

Wyoming Tax Facts Webinar

Wyoming's Wind Energy Tax Policy – What it Means for the Industry and for Communities

May 29, 2024

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UNIVERSITY
OF WYOMING

School of
Energy Resources

THE WORLD NEEDS MORE COWBOYS.

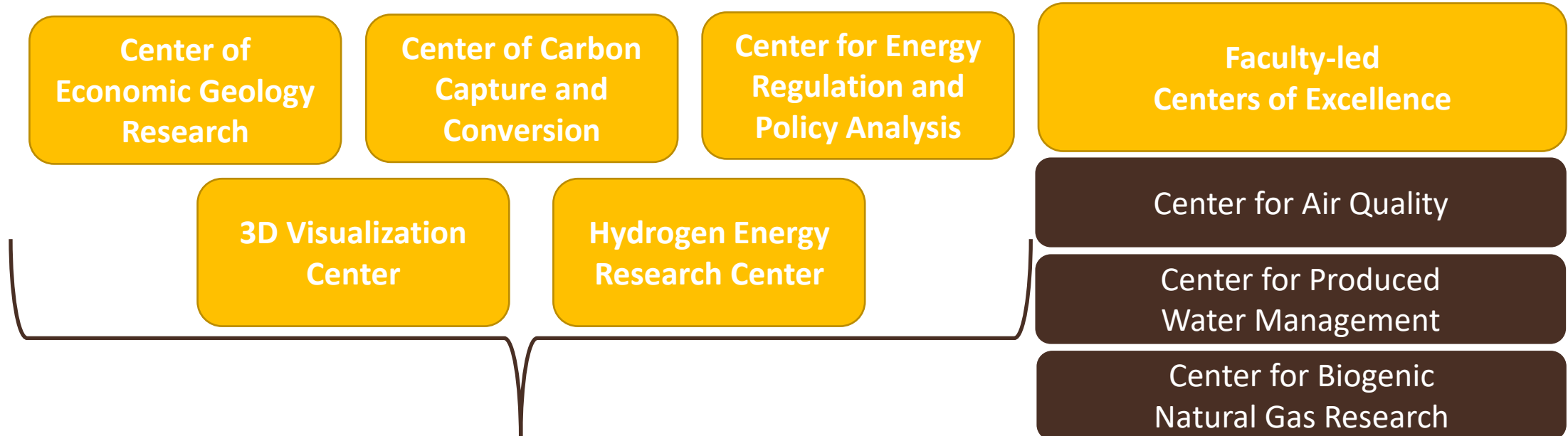
SER's Mission:

Energy-driven
economic
development for
Wyoming



*BUCKING
THE SYSTEM
SINCE 1886.*

SER Research Structure



Staff-led Centers of Excellence



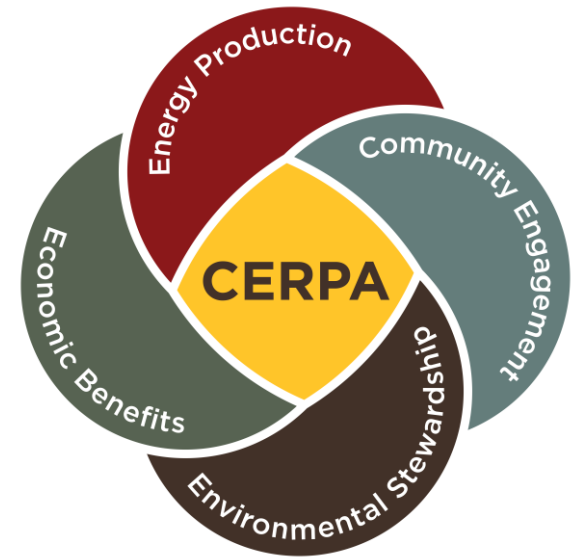
Partner Organization

Enhanced Oil Recovery Institute

RESEARCH

POLICY
SUPPORT

STAKEHOLDER
ENGAGEMENT



*BUCKING
THE SYSTEM
SINCE 1886.*

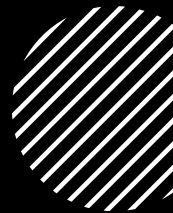


Today's Presentation

- Background
- Types of Wind Projects
- Wind Federal Tax Credits
- State Taxes and Incentives
- Economic Impacts of Wind Industry in Wyoming
- Current Issues



Background



Wyoming Wind Facts



Benefits to Landowners



Generation statistics: Global and U.S.



Life Cycle Emissions Profile



Levelized Cost of Electricity



Energy Intensity



Interconnection Queues

Wyoming Wind Facts

- Rank 24th - Operating Capacity at 3,328 MW
- Rank 19th - Electricity Generated by Wind at 20.8%
- Energy Workforce of 500
- Property, State and Local Taxes Paid in 2022 = \$17.8M
- Landowner payments made in 2022 = \$21.1M
- CO2 Emissions avoided in 2022 = 8M metric tons





Benefits to Landowners

Option Agreement: Rent or option payment for initial period to develop project

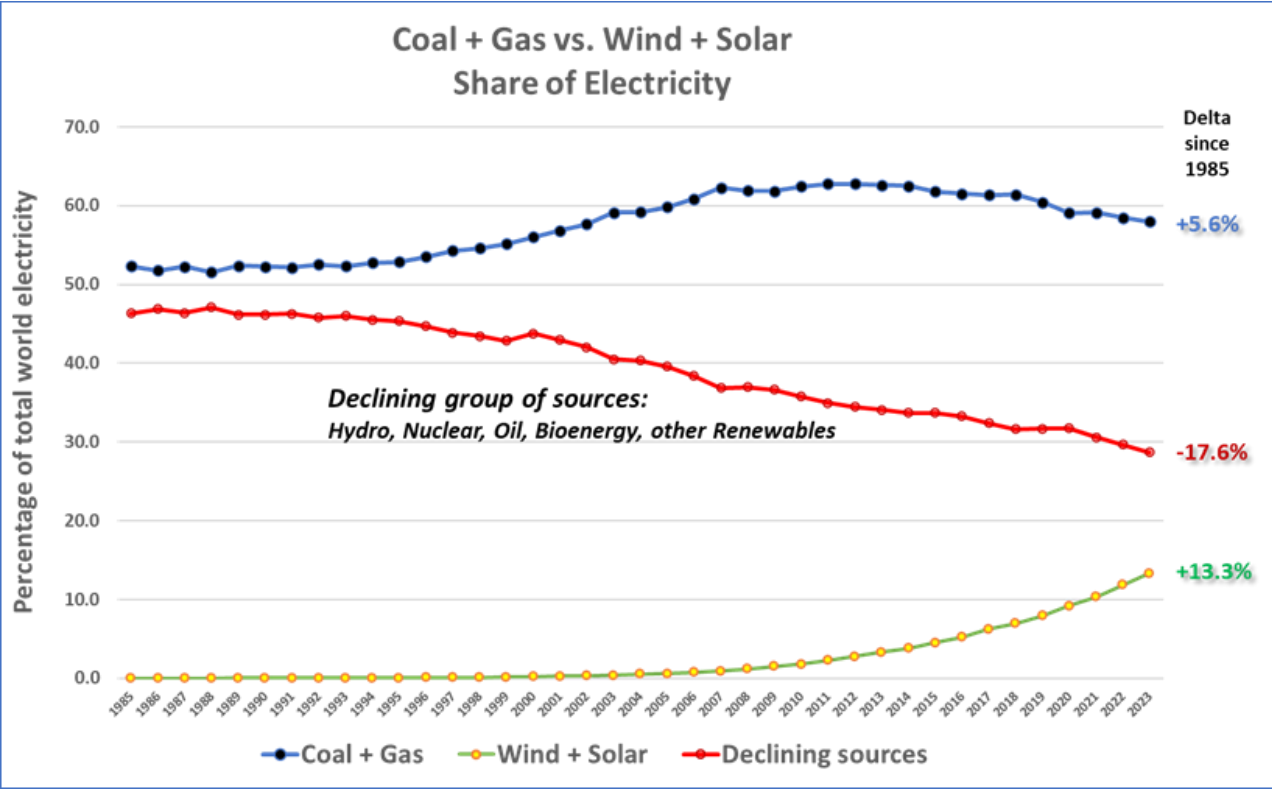
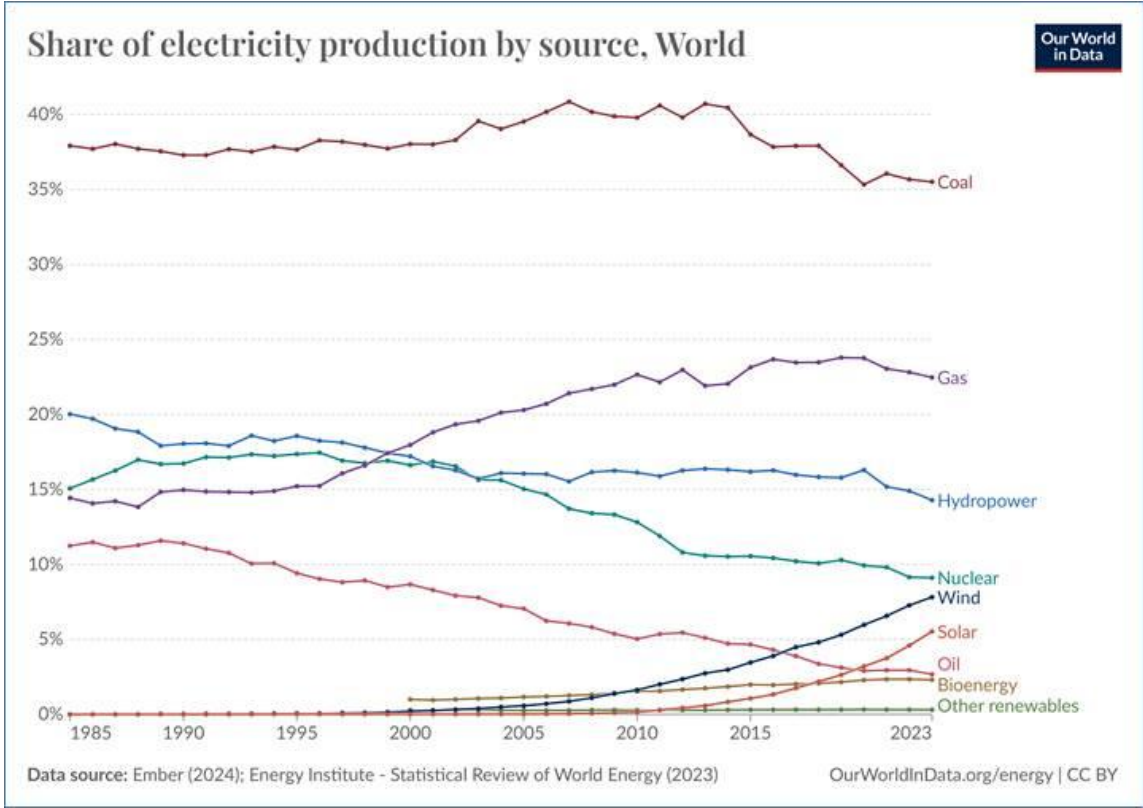
Operating Option

