Oregon Senate Energy Committee

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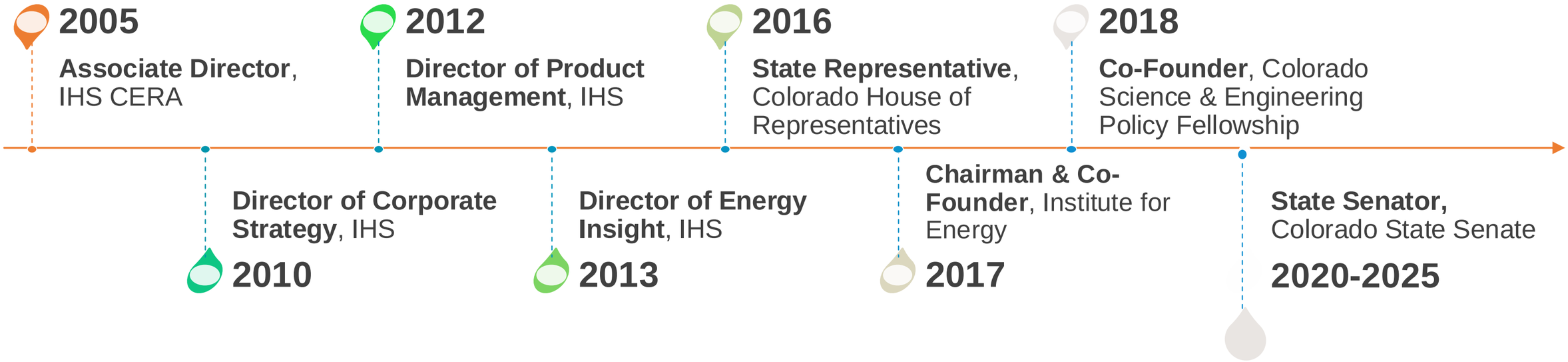
