

Cross-border cooperation in the Energy Community

Presentation of AURES Policy Brief

10th Renewable Energy Coordination Group meeting, 25 November 2020
Fabian Wigand, Bastian Lotz (Guidehouse)

Guidehouse_ Recommendations based on 20 years of experience in auctions



Part of the EUH2020 research project on renewables auctions

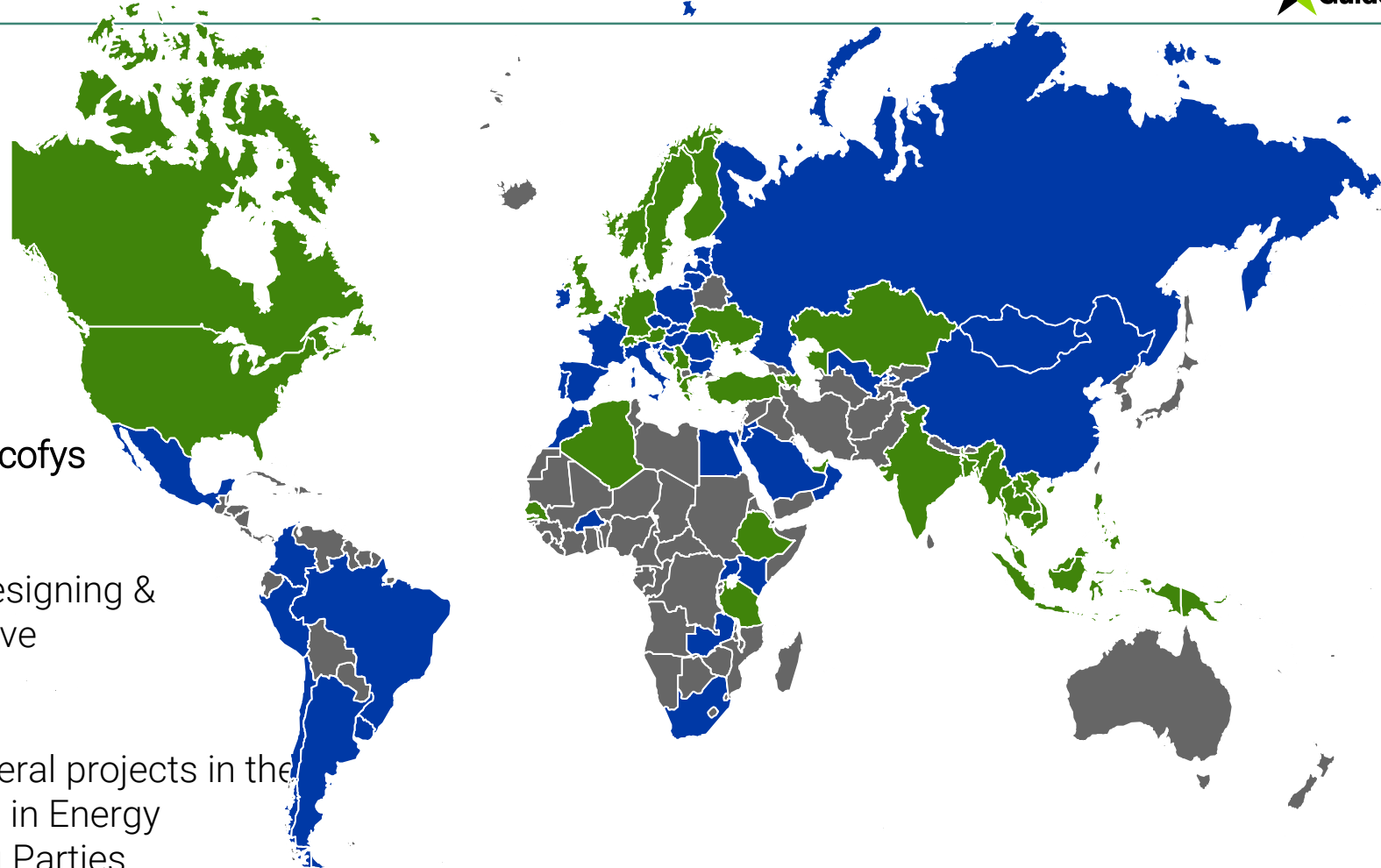
Guidehouse/Navigant/Ecofys

>800 energy experts

>60 offices worldwide

>20 years experience designing & implementing competitive procurement/auctions

Supporting EBRD in several projects in the introduction of auctions in Energy Community Contracting Parties



