

ESCAP's Green Power Corridor Framework: Concept and Example Applications

ACEF, Regional Power Trade & Market Integration

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Power system connectivity - larger, more integrated power systems to accelerate energy transition

ESCAP's Regional Roadmap on Power System Connectivity

Planning	<ul style="list-style-type: none">• Develop a regional master plan (Strategy 2)• Coordinate cross-border transmission planning (Strategy 6)
Financing and development	<ul style="list-style-type: none">• Mobilize investment in cross-border infrastructure (Strategy 7)
Operations	<ul style="list-style-type: none">• Move toward multilateral trading and competitive markets (Strategy 5)• Co-ordinate cross-border system operations (Strategy 6)
Cross-cutting	<ul style="list-style-type: none">• Build trust and political consensus (Strategy 1)• Develop intergovernmental agreements (Strategy 3)• Coordinate, harmonize, and institutionalize policy and reg frameworks (Strategy 4)• Build capacity and share information, data, best practices (strategy 8)• Ensure coherence of connectivity with the SDGs (Strategy 9)

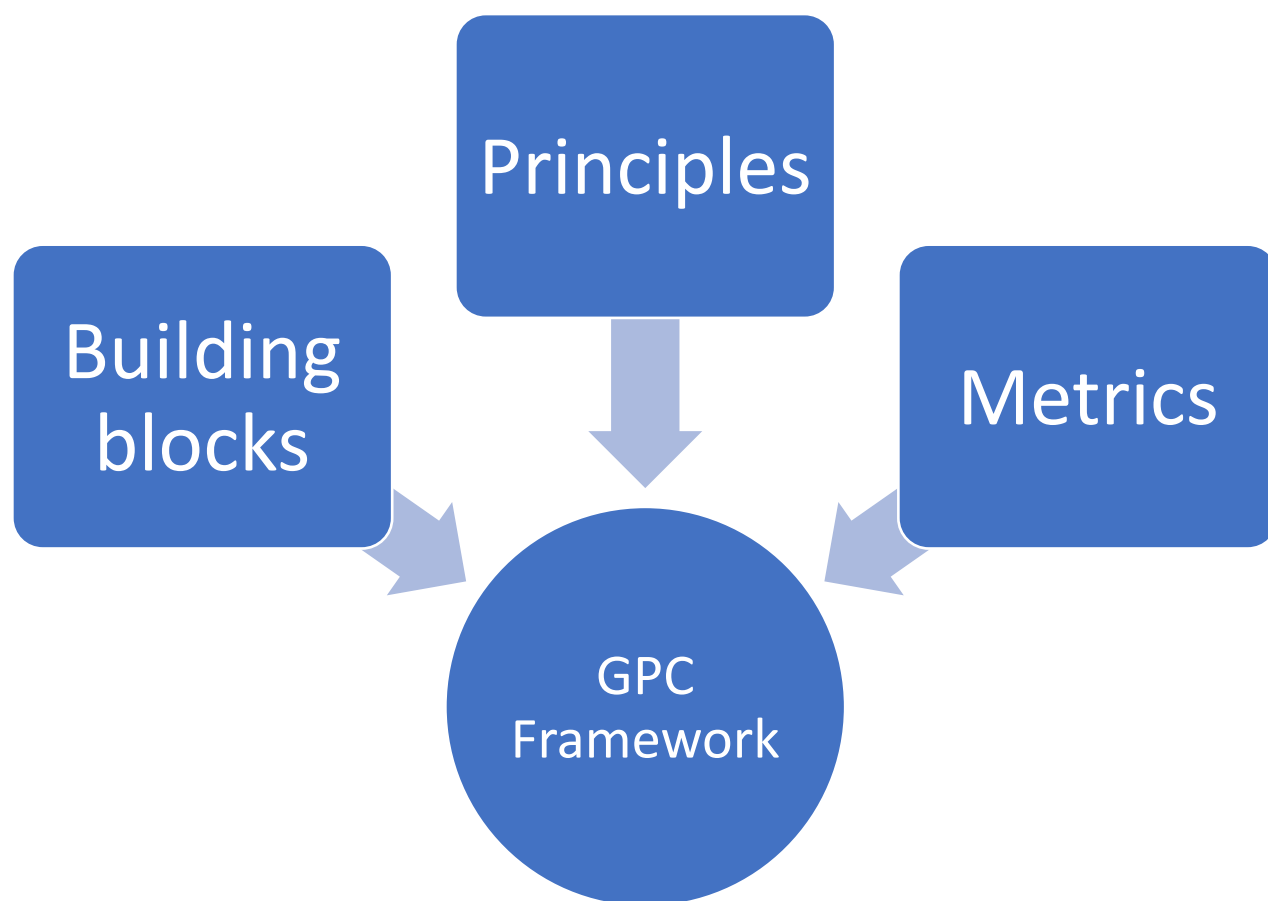
Strategy 9:

