

NO 01 | APR 2023

POLICY STUDY MOLDOVA Experiences and lessons learnt from auctions for renewable energy support: overview and recommendations for policy makers in Moldova

by Vasilios Anatolitis, Jenny Winkler, Julia Panny

## **Overview of Renewable Energy Auctions**

- > An auction is an allocation mechanism for the sale or procurement of a product or service. Auctions for the support of renewable energy sources (RES) are usually combined with a support scheme/remuneration mechanism. To work properly, auctions require competition.
- » RES auctions are market-based competitive bidding processes with the aim of identifying the most appropriate RES projects to be realised within a certain time period and geographical area and for allocating appropriate support payments to them.
- » Auctions function as price-finding mechanisms...
  - Especially well-suited if information asymmetry exists (e.g., between the government and the private sector on RES generation costs)
- » ...as well as allocation mechanisms
  - Government procures "RES electricity generation"
  - Project developers bid with suitable projects

### **Benefits and challenges of RES auctions**

#### **Benefits**

- Competition in auctions decreases support and generation costs
- Auctions ensure allocative efficiency (lowest-cost projects are built first)
- » Auctions provide a stable investment environment
- » Control over budget/deployed volumes for policy makers
- Transition to competitive, market-based system (i.e., electricity market)

#### Challenges

- Unfavourable strategic bidding behaviour can lead to high support costs/inefficiencies
- Risk of under fulfilling of RES deployment targets if low participation and/or realisation rates
- » Higher risks favour bigger players and might increase generation and support costs
- Considerable administrative costs and learning curve (transaction costs high in the beginning)

» Auctions can have multiple benefits, but (smart) auctions design is key to mitigate challenges

## Summary of auction design elements (1/2)

Design element category	Alternative options	Best practice from EU countries
Auction volume	Capacity (MW), generation (MWh), budget	Mostly capacity, yet budget may be considered in case government's budget is strictly limited
Timing	Regular, irregular (ad-hoc); High frequency, low frequency	No tendency, yet a regular schedule is more likely to contribute to a stable investment environment
Material prequalification	Permits and licences that need to be fulfilled/submitted by bidders to be eligible to participate in the auction	Material prequalifications are widely used. Material prequalifications, such as required licenses or grid connection agreements, decrease the risk of project defaults and help increase realisation rates
Financial prequalification	Securities/bank guarantees that need to be submitted by bidders to be eligible to participate in the auction. They typically include a bid bond (needs to be submitted prior to the auction participation by all bidders) and/or completion bond (needs to be submitted by the awarded bidders after the actual auction procedure).	Financial prequalifications are commonly applied. Financial prequalifications in form of bid and/or completion bonds are implemented to safeguard penalties for non-performance and delays, which increases the probability of serious bids and ensure a timely realisation of the projects. However, if set too stringent, might discourage potential bidders from participating and thus decrease competition.
Remuneration type	Capacity (MW), generation (MWh)	Support is paid out based on electricity generation. This incentivises the producers to generate electricity.
Remuneration form	Feed-in-tariff, fixed or sliding feed-in-premiums (Contracts-for-difference), quota, investment support, Power Purchase Agreement (PPA) with government	Mostly sliding feed-in premiums, as they offer a good trade-off between risk mitigation and market integration.
Design elements to differentiate b/w 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 auctions; Other design elements rare applied.
Selection criteria	Lowest price (price-only), price and other non-price criteria (multi-criteria)	Mostly price-only auctions implemented.