AURES II: EU funded research collaboration on auctions for renewable energy support



@ <http://aures2project.eu/> you will find case studies, a how-to-guide and detailed explanations of the cross-border renewable energy cooperation!

Funded by the European Union's **Horizon 2020** Framework Programme for research and innovation (2018 – 2021)

The joint policy brief by AURES II and the Energy Community Secretariat

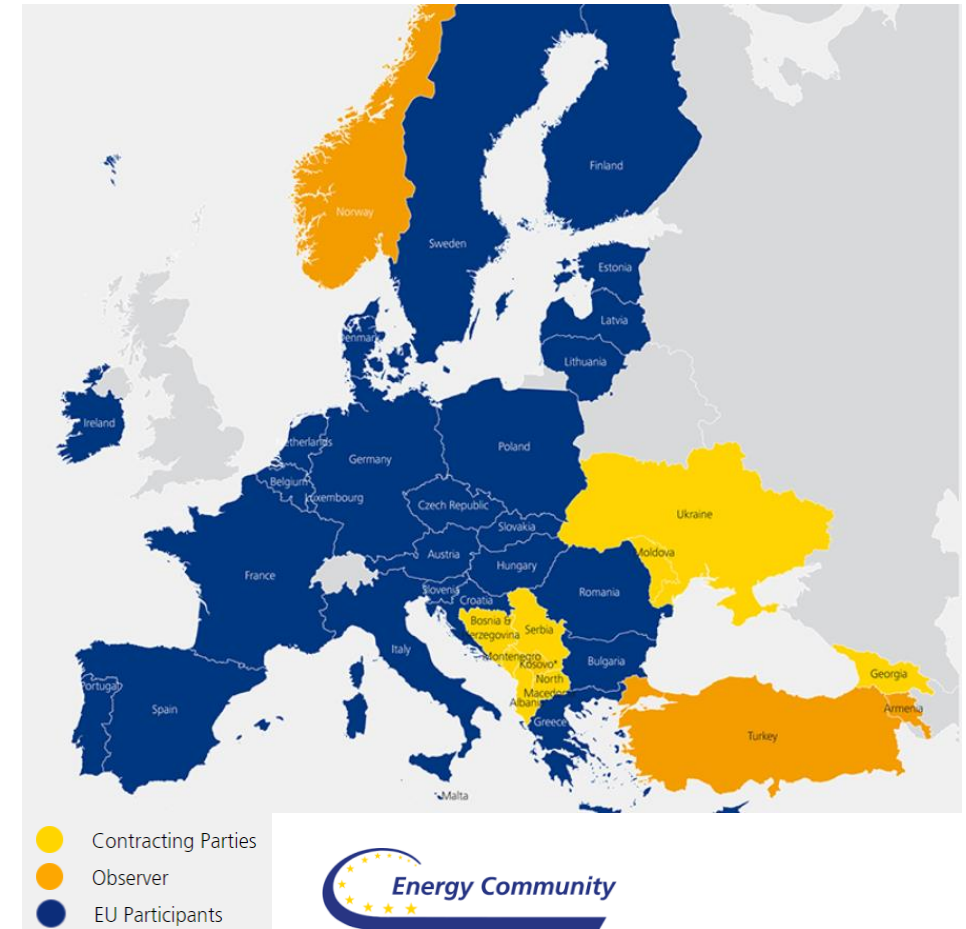
Cross-border cooperation on renewable energy is surging on the agenda of many EU Member States but is yet to attract the interest of Energy Community CPs.

