Customer Report

NGIA Commercial Hybrid Heating Pilot Program

CenterPoint Energy NGIA Hybrid Heating Pilot

HVAC Customer Report

Energy Savings and Cost Breakdown

Installation Address

Mankato City Of
10 Civic Center Plz
Mankato, MN 56001

Customer Account Details

Mankato City Of
10 Civic Center Plaza
Mankato, MN 56001
CenterPoint Account: 6103667

Contractor Information

Prepared for

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10 Civic Center Plaza
Mankato, MN 56001

Prepared by HVAC Specialist

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CenterPoint Energy

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HVAC Upgrades Cost

Initial DFRTU Equipment Cost	*Before Rebate*	$400,000.00
Estimated NGIA Pilot Utility Rebate		$100,000.00
Final DFRTU Equipment Cost	*After Rebate*	$300,000.00

Utility Cost Analysis

	Demand kW	Demand PCKW	Heating kWh	Cooling kWh	Heating Dth	Net Cost
Annual Energy Savings	1.264	1.137	-63,412	8,233	765.1	
Annual Cost Savings	$138.99		-$5,428.07	$704.74	$5,791.81	$1,207.39

Savings over Lifetime of Equipment

Cost Savings	GHG Heat	GHG Cool	GHG Total
$18,110.85	623.6 tons	16.0 tons	639.6 tons

Greenhouse Gas (GHG) Emissions Reduction calculations: The Greenhouse Gas (GHG) accounting framework established under the Minnesota National Gas Innovation Act evaluates lifecycle emissions that would have been released over the project's lifetime if not for the pilot, including emissions resulting from fuel extraction, processing, and distribution, along with point of use combustion. The total carbon intensity metric used for evaluation of emissions reductions from natural gas is 65.09kgCO2e/Dth natural gas reduced. Emissions from added electrical use are calculated using a carbon intensity metric that varies by electric provider and by year within the project's lifetime. A project lifetime of 15 years was assumed for rooftop units. Please contact CenterPoint Energy for more details on how GHG reduction estimates used in this report were calculated.

Savings estimates are based on standard engineering calculations and are NOT guaranteed. Your actual savings may be higher or lower depending on various factors, including how you operate your equipment. Electric utility rates are estimated at $0.0856/kWh and $9.1634/kW, where demand cost savings occurs primarily during the summer months peak rate hours of 9am to 9pm. Gas utility rates are estimated at $7.57/Dth.

Estimated Utility Rebates are based on 40% of equipment costs, up to 5 units or $100,000.00. All rebated equipment must be pre-approved by CenterPoint or their vendor and includes the hybrid heating unit, along with other pre-approved materials that are required for operation of the equipment. A detailed invoice showing seperated equipment and labor costs will be required before a rebate is issued. Rebate totals identified on this report are subject to change based upon final invoice price provided after installation is complete.

Hybrid Heating Unit Details

Unit #1

Unit Size (tons)	Make:	Daikin		Location:	
20	Model:	DPSH20B		Serial #:	

Notes:	**Lifetime GHG Emmissions** (tons)		**Annual Savings**	
	Reduced Gas GHG	169.8	Dth	173.9
	Added Electric GHG	20.3	kW	0.990
	Net GHG Reduction	149.5	PCKW	0.891
			kWh Cooling	2,907
			kWh Heating	-13,332
			Net Bill Savings	$532.90

EER	10.7	COP@47	3.5		
IEER	18.47	COP@17	2.6	NGIA Pilot Rebate	$40,000.00
		Gas Cap.	240,000		

Unit #2

Unit Size (tons)	Make:	Daikin		Location:	
68	Model:	DHSA068		Serial #:	

Notes:	**Lifetime GHG Emmissions** (tons)		**Annual Savings**	
	Reduced Gas GHG	577.2	Dth	591.2
	Added Electric GHG	87.1	kW	0.274
	Net GHG Reduction	490.1	PCKW	0.246
			kWh Cooling	5,326
			kWh Heating	-50,080
			Net Bill Savings	$674.49

EER	9.4	COP@47	3.29		
IEER	15	COP@17	2.26	NGIA Pilot Rebate	$60,000 (Capped)
		Gas Cap.	816,000		

Customer Acknowledgment & Agreement

I, the undersigned, agree that to the best of my knowledge, the equipment specified in this report is to be installed at the address and CenterPoint account listed. I understand that the energy or cost savings reflected in this analysis are estimated, and that Center for Energy and Environment and CenterPoint Energy do not guarantee that a specific level of energy or cost savings will result from the implementation of energy conservation measures or the use of products funded under this program.

I understand that the HVAC equipment specified in this report is specific to the replacement of said equipment, and that this program is not a holistic assesment of the entire system, and will not result in a comprehensive list of system deficiencies or needed repairs.

I understand that all mechanical code violations that are found during the HVAC sytem's inspection or during installation must be brought up to code at my expense. Costs for correcting code violations are NOT included in the costs or rebates specified in this document.

By signing below, I certify that I have read, understand and will comply with the above statements and the attached Rules and Requirements.

