

Renewable Energy Successes and Challenges



National Association of State Trust Lands Annual Meeting

August 26, 2024

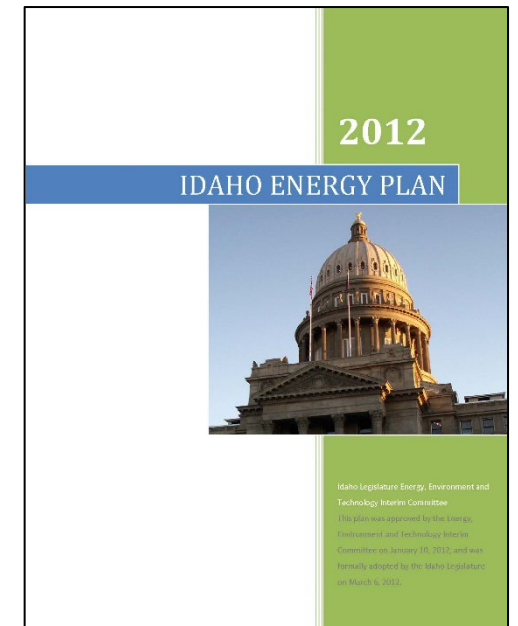
Richard Stover, Administrator

Idaho Energy Plan

Objectives

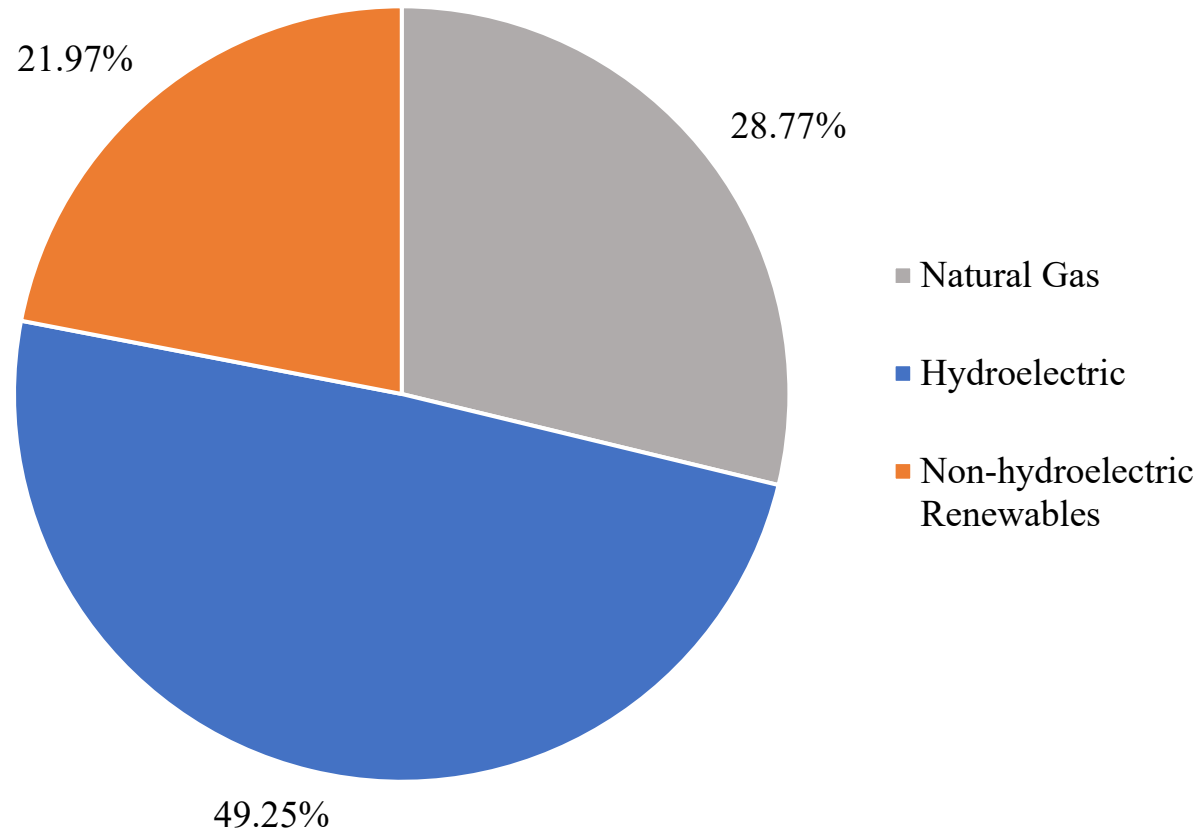
1. Ensure a secure, reliable, and stable energy system for the citizens and businesses of Idaho
2. Maintain Idaho's low-cost energy supply and ensure access to affordable energy for all Idahoans
3. Protect Idaho's public health, safety and natural environment and conserve Idaho's natural resources
4. Promote sustainable economic growth, job creation, and rural economic development
5. Provide the means for Idaho's energy policies and actions to adapt to changing circumstances

