

MEAN

MUNICIPAL ENERGY AGENCY OF NEBRASKA

A 2050

Carbon Neutral VISION





The Municipal Energy Agency of Nebraska Board of Directors in January 2020 approved a resolution that sets a bold organizational vision to work toward transitioning its wholesale power resource portfolio to achieve carbon neutrality by 2050.

A carbon neutral power supply portfolio would achieve net-zero carbon emissions through the elimination of carbon emissions or balancing emissions with carbon removal through carbon offset mechanisms.

A Member-Driven ORGANIZATION AND VISION

The force driving MEAN's 2050 Vision is its participating communities and the desire to further build upon their carbon-free successes and environmental stewardship. MEAN member communities have a voting representative on the Board of Directors, resulting in direct input into how the organization operates. MEAN also has several committees consisting of community representatives who provide recommendations to the Board.



BUILDING ON RECENT Carbon-Free Milestones

Since its formation, MEAN has invested in carbon-free energy, including constructing and owning Nebraska's first utility-scale wind project near Kimball, Neb. Today, the resource portfolio serving MEAN's communities consists of approximately 50 percent non-carbon resources, including individual communities' federal hydropower allocations from the Western Area Power Administration.



MEAN'S RECENT CARBON-FREE ENERGY MILESTONES INCLUDE:



Contracting to purchase the entire output (30 megawatts) of the new Kimball (Neb.) Wind Project, which has three times more capacity than the original project.



Working with the Colorado communities of Aspen and Glenwood Springs to achieve their local 100 percent renewable energy goals.



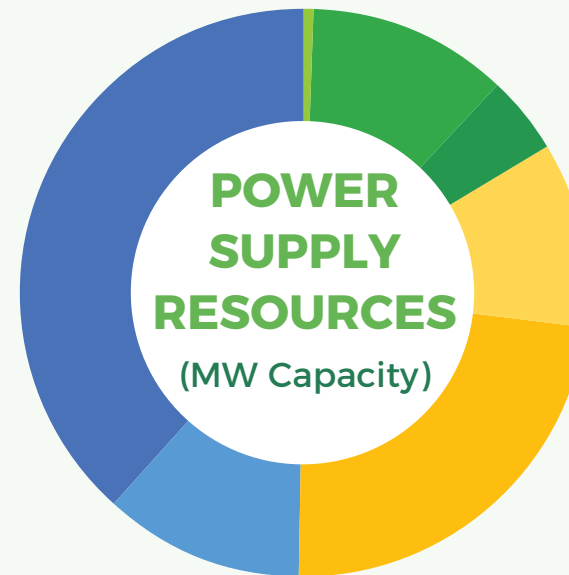
Expanding the opportunity for larger renewable projects located in MEAN Participant communities through MEAN's Renewable Distributed Generation Policy.



Extending a current 20-year contract for additional wind energy from the Wessington Springs, S.D., Wind Energy Center.

Current Resource Portfolio

The reliable and diverse energy resource portfolio used to serve MEAN's electric load includes baseload and variable electric generation from coal, nuclear, natural gas, hydro, wind, and landfill gas. This portfolio includes joint ownership with other utilities for baseload generation, power purchase agreements, and other MEAN designated network resources.



Hydro - In addition to MEAN contracts, includes resources owned by MEAN participants and MEAN participant WAPA allocations.

Hydro Displacement - Under the displacement agreement with WAPA, MEAN receives hydroelectric generated energy in WECC from capacity in the agreement. Under a bilateral settlement schedule, MEAN pays SPP for the related energy for WAPA's customers in SPP. MEAN also provides an equal amount of capacity to WAPA's customers in SPP from various MEAN contracted resources. *MEAN does not receive Renewable Energy Credits for this resource.

Coal - Includes owned (17.8%) and purchased energy (20.3%) through contracts.

Oil/Gas - Participant generation, which is typically used only as a stand-by resource for emergencies.



It's important to note, while renewable energy will have an increasing role in MEAN's resource portfolio going forward, energy produced from baseload power resources is still required for a reliable electric grid when the wind doesn't blow or the sun doesn't shine. Technology advancements will be required to achieve a stable electric grid that reliably delivers increased renewable energy.

*MEAN designated network resources include: Ridgway Hydropower Project, Reudi/Maroon Creek Hydroelectric Plant, and Western Area Power Administration Capacity and Energy Displacement Agreement (Renewable Energy Credits are not included in the WAPA Displacement Agreement).

Current Carbon-Free Energy Resources

WIND

- Ainsworth Wind Facility
- Crofton Bluffs Wind Facility
- Elkhorn Ridge Wind Facility
- Kimball Wind Project
- Laredo Ridge Wind Facility
- Wessington Springs Wind Energy Center

HYDRO

- Shavano Falls
- Western Area Power Administration allocations
- Ridgway Hydropower Project*
- Reudi/Maroon Creek Hydro Plant*
- Western Area Power Administration Displacement Agreement*

NUCLEAR

- Cooper Nuclear Station

LANDFILL GAS

- Metro Waste Authority Landfill Gas Project

*MEAN designated network resources



THE JOURNEY TOWARD Carbon Neutrality

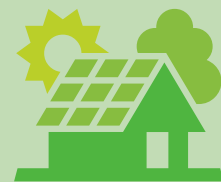
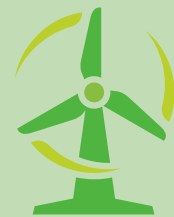
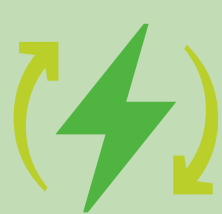
Going forward, MEAN staff will work in collaboration with MEAN communities to construct policies around resource planning, portfolio optimization and emissions reductions.

The formation of the plan will be initiated with MEAN's 2022 Integrated Resource Plan, which details MEAN's future resource needs and applies comprehensive evaluations to determine the preferred resource plan.



WORKING TOGETHER WORKS

MEAN's communities are committed to work together in the coming years as the transitional journey progresses, while also holding paramount its mission of providing reliable and regionally competitive wholesale power supply.



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The MEAN Board of Directors acknowledges to attain its 2050 vision of a carbon neutral portfolio, significant industry innovation and developments must occur, including:



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8377 GLYNOAKS DR.
LINCOLN, NE 68516
800-234-2595
402-474-4759

INFO@NMPPENERGY.ORG
WWW.NMPPENERGY.ORG