Typically by turbine
(\$4,000-\$8,000/turbine)

Monthly Royalty Payments =
approximately 4% of gross revenues,
increasing by 2% every five years

Option to Extend

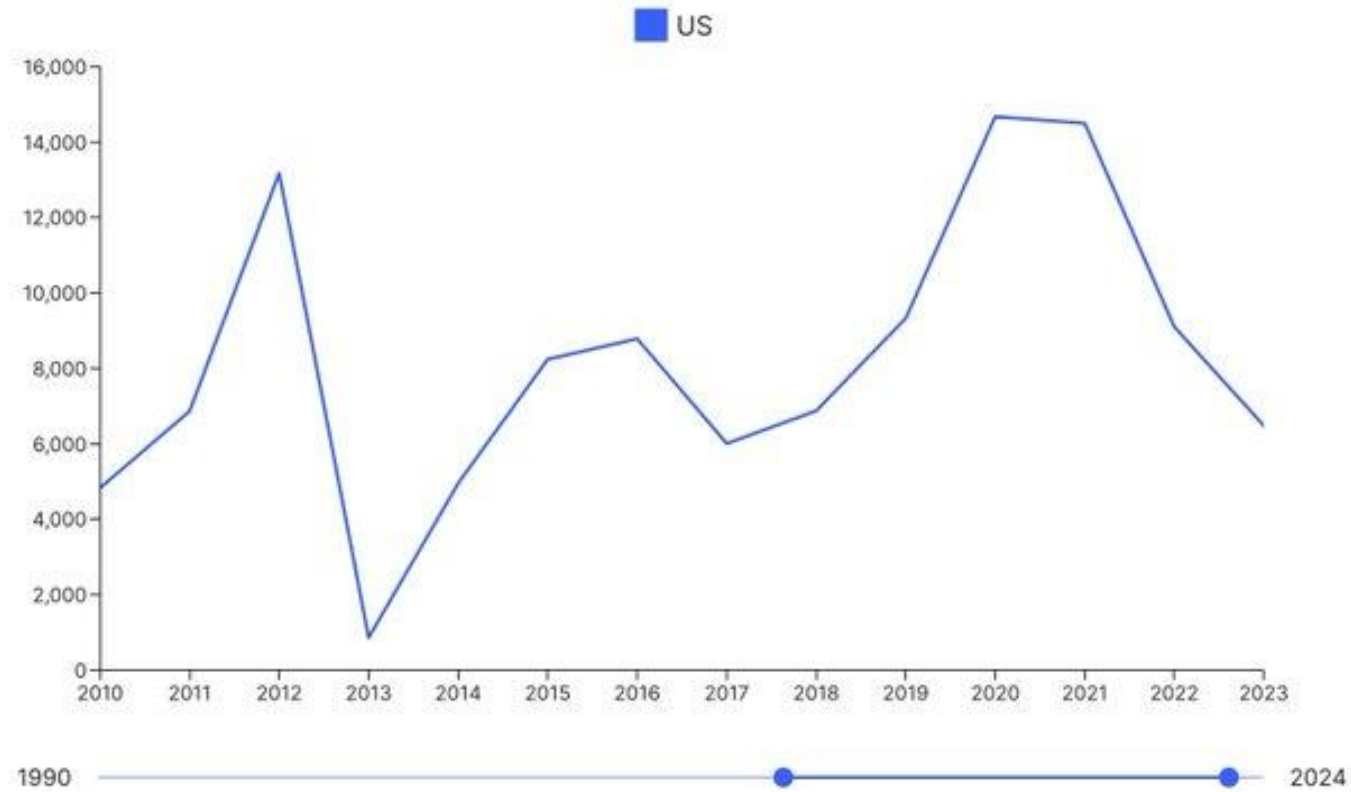
Global Perspective



Annual Wind Capacity Growth

Utility-scale capacity additions per year (MW)