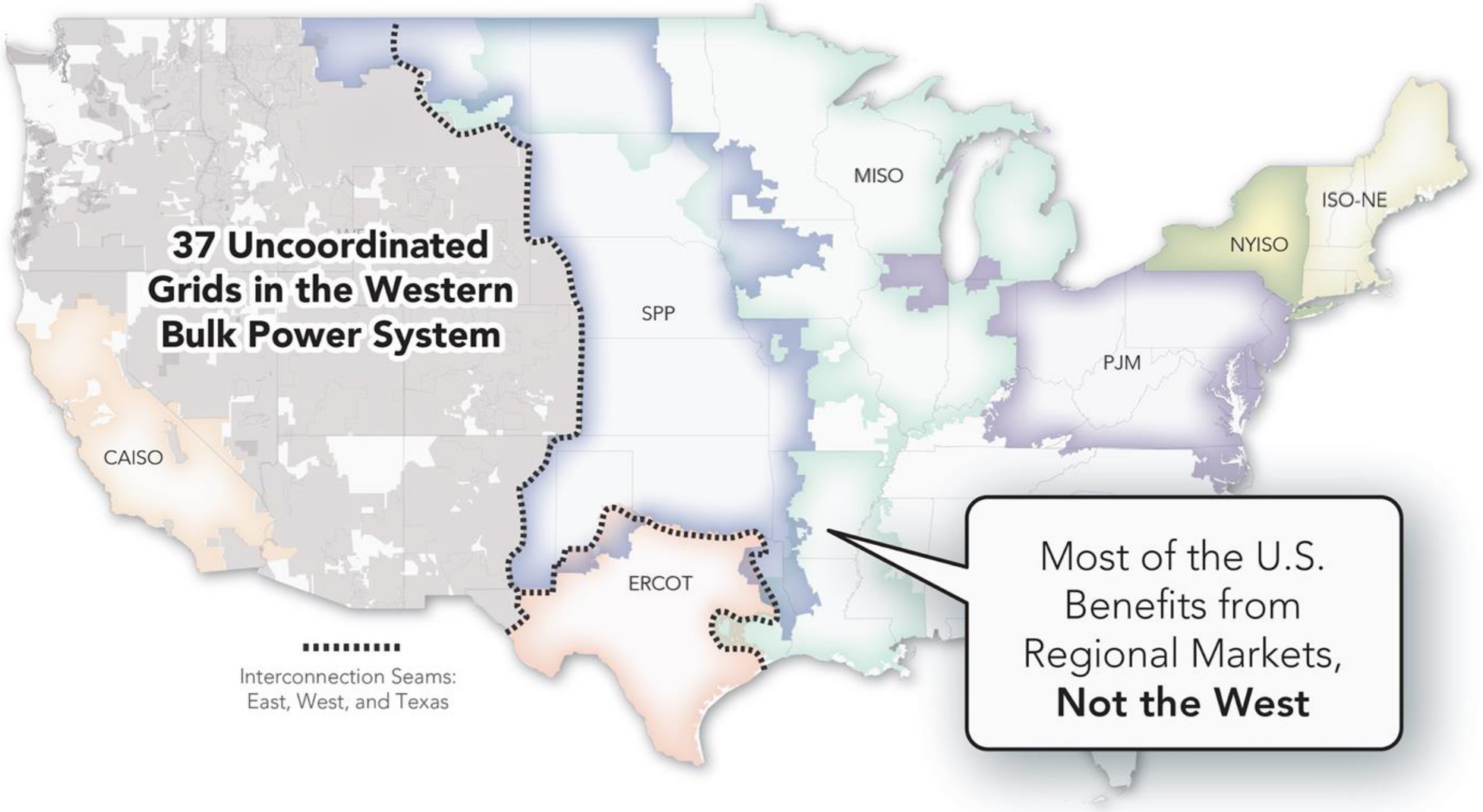
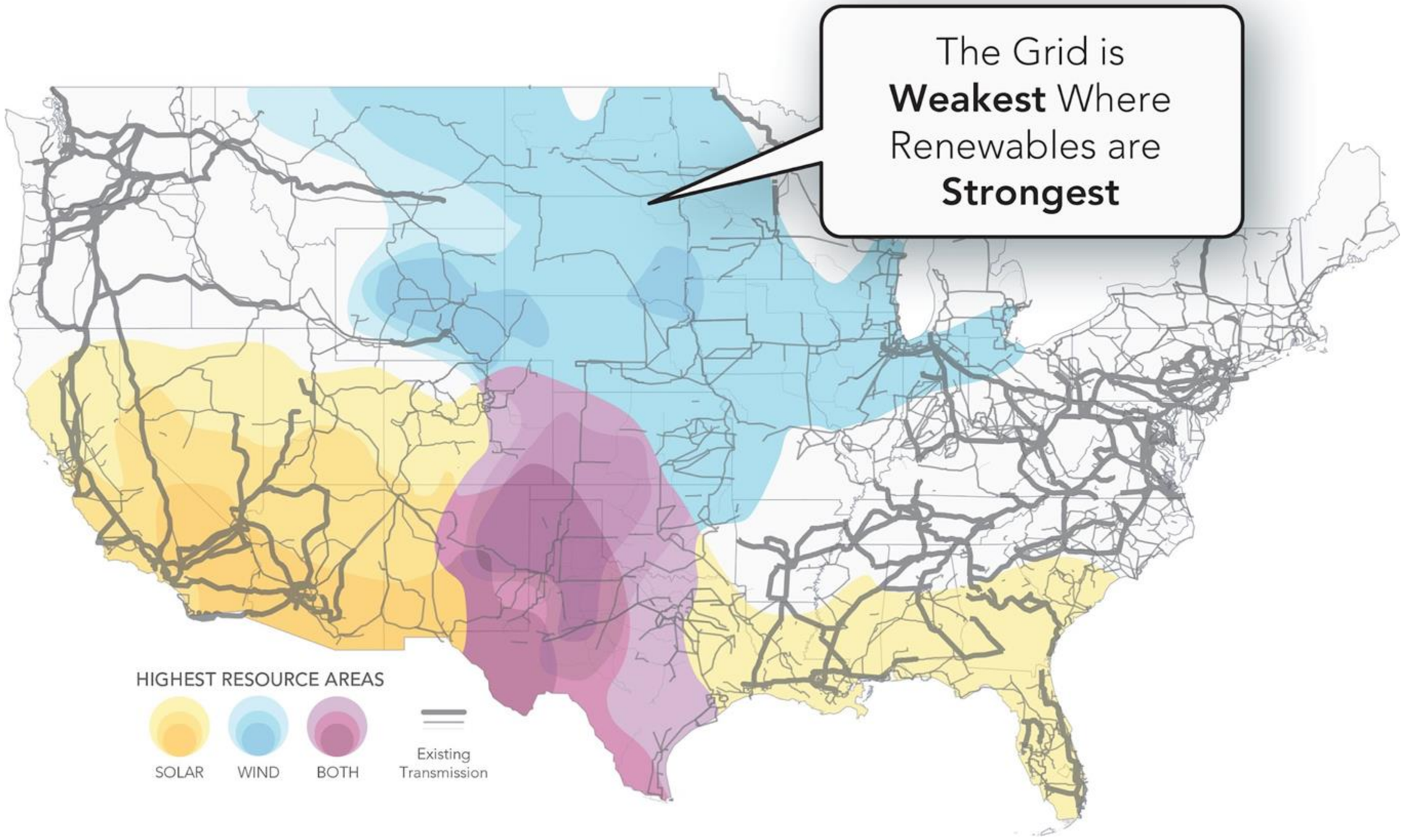
Chris Hansen, PhD

