

International Interconnections:

The future of energy is a world-wide web of electricity allowing green energy to flow where and when it is needed

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BUSINESS
OPPORTUNITIES 



As a global leader in low-carbon energy, the EDF Group covers every sector of expertise, from generation to trading and transmission grids. We have 160 000 employees worldwide, 80 Bn€ annual turnover.

The Power System & Transmission Engineering Centre (CIST) is the EDF department expert in transmission networks. We provide services as project managers, expert consultants, owner's engineers, technical assistants, and contract managers.

Some of our international consultancy projects

Indian Sub-continent
International Interconnection Roadmap
For India, Asia and Middle-East
Strategy, technical and business models

Morocco
Production/transport master plan
with a large-scale input of renewable
energies.

Jamaica
Study of the flexibility and stability of the system
in view of 30% renewable energy

West Africa
Creation of an information centre
and coordination of the WAPP (West African
Power Pool) enabling 14 West
African countries to coordinate
their electricity networks and establish
a market.

Egypt
Specifications, call for tenders, supervising
and implementation of New Cairo
National Dispatching Control Centre

Mongolia
Supporting Mongolia to invest in
renewable energies and opening
its markets to neighbouring Asian countries
network as part of the national project
NAPSI (Northeast Asia Power System
Interconnection) involving
the TSOs of all countries in Northeast Asia.

Cambodia
Design and construction of a 100-km, 115-kV line
between KamPong Cham and Kratie and two
20-km, 220-kV lines in the
Koh Kong region, as well as the 6 related
stations, and distribution lines
in rural areas.

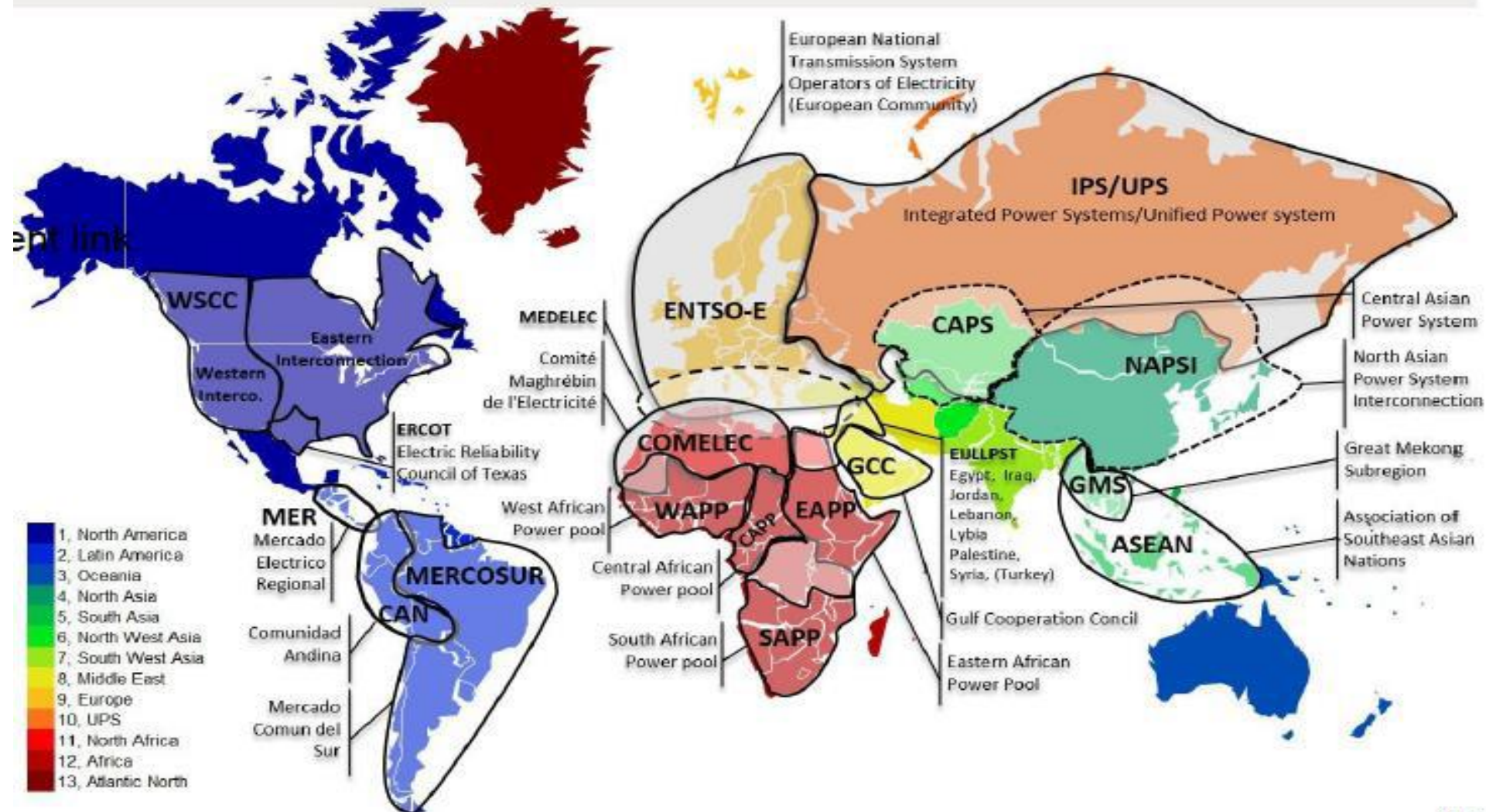
Thailand
Design and installation of underground
132/66 kV substation to save space
and improve urban landscape in Bangkok

