

CHAPTER 7:

Energy Programs

The primary energy-related responsibilities focus on administering the federally funded state Weatherization Assistance Program (WAP) and conducting the overall State Energy Program (SEP). The SEP consists of the general pursuit of all energy-related activities and is funded by the Department of Energy (DOE). Specific efforts include the administration and implementation of the Nebraska State Energy Code and administering the long standing and successful Dollar and Energy Saving Loan (DESL) program. The WAP and DESL program provide financial resources for Nebraska citizens to install upgrades to their homes or businesses to make them more energy efficient and decrease energy costs.



City Impact, a Lincoln-based non-profit, had all new LED lighting installed in 2021 with help from a low-interest loan through the DESL program.

A comprehensive annual report on energy activities is required by statute and the 2022 report will be included in a separate report submitted to the Governor and the Clerk of the Legislature by February 15, 2023. The State Energy Annual Report for 2021 may be found at <http://dee.ne.gov/publica.nsf/PubsForm.xsp?documentId=E2EE6EFC6B970FF1862587EB007391A4&action=openDocument>

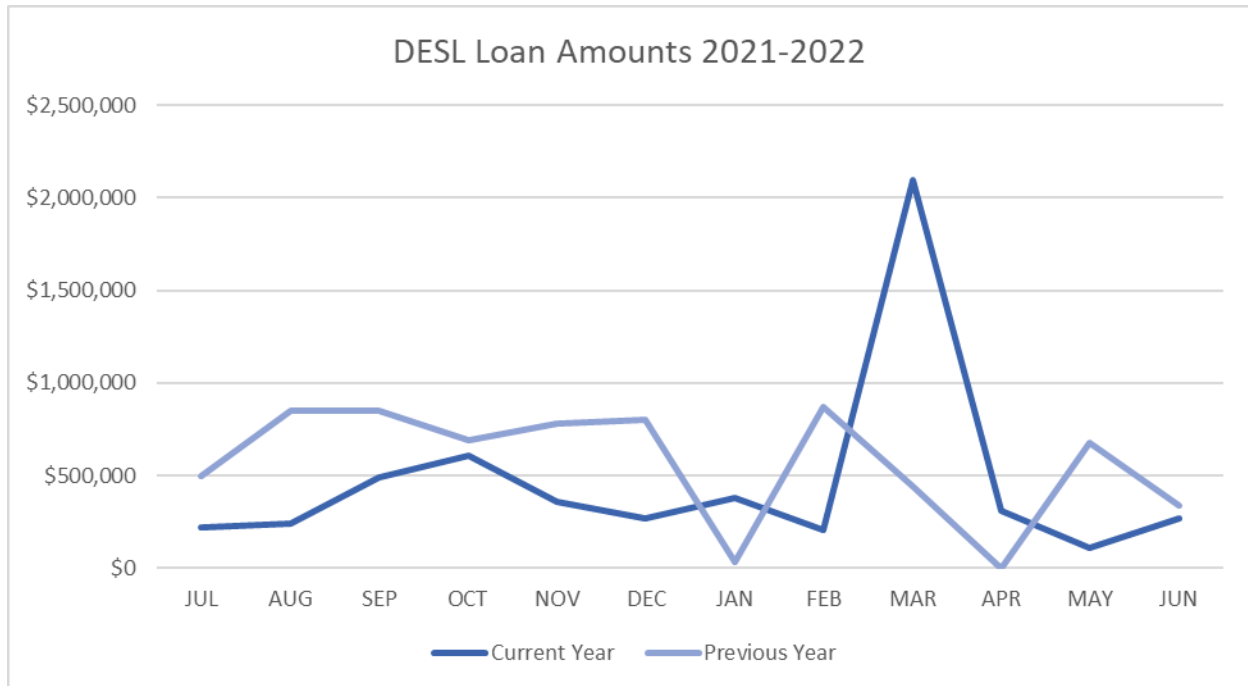
Energy

Dollar and Energy Savings Loan Program

The Dollar and Energy Saving Loans (DESL) program has helped tens of thousands of Nebraska residents, local businesses, school districts, and municipalities make their homes and buildings more energy efficient and helped them reduce energy bills by providing low-cost financing for energy-efficient equipment and projects. NDEE provides funds to Nebraska-based lending institutions to participate in a portion (50-90%) of each energy conservation loan. The DESL revolving loan system will continue to provide for energy conservation loans far into the future. These energy loans can be used for a multitude of energy-related projects including replacing inefficient lighting; installing highly rated, energy-efficient heating and cooling systems; providing better thermal resistance with added insulation and replacing old windows and doors; installing large and small-scale solar projects; and constructing new, energy-efficient housing.

