ENERGY SAVINGS FOR BUSINESS

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ESB Small Producers Energy Efficiency Deployment (SPEED)

Process Heating Checklist

March 7, 2022

Version 1.0

EMISSIONS REDUCTION ALBERTA

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INTRODUCTION

This document is intended as a guide to support the submission of accurate and complete Process Heating project applications. All applicants with Process Heating should ensure the application meets the SPEED Eligibility Requirements set out in the Participant Terms and Conditions, Contractor Code of Conduct and Eligible Measures List. The applicant must submit the requested documentation and answer the questions contained within this document.

This checklist includes guidance for what needs to be entered in each input field at Step 4 and Step 5 of the Application process. Step 5 specifically describes which documents need to be uploaded and their purpose.

GUIDANCE ON APPLICATIONS

The following sections provide guidance on Process Heating applications, ensuring that they are complete, accurate and comprehensive.

The applicant and/or contractor will also need to provide the following information in Step 4 and Step 5 of the application submission, as further described in the tables below.

STEP 4 OF PRE-PROJECT APPLICATION

ECONOMIZER

- Conventional (Non-Condensing) Economizer
- Condensing Economizer

Field	What to Enter	How Data or Input Provided is Used
Quantity	Enter the number of measures being installed.	• Used to calculate eligible incentive. • Post-project QA/QC.
Specification Sheet	Upload the specification sheet for the measure. Indicate/circle which specific equipment is being used for the project.	• Post-project QA/QC.
Boiler System Annual Operating Hours	Enter annual runtime for existing boiler system.	• Estimating energy savings achieved.
Boiler Input Energy (MBH)	Enter the total MBH of all installed boilers. If any boiler(s) is/are on standby, please indicate on a separate sheet and upload it.	• Estimating energy savings achieved.
Boiler Thermal Efficiency (%)	Enter average efficiency of all operating boilers (exclude the standbys) but also upload a separate document showing efficiency of each installed boiler (including the standbys).	• Estimating energy savings achieved.
Equipment & Material Costs	Enter equipment and material costs as indicated on the invoice/final quote.	• Calculate the eligible incentive. • Post-project QA/QC.
Labour Cost	Enter labour costs as indicated on the invoice/final quote.	• Calculate the eligible incentive. • Post-project QA/QC.
Design Cost	Enter design costs and include all other costs as indicated on the invoice/final quote.	• Calculate the eligible incentive. • Post-project QA/QC.

STEAM BOILERS

Field	What to Enter	How Data or Input Provided is Used
Quantity	Enter the number of measures being installed.	• Calculate the eligible incentive. • Post-project QA/QC.
Specification Sheet	Upload the specification sheet for the measure. Indicate/circle which specific equipment is being used for the project.	• Post-project QA/QC.
Boiler System Annual Operating Hours	Enter annual runtime for existing boiler system.	• Estimating energy savings achieved.
Boiler Input Energy (MBH)	Enter the total MBH of all installed boilers. If any boiler(s) is/are on standby, please indicate on a separate sheet and upload it.	• Estimating energy savings achieved.
Boiler Thermal Efficiency (%)	Enter average efficiency of all operating boilers (exclude the standbys). Upload a separate document showing efficiency of each installed boiler (including the standbys).	• Estimating energy savings achieved.
Boiler Application	Select from the list the boiler application: • Space Heating • Water Heating • Process Heating • Combination	• Estimating energy savings achieved.
Equipment & Material Costs	Enter equipment and material costs as indicated on the invoice/final quote.	• Calculate the eligible incentive. • Post-project QA/QC.
Labour Cost	Enter labour costs as indicated on the invoice/final quote.	• Calculate the eligible incentive. • Post-project QA/QC.
Design Cost	Enter design costs and include all other costs as indicated on the invoice/final quote.	• Calculate the eligible incentive. • Post-project QA/QC.

STEAM FITTINGS AND PIPE INSULATIONS

Field	What to Enter	How Data or Input Provided is Used
Quantity	Enter the number of measures being installed.	• Used to calculate eligible incentive. • Post-project QA/QC.
Specification Sheet	Upload the specification sheet for the measure. Indicate/circle which specific equipment is being used for the project.	• Post-project QA/QC.
Boiler System Annual Operating Hours	Enter annual runtime for existing boiler system.	• Estimating energy savings achieved.
Boiler Input Energy (MBH)	Enter the total MBH of all installed boilers. If any boiler(s) is/are on standby, please indicate on a separate sheet and upload it.	• Estimating energy savings achieved.
Boiler Thermal Efficiency (%)	Enter average efficiency of all operating boilers (exclude the standbys). Upload a separate document showing efficiency of each installed boiler (including the standbys).	• Estimating energy savings achieved.
Pipe Location	Select from the list the pipe location: • Indoor (Conditioned Space) • Indoor (Unconditioned Space) • Outdoor	• Estimating energy savings achieved.
Length of insulation (feet)	Enter total length of insulation for diameter selected. For fittings use equivalent pipe length.	• Calculate the eligible incentive. • Post-project QA/QC.
Pipe Diameter (inches)	Enter nominal pipe diameter.	• Calculate the eligible incentive. • Post-project QA/QC.

