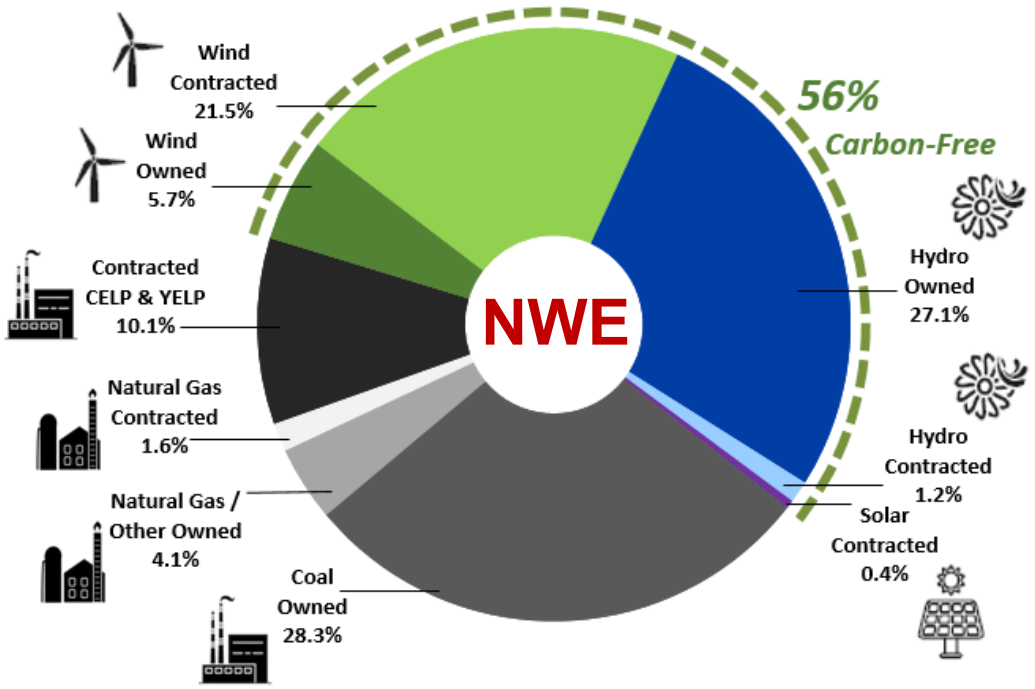
NorthWestern Energy's Energy Update on Resource Adequacy

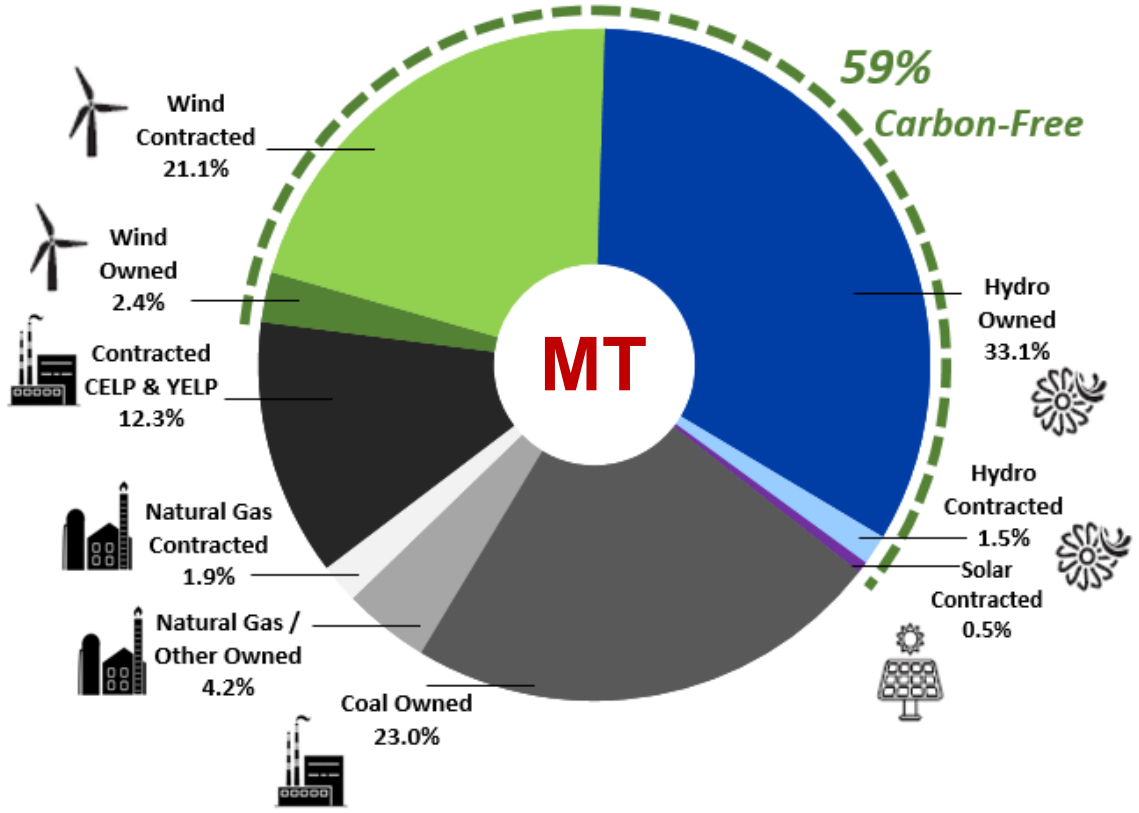
BBER – January 2023

Sustainability - Highly Carbon-Free Supply Portfolio – Especially in MT

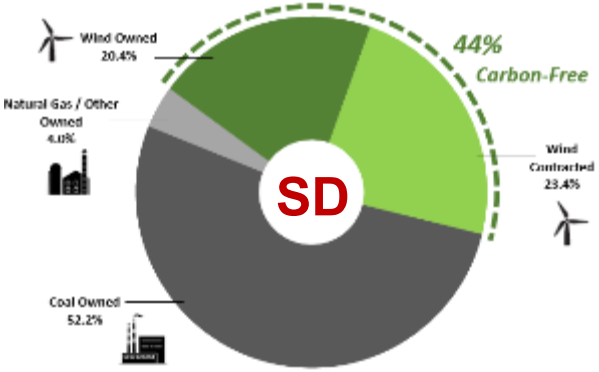
2021 Electric Generation Portfolio - Total NWE