Our focus: **reliable**, **affordable**, and **sustainable** power



Idaho's Electricity Generation by Resource (2023)

In 2023, Idaho ranked fifth among the states in the share of total electricity generated from renewable energy.



Utility and Regional Forecasts

- Idaho Power Company predicts peak load increase of 1,500 MW (23%) over the next 10 years;
- Avista Utility predicts a 9% increase
- PacifiCorp predicts 27% increase
- NWPPCC predicts a 30% increase; 8000 MW



Utilities' Preferred Portfolios and Goals

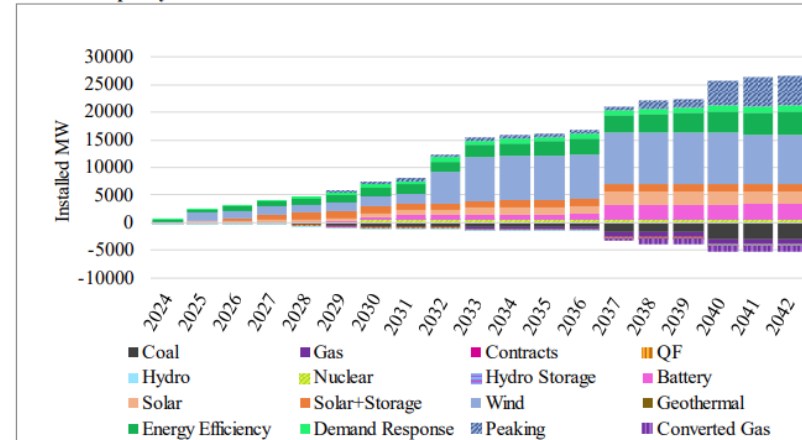
- Idaho Power: 100% clean energy by 2045
- Rocky Mountain Power: add 12,000 MW of renewables by 2040
- Avista: 100% clean energy by 2045

Table 1.1 Preferred Portfolio additions and coal exits (MW)

Preferred Portfolio—Valmy 1 & 2 (MW)													
Year	Coal Exits	Gas	H2	Wind	Solar	4 Hr	8 Hr	100 Hr	Trans.	Geo	DR	EE	Forecast
2024	-357	357	0	0	100	96	0	0	0	0	0	17	
2025	0	0	0	0	200	227	0	0	0	0	0	18	
2026	-134	261	0	0	100	0	0	0	Jul B2H	0	0	19	
2027	0	0	0	400	375	5	0	0	0	0	0	20	
2028	0	0	0	400	150	5	0	0	0	0	0	21	
2029	0	0	0	400	0	5	0	0	GW1	0	20	22	
2030	-350	350	0	100	500	155	0	0	0	30	0	21	
2031	0	0	0	400	400	5	0	0	GW2	0	0	21	
2032	0	0	0	100	100	205	0	0	0	0	0	20	
2033	0	0	0	0	0	105	0	0	0	0	20	20	
2034	0	0	0	0	0	5	0	0	0	0	40	19	
2035	0	0	0	0	0	5	0	0	0	0	40	18	
2036	0	0	0	0	0	5	0	0	0	0	40	17	
2037	0	0	0	0	0	55	50	0	0	0	0	17	
2038	0	-706	340	0	0	155	50	200	0	0	0	17	
2039	0	0	0	0	0	5	50	0	0	0	0	15	
2040	0	0	0	0	400	5	0	0	GW3	0	0	14	
2041	0	0	0	0	200	5	0	0	0	0	0	14	
2042	0	0	0	0	200	55	0	0	0	0	0	14	
2043	0	0	0	0	600	0	0	0	0	0	0	14	
Sub Total	841	261	340	1,800	3,325	1,103	150	200		30	160	360	
Total	6,888												

