



MONTANA ENERGY OFFICE

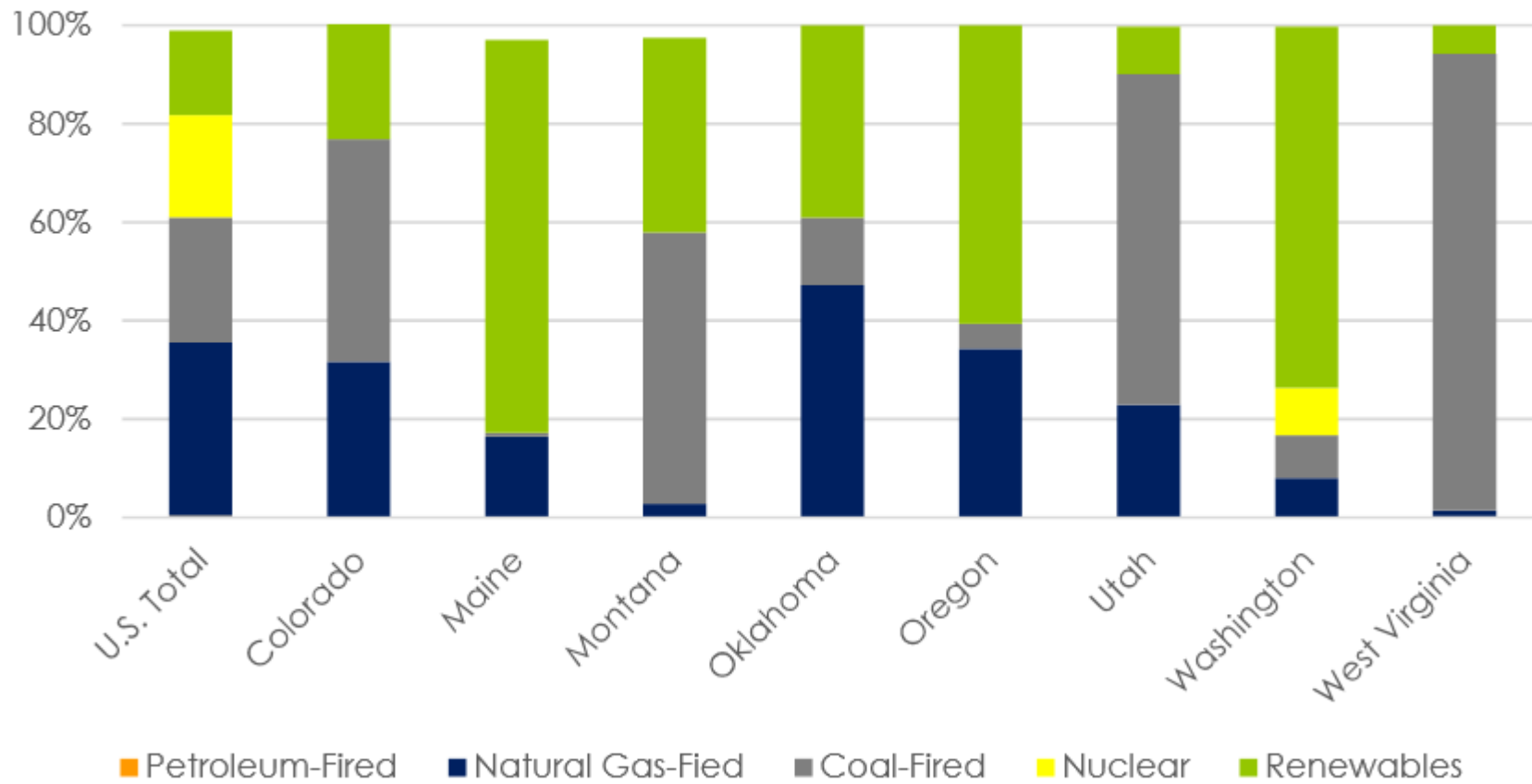
Montana Resource Efficiency Project

September 17, 2019

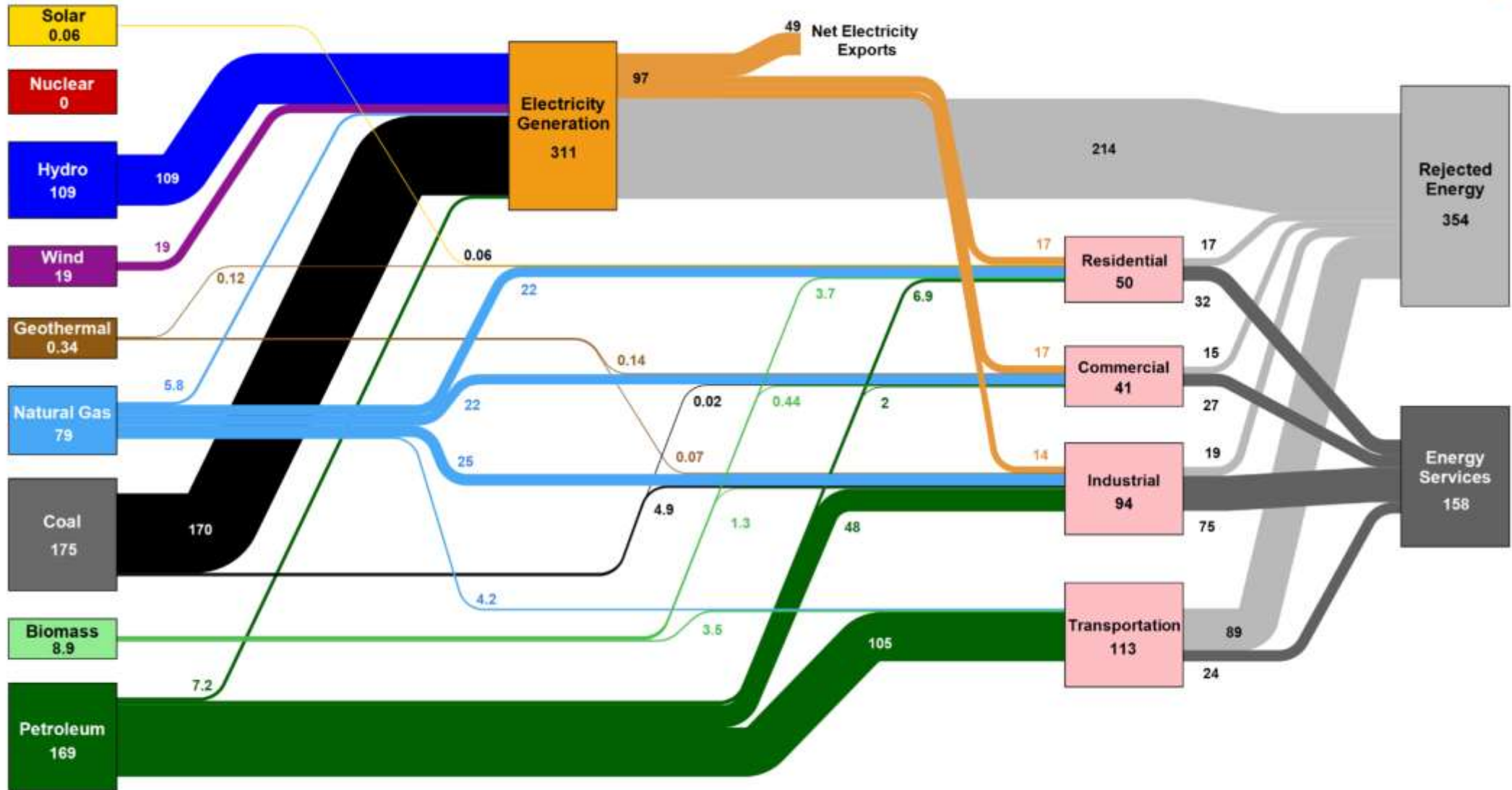
NASEO Annual Meeting

Building a Clean Energy Economy for Everyone

Utility-Scale Net Electricity Generation (%): 2019



Montana Energy Consumption in 2014: ~ 561 Trillion BTU



Source: Lawrence Livermore National Laboratory, "Montana Energy Consumption in 2014: ~ 561 Trillion BTU". If this information or a reproduction of it is used, credit must be given to the Lawrence Livermore National Laboratory and the



The Montana Resource Efficiency Project...

technical assistance program offered by the Energy Bureau's **Small Business Environmental Assistance Program** in partnership with the National Center for Appropriate Technology (NCAT).
Funding for the program comes from a competitive EPA Pollution Prevention Grant.

Targeted industries include:

Breweries & Distilleries

Lodging

Schools

Manufacturing/Industrial

Retail & Convenience Stores

Healthcare

Local Government

Other



Montana Resource Efficiency Project
performed energy audits and provided energy efficiency
assistance all across Montana this year.

