



# Super Grids for Energy Transition and Energy Security

## Interconnection of Regional Grids in Asia

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**75**<sup>years of</sup>  
Powering India

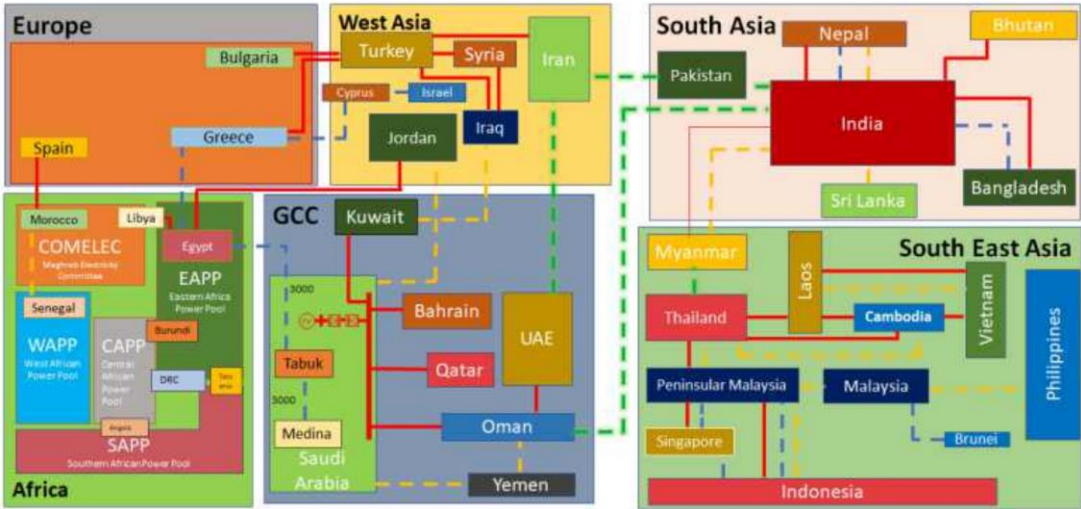
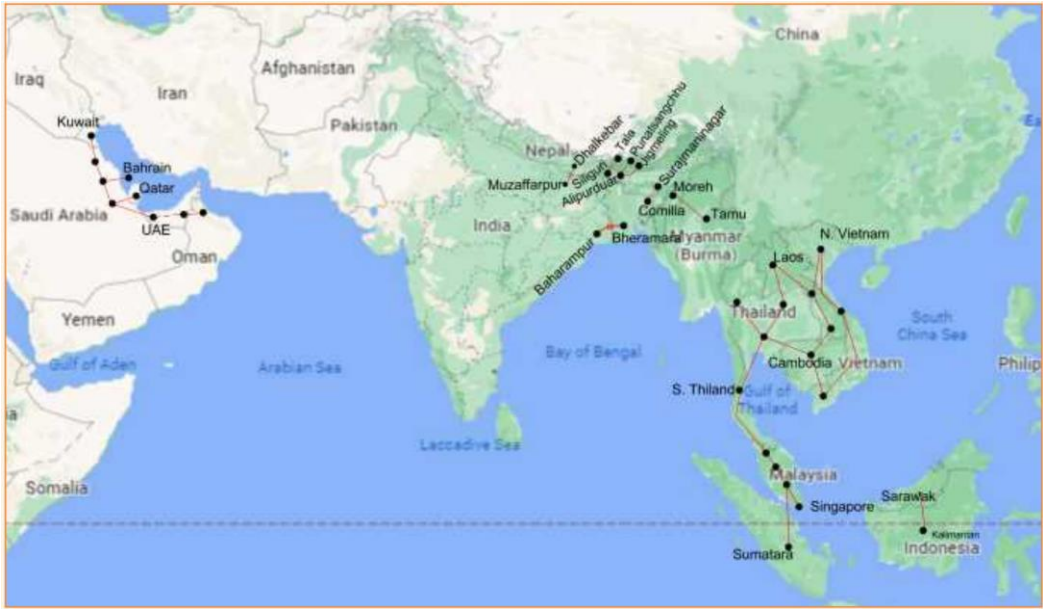