Idaho Power

Figure 1.2 – 2023 IRP Update All-State Preferred Portfolio Cumulative Changes in Installed Capacity



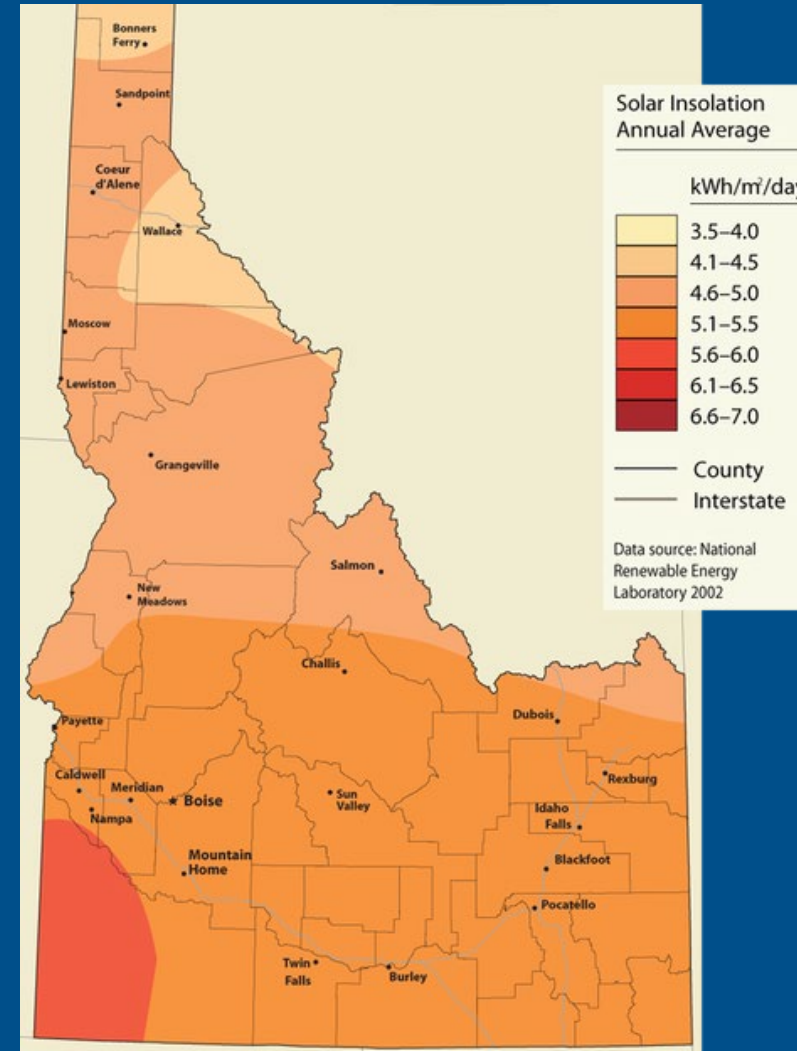
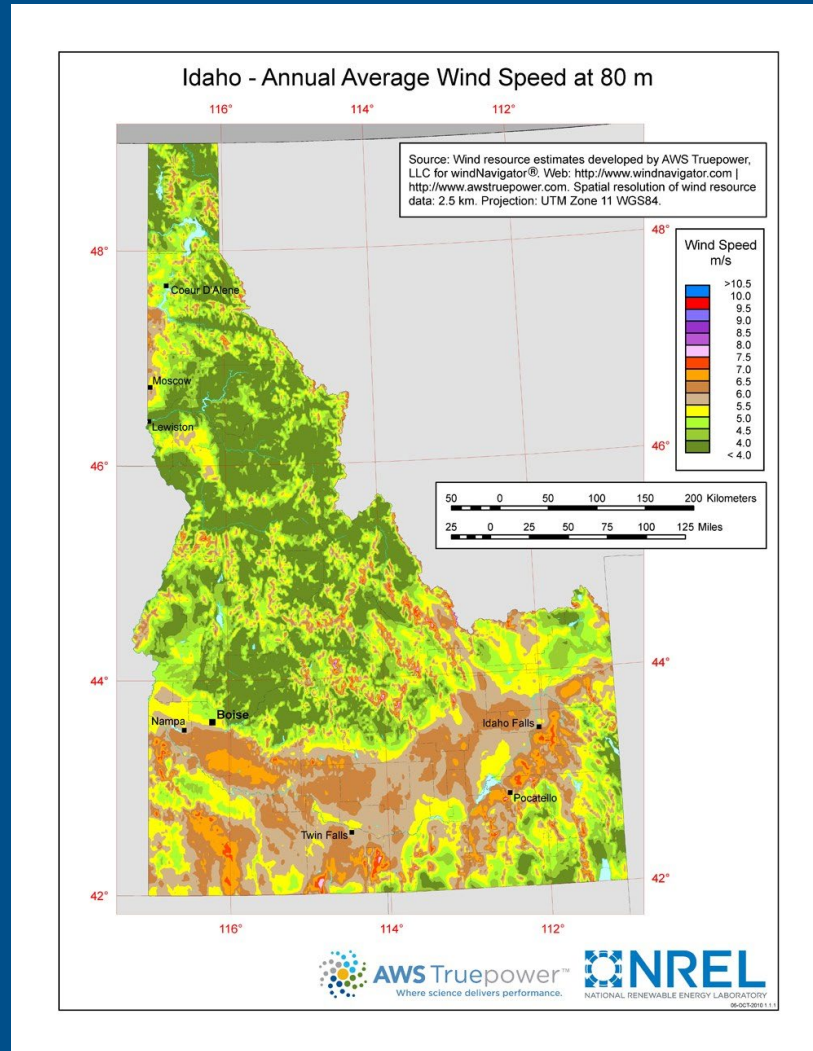
PacifiCorp/RMP

