

Policy Brief, January 2022

De-risking & scaling-up renewables through market-based policies

Practices from EU & the world – COP26 AURES II side event





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1 Introduction

With an amplified sense of urgency for more ambitious climate action, countries around the world are increasing their renewable energy targets and measures. In the light of major transformations of the energy system, renewable energy (RE) policies need to ensure that clean energy will be scaled-up, affordable and integrated into the power system. Well-designed market-based policies, particularly auctions, can implement Nationally Determined Contributions (NDCs), attract investments, and reduce costs.

During the last United Nations Conference of the Parties (COP26) in Glasgow (November 2021), our AURES II team organized a hybrid side event at the EU Pavilion under the title “De-risking & scaling-up renewables through market-based policies – practices from EU & the world”. The event was recorded and can be accessed [here](#). The main objectives of the event were to:

- Convey the message that well-designed auctions can help implementing NDCs, attract investments and reduce costs of RE.
- Share with the international community best practices on how to design competitive procurement to de-risk and scale-up renewable energies.
- Provide insights and recommendations from around the world by the expert speakers.
- Ask the experts about their insights into future developments, for example, on phasing out support, corporate PPAs, hydrogen, just transition in procurement, etc.

Experienced professionals working on the field of auctions joined the panel discussion to offer unique design learnings and best practices from real cases around the world, representing different types of RE markets and power systems:

- Adil Hanif from the European Bank for Reconstruction and Development (EBRD)
- Naida Taso from the Energy Community Secretariat (ECS)
- Diala Hawila from the International Renewable Energy Agency (IRENA)
- Sarah Lawson from the United States Agency for International Development (USAID)
- Devon Swezey from Google

From the AURES II team, Fabian Wigand (Guidehouse) moderated the on-site panel discussion, Vasilios Anatolitis (Fraunhofer ISI) introduced the AURES II project to the audience, Ana Amazo Blanco (Guidehouse) moderated the interaction with the audience through an online survey (using Mentimeter), and Agustin Roth (Guidehouse) collaborated with the organization of the event.

This policy brief collects and summarises the main take-aways and recommendations from the expert panellists that participated in the event.



2 Learnings from the AURES II Project

At the beginning of the panel discussion, the AURES II team shared with the public the main learnings obtained through the implementation of the project, which are summarised below.

Auctions as competitive procurement tools have become an important incentive allocation mechanism for new RE projects worldwide. By 2020, 116 countries had held auctions, up from 98 in 2018. Renewable energy auctions have shown to be a cost-effective tool to allocate public support for the energy transition. In general, bidders offer to build projects for a price in response to the volume of the auction (defined by the auctioneer, usually the government). Qualified bids are ranked from lowest to highest price and later are awarded up to the point where renewable energy supply meets demand. In this way, the auction matches the volume demanded with the most competitive offers supplied.

However, the decarbonisation of the power sector alone is not sufficient for the required climate action. Decarbonising other sectors, such as transport and heating and cooling, is needed to achieve climate neutrality. Therefore, more RE power will be crucial either for the direct electrification of these sectors or to support the decarbonisation in sectors and applications resistant to electrification (for example, through green hydrogen).

The broader decarbonisation demands, hence, linking climate action to procurement programs and thus, policymakers need to consider:

- How more ambitious NDCs & increased decarbonisation of other sectors increase the need for higher auction volumes and long-term procurement planning.
- How auction design can include climate resilience requirements.

Besides, the notion of risk is a central piece in every auction discussion and planning since it increases the cost of capital for developers and thus affects the costs of scaling up renewable energies.

As discussed in an earlier AURES II report¹, while policymakers often only have an indirect influence on exogenous risk drivers, e.g., capital market conditions or general country risk, they have a direct influence on many endogenous drivers, such as the auction and support design. Auction-specific risks such as qualification, allocation, non-compliance, and market exposure risk can be influenced and to some extent mitigated by careful auction design. Based on the referred report, certain design elements' options should be considered to address auction-specific risks, as described in Table 1 below.