Dubai
Probabilistic analysis of
renewable resource management to integrate
5 to 6 GW of solar power
into the power system.

Mekong sub-region
Development of the interconnection of the 6
Mekong countries to increase energy exchanges
and improve energy security in the region

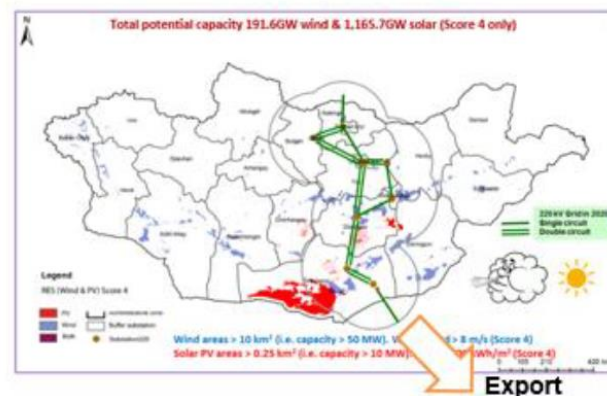


Interconnection is progressing at regional levels, around the world



North Asia Power System – ADB study

Northeast Asia Power System Interconnection



In Mongolia, the potential of Wind and Solar PV development is huge thanks to an outstanding wind resource (wind speed > 8 m/s), a good solar resource (Global Horizontal Irradiance GHI >1700 kWh/m and to numerous suitable areas)

The red stains stand for solar potential : 1200 GW

The blue stains stand for the wind : 200 GW

3 scenarios of Solar and Wind Power exportation from Mongolia:

5GW RE export

10GW RE export

100GW RE export

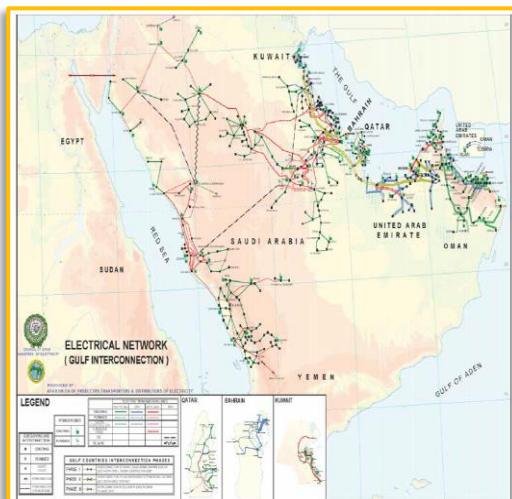


The Project of regional interconnection is ruled by United Nation (UNESCAP) in the anticipation of a future NAPS body where all the countries will work together