In fiscal year 2022, the DESL program helped finance over \$8.35 million for 250 loans that improved energy efficiency for 266 new projects. Over that time, on residential projects alone, the DESL program is estimated to have saved 45,978 kilowatt-hours of electricity, 37,830 therms of natural gas and reduced carbon emissions by almost 5,205 tons. Since the inception of the program in 1990, the DESL program has helped finance over 30,000 energy saving projects with the total cost of all improvements financed totaling over \$385.5 million.

The following chart shows the loans disbursed for FY2020/2021 and FY2021/2022.



DESL Project Highlights from Fiscal Year 2022

- Lighting and HVAC projects for three public school districts totaling over \$1.7 million, including a \$1.2 million project for Wynot Public Schools
- Seventeen new solar installations totaling over 715 peak kilowatt hours, including six large-scale agricultural projects and three commercial projects totaling over \$1.2 million
- \$265K for a new energy efficient home in Gibbon
- \$32K of insulation for a renovation project in downtown Emerson



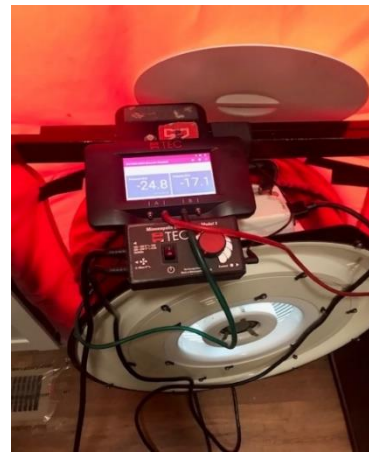
\$38K Lighting Retrofit Project for Lincoln Non-profit, City Impact (June 2022).



\$364K for Weeping Water (left) and \$170K for Wakefield (right), Public School Lighting Retrofit Projects (June 2022).

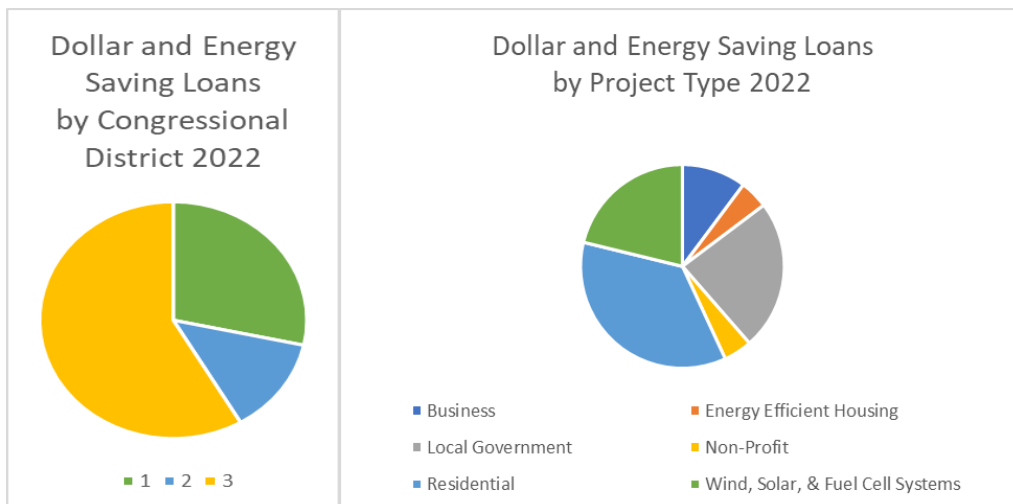


\$35K Photo Voltaic Installation peaking 16,000 watts at 4 Seasons Farms, LLC in Ashland (June 2022).



New Energy Efficient Housing, Gibbon (Buffalo County Assessor, 2021), Blower Door Testing (November 2021).

The following charts show percentage of loans participated by congressional districts and project types for FY2021/2022.