2021 Electric Generation Portfolio - Montana



2021 Electric Generation Portfolio - South Dakota

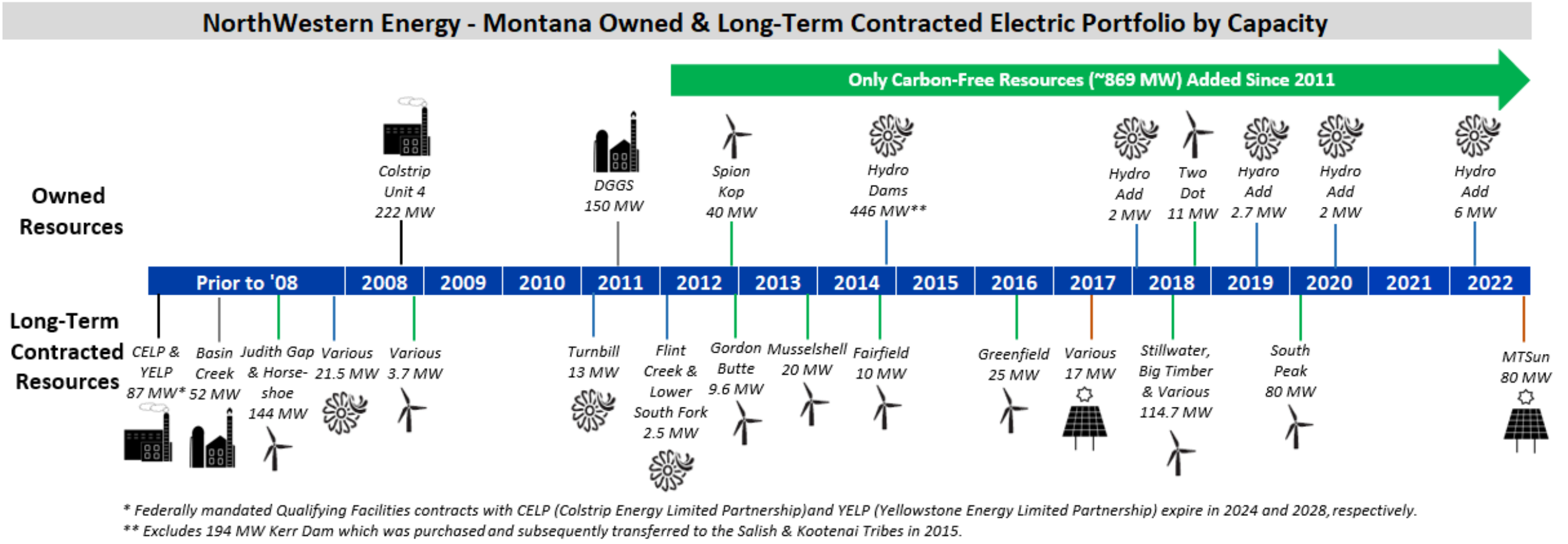


Contracted energy from Colstrip Energy Limited Partners (CELP), Yellowstone Energy Limited Partners (YELP) as well as a majority of the contracted wind, hydro and solar are federally mandated Qualifying Facilities, as defined under the Public Utility Regulatory Policies Act of 1978 (PURPA).

NorthWestern does not own all the renewable energy certificates (RECs) generated by contracted wind, and periodically sells its own RECs with proceeds benefiting retail customers. Accordingly, we cannot represent that 100% of carbon-free energy in the portfolio was delivered to our customers.

Based upon 2021 MWH's of owned and long-term contracted resources. Approximately 56% of our total company (59% in MT) of owned and contracted supply is carbon-free – better than the national average of 39.4% in 2021. (eia.gov table 7.2b)

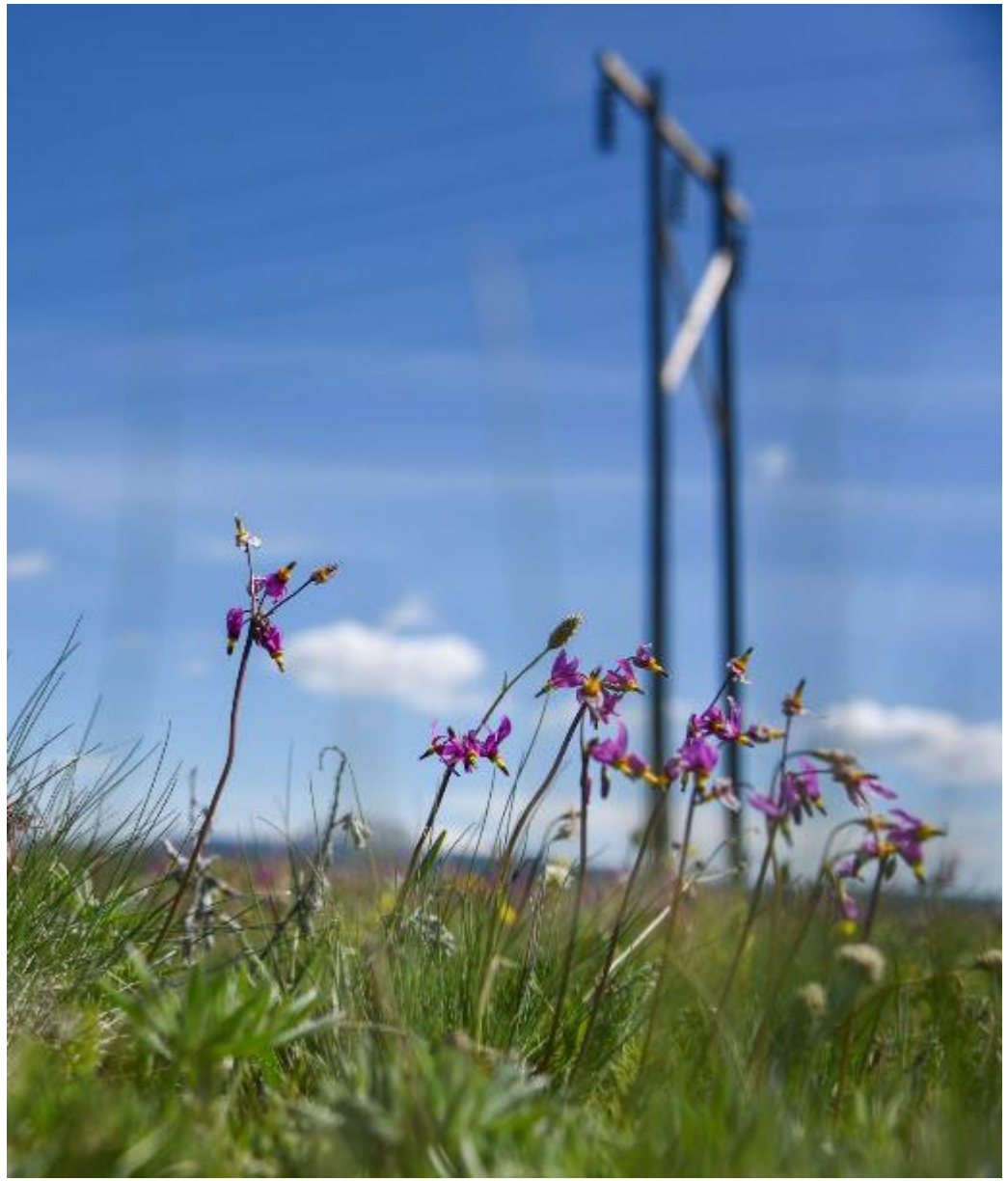
Timeline of Montana Generation Portfolio



** Federally mandated Qualifying Facilities contracts with CELP (Colstrip Energy Limited Partnership)and YELP (Yellowstone Energy Limited Partnership) expire in 2024 and 2028, respectively.*