Equipment & Material Costs	Enter equipment and material costs as indicated on the invoice/final quote.	• Calculate the eligible incentive. • Post-project QA/QC.
Labour Cost	Enter labour costs as indicated on the invoice/final quote.	• Calculate the eligible incentive. • Post-project QA/QC.
Design Cost	Enter design costs and include all other costs as indicated on the invoice/final quote.	• Calculate the eligible incentive. • Post-project QA/QC.

STEAM TRAPS

Field	What to Enter	How Data or Input Provided is Used
Quantity	Enter the number of measures being installed.	• Calculate the eligible incentive. • Post-project QA/QC.
Specification Sheet	Upload the specification sheet for the measure. Indicate/circle which specific equipment is being used for the project.	• Post-project QA/QC.
Is Steam Saturated or Superheated?	Select from the list either 'Saturated' or 'Superheated'.	• Post-project QA/QC.
Steam Trap Diameter (inches)	Enter steam trap diameter in inches.	• Used to calculate eligible incentive. • Post-project QA/QC.
Steam Trap Type	Select from the list the steam trap type: • Thermostatic • Mechanical Float • Mechanical Inverted Bucket • Thermodynamic	• Estimating energy savings achieved.
Boiler System Annual Operating Hours	Enter annual runtime for existing boiler system.	• Estimating energy savings achieved.
Boiler Input Energy (MBH)	Enter the total MBH of all installed boilers. If any boiler(s) is/are on standby, please indicate on a separate sheet and upload it.	• Estimating energy savings achieved.
Boiler Thermal Efficiency (%)	Enter average efficiency of all operating boilers (exclude the standbys). Upload a separate document showing efficiency of each installed boiler (including the standbys).	• Estimating energy savings achieved.

Equipment & Material Costs	Enter equipment and material costs as indicated on the invoice/final quote.	• Calculate the eligible incentive. • Post-project QA/QC.
Labour Cost	Enter labour costs as indicated on the invoice/final quote.	• Calculate the eligible incentive. • Post-project QA/QC.
Design Cost	Enter design costs and include all other costs as indicated on the invoice/final quote.	• Calculate the eligible incentive. • Post-project QA/QC.

STEP 5 OF PRE-PROJECT APPLICATION: ALL PROCESS HEATING MEASURES

Field	What to Enter	How Data or Input Provided is Used
Cost Quote	Quote or invoice should be itemized to include quantity, brand, model numbers for equipment, applicant name, contractor name, facility address and date (Sample quote provided in the Appendix). Costs should be indicated separately for: • Equipment and Material • Labour • Design and Others • Taxes	• Cross-reference against provided costs. • Calculate the eligible incentive. • Post-project QA/QC.
Electricity Bill for Facility	Upload the most recent electricity bill available for the facility.	• Ascertain rate class.

POST-PROJECT APPLICATION

Note that for the post-project application, you will be required to confirm that no changes were made from the pre-project application, unless an Application Change Approval Notice was issued by ERA.
In terms of documents required, you will need to provide evidence of the following:

- Invoice for Project Costs
- Proof of Payment for Project Costs
- Post-Project Photo
- Conditions stated in the Notice of Pre-Approval

Participant may be subject to a QA/QC check and asked for additional documentation to facilitate a site visit.

APPENDIX

SAMPLE INVOICE / FINAL QUOTE

Quotes should be itemized to include quantity, brand, model numbers for equipment, applicant name, contractor name, facility address and date. Costs should be indicated separately for:

- Equipment and Material
- Labour
- Design and Others
- Taxes

A sample quote is provided below:

Company Logo	Company Address:	xxxx		
	Website:	xxxx		
	Phone:	xxxx		

	PROJECT NAME:	XXXX	Project Start Date:	xxxx
			Project Completion Date:	xxxx

Applicant Company:	xxxx		
Applicant Name:	xxxx	Quote #:	xxxx
Facility Address:	xxxx	Date:	xxxx
Phone:	xxxx		

Measure #1

Fixture Description	LITHONIA CPANL 2X4 40/50/60LM 40K M2	DLC	PMS5PPS6
Measure Description	LED 2x4 Recessed Light Fixture - 4,500 – 5,999 Lumen Output	QTY	63

Measure Equipment/Material Costs	$ 6,538.71
Measure Labour Costs	$ 13,251.74
Measure Design/Other Costs	$ -
Measure Total Costs	$ 19,790.45

Measure #2

Motor Description	ILA7080-H Siemens Semiotics 10 hp		
Measure Description	Premium efficient motor –ODP-10 hp	QTY	1

Measure Equipment/Material Costs	$ 934.10
Measure Labour Costs	$ 123.11
Measure Design/Other Costs	$ 50.00
Measure Total Costs	$ 1,107.21

Measure #3

Sensor Description	Occupancy Sensor		
Measure Description	Fixture Mounted Sensor	QTY	305

Measure Equipment/Material Costs	$ 15,250.00
Measure Labour Costs	$ -
Measure Design/Other Costs	$ -
Measure Total Costs	$ 15,250.00

Total

Total Equipment/Material Costs	$ 22,722.81
Total Labour Costs	$ 13,374.85
Total Design/Other Costs	$ 50.00
Total Project Cost	$ 36,147.66
GST	$ 1,807.38
Total Cost w/ GST	$ 37,955.04