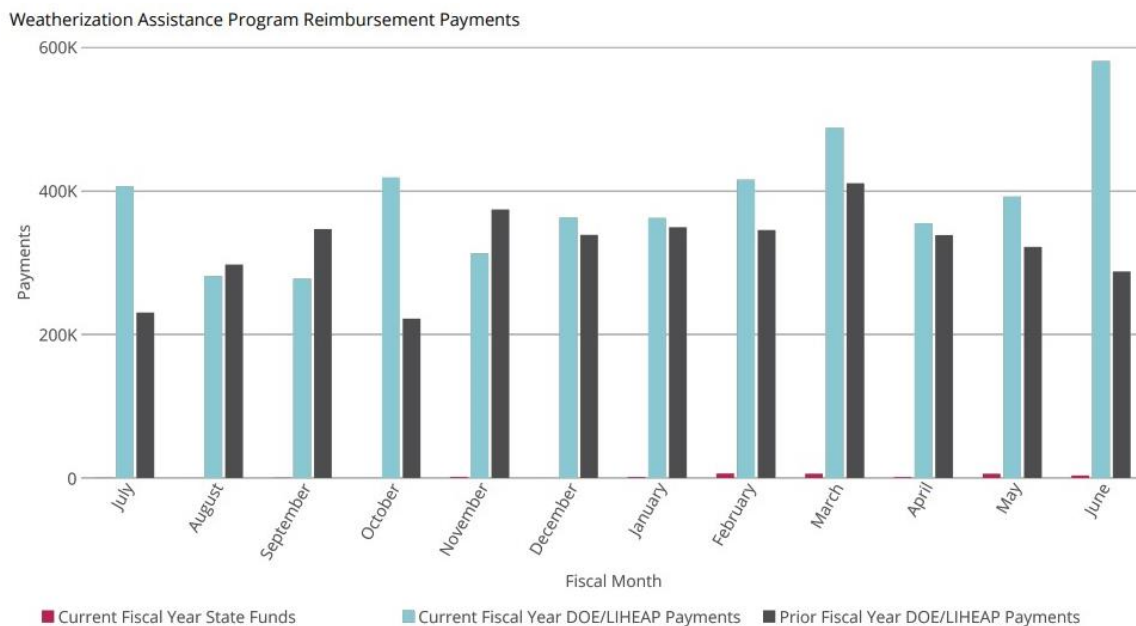
Weatherization Assistance Program

This federally funded program enables low-income families in Nebraska to reduce their energy bills by making their homes more energy efficient. Program staff evaluate the homes of clients that meet income requirements and are approved for weatherization assistance services to identify the most effective energy- and dollar-saving improvements. Seven community action agencies and one non-profit agency are responsible for implementing the home weatherization improvements in Nebraska.

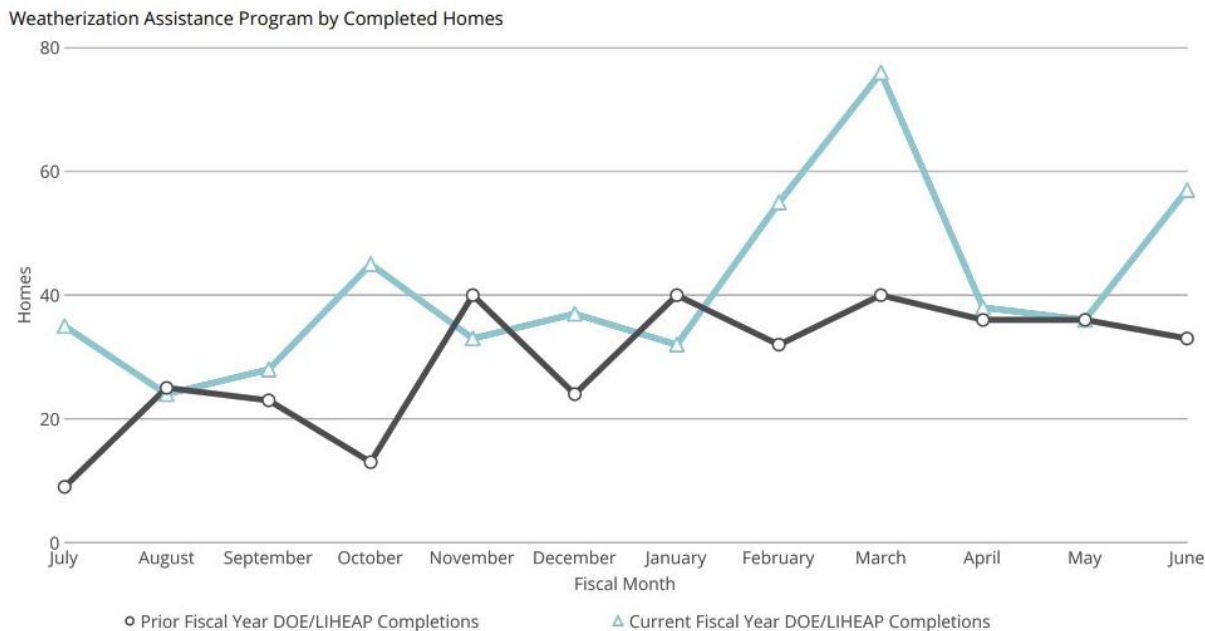
The types of improvements vary based on an energy audit analysis of the home; improvement investment averages between \$5,000 and \$7,500 per home, excluding the cost of health and safety improvements such as furnace repairs. The most common improvements are adding insulation, air sealing the home, repairing and replacing furnaces, installing energy-efficient lighting, and installing weather-stripping. Beyond the energy savings achieved, clients generally notice an increase in comfort due to reduced drafts and a more even temperature throughout their home. Between July 1, 2021 and June 30, 2022, 340 homes were weatherized across the state, helping to reduce the energy burden for low-income Nebraskans. Weatherization Program staff inspect a minimum of 10-15% of all completed homes to ensure the quality of work performed.

