

Nebraska Center for Energy Sciences Research Agreement Renewal





NPPD Board of Directors Meeting **Strategic Session** February 2025

John Swanson, Director of Generation Strategies & Research Roman Estrada, Generation Research Sr. Program Manager



Energy Center History

- Energy Center concept was driven by NPPD's Board of Directors
 - ✓ Idea was formed by then Director Darrel J. Nelson
 - ✓ Concept was memorialized in a letter from Director Nelson to then President & CEO Bill Fehrman on Sept. 20, 2005



DARRELL J. NELSON Director, Subdivision V HC 67, Box 99 Oconto, NE 68860 E-Mail: djnelso@nppd.com

September 20, 2005

William J. Fehrman President & CEO Nebraska Public Power District 68601/1414 15th Street P.O. Box 499 Columbus, NE 68602-0499

Dear Bill.

In response to your invitation, I am offering some possibilities for alternative energy research which may be within the areas of expertise of the University of Nebraska. To explain the relevance of some of these suggestions some background will be necessary, so I will use a narrative style.

In the 1940's and before the use of commercial fertilizer was prevalent in our part of the state, my father used a rotation of crops to grow his own nitrogen fertilizer. Oats would be planted with an interseeding of sweet clover. The oats were harvested in the conventional manner, which involved a grain binder and threshing machine. The sweet clover continued to grow that season, and since sweet clover is a biannual it came up the next year and produced a crop of seed. Sweet clover was not much good for hay, and it caused bloat in cattle if grazed, so the land did not produce a crop in the second year. However, in the following year, the nitrogen left in the ground left by that legume produced a good crop of corn, if it rained a little. The rank growth of the dead clover during the winter caught a lot of snow, and rain did not run off of a field, so there was quite an advantage to producing a crop of dryland corn. In more humid areas, the clover was plowed under in the spring of the year, but even in eastern Nebraska that was an "iffy' proposition because the clover used a lot of soil moisture before a crop was planted, and a crop of corn was questionable.

It those days land was cheap, and taxes were minimal, so we could afford to forfeit one crop in three to produce a good crop. With the high cost of land and taxes today, that would probably not be feasible.

GENERAL OFFICE 1414 15th Street / P.O. Box 499 / Columbus, NE 68602-0499 Telephone: (402) 564-8561 / Fax: (402) 563-5551 http://www.poof.com/

Established in 2006 as a collaboration between UNL and NPPD

Fund Research

- ✓ Seed projects in promising new areas
- ✓ Facilitate interdisciplinary collaborations

Leverage Funding

✓ Attract external funding from federal agencies, foundations and other public or private entities

Nebraska Center for Energy Sciences Research Agreement History

- Partnership between NPPD and UNL
- Initial agreement effective April 1, 2006

Agreement	Amount	Duration	Cumulative Amount
April 2006 – March 2011	\$5.0 Million	5 Years	\$5.0 Million
April 2011 – March 2016	\$5.0 Million	5 Years	\$10.0 Million
April 2016 – March 2021	\$6.25 Million	5 Years	\$16.25 Million
April 2021 – March 2026	\$7.5 Million	5 Years	\$23.75 Million

Proposed Agreement Extension

- Current Agreement expires on March 31, 2026
 - ✓ This end date will limit funding for projects selected this year to 15 months instead of up to two years as currently offered
- Recommended option for future funding for the Energy Center:
 - ✓ Consider applying general inflation (estimated at 4% annually) to the current \$1.5 million per year for a five-year period
 - ✓ The adjustment would escalate annual contributions to approximately \$1.75 million annually (\$250,000 annual increase)
 - New five-year commitment of \$8.75 million for a total of \$32.5 million over the new 25-year term

Proposed Agreement Extension (Cont'd)

- UNL, as part of their commitment to the Energy Center, agrees to increase their annual contribution to the Energy Center in the amount of \$250,000
- UNL's annual commitment in direct and in-kind contributions will now total \$1.0 million annually
 - ✓ All other terms of the original agreement (as amended to improve processes) apply
 - ✓ If NPPD's business conditions change and termination of the agreement is necessary for any reason, NPPD or UNL can terminate the agreement for convenience with a 90-day notice subject to certain reasonable shut down expenses

Proposed Agreement Extension Schedule

February 2025 Board meeting

✓ Review Energy Center history with Board of Directors

April 2025 Board meeting

- ✓ Director Dr. George Gogos' annual review of Energy Center activities
- ✓ Formal Board recommendation regarding Amendment No. 5 to the agreement, in the annual amount of \$1.75 million annually for five additional years, effective April 1, 2026



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Questions

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