

SUSTAINABLE ENERGY WEEK 2024

BUILDING RESILIENT & JUST ENERGY SYSTEMS

16-20 SEPTEMBER 2024 | PALAIS DES NATIONS | GENEVA

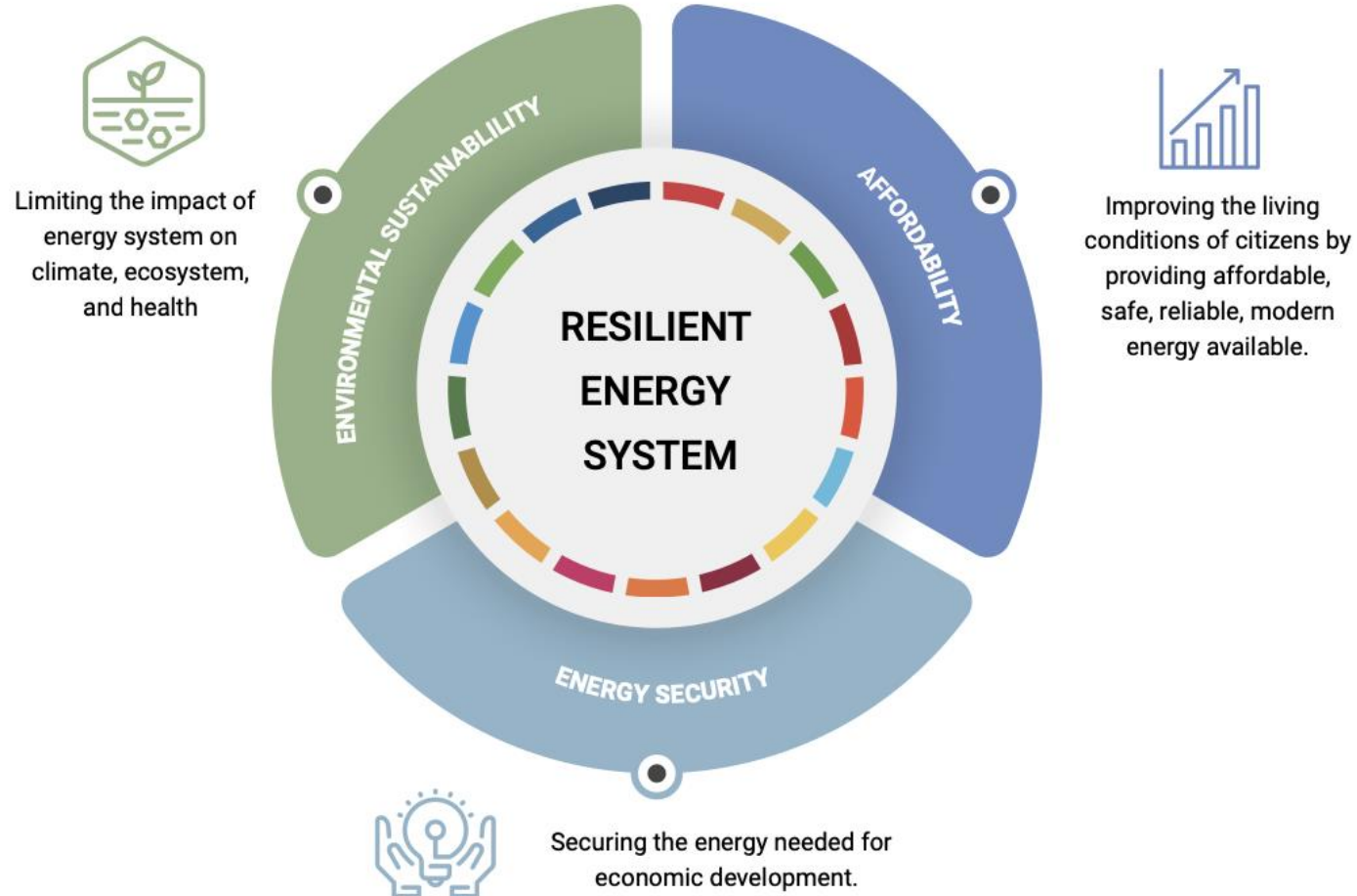


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Maintaining future electricity supply reliability in the period of transition of five to ten years