Source: based on del Río & Kiefer (2021): Analysing patterns and trends in auctions for renewable electricity, in: Energy for Sustainable Development, <a href="https://doi.org/10.1016/j.esd.2021.03.002">https://doi.org/10.1016/j.esd.2021.03.002</a>

## Summary of auction design elements (2/2)

Design element category	Alternative options	Best practice from EU countries
Auction format	Single-unit, multi-unit	Mostly multi-unit auctions; except offshore wind auctions (mostly single-unit). Single-unit auctions tend to be suitable where the project pipeline contains few, but large projects at any given time; and where grid infrastructure is not yet well developed
Auction type	Dynamic, static	Mostly static. Static auctions are less complex to implement and suitable for less experienced bidders. Also, they are the best fit for either a high or low number of bidders
Pricing rules	Pay-as-bid, uniform	Mostly pay-as-bid. Pay-as-bid pricing is recommended as the least complex pricing rule for bidders and also because outcomes between different pricing rules tend to be only marginal
Pricing limits	Ceiling prices, minimum prices	All countries have implemented ceiling prices. Ceiling prices define the maximum support level and aim to mitigate producer rents in case of low or limited competition in the auction. Very low ceiling prices may lead to aggressive bidding and lower award prices, which may result in lower realisation rates
Realisation periods	Awarded projects should be built by a given date (there may be a grace period)	Realisation periods are always foreseen to ensure timely realisation
Penalties	Applied for non-compliance/delays during the realisation of awarded project	Almost all countries have penalties in place which may take different forms. Apart from bid bonds/financial pre-payments which are not returned to the bidder as the most common form of penalty, support payments or the support period may be reduced
Other design elements	e.g., local content rules (equipment to be manufactured domestically), seller concentration rules (min. number of bidders needs to be reached), information provision (governments provide information to potential bidders)	Rarely applied

Source: based on del Río & Kiefer (2021): Analysing patterns and trends in auctions for renewable electricity, in: Energy for Sustainable Development, <a href="https://doi.org/10.1016/j.esd.2021.03.002">https://doi.org/10.1016/j.esd.2021.03.002</a>

## **Case study 1: RES auctions in Albania**

#### Background

- Albania is heavily reliant on hydropower and vulnerable to extreme weather conditions and droughts - its biggest challenge is thus the diversification of energy resources, which it tries to do via auctions while further decarbonising the energy sector
- » Another challenge is the electricity grid, which requires updating or even replacement to cope with large volumes of wind and solar power
- » RES auctions were introduced in 2018, based on amended Law No 7/2017 "On promotion of the use of energy from renewable sources", setting the backdrop for incentivising RES via market-based support schemes
- » The 2017 RES Law establishes the broad framework for the auction mechanism and Contracts-for-Difference (CfD) in future RES projects
- » Auctions are foreseen for both solar PV and wind power (15-year PPAs to be converted into CfDs once the Albanian Power Exchange is launched and fully operational)
- » Albania conducted a number of pilot auctions for solar and wind so far, with more to come
  - Solar PV auctions held in 2018, 2020/21 (new auction planned for 2023)
  - The first wind auction (two stages, open for plants between 10 and 70 MW) will select winners in 2023 –
    installations to be operational in 2025 (the government will select several projects amounting to a total
    capacity of 100 MW this could be increased to 150 MW)
- The first wind auction (two stages, open for plants between 10 and 70 MW) will select winners in 2023 – installations to be operational in 2025 (the government will select several projects amounting to a total capacity of 100 MW – this could be increased to 150 MW)

## Case study 1: RES auction design in Albania (1/2)

Design element category	Implementation Albania	Notes
Auction volume	Capacity (MW), but not all of the capacity is supported, i.e. the remaining electricity is sold on the market	For instance, in the 1st solar PV auction the total capacity of the plant was 140MW, out of which only 50% were covered by the support measures
Timing	Irregular (ad-hoc); low frequency	It seems that there is no long-term schedule for future auctions, yet. Given the relatively small market size, low frequency is appropriate, however, a clear auction schedule is preferable in order to create a stable investment environment
Material prequalification	Material, i.e. licenses, proof of previous experience, proof of financial well-being, etc.	Prequalification criteria aim to increase the realisation rate. Especially if the market is not yet very mature, it might not be recommendable to introduce very high thresholds in terms of experience required
Financial prequalification	Solar PV auctions: payment of a bid bond of EUR 200 thsd and EUR 400 thsd respectively (corresponding to 4 EUR/kW and 5.7 EUR/kW), in addition to a non- refundable participation fee of EUR 2000 to be paid in advance	
Remuneration type	Generation (MWh)	Generation-based remuneration provides incentives to RES generators to actually produce electricity
Remuneration form	Power Purchase Agreement (PPA) with the government, converted into a CfD upon functioning of Power Exchange	Low level of information available on CfD-conversion (this is currently being rectified). After being postponed several times, the Albanian power exchange launched in April 2023
Design elements to differentiate between technologies, regions, actors etc.	So far only technology- <b>specific</b> auctions for solar PV and onshore wind	

