

State of Play for Renewable Energy

November 15, 2019
EESI/CETSA Hill Briefing

Bill Parsons, Chief Operating Officer
American Council on Renewable Energy



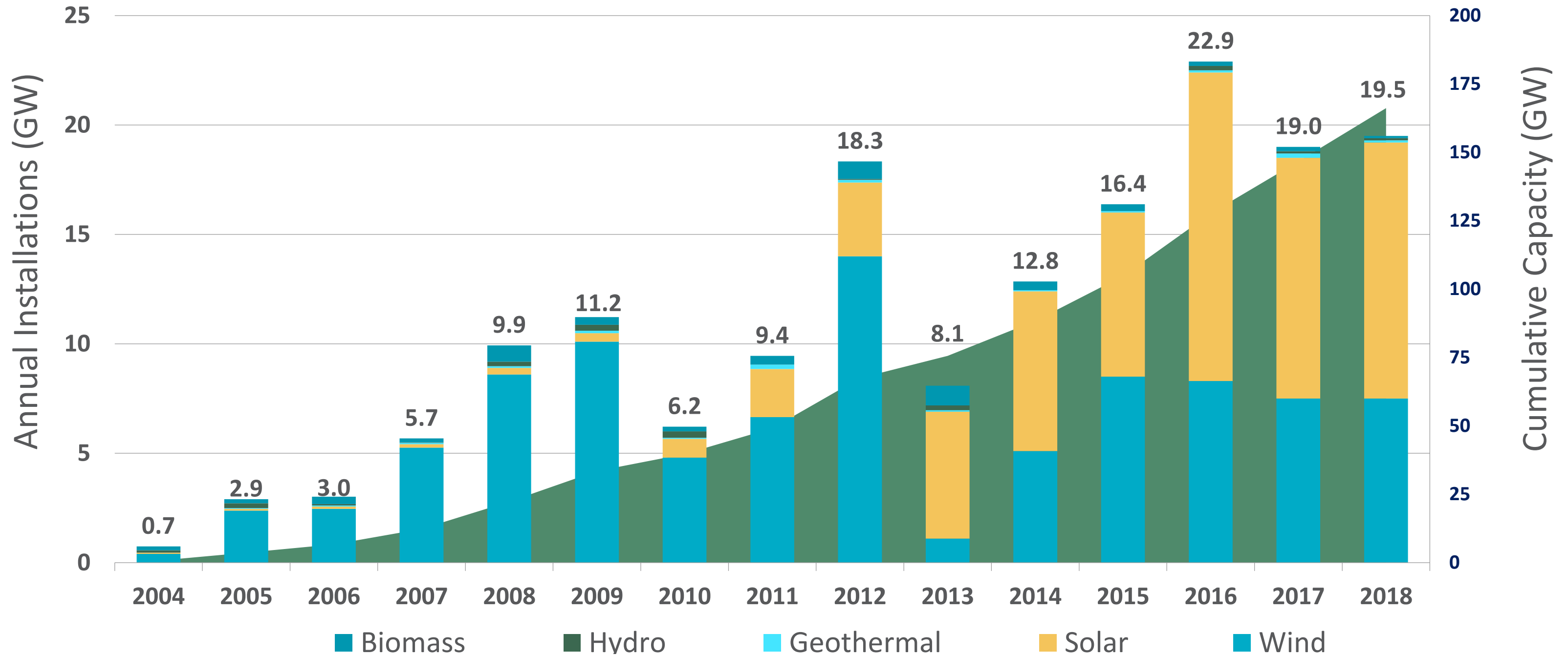


Founded in 2001, ACORE is a nonprofit organization that unites finance, policy and technology to accelerate the transition to renewable energy.

