



Montana Wildlife & Wind Energy Workshop

National and Western New Wind Market Outlook

**Tom Darin, Director of Western State Affairs
American Clean Power
April 27, 2021**

Agenda

AWEA is now ACPA

Wind –

- **where we are now**

- **Where we are going**

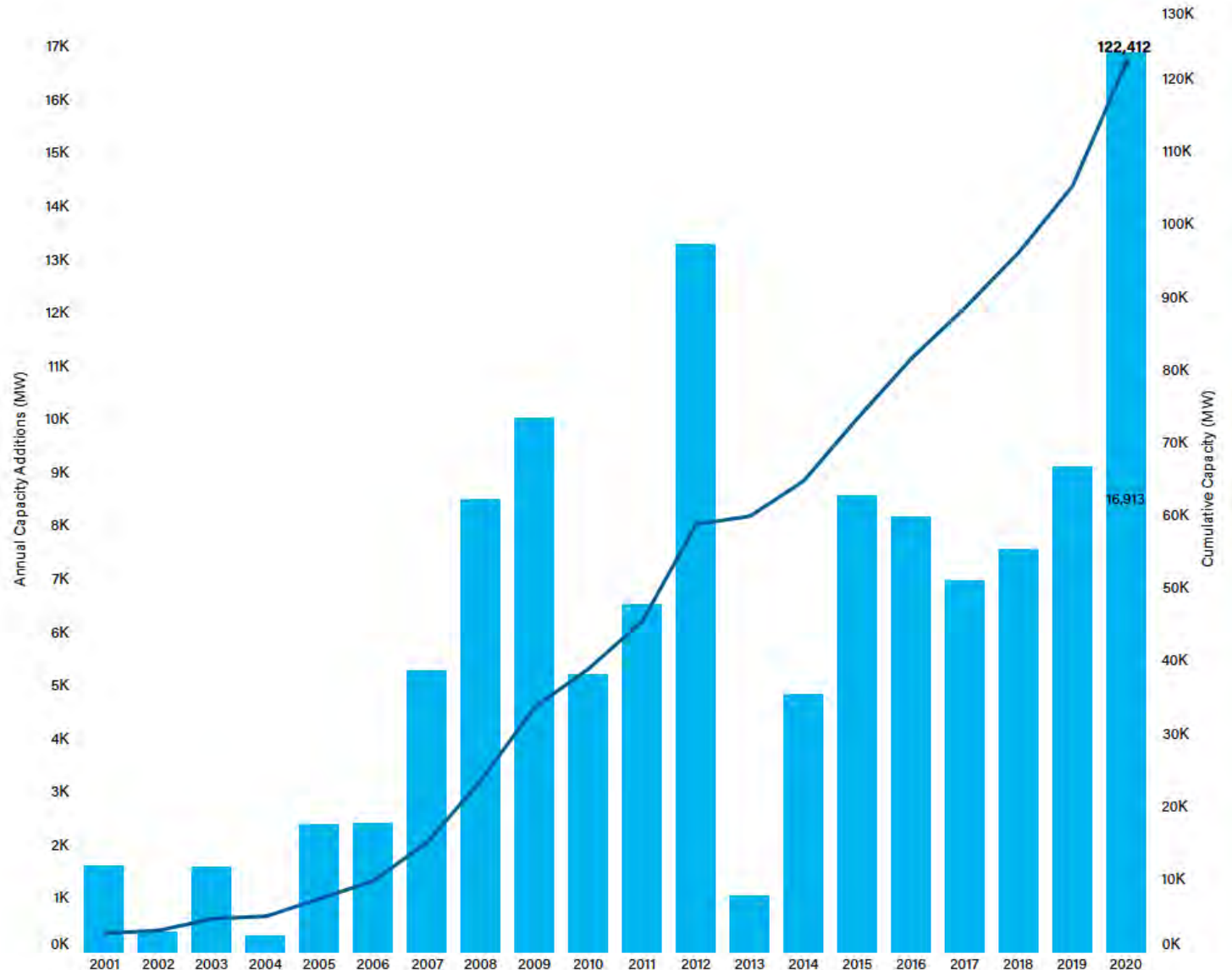
**A Word about Public
Lands**

C O N F I D E N T I A L

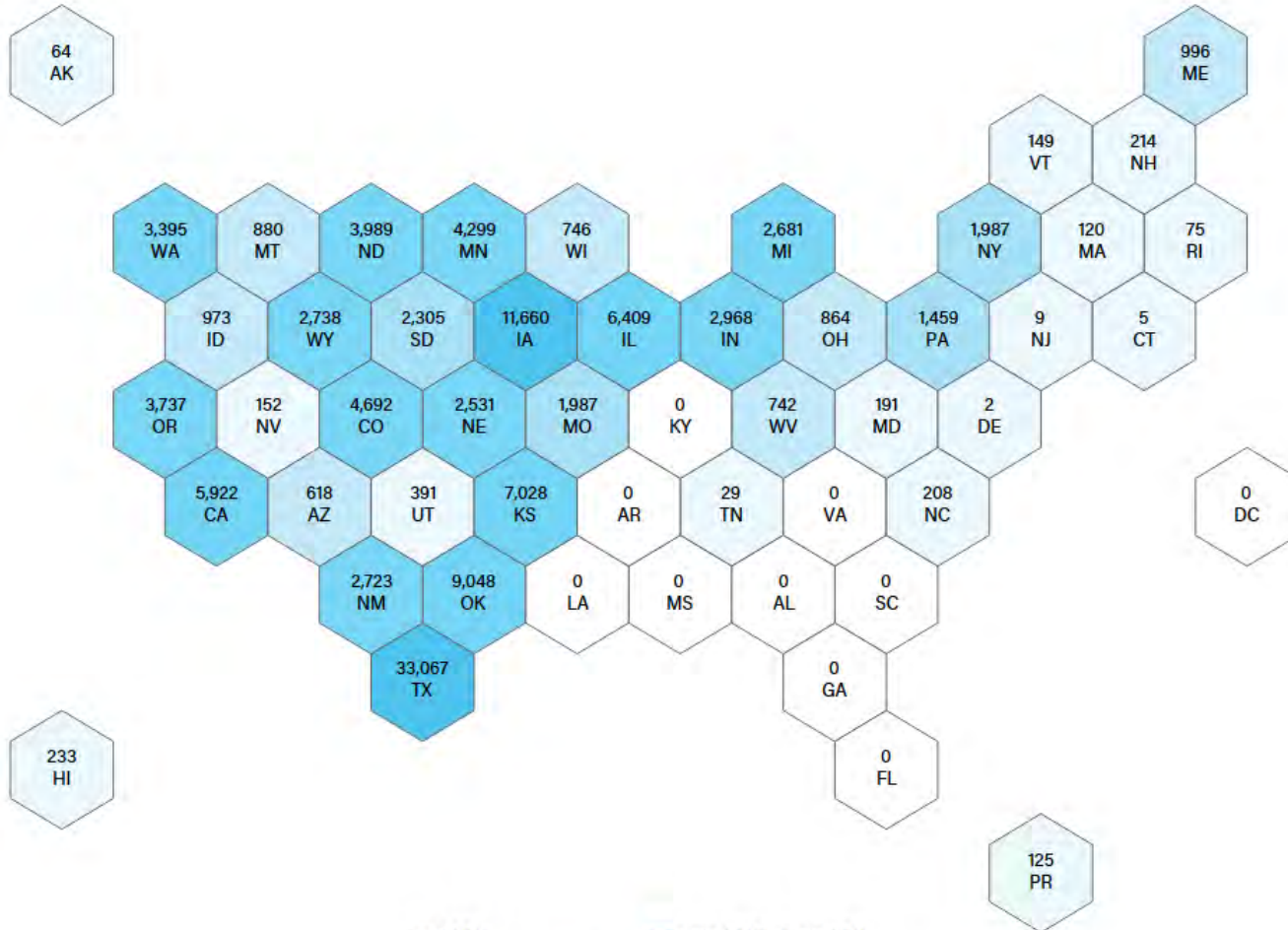
Over 122 GW now operating in U.S.

