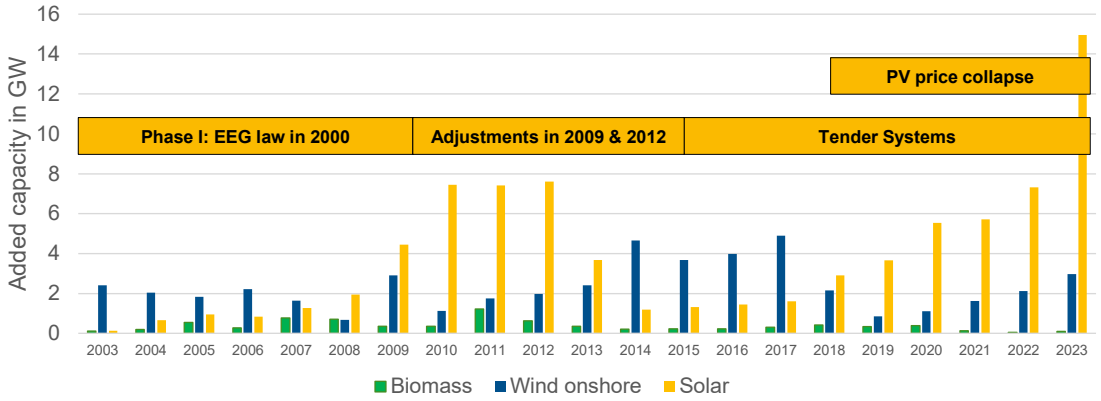
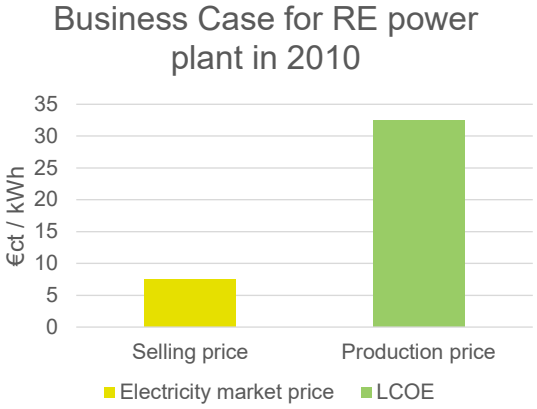
2000 – today: energy transition in waves



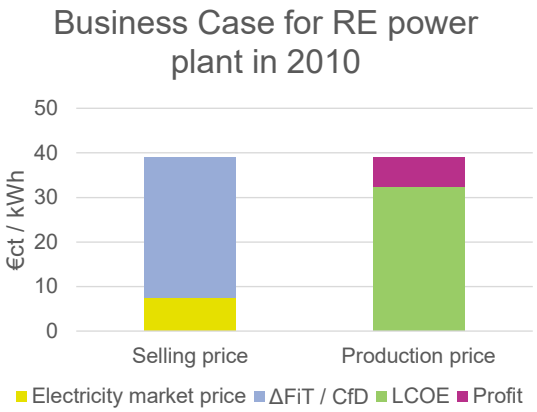
Source: Fraunhofer ISE on energy-charts.info

Guaranteed profits as a mid-wife for energy communities



Source: BDEW (2023); Fraunhofer ISE (2010)

Guaranteed profits as a mid-wife for energy communities



Source: BDEW (2023); BMU (2010); Fraunhofer (2010)

Price risk

- **FiT fixed for 20 years**
- **Guaranteed by law with state & electricity market as guarantee holder**

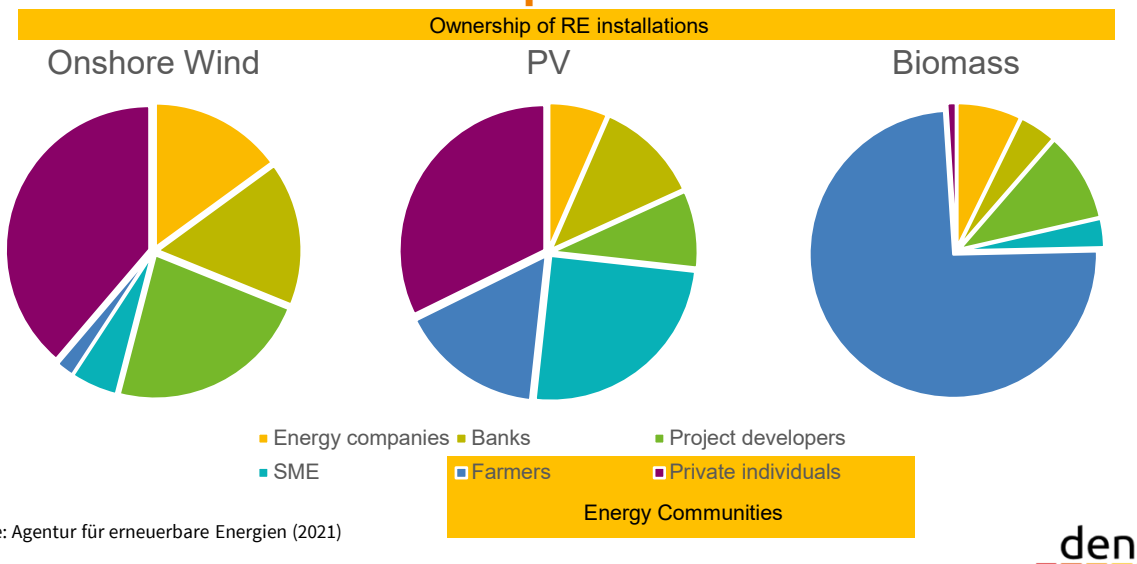
Volume risk

- **Production: predictable**
- **Demand side: priority grid access & vast market**