*** Excludes 194 MW Kerr Dam which was purchased and subsequently transferred to the Salish & Kootenai Tribes in 2015.*

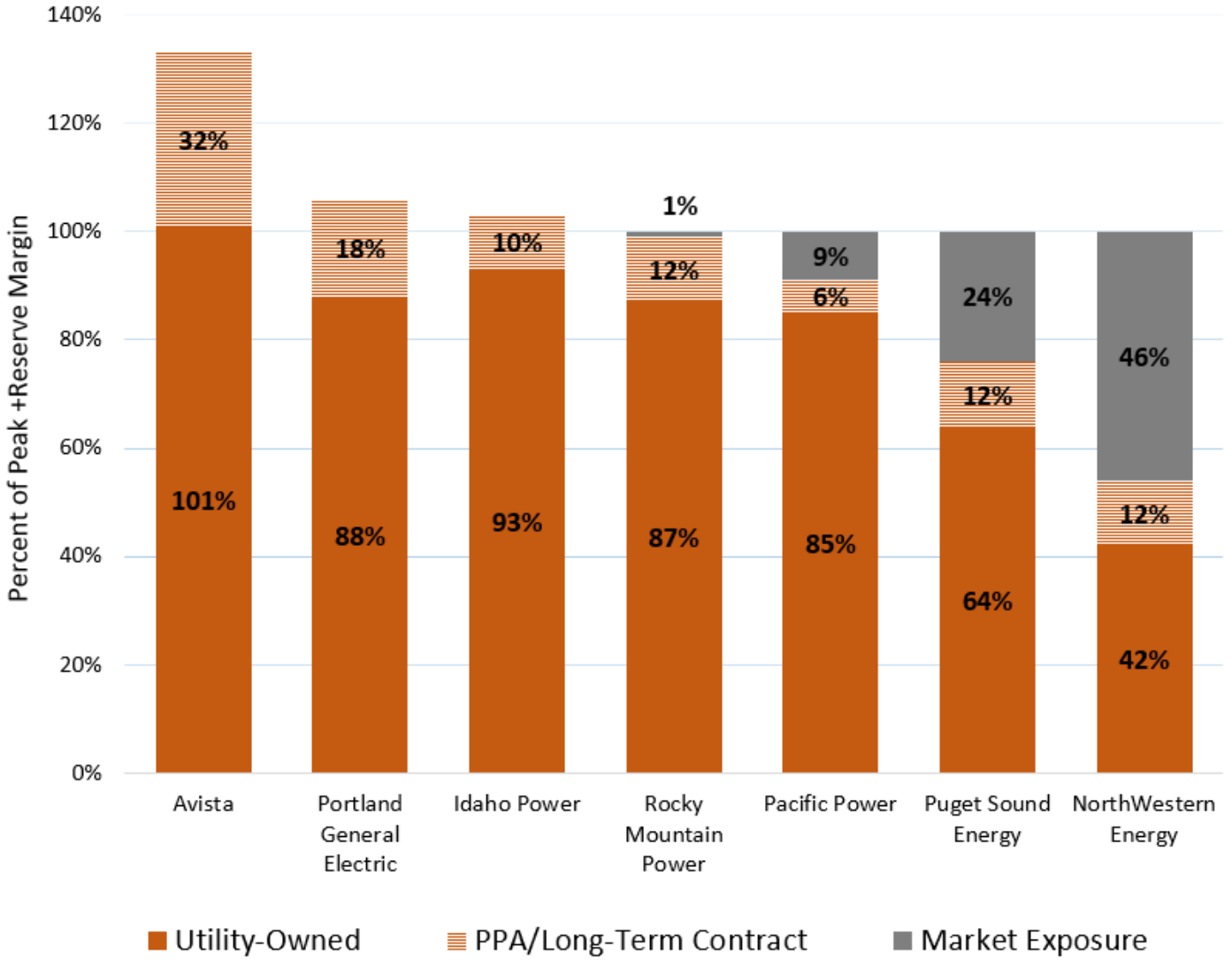
Since 2011, we have added nearly 870 MW of carbon-free generation, all from carbon-free resources.



Resource Adequacy

NorthWestern Energy
Delivering a Bright Future

NWE MT capacity as compared to regional peers



NWE's capacity deficit exposes our customers to greater market exposure (price and availability) than any of our regional peers. We're taking steps to close this gap.

Source: NorthWestern Energy's Montana 2019 Electric Supply Resource Procurement Plan

Colstrip Transaction Overview

NorthWestern Energy executed an agreement with Avista Corporation (Exit Agreement) for the transfer of Avista's ownership interests in Colstrip Units 3 and 4.

- Effective date of transfer: January 1, 2026
- Generating capacity: 222 MW (bringing our total ownership to 444 MW)
- Transfer price: $0.00
- NorthWestern will be responsible for operational and capital costs after January 1, 2026.
  - The agreement does not require approval by the Montana Public Service Commission (MPSC). We expect to work with the MPSC in a future docket for cost recovery in 2026.
  - NorthWestern will have the right to exercise Avista's vote with respect to capital expenditures[1] between now and 2025 with Avista responsible for its pro rata share[2].
- Avista will retain its existing environmental and decommissioning obligations through life of plant.
- Under the Colstrip Ownership & Operating Agreement, each of the owners will have a 90-day period in which to evaluate the transaction between NorthWestern and Avista to determine whether to exercise their respective right of first refusal.
- We expect to file our Montana Integrated Resource Plan during the first quarter 2023. This transaction is expected to satisfy our capacity needs in Montana for at least the next 5 years.

1. Avista retains the vote related to remediation activities.
2. Avista bears its current project share (15%) costs through 2025, other than "Enhancement Work Costs" for which it bears a time-based pro-rata share. Enhancement Work Costs are costs that are not performed on a least-costs basis or are intended to extend the life of the facility beyond 2025. See the Exit Agreement for additional detail.

Why Colstrip?

Reduces Risk

- We are in a supply capacity crisis due to lack of resource adequacy, with approx. 40% of our customers' needs on the market. This transaction will reduce our need to import expensive capacity during critical times.
- Establishes clarity regarding operations past 2025 Washington state legislation deadline.
- Reduces PCCAM risk sharing for customers and shareholders.

Bill Headroom

- Stable pricing reduces impact of market volatility and high energy prices on customers.

Aligned with 'All of the Above' energy transition in Montana

- Supports our generating portfolio that is nearly 60% carbon-free today.
- Provides future opportunity at the site while supporting economic development in Montana.
- Agreement considers the appropriate balance of reliability, affordability and sustainability.

Why Colstrip? (Continued)

Reliable

- **Existing resource, ready to serve our Montana customers**. Avoids lengthy planning, permitting and construction of a new facility that would stretch in-service beyond 2026.
- Reduces reliance on imported power and volatile markets, providing increased energy independence.
- In-state and on-system asset mitigating the transmission constraints we experience importing capacity.
- Adds critical long-duration, 24/7 on-demand generation necessary for balancing our existing portfolio.

Affordable

- **222 MW of capacity with no upfront capital costs** and stable operating costs going forward.
  - Equivalent new build would cost in excess of $500 million.
  - Incremental operating costs are known and reasonable. Resulting variable generation costs represent a 90%+ discount to market prices incurred during December's polar vortex.
- In addition to no upfront capital, low and stably priced mine-mouth coal supply costs.