Wind energy is the
largest source of
clean power in the
country

- 2020 was a record year for wind with nearly 17 GW of capacity coming online
 - Previous high was 13.3 GW in 2012
- Wind capacity has more than tripled since 2010
- 26,250 MW in 11 western states
 - 880 MW in MT



Wind Capacity



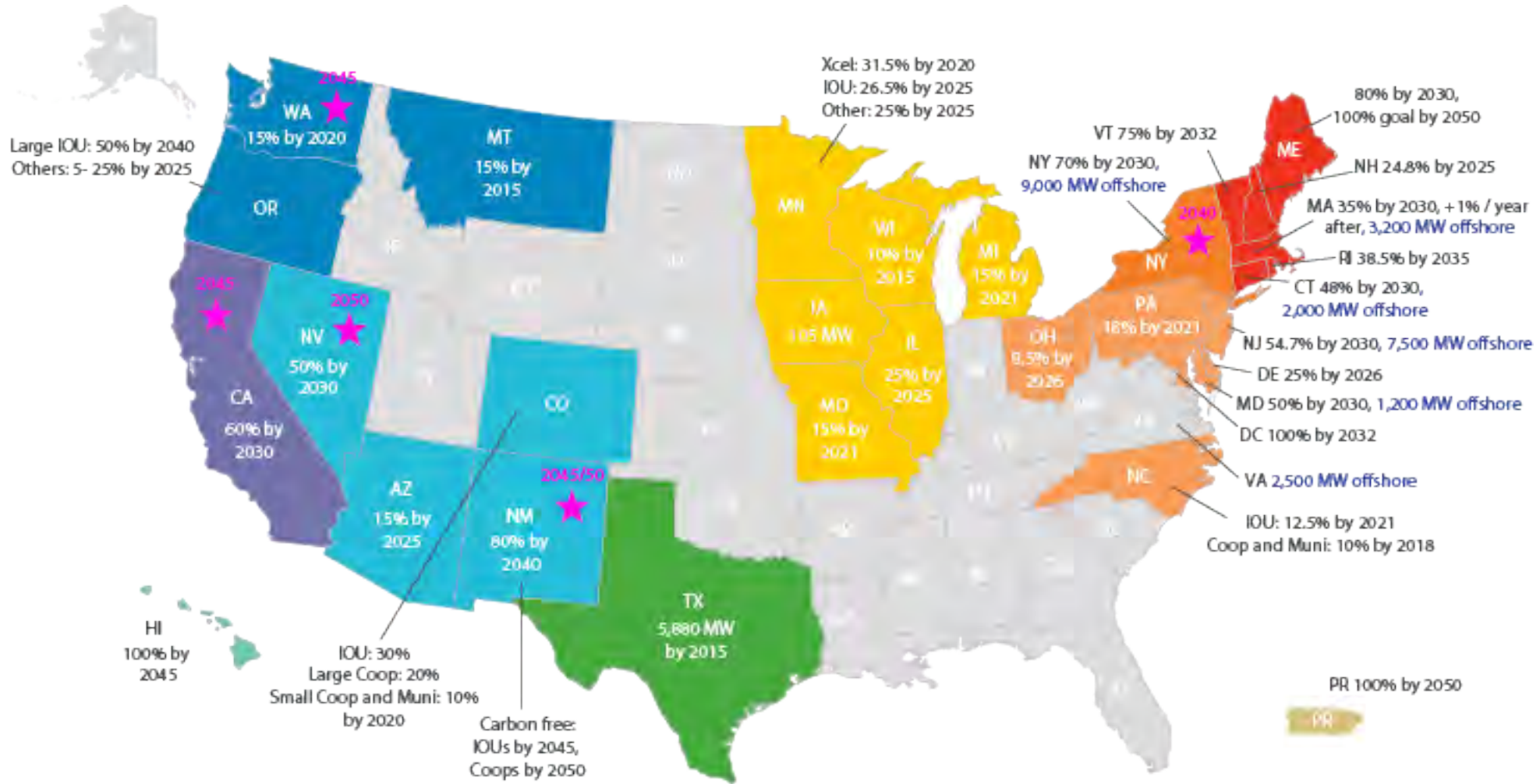
Top 10 Wind States

Texas	33,067 MW
Iowa	11,660 MW
Oklahoma	9,048 MW
Kansas	7,028 MW
Illinois	6,409 MW
California	5,922 MW
Colorado	4,692 MW
Minnesota	4,299 MW
North Dakota	3,989 MW
Oregon	3,737 MW