EEG 2000: Unexpected midwife of energy communities

- **Guaranteed feed-in tarriffs (FiT)**
- **Privileged access to the grid**
- **No fiscal budget burden due to EEG surcharge for electricity consumers**
- **„risk-free“ investment -> bankability**
- **Entering of new market players next to the traditional ones: private persons and communities**

New kids on the block: private individuals



Source: Agentur für erneuerbare Energien (2021)

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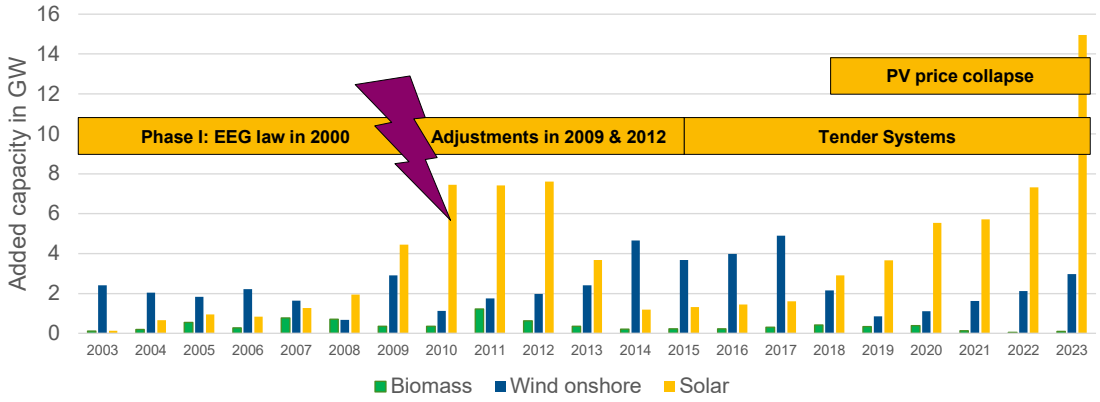
2000 – today: energy transition in waves



Source: Fraunhofer ISE on energy-charts.info

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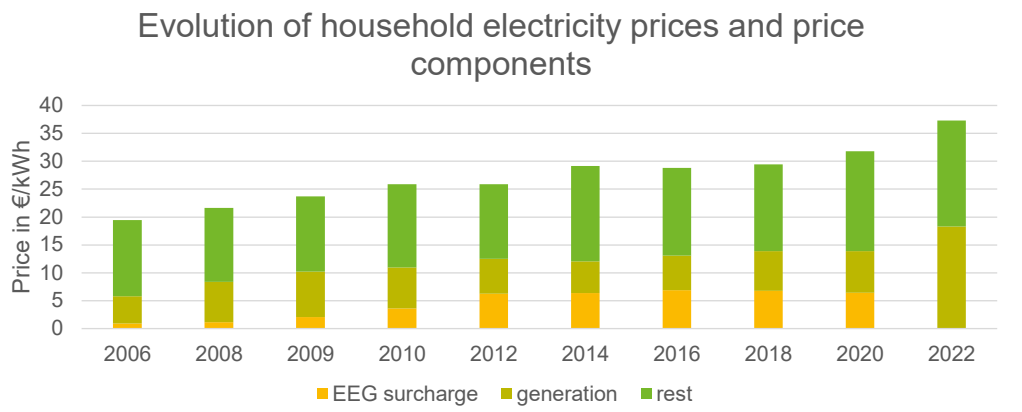
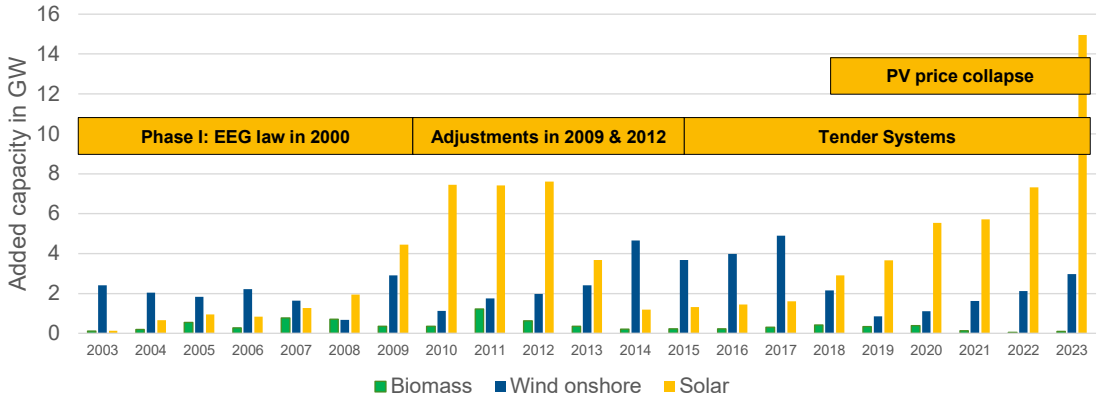
EEG 2000 in crisis: rising electricity prices



