

## Dollar and Energy Saving Loans Waste Minimization Project Summary



1. Name of Borrower	Project Title     A. Project Street Address or Location Legal Description				
3. Contact Person for Project					
5. Contact Person Mailing Address					
City	4a. Age of Existing Building or Equipment				
Contact Person Telephone Number	-ax Number	City State		Zip Code	
6. Waste Minimization Project Type	7. Describe Current Pro	ccess Which This Project Will Improve			
□ Renew or Recover Solvents, Chemicals or Abrasives for Further Use On-Site □ Modify Process to Require Fewer or Lower- Toxicity Solvents □ Convert to Reusable or Low-Volume Packing or Shipping Materials □ Control Inventory to Reduce Waste Produce New or Additional Products from Current Waste Stream □ Reduce Volume of Mixed Waste by Separating Hazardous Components □ Other (describe)  9. List Major Equipment Items Needed to Comp	-	Vaste Reduction Project			
10. Estimated Life Expectancy of Equipment Lis	sted on Line 9 and/or Exped	cted Useful Life of Project			
11. Operating cost BEFORE project (From wo	rksheet)		. 11	/yr	
12. Operating costs AFTER project (From worksheet)				/yr	
13. Operating cost savings (Line 11 minus line 12)			. 13	/yr	
14. Total installed project cost					
15. Simple payback (Line 14 ÷ line 13)			. 15	years	
	ledge I have read and understand the instru	ooth the existing conditions and the waste minimization project which I intend to unctions on page 4, and I will permit my lender and the Nebraska Energy Office, as the			
sign here Signature of Borrower		Date			

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

MAIL THIS FORM, PRICE QUOTES, AND ALL SUPPORTING DOCUMENTATION ALONG WITH THE NAME, MAILING ADDRESS, TELEPHONE NUMBER AND CONTACT PERSON FOR THE PARTICIPATING NEBRASKA LENDER YOU WILL BE USING TO FINANCE THE PROJECT, TO THE:

NEBRASKA ENERGY OFFICE, P.O. BOX 95085, LINCOLN, NE 68509, PHONE 402-471-2867, FAX 402-471-3064

### **FLOW DIAGRAMS**

See Instructions on Page 4 PAGE 2 OF 4 **Before Energy Inputs Raw Material Inputs Operations and Maintenance** Materials Labor **Old Process BEFORE Project Products** Non-Regulated Wastes **Regulated Wastes** Solids Solids Liquids By-Products Liquids Gases and Vapors Gases and Vapors **After Energy Inputs Operations and Maintenance Raw Material Inputs** Materials Labor **New Process AFTER Project Products Regulated Wastes Non-Regulated Wastes** Solids Solids Liquids By-Products Liquids

Gases and Vapors

Gases and Vapors

# FORM **36**

## Worksheet see instructions on page 4

PROCESS INPUTS AND OUTPUTS			BEFORE PROJECT		JECT	AFTER PROJECT		
Material, Energy, or Waste Name or Description	Units of Measure	Cost Per Unit	Units Used Per Year	Annual Permit Costs	Total Annual Costs	Units Used Per Year	Annual Permit Costs	Total Annual Costs
aw Materials, Solvents, Etc.								
nergy Sources								
peration and Maintenance								
egulated Wastes								
on-Regulated Wastes								
otal Operating Costs			<u> </u>				er Project	

#### **INSTRUCTIONS**

#### for Form 36, Waste Minimization

Complete this form and submit it, with all supporting documentation and cost quotes, to the Nebraska Energy Office, P.O. Box 95085, Lincoln NE 68509 (402-471-2867). The Energy Office will verify that the proposed project qualifies for financing and, if it does, mail your lender a Technical Audit Acceptance. You will make application with your lender for a low-interest loan to install the project. Your lender will then obtain a commitment of funds from the Energy Office. Do NOT begin the project until you are notified by your lender that this commitment has been received. Maximum loan length is 10 years.

- **Line 1.** Write the name of the borrower.
- **Line 2.** Write a descriptive title for the intended project.
- **Line 3.** Name the person who is the primary contact for any technical questions if different than the borrower (typically the person completing this audit).
- **Line 4.** Identify the facility where the project will be installed. Give a street address, city and zip code if available. Otherwise, give the legal description of the property. Provide age of existing building or equipment.
- **Line 5.** Write the mailing address of the project contact person.
- **Line 6.** Mark the box for the project type which best describes the goals of the waste minimization project. If you select "other", explain briefly how your project will accomplish the goal of reducing the volume and/or toxicity of your current wastes.
- **Line 7.** Describe the process in your current operation which is the focus of the proposed project. What does the process accomplish or produce and what are the primary wastes.
- **Line 8.** What waste minimization project do you want to finance with a loan? How will this project improve the process described on Line 7? How will it reduce the volume and/or toxicity of wastes?
- **Line 9.** List the major items of equipment which will be installed or modified to accomplish the project. Attach bids or price quotes for all new equipment or labor necessary to complete the project.
- **Line 10.** How many years can the equipment listed on Line 9 be expected to operate without replacement or major overhaul? If the project includes modification of existing equipment, what is the remaining useful life of that equipment?
- **Lines 11-13.** Complete the Worksheet. Then copy the BEFORE Project and AFTER Project operating cost totals to Lines 11 and 12. Subtract Line 12 from Line 11 to calculate the savings in operating cost. Write the result on Line 13.

**Line 14.** Add the price quotes or bids for all equipment and installation labor necessary to complete the project.

**Line 15.** Divide Line 14, the project cost, by Line 13, the annual cost savings. This is the simple payback of the project — the period of time it will take for the (undiscounted) operating cost savings to repay the installation cost of the project.

#### **FLOW DIAGRAMS**

These provide a visual representation of the inputs to and outputs from the process, both BEFORE the project and AFTER the project. No numbers are needed on these diagrams — just the names of the various inputs and outputs.

**BEFORE Project.** On the "Before" diagram, list all the major raw materials, energy inputs and regular operation and maintenance requirements which go into the current process. Then list the product and any by-products which are not considered waste and list the significant waste streams produced by the current process.

**AFTER Project.** Complete the "After" diagram in the same manner but showing all changes in inputs or outputs which will result from completing the project.

#### **WORKSHEET**

**Process Inputs and Outputs.** Refer to the Flow Diagrams and list all inputs and outputs from the BEFORE Project diagram which change as a result of this project. Then add any new inputs or outputs from the AFTER Project diagram. For each item listed, mark the normal units of purchase or measure and your current unit cost.

**BEFORE Project.** For each of the items listed, mark the number of units used or produced by this process in an average or the most recent year. For any items which require a permit for use or disposal, mark the actual annual permit cost in an average or the most recent year. Calculate the annual cost for each item as (units per year x cost per unit) + permit cost. Then total the annual costs and write the sum at the bottom of the column and on Line 11 of the Summary.

**AFTER Project.** Complete these columns similarly to the "Before" columns, but using the expected units and permit costs "After" project installation for the same production. Use the same unit cost unless your actual cost will change as a result of this project. Write the total at the bottom of the column and on line 12 of the Summary.