Sustainable

- **We remain committed to our net zero goal by 2050.** This additional capacity, with a remaining life of up to 20 years, helps bridge the interim gap and will likely lead to less carbon post 2040.
- Yellowstone Generating Station is likely be our last natural gas generating resource addition necessary.
- Partners are committed to evaluate non-carbon long-duration alternative resources for the site.
- Keeps the existing plant open and retains its highly skilled jobs vital to the Colstrip community.
- Protects existing ownership interests with an ultimate goal of majority ownership of Unit 4.

Facility Ownership Overview

Mitigating today's capacity crisis while creating a sustainable glide path to the cost-effective carbon-free technologies of tomorrow

	Current Colstrip Ownership Structure (megawatts)		Announced Sep. 12, 2022 — 2026 Exit Agreement — 185 MW of both Units 3 & 4 transfer from Puget Sound → Talen		Executed Jan. 16, 2023 — 2026 Exit Agreement — 111 MW of both Units 3 & 4 transfer from Avista → NorthWestern	
	Unit 3	**Unit 4**	**Unit 3**	**Unit 4**	**Unit 3**	**Unit 4**
Avista	111	111	111	111		
NorthWestern		222		222	111	333
PacifiCorp	74	74	74	74	74	74
Portland	148	148	148	148	148	148
Puget	185	185				
Talen	222		407	185	407	185
Total	**740**	**740**	**740**	**740**	**740**	**740**

NorthWestern is actively working with the other owners to resolve outstanding issues, including the associated pending legal proceedings. Additionally, the owners intend to pursue a mutually beneficial reallocation of megawatts between the two units that would ideally provide NorthWestern with a controlling (> 370 megawatts) share of Unit 4.

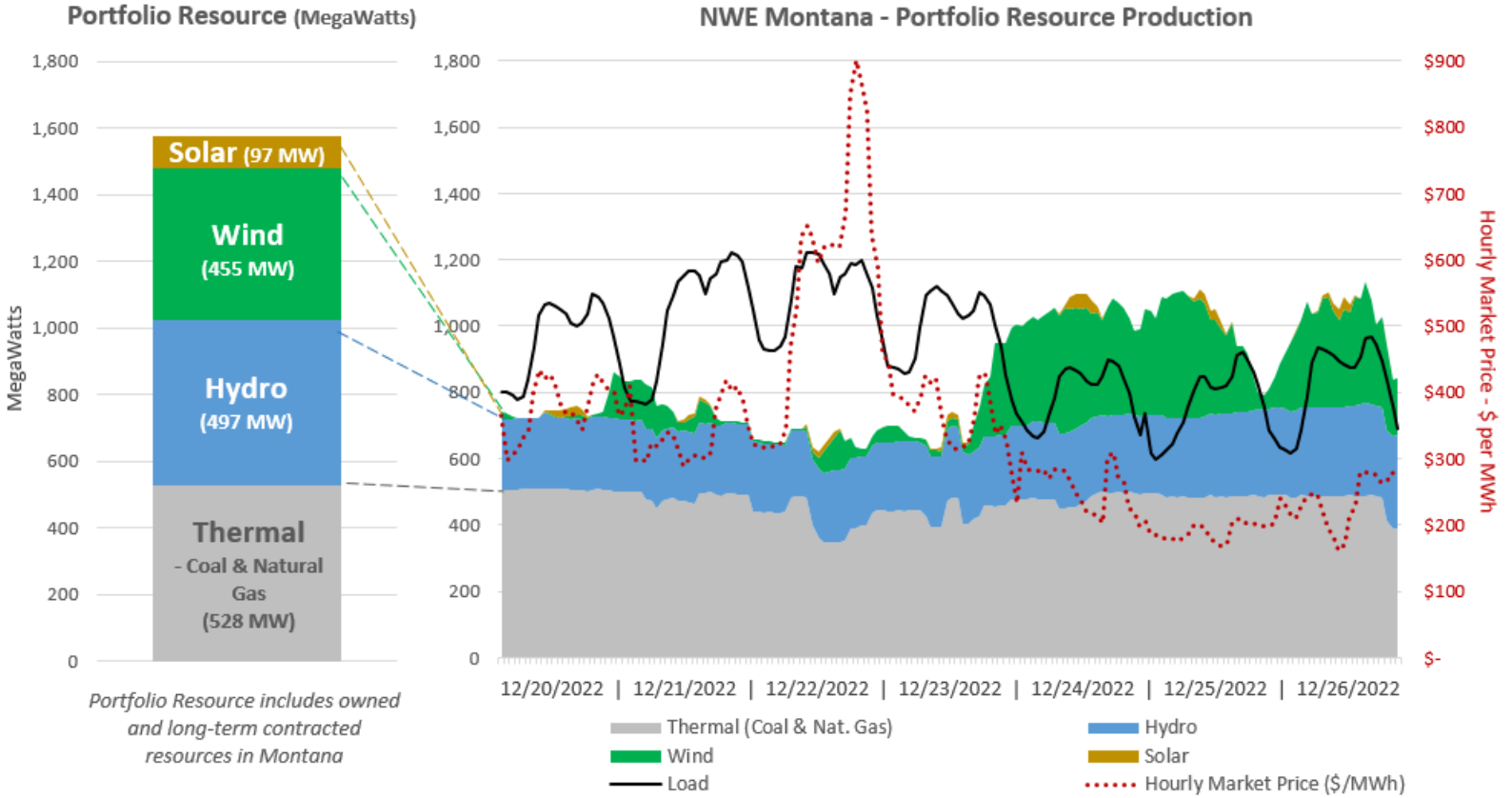
Importance of Colstrip to Regional Markets

"The risk of a shortfall (of electricity to the northwest region of the United States) could significantly rise if energy markets are constrained, demand from electrification rapidly increases or if the Colstrip power plant's last two coal-fired units are retired without replacing their generating capacity"

Quote from staff at the Northwest Power and Conservation Council's meeting in Portland, Oregon on January 11, 2023

Via the Clearing Up article "NWPCC: NW Needs More Reserves to Maintain Resource Adequacy" by Dan Catchpole, January 13, 2023

December 2022 Cold Weather Event - Montana



Estimated Cost Benefit of Existing 222 MW Colstrip Ownership vs. Market Purchases (Millions)

