

AURES II – Auctions for renewable energy support

Vienna

6 November 2018

Jenny Winkler

Fraunhofer ISI



Contents

- Background
- Project presentation
- Involvement of the Energy Community
- Sample results from AURES (I)
- Next steps

Contents

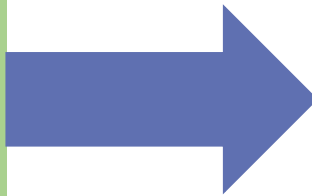
- **Background**
- Project presentation and involvement of the Energy Community
- Sample results from AURES (I)
- Next steps

Background

AUCTIONS FOR RENEWABLE ENERGIES

- Competitive determination of support level
- Quantity control through budget limit or auction volume

REQUIRED BY STATEAID GUIDELINES AND RED II



BENEFITS OF AUCTIONS

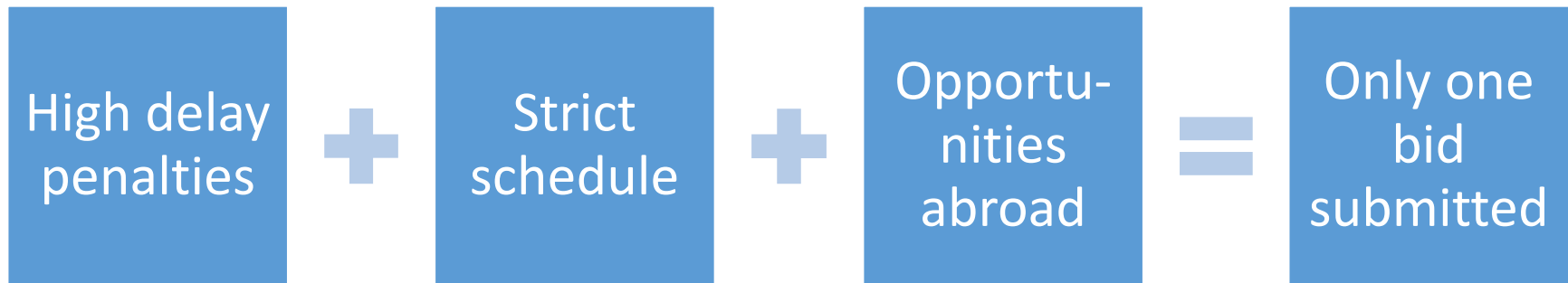
- Cost control/ increased support efficiency/lower support levels
- Increased effectiveness of support and more precise control of renewable extension

BUT: AUCTION DESIGN MATTERS!

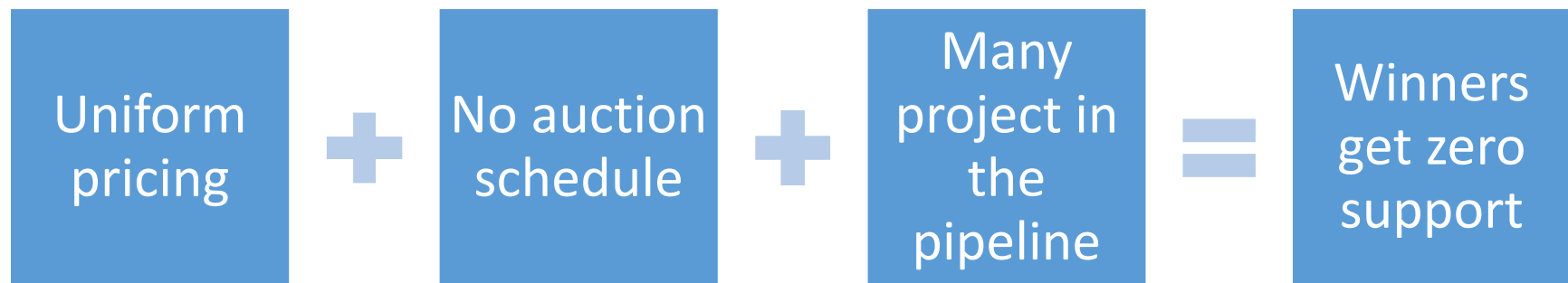
Auction design matters



Offshore wind auction, Anholt (2009/10)



