

Wind, Solar and Fuel Cell Application

Name: _____ Address: _____

Project Physical Location: _____

ABOUT THE LOANS

Products must be installed per the manufacturer's installation instructions for optimum operability and output. All installations must meet local, state, and federal codes and regulations. Eligible equipment must be a commercially available system. Wind must be certified by the Small Wind Certification Council (SWCC) to SWCC standards. Solar equipment and other electrical components must be Underwriters Laboratory (UL) rated. While owner installation of eligible equipment is allowed, experimental, or build your own systems, and the installation of that type of equipment, are not loan eligible.

Applications must be for a complete installation, to include all equipment, labor and other installation costs. Loan limits, except for solar hot water systems, are \$14,000 for the first kW on systems 10 kW and smaller, \$19,000 for the first kW on systems larger than 10 kW, to include grid tie equipment, generating or collecting equipment, installation, and any utility charges, and \$4,000 for each additional kW of generating capacity, up to 15 kW, and \$5,000 per kW above 15 kW, prorated. For example, an 800 watt (0.8 kW) PV system could be eligible for up to an \$11,200 dollar loan (\$14,000 x 0.8kW). In another example, a 12.5 kW wind system could be eligible for up to a \$65,000 loan (\$19,000 for the first kW, and \$46,000 for the remaining 11.5 kW). Loans for solar hot water systems are limited to \$19,000, and prorating for output does not apply.

Loan applications must be accompanied by itemized bids which show the name of the manufacturers, complete model numbers, descriptions, quantities and pricing for all equipment being provided, labor, installation, and utility charges. The bid itemization must show separate totals for:

1. Power generating equipment,
2. Grid tie equipment, and
3. Labor and equipment rental for the installation of the equipment.

If separate utility charges are required for grid connection, a copy of the bid from the utility must be included with the application. When there will be no separate utility charges, in lieu of a bid, provide a signed and dated statement from the utility confirming that no separate utility charges will apply.

Tracking and battery backup systems can be included as part of a project, provided loan limits are not exceeded, and should be listed as part of the grid tie portion of the bid. Loan applications must also be accompanied by data (usually one page) showing proof of loan program compliance – see requirements listed on page 2 for specific systems.

For solar shingles use Form 2 and Form 2.1 Roofing. Do not use this form.

FUEL SUPPLIERS

(If you have already completed FORM 1, 2, 3 or 4, do not complete the section below)

Energy Source	Utility or Supplier	Mailing Address	Phone Number	Account No.
Electricity <input type="checkbox"/> Check here if all electric	<input type="checkbox"/> *			
<input type="checkbox"/> Natural Gas or <input type="checkbox"/> Propane	<input type="checkbox"/> *			
Other (Specify)	<input type="checkbox"/> *			
Other (Specify)	<input type="checkbox"/> *			

* 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 NDEE 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 in this application is true and correct to the best of my knowledge and belief and I have read and understand the Instructions, Requirements, and Things You Should Know and that I will permit my lender and the NDEE, as they deem necessary, to have access to the subject property and records in order to make on-site inspections of the equipment which has been installed and financed under the program. The work described in this application will be completed within 5 months after my lender receives a signed commitment from the NDEE.

sign here

Signature _____

Date _____

You may NOT contract for or undertake the project you propose in this application prior to NDEE 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 the 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 the NDEE has signed the Commitment Agreement on your loan.

SUBMIT THIS COMPLETED FORM, FORM A, IF APPLICABLE, AND FORM B, ALONG WITH BIDS OR PRICE QUOTES TO A NEBRASKA LENDER

REQUIREMENTS

Fuel Cells — Must provide a one page copy of the Fuel Cell Manufacturer’s literature which shows equipment technical data, to include at a minimum, the total input and output energies in either btus or kWh.

Wind — Must provide a one page copy of the manufacturer’s literature which shows a graph or table of wind-speed vs output. Loan limit kW is determined from the kW rating with a 28 mph wind speed, or max mph. If turbine is rated at a speed “y” other than 28 mph, then kW for loan limit = (28 mph / “y” Speed mph) raised to the power of three (cubed) times the “y” output rating. For a system rated at 5kW in a 30 mph wind, the 28 mph rating would be (28mph/30mph)³ x 5kW, or 4.1 kW.

