

# CHAPTER 7:

## Energy Programs

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The primary energy-related responsibilities focus on administering the Dollar and Energy Saving Loan Program (DESL), 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, pursuit of an energy benchmarking effort



This photo shows a residential solar installation erected summer of 2020 in South Lincoln, funded by a Dollar and Energy Savings Loan from NDEE. Photo by Bryce Puck, May 2021.

focused on improving energy use in state buildings, and the implementation of the Renewable Fuel Infrastructure Program to improve air quality in Nebraska through the installation of ethanol blender pumps capable of dispensing clean burning high-blend ethanol. The DESL and WAP provide financial resources for Nebraska citizens to install upgrades to their homes or businesses to make them more energy efficient and decrease energy costs.

A comprehensive annual report on energy activities is required by statute and the 2021 report will be included in a separate report submitted to the Governor and the Clerk of the Legislature by February 15, 2022. The State Energy Annual Report for 2020 may be found at <http://dee.ne.gov/NDEQProg.nsf/PubsForm.xsp?databaseName=CN=DEQSER6/O=NDEQ!!Publica.nsf&documentId=34437FBD421B63EE8625867E00584DCF&action=editDocument>.

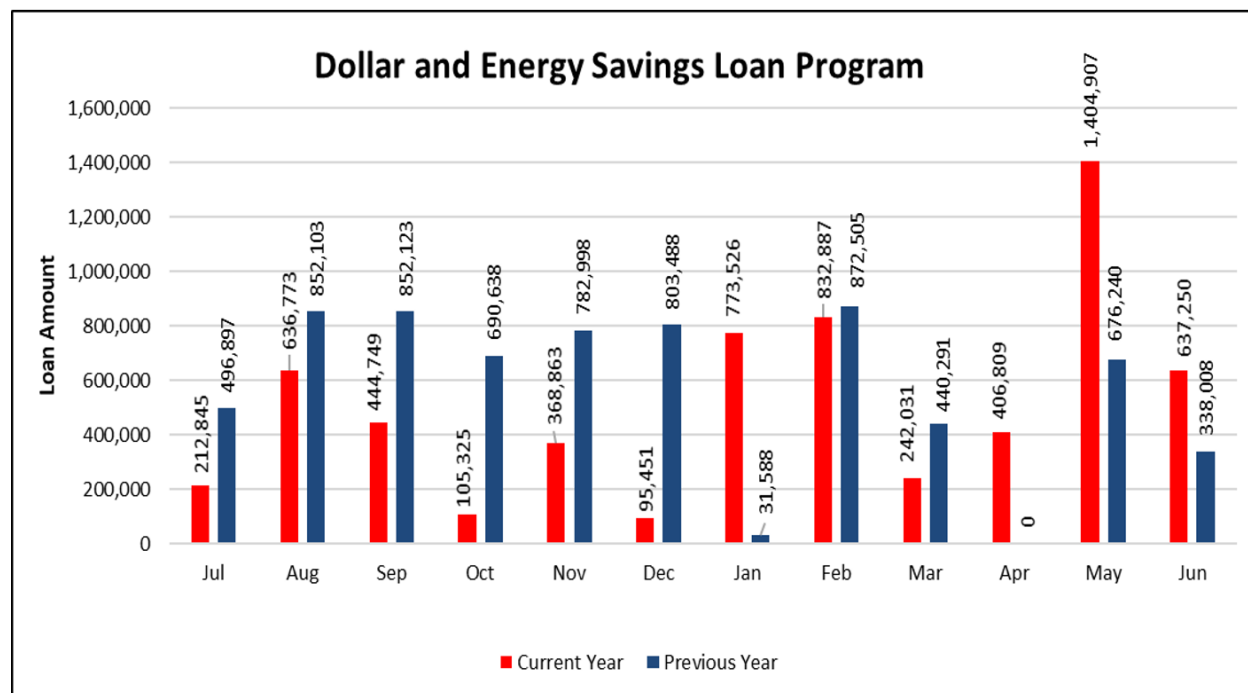
## Energy

### Dollar and Energy Savings Loan Program

The Dollar and Energy Saving Loans (DESL) program helps hundreds of Nebraska residents, local businesses, school districts, and municipalities make their homes and buildings more energy efficient and helps 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 2021, the DESL program helped finance \$9.43 million in 327 projects that improved energy efficiency. Over that time period the DESL program is estimated to have saved 57,458 kilowatt-hours of electricity, 47,996 therms of natural gas and reduced carbon emissions by almost 6,710 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 \$377.8 million.

The following chart shows the loans disbursed for FY2019/2020 and FY2020/2021.



Highlights from FY21 include: \$1.2M HVAC project for Weeping Water Public School District; \$400K lighting retrofit for Cass County School District; \$58K lighting retrofit for non-profit, City Impact; and 26 new solar projects totaling 424.74 kW.