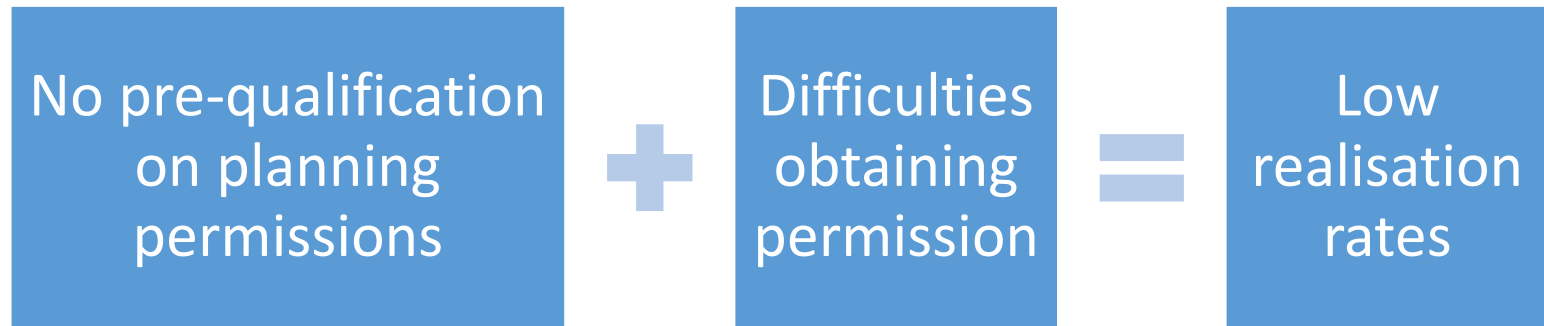
Onshore wind and biomass auction (2016)



Auction design matters



AER III auction, mainly onshore wind (1997/98)



Solar PV, 100-250 kW (2012)



Contents

- Background
- **Project presentation**
- Involvement of the Energy Community
- Sample results from AURES (I)
- Next steps

The AURES projects

- Horizon 2020 projects to support the implementation of auctions in EU MS and (newly) in Energy Community contracting parties
- Evaluation and analysis of auctions for renewables and direct support to interested parties
- AURES I: 2015 – 2017
- AURES II: 2018 – 2021 (Kickoff 26/27 November)

AURES II - Partners



Lead partner:

Fraunhofer ISI

Contact:

Jenny Winkler

jenny.winkler@isi.fhg.de

Vasilios Anatolitis

vasilios.anatolitis@isi.fhg.de

AURES II – Expertise

- Extensive theoretical and practical knowledge regarding the implementation of auctions
- Experience in supporting governments in improving RES support including introduction of auctions in EU countries:
 - Germany (Ecofys, Fraunhofer ISI)
 - Austria (Fraunhofer ISI, TU Vienna)
 - Luxembourg (Ecofys)

AURES II – Objectives

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

AURES II – Work packages

- WP 1: Project management
- WP 2: Monitoring of auction implementation
- WP 3: Auction database and empirical insights
- WP 4: Effects of auctions on the RES sector
- WP 5: Impact of auctions on cost of capital
- WP 6: International auctions
- WP 7: The future of auctions
- WP 8: Modelling
- WP 9: Recommendations
- WP 10: Communication and dissemination

Contents

- Background
- Project presentation
- **Involvement of the Energy Community**
- Sample results from AURES (I)
- Next steps

AURES II – Relevance for Energy Community

- WP 2: Monitoring of auction implementation
 - **Case study** on Energy Community contracting party (regarding the process of implementing auctions for renewables),
Responsible project partner: Ecofys
 - **Cooperation with Energy Community Secretariate** to develop guidance for contracting parties planning to implement auctions,
Responsible project partner: Fraunhofer ISI

AURES II – Relevance for Energy Community

- WP 5: Impact of auctions on cost of capital
 - Survey** regarding the effects of introducing auctions on risk perception of different stakeholders (including Energy Community Contracting Parties)
 - Responsible project partner:** Eclareon

- WP 6: International auctions
 - **Case studies of cross-border auctions** between EU MS and/or Energy Community contracting parties in cooperation with national stakeholders (incl. impact assessment)
 - Responsible project partner:** Ecofys

AURES II – Relevance for Energy Community

- Budget is available for
 - answering questions of policy makers in the process of implementing or conducting auctions
 - this includes support to defining exemptions from the required introduction of auctions (e.g. due to a low level of competition)
 - workshops in different countries with topics concerning auctions for RES support

