Critical bottlenecks in decarbonization of the U.S. electricity grid

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TWIN CHALLENGES: ZERO CARBON, DOUBLE DEMAND DEMAND

THE RAPID SWITCH: NEW ZERO CARBON ELECTRICITY NEEDED

**Electrification Scenarios**

- **Low**
- **Mid**
- **High**

Terawatt-hours

Total 2020 U.S. electricity generation

Electricity: the Linchpin

BOTTLENECK 1: RACE BETWEEN DECLINING COST & DECLINING VALUE

BOTTLENECK 3: SOCIAL ACCEPTANCE

- Total Capacity (X current capacity)
- Long-distance Transmission (X 50% of current capacity)
- Total Wind & Solar Land Footprint (X New Jersey area)

- CO2 Sequestered (X current EOR injections): 22.6
- Natural Gas CCS + Renewables
- CO2 Pipelines (X current pipeline network for EOR): 14.4
- Nuclear + Renewables
- Wind, Solar, Storage
- Renewables + Zero-carbon Gas
- Nuclear Capacity (X 100 GW): 11.3
- Natural Gas CCS + Renewables
- Total Wind & Solar Land Footprint (X New Jersey area)
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