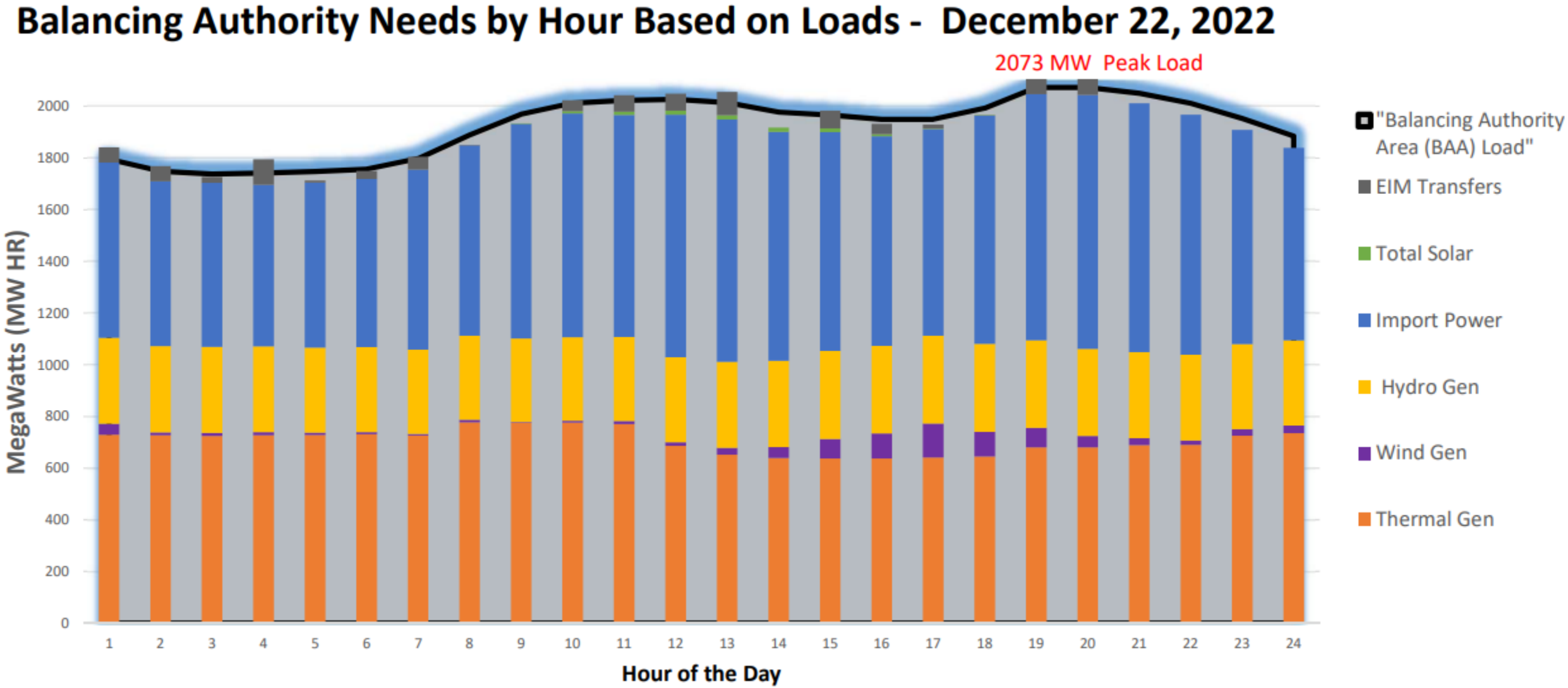
	Existing 222 MW of Colstrip					Colstrip Cost	Estimated Market Cost	
	MWh	Variable	+ Fixed	= Total		vs. Market	Total	Avg. $ Per Mwh
Dec. 20-26	35,580	$0.8	$1.4	$2.2		($9.8)	$12.0	$336.14
Dec. 21-23	15,467	$0.4	$0.5	$0.9		($5.7)	$6.6	$427.64

Colstrip costs significantly lower than market

Power prices surged during the recent Polar Vortex when wind and solar weren't providing capacity. Unfortunately, this was when NorthWestern was most dependent on the market to meet customer needs.

The incremental 222 megawatts of capacity provided in this transaction would have saved Montana customers ~$10 million over this 7 day event alone.

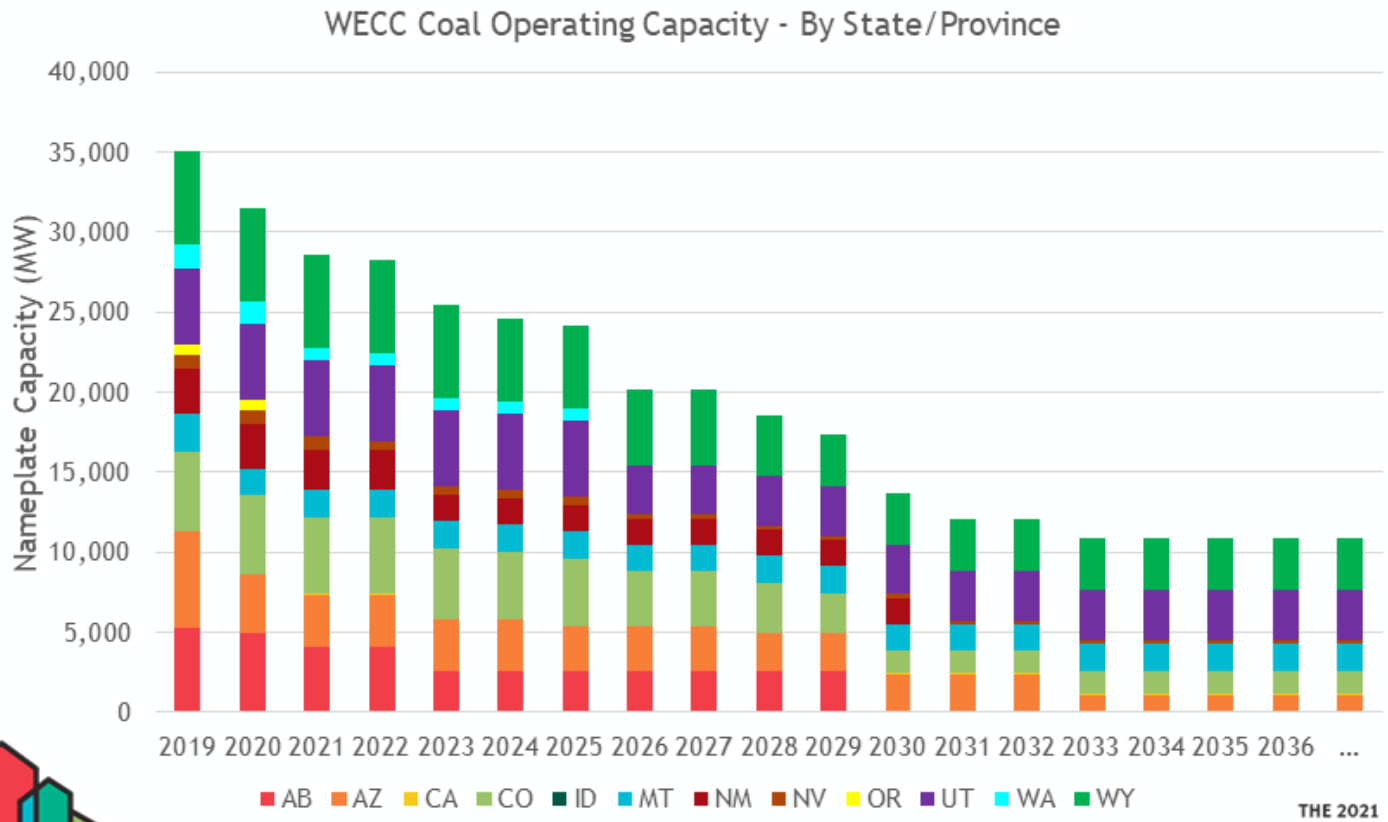
December 2022 Cold Weather Event - Montana



Imported electricity at all times on December 22, 2023 and up to 41% of our need at times, with the average hourly price of $567 per MWh that day.