Resilient Energy Systems

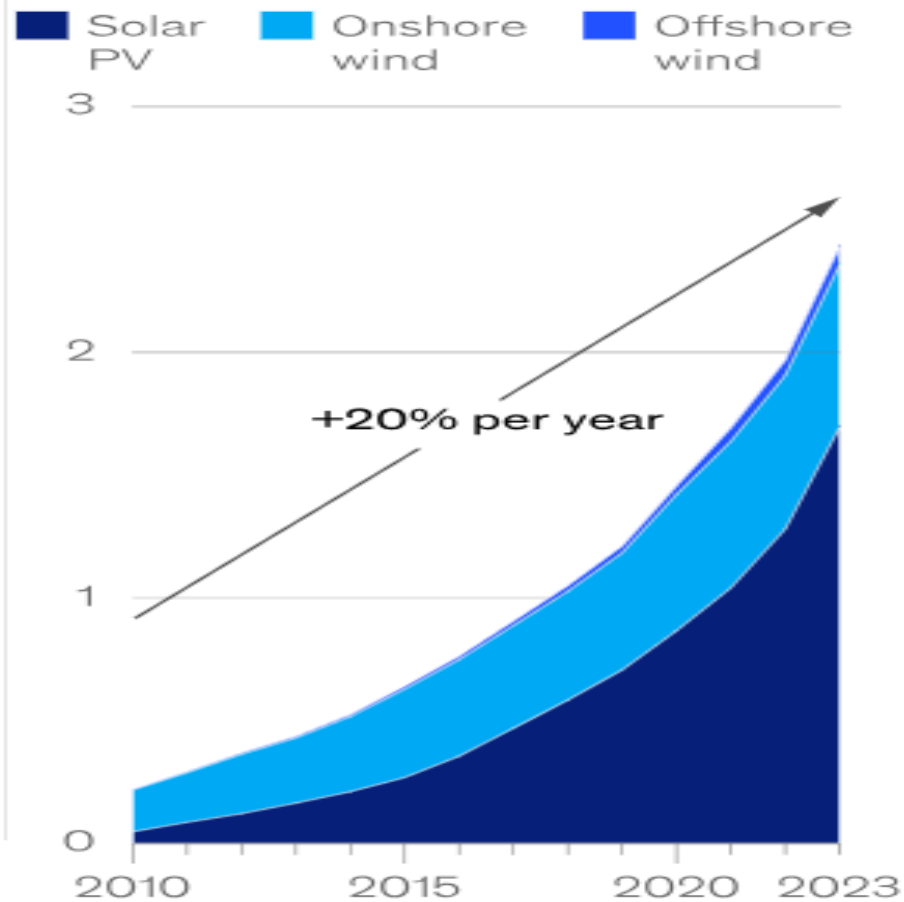


“There’s a thin line between order and chaos... and that line is known as electricity”

“Electricity is 5-6% of the economy, but the first 5-6%; without juice... nothing else works”