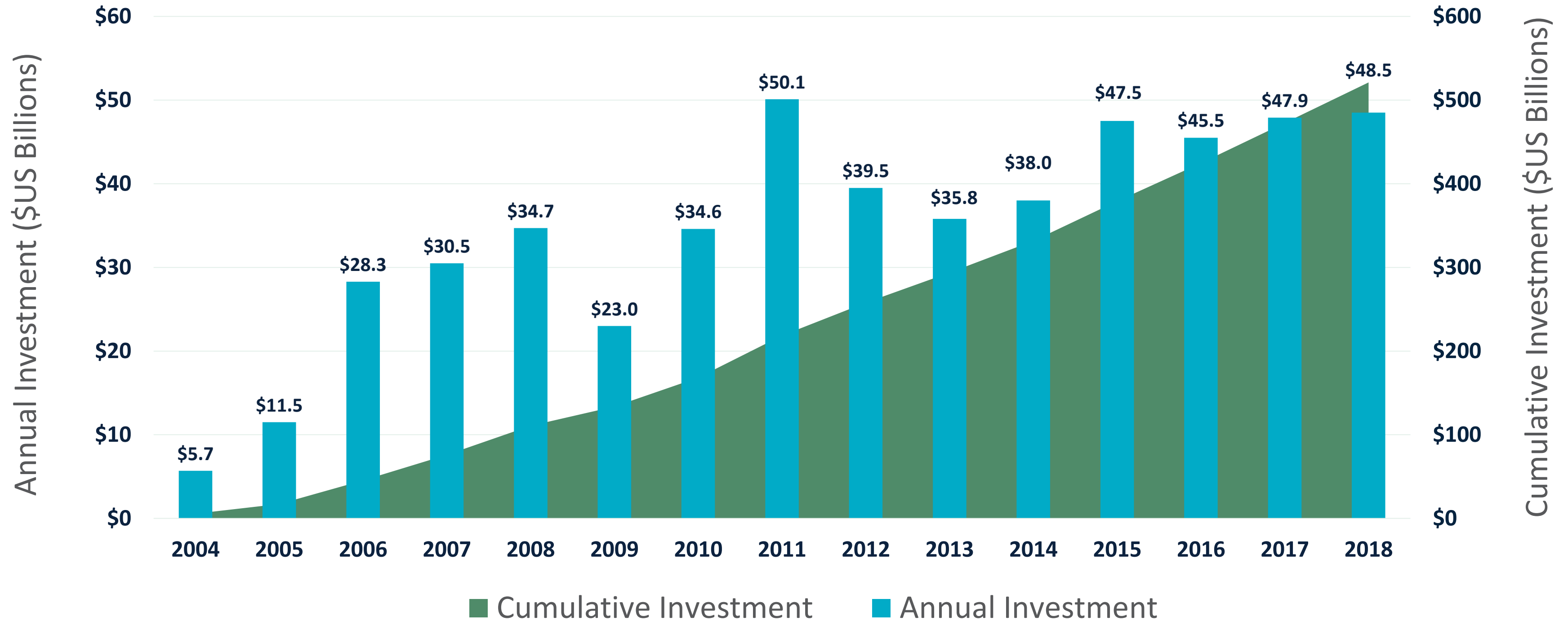


ACORE
AMERICAN COUNCIL ON
RENEWABLE ENERGY

U.S. Annual & Total Renewable Energy Installations: 2nd Highest Deployment Ever in 2018

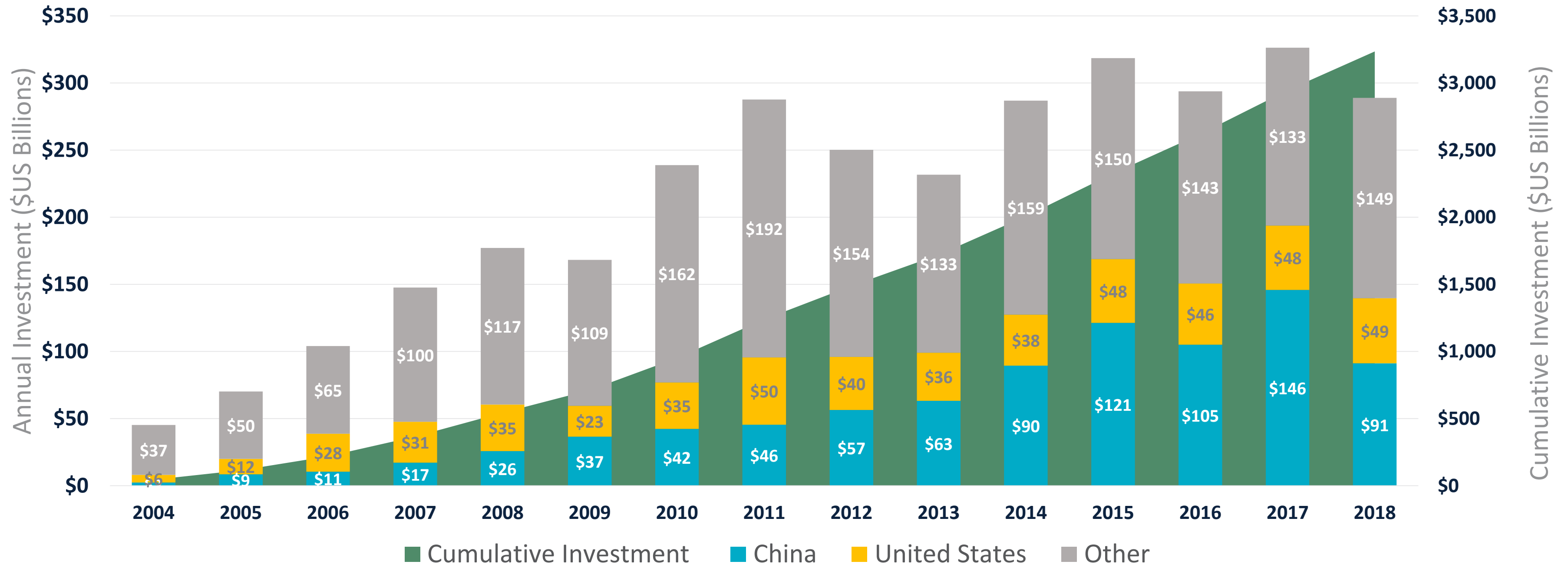


Continued High Level of U.S. Renewable Energy Investment (Also 2nd Highest Ever)