Professional Background

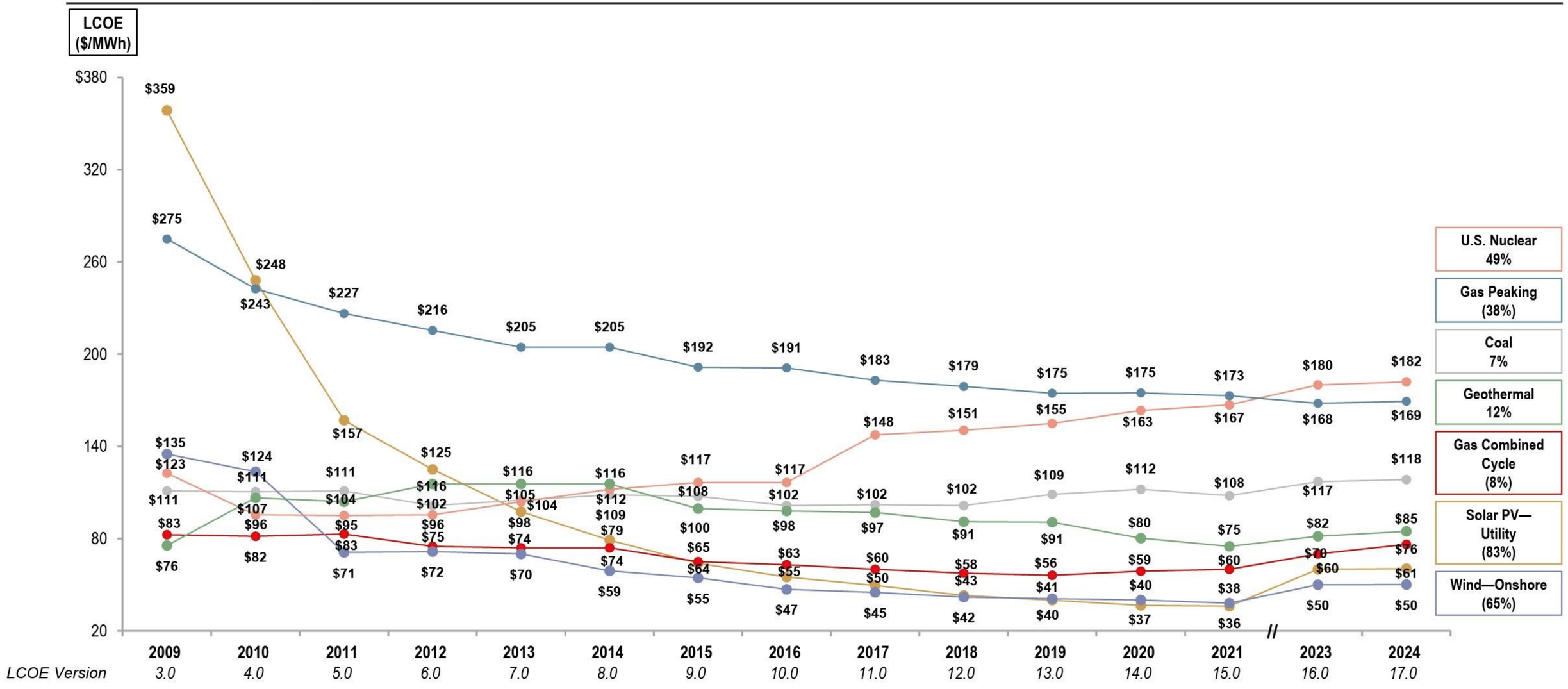
- BS, Nuclear Engineering, KSU
- SM, Systems Engineering, MIT
- PhD, Economic Geography, Oxford