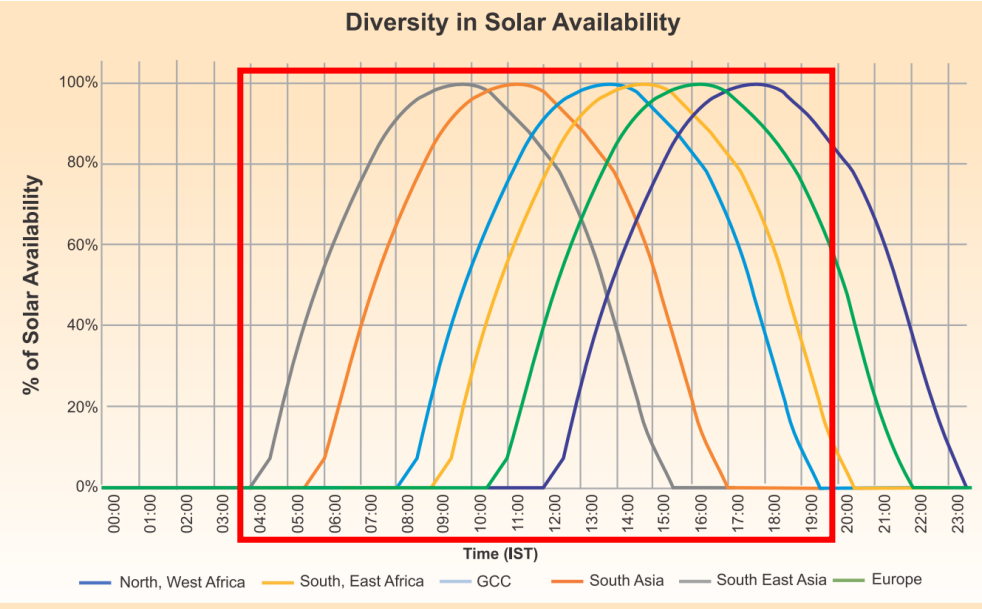
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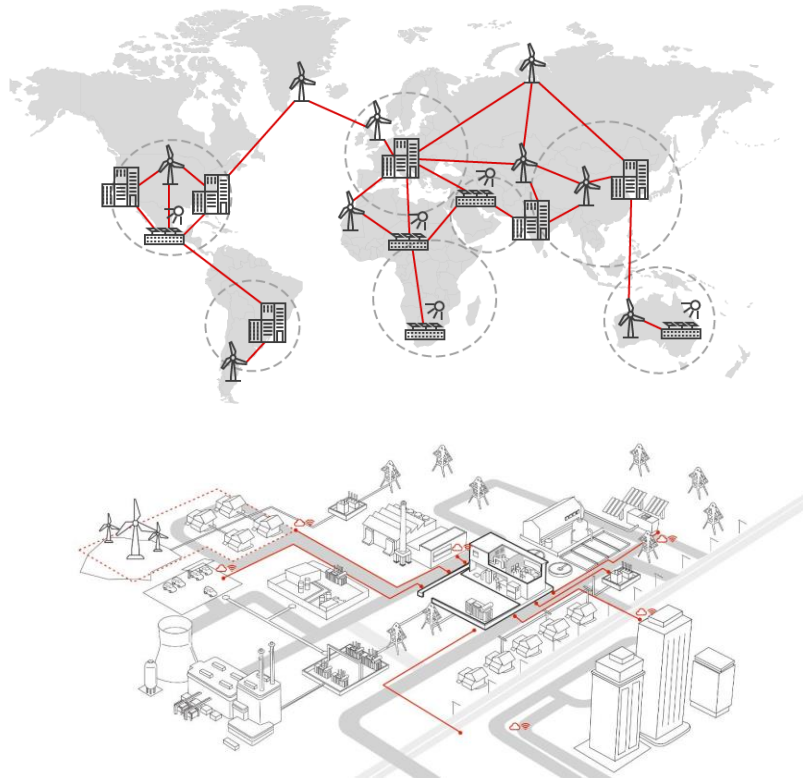
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# Energy Transition - Evolution of Regional Super Grids





