

H2020 Project: Auctions for Renewable Energy Support

8th Renewable Energy Coordination Group

Energy Community Secretariat, Vienna, 12 November 2019

AURES II: EU funded research project on auctions for renewable energy support



Funded by the European Union's **Horizon 2020** Framework Programme for research and innovation (2018 – 2021)

AURES II – objectives



1. Generate and communicate new insights on the applicability, performance, and effects of **specific auction designs**
2. Provide **tailor-made policy support** for different types of auction applications
3. Facilitate **knowledge exchange** between stakeholders

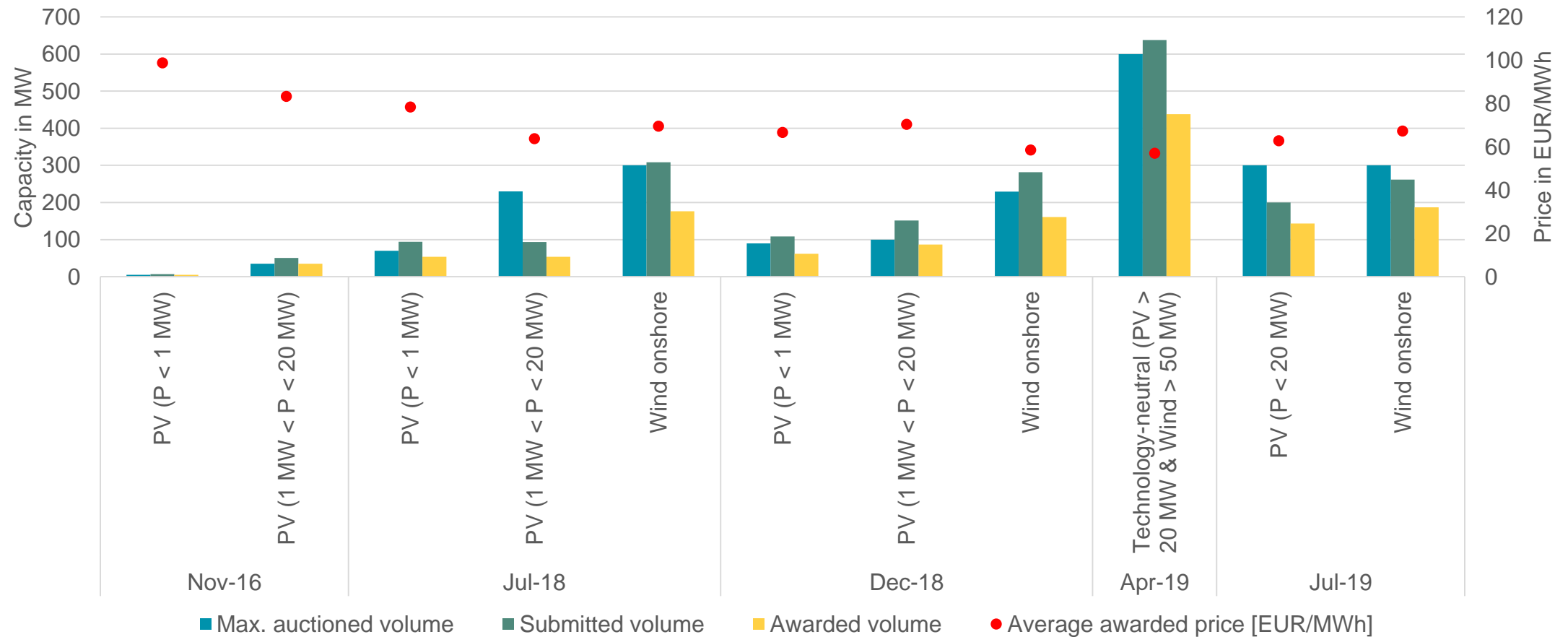
WP2: Monitoring of auction implementation