37 Uncoordinated Grids in the Western Bulk Power System
MISO
ISO-NE
NYISO
SPP
PJM
CAISO
ERCOT
Interconnection Seams: East, West, and Texas
Most of the U.S. Benefits from Regional Markets, **Not the West**


The Grid is
Weakest Where
Renewables are
Strongest
HIGHEST RESOURCE AREAS
SOLAR
WIND
BOTH
Existing
Transmission

Selected Historical Average LCOE Values[1]

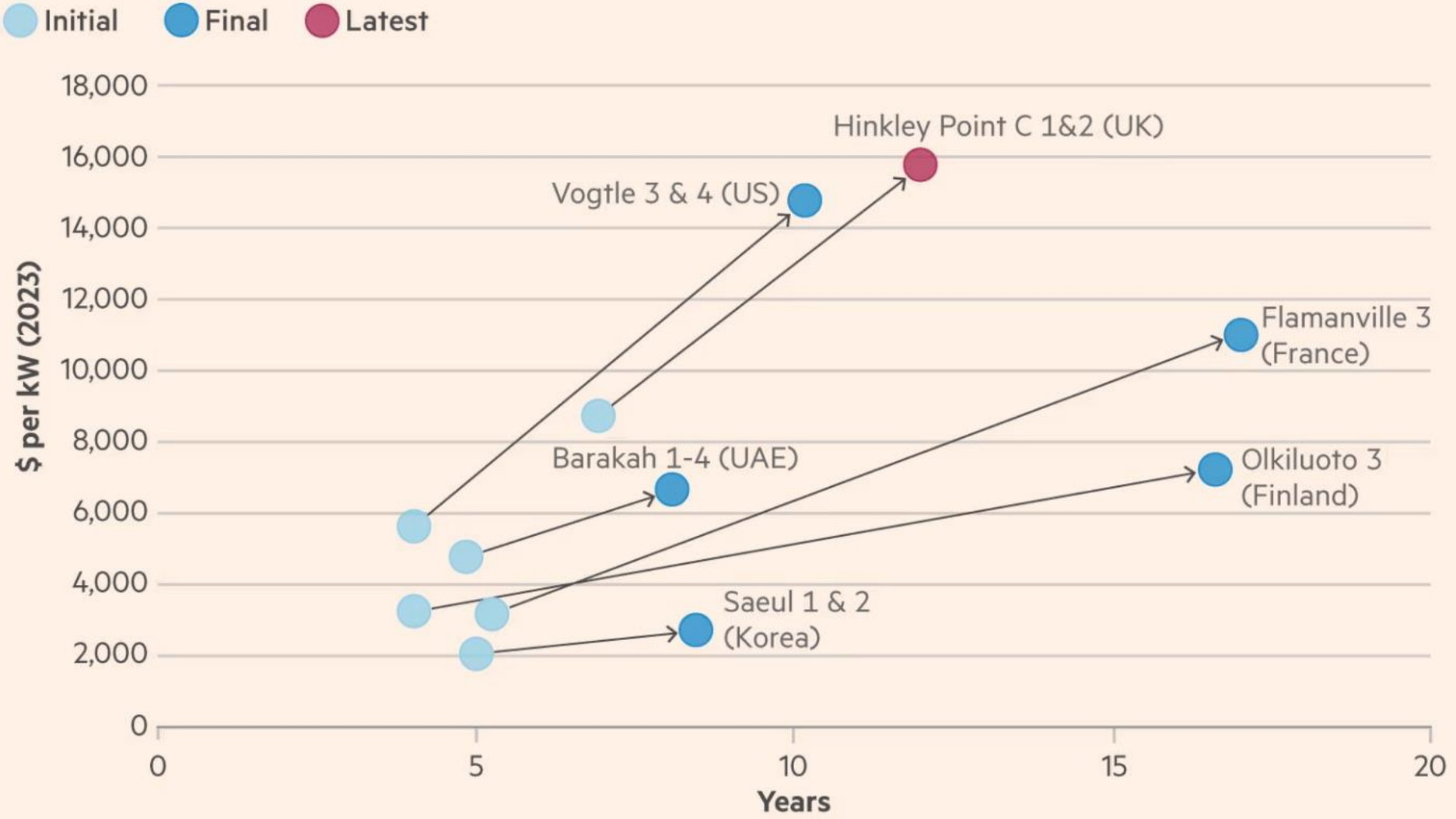


Source: *Lazard and Roland Berger estimates and publicly available information.*

(1) Reflects the average of the high and low LCOE for each respective technology in each respective year. Percentages represent the total decrease in the average LCOE since Lazard's LCOE v3.0.