49 projects complete

Estimated Lifetime Savings

- 62,256,105 kWh
- 46,300 tons of CO2 emissions
- \$418,506 utility rebates
- \$335,304 annually in utility bills

BREWERY SUSTAINABILITY PROJECT: In 2016, the SBEAP initiated a brewery sustainability project to incentivize breweries to become more resource efficient. Nine breweries participated in the initial training on how to become more sustainable. The project included a free energy and water use audit and targeted reducing pollutants produced including waste water, carbon dioxide, and solid waste.



“We have to reduce the amount of stuff we are wasting, and learn how to be more efficient with things. It obviously saves money. When we implemented a program to reduce the amount of packaging we use, we reduced our cardboard use by 2.5 tons/year—probably close to a 40% reduction.”

- Nolan Smith, Co-Owner
Philipsburg Brewing Company



83
BREWERIES
STATEWIDE

\$417
MILLION
IN ANNUAL
ECONOMIC
IMPACT

800
DIRECT
JOBS



Visit one of Montana's many craft breweries today!

Go to VISITMT.COM to learn more about the great state of Montana, and to obtain ideas on routes to take, places to stay and things to do along the way.

Or, ask your local brewery staff as you make your way on the Montana Brewers Trail! Share your stories with us on social media! #MTbeer #buylocalbeer

-  Brewery
 -  Ski Resort
 -  Capitol
- Map is not to scale.

Draught Works Brewery

A brewery in Missoula, Montana, that resides within a historic brick building built in 1931. The Montana Resource Efficiency Program (MREP) conducted a detailed audit that focused on energy and water conservation, renewable energy, and operational improvements.

Audit recommendations include installation of occupancy sensors, ECM motors (brushless, permanent magnet motor integrated with an electronic control module), walk-in cooler evaporator fans, compressed air system testing and maintenance, and installation of heat recovery-glycol chillers.

Total Gross Project Cost:	\$8,525
Total Annual Cost Savings:	\$4,282.5
Total Utility Incentive:	\$2,103
Net Cost:	\$6,421
Annual Energy Savings:	7,406 KWh and 5,030 therms
Environmental Benefits:	32.2 metric tons CO2 eq/yr
Simple Payback with Energy Savings:	1.5 years



Draught Works – Missoula, MT

Source for equivalencies calculations:
<https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

The purpose is to assist Montana healthcare facilities identify energy efficiency savings and provide an opportunity to significantly reduce operating costs while upgrading capital systems. The Montana Facility Finance Authority provides funding for the audits which are administered and conducted by the National Center for Appropriate Technologies (NCAT).

Total Gross Project Cost:	<u>\$14,914</u>
Total Annual Cost Savings:	<u>\$26,618</u>
Total Utility Incentive:	<u>\$8,847</u>
Net Cost:	<u>\$6,067</u>
Annual Energy Savings:	<u>264,865</u> KWh and <u>1,247</u> therms
Environmental Benefits:	<u>204</u> metric tons of CO2 eq/year
Simple Payback:	<u>0.23</u> years



Hi-Line Retirement Center – Malta, MT

Source for equivalencies calculations:
<https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

Montana Facility Finance Authority: Energy Efficiency Program

Available to nonprofit organizations such as:

Hospitals, Senior Living Facilities, Group Homes, Prerelease Facilities, Clinics

- Audits performed by a professional engineer
- Receive a full report with recommendations
- Upgrade facility with optimal technology
- Reduce operating costs over time
- Average savings potential: \$210,000 over 15 years

Up to \$15,000 available toward an audit to save on energy costs. Every grant requires a 10% financial match from the participating applicants. The match is used to fund future energy efficiency grants throughout Montana.

MREP Summary, December 10, 2018

Savings numbers should increase as projects continue to be implemented

Total Montana Facilities Assisted	185
Total actual KWH Saved (as verified by Northwestern Energy, over the life of the project)	123,896,930
Savings (btu) actual (as verified by Northwestern Energy, over the life of the project)	6,766,218,000
Natural Gas savings in Therms	67,678
Tons of CO₂e (Combined Electric and Natural Gas)	102,036
MTons CO₂e (Metric Tons) (Combined Electric and Natural Gas)	92,565
Megatons of CO₂e (MTCO₂e) (Combined Electric and Natural Gas)	0.102
Annual Actual Customer \$ saved	\$675,708
Customer Incentive from Utility	\$989,566
Breakout by Business Type	
Schools	52
Government	47
Manufacturing/Industrial	28
Offices	27
Brewery/Distillery	10
Retail/Convenience	29
Outdoor Lighting	11
Lodging	16
Healthcare	21

Questions *and* Discussion

Laura Rennick
Energy Bureau Chief
1.406.444.6588
laura.rennick@mt.gov