Significant Capacity Retirements in the West

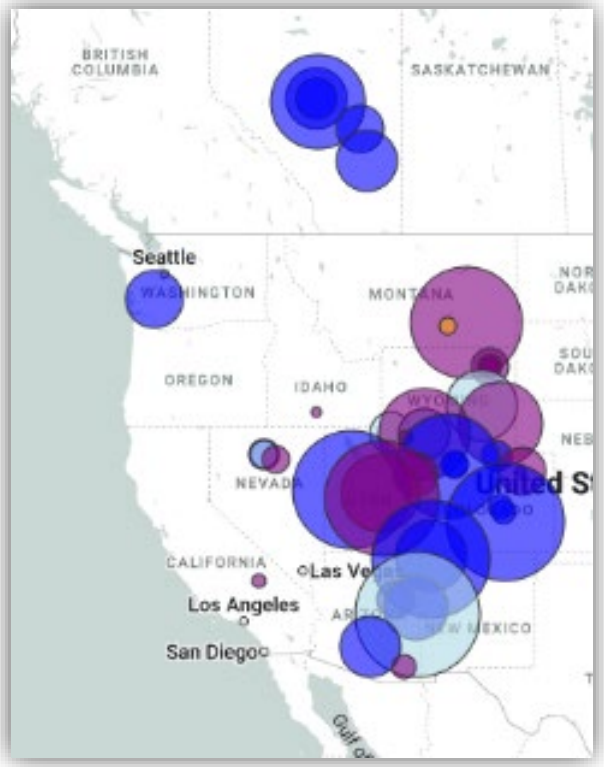
WECC coal units in operation, decreasing over time



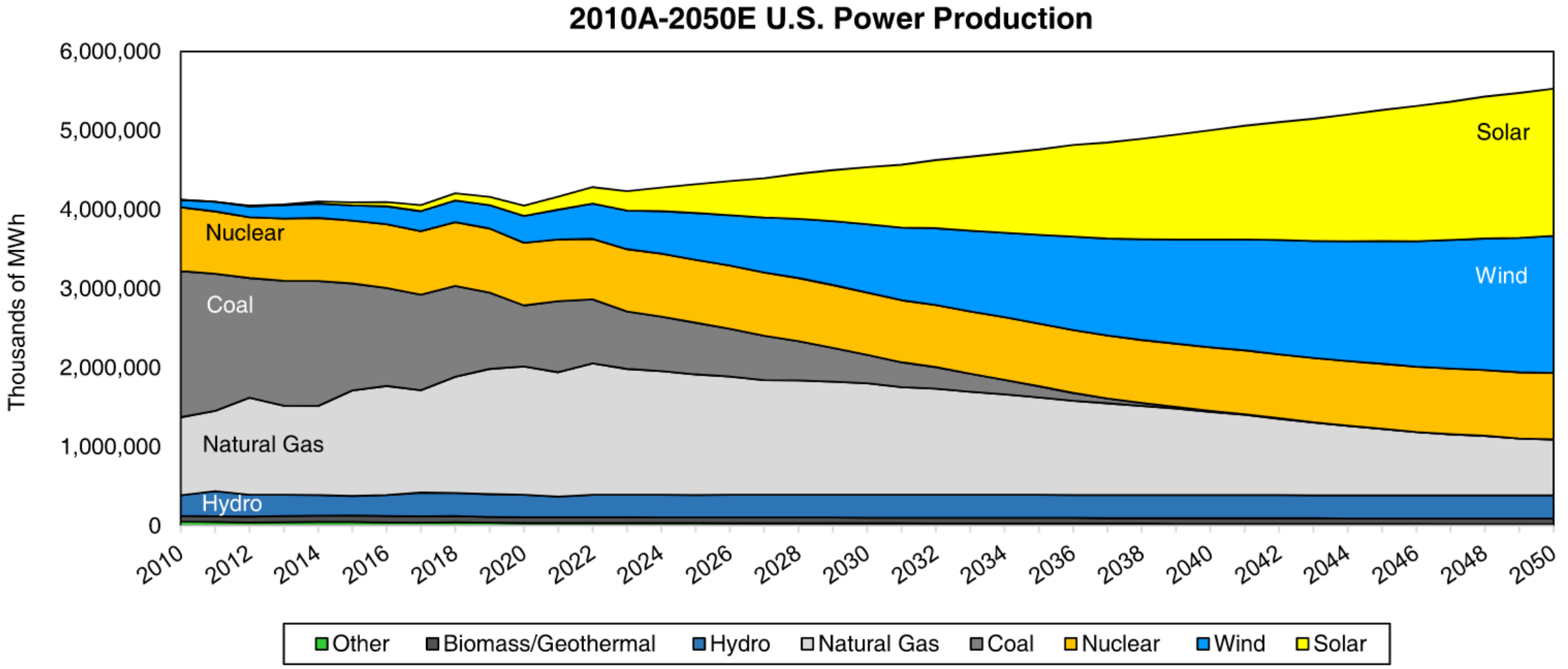
Updated 4/22/21

THE 2021 NORTHWEST POWER PLAN

Planned coal retirements in the west **exceed 20 gigawatts** over the next decade resulting in worsening capacity deficits as forecasted by the Northwest Power Plan.