This policy brief seeks to show

- ✓ the rationales of cross-border cooperation
- ✓ how CPs may benefit from cross-border cooperation under the current and future legal framework
- ✓ The most likely cooperation opportunities for CPs
- ✓ Necessary considerations on support scheme design

We look at (ex-ante) cross-border cooperation

- between CPs and EU Member States, and
- among Contracting Parties



What are the rationales for (ex-ante) cross-border cooperation?

For contributing party



Reduction of support costs in the achievement of RES targets by:

- ✓ tapping into better natural resource potential of a partner country
- ✓ reaching higher market values in the partner country
- ✓ accessing better financing conditions and lower costs of capital, thus reducing overall project costs, and
- ✓ increasing competition in the national auction scheme (relevant for small markets)

For hosting party



- ✓ Structural transition of national energy system and mobilization of FDI
- ✓ Job creation
- ✓ Reduced import dependency
- ✓ GHG emission reductions
- ✓ Clean air and public health
- ✓ Exchange of best practices
- ✓ Political cooperation
- ✓ Innovation

What is the legal framework for cooperation in the Energy Community?

Current framework (until 2021)

- CPs have transposed REDI into national law
- Between CPs and EU Member States
 - ✓ State-aid based opening obligation: EU Member State may open their support schemes to CPs
- REDI: Cooperation among CPs and between CPs and EU Member States:
 - ✓ Joint projects
 - ✓ Joint or (voluntarily) opened support schemes
 - ✓ Statistical transfers (ex-post)

Clean Energy Package (after 2021)

- CPs are yet to transpose the Clean Energy Package into national law (expected in 2021)
- REDII: Cooperation among CPs and between CPs and EU Member States likely possible, i.e.
 - ✓ Joint projects (physical link required)
 - ✓ Joint or opened support schemes (subject to transposition)
- EU renewable energy financing mechanism*: CPs may participate as host countries in EU-wide auctions.
- New CEF funding line for c-b projects**: Joint projects between EU Member State and CPs may receive upfront investment aid

* Article 33, Governance Regulation

** Article 7, revised CEF regulation

How can CPs cooperate?

Track 1

Joint projects (potentially supported by funding from CEF)

- ✓ Cooperation on **single or several** RE project(s)
- ✓ Extensive room for negotiation to **tailor cooperation to needs**
- ✓ Negotiation requirements entail **transaction costs** for cooperating parties
- ✓ Hosting party may implement a national **auction**, or cooperating parties may use a cross-border auction to select their joint project.
- ✓ **RES target accounting**: Target shares will usually be allocated in proportion to the financial contribution to the joint project.

How can CPs cooperate?

Track 1

Joint projects (potentially supported by funding from CEF)



- ✓ allow for **higher control over project selection** (e.g. technology, site), support costs and the allocation of costs and benefits
- ✓ entail **lower design complexities** and administrative burden compared to cross-border auction open to multiple projects
- ✓ may serve as a **starting point** for larger-scale cooperation in the future
- ✓ available **CEF funds** may incentivize development of joint projects



- ✓ **public acceptance** may be affected if costs and benefits of the joint project cannot be adequately communicated

How can CPs cooperate?

Track 2a

National cross-border auctions (unilateral opening)

3 main types of cross-border auction

Intensity of cooperation

1. **"Unilateral opening"** - Only one country opens its support scheme by implementing a cross-border auction that allows for the participation of bidders in a cooperating country. The cooperating country may contribute to the support payments.
2. **"Mutual opening"** - The cooperation countries both implement separate cross-border auctions.
3. **Joint auction (with separate/joint funding)** - The cooperation countries set up a joint auction, awarded projects are then either assigned to one country's support scheme or a jointly established fund.

