NEBRASKA
DEPT. OF ENVIRONMENT AND ENERGY

Nebraska Department of Environment and Energy Dollar and Energy Saving Loans

Heating, Cooling and Water Heating Projects Application

FORM 3

Name	Mailing Address	Building Age (Yrs)

INFORMATIONAL

EQUIPMENT SIZING, DUCT SEALING, AND PROPER INSTALLATION ARE CRITICAL COMPONENTS NEEDED TO ENSURE CORRECT OPERATION AND TO MAINTAIN THE EFFICIENCY OF HEATING, VENTILATION AND AIR-CONDITIONING EQUIPMENT.

To insure that equipment operates as it was designed, you should request that your installing contractor check that you have the proper size of equipment. Sizing is accomplished by using either a Manual J calculation for residential, Manual N for commercial, or any sizing software based on calculation from the ASHRAE Handbook of Fundamentals. Simply replacing equipment with the same size does not guarantee proper sizing. If you have insulated your home or business, replaced windows or doors, or sealed air leaks since your last equipment was installed, you may have reduced the load on that equipment. Studies have shown that oversizing of equipment can reduce efficiency by as much as 50%, costing you double what you would normally pay for energy. Oversizing of equipment also reduces the life of equipment due to short cycling, reduces the ability of equipment to remove moisture, and ultimately reduces the overall comfort of the consumer. If your equipment is sized correctly, then during the warmest or coldest days of the year the equipment will run for extended periods, to include continuous operation, while maintaining the temperature inside your home or business. Ductwork should be sealed to insure that conditioned air is provided, or taken, from the spaces intended. Ductwork that is not sealed, and located in attics, crawl spaces, or other unconditioned spaces, will either result in air that you have spent energy dollars to condition escaping to unintended spaces, or your equipment will be pulling warmer, cooler, or possibly contaminated air from spaces not intended. Even ductwork located within conditioned space needs to be sealed to insure that the air you have conditioned is directed to the spaces intended. The equipment you purchase is only as good as its installation. Look for contractors that have been trained to install the equipment you intend to purchase. It is a good idea to obtain multiple quotes and make inquiries of your utility and the Better Business Bureau with regard to the credentials of your intended contractor.

FUEL SUPPLIERS
(If you have already completed FORM 1, 2 or 4, do not complete the section below)

Energy Source	Utility or Supplier	Mailing Address	Phone Number	Account No.
Electricity ☐ Check here if all electric	☐*			
☐ Natural Gas or ☐ Propane	☐*			
Other (Specify)	☐*			
Other (Specify)	☐*			

* Mark this box if the utility account is not in your name. Then attach the appropriate completed Form 35(s).

Signature

I hereby authorize the Nebraska Department of Environment and Energy to obtain energy consumption, cost and billing information from the energy suppliers listed above. This information may include past and present as well as future consumption, cost and billing patterns. I also certify all the information supplied above is true and correct to the best of my knowledge and belief and I have read and understand the instructions, specific line instructions, and the information on equipment sizing, duct sealing, and proper installation, and that I will permit my lender and NDEE, as they deem necessary, to have access to the subject property and records in order to make on-site inspections of the improvements or replacements which have been financed under the program. The work described above will be completed within 5 months after my lender receives a signed commitment from NDEE.

sign here ▶ Signature _____ Date _____

You may NOT contract for or undertake the project you propose in this application prior to Nebraska Department of Environment and Energy signing a Commitment Agreement (FORM 10) with your lender to participate in the loan.

If you do so, you will lose your eligibility to finance the project with a low interest loan.

You may accept a bid, contingent on NDEE's signed commitment of funding, to lock in the price, but you may not proceed with the work or contractually obligate yourself to proceed until your lender notifies you that NDEE has signed the Commitment Agreement on your loan.

SUBMIT THIS COMPLETED FORM TO A PARTICIPATING LENDER

NEO 06-25-90 Rev.12-08-23
Supersedes NEO 06-25-90 Rev. 07-19-21

22-016

Type(s) of Improvement(s)	Minimum Requirements	Description of Improvement(s)	Cost from Bid(s)
1 ☐ Insulate Duct In Unheated Space(1)	R-value≥ 8.0 Supply, ≥ 8.0 Return	List R-value and Square Feet of Insulation	$
2 ☐ Insulate Pipe or Repair Leaking Pipe or Fitting	Residential: R-3.0 Commercial: ASHRAE 90.1 2007 Table 6.8.3	List R-value or Conductivity, Linear Feet, Nominal Pipe Size (NPS), and Insulation Thickness	$
3 ☐ Pressure Test and/or Seal Duct (1)	Tapes, Mastics, and Adhesives UL181A or UL181B Rated	Describe Methods to be Used – Brand and Product Number	$