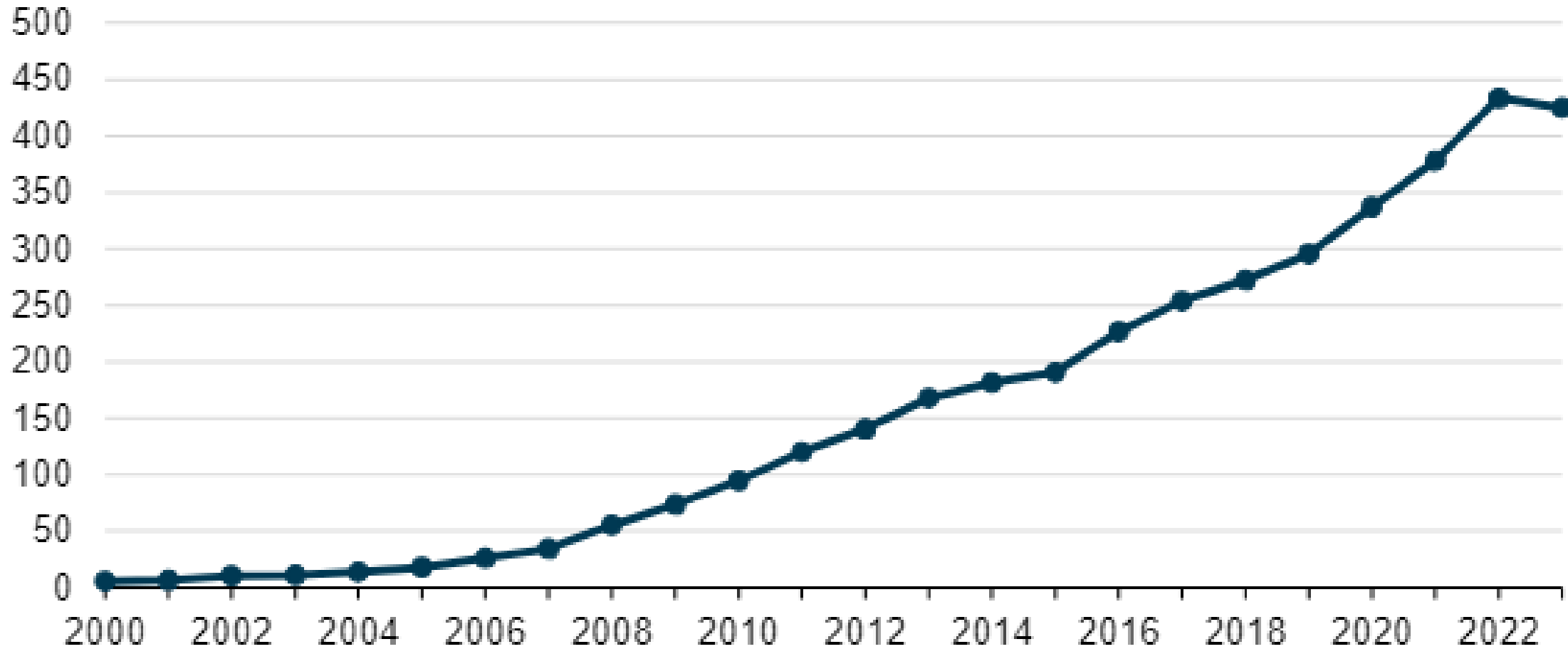
Edit States
US



Source: Energy Information Agency (EIA) Form 860

Annual U.S. wind generation, 2000–2023

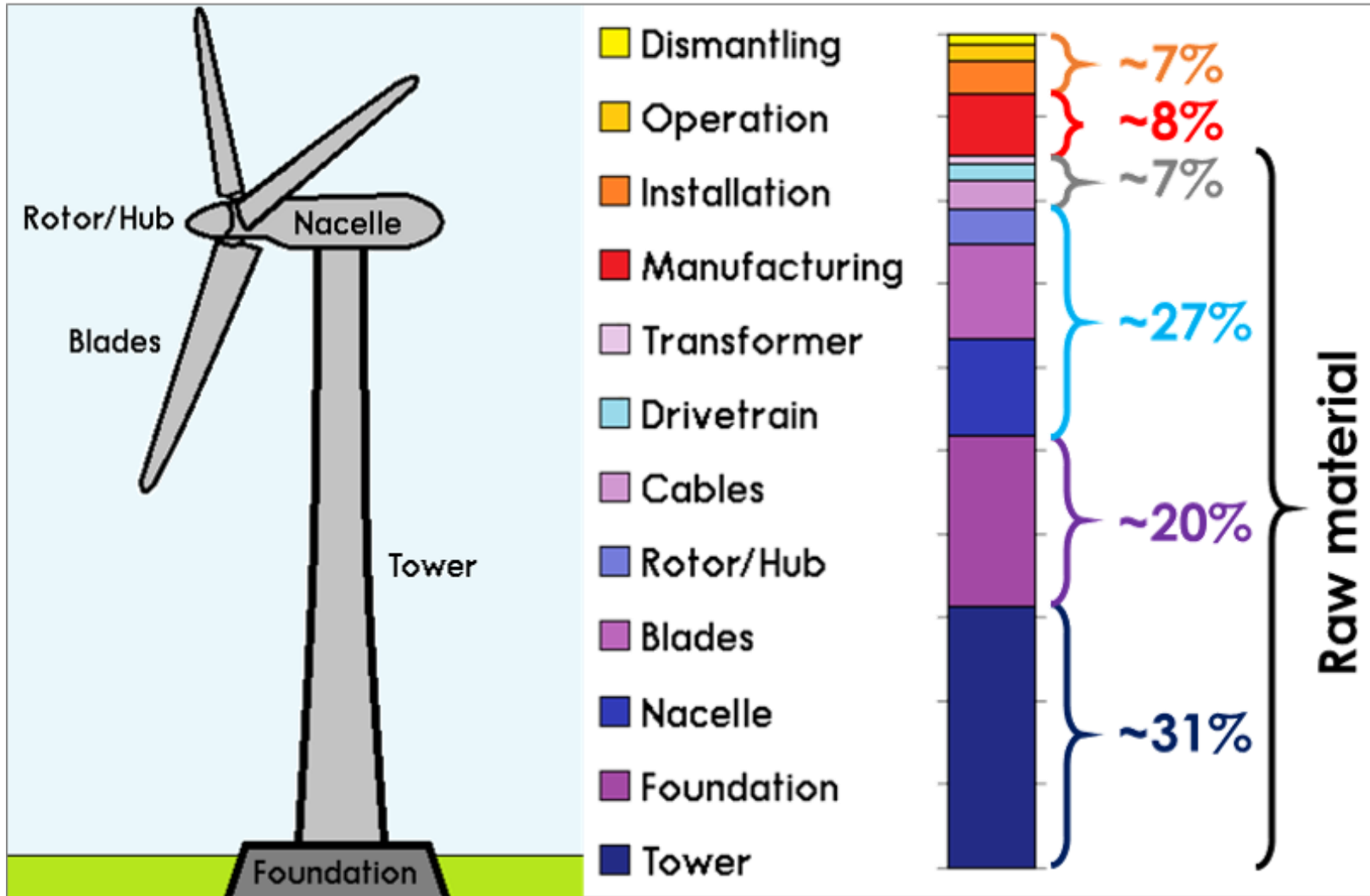
billion kilowatthours



Wyoming's
Electricity
Generation
Mix

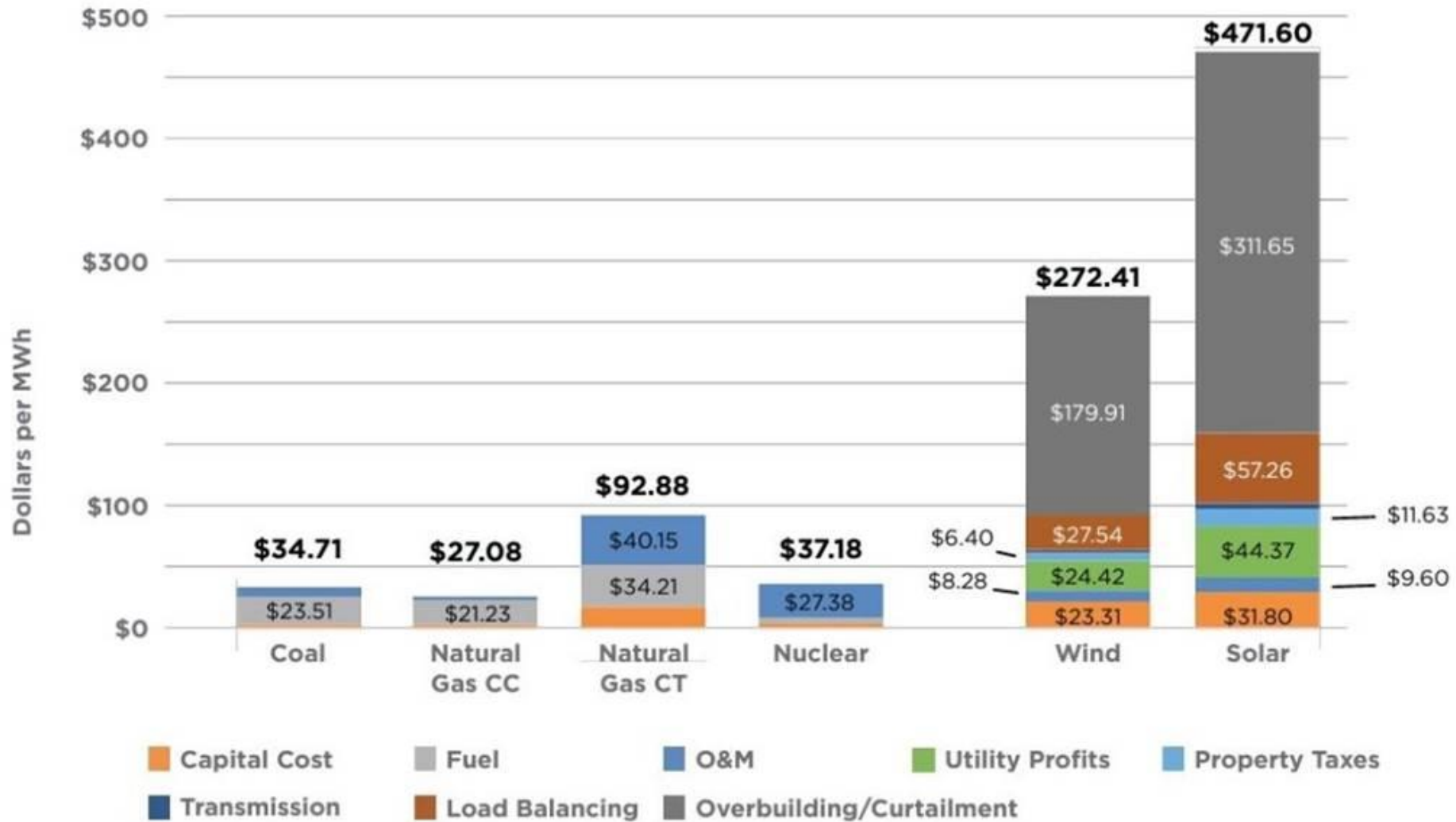
Year	Coal	Wind	Natural Gas	Hydro
2003	97%	0	0	3%
2012	80%	16%	1%	3%
2022	71%	24%	2%	3%