Ensure the coherence of energy connectivity initiatives and the Sustainable Development Goals

ESCAP's Green Power Corridor Framework:

A set of principles and metrics to help align connectivity initiatives with sustainable development

Green Power Corridor Framework: Components

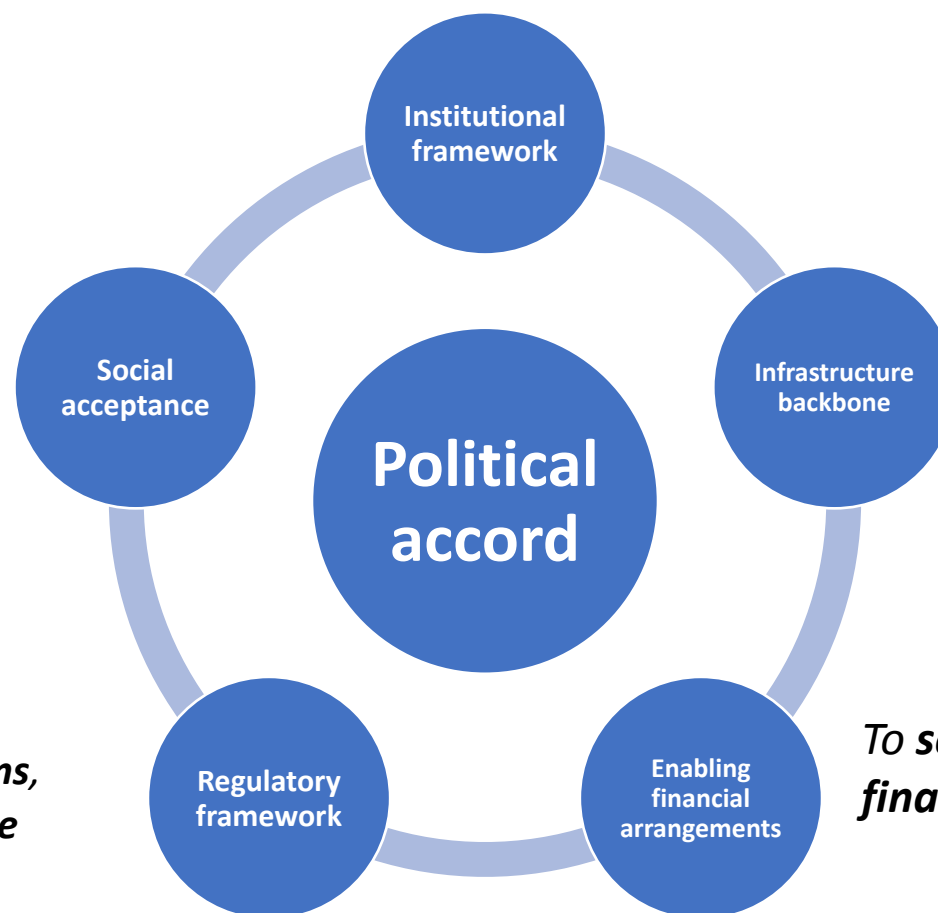


The GPC Framework aims to provide

- Building blocks to structure and orient connectivity initiatives
- Practical and relevant principles to guide the development of connectivity initiatives
- A set of metrics to enable the measurement of connectivity projects against relevant criteria