Likely scenarios (**unilateral opening**):

- EU MS opens its support scheme for participation from projects in a CP
- One CP opens support scheme for participation for projects from another CP
- Parties must negotiate and agree on
 - the scope of their cooperation,
 - the cost-benefit sharing (RES statistics)
 - the transfer of payments and information

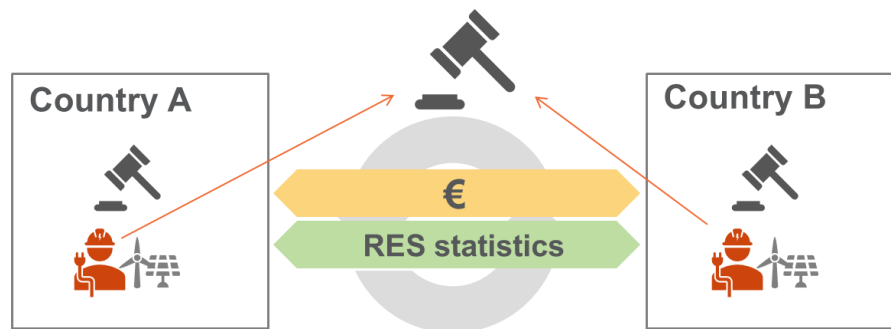


AURES Guidance on implementing cross-border auctions

How can CPs cooperate?

Track 2a

National cross-border auctions (unilateral opening)



AURES report 'Design options for cross-border auctions'

- Party conducting the auction largely determines the auction design.
- **Some design options require special attention** regarding their applicability in cross-border auctions, their impact on participants' costs, risks and project realization, e.g.
 - conditions for participation and
 - deadlines and penalties
- However, differences in broader **regulatory & market context** cannot easily be aligned in a cross-border auction
- **Recommendation:** Refrain from levelling differences in order to tap into the full efficiency potential of the auction.

How can CPs cooperate?

Track 2a

National cross-border auctions (unilateral opening)



- ✓ **Effectiveness** in terms of realized benefits of cooperation (e.g. support cost reductions, modernization of energy system) may be higher under multi-project cross-border auctions compared to single joint projects.
- ✓ **Efficiency gains** of multi-project cooperation via cross-border auctions compared to the negotiation of individual cooperation agreements for individual joint projects



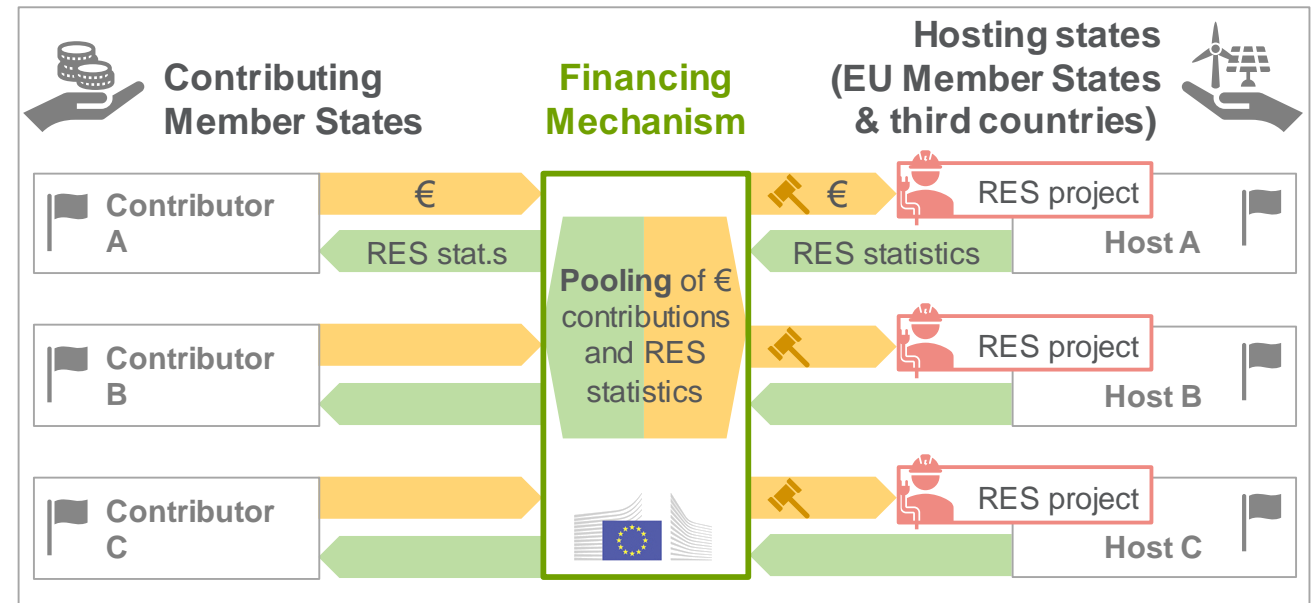
- ✓ **Higher implementation and design complexities** compared to joint projects, which could increase transaction costs and lead times
- ✓ **Less control over project selection** (e.g. specific sites, technologies) in host countries and the resulting costs and benefits
- ✓ Grid integration of awarded capacities may **increase system integration costs** in the host country, requiring compensation payments.