## Case study 1: RES auction design in Albania (2/2)

Design element category	Implementation Albania	Notes
Selection criteria	Lowest price (price-only auctions), except the 1st solar PV auction in 2018	Focus on the price only strengthens the focus on static efficiency. In 2018, multi-criteria auction with price only being weighted with 30%
Auction format	Solar PV: single-unit, site-specific, pre-developed by the government Onshore wind: multi-unit	In the wind auctions, the choice of the location to be used for the realisation of the wind farm project is left to the developer who is also in charge of all permitting. To assist them, a wind siting study has been prepared, including suitability criteria for the selection of sites, as well as a high-level screening of no-go areas
Auction type	Static	Two stages for onshore wind: first, submission of qualification bids, then, in a static auction, RFP from applicants successful in the first phase. In a static auction one bid is submitted for each project, and the auctioneer then evaluates all bids. Since static auctions are more straightforward for bidders, they are a suitable choice when auctions are first introduced in a market
Pricing rules	Pay-as-bid	Pay-as-bid is regarded as more robust and easier to comprehend for bidders
Pricing limits	Technology-specific ceiling prices (e.g., solar PV 55 EUR/MWh, onshore wind 75 EUR/MWh)	Ceiling prices are very common and safeguard the government from too high support costs, especially in case of low competition. Given the country's abundance of relatively cheap hydropower, it is crucial to ensure competitive prices
Realisation periods	18 months realisation period for solar PV auctions, longer realisation period for wind	Realisation periods are needed to ensure timely project realisation

### **Case study 1: RES auctions in Albania**

#### **Evaluation**

- Static efficiency: It is yet too early to judge effects on support costs over time as too little auctions have been conducted, however, the solar PV auctions that resulted in winning bids of around 25 EUR/MWh and around 30 EUR/MWh respectively, can be regarded as competitive compared to similar markets (24.89 EUR/MWh was the lowest price reached in solar auctions in the region)
- Effectiveness: it is still early to judge the effectiveness due to the small number of auctions conducted, however, given reported difficulties in concluding the agreements as well as one non-realised project there is still room for improvement. Higher prequalification requirements and/or penalties, might lead to an improved implementation rate (see also the increase of financial prequalification requirement between 2018 and 2020), but need to be balanced with decreasing numbers of bidders (due to higher risks/costs), e.g., the experience demanded by project developers needs to be carefully set to avoid excluding too many (new) actors
- » Actor diversity: is not a key concern/objective for the government, but encouraged by the flexible project size (10-70 MW) in the onshore wind auctions
- » System/market integration: The provision to convert the PPA into a CfD is expected to facilitate market integration of RES projects
- Security of supply: Given the country's tremendous reliance on hydropower, incentives for other RES are still not strong enough in comparison and the dominance of hydropower causes the system to be vulnerable. The required auction volume is not yet in line with the required deployment

### **Case study 1: RES auctions in Albania**

#### Conclusions

- > Overall, Albania has been able to successfully introduce and harness auctions for renewable energy. However, Albania needs to move from the pilot phase to the full rollout with a reliable and regular schedule of auctions to give confidence to investors and project developers, alike. Both solar PV and onshore wind power could effectively complement the existing hydropower fleet, but progress is slow
- » To ensure effectiveness, auction volumes and awarded capacities should be aligned to the expansion targets. This is currently not the case. The NECP or other strategic documents can be used as a tool to do so
- The auction design has gradually been adapted over time with increasing experience, e.g., the government increased the level of bid bonds for solar auctions from EUR 200 thsd to EUR 400 thsd from the first to the second auction and adapted the time frames for the realisation period. However, the main design principles have stayed the same
- To provide more clarity on the envisaged CfD scheme, the existing RES Law should be amended to provide more details on the conditions for CfDs and exact functioning
- » Cumbersome permitting procedures need to be addressed as well. Especially for onshore wind, procedures are described as "onerous"