## From

Central, predictable generation

Predictable consumptions

Inertia, reserves & predictable short circuit conditions

Electricity grid

Power System

Fault prevention and avoidance

## To

Volatile & more distributed generation

Flexible prosumers

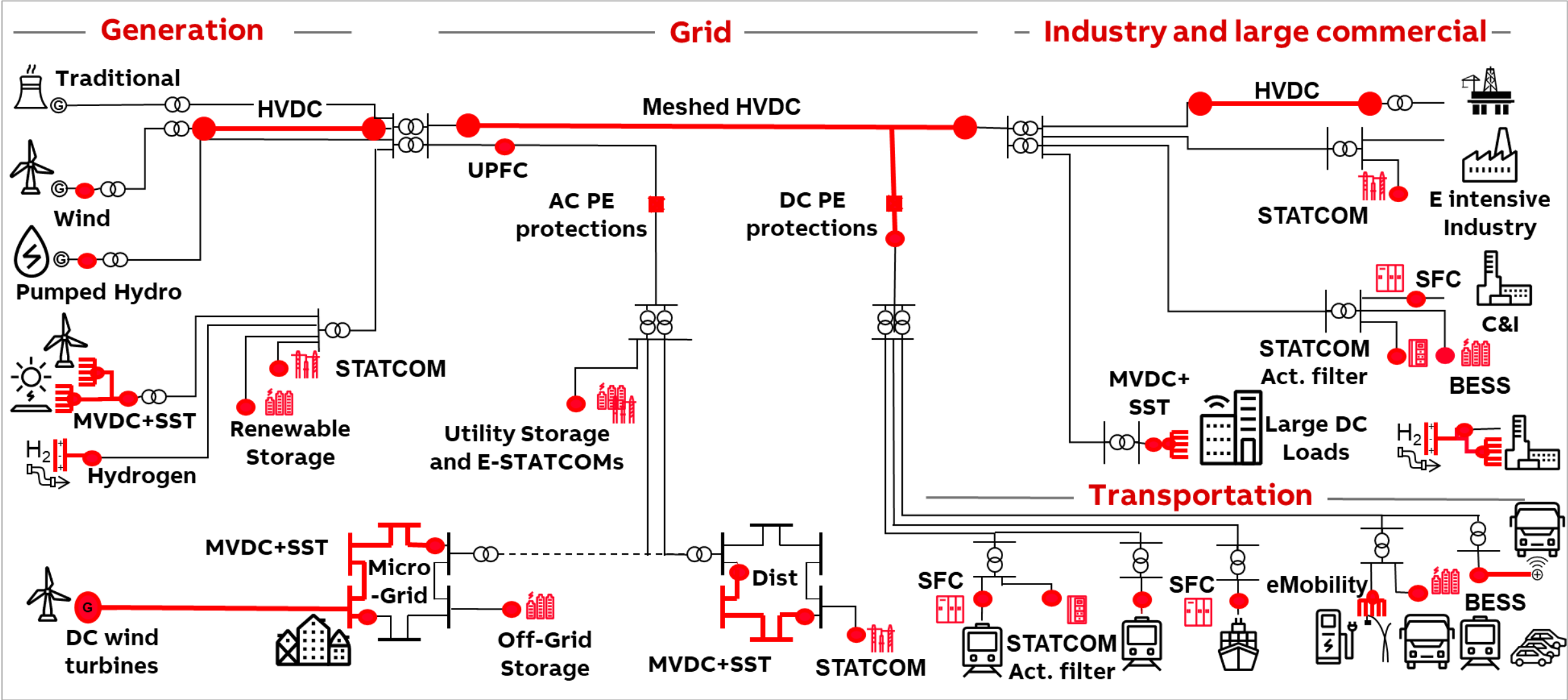
Virtual inertia, storage & power electronic components