Life Cycle CO₂ Emissions



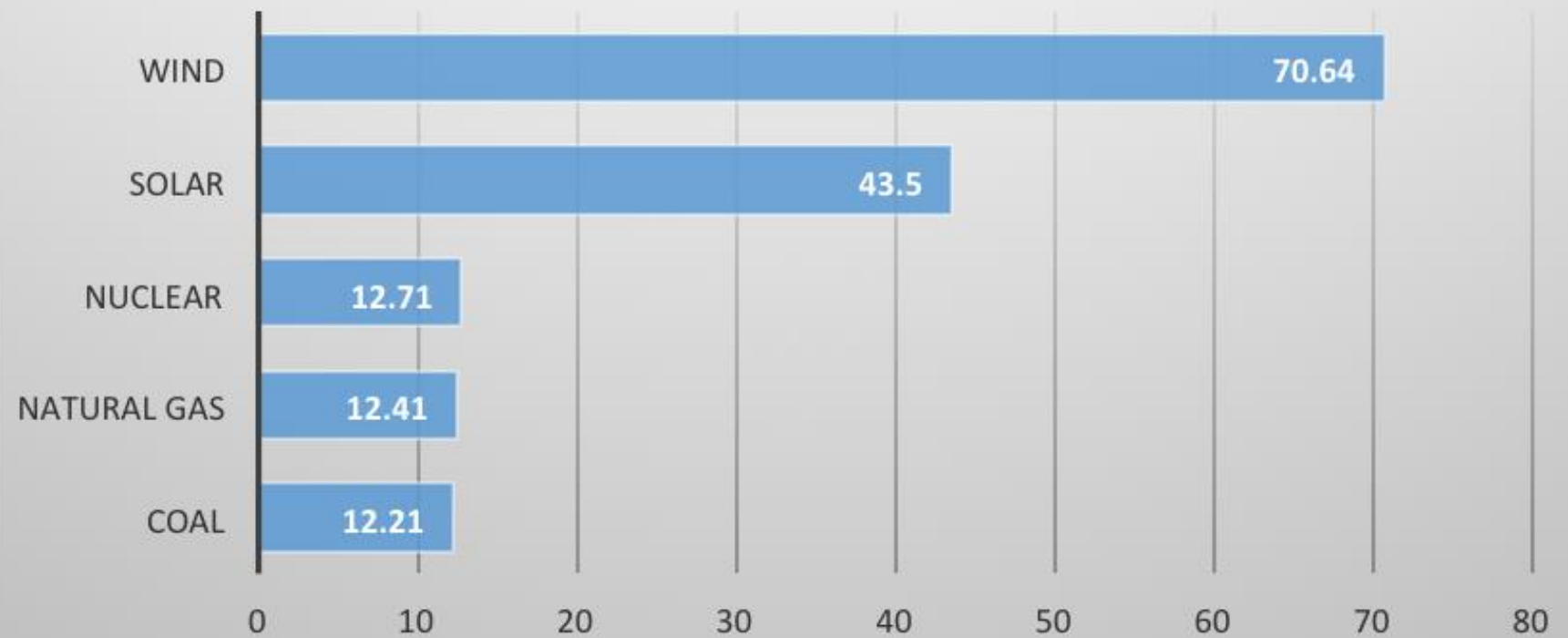
Figures for typical 1.5-2.0 MW on-shore wind turbines operating at ~7m/s WS
Averaging of several Life Cycle Analyses

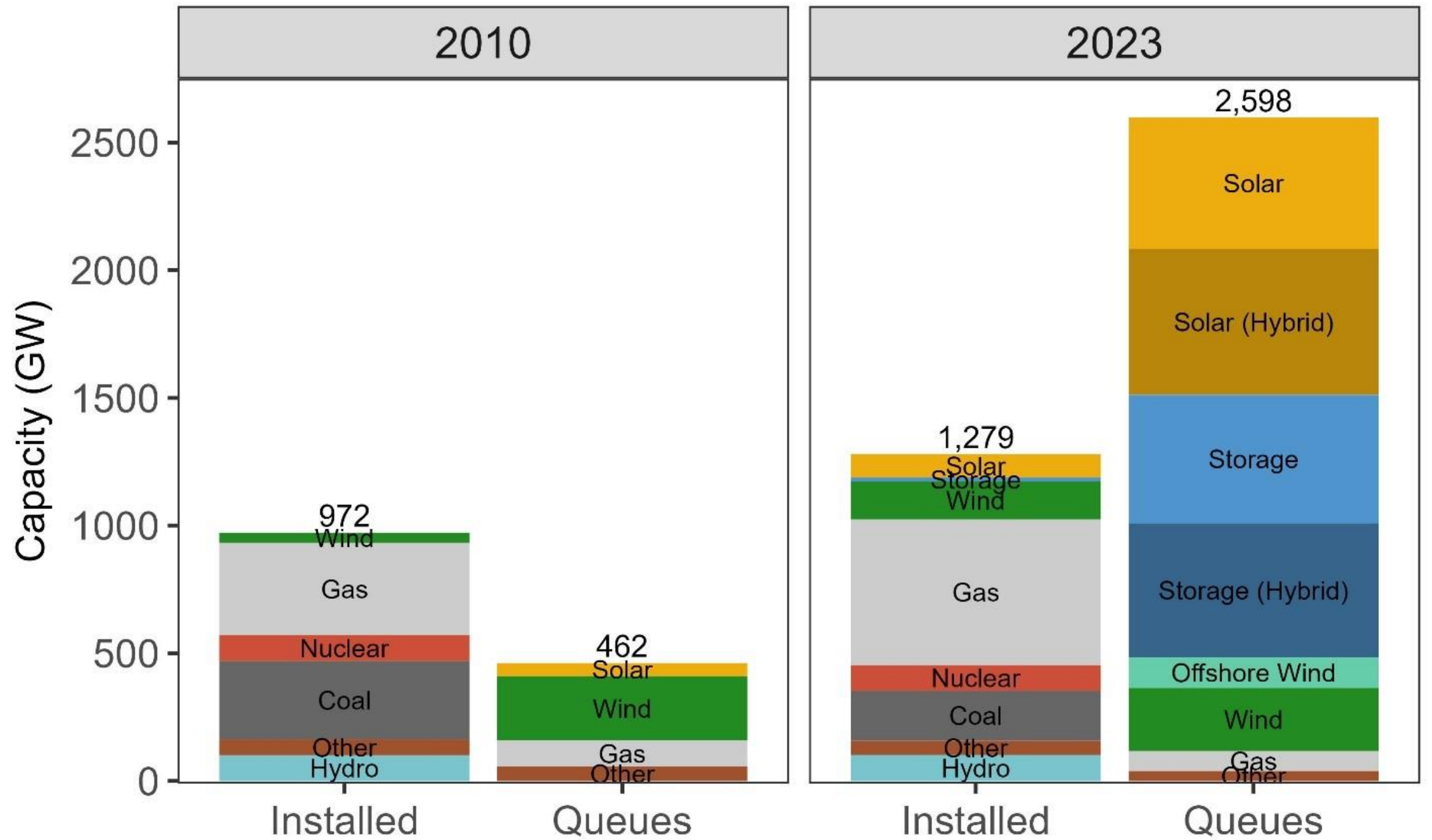
LCOE: Existing vs. New Energy Sources



The Institute
for Energy
Research
(2017)