How can CPs cooperate?

Track 2b

Cross-border auctions via the EU financing mechanism

- FinMec works like national cross-border auction, but with **less influence over design**.
- CPs can be hosts of new RE projects
- **EU Member States** can make voluntary financial contributions to the mechanism
- FinMec implements a RES auction which determines **support levels** and allocates support to RES projects in hosting countries.
- **RES statistics** are transferred back to mechanism which redistributes them to contributing MS relative to their € contributions
- Allocating parts of statistics to hosting country possible to account for **grid integration costs**



AURES Case Study on the financing mechanism

How can CPs cooperate?

Track 2b

Cross-border auctions via the EU financing mechanism



- ✓ Pre-determined support scheme and auction design **reducing negotiation requirements** between cooperating countries compared to bilateral cooperation mechanisms.
- ✓ **Decreases the administrative burden** for national authorities compared to national cross-border auctions since the European Commission appoints a responsible tendering authority.








- ✓ Host country projects face **risk of not being awarded** if lower competing projects
- ✓ EU-wide auctions offer **limited national control over project selection** in host countries and the resulting costs and benefits
- ✓ **A support scheme** may not be aligned with individual national policy priorities and/or regulatory and market conditions.
- ✓ Grid integration of awarded capacities may **increase system integration costs** in the host country, requiring compensation payments.

CPs are at different stages of electricity market development

- CPs are characterized by small-sized electricity markets, mostly lacking a reliable price signal from liquid short-term day-ahead markets
- Only Serbia (since 2016) and Ukraine (since 2019) have liquid day-ahead wholesale markets
- Kosovo and Albania will establish a power exchange in 202.
- All parties introduced administratively set feed-in tariffs (FiT)
- Past RE auctions
 - Albania: CfD for solar PV
 - North Macedonia: FiP for solar PV
 - Montenegro: market revenues solar PV and wind (locational auction)

Day-ahead electricity market development and NEMO designation status

	Legal basis for PX establishment	PX company established	Service provider for PX selected	PX operational	Legal basis for NEMO designation
					
Albania	●	●	●	●	●
Bosnia and Herzegovina	●	●	●	●	●
Kosovo	●	●	●	●	●
Montenegro	●	●	●	●	●
North Macedonia	●	●	●	●	●
Serbia	●	●	●	●	●

● In place ● In progress ● Not in place

Source: compiled by the Energy Community Secretariat.

This table is only on the Western Balkan CPs. Missing here are Georgia, Moldova, Serbia and Ukraine.