Green Power Corridor Framework: Building Blocks

To support, steer & monitor



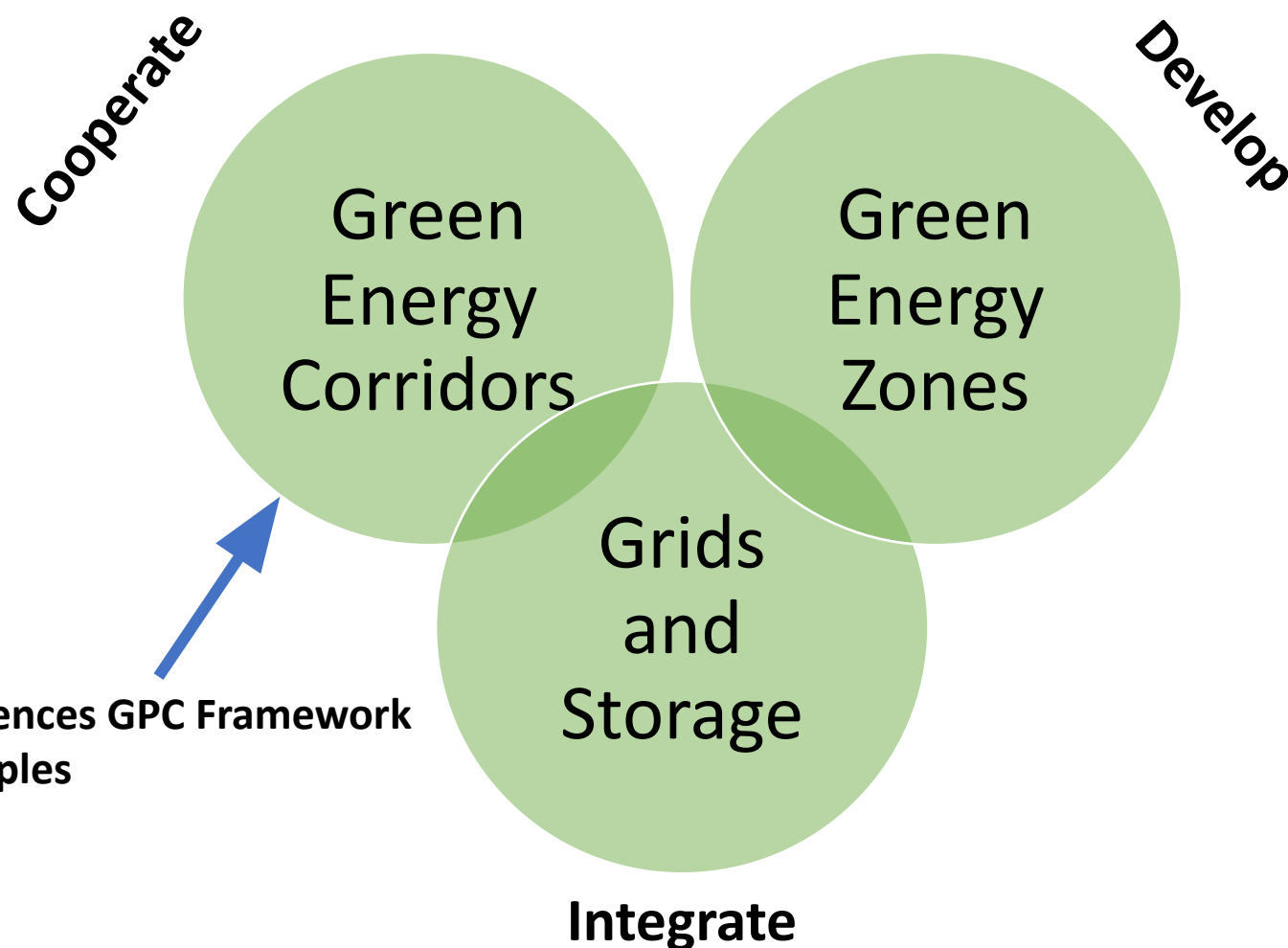
To strengthen national power grids

To secure participation of all types of financing as appropriate

*To enable **flawless & efficient operations**, **transparent power trade**, and **equitable distribution** of socio-economic benefits*