Solar Hot Water — Must provide a copy of the SRCC OG-300 rating. Must have a SRCC rating of SF > 0.5. Hot water systems must have a current Solar Rating and Certification Corporation (SRCC) OG-300 rating which can be viewed on the SRCC web site. SF = 1 – (EF/SEF), where EF is the energy factor of the water heater, and SEF is the rating shown on the SRCC web site: www.solar-rating.org

PV systems — Must provide a one page copy of the manufacturer’s literature which shows the Peak Standard Test Conditions (STC) wattage rating, and that panels/modules are tested and meet UL-1703. Maximum loan eligibility is calculated from the Peak STC wattage rating.

For solar shingles use Form 2 and Form 2.1 Roofing. Do not use this form.

Type(s) of Equipment

1. **Photo Voltaic (PV) System**
(Must be UL-Rated)
List Total STC **Watts**:

Total STC **Watts**:

2. **Solar Hot Water Heating System**
(Must be SRCC rated as a system with an SF > 0.5) List SRCC SEF:

EF of Water Heater:

SF [1 – (EF/SEF)]:

3. **Wind Generating System**
(Must provide wind speed vs output curve)
List **kWh** Output at 28 mph:

4. **Fuel Cell**
(Must have a 30% efficiency and 0.5 kW minimum capacity)
List **kWh** Output Capacity:

List Efficiency:

PROPOSED WIND, SOLAR OR FUEL CELL PROJECTS

EQUIPMENT INFORMATION
As Summarized From Your Bid(s)

Estimated Costs

List manufacturer(s), model number(s), and description(s) of generating equipment.

\$

List manufacturer(s), model number(s), and description(s) of grid tie equipment.

\$

Provide brief description of labor costs to include installation labor and any equipment rental.

\$

Provide brief description of any charges assessed by the utility. (Include copy of utility bid or letter from utility stating there will be no charges.)

\$

Total Cost

\$

Utility and Installer Signatures (Original signatures required)

The undersigned electric utility acknowledges the proposed installation of the system shown, that the system will be installed within their service territory, and that any associated utility charges are accurately reflected on this application.

Printed Utility Name _____

Printed Name and Title of Utility Representative _____

**sign
here** ▶

Signature of Utility Representative _____ Date _____

The undersigned installer confirms that the project will be installed to meet all local, state, and federal codes and regulations, that the equipment will be installed per the manufacturer's installation instructions, and that a copy of the manufacturer's installation instructions will be made available to the NDEE if requested.

Printed Company Name _____

Printed Name and Title of Company Representative _____

**sign
here** ▶

Signature of Company Representative _____ Date _____

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 institutional partners. Projects must be located in Nebraska.

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 item on this form. You are required to provide the estimated cost of each type of equipment, not a lump sum for all or a combination of equipment covered by this form. 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 so be sure to check with them also.

WHERE TO FILE. Take this completed form, Project Start Notification (Form B), and the accompanying bids or quotes to your local lender and apply for a loan. If the lender of your choice is not a Nebraska lender or is not making the loans available to their customers, contact NDEE for the names of other Nebraska lenders in your area.

FUEL SUPPLIERS. If you have not completed this

information on Form 1, 2, 3 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 cost quotes and/or contractor's proposals and supporting documentation for all the projects described on this form. Take this application to the local lending institution of your choice to apply for a Dollar and Energy Saving Loan. If you are an individual or a sole proprietorship, you also must complete and submit a United States Citizenship Attestation Form (Form A) with your application.

Specific Instructions for Proposed Wind, Solar or Fuel Cell Projects. Indicate the type(s) of equipment being proposed by checking the appropriate box or boxes. Provide the information requested for each type of equipment in that column under the appropriate heading. Provide the requested equipment information for each Type of Equipment in the space provided in the Equipment Information column. Lastly, provide the Estimated Costs for each type of equipment proposed in the Estimated Costs column, and enter the Total Cost of all types of equipment in the application.

FOR MORE INFORMATION

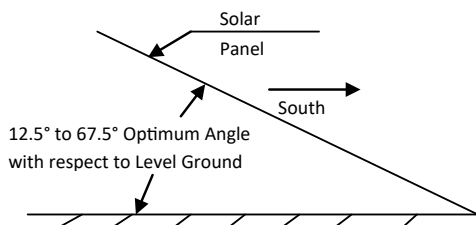
Nebraska Department of Environment and Energy, P.O. Box 98922, Lincoln, NE 68509-5085, Phone 402-471-2186, Fax 402-471-3064

Email: energy@neo.ne.gov

Loan Program Online: neo.ne.gov/programs/loans/loans.html

THINGS YOU SHOULD KNOW

Optimum solar collection is obtained by facing panels, modules, or collectors for hot water systems directly south, and at angles of 12.5° to 15° summer (Apr 20 to Aug 22), 37.5° to 40° spring and fall (Feb 27 to Apr 20, and Aug 22 to Oct 13), and 65° to 67.5° winter (Oct 13 to Feb 27). Angles shown are optimum from southern to northern Nebraska, i.e... 12.5° summer for southern Nebraska to 15° summer for northern Nebraska. Facing a system east or west will reduce the generating capacity by 15% to 20%. Optimum collection and affordability comes with systems that can be manually



adjusted for the season, which do not see shade from adjacent buildings, trees, or other obstacles. While tracking systems provide the most output,

check to see if the cost is justified. It is important that grid tie equipment be properly matched with the generating equipment.

