



CROSS-BORDER GRID COST ALLOCATION IN THE EU: AN INCENTIVE-BASED NEGOTIATED FRAMEWORK

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Introduction

- ❖ The EU seeks to deepen its energy market coupling, decarbonization, and electrification objectives through strengthening the cross-border interconnections.
- ❖ However, the costs and benefits of projects are unevenly distributed across the borders.
- ❖ Realisation of many projects is hampered by disagreements among project promoters and NRAs regarding the allocation of costs.
- ❖ While the CEF mechanism provides financial incentives, it does not fully align and internalise stakeholder incentives to cooperate on joint investment prospect.

Why this matters now

- ❖ The anticipated investment requirements in the grids towards 2050 is large and increasing
- ❖ Many projects stall because cost allocation is politically and commercially contested
- ❖ The problem is not only funding, but aligning incentives across jurisdictions
- ❖ The paper asks how the CEF can unlock efficient agreements

EU grids

Shared value, split costs

Why some cross-border projects stall

- ❖ Benefits and costs are unevenly distributed across jurisdictions
- ❖ National actors unwilling to pay for assets located abroad
- ❖ Firms hold private information about their expected project benefits
- ❖ Strategic understatement of willingness-to-pay can block efficient projects

CBCA

Core allocation problem

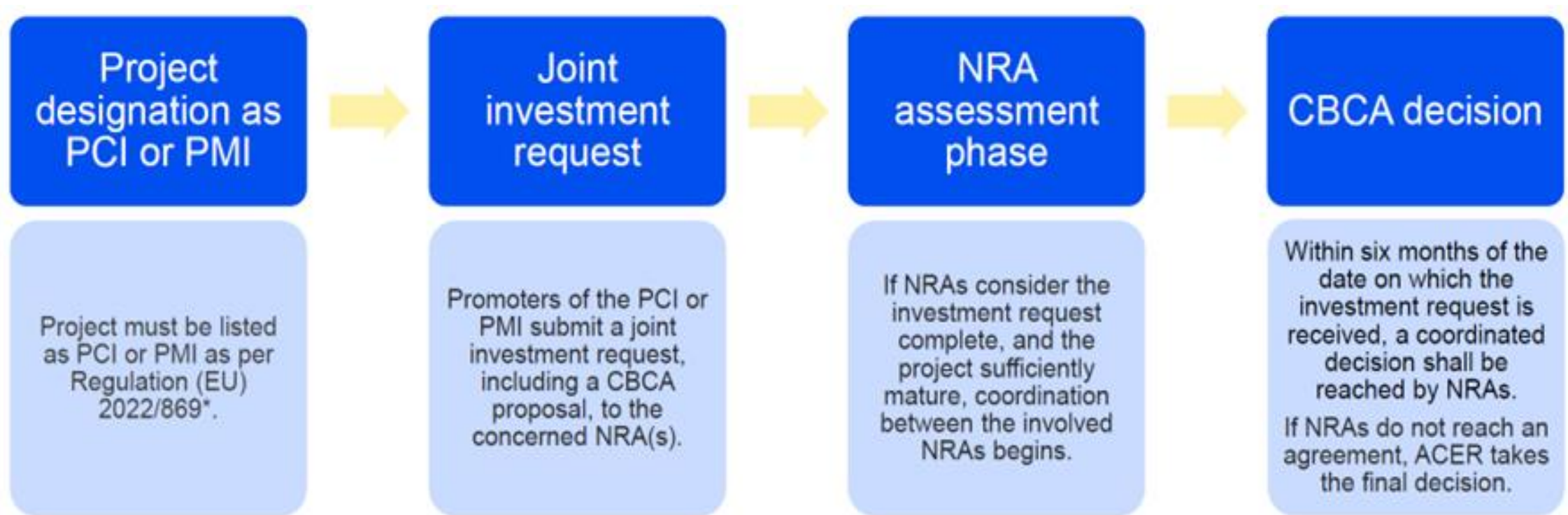
The existing EU CBCA architecture

- ❖ TEN-E, TYNDP, ENTSO-E or ENTSOE, NRAs, ACER, and CEF structure the process
- ❖ CBCA allocates costs based on assessed cross-border benefits
- ❖ Project sequence runs from identification and CBA to NRA coordination
- ❖ CEF enters too late to materially shape bargaining incentives

Late

Timing of CEF support

Current CBCA Framework



Source: ACER (2025)