Land Use by Electricity Source in Acres per Megawatt Produced

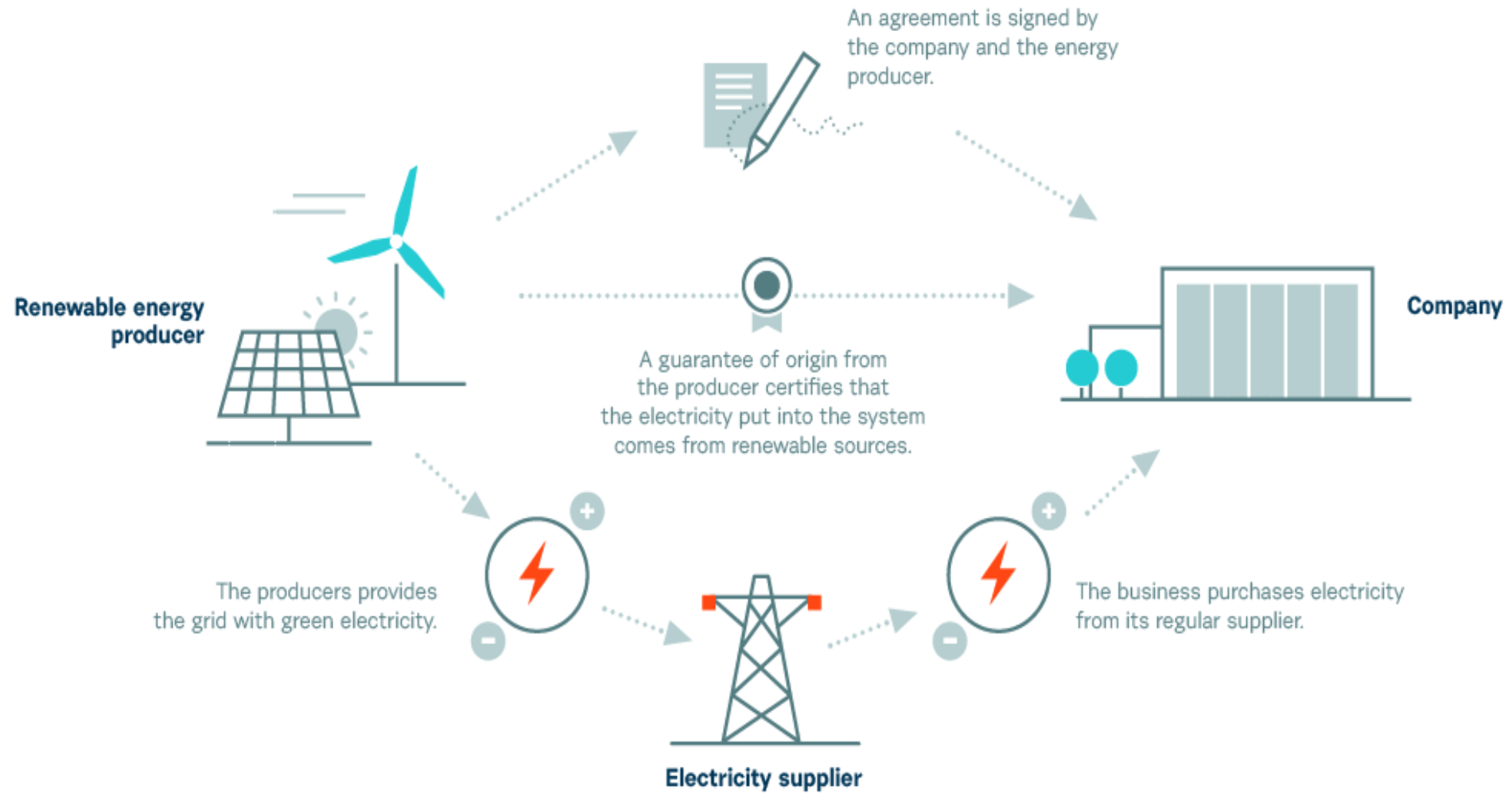







Types of Wind Energy Projects

- Utility Model
- Independent Power Producers
 - Power Purchase Agreements

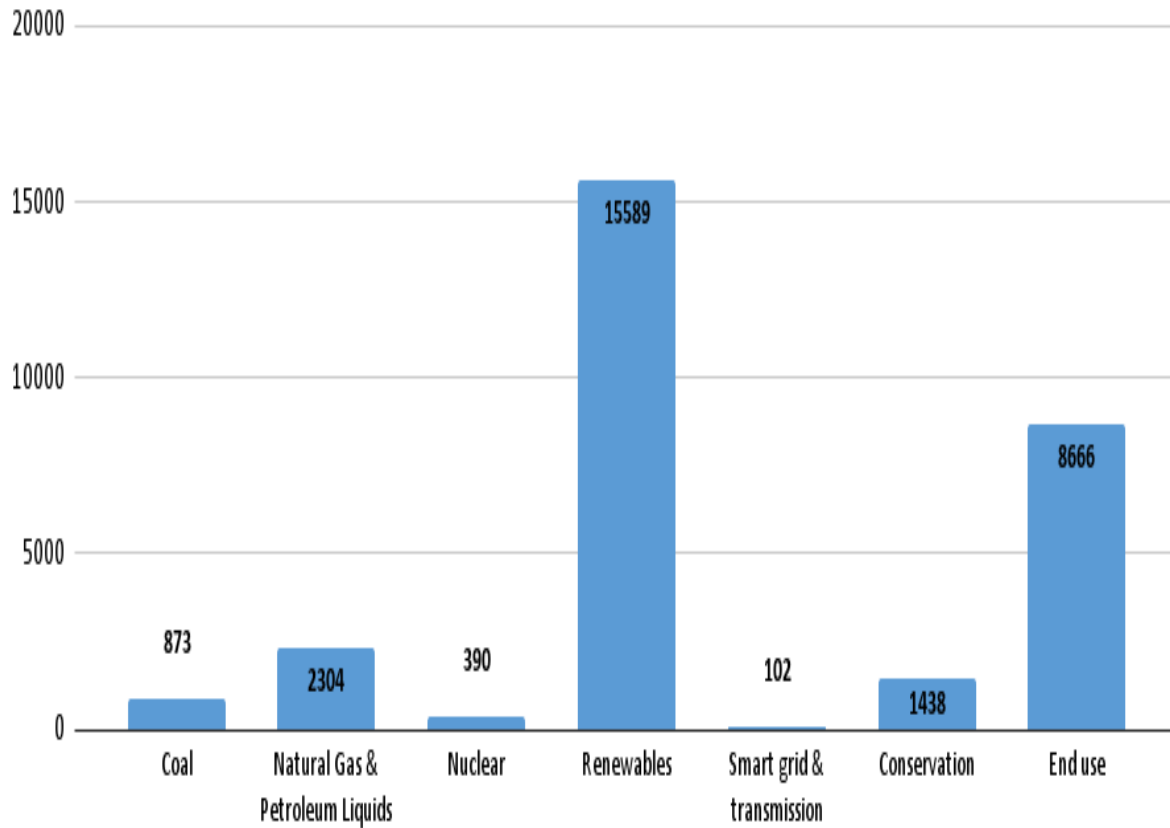


Source: Nano Energies, 2024