SPACE COOLING	New Equipment	Capacity (kbtuh) - Requirement	Manufacturer, Model No. & AHRI Certification #	Model No. (& Coil No. Where Indicated)	Size	Performance	Cost
4 ☐ Install Space Cooling Equipment (1)(10) Fuel Used for Old Cooling System ☐ Electricity ☐ Room A/C ☐ Central A/C ☐ Heat Pump ☐ Other_____ _____ ☐ None	Central Air Conditioner (2) (15)*	<65 –16 **SEER2** (Must Meet or Exceed) ≥65,<135 –11.2 EER ≥135,<240 – 11.0 EER ≥240 –10.0 EER All Water & Evaporatively Cooled –14.0 EER		Provide Model and Coil Number	Tons	SEER2 EER	$
	Air Source Heat Pump (2) (3) (6) (15)* (COP is at 47°F)	**<65 –10 EER2 and ENERGY STAR Cold Climate Designation (16)* (Must Meet or Exceed Both)** ≥65,<135 –11.2 EER,3.4 COP ≥135,<240 –11.0 EER,3.3 COP ≥240 –10.0 EER,3.3 COP All Water & Evaporatively Cooled –14.0 EER, 3.3 COP		Provide Model and Coil Number	Tons	SEER2 EER2 HSPF2 & COP	$
When Replacing Existing Heat, Only Electric Resistance OR 90% Gas Heat are Allowed as Backup With Heat Pumps (6)	Ground Water or Ground Coupled Heat Pump (6) (15)*	All Sizes Water Loop–14.0 EER,4.6 COP Ground Water–16.2 EER,3.6 COP Ground Loop–14.1 EER,3.3 COP Direct Exch.–15.0 EER,3.5 COP		Provide Model No. & Coil No. if Applicable	Tons	EER COP	$
	Packaged Terminal Heat Pump or Air Conditioner (2) (3) (6) (15)*	All sizes – 12 EER		Provide Model No. & Coil No. if Applicable	Btuh	SEER EER HSPF	$
SPACE HEATING 5 ☐ Install Space Heating Equipment (1)(8)(10) Fuel Used for Old Heating System ☐ Electricity ☐ Heat Pump ☐ Resistance ☐ Natural Gas ☐ Propane ☐ Other_____ _____ ☐ None	Forced Air Gas Furnace (4) (15)*	All Sizes - 95 AFUE		☐ Natural Gas ☐ Propane	MBH	AFUE	$
	Steam or Hot Water Boiler and Combined Water and Space Heating (4) (15)*	All Sizes - 95 AFUE or CAafue		☐ Natural Gas ☐ Propane	MBH	AFUE or CAafue	$
	Radiant Heating Systems (4) (9)*	All Sizes – 85 Thermal Efficiency High Bay Only (12 feet)		☐ Natural Gas ☐ Propane	MBH	Thermal Efficiency	$
	Electric Resistance Heating System (6)*	All Sizes Emergency Replacement Systems Only			kW	Not Applicable	$
	Bio-Mass Stove (11)*	Efficiency of 75% or More and EPA Stamp			MBH	%	$

