AURES II – Auctions for Renewable Energy Support II

Final conference

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Brief introduction to RES auctions

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What are RES Auctions?

- Auctions function as **price-finding mechanisms**...
  - Especially well-suited if information asymmetry exists (e.g. between government and private sector on RES generation costs)
- ...as well as **allocation mechanisms**
  - Government procures “RES electricity generation”
  - Project developers bid with suitable projects
- Sometimes we also speak of tenders. These are multi-criteria auctions including price and additional non-price criteria. In practice, the terms auctions and tenders are often used synonymously though.

Benefits and Challenges of RES auctions

Arguments in favour of auctions...	... and not in favour of auctions
Competition decreases (support) expenditures and costs	Unfavourable strategic bidding behaviour → higher support costs and inefficiencies
Ensures allocative efficiency (build lowest-cost projects first)	Risk of under fulfilling RES deployment targets if auction has low participation or realisation rates
Ensure stable and foreseeable investment environment	Higher risks favour bigger players and might increase generation costs
Control over budget/deployed volumes	Considerable administrative costs and learning curve (transaction costs high at the beginning)
Transition to market-based system (i.e. electricity market)	Low competition may lead to inefficient outcomes

Auctions can have multiple benefits, but (smart) auction design is key

Types of RES support instruments and auctions

- In the past, two main categories of RES support instruments/mechanisms have been used: **Price-based** and **quantity-based**

- Auctions combine the **price-based** and the **quantity-based** approach to a common allocation process. They can be used to determine the support level of feed-in tariffs and premiums or investment support.
- Auctions replace an administrative price level setting. In auctions, the government sets the auction volume based on installed capacities, electricity or overall available budget.

Summary of auction design elements

Design element category	Alternative options	Best practice from EU countries
Auction volume	capacity (MW), generation (MWh), budget (€)	Mostly capacity
Timing	regular, irregular (ad-hoc); high frequency, low frequency	No tendency
Prequalification requirements	Material (e.g. licenses, experience, grid connection), financial (e.g. bid bonds and performance bonds)	Almost all countries use both material and financial prequalifications
Remuneration type	capacity (MW), generation (MWh)	Generation-based
Remuneration form	feed-in-tariff, fixed or sliding feed-in-premiums (contracts for difference), quota, investment support, power purchase agreement (PPA) with the government	Mostly sliding feed-in premiums
Design elements to differentiate between technologies, regions, actors etc.	Separate auctions: multi-technology, technology-basket, technology-specific minimum and maximum quotas/shares; bonus and malus systems	In the past, mostly technology-specific auctions; now trend towards multi-technology; Other design elements rare

based on del Río & Kiefer (2021)

Summary of auction design elements

Design element category	Alternative options	Best practice from EU countries
Selection criteria	lowest price (price-only auctions), lowest price and other criteria (multi-criteria auctions)	Mostly capacity
Auction format	single-item, multiple-item	No tendency
Auction type	dynamic, static	Almost all countries use both material and financial prequalifications
Pricing rules	pay-as-bid, uniform	Generation-based
Pricing limits	ceiling prices, minimum prices	Mostly sliding feed-in premiums
Realisation periods	awarded projects should be built by a given date (there may be a grace period)	In the past, mostly technology-specific auctions; now trend towards multi-technology; Other design elements rare
Penalties	applied for non-compliance or delays during the realisation of awarded project	Almost all countries have penalties
Other design elements	e.g. local content rules (equipment to be manufactured domestically), seller concentration rules(minimum number of bidders needs to be reached), information provision (governments providing information to potential bidders)	Rarely applied

based on del Río & Kiefer (2021)

In a nutshell...

- Auctions function as **price-finding mechanisms**...
- ...as well as **allocation mechanisms**
- Auctions have become the **predominant instrument** in the EU and worldwide for renewable energy support
- **Competition** is crucial for auctions to function
- Smart design is key, but: **no "one-size-fits-all"**; should be adapted to local circumstances and desired policy objectives

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