To ensure public support

GPC Framework and the COP29 Green Energy Pledges



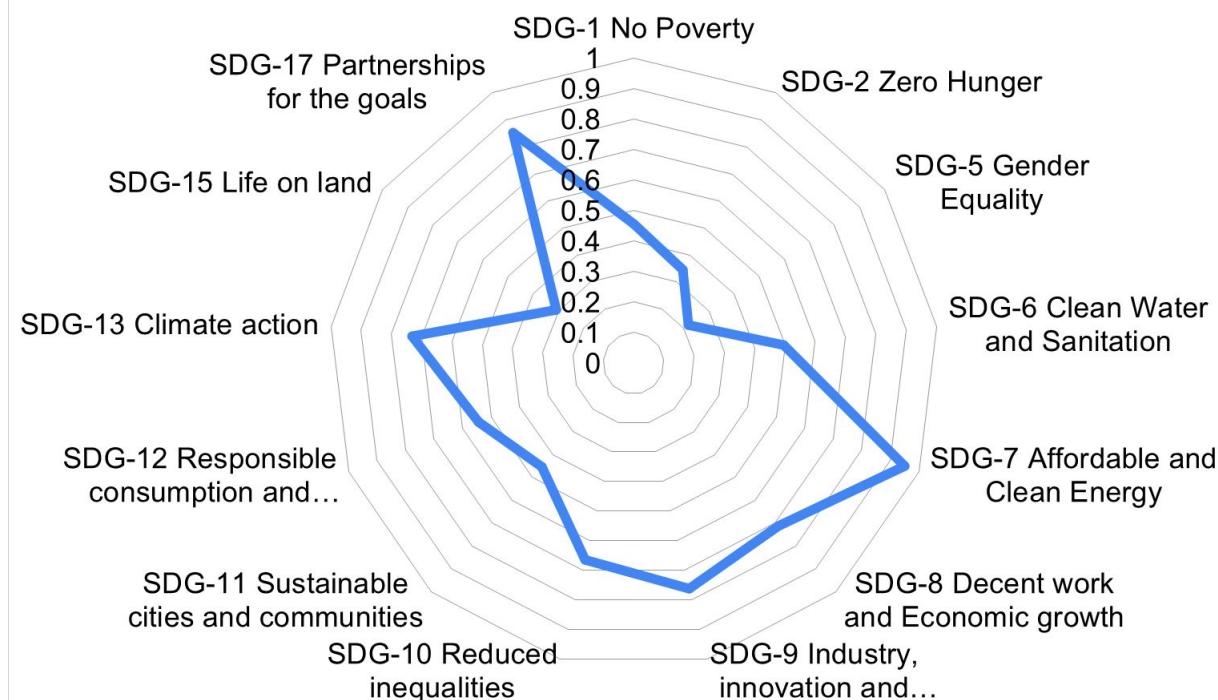
Tripling RE and achieving net-zero emissions requires a holistic approach to energy sector development:

- **Green Energy Corridors** to enable **cooperation** to bring clean energy resources to demand
- **Green Energy Zones** to unlock economic **development** opportunities
- **Grids and storage** to enable secure and efficient **integration**