#### Background

- » RES auctions were introduced in Greece in 2016, after several years without any RES support scheme in place due to the financial crisis that started in 2009
- » Consequently, the auction design shows a strong focus on support cost efficiency, i.e., reduction of support costs
- » Law 4414/2016 provides the general framework for conducting auctions, while the auctioneer, the Greek Regulatory Authority for Energy (RAE), typically defines the detailed auction implementation
- » Greece conducted two pilot auction rounds in 2016, while the permanent auction scheme started in 2018
- » By 2025, the government intends to conduct 8 auctions to add 3 GW to the system
- » Greece has a liberalised and liquid electricity market, intraday and balancing markets are still immature

## Case study 2: RES auction design in Greece (1/2)

Design element category	Implementation in Greece (2016-2021)	Implementation in Greece (since 2022)	Notes
Auction volume	Capacit	y (MW)	Capacity as the auctioned volumes reflects the targets set in the NECP
Timing	Regular At least once a year		Auctioned volumes set by government; RAE (the auctioning body) defines specific auction rounds and sets rules
Material prequalification	Generation license (in 2020, the more streamlined production license introduced) and grid connection agreement (or final/binding grid connection offer)	Material: Production license/generation license and grid connection agreement (or final/binding grid connection offer)	
Financial prequalification	Bid bonds: PV 10 EUR/ Completion bonds: PV 40		Bid bond is defined as 1% of a project's CAPEX and Completion bond as 4% of the CAPEX; assumed CAPEX are 1000 EUR/kW for PV and 1250 EUR/kW for onshore wind; the bid bond is paid back after each round to all bidders
Remuneration type	Generation-ba	sed (per MWh)	
Remuneration form	Two-sided Contracts-for-difference with a monthly, technology-specific reference market value		The two-sided CfD provides revenue stability for the producers, yet safeguards the government from windfall profits and provides incentives for market integration due to the monthly reference market value
Design elements to differentiate between technologies, regions, actors etc.	Separate auctions: multi-technology and technology-specific auctions in parallel No minimum and maximum quotas/shares	Separate auctions: multi-technology and technology-specific auctions in parallel In 2022 auction: Minimum quotas /shares of 30% for PV and onshore wind each From 2023: regional auctions for specific, not well-interconnected regions; auctions for energy communities	Before 2022, multi-technology and technology-specific auctions ran in parallel, yet with different capacity size requirements. Since 2022, the focus shifted towards multi-technology auctions, yet with several other auction formats in place

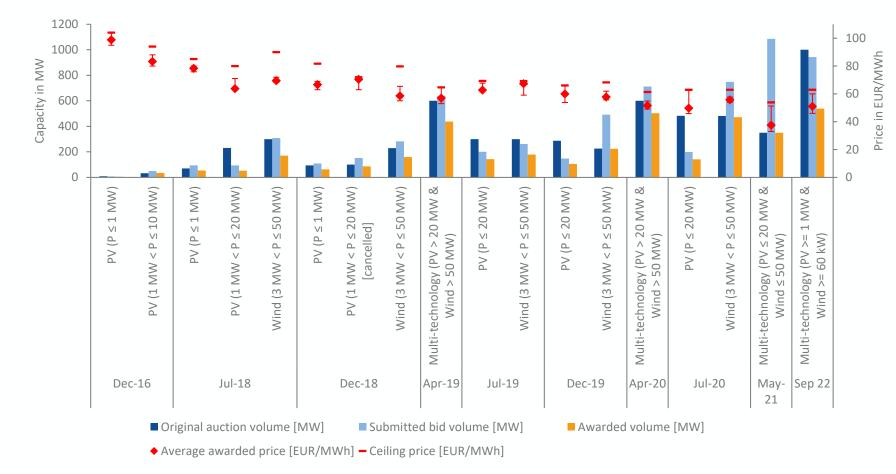
## Case study 2: RES auction design in Greece (2/2)

