

Engine Block Heater – Stationary (BPA Qualified)

Backup generators use electricity to keep coolant warm enabling the generator to maintain quick-start readiness. Updating the heater type has been shown to result in cost effective savings. Generators can be found in numerous locations throughout the region including municipal lift stations, emergency services (police, fire, hospital) facilities, schools, communication towers, grocery stores, utility facilities, gas stations, hotels, etc.

Requirements and Specifications

Qualifying applications for forced circulation Engine Block Heaters (EBH) must be installed in generators or engines that meet the following requirements:

- The forced circulation EBH must replace a thermo siphon electric resistance block heater.
- The generator or engine must be stationary and fixed.
- The install must meet manufacturer's recommendations and be performed by a manufacturer-certified installer.

Documentation Requirements

Documentation Description	Retention/Submittal Locations		
	BPA Energy Efficiency Reporting System	eedocs@bpa.gov or fax 1-866-535-7955	Customer File
End-user identifying information including unique site ID and address	X		X
Equipment/contractor invoice showing (a) measure requirements have been met (e.g., manufacturer, model number, type, size and quantity of equipment or product installed/used), (b) the order/purchase date (c) cost (d) installer's manufacturer assigned training number		X	X
Manufacturer's installation checklist			X

Reimbursement

Replacement Heater Size	Reimbursement
< 3 kW	\$200.00
≥ 3 kW	\$1,500.00

Limited Availability Emerging Technology Field Test Projects

Requirements and Specifications

Emerging Technology Field Test Projects allow BPA to collect detailed data to more accurately estimate savings and potential performance to create future deemed and BPA-qualified measures. BPA may contract with third parties to deploy the emerging technology, evaluate performance and verify energy savings.

On the [BPA Emerging Technologies Web site](#), BPA maintains a list of available emerging technology projects with defined eligibility requirements, number of installations targeted, participation obligations, savings and reimbursement.

If a customer is eligible for and wishes to participate in a project, it must use the Option 1 custom project process and submit a custom project proposal that uses the Engineering Calculations with Verification Protocol for measurement and verification. BPA will provide the information necessary to complete the custom project documentation and will provide staff assistance in the development of the proposal and completion report.

BPA may require metering to continue after project completion and may require customers to perform additional duties to support the research efforts (e.g., customers may be asked to provide access to end-user billing history and contact information). If additional metering is required, it will not change customers' reimbursement or savings.

Documentation Requirements

Customers must follow the Option 1 [custom project documentation requirements](#) and may be required to provide end-user billing information and contact information.

Reimbursement

See the [custom programs and projects reimbursement table](#).

Variable Frequency Drives in Small Compressed Air Systems

Requirements and Specifications

VFDs applied to a single air compressor 75 hp or less must use the RTF-approved NW Regional Small Compressed Air Savings Calculator. Each VFD compressor must be submitted as an individual project (i.e., compressors may not be combined or divided).

The calculator will determine energy savings.

Documentation Requirements

Documentation Description	Retention/Submittal Locations		
	BPA Energy Efficiency Reporting System	eedocs@bpa.gov or fax 1-866-535-7955	Customer File
End-user identifying information including unique Site ID and address	X		X
Equipment/contractor invoice showing (a) measure requirements have been met (e.g., manufacturer, model number, type, size and quantity of equipment or product installed/used), (b) the order/purchase date and (c) cost			X
Completed NW Regional Compressed Air Savings Calculator (available in the Document Library)		X	X

Reimbursement

Though this is not a custom project, reimbursement is paid according to the [custom programs and projects reimbursement table](#).

4. Custom Programs and Projects

4.1 Custom Programs and Projects General Requirements

Projects started as custom projects or as part of a custom program must be completed using the custom path under which they were started and cannot be submitted under a deemed option. Custom programs and projects may not result in fuel switching and may not include deemed measures (savings or reimbursement), unless otherwise provided in the Manual.