2023 IRP Preferred Resource Strategy

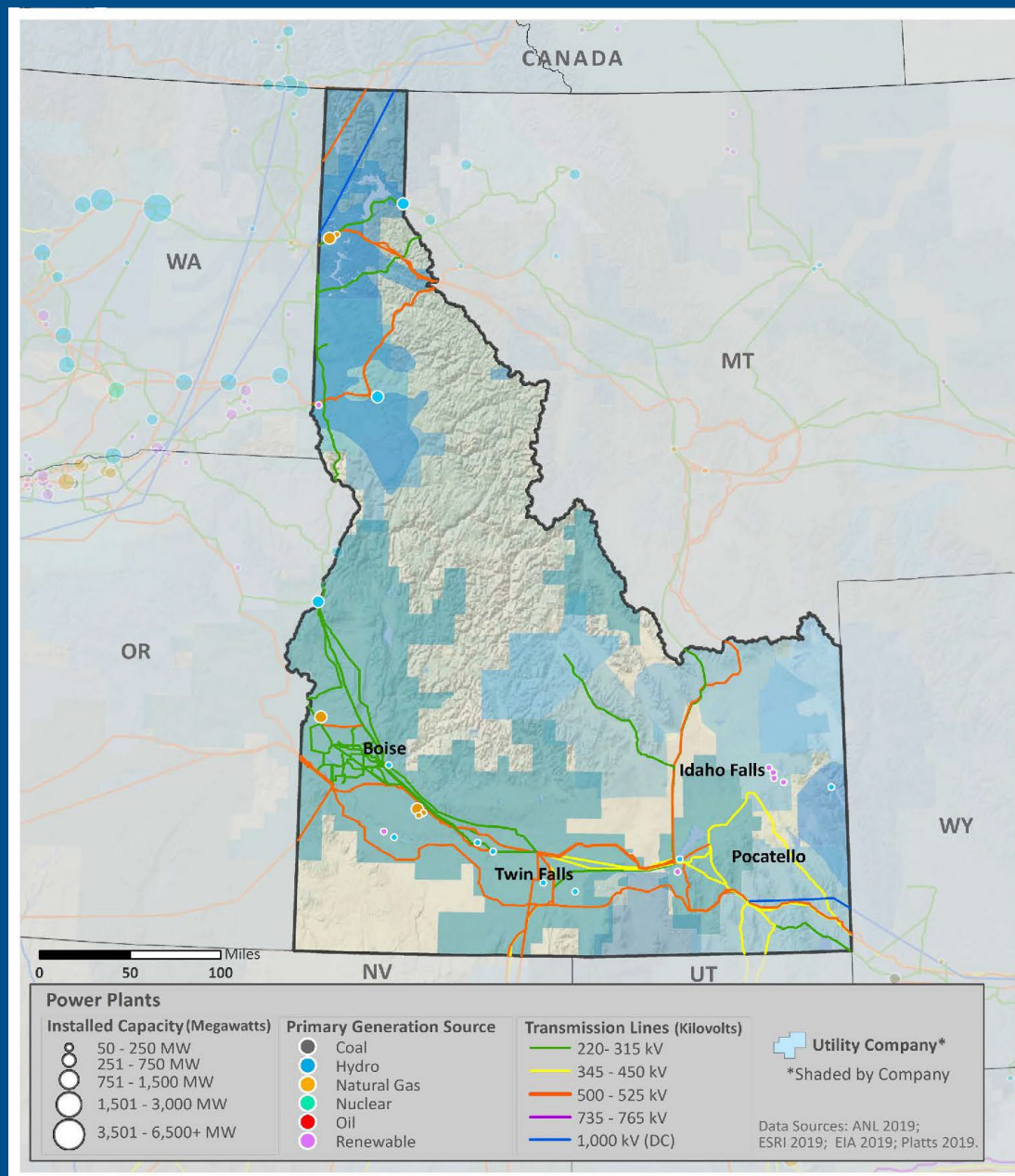
Resource	Time Period	Jurisdiction	Capacity (MW)	Energy Capability (aMW)
NW Wind	2030	WA	200	63
Montana Wind	2032	WA	200	97
Natural Gas CT	2034	ID	90	86
Renewable Fueled CT	2036	WA	88	31
Long Duration Storage (>24 hr)	2039	WA	52	-1
PPA Wind Renewal	2041	WA	140	53
Renewable Fueled CT	2041	WA	74	26
Natural Gas (ICE)	2041	ID	46	46
PPA Wind Renewal	2042	WA	105	36
Renewable Fueled CT	2042	WA	186	65
Natural Gas CT	2042	ID	102	97
Long Duration Storage (>24 hr)	2043	WA/ID	68	-1
NW Wind	2044	WA	100	31
Long Duration Storage (>24 hr)	2044	WA/ID	50	-1
NW Wind	2045	WA	200	63
Renewable Fueled CT	2045	WA	348	122
Natural Gas (ICE)	2045	ID	65	65
Short Duration Storage (<8 hr)	2045	ID	25	0
Total New Resources			2,139	878