Design element category	Implementation in Greece (2016-2021)	Implementation in Greece (since 2022)	Notes
Selection criteria	Lowest price (price-only auctions)		Capacity as the auctioned volumes reflects the targets set in the NECP
Auction format	Multi-unit	:	
Auction type	Dynamic, two-stage approach: 1) prequalification stage and then 2) a subsequent dynamic auction procedure	In 2022, same approach as before, yet intention to change to static auction procedure in the second stage	The dynamic auction format intends to support the real price discovery and lead to lower awarded prices
Pricing rules	Pay-as-bic	1	Pay-as-bid is regarded as more robust and easier to comprehend
Pricing limits	Ceiling prices: technology-specific ceiling prices in technology-specific auctions, the same ceiling price in multi-technology auctions	Ceiling prices: technology-specific ceiling prices, even in multi- technology auctions (e.g., in 2022, PV 54 EUR/MWh, Onshore wind 63 EUR/MWh)	Ceiling prices safeguard the government from too high support costs, especially in case of low competition
Last project rule	The bid that surpasses the auctioned volume is rejected and the next bid, which still fits in the residual auctioned volume, is awarded, even at a high bid price	The bid that surpasses the auctioned volume by less than 10% is awarded, otherwise rejected; projects cannot exceed more than the remaining capacity	
Realisation periods	PV: 12 months if $\leq$ 1 MW, 15 months if 1 MW < capacity $\leq$ 5 MW 18 months if > 5 MW Onshore wind: 24 months if $\leq$ 10 MW, 36 months if > 10 MW	PV: 30 months, Onshore wind: 36 months (+12 months if project realisation/EPC needs an auction)	Before 2022: multi-technology and technology-specific auctions in parallel, yet with different capacity size requirements; since 2022: focus shifted towards multi-technology auctions, yet with several other auction formats in place
Penalties	Completions bonds retained in case of non-realisation or delays during the realisation of awarded project		Penalties intend to safeguard the realisation of awarded projects
Oversubscription rule	40% (in 2016, 2019, 2020), 75% (in 2018), and 100% (in 2021) oversubscription required, i.e., the auctioned volume needs to be surpassed by the volume submitted by bidders, otherwise, the auction volume is reduced accordingly	80% (in 2022) oversubscription required	This ensures a sufficient level of competition in each auction round, due to the focus on static efficiency, i.e., reducing support costs, in Greece
Anti- concentration rule		Each bidder (and their subsidiaries) only allowed to submit max. 35% of auctioned volumes	

#### **Evaluation**

- Static efficiency: awarded prices have decreased significantly over the years (see next slide); while the oversubscription rule certainly contributed to this effect, the stable framework and auction schedule certainly played a role as well
- » Effectiveness: first three rounds have had high realisation rates and thus high effectiveness; overall, the Greek government was able to award more than the intended 2.6 GW of RES capacity by 2020, despite the volume adjustment being in place
- Actor diversity: is not a key concern/objective for the government, yet regulation for energy communities has been introduced and specific auctions for energy communities are foreseen in the future, as well as an anti-concentration rule in the 2022 auction; furthermore, de-minimis rule has been implemented, providing administratively-set support to small projects (yet incentive for larger projects developers as well)
- » System/market integration: monthly reference period under the CfD provides incentives for market integration
- Security of supply: the auctions have contributed to the security of supply, as both PV and onshore wind have experienced a strong ramp-up; the implemented minimum technological quotas/shares in the multi-technology auctions intend to safeguard this effect; security of supply will be further strengthened with the upcoming RES + storage auctions

#### **Evaluation – static efficiency/awarded with price**



Note: The difference between the "Submitted bid volume [MW]" and the "Awarded volume [MW]" indicates the effect of the oversubscription rule