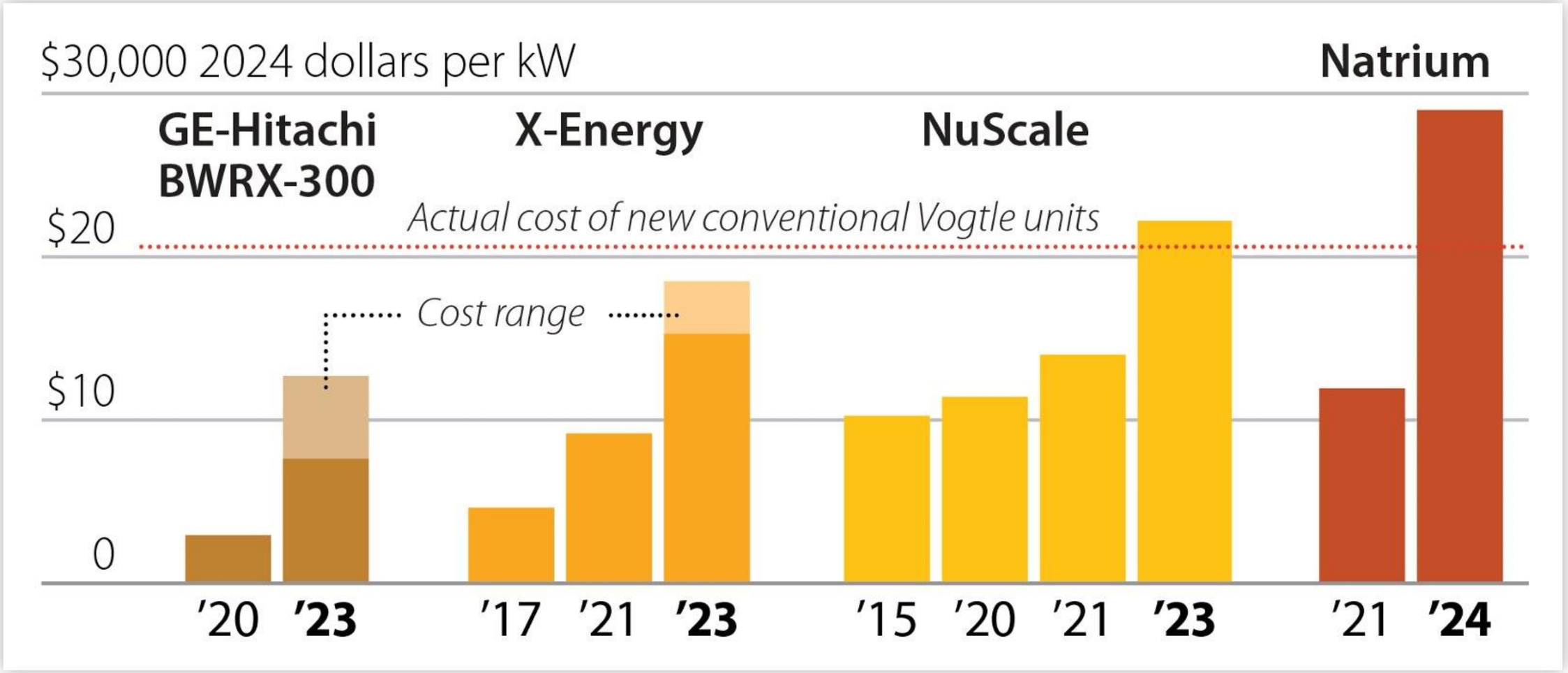
Many recent nuclear projects have been hit by delays and cost overruns

Initial and latest capital cost estimates and construction time for selected projects



Source: IEA analysis based on publicly available sources. The latest cost estimates for Hinkley Point C considered in this analysis are based on 'Hinkley Point C Update' (EDF, 2024)

SMR Capacity Costs ($/kW)



Source: IEEFA calculations based on public data

Key Insights

1. Columbia University cost-modeling study indicates that nuclear costs above $6,200/kW will result in marginal role for nuclear power.

2. Firm, clean options such as geothermal and hydro provide stiff competition for new nuclear units in the West.

3. Grid enhancing technologies and grid capacity expansions are likely to be more cost effective than new nuclear.