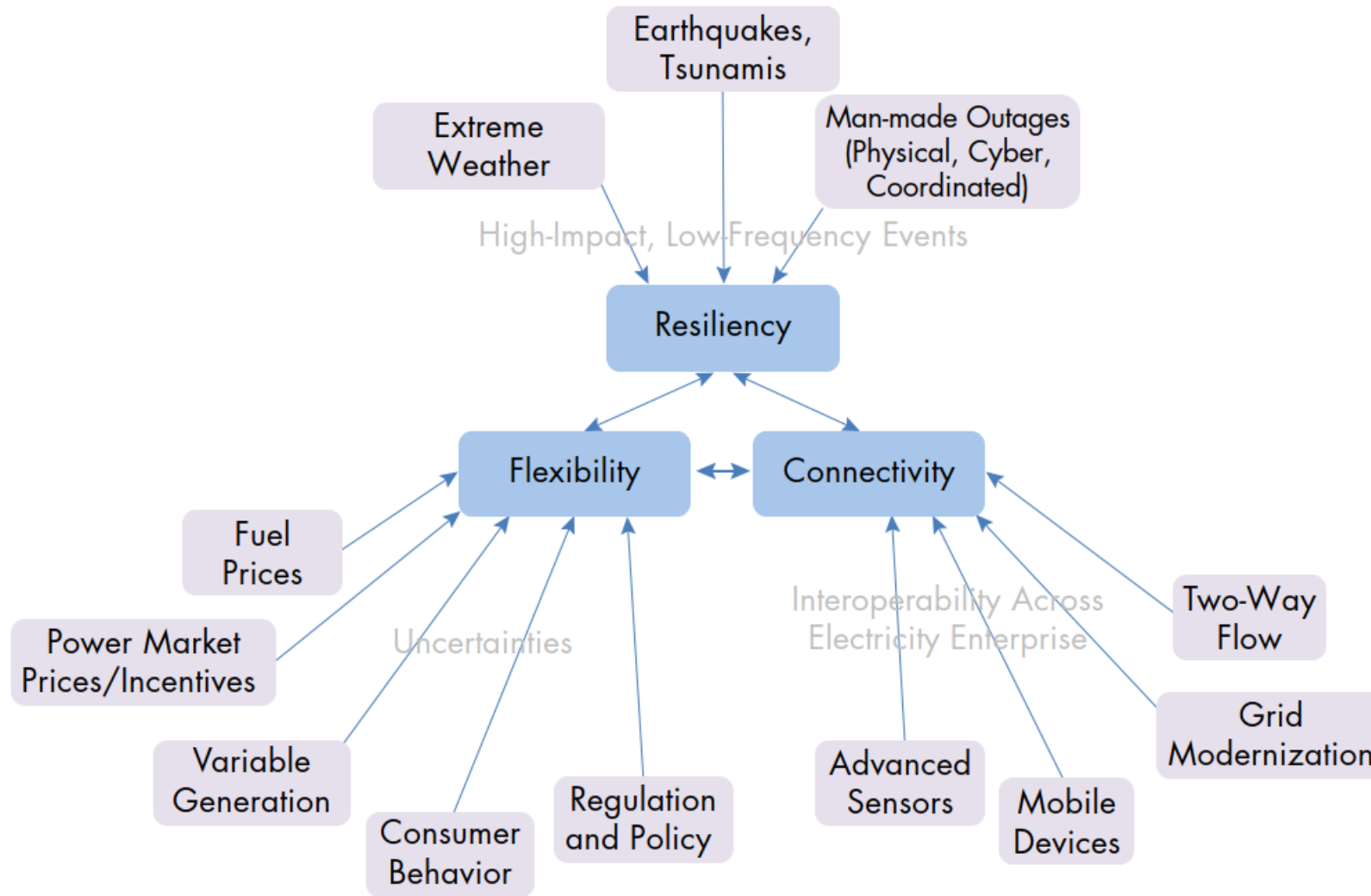
“System of Electricity Systems”