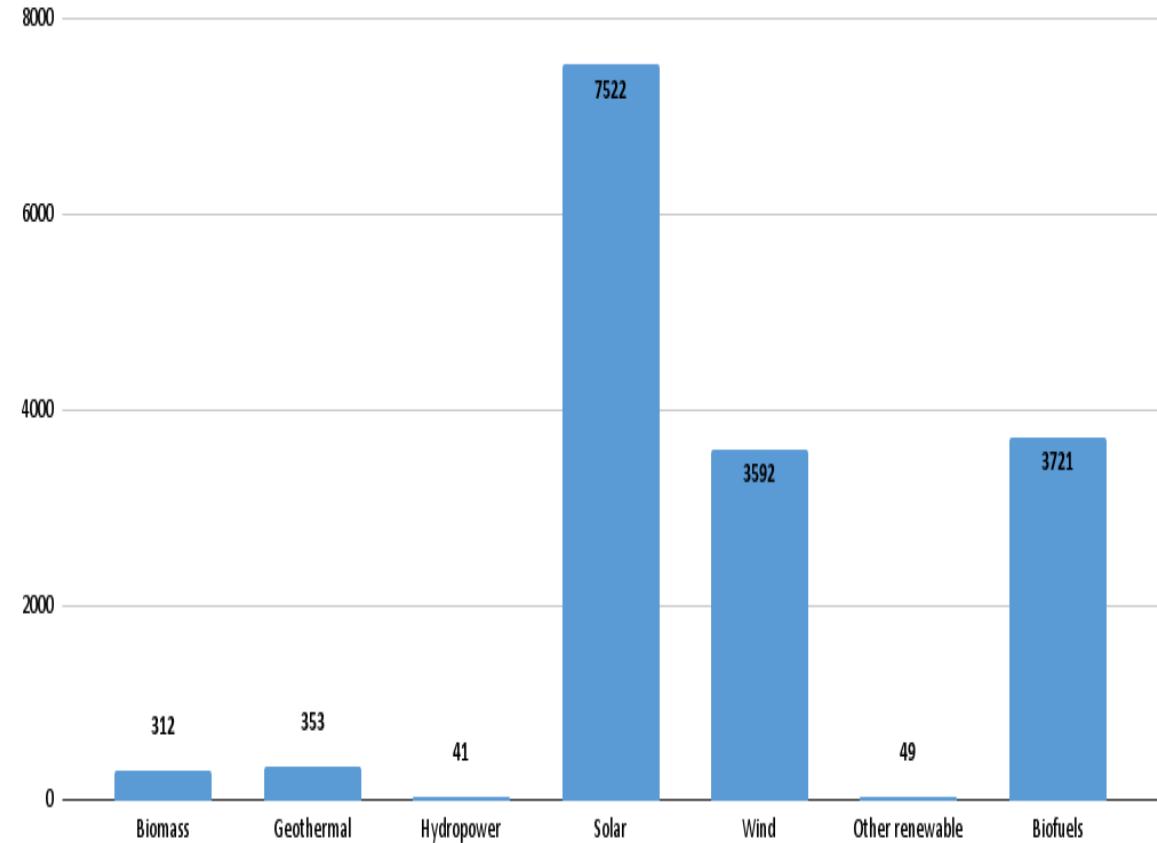


Federal Tax Credits for Wind Energy Projects

Federal Energy Subsidies and Incentives, FY 2022
 (Million 2022 Dollars)

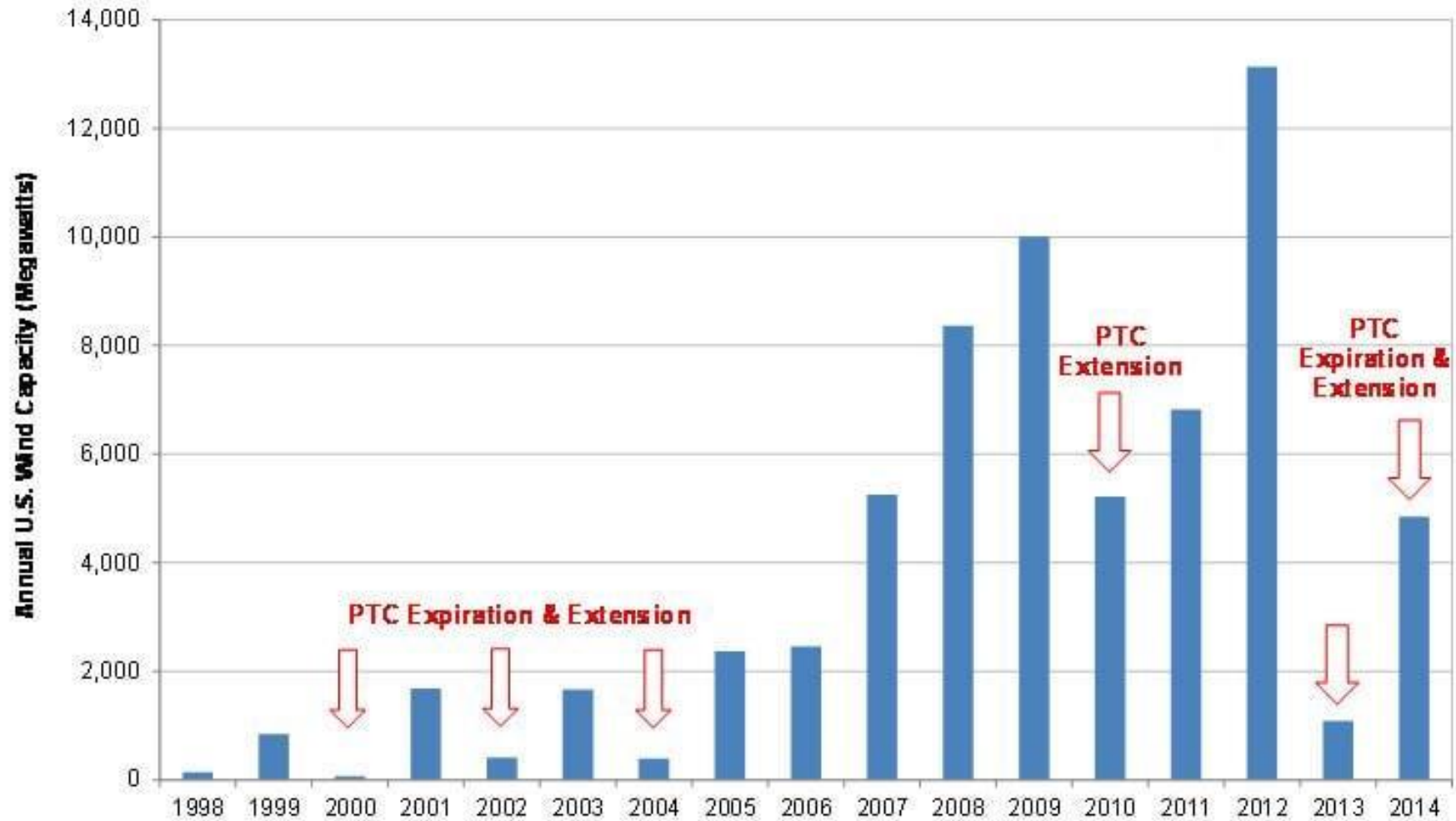


Renewable Energy Subsidies by Type, FY 2022
 (Million 2022 Dollars)