#### **Conclusions and lessons learnt**

- » The Greek auction scheme, can be regarded as a success, given the decreasing prices over the years, while still awarding the intended capacities
- » Nevertheless, the auction design has experienced changes over the years and especially in 2022:
  - Last project rule: Greece stopped awarding projects with higher bid prices that fit in the available auctioned volume to reduce the overall awarded prices, even if the auctioned volume is not completely exhausted
  - Ceiling prices: different ceiling prices for each technology in multi-technology auctions have been implemented instead of one common ceiling price for both technologies to avoid windfall profits for the cheaper technology (in this case PV)
  - Anti-concentration rule: starting in 2022, the auction design foresees that each bidder (and their subsidiaries) is
    only allowed to submit a maximum of 35% of the auctioned volume, which was not the case before and might have led
    to market concentration of few players; this change in the design intends to increase competition in the auctions
  - Oversubscription rule: the level of oversubscription (i.e., how much the auctioned volume needs to be surpassed by the submitted volume) changed between 40% and 100% and is set by the auctioneer and is typically based on a qualitative assessment of the general development of projects' competitiveness/level of awarded prices
  - Auction format: after 2022, potential introduction of static auctions instead of dynamic auctions to allow for a simpler auction procedure
  - "Special auctions": to account for different objectives and different circumstances, auctions for RES + battery storage, region-specific auctions, especially for non-interconnected islands or not well-connected areas (Peloponnese), and auctions for energy communities will be held
- » Changes in regulatory framework:
  - Streamlining of permitting procedures: introduction of production license (instead of generation license), which is obtainable through a simplified, digital process, to speed up permitting procedures and allow for a higher level of competition

## High-level comparison: Moldova & case study countries

	Moldova	Albania	Greece
Market size (electricity consumption in 2020)	5.8 TWh	6.7 TWh	51.7 TWh [Germany 527 TWh]
RES-E Market	Net energy importer RES share not well advanced (3% 2019)	Net energy importer High RES share, however, reliance on hydro	Net energy importer Already high RES share
RES potential	Vast renewable energy potential, especially solar and wind	Vast renewable energy potential, especially solar, wind and hydro	Vast renewable energy potential, especially solar and wind
Grid challenges	Sigr	nificant	Less significant, yet many non- interconnected islands and regions with grid bottlenecks
Wholesale electricity market	Not yet in place	Not yet in place, but progress made (due to be launched in 2023)	Liquid spot market, other markets less developed
Experience with RES support schemes	Administratively-set feed-in tariffs Administratively-set		eed-in tariffs, auctions
Administrative challenges	Significant issues/delays with permitting processes		Greece aims to tackle this issue with easier access and streamlined processes, yet problems persist
Investment environment	Country risk rating*: D4 High risk	Country risk rating*: D3 Sensitive risk	Country risk rating*: B2 Medium risk

\*Allianz Trade Country Risk Analysis, see Country Risk Ratings | Maps, Reports & Analyses | Allianz Trade in USA (allianz-trade.com)

# General recommendations for an appropriate auction design in Moldova (1/2)

Overall, a stable, reliable and transparent political and regulatory framework for renewable energies is key to ensure sufficient competition and reach auction objectives

- » Always adapt auctions to the specific situation
  - Auction design should not be "copy-pasted" from other countries as regulatory frameworks differ → needs to match current market environment and policy objectives
- » Secure sufficient competition
  - Auctions only work with enough competition. What is the resource potential in the country? How many RES developers exist?
  - Cross-border options might help to ensure sufficient competition
- Provide abundant information and a long-term deployment and auctioning schedule to ensure a framework of certainty to potential investors

# General recommendations for an appropriate auction design in Moldova (2/2)

- » Safeguard project realisation
  - Are the penalties high enough to ensure commissioning? Are the prequalification requirements sufficient?
- » Keep it simple
  - − At the beginning a simple and transparent design is important → attracts investors and thus increases competition!
- » Potential pathways for the auction design in Moldova
  - If effectiveness, in the sense of fast RES deployment, is prioritised: consider implementing multi-unit auctions and free site selection of bidders, as well as rather strict/short realisation periods; nevertheless, these design elements can lead to lower competition and/or higher support costs
  - If static efficiency, especially risk mitigation, is prioritised: consider implementing sitespecific auctions with pre-development of site conducted by government and more lenient/longer realisation periods; nevertheless, these design elements can lead to slower RES deployment
  - If a liquid electricity market exchange is expected in Moldova during the lifetime of an auction-supported RES plant and the remuneration scheme might change, it is recommended to anticipate this in the auction specifications by foreseeing a conversion