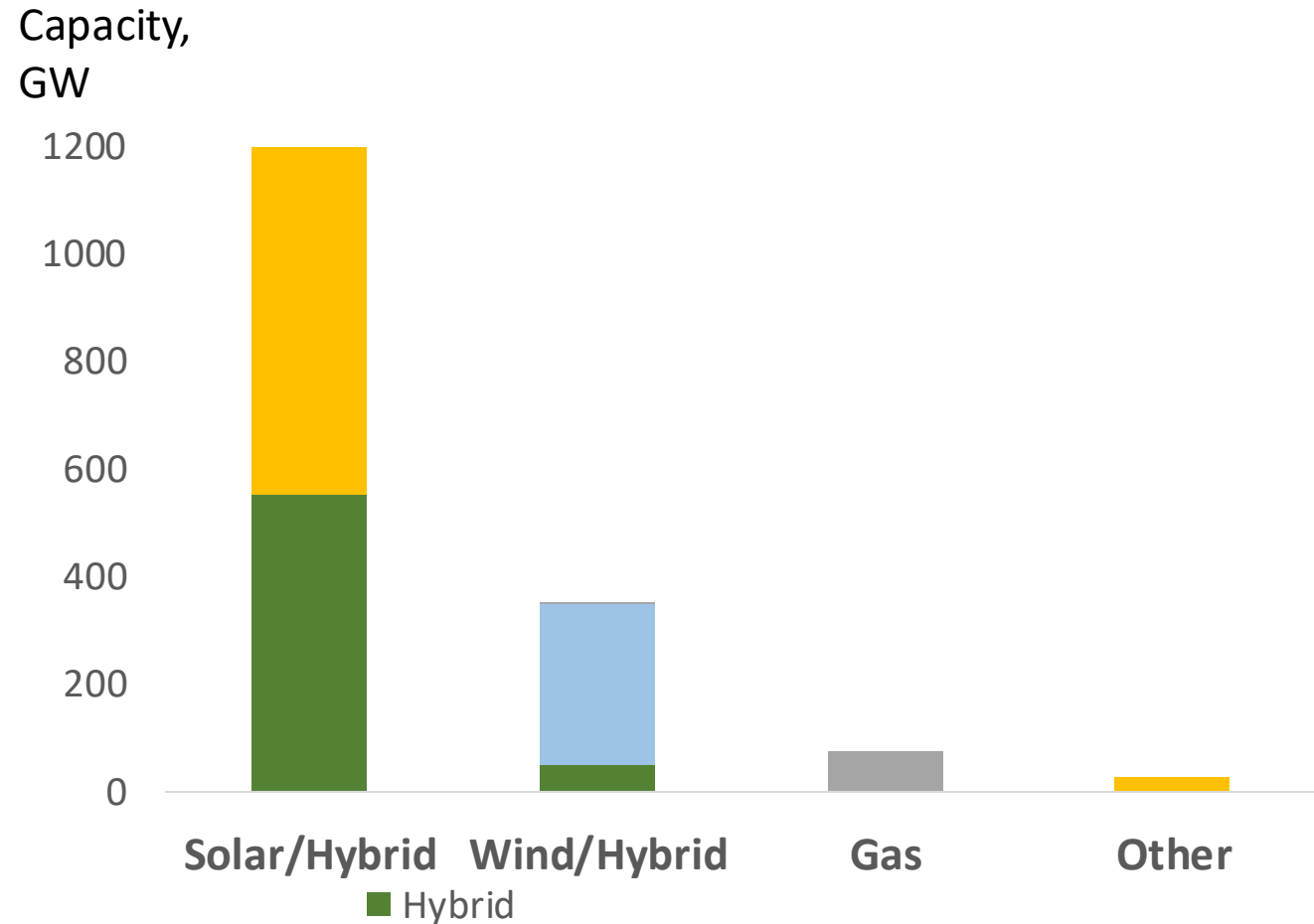
Resource Transition is occurring... ... and will continue