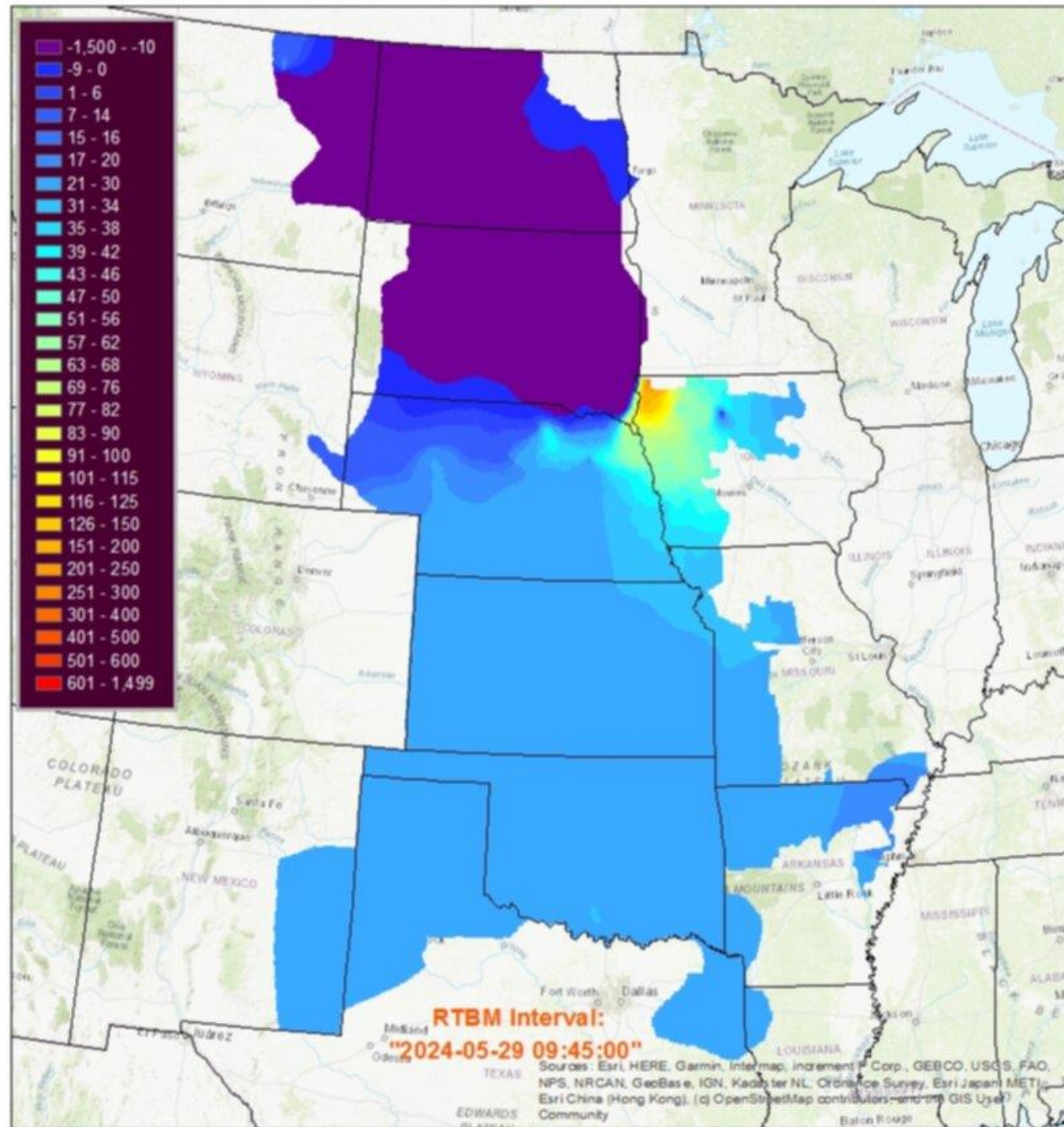
Source: Energy Information Administration


Impact of Production Tax Credit Expiration and Extension on U.S. Annual Installed Wind Capacity



SPP's Price Contour Map

May 29, 2024
9:00 am





State Taxes and Incentives for Wind Energy Projects

	State Corporate Income Tax Rate	State Gross Receipts/ Business Tax Rate	Exemptions from Corporate or Business Taxes	Sales Tax Rate (Avg. state & local)	Sales Tax Exemption	Property Tax Rate and Assessment Method	Property Tax Exemption/ Incentive	Depreciation Method	Other Incentives/ Subsidies	Specific Wind Taxes
Arizona	6.968%	N.A.	-investment tax credit of 10%, 1¢/kWh Production tax credit, ends 2019.	5.6% (8.25%)	No	-assessment based on 18% of depreciated facility value, taxed at 12.95% (state average)	-wind equipment full cash value assessment discounted by 80%	Straightline, 25-year, 10% floor.	No	No
California	8.84%	N.A.	No	7.5% (8.48%)	-limited to non-generation equipment	- 1% tax rate on depreciated facility value	No	Straightline, 20-year, 20% floor.	No	No
Colorado	4.63%	N.A.	-80% exemption for facilities in state enterprise zones	2.9% (7.5%)	-state sales tax exemption for wind facilities	- assessment based on 29% of state-adjusted expected gross revenue, taxed at 7.555%	-graduated reductions in property tax assessment for larger facilities	Straightline, 20-year, 15% floor.	No	No
Idaho	7.40%	N.A.	No	0% (6.04%)	No	-1.67% tax rate on depreciated facility value	-can elect to be charged 3% of annual energy earnings if not regulated by IPUC	Straightline, 20-year, 20% floor.	request financing from Idaho Energy Resources Authority	No
Montana	6.75%	N.A.	-35% investment tax credit (cannot be taken with property tax exemption), 1% of new wage payroll if jobs increase by 30%	N.A.	-no sales tax in the state	-assessment based on 3% of depreciated facility value, taxed at 55.546% (state average)	-discount of 25% or 50% of assessed value in first 5 years, discount declines in equal increments over	Straightline, 20-year, 15% floor.	No	No
Nevada	N.A.	-0.136% of Nevada gross revenue exceeding \$4 million	-Revenues from power exported from the state would be exempt	6.85% (7.98%)	-reduced to 2.6% on purchases in the first three years of operation	-assessment based on 35% of depreciated facility value, taxed at 3.15% (state average)	-over 10 MW, the property tax is reduced by up to 55% for up to 20 years	Straightline, 50-year, 0% floor.	No	No
New Mexico	7.60%	State: 5.125% Average across all tax areas: 6.425%	-\$0.01/kWh credit up to the first 400,000 MWh produced before \$20 million cap was met	5.13% (7.55%)	Exempt from state sales tax through payment of gross receipts tax	-assessment based on 33.33% of depreciated facility value, taxed at 2.6666% (state average)	-taxes fully negotiable if industrial revenue bonding used	Straightline, at 3.2% rate down to 20% floor.	-local industrial revenue bonding may be negotiated.	No
Oregon	6.60%	N.A.	No	N.A.	-no sales tax in the state	-assessment based on depreciated facility value, taxed at 1.5%	-may qualify for permanent 20% reduction in assessed value	Straightline, 20-year, 20% floor.	No	No
Utah	5.00%		-10% investment tax credit or \$3.50/MWh refundable production tax credit in first four years	5.95% (6.76%)	-renewable energy equipment is exempt	-assessment based on depreciated facility value, taxed at 1.3%	- abatement of some or all property taxes for projects within renewable energy development zones	Straightline, 20-year, 20% floor.	No	No
Washington	N.A.	-0.484% of gross receipts	No	6.5% (8.9%)	No	-assessment based on depreciated facility value, taxed at 1.225%	No	27-year state-specific table, 15% floor	No	No
Wyoming	N.A.	N.A.	-no taxes on income or earnings	4% (5.4%)	No	-assessment based on 11.5% of depreciated facility value, taxed at 6.8% (state average)	No	Straightline, 20-year, 20% floor.	No	\$1/MWh




Economic Impacts of the Wind Industry in Wyoming

Wyoming Wind Generation Tax

- Source: State of Wyoming, Department of Revenue, 2023 Annual Report
 - Authority: W.S. 39-22-101 to 39-22-111
-

Year	State	Local	Total
2014	1,772,147	2,658,221	4,430,368
2015	1,501,880	2,252,819	3,754,699
2016	1,750,026	2,625,038	4,375,064
2017	1,619,672	2,429,507	4,049,179
2018	1,665,589	2,498,383	4,163,972
2019	1,650,180	2,475,271	4,125,451
2020	1,933,944	2,900,916	4,834,861
2021	1,707,793	2,561,690	4,269,483
2022	1,716,039	2,574,059	4,290,098



Measuring the Economic Impacts of Wind Projects in Wyoming (SER 2022)

Analyzed Three Distinct Deployment Scenarios

- Low Scenario: 2 GW
- Moderate Scenario: 4GW
- Aggressive Scenario: 6GW



Key Findings –Employment Impact Calculations

Low Scenario

- 3,216 Construction Phase Jobs
- 528 Operations and Maintenance Phase Jobs

Moderate Scenario

- 6,432 Construction Phase Jobs
- 1,056 Operations and Maintenance Phase Jobs

Aggressive Scenario

- 9,648 Construction Phase Jobs
- 1,584 Operations and Maintenance Phase Jobs

Key Findings –Enhancing Tax Revenues

Low Scenario


- Annual Tax Revenues = \$30M
- Federal Royalties = \$1M

Moderate Scenario

- Annual Tax Revenues = \$60M
- Federal Royalties = \$2M

Aggressive Scenario

- Annual Tax Revenues = \$89M
- Federal Royalties = \$3M



Estimating the Impact of
State Taxation Policies on the
Cost of Wind Development
in the West (Godby, Cook, 2019)

Estimated Average Cost of Energy
across 11 Western States

Study Assumed:

- 300MW Project
- Identical labor/construction costs
- 35% capacity factor



Estimated Average Cost of Energy Ranges

State	Price/MW
California	66.87-67.11
Nevada	61.97-66.35
Washington	58.17-66.26
Arizona	55.16-62.30
Oregon	53.53-61.56
Utah	51.60-59.97

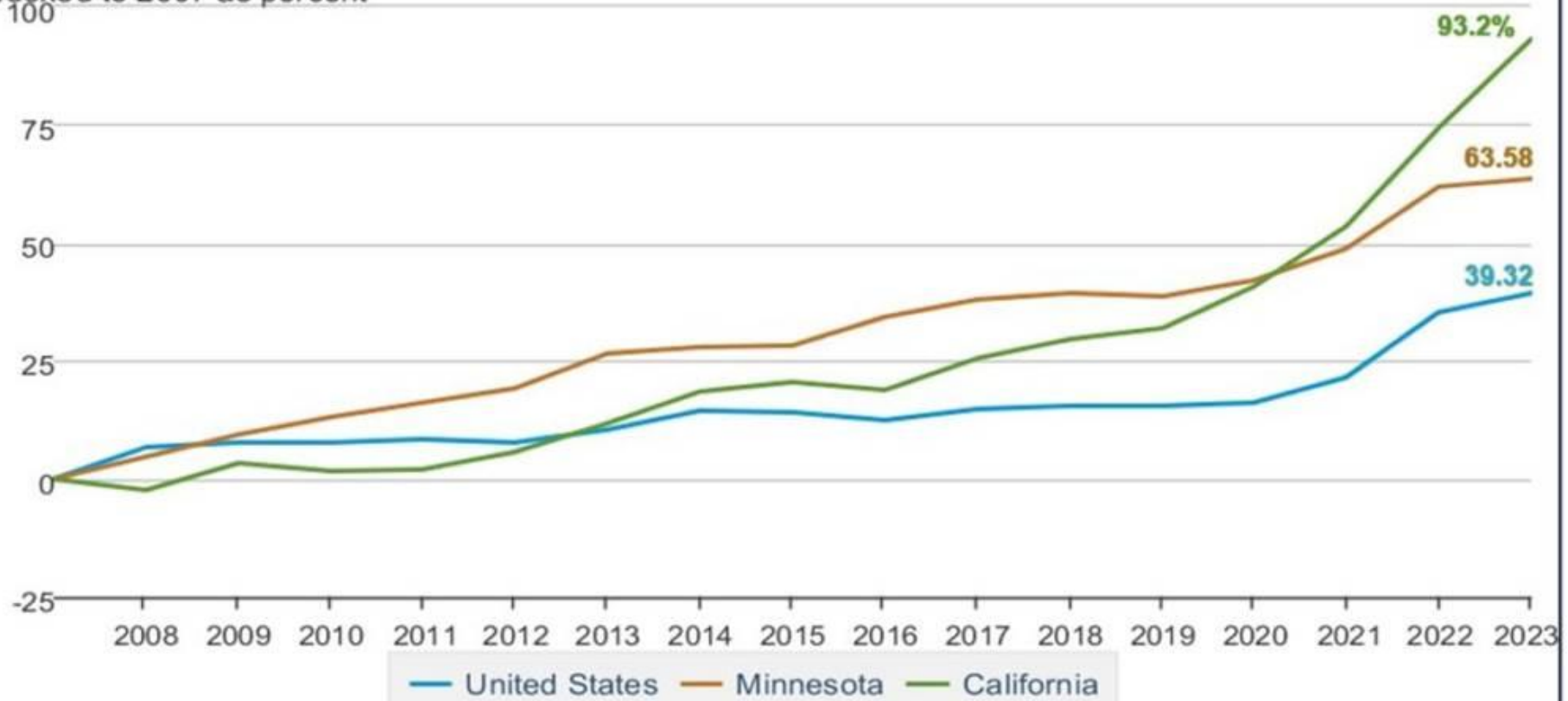
State	Price/MW
Idaho	49.60-62.10
Wyoming	35.44-62.37
Colorado	34.72-60.44
Montana	34.43-59.86
New Mexico	32.18-60.16



Current Issues facing Wyoming's Wind Industry

Average retail price of electricity, all sectors, annual

Percent
Indexed to 2007 as percent



Data source: U.S. Energy Information Administration

Joint
Corporations
Interim
Electricity
Taxation
Subcommittee

First Meeting – May 22, 2024

Reviewing Three Bills from 2024 Session

- SF85 – Repeal of Sales Tax on Electricity
- HB147 – Created an Exemption for Sales of Electricity
- HB200 – Electricity Generation-Equity and Consumer Protection

Request for Proposal

- Legal Issues – Commerce Clause
- Economics – Revenue Impacts

Next Meeting – Tentatively June 14



Under Construction



Name	Type of Facility	Max IAP Available	% IAP Allowed	Total IAP Awarded	% IAP Awarded by the Council	Remaining IAP	Monthly Distribution
Genesis Alkali Optimization	Trona Mine	Baseline Calculation Method	Baseline Calculation Method	\$2,154,759 Yearly Estimate	65% Sweetwater 17.5% Lincoln 17.5% Uinta	Varies	Average \$10,550
Choke Cherry Sierra Madre	Wind	Baseline Calculation Method	Baseline Calculation Method	\$6,050,000 Yearly Estimate	94% Carbon 3% Albany 3% Sweetwater	Varies	Average \$504,167
Boswell Wind	Wind	\$ 12,392,400	2.76%	\$ 11,040,000	89%	\$ 2,365,320	Varies
TransWest Express	Transmission	\$ 24,613,680	2.76%	\$ 8,443,095	34%	\$ 8,443,095	\$ 562,873
Roundhouse Renewables	Wind	\$ 7,914,424	2.76%	\$ 5,902,930	75%	TBD	\$ 393,529
Exxon LaBarge	Carbon Capture	\$ 3,124,320	2.76%	\$ 2,492,276	80%	\$ 1,661,517	\$ 103,845
Gateway South	Transmission	\$ 6,193,881	2.76%	\$ 4,631,445	75%	\$ 2,137,590	\$ 178,133
Rock Creek Wind	Wind	\$ 14,371,320	2.76%	\$ 8,943,710	62%	\$ 6,590,103	\$ 470,722
South Cheyenne Solar	Solar	\$ 3,778,164	2.76%	\$ 492,230	13%	\$ 492,230	\$ 49,223
Anticline Wind	Wind	\$ 3,690,000	2.25%	\$ 1,990,000	54%	\$ 1,990,000	\$ 99,500
Average		\$9,509,774	2.70%	\$5,491,961	60.25%	\$ 2,959,982	\$ 265,404

* Dollar amounts are rounded to the nearest whole dollar

* Percentages are rounded to the nearest ones



Pending Construction



Name	Type of Facility	Max IAP Available	Statutory Tier	Total IAP Awarded	% IAP Awarded by the Council	Monthly Distribution	Anticipated Start Date
Uinta Wind	Wind	\$ 2,809,680	2.76%	\$ 384,543	14%	\$ 20,239	April 2019
Two Rivers /Lucky Star	Wind	\$ 20,462,640	2.76%	\$ 9,724,477	48%	\$ 360,166	TBD
Ciner Unit 8	Soda Ash Refinery Expansion	\$ 3,174,000	2.76%	\$ 2,750,987	87%	\$ 125,045	TBD
Lincoln Solar	Solar	\$ 3,401,101	2.76%	\$ 3,201,708	94%	\$ 168,511	Q1 - 2024
Dinosolar	Solar	\$14,064,800	2%	\$ 5,774,613	41%	\$ 169,842	Apr-24
Cedar Springs IV	Wind	\$ 9,060,000	2%	\$ 4,025,940	44%	\$ 236,820	Nov-23
CK Gold	Gold/Transition Metals Mine	\$ 4,530,000	2.76%	\$ 1,134,156	25%	\$ 63,009	Q1 - 2024
Goshen Solar	Solar	\$ 4,269,720	2.76%	\$ 238,319	5%	\$ 14,895	Mar-25
Rail Tie	Wind	Average \$ 13,500,000	2.76%	\$ 8,643,658	64%	\$ 480,203	Mar-24
Average		\$8,363,549	2.62%	\$3,986,489.01	41%	\$182,081.04	

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* Percentages are rounded to the nearest ones

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Questions?

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