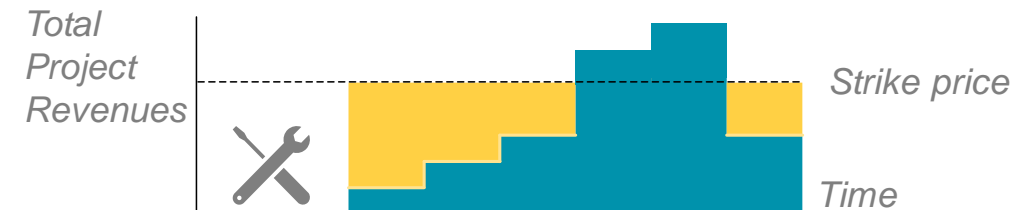
Feed-in premiums (FiP) are being increasingly used

- FiP are widespread among EU Member States
- Many CPs still have **feed-in tariffs (FiT)** in place, which are not in line with State Aid Guidelines
- **FiTs** offer a fixed remuneration per energy produced independent of market price.
- RE plant operators receiving **feed-in premiums**
 - sell the electricity generated directly on the day-ahead wholesale power market, and
 - receive an additional payment on top of revenue generated from electricity market.
- FiP offer **better market integration incentives** while providing predictable revenue streams in order to boost RE investments.
- Two types of FiP: **fixed and sliding premiums**

Fixed premium



Sliding premium (one-sided)



Support payments

Market revenues

Fixed and sliding premiums in cross-border auctions: No design is clearly preferable

- **Fixed premiums** are easiest option regarding the implementation in cross-border auctions, but
 - have several drawbacks regarding support costs certainty, the risk of overcompensation and higher financing costs for plant operators,.
 - strongly favours bidders from countries with higher (expected) market values and thus lowers the attractiveness for bidders from countries with lower market values.
- **Sliding premiums** offer challenges for premium calculation and reference market price determination in case no liquid day-ahead wholesale market in host country in place
- In this case, **premium calculation** requires alternative ways of defining reference market prices,
 - based on the participating (EU Member State) contributing party's wholesale market, or
 - based on another regional country's day-ahead wholesale market (e.g. HUPX of Hungary).

Key messages of this policy brief

- ✓ **Cooperation is beneficial.** The contributing party receives cost-efficient RES statistics that count towards target achievement. The hosting party receives foreign direct investment for RES projects that can help modernize and decarbonize the electricity system.
- ✓ **Cooperation is facilitated by the EU regulatory system.** The European regulatory framework includes mechanisms for cooperation, i.e. joint projects and cross-border auctions, both between EU Member States and CPs and among CPs.
- ✓ **Cooperation instruments work.** These cooperation mechanisms translate into practical instruments for cooperation. Joint projects are largely subject to negotiation. Cross-border auctions have been extensively researched and already applied in a first mutual cross-border auction between Germany and Denmark. Cooperation can build on these insights.
- ✓ **Cooperation needs to consider local circumstances.** Cross-border cooperation needs to consider local circumstances (e.g. regulatory framework and market conditions)
- ✓ **Contracting Parties should establish liquid day-ahead wholesale markets.** This is needed to take full advantage of all cooperation options, especially cross-border auctions, and to ensure an efficient market premium design.

