AUCTIONS:
GLOBAL TRENDS AND OPPORTUNITIES
FOR RE PROJECTS IN SOUTHEAST EUROPE

Findings from:
Renewable Energy Auctions: Status and Trends beyond Price
Renewable Energy Market Analysis: Southeast Europe
Policies at the center of the energy transition

Investment in renewable energy, by economy [USD million]

Source: BNEF
Investment in renewable energy, by technology [USD million]

Source: BNEF
Cost competitive VRE projects – Solar PV

Average invested cost of utility scale Solar PV, SEE vs rest of Europe, 2018 [USD/kW]

1215

1098

Europe except SEE

SEE

LCOE of utility scale Solar PV, SEE vs rest of Europe, 2018 [USD/kWh]

0.20

0.15

0.10

0.05

0.00

Global fossil fuel cost range

0.105

0.100

Source: IRENA
Cost competitive VRE projects – onshore wind

LCOE of onshore wind, SEE vs rest of Europe, 2010-18 [USD/MWh]

Source: IRENA
Solar photovoltaic and onshore wind LCOE sensitivity to WACC, SEE, 2018-25 [USD/kWh]

Source: IRENA
Objectives of auctions beyond price

- Achieving the lowest price
- Ensuring timely project completion
- Supporting the integration of VRE
- Supporting a just and inclusive transition
Auction design elements to consider

The design of the auction considering trade-offs:

- Ensuring project timely delivery and price
- Ensuring grid integration and price
- Contributing to the just and inclusive transition and price

- Choice of the auctioned volume, the way it is divided among different technologies and project sizes and the auction category
- Minimum requirement for participants in the auction and necessary documentation
- Auction demand
- Qualification requirements and documentation
- Winner selection and contract awarding process
- Risk allocation and remuneration of sellers
- How bids are collected, winners selected, and contracts awarded
- Types of risk among stakeholders and specific rules to ensure high rate of timely implementation of awarded projects

- Auctions are a very flexible tool.
- They can also embed solutions for crisis periods - like the Great Lockdown.
- For example, allowing delay in constructions or with predetermined curtailment risk allocation in case of force majeure

A total volume exceeding **110 GW** auctioned in 2017-18, more than half and a third solar PV and onshore wind, with increasing interest in offshore wind and CSP.
Latest global trends in price resulting from auctions for solar PV and onshore wind price

Global weighted average prices resulting from auctions, 2010-2018, and capacity awarded each year

- Solar prices continue to fall, albeit at a slower rate, as PV auctions increasingly expand to newcomers
- Wind edged out, due to higher prices in countries where the majority of volume was auctioned
The missing money problem

• Usually a common occurrence in situations of structural overcapacity
• But also in situation of prolonged low demand (Great Lockdown being a clear real case)
• Structural low prices discourage new investments, both in renewable energy and fossil fuel plants.
• This is a proof that market design needs to be updated for the renewable energy era.

Source: IRENA, Power system organisational structures for the renewable energy era, 2020
Implementation strategies for auction design to support increasing shares of VRE

Project-based strategy  -->  Project-specific auctions
Quantity-based strategy  -->  Constraints-based limits
Adjustment-based strategy  -->  Predetermined corrections
Price-based strategy  -->  Exposure to market risks
Product-based strategy  -->  Product-specific auctions

Source: IRENA, Renewable energy auctions: Status and trends beyond price, 2019
• Project specific auctions aims for a highly predictable outcome, as the auctioneer maintains tight control of the results through pre-determined parameters such as project size, technology, location and technological characteristics.

• Constraints-based auctions present hard limits to what, where and how to build the power plants, whilst allowing some degree of power plant design freedom.
More market-based solutions

- With *ex-ante* conditions, adjustment-based strategies relies on the capacity of the power system operator to forecast future system needs.

- With *ex-post* signals (market prices), Feed-in-Premiums let the developer build and operator a plant fit for future system needs.
Ensuring just and inclusive transition

**Inclusion of small and new players**
- Predetermined volume set for small and new players
- Technology-specific auctions and limited project size
- Preferential treatment (e.g. discounted bid bond) and less strict qualification req.
- Less strict compliance rules

**Development of local industries and job creation**
- Local content requirements and Commitments for local job creation
- Winner selection criteria
- Regularity of auctions that support local industries

**Subnational development and community benefits**
- Zone-, site-, or project-specific auctions, can pre-select the sites and regions that best suit policy objectives
- Proof of land-use rights, grounded in solid documentation that is binding on auction participants
Socio-economic impact: employment

Energy transition footprint of the SEE region in terms of employment, 2019-2050 [%]

Source: IRENA

~ 50,000 additional jobs
Socio-economic impact: GDP

Energy transition footprint of the SEE region in terms of GDP, 2019-2050 [%]

Source: IRENA

Cumulated GDP ~500 USD bln
Conclusions

- Economies in the region are gaining ground as they address some of the barriers in RE investment – the most important being the high cost of capital in the region, due to policy, off-taker and currency risk.

- The market size of the economies is limited. As a result, investors may look at the region as a whole rather than its individual parts, so the retraction or delay of renewable energy strategies from one economy may be to the detriment of the entire region.

- Harmonised auctions create the opportunity to reduce the risk perception, providing clear signal to attract investors reducing the cost of capital.

- Auctions are flexible: they are not a “one size fits all” solution, but they can be designed to solve (or assist to solve) contingent regional issues, from system integration to low employment rate.