

# AURES II – Auctions for Renewable Energy Support II

Final conference

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# Can multi-technology auctions work?

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# What are multi-technology auctions?

- In multi-technology auctions, more than one technology can be awarded in the same auction round:
  - Auctions for all decarbonization technologies: e.g. SDE++
  - Auctions for (almost) all renewable technologies: e.g. Hungarian renewable energy auctions
  - Technology-basket auctions: e.g. combined auctions for onshore wind and PV in Greece
  - Auctions for technology combinations: e.g. auctions for storage and generation in Germany
- Multi-technology auctions are never technology-neutral!

# Impacts of multi-technology auctions

Criterion	Impact of multi-technology auctions
<b>Static efficiency</b>	High as least cost technologies are awarded
<b>Dynamic efficiency</b>	Potentially low as only most mature technologies are awarded
<b>Support costs</b>	Depending on technologies necessary for reaching auction volume
<b>Planning certainty and supply chains</b>	Potentially low due to changes in awards per technology over time
<b>Flexibility</b>	More options for reaching the auction volume can increase competition and flexibility
<b>Auction design</b>	More complex in order to allow for specifics of all involved technologies

Source: <http://aures2project.eu/2022/04/13/the-state-of-multitechnology-auctions-in-europe/>

# Technology bias in multi-technology auctions

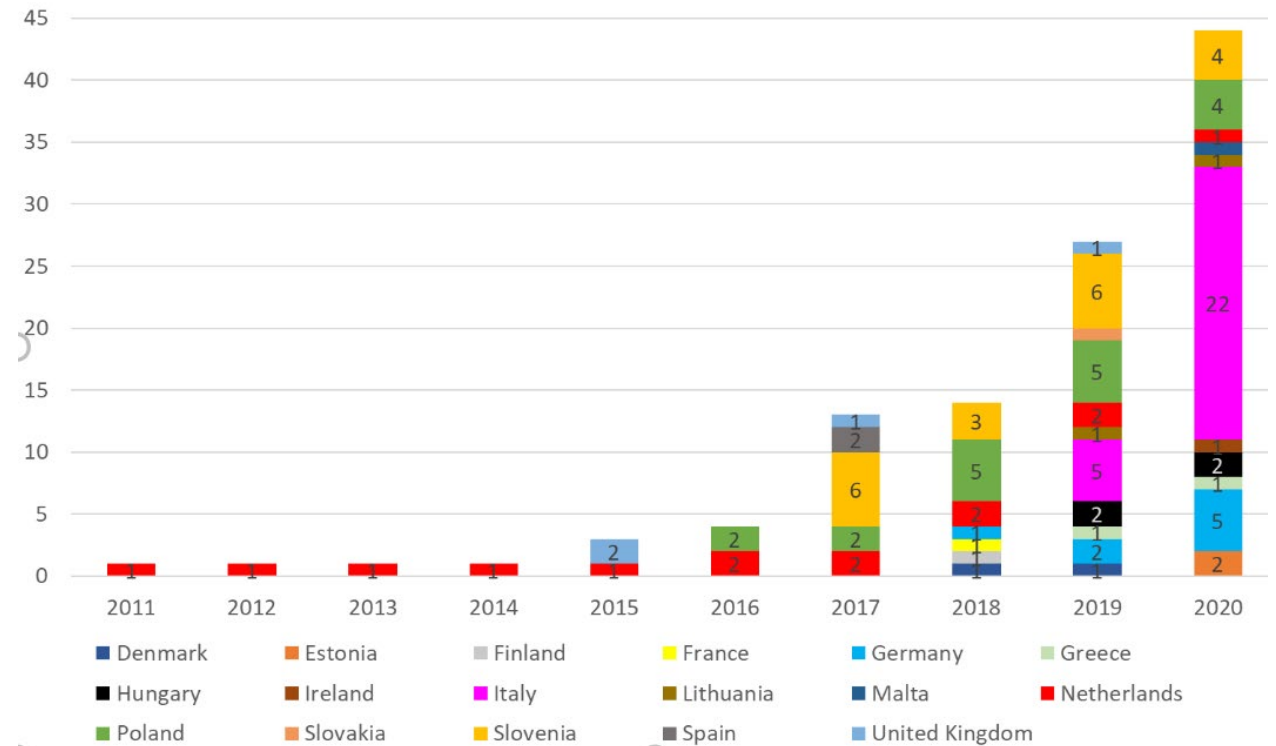
- Auction design parameters influence relative competitiveness of technologies, e.g. longer realization time favors technologies with fast learning rates
- Model-based analysis shows:
  - type of support (type of premium) crucial for technology bias
  - impact of other design elements depends on type of support
  - marginal impact for timing of auctions
  - small impact for realization period and balancing cost responsibility
  - moderate to high impact for support period, integration of grid costs and environmental harm compensation

**Table 50:** The relevance of the analysed design elements for technology bias in all three remuneration schemes, based on the reference values of the baseline scenario.

Relevance of design elements for technology bias in auctions	1-sided sliding premium	2-sided sliding premium (CfD)	Fixed premium
Support period	moderate	moderate	high
Granted realisation period	small	small	small
Timing of the auction	marginal	marginal	marginal
Balancing cost payment responsibility <sup>15</sup>	small	small	marginal
Grid integration cost compensation	high	high	moderate
Environmental harm compensation	high	high	high

# Multi-technology auctions in the EU

- In principle required by Renewable Energy Directive and State Aid Guidelines but exceptions apply
- Numbers increasing
- Results:
  - Stop- and-go can be an issue
  - Dominant technologies can change over time
  - No clear effect on prices compared to single technology auctions
- As always: auction design needs to fit framework conditions and objectives



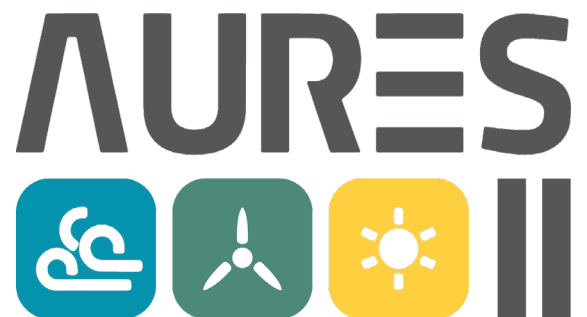
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# Multi-technology auctions can work if...

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- ...MS define specific objectives and adapt design elements accordingly.
- ...targeted technologies are comparable or auction design elements account for differences (e.g. realisation periods, level of financial prequalification).
- ...multi-technology auctions are not competing with technology-specific auctions taking place at the same time.



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## AURES II

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