Installed capacity of wind and solar, terawatts



Source: McKinsey & Company, Inc

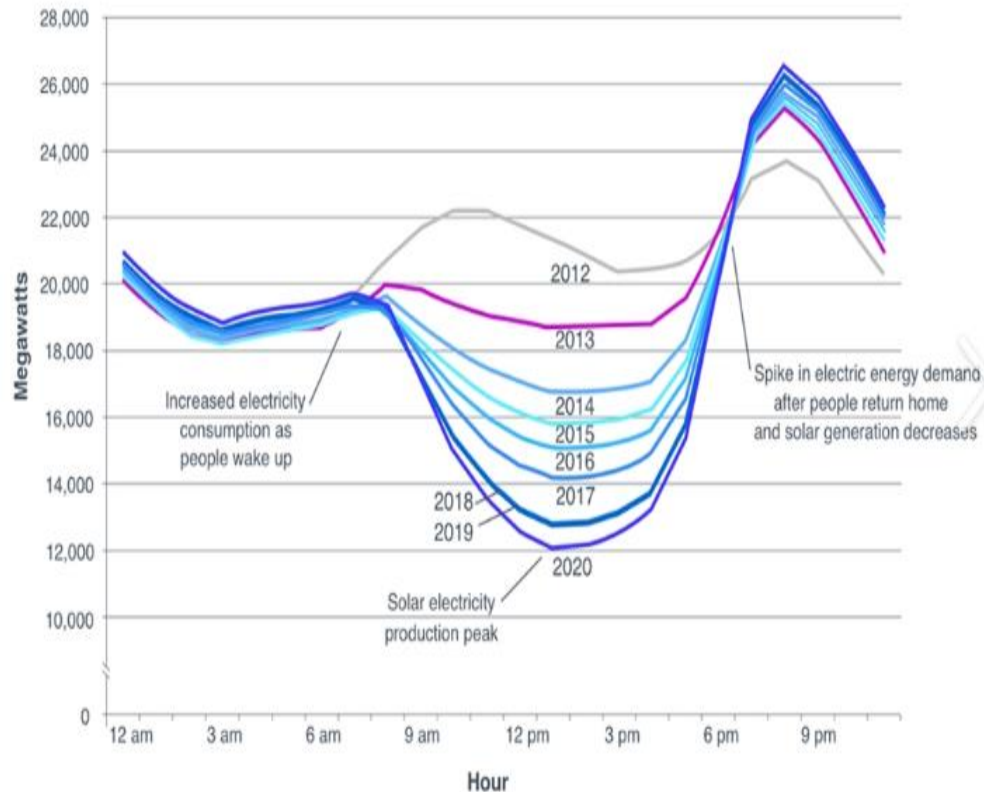
United States Interconnection Queues



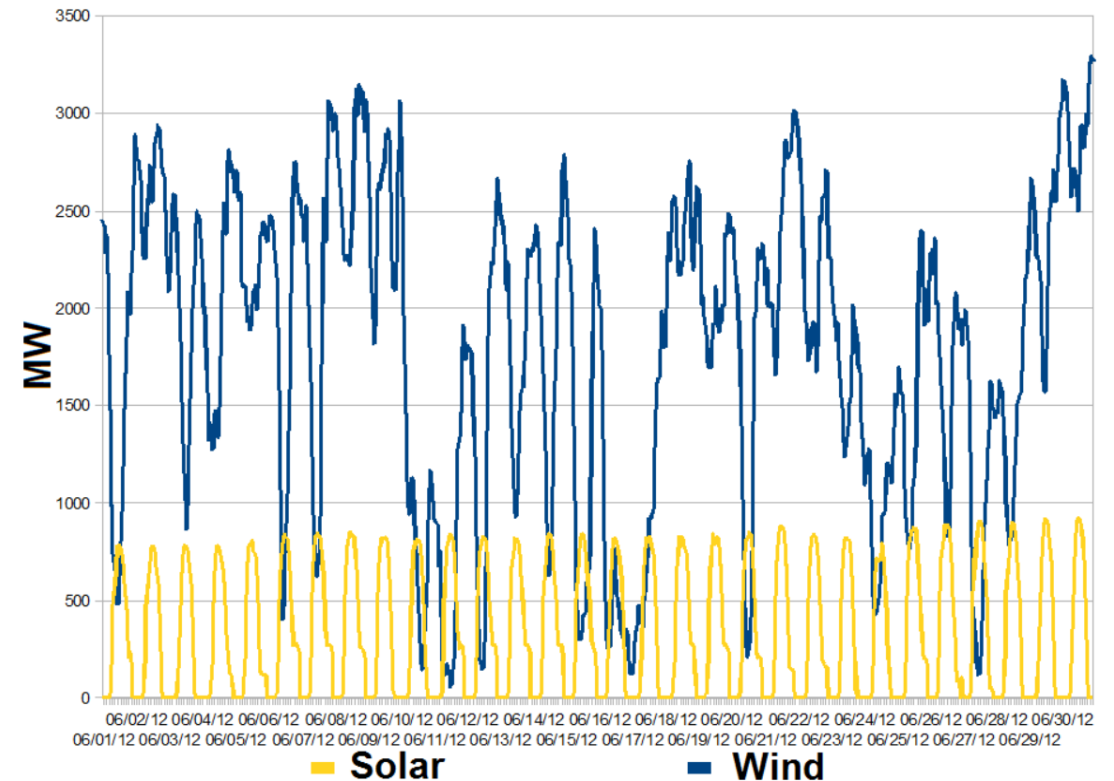
Source: Lawrence Berkeley National Laboratory

Challenges with renewable integration: Ramping and Volatility

California ISO “Duck Curve”

