

USJI Seminar

**The Great East Japan Earthquake: Lessons for Japan's Energy Policy,
Infrastructure Development, and Media Coverage**

21 July 2011, Washington DC

**Transboundary Super Grid
as a Long-Term Solution for
Energy Security and General Security**

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Societal System Proved Vulnerable

- The Great East Japan Earthquake has tragically exposed the **vulnerabilities of societal systems in Japan.**
- Citizens were abruptly forced to contend with **rolling blackouts** due to shutdown of nuclear power plants.
- Nuclear power plants are **in limbo.**

Domestic Impasse **to** a **Transboundary Solution**

In Japan

- Nuclear: Insecure prospects
- Thermal: More cost and CO₂
- Geothermal: Few feasible sites
- Hydro: No more good sites

In Asia

- Hydro: A lot of potential
- Solar: Very promising sites
- Thermal: “Locally produced and consumed” potential
- Wind: Some good sites

→ **Super Grid for inter-connection**

Super Grid has been proposed in Asia

Promising sites exist in Asia for solar power generation.

Wind blows in winter, not in summer (when we need more energy), while Super Grid can connect two hemispheres (North and South).

A lot of Hydro Power potential exists in Asia.

Concept of Global Super Grid is not New

- Buckminster Fuller in the 1970s envisioned **an interconnected global grid** linked to renewable resources, as a tool to improve global security.
- In these days, **even WWF suggests** installation of global Super Grid for Green Energy.

Technologies already Exist

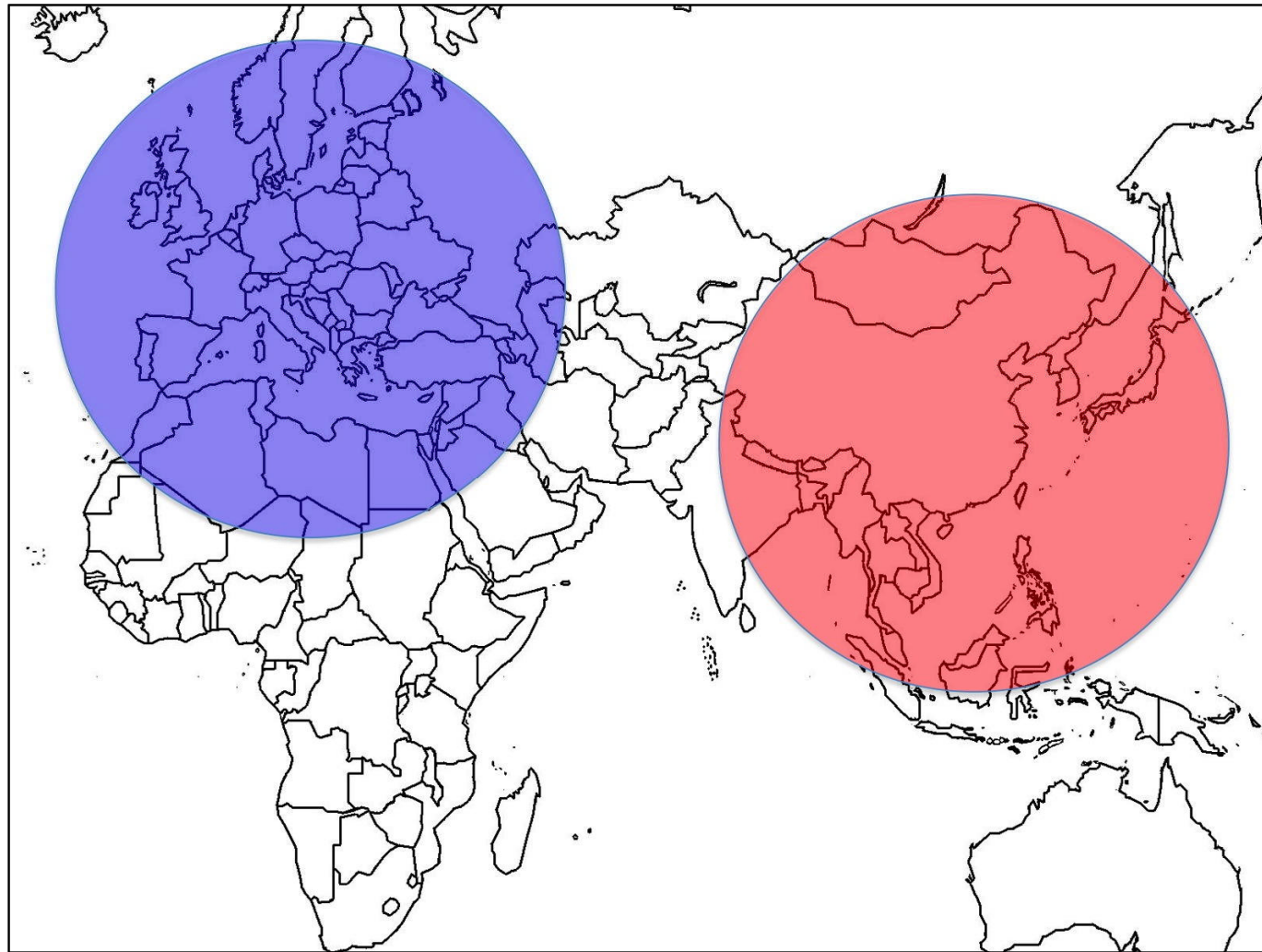
“The technologies necessary to build a super grid are **all fully developed and available now.**”

“The only missing ingredient is **political will.**”

by Al Gore
in Our Choice (2009)

Geographic Coverage

DESERTEC (Proposed) in Europe, Middle East and North Africa
and **Similar Super Grid in Asia**



Questions to be Addressed

- Is Super Grid affordable?

Definitely! The cost of building the Japan-Australia Super Grid is equivalent to the transportation costs of LNG for power generation in Japan for a few to several years.

- Will Super Grid undermine general (non-energy) security of Japan?

Probably Not. Super Grid can enhance security, as Buckminster Fuller suggested in the 1970s.

Sharing Water Enhances Regional Security

- In Mekong River Basin, China has made compromises for downstream countries.
- Turkey has done the same in the Tigris-Euphrates River Basin for the northern part of Iraq.
- Regional **Economic Integration** enhances regional security.

→ **Super Grid may also enhance regional security**

Gas Pipelines Enhance Regional Security

- Networking of energy sources (e.g. by natural gas pipelines) has enhanced regional security, in addition to energy security

→ “Networked” resources may enhance regional security, between sellers and buyers.