GPC Framework metrics pilot implementation in Georgia

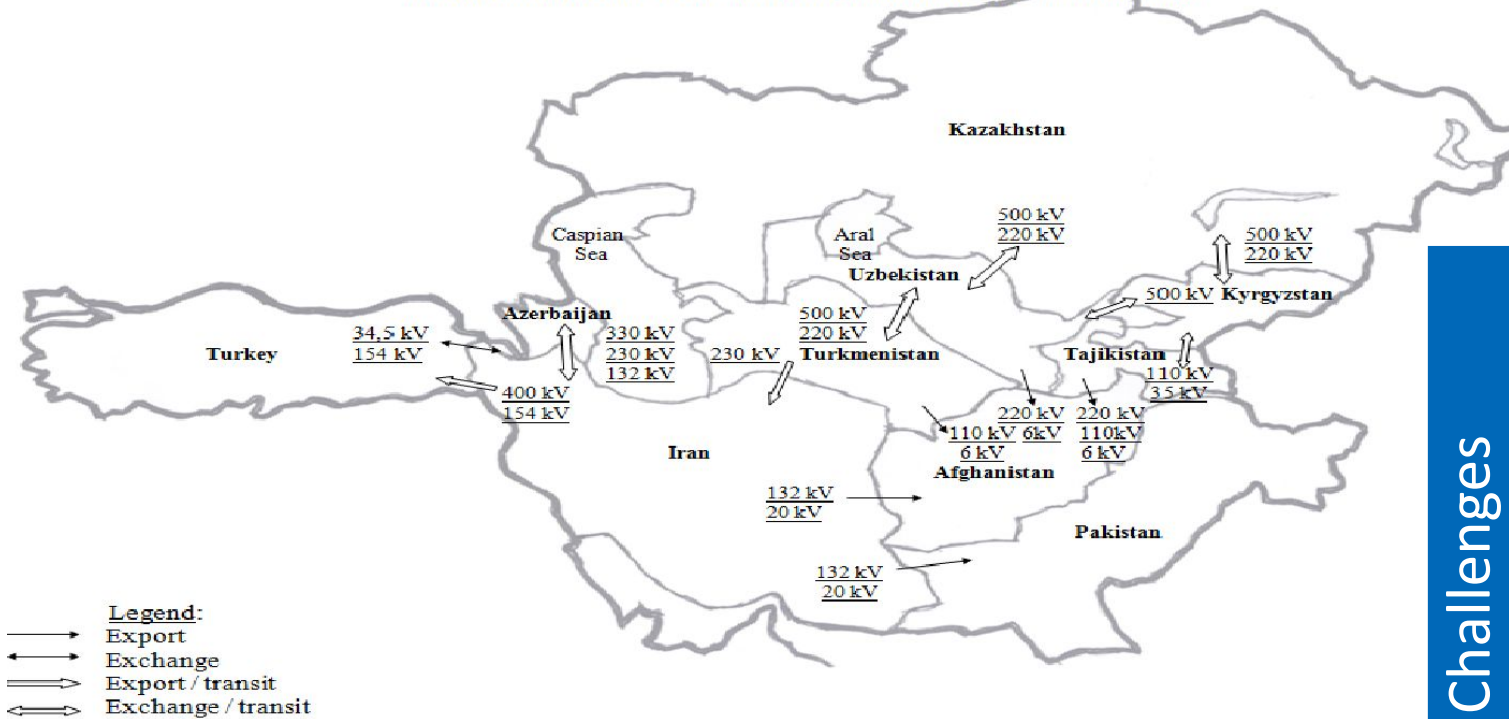
- Allow early easy comparability across projects and proposals
- Support multi stakeholders' engagement in the process
- Facilitate identification of possible areas for project improvement

**Pilot assessment project:
“Black Sea Submarine Cable”**



GPC Framework and the power market development in Central and West Asia

Status of bilateral Power Grid Interconnections of the ECO Member States



Challenges

Diverse regulatory frameworks

Infrastructure development

Insufficient development of renewable energy power

Institutional arrangements

Market design

Technical challenges

Data sharing

Tariffs

Capacity building

Source:

<https://www.unescap.org/sites/default/d8files/event-documents/Project%20on%20Establishment%20of%20ECO%20Regional%20Electricity%20Market%20by%20Rovshan%20Mirzayev%20Minerals%20and%20Environment%20Economic%20Cooperation%20Organization.pdf>