The program receives funding from three sources: DOE’s Weatherization Assistance Program, Low-Income Home Energy Assistance Program (LIHEAP) financed through the Nebraska Department of Health and Human Services and State General Funds. Since the WAP began in 1977, \$227 million has been provided to make energy efficiency improvements in 70,667 homes. The Department is allowed to use \$600,000 from the LIHEAP budget to use for Heating and Cooling Repair and Replacement Assistance (HCRRA) with a limit of \$5,000 per client. This program, started in January of 2019, to offer furnace and AC repair or replacement assistance to extremely low-income clients.

The following chart shows the Weatherization Assistance Programs reimbursements for FY2020/2021 and FY2021/2022.



The following chart shows the Weatherization Assistance Programs production for FY2020/2021 and FY2021/2022.



The Covid-19 pandemic has presented numerous challenges for the program. Changes to standard operating procedures were needed to conduct normal weatherization activities and to keep program clients and sub-grantee staff safe. NDEE Weatherization Assistance Program staff collaborated with sub-grantee representatives to develop guidance and identify needed training to enable weatherization services to take place in residential homes with potentially high-risk individuals at home. NDEE staff and sub-grantees will continue to work on updating these processes to ensure the safety of our clients while continuing to provide needed weatherization services across Nebraska.

State Energy Program and Special Projects

The US Department of Energy (DOE) provides funds to states for the general operations of State Energy Offices. These funds support the day-to-day energy responsibilities of NDEE. The funds provide support for the DESL program and serve as a primary funding source for several other efforts that are the responsibility of the Energy Programs. A description of those efforts follows.

Energy Codes

As a result of LB 405, signed into law by Governor Ricketts on May 8, 2019, the Nebraska Energy Code was updated from the 2009 standards established by the International Energy Conservation Code to the 2018 standard. Nebraska was among the first states to adopt the 2018 standard. With the adoption of the updated code, homeowners of the typical three-bedroom house are projected to save between \$165 and \$206 annually on energy costs.

NDEE staff have been actively involved in providing training on the new code through a training partnership with the Midwest Energy Efficiency Alliance (MEEA) and partnerships with other organizations to provide on-site trainings. Through the partnership with MEEA, more than two dozen virtual and in-person training sessions have been held on many different aspects of the Nebraska Energy Code. The NDEE is continuing virtual and in-person training efforts through this partnership and will be hosting practical trainings with an emphasis on teaching stakeholders in Nebraska how to perform the new testing and verification methods defined in the Nebraska Energy Code.

State Heating Oil and Propane Programs

NDEE staff support the state's heating oil and propane users by participating in the DOE State Heating Oil and Propane Program. Price and supply information is obtained from Nebraska retailers and entered on the NDEE website. Consumers can then effectively plan for purchases of these commodities during the heating season.

Information may be found at:

- Propane Prices: <https://neo.ne.gov/programs/stats/inf/86.html>
- Heating Oil Prices: <https://neo.ne.gov/programs/stats/inf/87.html>
- Annual Report: <https://neo.ne.gov/programs/shopp/shopp.html>

Nebraska Energy Security Initiative

In the first half of 2022, comprehensive Local Energy Security Plans were developed for the eight Planning, Exercising, and Training (PET) regions in Nebraska. The Plans aid local officials and emergency managers to increase their jurisdictions' energy resiliency. The Plans identify regional energy suppliers, identify primary contacts and key assets, and develop an energy assurance crisis communications protocol. The Plans' development is part of the US DOE State Energy Program's Nebraska Energy Security Initiative to address assurance and security concepts within the existing framework of emergency management and homeland security.