

Power Grid Connectivity in Northeast Asia

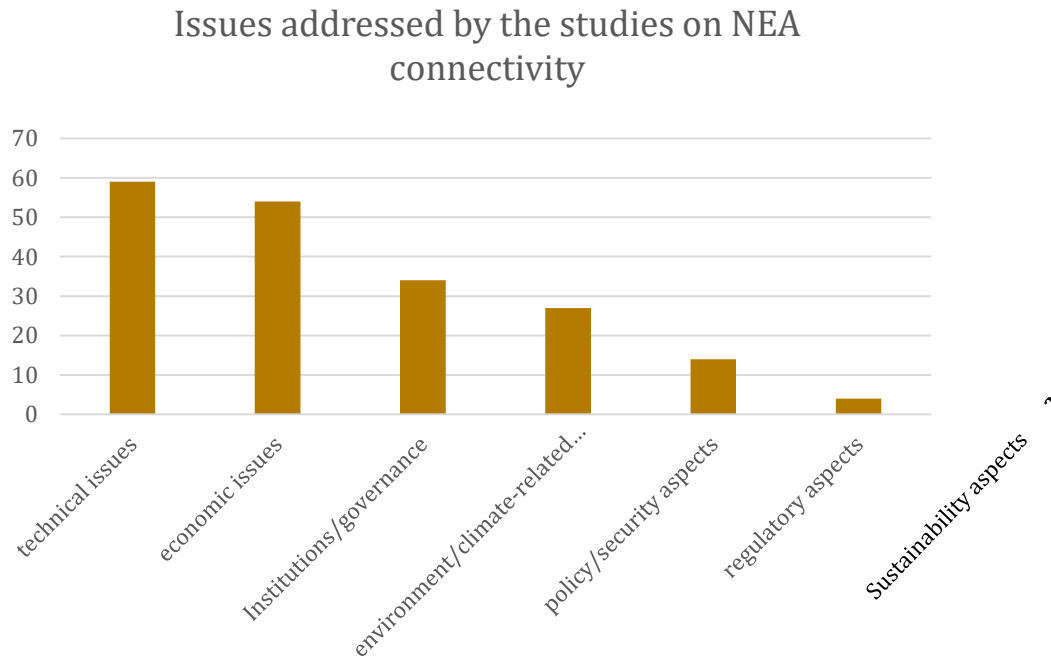
Towards a more sustainable energy system?



Stiftung Wissenschaft und Politik
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Power grid connectivity in NEA: extensive but fragmented knowledge base

- The report is based on over 130 studies on power grid connectivity initiatives in NEA, about 70 of these – feasibility studies and models



Sustainability and power grid interconnection in Northeast Asia

Expansion of power grid interconnections – one of the key elements to a sustainable energy system:

- Tapping into regional renewable energy resources remote from main load centres
- Compensating variability of renewable energy generation through integrating a mix of mutually ancillary renewables into the grid, larger transmission grids, seasonal and time-zone and economy-related demand variations
- Contributing to more stable grid and security of supply
- Contributing to reduction of carbon emissions through electrification and transition to cleaner power generation
- Improving air quality
- Lowering electricity cost for consumers, particularly in countries with higher electricity prices (i.e. Japan).

Sustainability and power grid interconnection in Northeast Asia

Putting sustainability at the centre of regional interconnection projects is key to their feasibility and efficiency:

- Expansion of the grid must go hand in hand with the deployment and integration of new RES-E generation capacities to avoid transfer of carbon burden
- RPGI grants low-cost, low-carbon electricity only if strong carbon policies are in place
- Implications of the land use for the RPGI
- Implications of water use for construction and operation of RPGI
- Capacity building for efficient operation of the RPGI
- Access to affordable electricity for the poorest population groups
- Quality of energy access: how can RPGI contribute to access to clean electricity AND energy services, also in rural areas?

Regional Intergovernmental Cooperation – Key to RPGI implementation

- Harmonization of the power market regulations and standards.
- Putting financing mechanisms in place, ensuring the investment security to the private sector
- Data sharing for transparent and stable operation of RGIP
- Cooperation on carbon pricing
- Working on emergency response mechanisms
- Cooperation on capacity building (particularly urgent in the case of Gobitec)
- Taking DPRK on board

=> Political will to establish cooperation mechanism between all concerned governments is the necessary first step towards regional power grid interconnection and a sustainable energy system

Thank you!

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