AURES



Fabian Wigand

Fabian.wigand@guidehouse.com

Bastian Lotz

Bastian.lotz@guidehouse.com

AURES II

Website: <http://aures2project.eu/>

LinkedIn: AURES II

Twitter: @auctions4res

Newsletter: <http://eepurl.com/gd42zz>



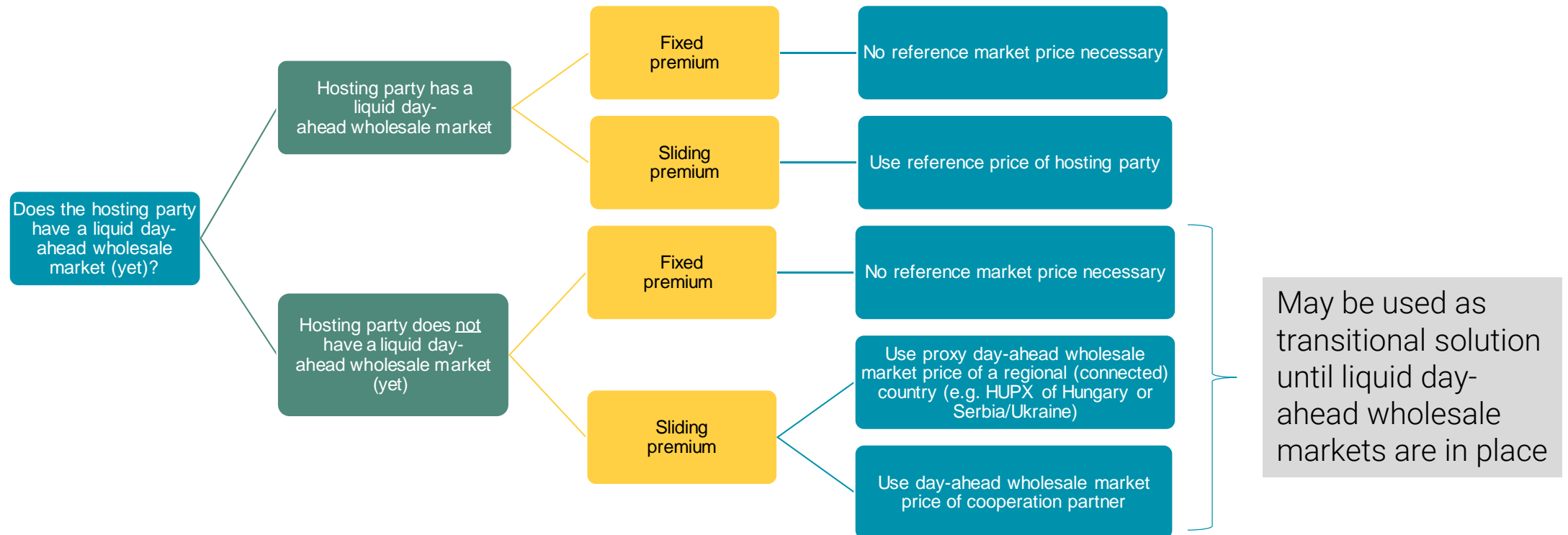
AURES II has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 817619

Options for premium design with and without wholesale market in host country

Step 1: Check status of wholesale electricity market of host party (precondition: projects can create market revenues, e.g. through bilateral contracts).

Step 2: Evaluate options for premium design

Step 3: Determine method for reference market price calculation



Other considerations

Regulatory framework

- **Unbundling:** In Contracting Parties that have not fully unbundled their electricity market yet, state utilities that own generation assets might prioritize them vs Independent Power Producers in cases of technical or economic curtailment.
- **Updated RE targets with additionality criterion:** More certainty on 2030 RE targets of Contracting Parties needed to assess incentives for cross-border options and role as contributing or hosting party