Where we are headed: Clean Energy Demand Drivers

- **Cost declines**
- **State**
 - RPS and 100% clean laws
 - retire and replace
- **Federal**
 - President Biden Earth Day Commitment (52% CO2 reductions below 2005 levels)
 - Executive Orders
 - Legislation –
 - American Jobs Act
 - Infrastructure, possible transmission ITC
 - Wind/solar/storage/other Tax credits
 - National Clean Energy Standard

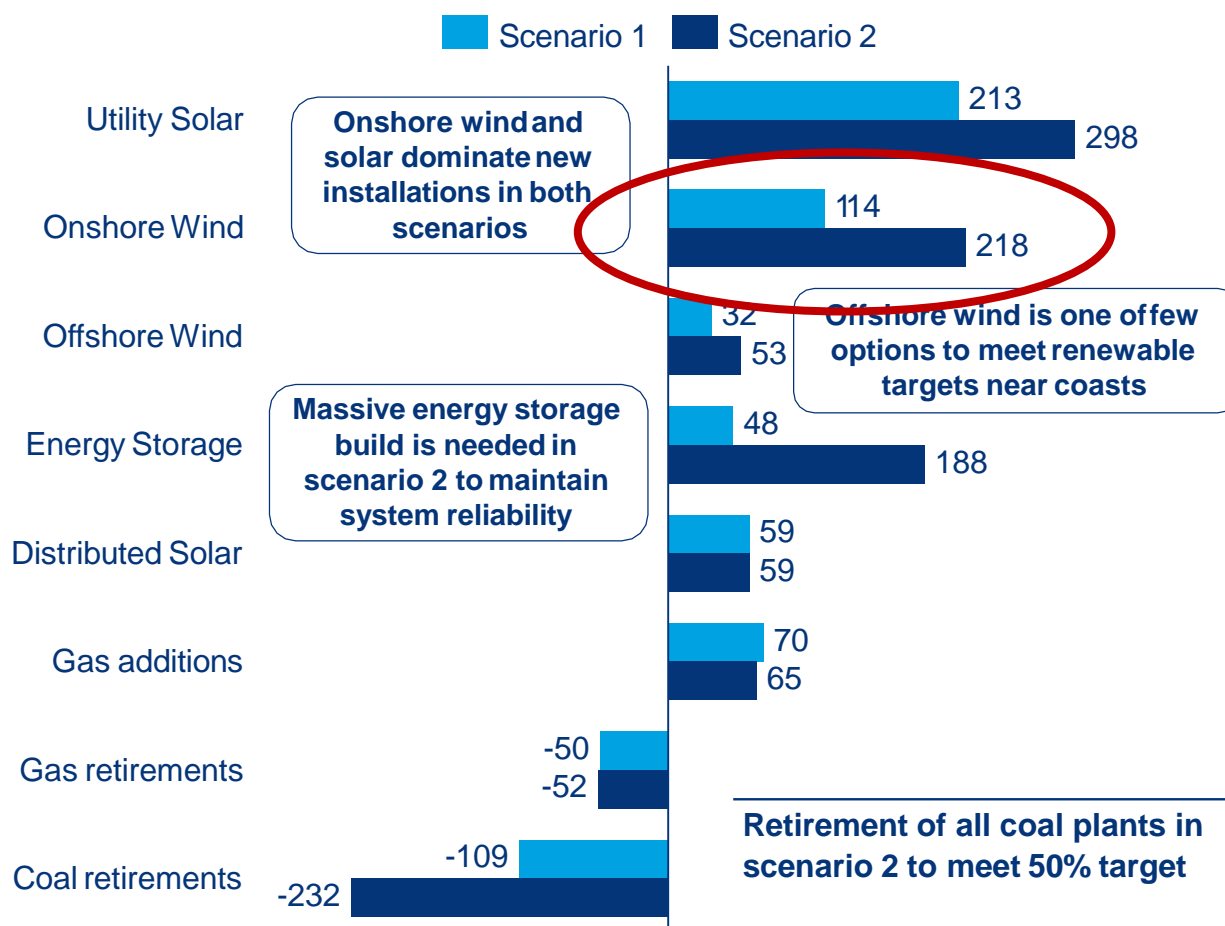
State RPS/100% Clean



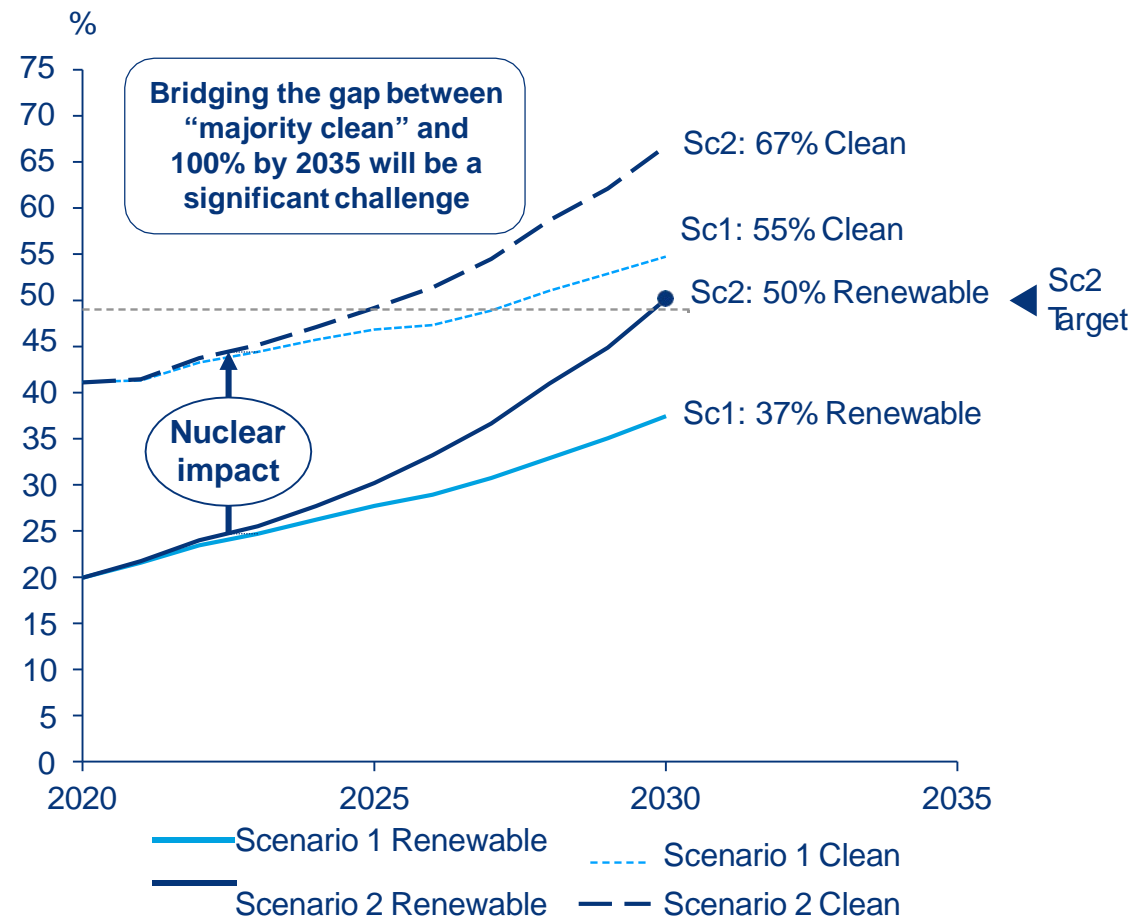
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|------------|---------------|--------------|-------------|--------|---------------------------------|
| California | Mountain West | Midwest | New York | Hawaii | Year |
| Northwest | Plains | Mid-Atlantic | New England | Texas | ★ 100% clean / carbon-free goal |

