

# US Corporate Carbon Emissions-Free Demand Outlook

Presentation Prepared for CEBA

For Public Release



# To conduct comprehensive long-term planning, grid operators require an accurate outlook into emerging corporate carbon emissions-free demand

CEBA sought an independent analysis to understand and forecast the future demand for carbon-free power sources among corporates in the US at a regional level

## Status

- Corporations across multiple sectors have set ambitious carbon emissions-free power targets over the last few years, many with high power needs in key strategic sectors
- At the same time, there is increasing pressure from FERC on regional planners and states to estimate corporate demand to provide better long-term planning to meet future demand through locational transmission planning
- Note that FERC Order 1920A (paragraph 303) states: "We continue to require transmission providers to consider corporate commitments that are likely to affect Long-Term Transmission Needs as part of Long-Term Regional Transmission Planning to the extent that these commitments affect transmission customers' transmission needs, because transmission providers must plan for the needs of all transmission customers on a comparable basis under Order Nos. 888, 890, and 1000."

## Challenges

- Following a decade of stagnant demand growth, AI and data centers are now transforming the outlook for U.S. demand
- To address near-term power needs and energy intensive demand profiles, corporations are increasingly relying on firm resources such as nuclear energy, energy storage, and other thermal sources
- Grid operators will require further visibility on this demand to conduct their reliability and long-term planning studies
- Corporations have diverse clean energy targets and demand profiles. Estimating corporate carbon emissions-free energy demand requires a robust methodology to project future needs based on sector and company behavior.

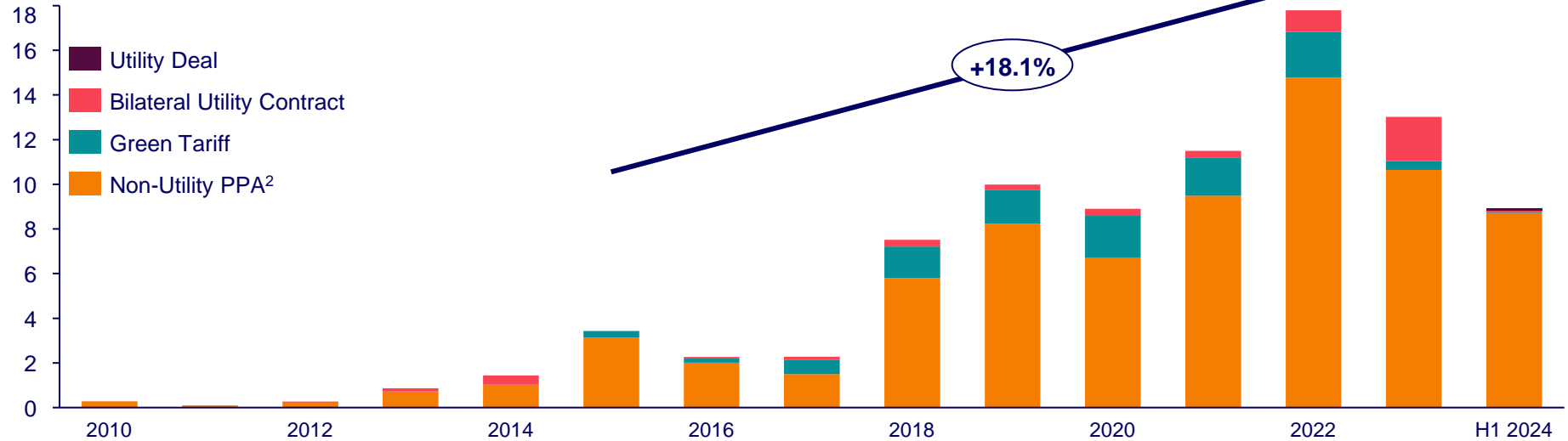
## Questions

- How large will the US future carbon emissions-free energy demand be by 2035?
- How will the carbon emissions-free energy demand be spread throughout the regions? And what are the primary drivers shaping the trend?
- What proportion of carbon emissions-free energy demand is driven by new growth versus existing corporate demand transitioning to carbon emissions-free energy to meet procurement targets?
- Will the mix of the technology evolve over time?

# Recent Trends: Corporate carbon emissions-free energy procurement has steadily grown to ~13 GW annually between 2021- 2023

Roughly 50% of solar and 20% of wind capacity additions are contracted through PPAs