***** Numbers in parentheses are explained at the bottom of page 3.

Type(s) of Improvement(s)		Minimum Requirements	Description of Improvement(s)			Cost from Bid(s)
WATER HEATING	**New Equipment**	**Capacity (kbuth) - Requirement**	**New Equipment Manufacturer & Model No.**	**Size**	**Performance**	**Cost**
6 ☐ Install Water Heater (5) (8) Fuel Used for Old Water Heater ☐ Electricity ☐ Natural Gas ☐ Propane ☐ Other_____ _____ ☐ None	Gas Storage Water Heater (4) (15)*	≤ 75 kbtu input – .82 EF > 75 kbtu input – 90% Thermal Efficiency		Tank Gal.	EF/Thermal EFF.	$
	Electric Storage Water Heater (15)*	All Sizes – .93 EF		Tank Gal.	EF	$
	Heat Pump Water Heater	All Sizes – 2.0 EF		Tank Gal.	EF	$
	Desuperheater Water Heater	All Sizes – ANY		Btuh	Not Applicable	$
	Demand (Tankless) Water Heater (15)*	All Sizes – Gas – .82 EF Electric – .99 EF		Gal/hr	EF	$
7 ☐ Install Insulation Blanket on Hot Water Heater		R-value ≥ 4.0	List Quantity, R-value and Square Feet of Insulation			$
8 ☐ Install Hot Water Flow Restrictor or Heat Trap (5)		ANY	List Location and Type of Restrictors or Traps			$
9 ☐ Install Automatic Damper on Flue or Vent		ANY	List Quantity and Make and Model Number			$
10 ☐ Install Intermittent Ignition Device (8)		ANY	List Quantity and Make and Model Number			$
11 ☐ Replace Only the Burner on Furnace or Boiler (8)		ANY	List Quantity and Make and Model Number			$
12 ☐ Install Programmable Thermostat or Digital Controls (6)		Any - See note 6	List Quantity and Make and Model Number			$
13 ☐ Install Whole House Fan or Solar Attic Vent Fan		ANY	List Make and Model Number			$
14 ☐ Install Heat or Energy Recovery Ventilator, HRV or ERV		HVI-Tot. Recovery Eff ≥ 25% or AHRI-TOT EFF ≥ 76 @ 75% Flow	List Make and Model Number	Efficiency	☐ HVI ☐ ARI	$
15 ☐ Install Fireplace Insert (7) and chimney sealed.		Existing fireplace hearth	List Make and Model Number			$
16 ☐ Install Outdoor Combustion Air Intake Duct (7)		ANY	List Size and Linear Feet			$
17 ☐ Variable Frequency Drive (13)		ANY	List Brand and Model Number			$
18 ☐ Advanced Main Air Circulating Fan(14)		ANY	List Make and Model Number			$
TOTAL						**$**

*ADDITIONAL FORM 3 REQUIREMENTS AS REFERENCED ON PAGES 2 AND 3

1. Seams on new or renovated ductwork shall be sealed in accordance with the State Energy Code. Tapes and mastics used to seal ductwork shall be listed and labeled in accordance with UL181A (for rigid duct) or UL181B (for flexible duct). The contractors **bid must include the brand and product number of sealant** being used. Duct tape and silicone caulk are not acceptable methods of sealing ductwork.
2. For Room or Window type air conditioners, see Form 1 Appliances.
3. If you selected a heat pump, you must check both boxes 4 and 5, and supply the requested information for old equipment.
4. Condensing type gas units must have combustion intake air ducted from outdoors.
5. Water heater installation must include heat traps or a one-foot downward run of pipe within two feet of both inlet and outlet.
6. Heat Pumps must be installed with a ramp-up type thermostat especially designed to bring on backup heat in stages, and only when the heat pump can no longer keep up with demand, and must be able to differentiate between a demand call and a 'return from setback' call for heat.
7. Fireplace inserts must be direct venting, taking combustion air from outside. The insert must provide an airtight seal for an existing hearth or chimney. Inserts which burn renewable type fuels must meet EPA requirements for particulate and bear the EPA stamp. Provide copies of manufacturer's literature which shows fuel type, EPA registration, and sealing properties.
8. Combustion gases must be vented to the outdoors. Unvented appliances are not allowed.
9. High bay areas are defined as ceilings where the lowest point of the ceiling is at 12 feet above floor level.
10. Roof top units must be either cooling only, or meet both heating and cooling requirements.
11. Must meet EPA requirements for particulate, bear the EPA stamp and the EPA stamp must include an efficiency of 75% or more. Units must be direct vented, taking combustion air from outside the dwelling unit using either concentric pipe or two pipe exhaust/intake systems. Stoves which bear the EPA stamp without an efficiency rating on that stamp do not qualify.
12. Replace furnace fan motor with electronically commutated motor (ECM). Fan may also be replaced if recommended by the installing contractor.
13. VFD costs are for a complete installation and may include additional controls, provided the controls are digital (provide separate price and complete line 12) and may also include motor replacement, provided the motors are premium efficiency (list motor brand and model on bid).
14. Advanced Main Air Circulating Fans are fans incorporate either an ECM motor, where available, or premium efficiency for larger motors, both of which must be capable of a minimum 50% speed reduction via VFD or step control. Controls may be included on line 12.
15. All equipment must hold current certification in the AHRI directory, www.AHRIdirectory.org and certification number must be present, or copy of the AHRI certificate should be submitted.
16. **NEW ENERGY STAR Cold Climate Designation for heat pumps states equipment must meet or exceed all the following energy efficiency ratings: 15.2 SEER2, 8.1 HSPF2, and 1.75 COP at 5°F, and capacity at 5°F ≥ 70% of that at 47°F.**

INSTRUCTIONS

WHO MAY APPLY. Only legal residents of Nebraska may apply for loans. A legal resident is a Nebraska taxpayer, a Nebraska partnership, a Nebraska-chartered corporation, a subdivision of Nebraska government or a person who has maintained a permanent residence and lived in the state for more than six months. Residency requirements may differ for Energy Star® business or non-profit partners.