Signature

Date

CenterPoint Energy NGIA Commercial Hybrid Heating Pilot Program

Program Rules and Requirements

The CenterPoint Energy NGIA Commercial Hybrid Heating pilot program, administered by Center for Energy and Environment ("CEE") and funded through CenterPoint Energy, offers rebates to eligible business customers ("Participant") who purchase and install qualifying dual fuel Roof top units in existing buildings. The intent of the pilot program is to incentivize CenterPoint customers to install dual fuel roof top units (DF RTU) by defraying a portion of the cost of the DF RTU.

Participant Qualifications

Pilot program rebates apply only to qualified CenterPoint customers with an active commercial gas account in CenterPoint Energy's Minnesota service territory that meet pilot program eligibility requirements. The Vendor or Participant must verify with a CEE consultant and CenterPoint Energy that a customer is eligible for pilot program rebates before committing to purchasing equipment or implementing a project. Funds are limited and not all eligible properties will qualify. To determine if a business qualifies for the pilot program please contact CEE at (612) 244-2428.

Eligibility Requirements

1. Rebate items must be installed at the CenterPoint Energy gas account listed on the application.

2. The CenterPoint Energy gas account to which the rebate is being applied must be in good standing with the company.

3. All equipment must be new. Used or rebuilt equipment is not eligible for a rebate.

4. All removed HVAC equipment, refrigerant and hazardous waste must be properly recycled and cannot be sold or reused at another location. Documentation may be required to ensure compliance with proper disposal of equipment.

5. CenterPoint Energy and CEE recommend following AHRI standard practices (Standards & Guidelines | AHRI).

6. Equipment that has already been rebated through any other CenterPoint Energy rebate programs is ineligible for a rebate under the NGIA Commercial Hybrid Heating pilot program. This includes upstream programs that provide incentives to manufacturers, distributors and retailers to sell products at a discounted price.

7. CEE reserves the right to disallow a rebate if it determines, in its sole judgment, that the HVAC-R technology is inappropriately applied or will not appropriately condition the space.

8. Equipment must be purchased, properly installed and fully operating prior to receiving a rebate.

Vendor Responsibilities

9. The "Vendor" is any person or company that is consulting on the project, selling the project to the participant, completing the work and/or supplying the materials. Vendor is an independent contractor and not an agent or representative of CenterPoint or CEE, has no authority to bind CenterPoint or CEE, and is solely responsible for sub-contractors the Vendor hires to do some or all of the work and/or supply materials.

10. The Vendor must clearly communicate to the Participant the purpose and requirements of the pilot program, including eligibility requirements for rebates. The Vendor must involve the CEE consultant in communications with the Participant, and must keep the CEE consultant fully informed regarding all details of the transaction.

12. Any inaccuracies concerning project specifications must be reported immediately to a CEE consultant so they can be addressed, the rebate recalculated if necessary and a revised report issued to the Vendor and the Participant.

13. Vendor must contact a CEE consultant whenever there are changes to the project so that equipment eligibility can be confirmed and the rebate value can be re-calculated if necessary.

Rebate Calculations

17. Rebates cannot exceed 40 percent of the Participant's Equipment costs, unless otherwise specified by the Program.

18. "Participant's Equipment Cost" means the Participant’s financial obligation for the HVAC-R upgrade based on the total cost of the Hybrid Heating system equipment that is required for operation of the unit. Ancillary equipment may not qualify for inclusion in the rebate calculation unless specifically approved by the program.

Program Payment Restrictions

19. The following types of financial transactions are not allowed as methods of payment by the Participant for the project: barter, in-kind donations and performance contracting. To receive a rebate, the participant must provide proof of payment for the equipment installed. Participant equipment cost must be a non-zero amount to qualify for a rebate.

Invoice

20. The Vendor must submit an accurate, complete and transparent final invoice for the completed HVAC upgrade. All parties involved in the project, including the Participant and CEE, must have a clear understanding of the scope of work and associated project costs, including any Deductions that have been applied.

21. Invoice(s) submitted must include: (1) itemized quantity, manufacturer's make and model numbers for each material item, (2) a lump sum amount for both material and labor, and (3) grand total project cost. In some cases, original equipment manufacturer (OEM) specification sheets may be requested for verification or clarification.

22. The Vendor must provide the Participant an invoice that reflects the same financial information that is submitted to CEE, including any Deductions that have been applied.

Verification

23. CEE reserves the right to inspect Participant's facility(ies) for installation of materials listed on this rebate application and will need access to survey the installed project. If the inspection determines that Participant did not comply with these Rules and Requirements, any rebate received by Participant must be promptly returned to CenterPoint Energy.

24. Vendor agrees to promptly provide CEE with such additional documentation and information as may be necessary to verify compliance with these Rules and Requirements, such as copies of cancelled checks or other relevant receipts/records as proof that the Participant paid the amount reflected on the invoice. Rebates for that project will not be paid until all requested documentation and information is provided and verified.