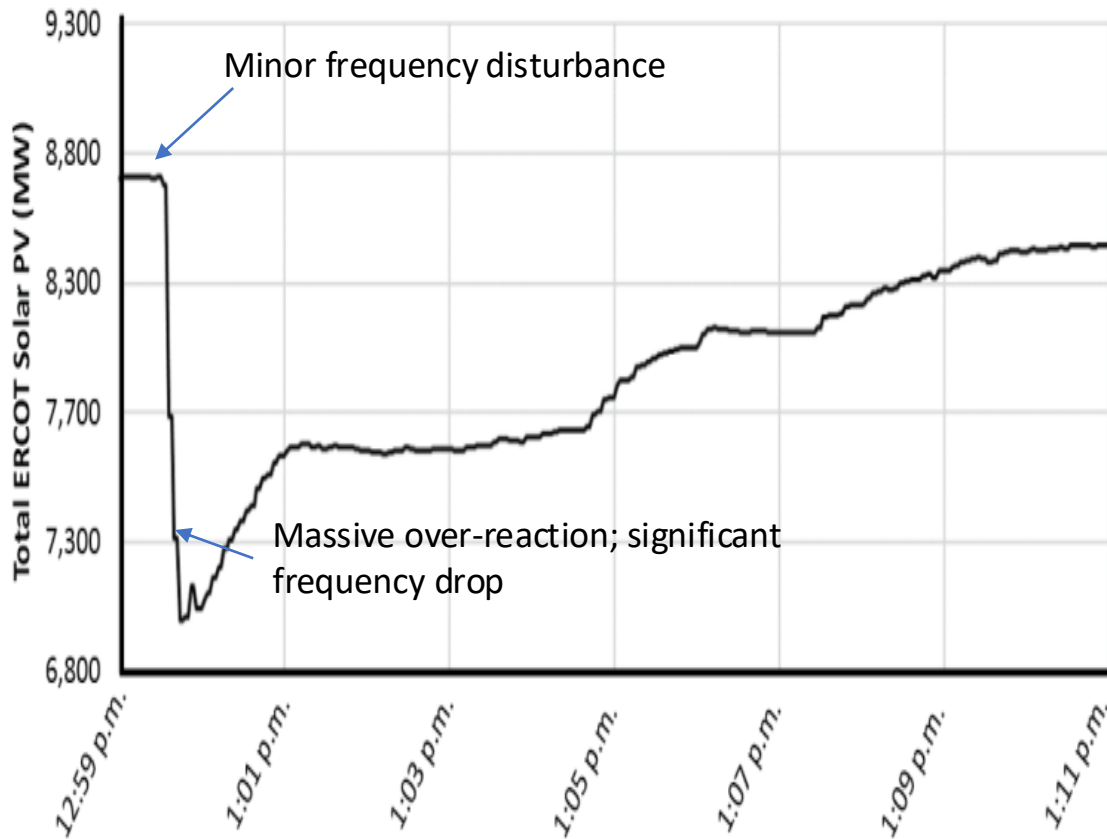


Solar and Wind Production in California

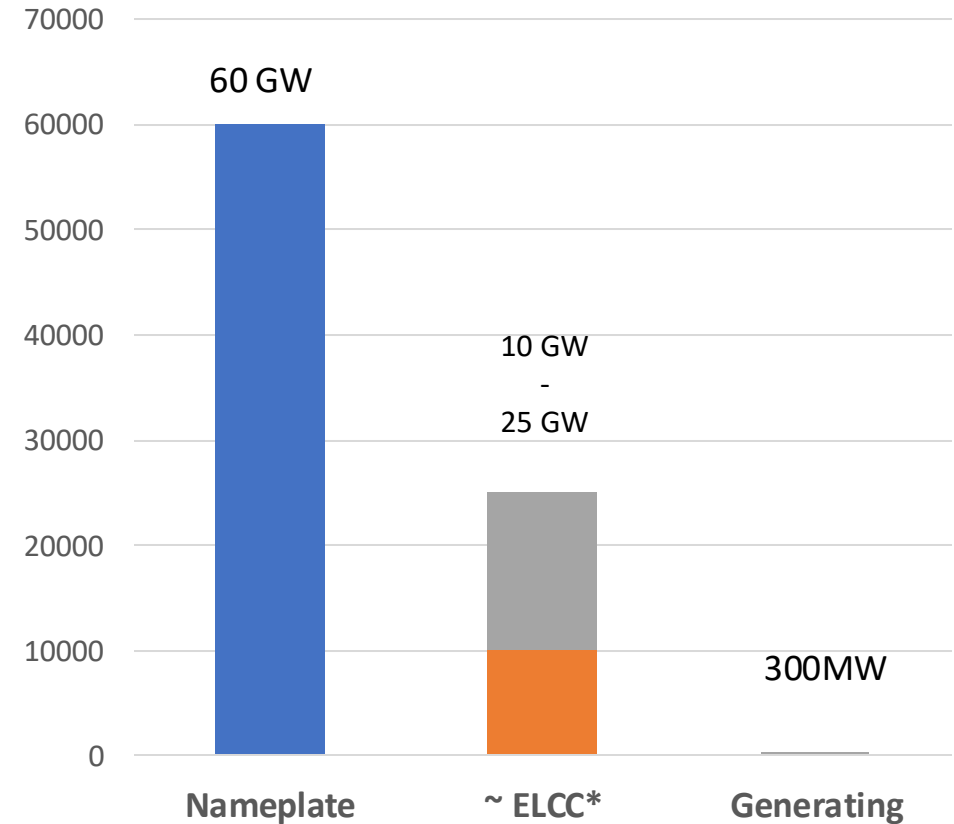


Challenges with renewable integration: Inverter Behavior and Common Mode Failure

ERCOT Solar Production June 4, 2022

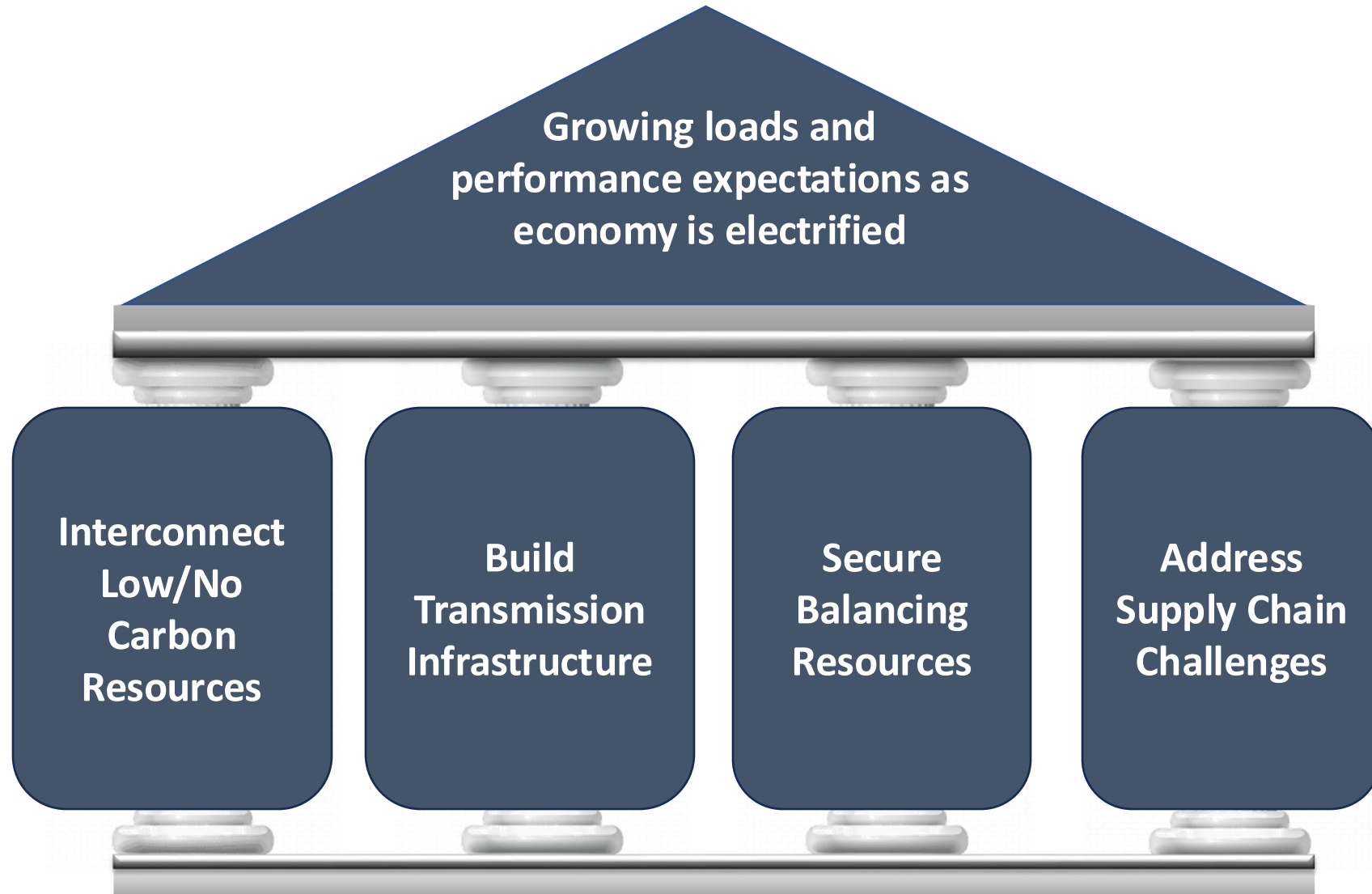


June 6, 2023 Wind Production North American Mid Continent



*ELCC is essentially the planning value of installed capacity ("Equivalent Load carrying Capacity")

Four Pillars of the Energy Transition



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Thank you!

Jim Robb

Chair, Group of Experts Cleaner Electricity Systems

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Date: 17 September 2024, Geneva

The views expressed are those of Jim Robb and do not necessarily reflect the views of the United Nations