Natural Gas will be part of the US Power Production



Sources: EIA, SNL Financial LC and Wells Fargo Securities, LLC Estimates

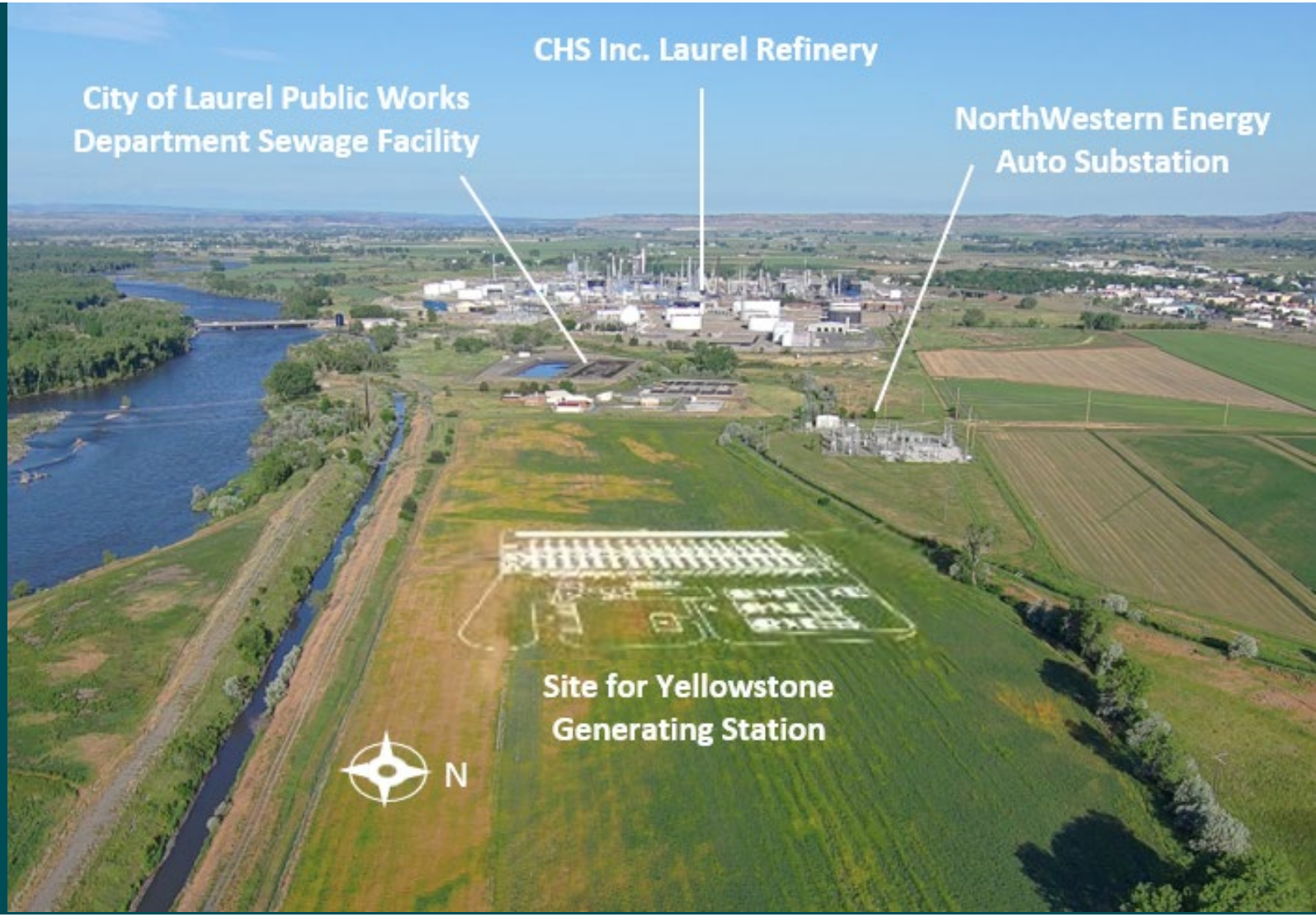
Expect Natural Gas to be part of the transition to Net Zero in the United States

Capacity - Yellowstone County Generating Station

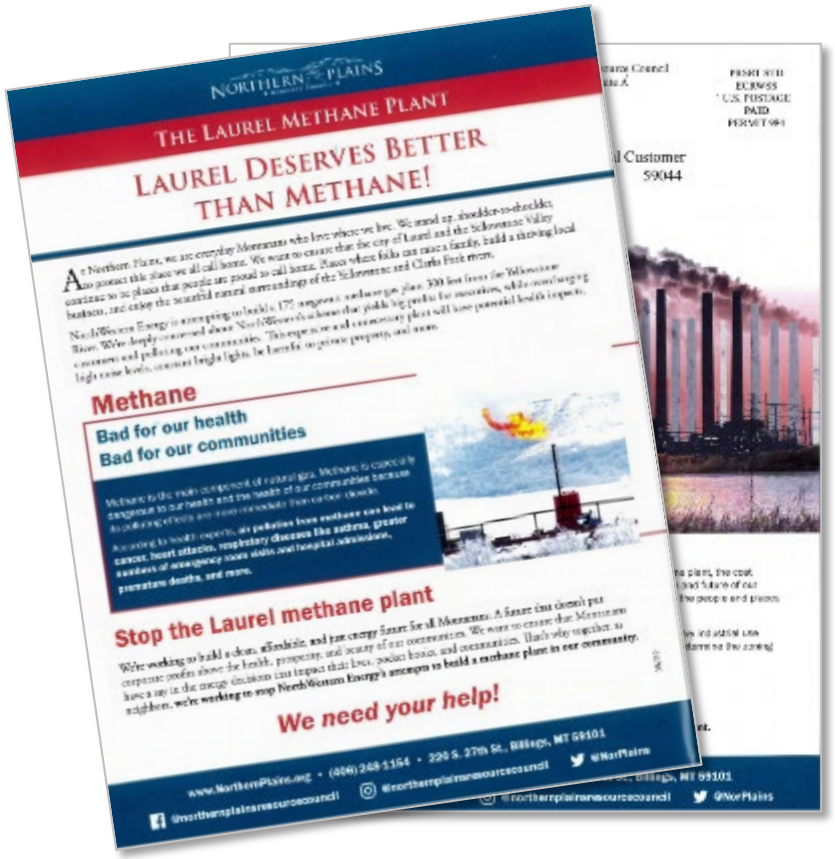
Broke ground in 2022 on the 175-megawatt natural gas plant south of Laurel.

Selected through a third party administered bid process that also selected 50 MW Beartooth Battery and 100 MW hydro-based contract.

Designed specifically to provide peak capacity and support the intermittent nature of renewable energy.



Capacity - Facts about Yellowstone County Natural Gas Plant



There is a publication being circulated in and around Yellowstone County stating how the plant is unnecessary, bad for the environment, and expensive.

The <u>YellowStone County plant is necessary</u>

- We are required by our regulators to provide electricity to our customers 24 hours a day / 7 days a week
- We currently have a 46% capacity reserve margin deficit
- Will fill in the gaps of needed electricity when renewables are not available

The <u>YellowStone County plant is a clean alternative to coal</u>

- <u>Has an approved air permit from the Montana DEQ</u> and will comply with all applicable requirements
- Will <u>produce 50-60% less CO2 than coal plants</u>
- Will have state-of-the-art emissions control technologies - will produce only negligible amounts of sulfur, mercury and particulates, as compared to coal
- Will only be running for peak needs and not as a base load source
- <u>Natural gas is methane in the pipeline and CO2 after it is burned</u>

The <u>YellowStone County plant is best cost alternative</u>

- Went through a third party and they determined in all scenarios that the Yellowstone County plant would be the best cost/most reliable energy solution to meet our capacity needs
- Wind would cost ~8 times and solar ~15 times what we would spend on the natural gas plant to provide the same capacity