Rebate Application and Payment

25. Pilot program rules and rebate eligibility requirements are subject to change. It is the Participant's and Vendor's responsibility to verify with CEE that estimated rebates are still valid before committing to, purchasing equipment for or implementing a project.

26. CenterPoint Energy and CEE are not responsible for any lost, late, stolen, ineligible, illegible, misdirected or postage-due mail. All completed rebate applications and other submissions in connection with the pilot program become the property of CenterPoint Energy and CEE and will not be returned.

27. In cases of deferred payment, CEE reserves the right to process the rebate only when full payment is received by the Vendor from the Participant. All financed and alternate payment plans must be documented with detailed, legally obligating and signed contracts. CEE reserves the right to disallow any payment plan that its staff determines is not in compliance with the program design intent and rules.

28. Rebates will not be disbursed until the project is fully installed and verified.

29. Unless otherwise indicated, the rebate check will be sent to the Participant (i.e., CenterPoint Energy account holder) listed on the rebate application. CenterPoint Energy will issue rebates in the form of checks.

30. Once completed paperwork is submitted and approved, rebate payments are usually made in 6 to 8 weeks.

Special Notices

31. CenterPoint Energy and CEE reserve the right to refuse payment or participation in the pilot program if the Participant or Vendor violates pilot program design intent, rules and procedures. CenterPoint Energy and CEE are not liable for rebates promised to Participants as a result of a Vendor misrepresenting the program.

32. The pilot program is subject to 60 days' notice of cancellation. The Participant and Vendor are responsible for checking with a CEE consultant to determine whether the pilot program is still in effect and to verify program requirements.

33. CEE RESERVES THE RIGHT TO DISQUALIFY NONCOMPLIANT VENDORS FROM PARTICIPATION IN THE PILOT PROGRAM.

34. Upon signing the customer participation agreement, the customer must make a good faith effort to order equipment within 45 days of signature to remain in the program. If equipment is not ordered within 45 days, the customer must receive approval in writing from the CEE/CenterPoint Energy to remain in the pilot program.

Disclaimers

35. Do not endorse any particular vendor, manufacturer, product or system design by offering these rebates;

36. Are not responsible for any tax liability imposed on the Participant as a result of the payment of rebates;

37. EXPRESSLY DISCLAIM ALL WARRANTIES, EXPRESSED OR IMPLIED, AND ANY IMPLIED WARRANTIES OF

MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE WITH RESPECT TO ANY PRODUCTS, EQUIPMENT, MATERIAL OR WORKMANSHIP PROVIDED, SUPPLIED OR INSTALLED IN CONNECTION WITH THE PILOT PROGRAM. Product warranties, if any, are issued by the equipment manufacturer(s) for the benefit of the Participant and/or Vendors.

38. Are not responsible for the disposal of equipment removed and replaced in connection with this pilot program;

39. In no event shall be liable for any indirect, special, incidental, consequential or punitive damages arising out of or relating to the pilot program;

40. Do not guarantee that a specific level of energy or cost savings will result from the implementation of products funded under this pilot program.

Equipment Requirements

41. All energy saving measures approved by the pilot program will have savings potential documented using program approved calculation methods. These methods will document baseline use and apply savings calculations to establish annual savings for recommendations. No outside calculations will be accepted without approval by the program administrator.

Measurement & Verification (M&V) Requirements

42. Participants will allow CEE employees and their contractors' on-site access with prior scheduling for the purpose of installing and maintaining test equipment until the end of the monitoring period, no later than December 2029. A minimum of three site visits will be required, one to install, one to verify installation, and one to remove.

a. Allow for the installation of a data logger with electric meters, temperature sensors, and other sensors to monitor the performance of the existing heating system. Participant understands and agrees that monitoring may be conducted for a period extending until December 2029.

b. Allow for the installation of a data logger with electric meters, temperature sensors, flow meters, and other sensors to monitor the performance of a newly installed heat pump roof top units.

c. Allow CEE employees access to the property for ongoing maintenance of the equipment and/or testing as necessary.

d. All sensors and equipment used only for monitoring will be removed by or at the direction of CEE at the end of the project.

43. Participant agrees not to move, unplug, obstruct or otherwise disturb or interfere with the associated test equipment.

44. Participant will use, maintain, and operate equipment installed as part of this study in accordance with manufacturer's instructions, warnings, and specifications.

45. Participant agrees to avoid unexpected or undisclosed changes to the site or heating systems that may affect data gathered or eligibility for the project, to the extent that is reasonably within participant's control.

a. Participants must notify the CEE representative listed in this agreement of any alterations to the site or site heating systems, including but not limited to the installation of new equipment outside of those installed for the purposes of the project, changes in property ownership that may affect eligibility or participation in the pilot program, and changes in site occupancy beyond those disclosed in the recruitment process.

b. Participant will notify the CEE representative listed in this agreement of such changes as soon as possible, preferably prior to when data collected may be affected or prior to when this change is in effect, whichever comes first.

Contact Information

Phone: (612) 244-2428.

Fax: (612) 335-5888.

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Minneapolis, MN 55401