- So far, several country case studies have been published
 - [Poland](#)
 - [UK](#)
- By the end of the year, the following will follow
 - CSP case study
 - Offshore wind case study
 - Denmark
 - Chile
 - Mexico
 - Argentina
 - Canada
 - Portugal
 - Saudi Arabia
 - Greece
 - Germany

Insights on the Greek auction scheme

- First auction in 2016 (pilot PV auction)
- Mostly technology-specific:
 - PV (differentiation between $P < 1$ MW and 1 MW $< P < 20$ MW)
 - Wind onshore
 - but, technology-neutral (PV > 20 MW and Wind onshore > 50 MW) auctions as well
- Two-round auction procedure
 - Bidders first prequalify to participate in the actual auction
 - Afterwards, dynamic multi-unit auction with the bidders
- “75% rule” in technology-specific auctions, i.e. auctioned volume must be oversubscribed by at least 75% by prequalified bidders (40% from 2019)
- Two stage bid bonds (first 1% of investment cost, after award 4%)

Insights on the Greek auction scheme



Insights on Slovenian auction scheme



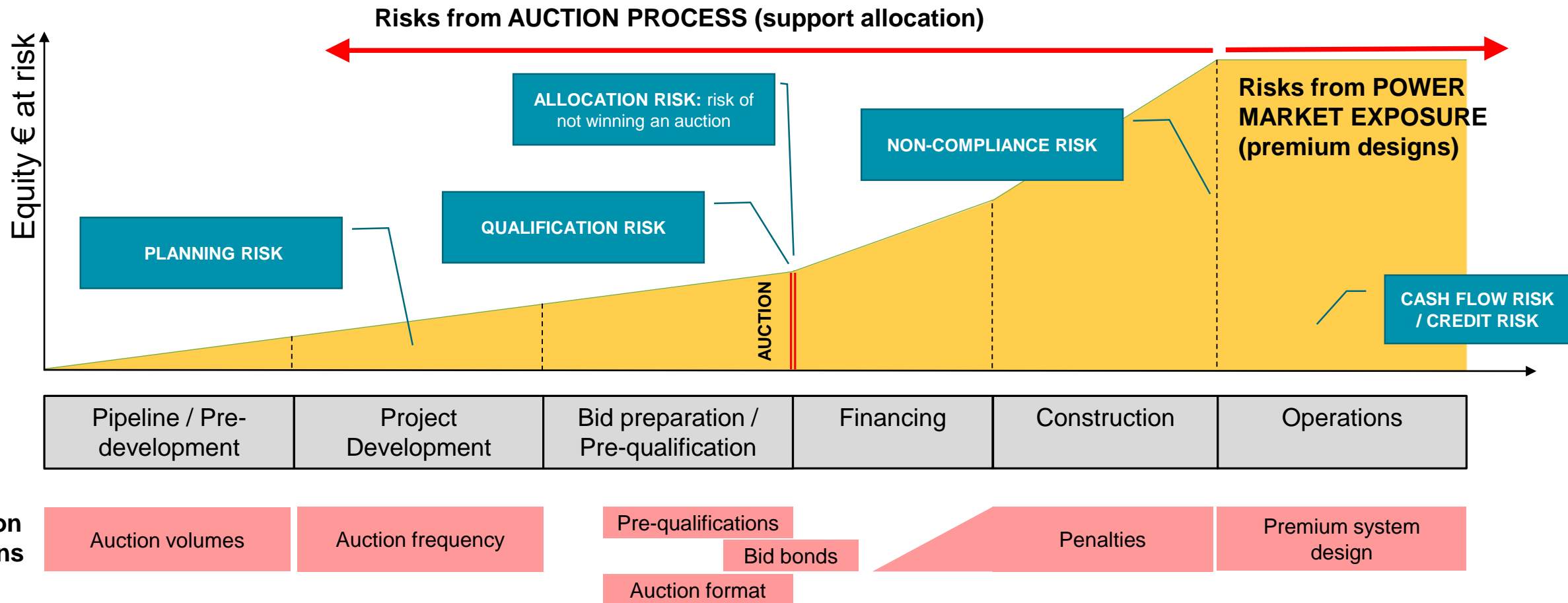
- First auction in 2016
- Two rounds with technology-basket auctions
 - Round 1
 - Group 1: hydro, PV, wind onshore and biogas installations using waste
 - Group 2: RES and CHP generating plants whose operation is based on the purchase or production of fuels and geothermal
 - Round 2
 - In addition to RES and CHP that were not successful in the first round, repowered RES projects can participate
- Budget is auctioned – usually 10 Mio. EUR (Round 1: Group 1 - 7 Mio. EUR, Group 2 - 2 Mio. EUR, Round 2: 1 Mio. EUR)