Aggregate Global Investment Exceeds \$3.2 Trillion

Global Renewable Energy Investment, 2004 - 2018



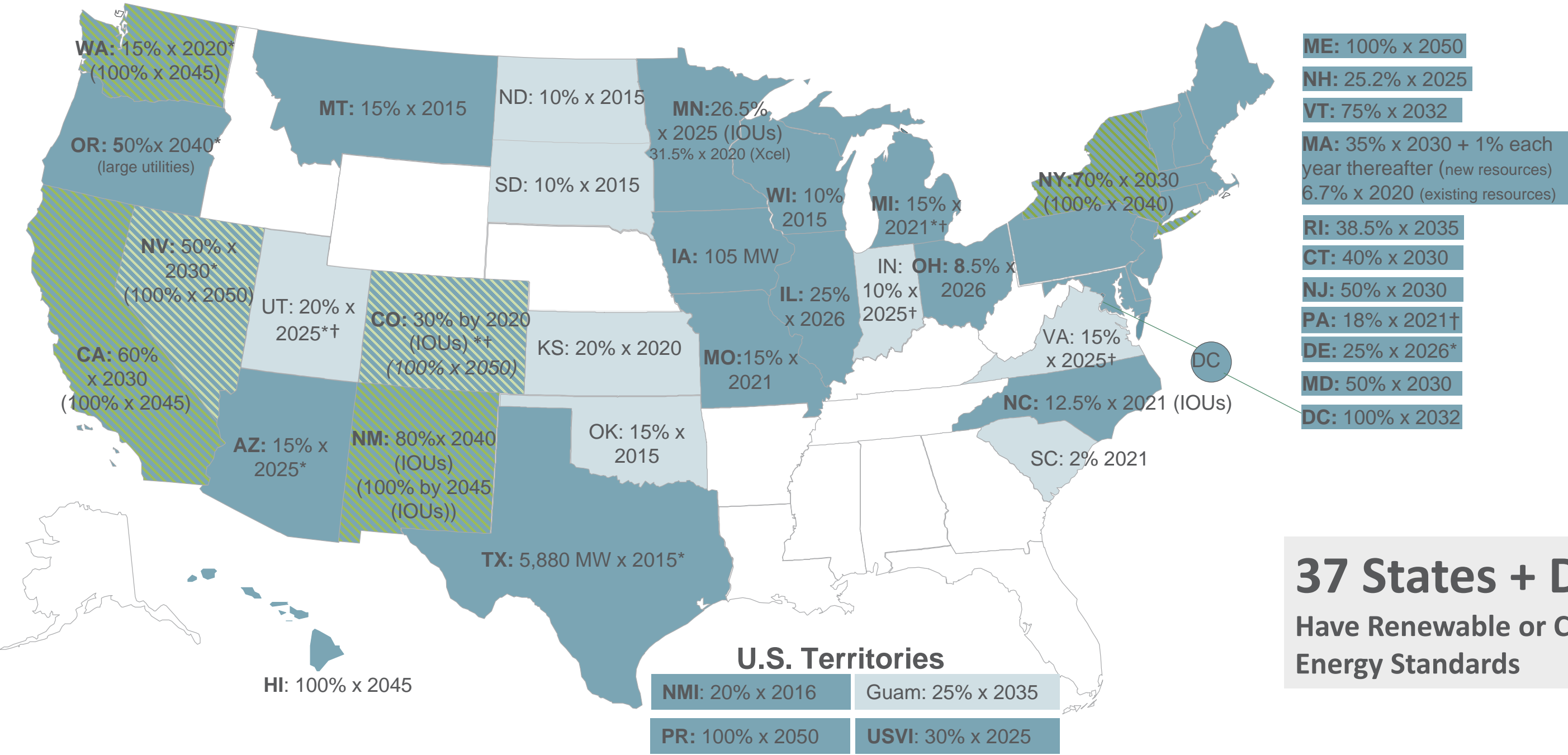
Source: BNEF



Key Drivers for U.S. Renewable Energy Growth

1. Ambitious state and local renewable standards in populous states
2. Increasing demand from American companies and consumers
3. Dramatic improvements in cost-effectiveness
4. A supportive and predictable tax platform

Driver #1: State Renewable Energy Directives



Renewable portfolio standard
 Renewable portfolio goal
 Clean energy standard
 Clean energy goal
 * Extra credit for solar or customer-sited renewables
 † Includes non-renewable alternative resources

State Renewable Policies Continue to Get More Ambitious



Aggressive state renewable standards in populous states

- **California** – 100% Carbon-Free by 2045 and 60% Renewable by 2030
- **New Mexico** – 100% Carbon-Free by 2045 and 80% Renewable by 2040
- **Nevada** – 100% Carbon-Free by 2050 and 50% Renewable by 2030
- **Hawaii** – 100% Renewable by 2045
- **Washington** – 100% Renewable by 2045
- **New York** – 100% Carbon-Free by 2040 and 70% Renewable by 2030
- **New Jersey** – 50% Renewable by 2030
- **Maine** – 100% Renewable by 2050
- **Maryland** – 50% Renewable by 2030
- **Massachusetts** – 55% Renewable by 2050