AURES II – Relevance for Energy Community

- Budget is available for:
 - Case cooperation with policymakers (3-5 cases) on national auction schemes and on cross-border cooperation
 - Direct support of interested countries through ad-hoc studies, expert advice and bi- and multilateral meetings
 - Participation of AURES II experts in 30 external events
 - 6 regional workshops

Contents

- Background
- Project presentation
- Involvement of the Energy Community
- **Sample results from AURES (I)**
- Next steps

AURES results

- Cash-flow model
- Overview of main design elements for auctions
- Case studies
- Policy Memos
- AURES Auction designer
- **Website: <http://auresproject.eu>**

Auction designer

The screenshot shows a web browser with two tabs: 'Auction tools | AURES' and 'AURES auction tool'. The address bar shows 'auresproject.eu/auctiondesigner'. The page header includes the AURES logo and the tagline 'PROMOTING EFFECTIVE RENEWABLE ENERGY AUCTIONS'. The main heading is 'AURES Auction Designer'. A progress bar at the top right shows steps 1 through 9: START, ESSENTIALS, FORMAT, BIDDERS, TYPE, PRICING, PAYMENT, DESIGN, and SUMMARY. Below this, a summary bar displays: 'SUMMARY: COUNTRY: N/A TECHNOLOGY: N/A SUPPLY/DEMAND RATIO: N/A FORMAT: N/A TYPE: N/A PRICING RULE: N/A PAYMENT: N/A' with a 'SHOW ALL' button. The main content area is split into two columns. The left column has a sub-heading 'Design your renewable electricity auction' followed by a paragraph asking about policy maker interest in renewable energy auctions. Below this is another paragraph explaining that the tool is a free online tool developed by the AURES project. The right column contains a paragraph about playing with design elements and another paragraph about obtaining useful feedback by entering realistic answers and downloading an info sheet. At the bottom right, there is a 'Choose a country' dropdown menu with 'Select' as the current selection and a blue 'Continue' button.

Auction tools | AURES × AURES auction tool × +

auresproject.eu/auctiondesigner

AURES PROMOTING EFFECTIVE RENEWABLE ENERGY AUCTIONS

Auction Designer

AURES Auction Designer

1 2 3 4 5 6 7 8 9
START ESSENTIALS FORMAT BIDDERS TYPE PRICING PAYMENT DESIGN SUMMARY

SUMMARY: COUNTRY: N/A TECHNOLOGY: N/A SUPPLY/DEMAND RATIO: N/A FORMAT: N/A TYPE: N/A PRICING RULE: N/A PAYMENT: N/A [SHOW ALL](#)

Design your renewable electricity auction

Are you a policy maker interested in allocating support for renewable energy installations via auctions? Do you want to understand which are the most common auctions for renewable energy support? Do you need to know more about which auction design has which effects on auction performance?

The **AURES Auction Designer** is a free online tool developed by the [AURES project](#). It takes you through the most important questions which need to be answered by anyone trying to set up a successful renewable energy auction. The tool is interactive. Feel free to skip between the questions, try out

different options, and play around with different design elements to observe their effects.

However, keep in mind that you will obtain the most useful feedback if you enter realistic answers. Therefore, if you want to prepare your data first, download our [info sheet](#) with background information and a list of the questions you will be asked when going through the tool.

Choose a country

Select

Continue



START



ESSENTIALS



FORMAT



BIDDERS



TYPE



PRICING



PAYMENT



DESIGN



SUMMARY

Total	Biogas	Biomass	Geo-therm	Hydro (large)	Hydro (small)	PV	CSP	Tide/Wave	Onshore wind	Offshore wind
-------	--------	---------	-----------	---------------	---------------	----	-----	-----------	--------------	---------------

Installed capacity 2014 [MW]

?

12463	615	917	0	6821	1239	785	0	-	2086	0
-------	-----	-----	---	------	------	-----	---	---	------	---

NREAP planned capacity 2020 [MW]

?

13165	102	1164	1	7707	1291	322	0	0	2578	0
-------	-----	------	---	------	------	-----	---	---	------	---

Multiple technology	Biogas (> 1 MW)	Biomass (> 1 MW)	Geo-therm (> 1 MW)	Hydro (> 10 MW)	Hydro (> 1 MW)	PV (> 1 MW)	CSP (> 1 MW)	Tide/Wave (> 1 MW)	Onshore (> 1 MW)	Offshore (> 1 MW)	Small plants (< 1 MW)
---------------------	-----------------	------------------	--------------------	-----------------	----------------	-------------	--------------	--------------------	------------------	-------------------	-----------------------

Select a technology for which you want to explore auction designs

?