To compare Solar Hot Water system efficiency, visit the Solar Rating and Certification Corporation web site, www.solar-rating.org. Small wind is also rated on this site.

Wind generating equipment should be installed such that the wind is unobstructed by adjacent buildings, land formations, or trees. If the wind is obstructed, the output of the generator will be greatly reduced. You should understand that your wind or solar generator will not produce at it's maximum rating all of the time. A good rule of thumb to use to determine average hourly production for wind or solar, 24 hours per day, 7 days a week, is to take the output rating, at 28 miles per hour or at STC, and divide by four or five.

Your local utility needs to know if you are generating electricity. Having solar hot water systems within the utility's territory may allow the utility certain renewable energy credits which are not available to the consumer.

Solar equipment, wind generators, and fuel cells have a positive impact on the environment. These systems may or may not have a favorable payback period. The NDEE does not make equipment recommendations. You should get multiple quotes to insure that you are getting the best performance for your energy dollar. You should check the Better Business Bureau to insure that you are getting a quality installation. You should investigate information from third party sources and be informed about the systems you intend to purchase.

Combination systems are acceptable, but are subject to loan limits. For instance, an application for 800 watts (0.8 kW) of PV and 5 kW of wind, would be eligible for a \$33,200 loan, provided requirements for both wind and solar are met. This would be 5.8 kW of total generating capacity, and would be eligible for \$14,000 for the first kW, and \$19,200 for the remaining 4.8 kW (4.8 x \$4,000), for a total of \$33,200. A solar hot water system added to this project would be eligible for an additional \$19,000, provided program requirements were met.

Good third party sources of information for renewable energy include: The U.S. Department of Energy (DOE), www.energy.gov,

the American Wind Energy Association, www.awea.org, and DOE's Office of Energy Efficiency and Renewable Energy, www.eere.energy.gov

When faced with performance claims or guarantees, be skeptical of words such as "up to" or "for the first year." The words "up to" include zero or nothing, and everything in between. You might ask yourself, "If a company will make a performance guarantee 'for the first year,' why wouldn't they make the guarantee for five or ten years, or the expected life of the system?" You should note that most mechanical and electrical systems can be expected to lose some efficiency as they age, but on reliable equipment this should be a gradual decline which only slightly affects the system's performance.

What do I need, to get a loan for my wind, solar, or fuel cell Project?

1. Bid(s) from your contractor(s) for a complete project. (Multiple bids are not required but recommended to get the most for your energy dollar. **Only submit the bid(s) you intend to use.**)
 - Bid(s) (see page 1 of 4) must be descriptive with three sub-totals for Power Generating Equipment, Grid Tie Equipment, and Labor and Equipment Rental for a complete installation.
 - The bid(s), must be for a total project, and provide the three subtotals.
 - On Do-It-Yourself installations, you may not include labor for yourself.
 2. Bid from your utility for grid connection, or a letter stating there will be no charges.
 - Even if there are no charges, you still need a bid or letter from the utility confirming this.
 3. Data sheet, or sheets, providing minimal information about your equipment.
 - See specific data requirements for your type of project on page 2 of 4.
 4. Completed Form 20.
 - Name and Address, and/or legal description, where the equipment will be installed (location, section, township, range).
 - Name, Address, Phone Number, and Account Number for each of your energy suppliers, electric, gas, propane, and/or other (show all, not just electricity).
 - Information copied from, **and matching**, your bid(s).
 - Signature and date from you, the borrower. Signature and date from your utility. Signature and date from your installer, or supplier for Do-It-Yourself installations.
 5. Completed Form A, Citizenship Status, Name, Signature, and Date (individuals and sole proprietorships only).
 6. Completed Form B, Name, Address, Signature and Date.
 7. Provide the above 6 items to your Local Participating Nebraska Lender for submittal, **by the lender**, to the NDEE.
- CAUTION:** You may not contractually commit or obligate yourself to a project, or begin construction until your lender has received a signed commitment agreement from the NDEE to participate in the loan for the project.