Capacity - Alternatives

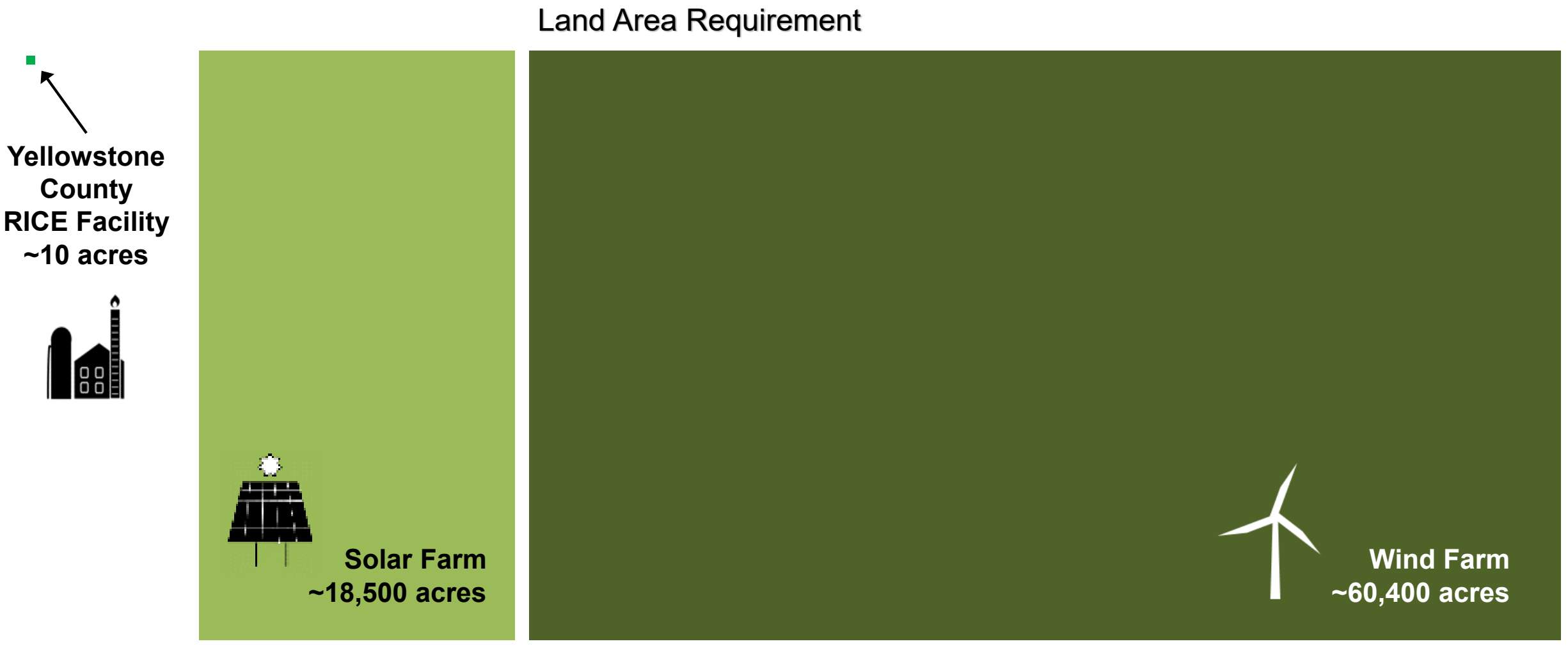
Yellowstone County RICE Units	Wind Farm	Solar Farm	Battery Lithium Ion (4 hour)
Capacity 96.5% Credit	Capacity 13.1% Credit	Capacity 5.2% Credit	Capacity 100.0% Credit
175 MW Nameplate Needed	1,222 MW Nameplate needed	3,077 MW Nameplate needed	160 MW X 18 batteries = 2,880 MW Nameplate needed for 72 hours (4 x 18)
$275 million Cost to Build	$2.1 BILLION Cost to Build	$4.1 BILLION Cost to Build	$3.8 BILLION Cost to Build
	~8 times Yellowstone County Plant	~15 times Yellowstone County Plant	~14 times Yellowstone County Plant

To meet our capacity needs, it would cost approximately 8 to 15 times more alternative resources (wind / solar / battery) than our Yellowstone County Natural Gas plant would

Note: Capacity Credit factors are based on Effective Load Carrying Capability (ELCC) as of Dec. 2021.

The construction cost per generation type based on Cost and Performance Characteristics of New Generating Technologies, Annual Energy Outlook 2022 (eia.gov)

Capacity - Alternative Capacity Considerations – Land Requirement



Not only will it cost ~7 times and ~15 times to build a wind farm or solar farm, respectively, for the equivalent capacity output as the Yellowstone County natural gas plant, we would need nearly 1,850 times the area of land for the solar farm and over 6,000 times the area of land for the wind farm, as compared to the YellowStone County RICE facility.

Electricity & Natural Gas – Still a Great Value

Coffee / Latte

$4 -$5 per day

Cell Phone Bill Family of 4

$5 - $11 per day

Power your House

$5 - $7 per day
(Electricity $3-$4/day & Natural Gas $2-$3/day)

Electricity and Natural Gas is still a great value

Electricity – Still an Amazing Value over the Century!

A Dozen Chicken Eggs

1922…... $0.35

Today….. $2.95

up 743%

A Electric Range on which to Cook

1922…... $168

Today….. $900

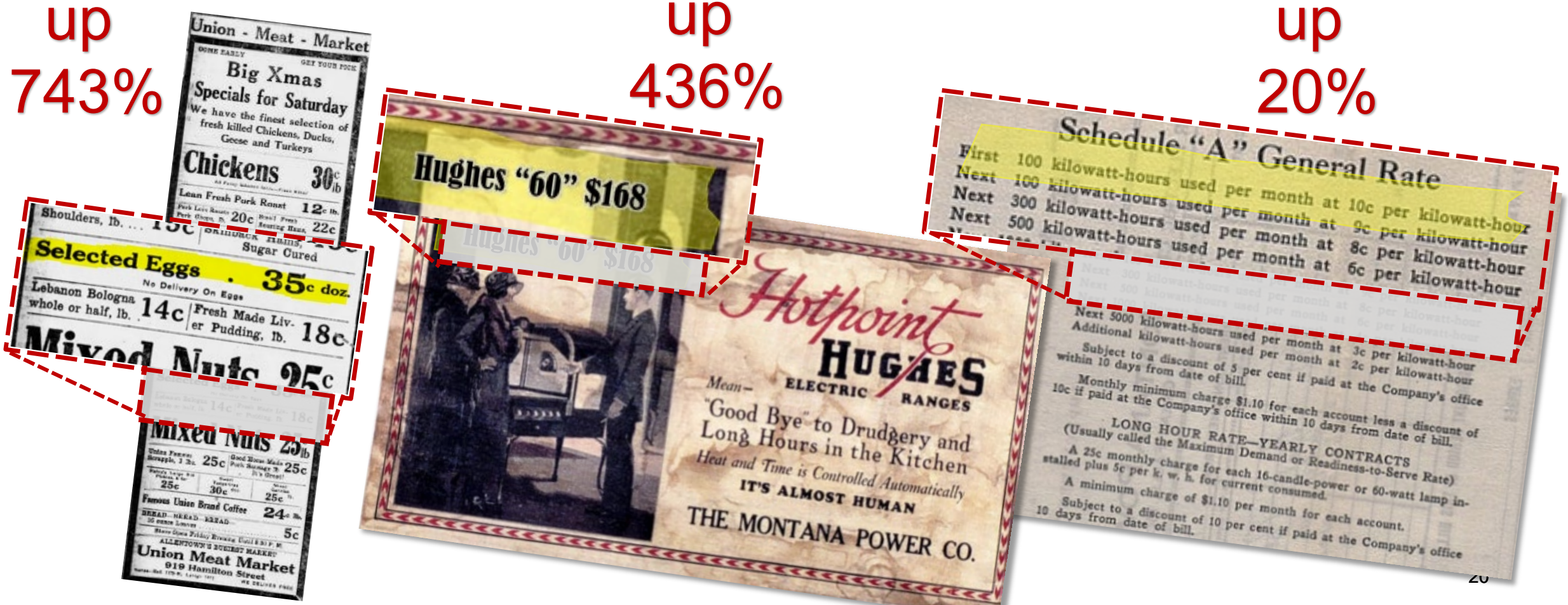
up 436%

A kWh of Electricity to Power the Electric Range

1922…... $0.10

Today….. $0.12

up 20%



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