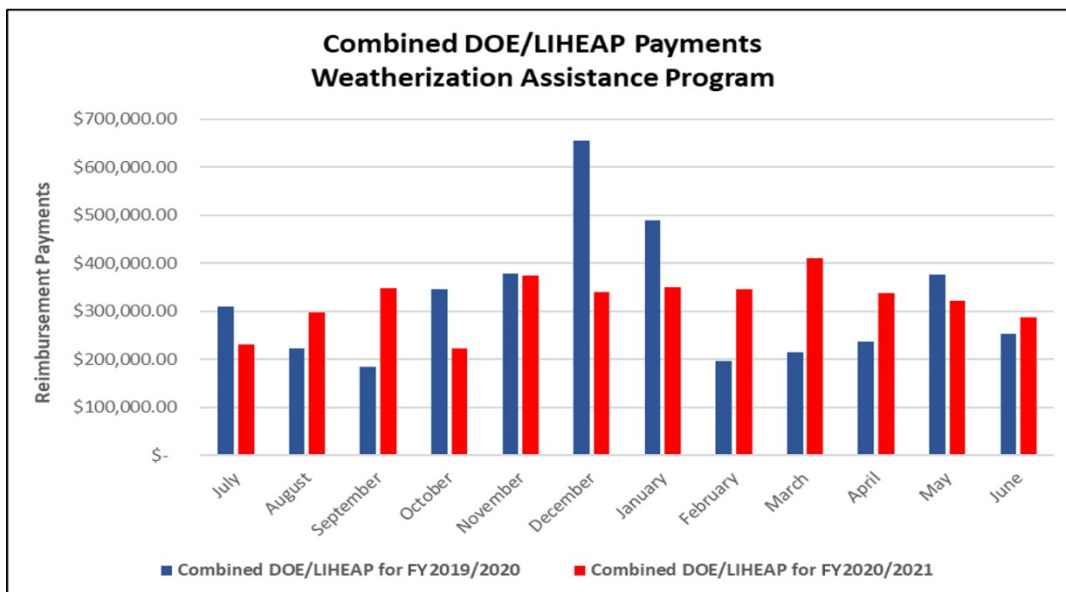
### Weatherization Assistance Program

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, 2020 and June 30, 2021, 351 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 two sources: DOE’s Weatherization Assistance Program and the Low-Income Home Energy Assistance Program (LIHEAP) financed through the Nebraska Department of Health and Human Services. Since the WAP began in 1977, \$220.7 million has been provided to make energy efficiency improvements in 70,326 homes. The Department also received an additional \$500,000 from LIHEAP to use for Heating and Cooling Repair and Replacement. This program, started in January of 2019, is able to offer furnace and AC repair or replacement assistance to extremely low-income clients. This program was especially beneficial in providing heating system replacements needed as a result of Nebraska’s historic flooding during the spring of 2019.

The following chart shows the Weatherization Assistance Programs reimbursements for FY2019/2020 and FY2020/2021.



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 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 both the DESL and WAP programs and serve as a primary funding source for a number of 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 and prior to the pandemic had partnered with other organizations to provide on-site trainings. NDEE is continuing virtual training efforts through a training partnership with the Midwest Energy Efficiency Alliance.

#### ***Building Energy Benchmarking***

NDEE staff are administering a grant from DOE involving benchmarking energy use in state buildings. To date, energy benchmarking has occurred in approximately 62% of all state-owned buildings. Building managers now can document the value of subsequent energy conservation measures. DOE estimates that benchmarking programs can save anywhere from 7-20% energy savings on an annual basis. Additionally, this grant enabled the development of a tool to calculate economic, energy, and environmental impacts in public and commercial buildings. Finally, grant funds provided Building Operation Certification and Certified Energy Manager training to 31 state employed facility managers and helped establish a curriculum for middle and high school students to learn how to benchmark energy use in any public or private building.

#### ***Renewable Fuel Infrastructure Program***

From 2016 to 2019, the Nebraska Energy Office staff administered the Access Ethanol Nebraska program that provided \$2.285 million in funds to support the installation of 88 high-blend ethanol pumps at 22 retail locations across the state. LB 585, enacted by the legislature in 2019, provided NDEE with the opportunity to place additional blender pump installations

should funding become available. Increased use of advanced biofuels will have a positive impact on air quality across the state.

### ***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>

### ***Nebraska Energy Assurance Initiative***

NDEE staff gave a virtual presentation to the National Association of Emergency Management in April 2021. The presentation was an overview of Energy Assurance and the US DOE State Energy Program project: Nebraska Energy Assurance Initiative. The Nebraska Energy Assurance Initiative is aiding local officials and emergency managers to increase their jurisdictions' energy resiliency by developing their own local energy assurance plans.