

# TREES Heat Nebraska – Wood Energy Conversion (WEC) Grant Funding

## Application Instructions (Print out and read thoroughly prior to completing WEC Application)

### BOX 1. Proposed Wood Energy Uses

Check the boxes that correspond to uses for energy generated from the wood energy system. If checking "Other", describe the additional uses for generated energy (such as process steam for facility use (ex. Laundry), water heating, etc.) in **BOX 11**.

### BOX 2. Estimated Annual Wood Fuel Usage (tons)

Estimated annual amount of wood fuel required to meet facility energy needs. This can be estimated by dividing the annual facility heating requirements (British Thermal Units, BTUs) by the estimated BTU amount per unit of desired wood fuel (Total facility BTU needs divided by number of BTUs per pound of fuel divided by 2,000 pounds per ton equals estimated annual tons of wood fuel).

### BOX 3. Potential Wood Fuel Type

Check the box corresponding to the type of wood fuel to be used in the wood energy system. Fuel availability and price should be considered when deciding between wood fuels. If checking "Other", describe proposed wood fuel in **BOX 11**.

### BOX 4. Current Fuel Used

Check the box corresponding to the current fuel being used at the facility. If checking "Other", describe the fuel in **BOX 10**.

### BOX 5. Pre-feasibility Assessment Completed

Check the box corresponding to the completion of a pre-feasibility assessment related to the economic potential for a wood energy system at this facility. If completed, include the month and year during which the study was finalized. These assessments evaluate the economic viability of a project. Assessments report the facility's energy consumption, use, and requirements while estimating the amount of wood fuel required to meet those needs, as well as a fuel cost comparison between the currently utilized fuel and potential wood fuel. Please include this document as part of the WEC Application Package.

### BOX 6. Technical Engineering Feasibility Study Completed

Check the box corresponding to the completion of engineering feasibility and basic system design processes of the proposed wood energy system. If completed, include the month and year during which the work was finalized. Studies completed in the past 2 years are preferred. Engineering and design includes overall system simple engineering design, cost estimates related to all projected required technology and equipment, and construction and renovation costs and labor involved in the proposed project. Please include this document as part of the WEC Application Package.

### BOX 7. Estimated Annual Savings (dollars)

Provide the annual estimated facility dollar savings as a result of the installation of a wood energy system versus the current system at the specified facility. This is the amount you should save on energy bills each year. This information is often included in feasibility or technical analyses.

### BOX 8. Simple Payback Period (years)

Divide total estimated project cost including installation (**BOX 14**) by the estimated annual savings (**BOX 7**). This will provide the number of years it will take for the woody biomass system to pay for itself. This number must be below 15.0 years to be eligible for most additional funding sources.

### BOX 9. Brief Summary of Project

Include the project background, previous history related to wood energy investigations, project timeline (if established), estimated start and completion dates, desired outcomes, and regional natural resource and economic impacts of the wood energy system.

### BOX 10. Type of Organization and Facility Description

Provide a brief description of the purpose of the organization implementing this wood energy system and the types of activities conducted by the organization. Also provide a general overview of the facility included the total number of buildings, square

footage, and fuel being replaced by the wood system.

### BOX 11. Description of Wood Energy System

Describe the proposed wood energy system including construction and renovation needs (ex. Fuel handling system, fuel storage site), required facility infrastructure upgrades (ex. HVAC, climate controls), energy uses tied to the wood energy system (ex. Heating, cooling, electrical production, process steam/heat and its use), and the number buildings and square footage to be attached to the system.

### BOX 12. Regional Wood Fuel Availability

Include information regarding the number of wood fuel suppliers within the area and any information learned about them during the investigation process such as where they are located, estimated annual supply, their sources of raw material, and the number of current facilities to which they supply fuel. Also include any known wood energy systems within 50 miles of the proposed facility.

### BOX 13. Partner Contributions and Financing Strategy

Describe involvement by other partners including federal, state, local, and private agencies, organizations, or businesses. Include the nature of contributions such as technical (ex. wood fuel supplier identification, wood energy system assistance) and financial assistance. If financial assistance has been provided, outline the nature of the assistance such as feasibility study cost-share and previous financial awards related to the project. Include existing secured financing dedicated to the facility conversion (i.e. grants or loans) and planned funding acquisition efforts. Private contributors need not be identified by name, simply identified as "Private Contributor" and include information regarding their technical or financial assistance.

### BOX 14. Total Estimated Project Cost

List the total cost of the wood energy system including boiler technology, other equipment, construction, renovation, and installation. ***This must be the cost of all labor, equipment, materials, and technology necessary for a properly functioning wood energy system that will generate thermal and/or electrical energy for the facility identified above.*** Include copies of price quotes and estimates to support the costs included in this box.

### BOX 15. Requested Reimbursement Amount

Estimated dollar amount of the Wood Energy Conversion cost-share that is being requested by the facility from the Nebraska Forest Service (NFS) after the wood energy system installation has been completed and all invoices have been paid to contractors. ***This amount is equal to up-to 50% of total estimated project cost (BOX 14), with a funding maximum determined by annual program allocation.*** For information regarding annual funding availability, contact Adam Smith, (402) 472-1276 or [asmith11@unl.edu](mailto:asmith11@unl.edu)

### BOX 16. Application and Project Approval

Requires signatures from the organization representative requesting cost-share funding and the NFS Director/State Forester. These signatures represent each party's project approval and obligation of estimated reimbursement funds from **BOX 15** to the organization identified above for the installation of a wood energy system.

### BOX 17. Performance Certification

Completed after the project has been concluded, this box requires signatures from the organization representative and the NFS Director/State Forester. These signatures represent each party's approval to fund the reimbursement equal to the amount included in **BOX 15** (not to exceed 50% of the actual final project cost) and contingent on NFS receipt of proper invoice documentation confirming that final payments have been made to contractors and final inspection by NFS staff.