2020 Wood Mackenzie Study: 2030 Forecasted New Clean Energy Demand

Scenario capacity changes – 2020-2030 cumulative GW change



US renewable energy and clean energy penetration, US % of generation

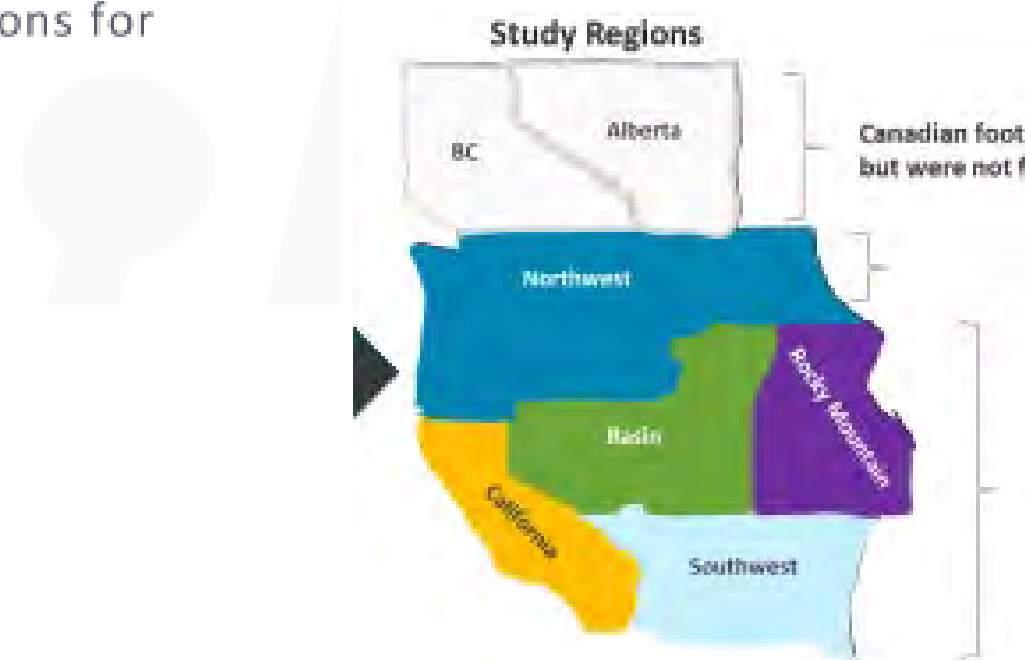


Western Flexibility Assessment

Investigating the West's Changing Resource Mix and Implications for System Flexibility

December 10, 2019

Final Report



- In addition to the operational challenges associated with achieving policy goals, the study estimates that the West must add roughly 9 GW of renewable energy, per year, starting in 2026, in order to provide energy sufficient to meet state policy goals through 2035. These investments in renewable energy represent only a subset of the potential infrastructure needs as this study also forecasts additional gas-fired resources, new transmission, significant storage build-outs, and demand engagement programs. The

The Role of Western Public Lands – Transmission and Generation



- 2020 omnibus law – 25 GW RE authorized by 2025
 - we only have 1 GW presently
 - BLM FY 2021 – 12 projects in permitting (2 wind)
- Transmission
 - Section 368 corridors
 - activity in UT-WY; WY-CA; MT-WA; CO; NM-CA; CA
 - Infrastructure bill; initiatives at FERC
- Generation – can't remain at 99% private lands
- Previous efforts – Wind and solar PEISs; DRECP; WREZ
- Wind Energy Guidelines and Landscape Level Planning
 - Wind \approx 40-60 total acres/MW
 \approx .75 direct acres/MW



Thank you.

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