19

# Preliminary recommendations for the RES auction design in Moldova (1/2)

	_	
Design element category	Suggestions	Notes
Auction volume	Capacity (MW)	Easier to implement and to monitor; quotas already in place. If strict budgetary constraints in place, consider auctioning budget
Timing	Regular Low frequency (due to small market)	Regular auctions with an indicative auction schedule to provide signals to supply chain and investors
Material prequalification	Material (e.g. licenses, experience, grid connection) shoud be required to safeguard realisation of awarded projects	Requirements on experience with RES projects should be rather lenient, as the RES market is rather small in Moldova
Financial prequalification	Financial: should be implemented to safeguard the realisation of the project. For instance, 1% of indicative, administratively set investment expenditures as bit bonds, 4% of indicative investment expenditures as competition bond for awarded bidders (see Greece)	
Remuneration form	Feed-in tariff, as soon as electricity market becomes liquid, switch to two-sided Contract-for-difference	Especially suitable in Moldova due to balancing responsibility for all producers (although important to have intraday/balancing market in place and bidders should know potential imbalance costs in advance)
Currency/indexation	Currency: preferably in EUR Indexation: if in EUR, no indexation required	Higher risk for the government if in EUR, but higher investor security. Same applies for indexation
Design elements to differentiate between technologies, regions, actors etc.	Technology-specific auctions, however, in case the objective of quick deployment is pursued, also multi-technology auctions could be an option	Technology-specific auctions create a more stable environment for investors and the supply chain. Yet, multi-technology auctions could be an option to make use of already existing supply chains.

20

# Preliminary recommendations for the RES auction design in Moldova (2/2)

Design element category	Suggestions	Notes
Selection criteria	Lowest price (price-only auctions)	Easier implementation and more straightforward for bidders and is recommendable for the first auctions
Auction format	If the focus is more on reducing support costs and risks, single-unit auctions might be preferable, e.g., as conducted in Albania. For de-risking purposes, the project can be even be pre-developed by the government: site provision, resource assessment, guaranteed grid-connection, necessary permits obtained, etc. multi-unit auctions could also be an option, if a fast deployment is prioritised in Moldova	
Auction type	Static auctions	Easier implementation and more straightforward for bidders
Pricing rules	Pay-as-bid	More straightforward for bidders
Pricing limits	Technology-specific ceiling prices, no minimum prices	Ceiling prices limit the potential governmental spending, especially in case of low competition
Realisation periods	Context-specific and depending on required speed of additional capacity deployment. If focus is on fast deployment, rather short realisation periods preferable, while rather long ones in case of support cost reductions	Realisation periods always foreseen
Penalties	Applied for non-compliance or delays during the realisation of awarded project. Same level as bid/completion bond	
Other design elements	No further design elements, such as the oversubscription rule, should be applied	More straightforward and simple design is preferable at the early stage of auction implementation

21

#### **About the German Economic Team**

Financed by the Federal Ministry for Economic Affairs and Climate Action, the German Economic Team (GET) advises the governments of Ukraine, Belarus\*, Moldova, Kosovo, Armenia, Georgia and Uzbekistan on economic policy matters. Berlin Economics has been commissioned with the implementation of the consultancy. \*Advisory activities in Belarus are currently suspended.

#### CONTACT

Carolin Busch, Project Manager Moldova busch@berlin-economics.com

#### **German Economic Team**

c/o BE Berlin Economics GmbH Schillerstraße 59 | 10627 Berlin Tel: +49 30 / 20 61 34 64 0 info@german-economic-team.com www.german-economic-team.com

Our publications are available under <a href="https://www.german-economic-team.com/">https://www.german-economic-team.com/</a>

Implemented by

