

2026 POLICY GUIDES

Nuclear Energy

Issue

As the demand for reliable, low-carbon energy grows, nuclear power is emerging as a critical tool to support Nebraska's agricultural and energy sectors. This guide is intended to help county Farm Bureau leaders and members evaluate the safety of advanced nuclear technologies, the direct impact that low Carbon Intensity (CI) energy has on our ability to market Sustainable Aviation Fuel (SAF) and ethanol at a premium, and the recent advanced nuclear siting evaluations conducted by the Nebraska Public Power District (NPPD).

Background

NPPD recently wrapped up a major feasibility study to figure out the best places to build next-generation nuclear power plants in the state. Backed by a \$1 million state allocation from 2022, the goal was to identify prime locations for small modular reactors (SMRs), a newer, more scalable and safer type of nuclear technology compared to traditional large-scale facilities.

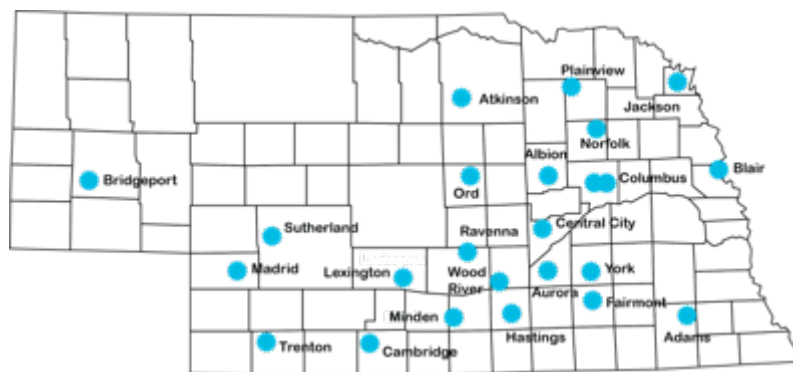
SMRs and microreactor technology represent a significant evolution from older-generation plants. These advanced designs feature passive safety systems that rely on natural physical forces — such as gravity, natural circulation and convection — to cool the reactor. In the event of an emergency, these systems shut down and cool the reactor without the need for external electricity or mechanical pumps. For Nebraska's farmers and ranchers, the carbon footprint of our energy grid is directly tied to agricultural profitability. The value of ethanol and SAF in markets like Europe and California depends on their CI scores. When a biorefinery utilizes zero-carbon electricity, its overall CI score drops, allowing the fuel to be sold at a premium in states and countries with low-carbon fuel standards.

The recent NPPD study used a two-phase approach to filter locations based on strict regulatory and practical requirements. First, researchers evaluated the entire state and initially produced a shortlist of 16 potential communities. In phase two, NPPD dug into the details, grading those 16 sites against 32 different metrics, including water access, environmental impact, socioeconomic factors and safety. This final phase narrowed the field to four top candidates: Beatrice, Brownville, Norfolk and Sutherland. Identifying these four towns doesn't mean ground is breaking tomorrow — this is just the foundation for a much larger, long-term energy strategy. The data from this study will guide the newly formed Great Plains New Nuclear Consortium, a joint effort between NPPD, the Omaha Public Power District, Lincoln Electric System and the Grand River Dam Authority. This consortium is exploring the possibility of bringing 1,000 to 2,000 megawatts of new nuclear power to Nebraska, to put this into perspective, that is roughly 20,000 pivots, or 800,000 homes.

For Nebraska's farmers and ranchers, the carbon footprint of our energy grid is directly tied to agricultural profitability. The value of ethanol and SAF in today's market is dictated by CI scores.

When a biorefinery utilizes zero-carbon electricity, its overall CI score drops, allowing the fuel to be sold at a premium in states and countries with low-carbon fuel standards. Securing these premiums is critical because international carbon accounting models can severely penalize agriculture. The June 2025 update to the CORSIA Default Life Cycle Emissions Values presents a significant logistical carbon penalty for American producers. To offset these severe penalties and remain competitive globally, Nebraska must drive down facility-level emissions. With the enactment of Nebraska's SAF tax credits, LB 8 and LB 1072, signed into law in April 2024, the state has the statutory framework to capitalize on low-CI fuel production, provided there is a clean energy grid to support it.

The final location of the next nuclear facility in Nebraska will also be a critical decision. In this discussion, it is important for the agricultural community to balance which of the four locations would offer the maximum return for the bioeconomy while also minimizing disruption to existing agricultural operations and efforts. To this end, things to consider would be proximity to bioeconomy infrastructure (i.e. existing ethanol plants and location of future sustainable aviation fuel production facilities, see figure below), rural agricultural operation density, and intrastate regional CI score.



The federal government is also backing Nebraska's nuclear ambitions. The Department of Energy (DOE) awarded NPPD nearly \$27.9 million to help pursue an Early Site Permit from the Nuclear Regulatory Commission for a next-generation nuclear facility. While this is not construction funding, it helps cover the expensive and time-consuming regulatory work needed to get a site federally approved. The grant is part of the DOE's broader \$900 million effort to accelerate SMRs nationwide. Because it is a cost-share agreement, the award will cover less than half of the total application cost, meaning NPPD and the Great Plains New Nuclear Consortium will still invest significant resources. In April 2026, Nebraska officially responded to a request from the federal government on the state's interest in hosting a long-term nuclear storage and recycling facility. The state rejected the idea of becoming a dumping ground for the nation's nuclear waste, pitching instead an all-in-one energy campus that combines fuel recycling and power generation on a single site. Under this proposal, used fuel isn't just sitting in storage — it gets recycled right on-site and fed directly into next-generation advanced reactors to create continuous electricity, which can immediately power co-located data centers and manufacturing facilities.