4.1.1 Custom Programs and Projects Reimbursement Levels

Projects are reimbursed at the rate in place at the time the custom project was approved (proposal approval for Option 1/project start date for Option 2) and cannot be canceled and resubmitted under a different reimbursement rate. For Option 1 custom projects, if BPA's reimbursement rate changes between the date the project proposal was submitted and the date the project proposal was approved by the COTR, the estimated BPA reimbursement amount in the proposal may not reflect the approved reimbursement rate.

Customers must pass through the entire BPA-reimbursement received to their end users if such reimbursement is for an Energy Smart Industrial project; a progress payment; or funded by large project funds. Reimbursement is currently calculated according to the tables below.

Project Type	Measure Life (Years)	Sector	Maximum Reimbursement Rate (\$/kWh)
EnergySmart Grocer	1	Commercial	\$0.025
	2-3	Commercial	\$0.05
	4+	Commercial	\$0.17
Non-Residential Lighting (excluding EnergySmart Grocer)	All	<ul style="list-style-type: none"> • Agricultural • Commercial • Industrial 	\$0.18
Retrofit Construction (excluding EnergySmart Grocer and Non-Residential Lighting)	1	All	\$0.025
	2-3	All	\$0.05
	4-19	<ul style="list-style-type: none"> • Agricultural • Industrial • Utility Distribution 	\$0.25
		<ul style="list-style-type: none"> • Commercial • Residential 	\$0.20
	20+	All	\$0.35
New Construction and Major Renovation (excluding EnergySmart Grocer and Non-Residential Lighting)	1	All	\$0.025
	2-3	All	\$0.05
	4-19	<ul style="list-style-type: none"> • Agricultural • Residential • Commercial 	\$0.27
		<ul style="list-style-type: none"> • Industrial • Utility Distribution 	\$0.25
	20+	<ul style="list-style-type: none"> • Agricultural • Commercial • Industrial • Residential 	\$0.35
		Utility Distribution	\$0.25

4.1.3 Custom Programs and Projects Documentation Requirements

Documentation Description	Retention/Submittal Locations		
	BPA Energy Efficiency Reporting System	eedocs@bpa.gov or fax 1-866-535-7955	Customer File
<i>Custom Programs</i>			
Custom Program Proposal Template		X	X
Evaluation Plan		X	X
Evaluation Report for completed evaluated program		X	X
End-user payment documentation (e.g. canceled check), if pass-through is required or for all projects requesting less than the total available BPA reimbursement			X
<i>Option 1 Custom Projects</i>			
Option 1 Custom Project Calculator (Send to BPA (via eedocs@bpa.gov or fax) for proposal and completion report review with all supporting documentation, including associated lighting calculator being used for estimates. Submit to BPA Energy Efficiency reporting system after approval of project completion report, when requesting BPA reimbursement or reporting self-funding.)	X	X	X
End-user payment documentation (e.g. canceled check), if pass-through is required or for all projects requesting less than the total available BPA reimbursement			X
<i>Option 2 Custom Projects</i>			
Option 2 Custom Project Calculator	X		X
Responsible entity implementing M&V plan, M&V plan, pre and post measurement data, assumptions and any modeled or calculated data used to determine energy savings			X
Detailed project description, baseline conditions and operating conditions necessary to determine energy savings and if included for calculating the B/C ratio, documentation showing how the projected non-energy benefits and operations and maintenance costs were calculated			X
End-user payment documentation (e.g. canceled check), if pass-through is required and effective or for all projects requesting less than the total available BPA reimbursement			X

4.2 Custom Programs

This section will provide information on (1) general requirements, (2) the approval and modification process and (3) reporting and reimbursement.

4.2.1 Custom Program Requirements

Customers may submit Evaluated Custom Programs or Pre-approved M&V Custom Programs. The requirements of both programs will be discussed together, and where differences between the programs exist, they will be clearly noted. The custom program must include multiple installations such that the installations are not suited for the [custom project](#) process. The custom program must be cost-effective (TRC B/C ratio > 1.0) on a prospective (planning) basis, and must be TRC cost-effective retrospectively, as outlined in reporting and reimbursement requirements.

The customer may cease its custom program participation at any time using the [COTR Request and Acknowledgment Procedure](#). BPA shall have no obligation for costs incurred for unreported savings.