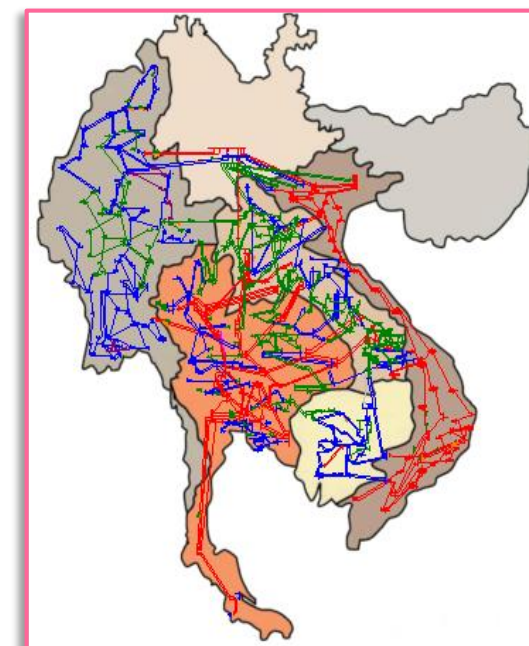
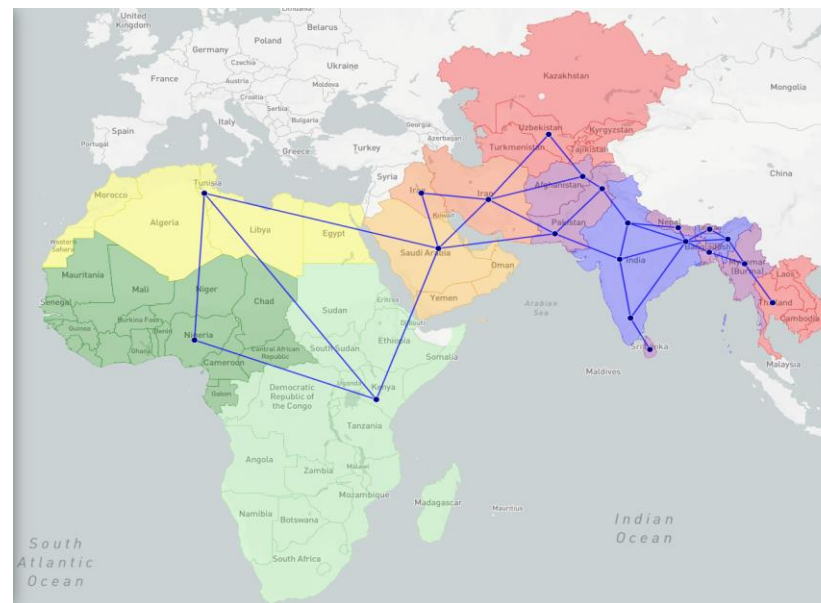
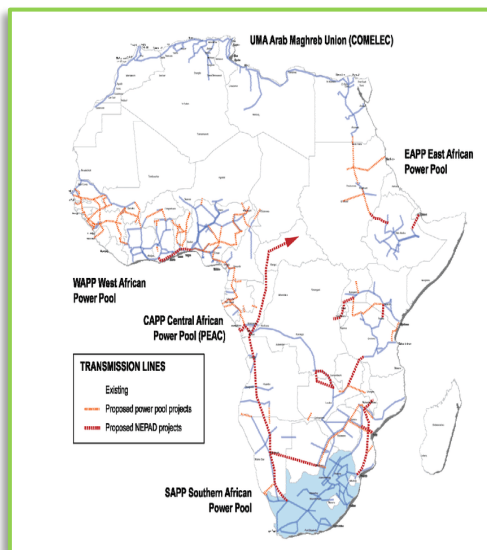
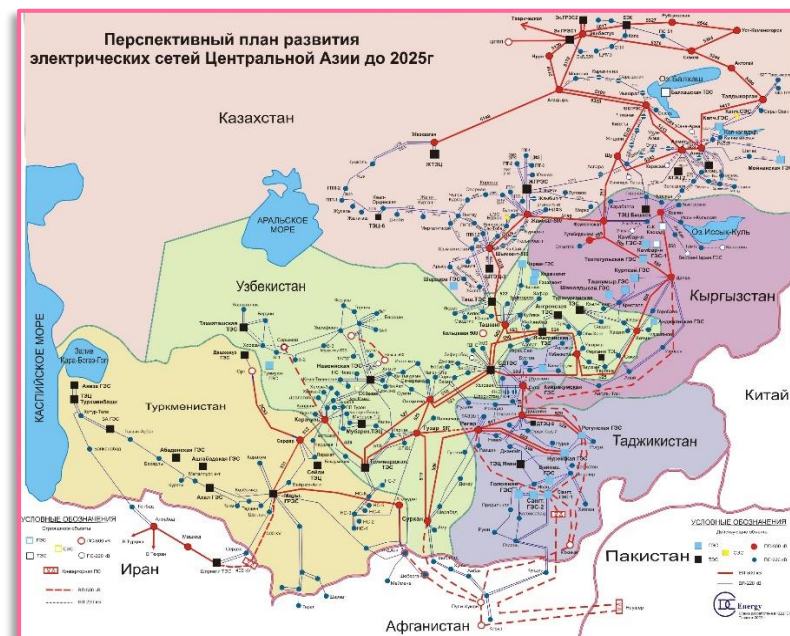
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India interconnecting through OSOWOG (One World, One Sun, One Grid): “The sun never sets”