Ambitious Local Renewable Policies



More than 100 cities and 10 counties have adopted 100% clean energy goals

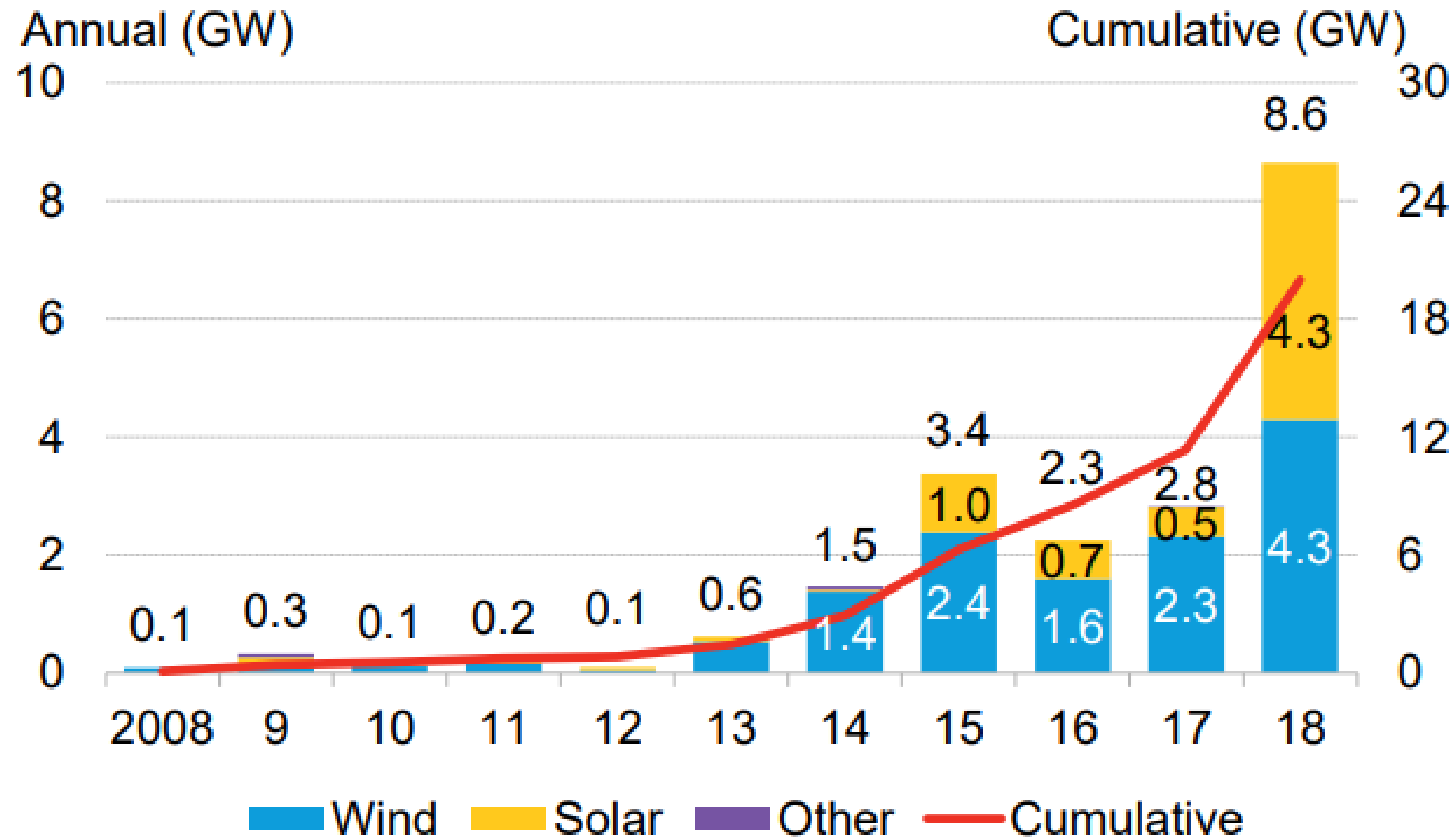
- **Chicago:** 100% clean, renewable electricity for all buildings by 2035.
- **Denver:** 100% renewable electricity community-wide by 2030.
- **Los Angeles:** 100% clean, renewable electricity community-wide by 2045 and 100% carbon reduction across all sectors by 2050.
- **Cleveland:** 100% clean, renewable electricity by 2050.
- **Portland:** 100% renewable electricity community-wide by 2035.
- **San Francisco:** 100% renewable electricity community-wide by 2030.
- **Washington, D.C.:** 100% renewable energy by 2032.
- **Wake County, North Carolina:** 100% clean, renewable energy across all energy sectors by 2050.
- **Multnomah County, Oregon:** 100% renewable electricity community-wide by 2035, and 100% renewable energy for transportation, heating and cooling by 2050.