¹ <http://aures2project.eu/2021/09/29/fit/>



Table 1 – Auction-specific risks and respective design elements

Risk	Design element
<p>Qualification risk: is the risk that a bidder prepares but does not fully and timely meet an auction’s prequalification requirements and is therefore disqualified from the auction.</p>	<ul style="list-style-type: none"> • Sufficient lead time • Realistic requirements to encourage a high competition level • Multi year auction schedules can encourage market entry
<p>Allocation risk: bidder prepares bid, participates in the auction but does not win. Bid preparation costs become sunk costs.</p>	<ul style="list-style-type: none"> • Disclosing a long-term auction schedule with a regular frequency can mitigate some allocation risk and improve financing conditions • Sufficiently large volumes to ensure the participation of a high number of bidders but at the same time maintain competition.
<p>Non-compliance risk: refers to the risk that a bidder does not meet contractually agreed deadlines or production obligations and thus must pay penalties or lose the awarded contract.</p>	<ul style="list-style-type: none"> • Reasonable prequalification requirements to ensure seriousness of bidders. • Realistic project realization deadlines that are consistent with the project development timelines of the respective technology they apply to. • Apply gradual penalties that are proportional to the extent of the commissioning delay because this allows for controlling the impact on future cash flows in a more nuanced way than applying the full penalty.
<p>Revenue or market exposure risk: project revenue exposed to price volatility in electricity markets leads to unsecured revenues.</p>	<ul style="list-style-type: none"> • Support/incentive with some form of revenue stabilisation (e.g., CfD).

3 Challenges and best practices around the world

The important role of auctions as a market-based instrument to foster a deeper and faster decarbonisation was remarked. However, when countries introduce auctions, certain challenges can arise. The panellists shared valuable insights about these challenges and which best practices to follow.

Firstly, a common challenge that investors face is the **lack of a long-term schedule** of renewable energy deployment and associated procurement. Hence, multi-year planning and clear climate targets can mitigate allocation risks and incentivize competition.

Secondly, the experts pointed out that **some countries still do not have well-functioning electricity markets** in place. In these cases, a conversion event can be followed, where bidders bid for fixed prices that will eventually be converted into a Contract for Difference scheme.

In a previous AURES II report², the conversion from a Feed-in Tariff (FIT) to a Feed-in Premium (FIP) scheme was analysed. The recommendation is that conversion of remuneration schemes during a project's lifetime should generally be avoided due to the uncertainty of the market price development at the time of bidding. Yet, if necessary, the negative impacts of a future conversion event on bidders' financing conditions can be attenuated if the conditions triggering the conversion event (e.g., a market readiness assessment by the regulator after the electricity market is introduced) are defined clearly.

Moreover, the FIP itself should be designed by converting the previous FIT level into the strike price of a symmetric sliding FIP and by using a reference price with a shorter time horizon (e.g., hourly day-ahead market prices). Assuming producers can sell their power at the level of the reference price, exposure to market price risk is lessened and the revenue risk for existing projects is reduced.

Besides, the expert panellists recommended to policymakers that the **design of auctions should be adequately anchored in the specific national context** and in the broader energy and climate policy of the country to avoid having an isolated support scheme.

The experts stressed the importance that **the energy transition must be just and inclusive**, engaging not only the private sector but also the local communities to share all the socioeconomic benefits of RE deployment. For instance, auctions can be designed to incentivize local job creation, to foster economic development of certain areas, or to encourage the participation of marginalized people in RE projects.

Last, but not least, the risk of not being allocated after bidding in an auction is a pressing issue for most investors and developers around the world. Therefore, the auction experts recommended that countries should aim for a **sustainable distribution of risks**, i.e., attributing risks to those who are best placed to manage them.

² <http://aures2project.eu/2021/09/29/fit/>



4 Outlook: new developments around the world

To conclude the event, the experts shared their insights into the future of auctions and the energy transition.

Large corporations such as Google already have climate targets in place, for example, operating based on carbon-free electricity around the clock. To comply with the climate commitments, corporates can run **auctions to allocate corporate Power Purchase Agreements** (corporate PPAs) of for example 10-20 years and allow RE projects to scale up. In this way, corporate players can buy renewable electricity at competitive prices while adding more RE capacity to the grid.

As adding more variable RE capacity poses challenges from a power system perspective, **auctions can be used to provide an integrative approach** to strategically combine different solutions and reduce the need for grid expansion, such as wind or solar power combined with battery storage, demand-side management, efficiency measures, etc.

The panellists agreed that policymakers and regulators should closely consider that **smart auction design tailored to national contexts is necessary to achieve decarbonisation** as quickly and cost-effective as possible. Besides, the clear regulation and introduction of **Guarantees of Origin** (green certificates) is a key step to prove that a certain amount of electricity is produced from renewable sources and enable more cost-effective RE deployment.

Last, experts shared that **auctions with different scopes**, such as auctions for green hydrogen, auctions to allow coal phase-outs, or auctions to reduce CO₂ emissions, are also part of the current and future development of competitive procurement.



AURES II is a European research project on auction designs for renewable energy support (RES) in the EU Member States.

The general objective of the project is to promote an effective use and efficient implementation of auctions for RES to improve the performance of electricity from renewable energy sources in Europe.

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