Proposed approach for developing a multilateral market for ECO region

Status of bilateral Power Grid Interconnections of the ECO Member States



- Completion of existing infrastructure projects
- Establishment of an Electricity Trading Center
- Upgrade of power system control equipment to meet technical requirements of trading in the related countries and to smoothly integrate variable renewable

Measures from the road map (1/3)

1. Organization of Stakeholders' Cooperation for the Development of Cross-border Electricity Trade



- Permanent high-level working group
- Agreement on decision-making principles and financing of designated activities.



1-3 years

2. Agreement on the boundaries of energy cooperation



- Framework multilateral intergovernmental agreements on energy cooperation
- Comprehensive master plan for the advancement of cross-border electricity trade in the region



1-7 years

3. Development of rules and mechanisms for mutual trade and interstate electricity transmission



- Incorporation of the rules into the national legislation of the ECO member states



1-15 years

Measures from the road map (2/3)

4. Harmonization of legislation on cross-border electricity connectivity



Annual publication of results from comparative analyses of energy policies



1-7 years

5. Regional cross-border electricity grid master plan



Coordinated cooperation mechanisms for planning the development of the regional cross-border electricity grid



1-15 years

6. Interaction of organizations (system operators, commercial infrastructure operators)



Implementation of cooperation mechanisms for infrastructure development in the electricity transmission and trade



1-15 years

Measures from the road map (3/3)

7. Fostering investments



Regional platforms that bring together interested parties to promote project financing



1-15 years

8. Ensuring information exchange



Implementation of rules for information exchange between authorized government bodies and infrastructure organizations in the region



1-15 years

9. Sustainability of interstate electricity trade



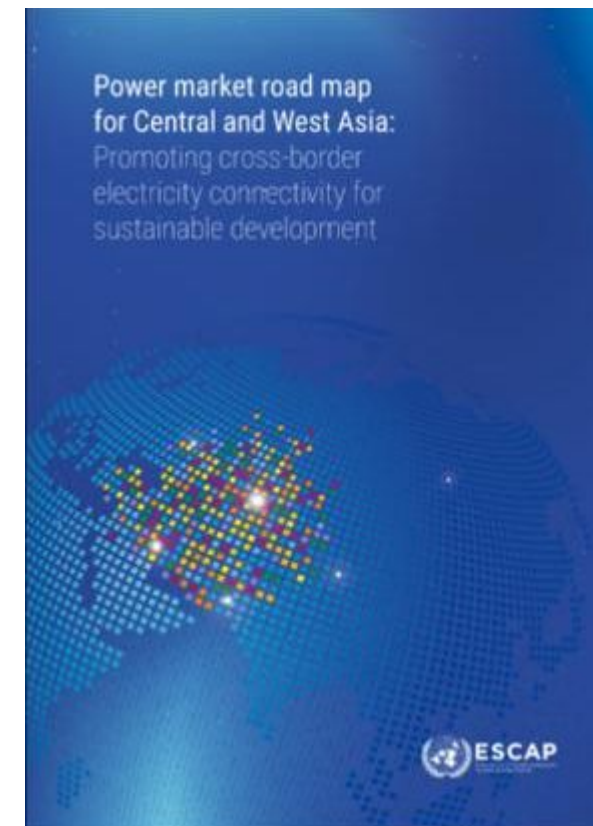
Involvement of sustainable development criteria in the projects, aimed at the development of interstate electricity trade



1-15 years

Next steps and recommendations

- Developing a working group to facilitate regular dialogue
- Identifying financial aspects of implementing the road map
- Tailoring agreements on power system connectivity models to the specific circumstances
- Using existing forums dedicated to knowledge-sharing, harmonization and capacity-building can facilitate this process.
- Coordination among international donor organizations



Power market roadmap for Central and West Asia



ESCAP

Economic and Social Commission
for Asia and the Pacific