Driver #2A: Growing Consumer Demand

A Record Year for Commercial & Industrial PPAs



U.S. Corporate PPA Volumes, by Technology (GW)

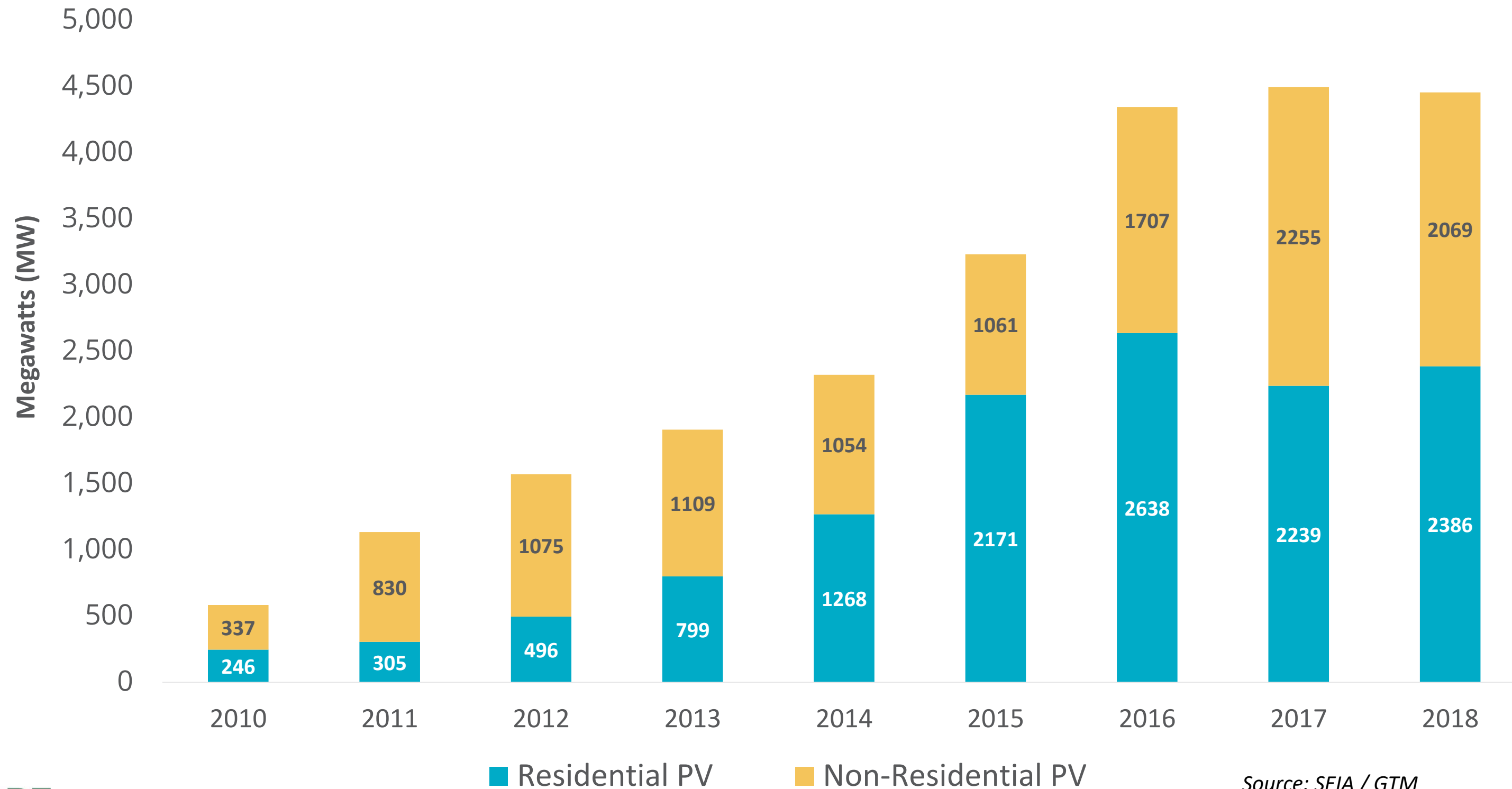


Source: BNEF

Driver #2B: Growing Consumer Demand