GETTING BIDS. You need to get bids or quotes first, so you will have them available for your lender. Make sure the contractor or supplier providing the bid or quote breaks all costs down by applicable project on this form. You are required to provide the estimated cost of each individual project, not a lump sum for all or a combination of projects. You are only required to get one bid or quote under the program, however, it is generally prudent to seek more than one to help you in your purchasing decision. Your lender may require more than one bid or quote in making certain types of loans.

WHERE TO FILE. Take this completed form and the accompanying bids or quotes to your local lender for loan processing. If the lender of your choice is not participating in this program, contact the Nebraska Department of Environment and Energy.

FOR INFORMATION. Contact the NDEE by email ndee.desl@nebraska.gov; by phone (402) 471-2186 or (877) 253-2603; or by mail P.O. Box 98922, Lincoln, NE 68509 or visit https://neo.ne.gov/programs/loans/loans.html.

SPECIFIC LINE INSTRUCTIONS

NAME, ADDRESS and BUILDING AGE. Print or type your name and mailing address in the space provided, and mark the age of the building in which the improvements will be installed. **These improvements may not be installed in a building which is less than 5 years old. New construction is not eligible.**

DESCRIPTION OF IMPROVEMENTS. Complete the re-quested information as described below. The estimated cost for projects on this form should be clearly broken out on the price quote or contractor's proposal, and should be listed sep-arately for each project on this form.

LINES 1-3 AND 7-16. Check the box for the improvement you want to make and complete the rest of the description requested for that project in the space provided. Mark the es-timated cost of each improvement in the right-hand column.

LINES 4, 5 AND 6. Check the boxes for the general type(s) of improvement(s) you want to make, and describe the exist ing system in the space provided. Some types of new equipment require the completion of information under two boxes. If there is no existing equipment for the type of improvement you are making, mark "None." Then locate the line that describes the specific heating, cooling or water heating equipment you want to install and fill in the blanks. The required information in-cludes the manufacturer and model number of the equipment, a coil number where appro priate and the measured performance factor. Mark the esti mated cost of each improvement in the right-hand column.

The minimum qualifying performance factor for each type of equipment is shown next to the new equipment name. By law, manufacturers measure the performance of most heating, cooling and water heating equipment they produce. These **performance factors** give an indication of how effectively a unit does its job compared to the energy input required. Higher factors indicate better performance WITHIN THE SAME TYPE OF EFFICIENCY RATING. For instance, a 9.0 HSPF will perform better than an 8.5 HSPF, but a 4.5 COP will typically perform better than a 9.0 HSPF. While most efficiencies measure the same parameters, output versus input, not all use the same units. An AFUE of 90%, having like input/output units (dimensionless), means that what you receive as heat, the output, is 90% of what you input, 100%. An HSPF of 9.0 which includes factors for backup heat, has units of btu/watt-hr, output/input, and means that for every 9.0 btu you feel as heat, you must put in 1 watt-hr (1 watt-hr = 3.412 btu). A C.O.P. is again dimensionless, but does not include factors for backup heat. Your contractor can look up the performance factor for the equipment you want to install and help you to determine what efficiencies are right for you. It may also be shown on the yellow ENERGYGUIDE label for certain equipment, or in the manufacturer's product literature. AFUE–Annual Fuel Utilization Efficiency (dimensionless), EF–Energy Factor (dimensionless), HSPF – Heating Seasonal Performance Factor (btu/watt-hr), C.O.P. – Coefficient of Performance (dimensionless), and SEER – Seasonal Energy Efficiency Ratio (EER – Energy Efficiency Ratio) (btu/watt-hr) are standard measurements of performance.

FUEL SUPPLIERS. If you have not completed this information on Form 1, 2 or 4, provide the name, mailing address, telephone number and your account number for your electric utility and each fuel supplier serving this address. If the only energy source for the building is electricity, check the box provided. If an account is not in your name, then check the box and attach a completed Form 35 with the information for that fuel supplier. (This might happen where a landlord is seeking a loan but the tenant pays the energy bill.)

SIGNATURE. Sign and date this application and attach the bid(s) or quote(s) and/or contractor's proposal(s) for all the improvements described on this form. Take this application to the local participating lending institution of your choice to apply for a Dollar and Energy Saving Loan.

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