Energy connectivity

The importance of increased energy integration

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Strengthening Subregional Connectivity in East and Northeast Asia through Effective Economic Corridor Management
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Impact of COVID-19 on energy systems has been dramatic

Every day is Sunday:

- Demand is down in offices, restaurants, public transport...
- For how long depends on infection waves, vaccine development.

Disproportionate impact on fossil fuel generators:

- Renewables output is steady, fossil fuel units absorb the “delta”.
- Profitability declines and older coal units may be facing shutdown/mothballing.

“Postcard from the future” for high renewables penetration system:

- Demonstrates how power systems manage sudden increase in variable RE share.
Generation mix before and during lockdown period, India

IEA, Electricity mix in India, January-August 2020, IEA, Paris
Connectivity: a tool for managing our energy future

Meeting our sustainability objectives means:

• More renewables in our power systems (increased variability)
• Changing shape of demand (efficiency, electrification, demand response)
• Changing fuel mix (natural gas as bridge fuel, renewable gas, “green” hydrogen)

This transformation has implications for:

• Sustainability
• Cost
• Security

The energy trilemma
Connectivity helps resolve the energy trilemma

Sustainability:
• Connect load centres to regions with high renewable resource potential (often remote)

Cost
• Import lower cost electricity
• Earn revenues through exports

Security
• Increase diversity of supply
Connectivity properly guided: draft ESCAP roadmap for power system integration in Asia

To create a pan-Asian interconnected grid that offers a more reliable, affordable and sustainable electricity supply

Underpin social and economic development

Assist the move to a low-carbon energy system

- 9 strategies outlined which, together, can support sustainable integration in the region
- Cover issues related to planning, development, and operations
Roadmap Strategies

1. Build trust and political consensus
2. Develop a regional Masterplan
3. Develop intergovernmental agreements
4. Harmonize policy and regulatory frameworks
5. Work towards multilateral trade and frameworks
6. Coordinate transmission planning and operation
7. Mobilize investment
8. Share learnings and build capacity
9. Ensure coherence with the SDGs

VISION: A region-wide Asia-Pacific electricity market built on a unified grid
Final thoughts

• Connectivity is a **tool**, not a goal.

• ”Properly guided” means thinking and working **holistically**.

• Connectivity requires **cooperation**.