Limitations of the Current CBCA Framework

- ❖ The current framework does not effectively address the **incentive incompatibilities** and uneven distribution of costs and benefits across jurisdictions.
- ❖ Can incentivise strategic stakeholder behaviour (i.e., project promoters, NRAs, ministries) to understate benefits and request CEF funding beyond the efficient or available resources.
- ❖ Late-stage ex-post subsidies can amplify this tendency.
- ❖ It does not address **information asymmetry** or incentive compatibility among stakeholders. Each firm's valuation of benefits is unobservable, and cost allocations are negotiated under uncertainty about other firms' valuations.
- ❖ This results in inefficient project selection, excessive delays, or ad hoc compensations

The Conceptual Case

- ❖ EC and the firms, only to pay for a share of the total costs that is smaller than their benefits
- ❖ Value of benefits to individual firm is not observable to others, but total project costs are known
- ❖ The CEF co-funding as a policy instrument that bridges these information gaps
- ❖ Each firm derives a private benefit from the project, reflecting the shallow (local) and deep (system) benefits in their respective jurisdictions
- ❖ EC's objective is to promote projects that enhance EU-wide market coupling and system benefits
- ❖ Within budget constraint, the EC commits to cover a fraction X of total costs through CEF that reflects EC's valuation of the EU-wide benefits from market coupling
- ❖ If the combined WTP of firms falls short, project is abandoned, or alternative designs considered

Core idea of the proposed framework

- ❖ Treat CEF as a strategic policy instrument rather than a passive subsidy
- ❖ Embed EU co-funding inside the bargaining environment
- ❖ Use the mechanism to reveal valuations and improve cost sharing
- ❖ Aim for agreements that are efficient, feasible, and politically more credible

CEF

**From subsidy to
incentive lever**

Theory and method in practice

Efficiency logic

- ❖ A project should proceed if total welfare rises
- ❖ Uneven gains are acceptable if compensation is feasible
- ❖ The practical goal is a workable Pareto improvement
- ❖ Project cost is observable, while benefit valuations are partly private

Negotiation logic

- ❖ Firms must cooperate to realize the project
- ❖ They still compete over who pays what
- ❖ Bargaining and mechanism design are therefore central
- ❖ The paper derives a negotiated rule for cost sharing under asymmetric information

What these equations mean for decision-makers

- ❖ Equal sharing is not the benchmark; benefit-proportional sharing is
- ❖ Small, well-targeted EC support can unlock otherwise blocked projects
- ❖ The mechanism reduces strategic underreporting of value
- ❖ The policy focus shifts from 'compensating losers' to structuring agreement

**Targeted
support**

**Unlock,
do not over-subsidize**

Main features of the proposed framework

- ❖ **CEF as strategic instrument:** The CEF co-funding to unlock investment, rather than a static subsidy.
- ❖ **Welfare benefits:** CEF funding increases the welfare benefits of market coupling.
- ❖ **Separation of costs and benefits:** Unlike CBA, it treats the benefits as unobservable private information to be elicited.
- ❖ **Value revelation:** Uses the CEF instrument, negotiation, and menu of options to reveal the firms' valuation of their private values.
- ❖ **Quasi-cooperative bargaining:** Creates a setting where firms co-operate to secure EU funding while competing to minimize their individual cost shares, leading to a fair bargaining solution.
- ❖ **Mechanism design:** Transforms CEF from a passive **ex-post** support to an active **ex-ante** incentive regulation role.

Bargaining and Cooperation

- ❖ All firms with a potential net benefit have an interest in the project being developed.
- ❖ If a non-cooperative bargaining with no agreement, none of the parties (incl. the EC) can realise their benefits and all parties lose.
- ❖ A quasi-cooperative bargaining setting emerges where firms cooperate to secure project implementation and benefits of the project while they compete to minimise their share of total costs.
- ❖ Where a cooperative bargaining is not feasible, such a quasi-cooperative bargaining is an improvement to the current non-cooperative bargaining.

Conclusions

- ❖ The framework offers a formal policy design
- ❖ Integrates CBCA, bargaining theory, and incentive design
- ❖ Re-frames the EC as an active architect of feasible agreements

- ❖ Reduces info. asymmetry regarding benefits
- ❖ Lead to cooperative bargaining among firms
- ❖ Enhances transparency, de-risking, ensures more efficient use of EU funds

- ❖ Extends the logic to project portfolios under a constrained budget to CEF

Conclusions

Institutional and analytical

<https://www.jbs.cam.ac.uk/wp-content/uploads/2026/07/eprg-wp2614.pdf>

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