



# AURES II – Auctions for Renewable Energy Support II

Final conference

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# Low risk auction design

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# Low-risk auction design draws from analysis on auctions on cost of capital (WP5)



## Work Package 5 (WP 5)

### Survey on cost of capital in solar PV and wind projects

- 93 semi-structured interviews across EU member states (and UK)
- Bankers, project developers, investors, experts

	Model 14	Model 15	Model 16	Model 17	Model 18	Model 19	Model 20
Intercept	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Structural Conditions	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
Sector Experience	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Government Bonds	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Economic Growth	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Government Quality	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Public Support	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
American Presence	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Low Market Risk	0.000	0.000	0.000	0.000	0.000	0.000	0.000
High Market Risk	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Restrictive change	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Long Term Security	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Adj. R <sup>2</sup>	0.000	0.000	0.000	0.000	0.000	0.000	0.000
F	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Log Likelihood	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Var. cov.	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Var. diagonal (inverse)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Var. Bound	0.000	0.000	0.000	0.000	0.000	0.000	0.000

### Econometric analysis on factors affecting cost of capital

- Macro-level variables (e.g., country risk)
- Meso-level variables (e.g., auctions - # rounds and MW, exposure market price)
- Project-level variables (e.g., resource risk)

Bids in [EUR/MWh]	Mean bid	Median bid	CoE mean	CoD mean	DSCR	Loan tenor	Debt shares	WACC
Min and max bid levels, and financing costs – fixed premiums (onshore wind)								
DK-Wind Onshore	2.31	0.79	7.00%	1.38%	1.15	18.33	74.71%	2.60%
RO-Wind Onshore	63.84	62.98	10.00%	5.63%	1.25	10.00	61.05%	6.78%
Min and max bid levels, and financing costs – sliding premiums (onshore wind)								
FR-Wind Onshore	54.28	54.63	6.92%	1.72%	1.17	17.95	76.93%	2.51%
NL-Wind Onshore	80.44	80.13	11.50%	1.94%	2.00	15.00	58.45%	5.62%
Min and max bid levels, and financing costs – contracts for difference (onshore wind)								
IE-Wind Onshore	47.11	47.14	10.00%	3.50%	1.50	16.00	65.34%	5.46%
LV-Wind Onshore	97.14	96.05	19.17%	4.92%	1.10	11.00	80.57%	6.87%

### Cash-flow model to estimate

- Expected bid prices across EU 27 and UK
- Effect of financing conditions vs. other variables on bid prices
- Support costs

# Low-risk auction design

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**Low-risk auction design takes the local financing conditions of developers into account and tries to minimise unnecessary risks for bidders**

**Good auction design does not need to shield bidders from *all* risks. Instead, it should help them correctly assessing and addressing the risks involved in participating in an auction**

# Low-risk auction design

1. Auctions can significantly impact financing conditions \*
2. Policymakers can create low-risk investment environments by **choosing designs that ease financing** and decrease cost of capital
3. A focus on **de-risking of debt financing** delivers the largest reductions in cost of capital and thus support costs  
*>> loan maturities and debt size can be increased, interest margins decreased by revenue stabilisation mechanisms (such as CfDs, sliding premiums and price floors)*
4. Sufficiently large volumes, **multi-year auction schedules** and **stability** can reduce cost of capital, by allowing for economies of scale and portfolio effects; and by reducing allocation and qualification risk
5. **Relaxing material pre-qualifications, bid bonds and penalties** does not create significant support cost reduction (e.g., through lower equity return requirement); instead, it **may create unwanted effects**, such as lower project realisation rates
6. “Walk-away” effect: Bidders may decide not to participate in an auction if its design is perceived unfavourable or with an inadequate risk-return profile

\* However: cost of capital do not only depend on support policies, but on many other external factors, such as country risk

# AURES II resources on auctions, risk and financing



## Reports

- [Effects of auctions on financing conditions for renewable energy](#), 2019
- [Renewable energy financing conditions in Europe: survey and impact analysis](#), 2021
- [Auction design and renewable energy financing](#), 2021

## Policy Briefs

- [De-risking and scaling up renewables through market-based policies](#), 2022

## Scientific articles

- [The impact of auctions on financing conditions and cost of capital for wind energy projects](#), Energy Policy, 2021

## Data

- [Financing conditions of renewable energy projects –results from an EU wide survey](#), Open Research Europe, 2021