For producers, this integrated approach ultimately brings a multi-billion-dollar commercial asset into a rural county, this campus creates a new tax base to help shift the local property tax burden off agricultural land while securing the much-needed base load power.

Farm Bureau Policy

STATE POLICY:

ALTERNATIVE ENERGY (2026). The state and federal governments, and the Nebraska Farm Bureau should work to develop and use alternative sources of energy, including ethanol, soy diesel, hydrogen, wind, hydropower, solar, methane, low pressure steam, and nuclear to supplement the present supply of petroleum. We encourage the use of renewable energy sources to supplement petroleum, coal and natural gas.

ELECTRIC INFRASTRUCTURE (2025). We support continued development of modular nuclear reactors located at the site of major electrical consumers or close to major transmission lines to provide flexibility and redundancy to our current electric infrastructure.

FEDERAL POLICY:

401 / Electric Power Generation

3. We support:

3.14. Increased research for technological developments for the use of nuclear fusion as a clean and safe alternative energy source;

Nuclear Electricity

8.1. We support:

8.1.1. Nuclear energy plants, as a source of needed energy with adequate safeguards to ensure their safe and environmentally sound use;

8.1.2. Studying the impact of nuclear power plant emissions upon the surrounding agricultural community. The operator of a nuclear facility, prior to beginning of operation and at regular intervals thereafter, should be required by the Nuclear Regulatory Commission to educate neighboring farmers on emergency agricultural practices and procedures to be followed in the event of a nuclear accident;

8.1.3. Reprocessing nuclear waste to generate additional energy; and

8.1.4. Improving permitting efficiency, both in timeframe and cost, for nuclear power generation, including small-scale plants, while maintaining high safety standards.

9. Renewable Electricity

9.1. We support:

9.1.3. Developing renewable fuels, clean coal, and next generation nuclear technologies in order to keep the costs of electrical energy affordable;

402 / Energy

9. We urge Congress and the administration to enact policies that will:

9.10. Support further development of nuclear, solar, geothermal, bio-based, hydroelectric, oil shale, tar sands, wind and other sources of energy and recommend that special emphasis be given to converting to expanded use of coal, including gasification, liquefaction and ethanol production;

10. We support:

10.5. The expansion of nuclear energy and the reprocessing of spent fuel;

503 / Climate Change

2. We support:

2.21. Using a broad spectrum of power sources like renewables, biofuels and nuclear energy to help facilitate the market-derived cost of energy;

2.34. A scientific life-cycle assessment and rating system of energy use and environmental impacts (land use changes and greenhouse gas emissions) of renewable energy systems including solar, wind, nuclear, hydrogen, green natural gas and battery energy storage systems;

505 / Hazardous and Nuclear Waste Management

1. We support:

1.1. A hold being placed upon activities by multistate low-level nuclear waste compacts until the federal government makes a final determination as to the number of low-level waste sites needed nationally;

1.2. Working with the appropriate state or regional entities to assure agricultural interests are given adequate consideration and to assist in public education activities;

1.3. Sufficient sites being designated to accommodate waste;

1.4. Research and development for alternate methods to handle hazardous waste;

1.5. Producers of hazardous waste being responsible for its safe transport and disposal within the limits governed by county, state and federal regulations;

1.6. The Department of Energy following the procedures of the 1982 Nuclear Waste Repository Act based on scientific fact;

1.7. Legislation that would prevent nuclear and toxic waste dumps from being placed on or beneath productive agricultural land and in areas with large underground water reservoirs and ocean and coastal waters;

1.8. Any entity operating a facility that processes, manufactures, stores, or disposes of hazardous, toxic, nuclear, or any other material that may pose an adverse impact on the economic well-being of agriculture, to be required to compensate for any losses that may occur;

1.9. The denial of permits to chemical waste companies in floodplain areas;

1.10. Further scientific, economic, environmental and agricultural market impact studies of a high-level nuclear waste repository; and

1.11. The recycling of used nuclear fuel rods, thereby, reducing the need

Questions

- Given the strict carbon emissions penalties in models like CORSIA, should Farm Bureau prioritize supporting nuclear energy specifically as a mechanism to lower the CI score of Nebraska's biofuel production?
- Should Nebraska Farm Bureau policy support state-level financial incentives or streamlined permitting to attract SMRs development to rural Nebraska?
- Advanced nuclear facilities can preserve local tax revenues and create high-paying jobs in rural areas. Should our policy prioritize these community-level economic benefits when supporting the siting of new energy infrastructure?
- Does our current energy policy adequately address the direct relationship between the electrical grid's carbon footprint and the premium pricing of our agricultural commodities in the emerging bioeconomy?

- How should Nebraska Farm Bureau balance the statewide need for low-CI energy to support our SAF and ethanol markets with the concerns of local property owners facing nuclear facility siting?
- What role should county Farm Bureaus play in the community engagement process to address “not in my backyard” responses when a site is proposed in their jurisdiction?
- Should Nebraska Farm Bureau prioritize certain locations identified in the NPPD siting study over others?