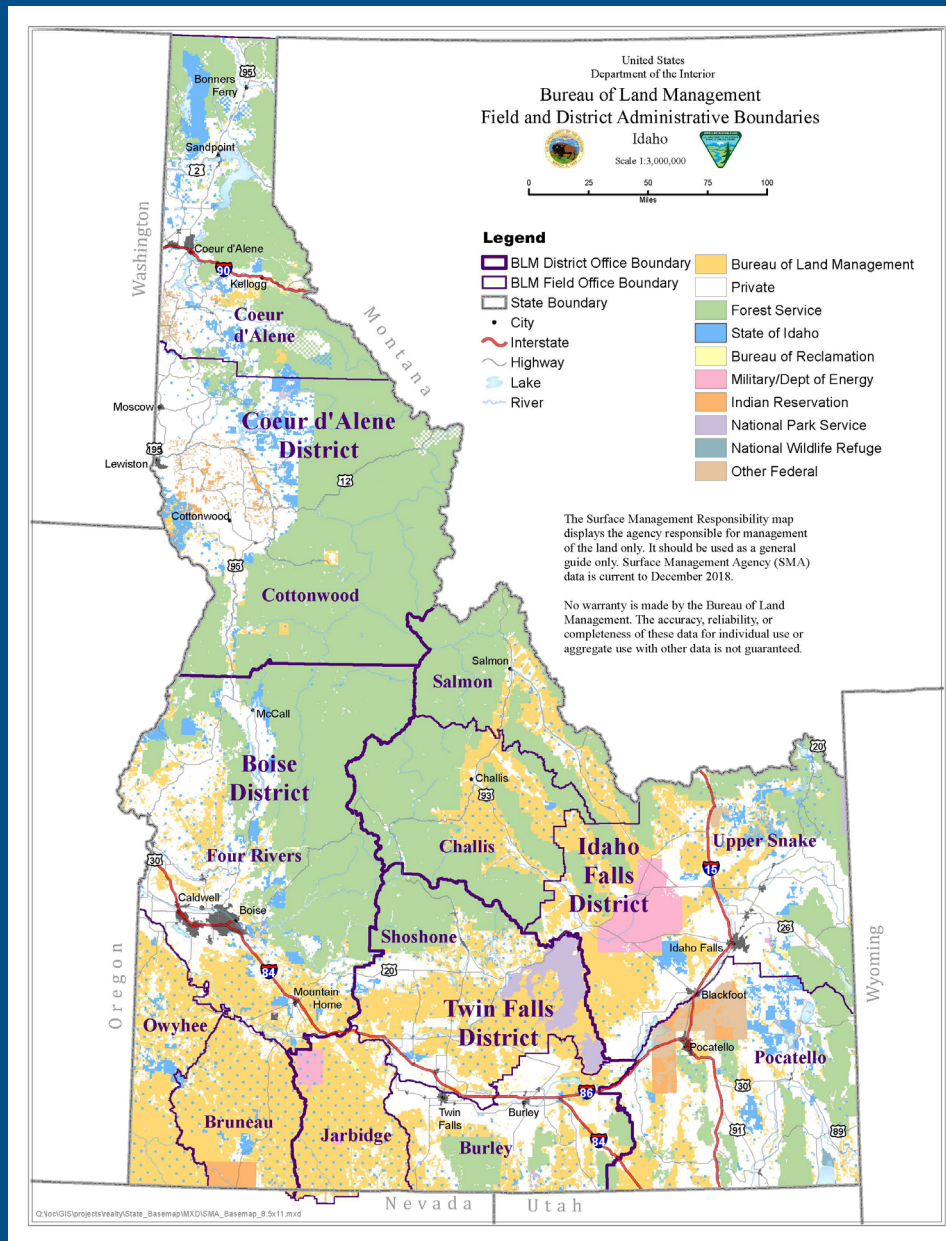
Avista

Wind and Solar Potential



Transmission



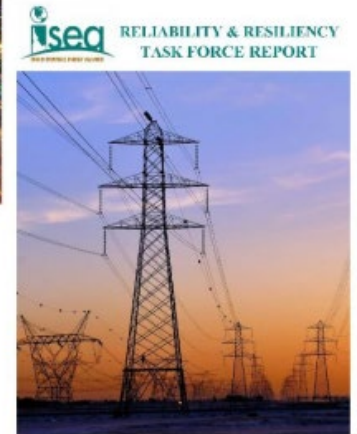
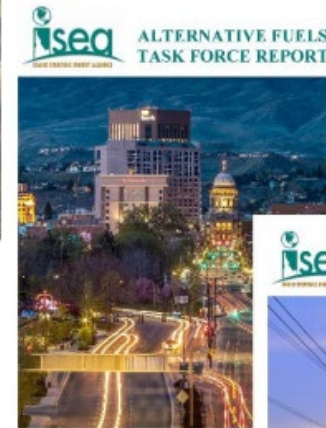
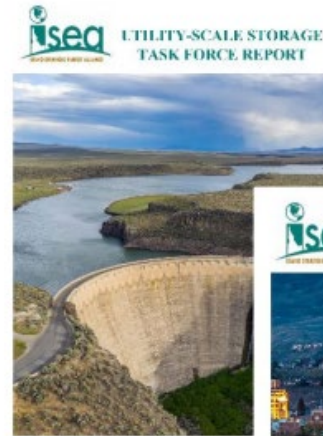


Land Ownership



Idaho Successes

- Idaho Strategic Energy Alliance
- Statute change of clean energy
- Energy Leasing Policy
- Geothermal applications on state lands
- Grid infrastructure improvements
- Levelized Cost of Energy



Idaho Power Mesh Wrap

Installed fire mesh wrap on wood transmission poles in wildfire-prone areas.

The wrap helps protect the wood poles and decrease likelihood of outages during wildfires.

Photo was taken after a fire in Summer 2023



Challenges

- Permitting
- Public perception
- Intermittency/Redundancy
- Grid design



Grand View Solar Project, Owyhee County

108 MW, 673 acres



Goshen Wind, Bonneville County

124.5 MW, 11,000 acres