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Deployment target [MW] in the next 5 years

?

Number of auctions during the next 5 years

?

Volume per auction [MW]

?

Read more

Expected market potential per auction [MW]

?

Return to START

Continue to FORMAT



START



ESSENTIALS



FORMAT



BIDDERS



TYPE



PRICING



PAYMENT



DESIGN



SUMMARY

Design elements

Vary the design elements below to observe their effect on auction performance.

Ceiling prices Read more

Slider control for Ceiling prices, ranging from none to ambitious.

Material Prequalifications Read more

Slider control for Material Prequalifications, ranging from lenient to strict.

Financial Prequalifications Read more

Slider control for Financial Prequalifications, ranging from lenient to strict.

Penalties Read more

Slider control for Penalties, ranging from lenient to strict.

Bidder restrictions Read more

Slider control for Bidder restrictions, ranging from loose to tight.

Secondary objectives

Which criteria, apart from prices, are important to you in your auction?

Actor Diversity Read more

Dropdown menu for Actor Diversity, currently set to No.

Geographical distribution Read more

Dropdown menu for Geographical distribution, currently set to No.

Domestic industry development Read more

Dropdown menu for Domestic industry development, currently set to No.

System integration Read more

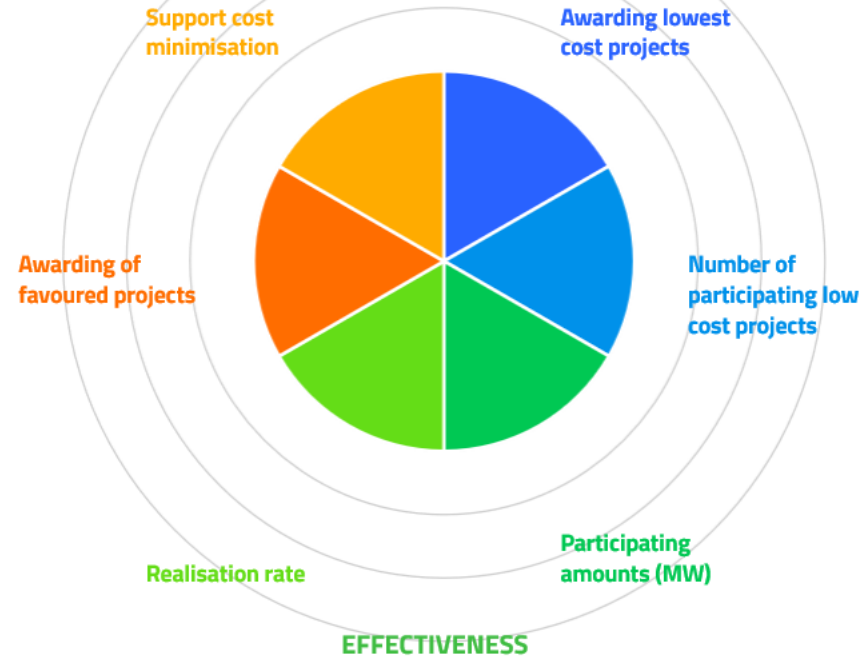
Dropdown menu for System integration, currently set to No.

Technical specifications Read more

Dropdown menu for Technical specifications, currently set to No.

SOCIO-POLITICAL ACCEPTABILITY

ALLOCATIVE EFFICIENCY



[Read explanation for dimensions in chart](#)

Design elements

Vary the design elements below to observe their effect on auction performance.

Ceiling prices Read more

none ambitious

Material Prequalifications Read more

lenient strict

Financial Prequalifications Read more

lenient strict

Penalties Read more

lenient strict

Bidder restrictions Read more

loose tight

Security

When

Geograph

No

Domestic

No

System in

No

Technical

No

Prequalification requirements regarding project development stage

The measure

Prequalification requirements regarding the project development stage are intended to ensure that all bidders are serious and have a sound understanding of their project. Moreover the requirements can help prevent occurrences of unforeseen obstacles, which may otherwise result in delays or non-realisation of projects. The required documentation is typically a detailed project description, grid access guarantee, land tenure, environmental permits and construction permits. For small installations, more relaxed requirements are also possible.