Source: BDEW (2023)

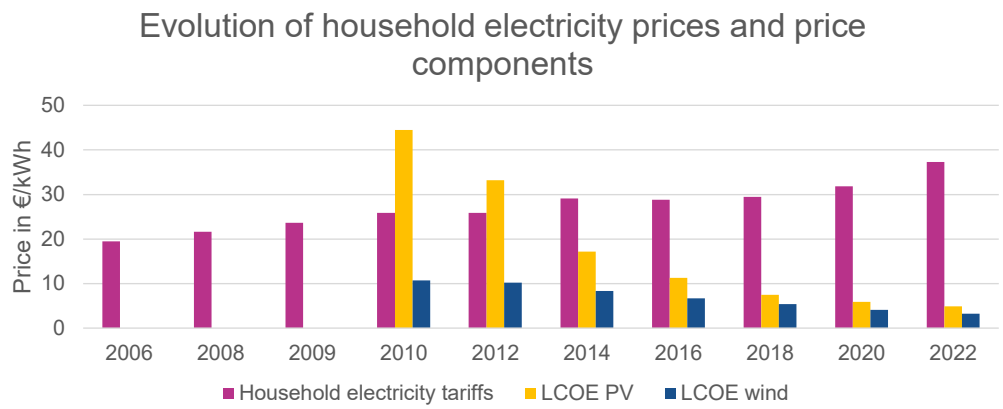
Political decision in 2009 and 2012: reduction of FiT

2000 – today: energy transition in waves



Source: Fraunhofer ISE on energy-charts.info

From profit sharing to energy sharing



Source: BDEW (2023); IRENA (2023)

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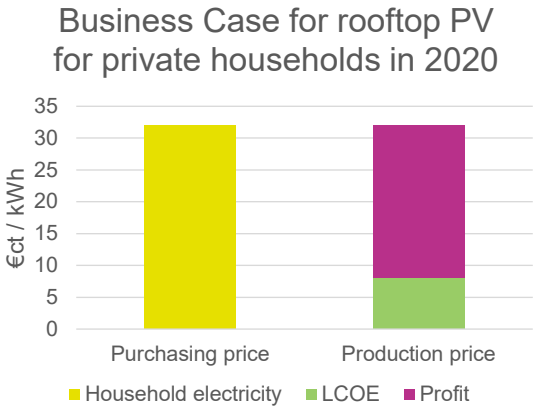
From self-consumption to collective self-consumption



Volume risk

- **Electricity consumption limited to own consumption**

Source: BDEW (2023))

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But energy sharing is not there (yet).

- **Technically legal in Germany (up to debate and probably court decision if RED II is properly ratified)**
- **Obligations as an energy supplier -> enormous transaction costs**
- **Economically barely viable due to grid fees, taxes and levies**

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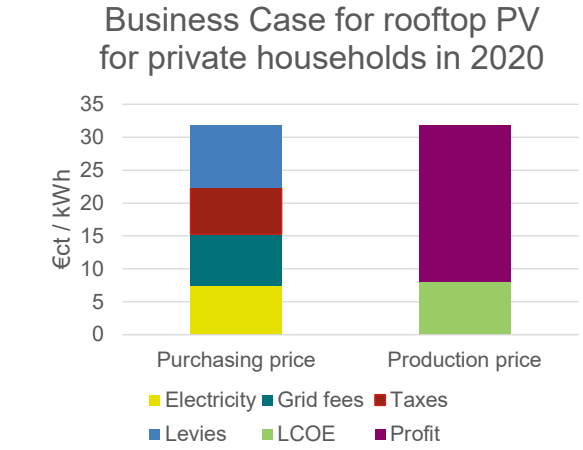
From self-consumption to collective self-consumption



Source: BDEW (2023); Fraunhofer (2021)

Volume risk

- **Electricity consumption limited to own consumption**

Policy Options

- **Purchasing side: excempt from grid fees, taxes or levies**
- **Production side: collective self-consumption premium**

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Summary

- **Energy communities accidental outcome from EEG 2000 law and decentral charateristic of RE**
- **Derisking made projects bankable and therefore accessible to private individuals /energy communities**
- **Energy communities were an investment phenomenon rather than energy phenomenon**

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Thank you.
To be continued in part II:
Finance & Heating communities