WP 3: Auction database and empirical insights



- By the end of January 2020, first version of the **AURES II Auction Database** will be online
 - **Auction results** (prices and volumes) and **design elements** of all EU countries that have undertaken auctions so far
 - Final database will be interactive and more advanced (in collaboration with DG ENER)
- Quantitative, descriptive overview and analysis on applied design elements in the EU
- Based on the data, quantitative analysis of the impact of design elements on awarded prices → derive best practises

WP 5: Impact of auctions on cost of capital



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Key findings so far from the recently published report [“Effects of auctions on financing conditions for renewable energy”](#)

- Auction designs such as bid bonds and pre-qualification requirements could have an effect on cost of equity in early project development stages, especially for smaller market actors. These do not have a large impact on costs of debt, as banks get involved in projects only after the auction and when the PPA has been signed
- The remuneration systems (one sided vs. two sided CfD vs. fixed FIP) exhibit the greatest impact on **costs of debt**. This is because they directly affect the revenue predictability of projects, and therefore affect the ability of projects to repay debt. Systems with more price risk, also affect loan tenor and DSCR in a negative way

WP 5: Impact of auctions on cost of capital

- The extent of the effects of individual auction designs on financing conditions, will mostly depend on the **type of actor involved**, and their ability to diversify risk and/or absorb potential sunk costs. Smaller actors might experience a greater impact on financing conditions, than larger actors (energy cooperative vs. utility)
- Auctions could exhibit a positive impact on costs of capital, by enabling **greater support scheme sustainability** and predictable roll out schedules

Next steps:

- Survey in the EU with investors to find out cost of capital
- Quantitative analysis to determine the effects of various design elements on cost of capital

WP 6: International auctions

Key findings from the reports [“Design Options for Cross-Border Auctions”](#) and [“Auction-Theoretic Aspects of Cross-Border Auctions”](#)

- Joint cross-border auction schemes show best results, but complicated to be implemented
- Sequential mutual cross-border auctions show similarly good results
- Parallel auctions, where bidders have to decide where to participate, usually decrease efficient outcomes (holds for technology-neutral and technology-specific auctions in parallel as well)

Next deliverables and reports



| Deliverable | Date |
|--|----------|
| Case study reports on existing auctions | Dec 2019 |
| Report - Effects of auctions on RES value chains | Dec 2019 |
| Briefing paper on the effects of auctions on RES communities and measures to protect those | Dec 2019 |
| Auction Database | Jan 2020 |
| Research paper on multi-technology auctions | Feb 2020 |
| Two peer-reviewed papers on the quantitative analysis of auction results | Apr 2020 |
| Case study reports on planned auctions | Jun 2020 |
| Report on country-specific and European case studies | Jun 2020 |
| Policy brief on cross-border and European RES auctions | Jun 2020 |

Next events

22 November 2019 in
Vienna
2nd Regional Workshop
Community Energy

29 November 2019 in
Copenhagen
3rd Regional Workshop
Offshore Energy hub in the
North Sea

May/June 2020 in
Berlin
4th Regional Workshop



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