Real-life examples

The [Irish](#) AER III auction suffered from low realisation rates. While part of the winning bidders had difficulty obtaining planning permission and their projects were thus not realised, there were at the same time significant potential wind park capacities holding planning permission but not an AER contract. In order to address this problem, the following auction rounds required all bidding projects to have secured planning permission. Later auction rounds also required bidders to hand in an indicative cash flow statement showing that the proposed project could at least break even.

In the [Dutch](#) SDE+ scheme, project developers are required to present a written permission of the owner of the location/land, a (technical) description of the installation, and a feasibility

Close



START



ESSENTIALS



FORMAT



BIDDERS



TYPE



PRICING



PAYMENT



DESIGN



SUMMARY

Design elements

Vary the design elements below to observe their effect on auction performance.

Ceiling prices [Read more](#)

Slider control for Ceiling prices, ranging from none to ambitious.

Material Prequalifications [Read more](#)

Slider control for Material Prequalifications, ranging from lenient to strict.

Financial Prequalifications [Read more](#)

Slider control for Financial Prequalifications, ranging from lenient to strict.

Penalties [Read more](#)

Slider control for Penalties, ranging from lenient to strict.

Bidder restrictions [Read more](#)

Slider control for Bidder restrictions, ranging from loose to tight.

Secondary objectives

Which criteria, apart from prices, are important to you in your auction?

Actor Diversity [Read more](#)

Dropdown menu for Actor Diversity, currently set to No.

Geographical distribution [Read more](#)

Dropdown menu for Geographical distribution, currently set to No.

Domestic industry development [Read more](#)

Dropdown menu for Domestic industry development, currently set to No.

System integration [Read more](#)

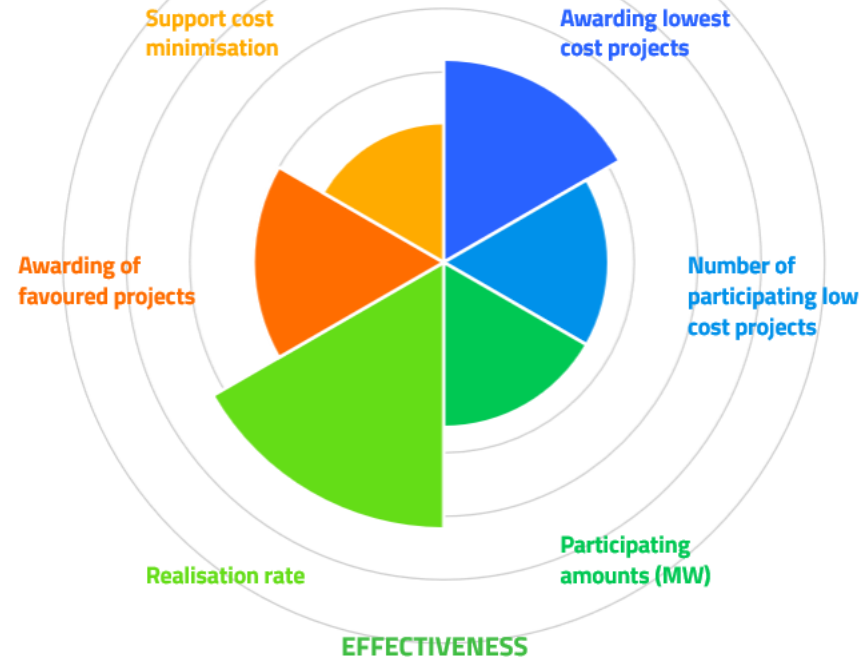
Dropdown menu for System integration, currently set to No.

Technical specifications [Read more](#)

Dropdown menu for Technical specifications, currently set to No.

SOCIO-POLITICAL ACCEPTABILITY

ALLOCATIVE EFFICIENCY



[Read explanation for dimensions in chart](#)

Contents

- Background
- Project presentation
- Involvement of the Energy Community
- Sample results from AURES (I)
- **Next steps**

Next steps in AURES II

- Kick-off meeting in Brussels (26/27 November)
- After: project team will contact Energy Community Secretariate again
- Ideas regarding case studies can already be communicated to project team now (via me)
- Questions around RES auctions and interest in closer cooperation or advice can already be communicated
- Active participation is of course very welcome!

Thank you for your attention!

Contact:

Jenny Winkler

jenny.winkler@isi.fhg.de