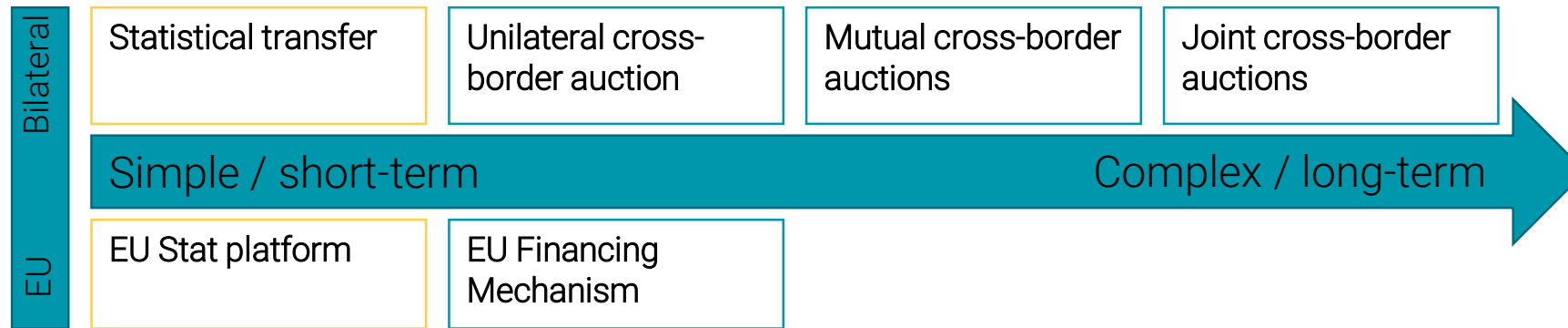
Market conditions

Higher investment cost:

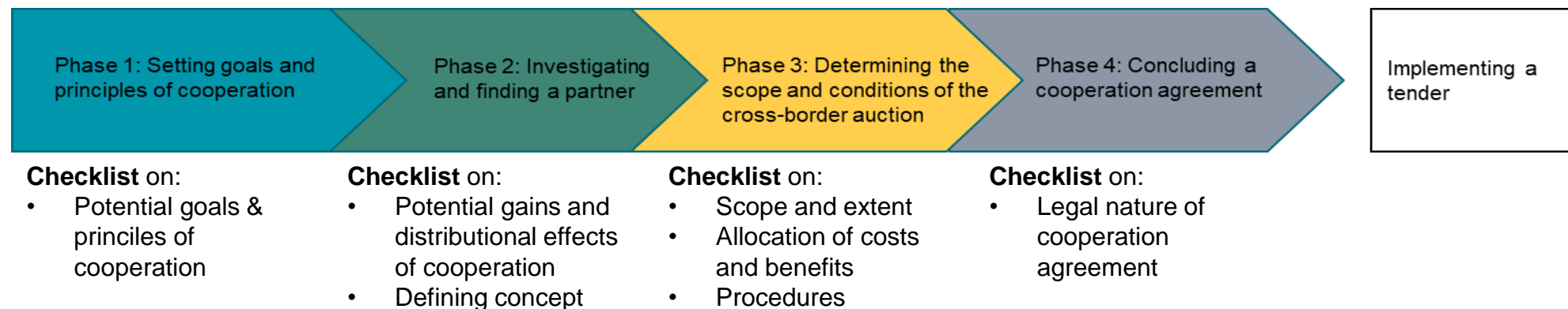
- Relatively immature RE markets → project developers may face higher investments costs (compared to developers in EU Member States)
- WACC is substantially higher in most Contracting Parties due to increased off-taker and country risk
- This may have implications on bid prices and thus the competitiveness of projects in CPs participating in cross-border auctions.

Practical guidance & checklists on implementing cross-border auctions report finalized

1) Overview of instruments for cross-border cooperation on renewables



2) Checklists for four phases to implementing a cross-border auction



Overview of instruments for cross-border cooperation relevant for EC parties

Opening of support schemes

- State aid based opening obligation can be fulfilled by opening to CPs, it is „considered positively“
- Voluntary opening under RED II is limited to other Member States
 - Once the RED II is transposed, this call to voluntarily open also holds for the CPs
- EU Financing Mechanism: CPs can participate as a host country in a joint project

Cooperation mechanisms (RED)

- Joint projects: Possible to cooperate between MS and CPs and among CPs; option to receive CEF funding in cooperation with EU Member State
- Joint support schemes: One or more CPs and one or more EU MS may decide, on a voluntary basis, to join or partly coordinate their national support schemes
 - Unilateral, mutual and joint auctions possible
- Statistical transfers (just transfer, no new projects): Possible in all directions, CPs must notify Secretariat