## Historical Corporate Procurement Capacity by Year Contracted<sup>1</sup>, GW



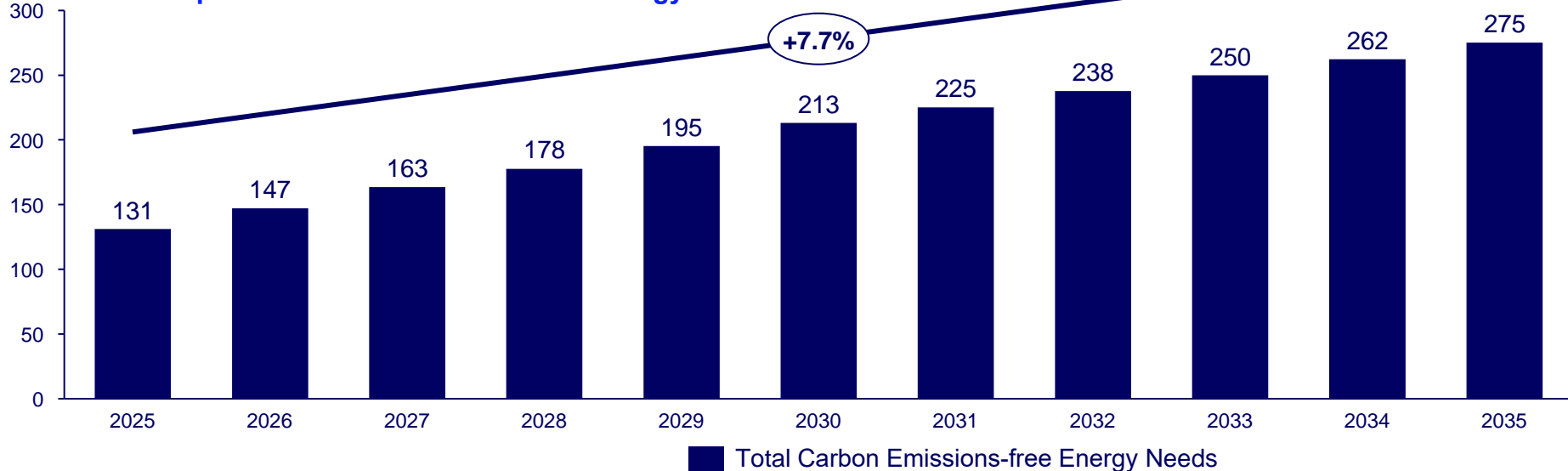
Source: Wood Mackenzie, CEBA

Notes: [1] This figure does not reflect the starting year of the contract, but rather the year a contract was agreed upon. [2] Non-Utility includes non-corporate buyers that are not utilities or IPPs, such as universities, the military, and state/municipal governments. 'Utility Deals' and 'Bilateral Utility Contracts' are a type of procurement mechanism where an Utility is an offtaker of the output from a generator.

# By 2035, F1000 companies will demand a total of 275 GW of carbon emissions-free energy to achieve their publicly committed clean energy targets

Around 35% of this carbon emissions-free energy demand is driven by large load sector growth, and most of the demand coming from a shift of existing demand to carbon emissions-free energy sources, as F1000 companies strive to meet their targets

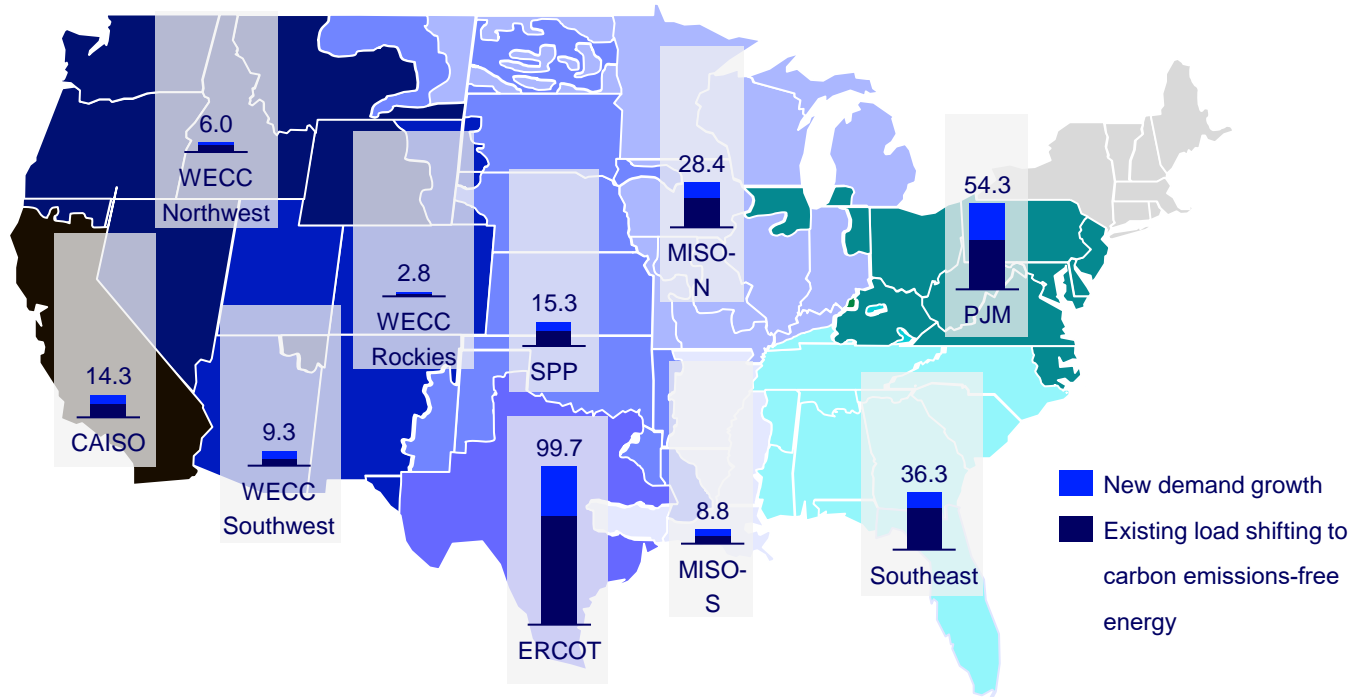
## Cumulative Corporate Carbon Emissions-free Energy Procurement



# Nearly 70% of total carbon emissions-free energy needs are centered around ERCOT, MISO, and PJM, in line with historical PPA activity

Wood Mackenzie's latest demand forecasts shows load spreading outside of previous high growth areas

## 2035 Corporate Carbon Emissions-free Energy Demand by Region, GW



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