Sector coupled energy system

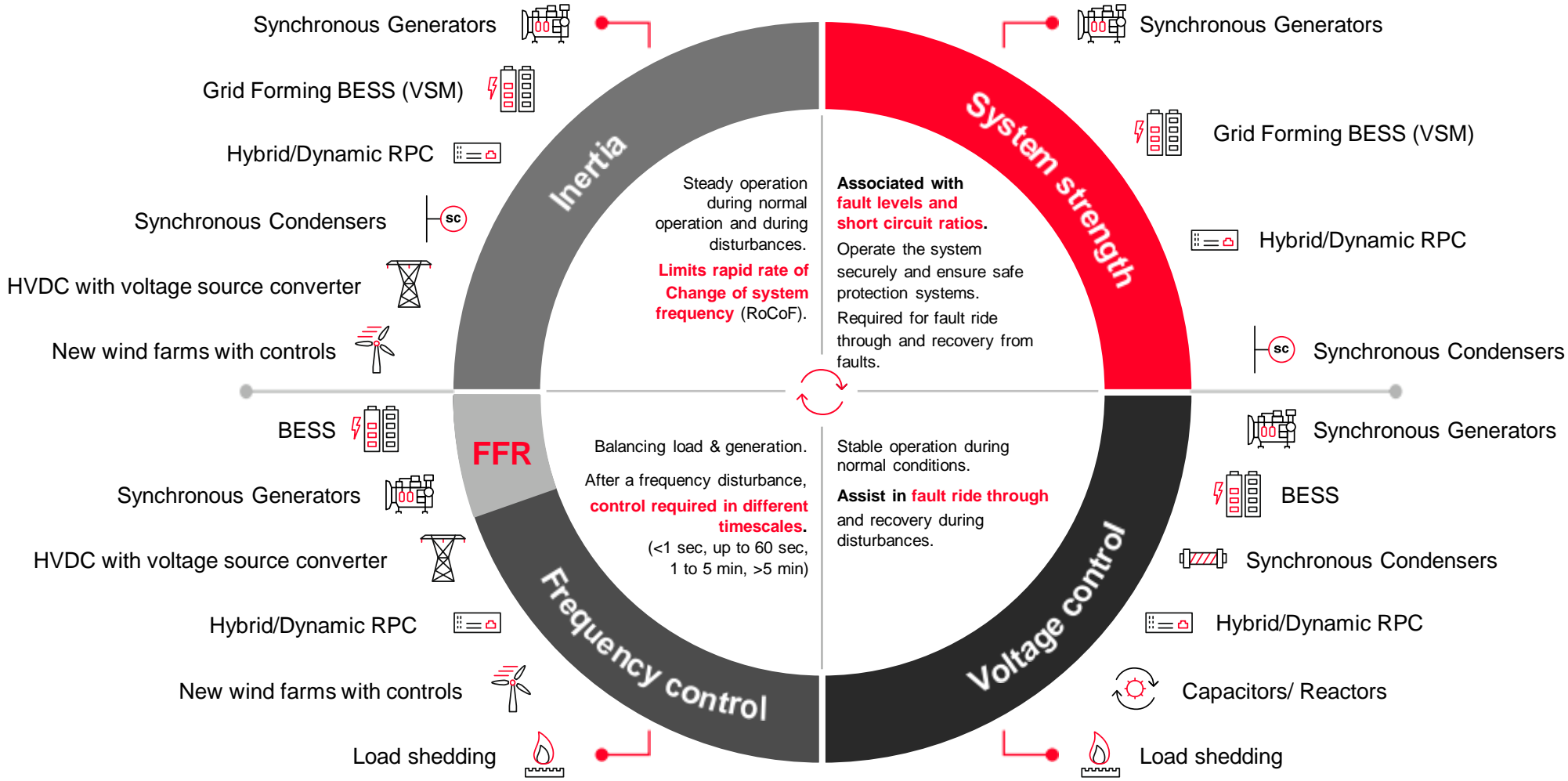
Pro-active and predictive fault management

# Energy System 2050 - Towards a Carbon-neutral Vision





# Technologies for Stable and Secure Super Grids Operation



## HVDC Technologies

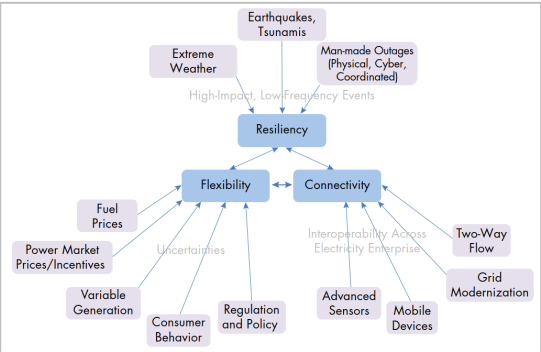
- Back-to-Back
- Line over land
- Cable under sea