Annual U.S. Distributed Solar Installations, 2010 - 2018

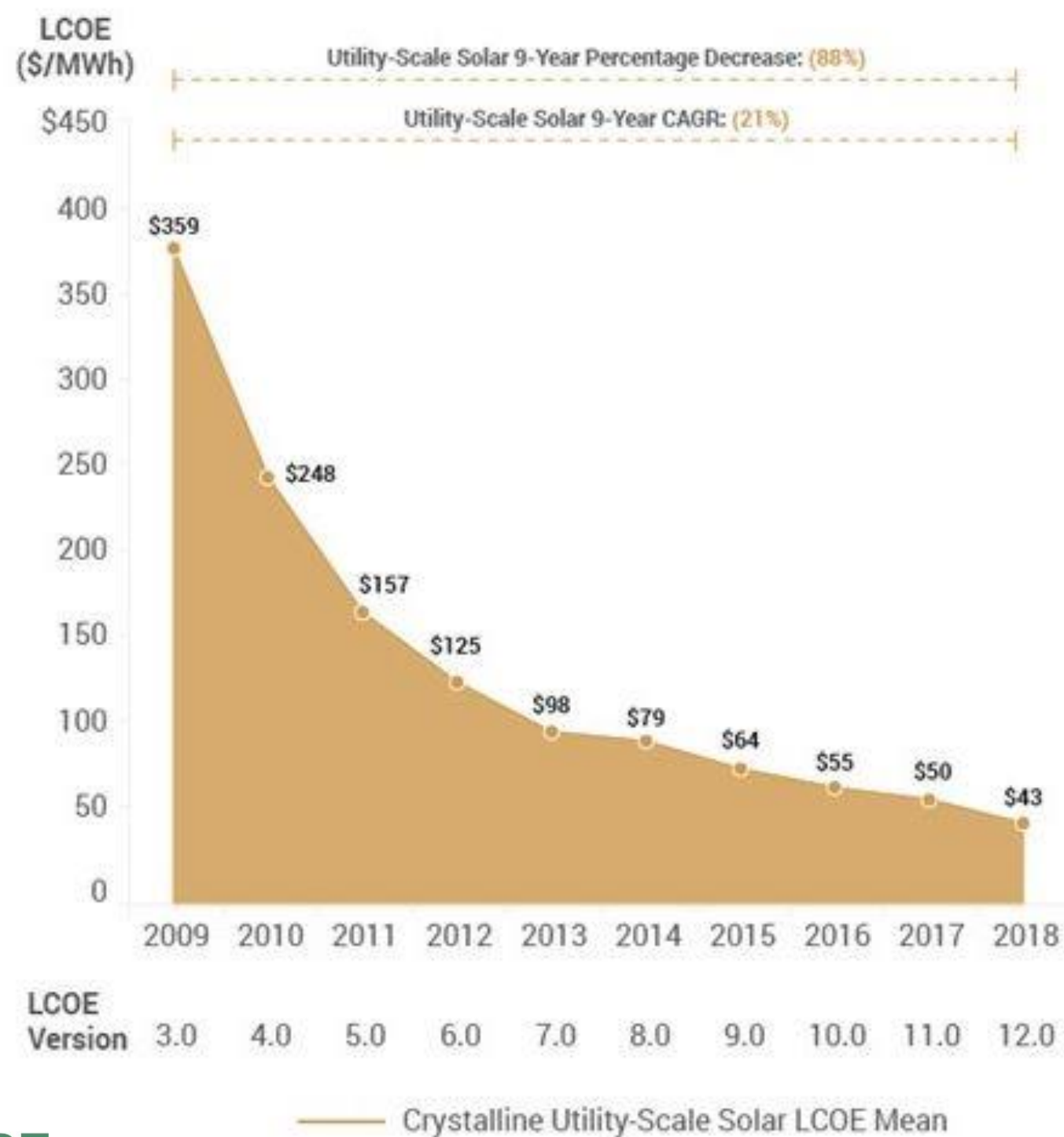


Source: SEIA / GTM

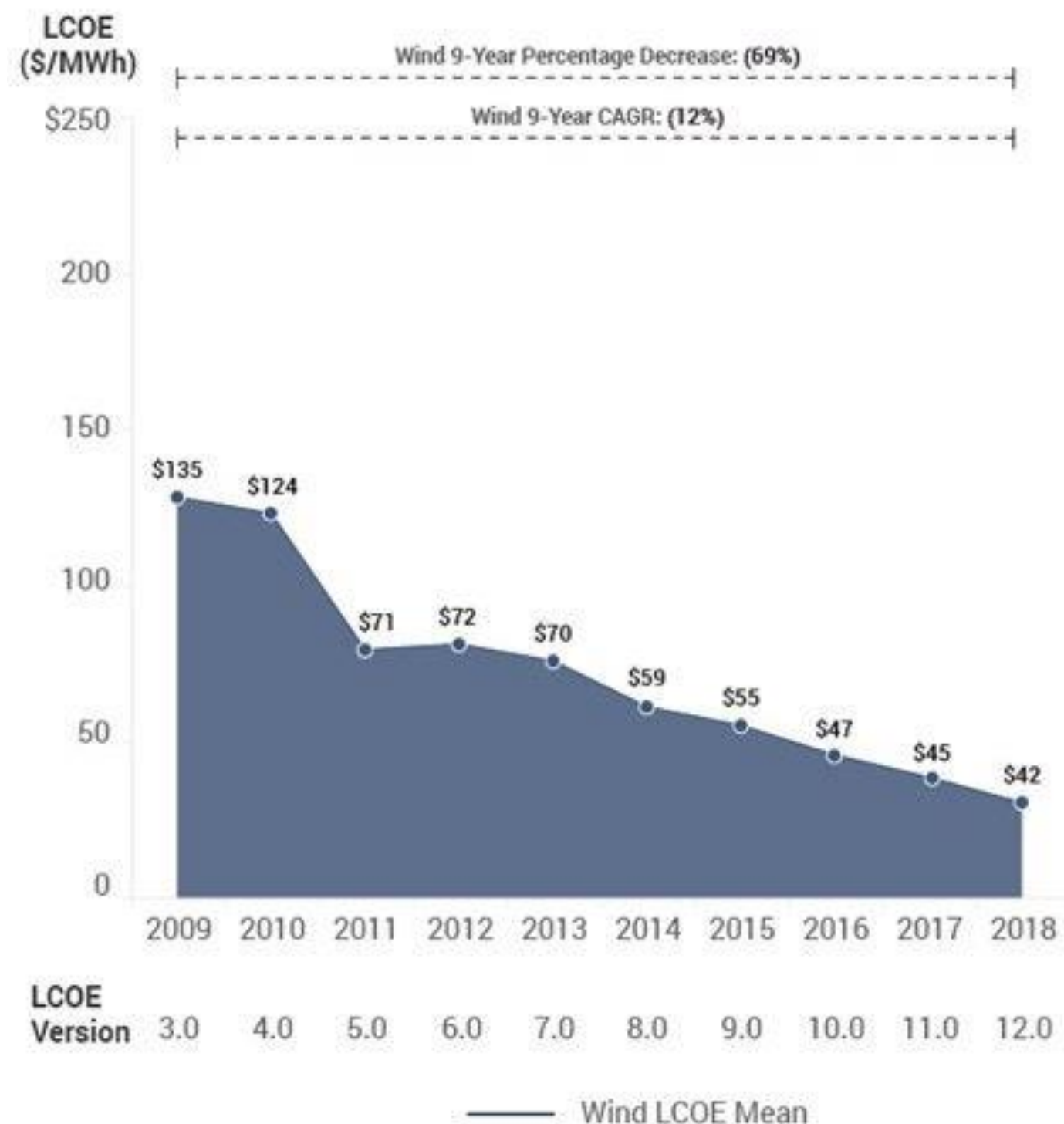
Driver #3: Dramatic Improvements in Cost-Effectiveness of Wind and Solar Power