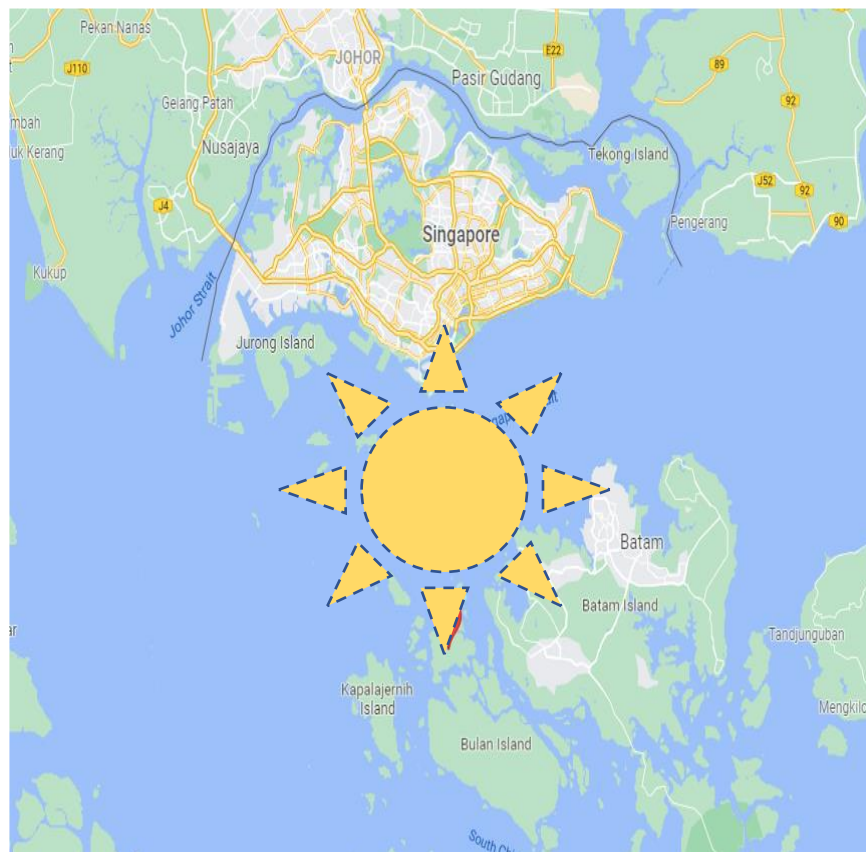
- Financed by the World Bank
- Under the patronage of the International Solar Alliance
- Roadmap being developed by EDF consortium
- Presented at COP26 in November 2021





Straits Green Link

Allowing green power to flow across borders in SE Asia



Consortium:

EDF, Indonesia Power, Masdar, Singapore Power, Tuas Power

Import license from Energy Market Authority of Singapore

Export license from Indonesian Authorities (KKPR)

PV = 0.9 GWp

BESS = 0.3 GWh

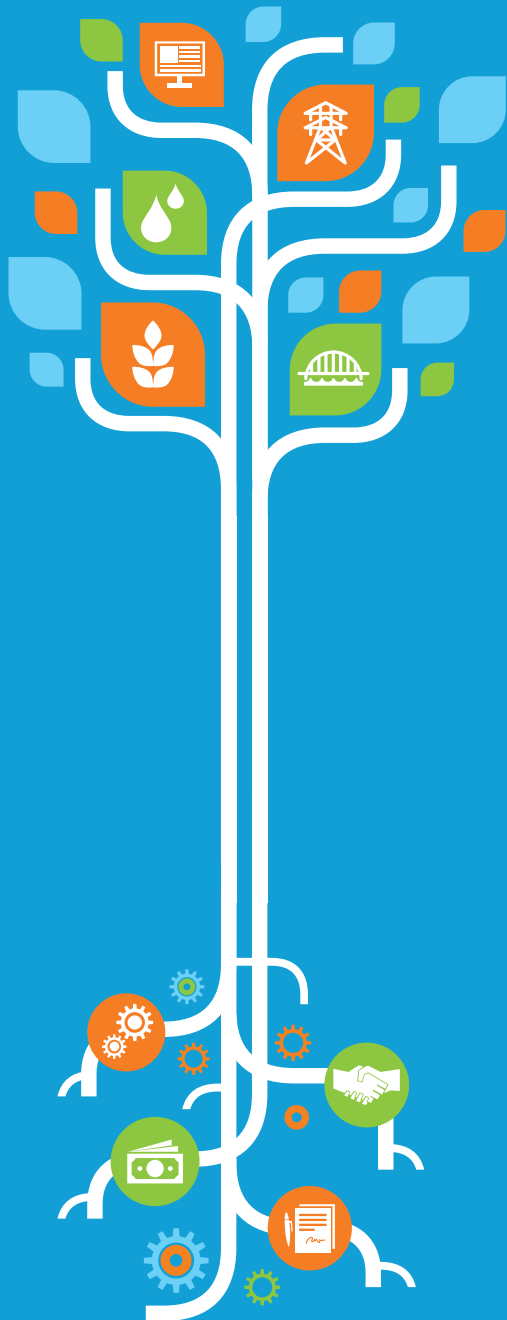
Link characteristics

- 230 kV, HVAC
- New substation to be built in Riau islands
- Existing substation at Singapore

Timeline:

Construction start = 2023

Start of operations = 2027 or before



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