For asynchronous interconnection between

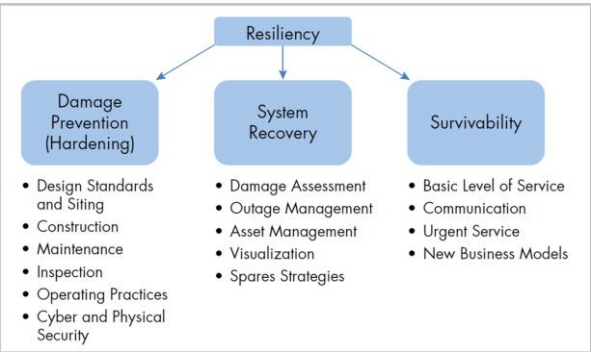
- Countries
- Sub-regions



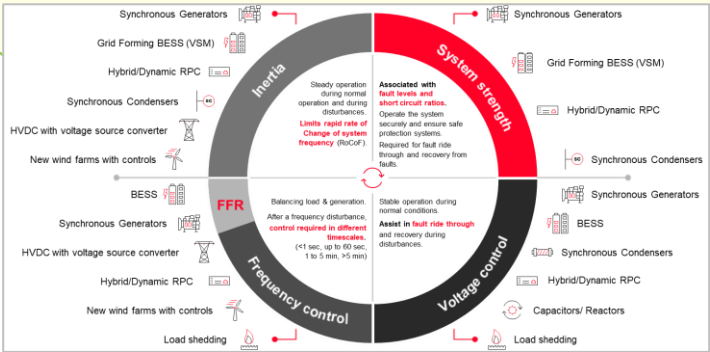
Resiliency Aspects



Resiliency Concepts

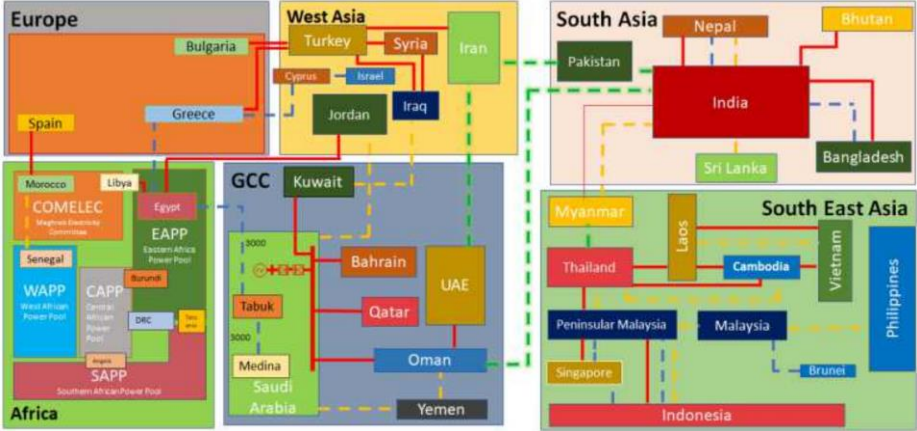
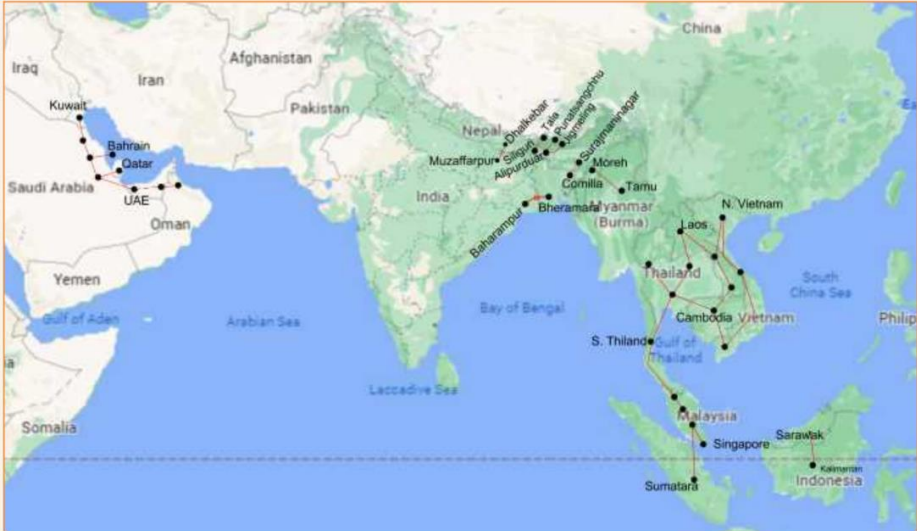


Collaborative  
Techno-Economic Studies  
for Co-innovating and Co-Creating  
Asian Super Grids



Technologies

Super Grids



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Inspire the Next 