88% Reduction in Solar LCOE since 2009



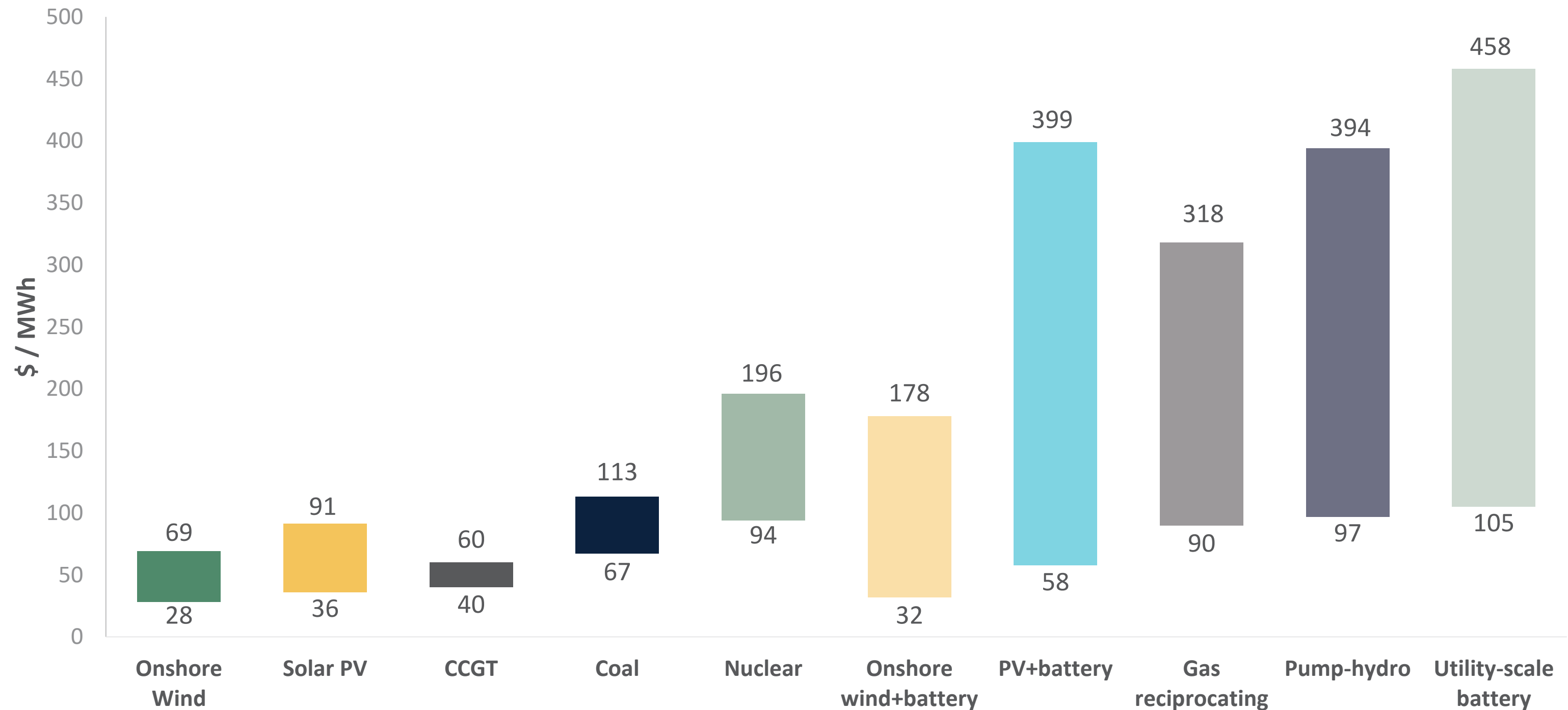
69% Reduction in Wind LCOE since 2009



The Cost-Effectiveness of Wind and Solar Power



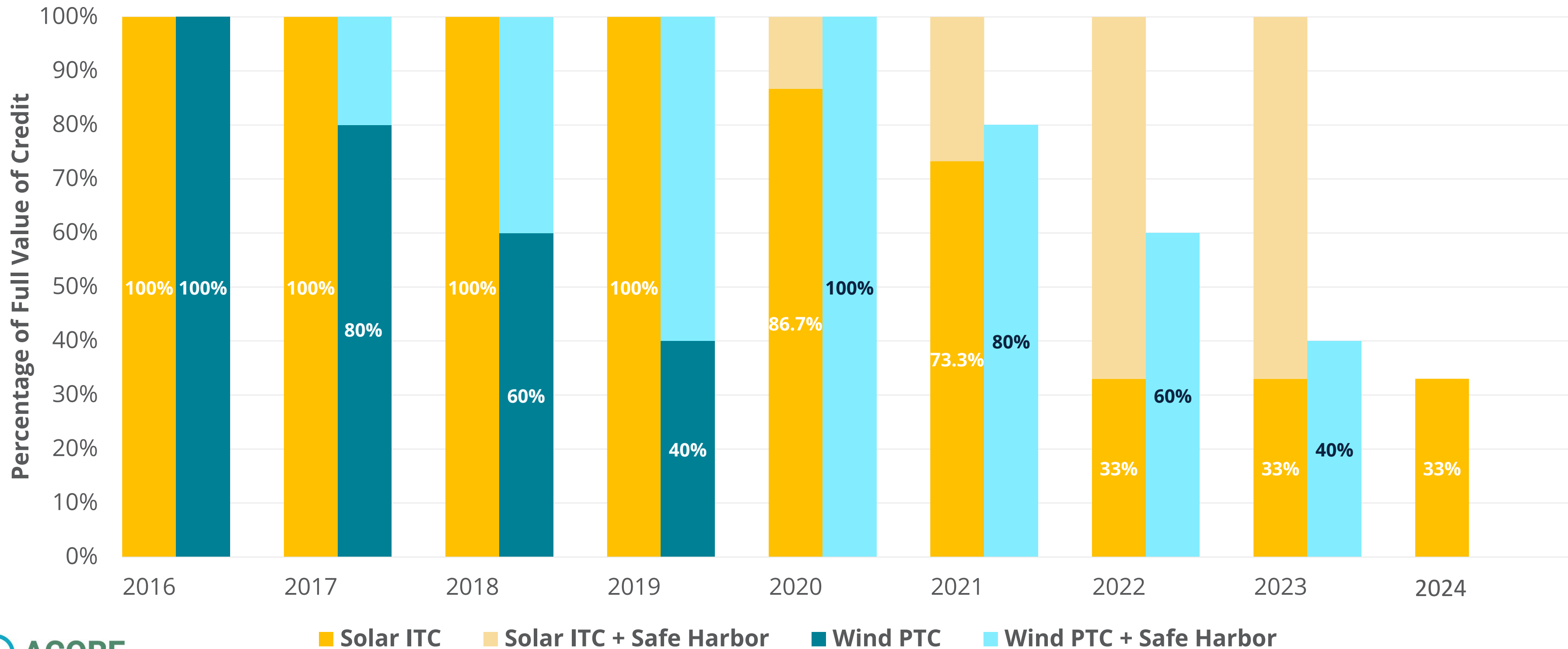
Unsubsidized Levelized Cost of Electricity Comparison, U.S. 2018



Driver #4: A Supportive and Predictable Tax Platform



Wind PTC and Solar ITC Phase-Down Schedules



The Guardian

We have 12 years to limit climate change catastrophe, warns UN

Urgent changes needed to cut risk of extreme heat, drought, floods and poverty, says IPCC

● **Overwhelmed by climate change? Here's what you can do**



▲ A firefighter battles a fire in California. The world is currently 1C warmer than preindustrial levels. Photograph: Ringo HW Chiu/AP

The world's leading climate scientists have warned there is only a dozen years for global warming to be kept to a maximum of 1.5C, beyond which even half a degree will significantly worsen the risks of drought, floods, extreme heat and poverty for hundreds of millions of people.

The authors of the landmark report by the UN Intergovernmental Panel on Climate Change (IPCC) released on Monday say urgent and unprecedented changes are needed to reach the target, which they say is affordable and feasible although it lies at the most ambitious end of the [Paris agreement](#) pledge to keep temperatures between 1.5C and 2C.

“The same way we look back today and have pride in the things our grandparents did to defend democracy — our grandchildren are going to look back and have feelings about what we did today. What those feelings are will depend on what we decide to do.”

Solomon Hsiang, Director, Global Policy Laboratory at the University of California - Berkeley

Thank you



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