# **RFP for Natural Gas Demand Response**

Issued by Xcel Energy

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# Introduction

Xcel Energy ("The Company") is seeking to implement a new natural gas demand response (DR) pilot program to further reduce peak energy demand in the Colorado service territory, particularly in constrained communities. This Request for Proposals (RFP) will provide guidelines for qualified vendors to prepare a proposal, submit for evaluation, and describe how a pilot program will be initiated if appropriate. The RFP will also address research questions that the Company will be seeking to answer if a pilot project is pursued. Proposals are due March 15, 2024.

### Background

### Xcel Energy

Xcel Energy is a leading electric and natural gas utility that serves customers in eight states across the Midwest and West regions of the United States. Xcel Energy is committed to delivering clean, reliable, and affordable energy to its customers, while also reducing its carbon footprint and enhancing its environmental performance.

### **RFP** Origination

This RFP is a continuation of work that was agreed to in the 2023 Colorado Settlement Agreement (Proceeding Number 22A-0315EG). As part of this agreement, the Company issued an RFI in 2023 for ideas related to new demand response programs. As a result of this RFI, the Company has decided to move forward with this RFP with the goal of creating a natural gas DR program to reduce peak natural gas demand, particularly in constrained communities.

The general approach of these programs will remain consistent with the requirements outlined in the RFI. All proposals should make use of advanced metering where available, be technology neutral, and reward participants with a pay-for-performance strategy. Programs may be for commercial or residential customers, or both.

In addition to results from the previous RFI, this RFP also incorporates the guidance and conclusions of the Colorado Public Utilities Commission's work in Proceeding Number 23M-0466EG.

### Electric Demand Response Filings

Xcel Energy currently offers a robust suite of electric demand management programs with over 500 MW under control today. For background on the programs currently offered please see the details in our 2024-2026 Colorado Demand-Side Management and Beneficial Electrification Plan, the 2024-2026 Transportation Electrification Plan, and the 2022-2025 Renewable Energy Compliance Plan.

### Natural Gas Demand Response Portfolio

Xcel Energy has conducted a natural gas DR pilot for customers in constrained mountain communities:

• Heat Savers – Smart thermostat program that adjusts participant's thermostat set points on cold winter days to reduce furnace usage during peak times.

# Objective

### Pilot Programs

The objective of this RFP is to find natural gas demand response opportunities to expand offerings in natural gas DR with unique programs or customers that do not overlap with Heat Savers. There is particular interest in evaluating capabilities of mechanisms to reduce gas usage in hybrid heat pump systems. Core objectives of this pilot are:

- Avoidance of investments in additional infrastructure to alleviate existing capacity constraints.
- Reduction in greenhouse gas emissions.
- Improve the reliability and resiliency of the gas system.

#### **Research Questions**

The following are some of the research questions that Xcel Energy wants to answer through potential pilot projects. RFP responses should consider these questions and how they will impact program design, implementation, measurement, reporting, etc:

- What is the potential reduction of peak natural gas demand usage through DR program designs and technologies, including but not limited to, different temperature setbacks, elevations, and different weather conditions?
- Are there commercially available technologies and program designs that can successfully reduce peak natural gas demand usage on either a localized distribution level or bulk-system level?
- How willing are customers to enroll in a natural gas DR program?
- What are the customer characteristics, preferences, and motivations for participating in the demand response program?
- What incentive amounts and structures do customers require to enroll and remain in this type of program?
- How often will customers opt out of individual events that are called and for what reasons?
- What are the customer satisfaction, acquisition, retention, and attrition rates for the demand response program? What can be done to improve overall satisfaction with the program and boost enrollment/event participation?
- If new equipment is required, does it perform as expected and deliver the results that were needed to facilitate the DR program?
- What are the effects of thermostat schedules and leveraging proper messaging to advise customers to modify?
- How does pre-heating affect event performance and customer satisfaction?
- Including snap-back, is there a net reduction of natural gas used during an event?
- What is the value of the program for the mass market vs targeted constrained areas?

#### Future Programs

Ultimately, Xcel Energy may launch a pilot or pilots to determine viability of programs. Pilot programs may address commercial or residential natural gas. Exact timing of pilot programs will be dependent on several factors, but the Company expects programs to begin Fall 2024 to collect data on the 2024 – 2025 heating season.

If a pilot program proves successful, the Company may consider expansion of the program. This will depend on a number of factors including the demand response benefits, cost benefits, and customer satisfaction with the pilot and willingness to continue participating.

# Proposal Requirements

A vendor may submit more than one proposal, but each proposal should be written and submitted separately. A complete proposal should not exceed 20 pages.

### Summary of Proposal

Create a summary of the proposed program in the form of a cover letter. This summary should not exceed five pages and should provide a high-level overview of the proposed program, the objectives it addresses, target customers, technology and equipment requirements, and any unique elements of the proposal the vendor would like to highlight.

The summary of proposal should address which of the following objectives it addresses, why these are the critical objectives to address, and how it addresses them:

- Avoidance of investments in additional infrastructure to alleviate existing capacity constraints.
- Reduction in greenhouse gas emissions.
- Improve the reliability and resiliency of the gas system.
- Evaluate DR reductions for a given measure across multiple timeframes, including weather and high-interval consumption data pre- and post-event.
- Quantification of snapback effects and net impact if any on capacity reductions at peak. Quantification should evaluate cost benefits with and without snapback.
- Qualitative analysis of overall impacts on the gas system in the context of system constraints, both current and future.
- Evaluation of variables in the program, including thermostat set-points, indoor temperatures, hot water usage, occupancy, and building-specific characteristics like age, size, insulation levels, etc.
- Data driven feedback embedded in the design of the program.
- Comparative analysis to a control group of non-participants through M&V.
- Applications focused on addressing those who can least afford technologies, live in disproportionately impacted communities, and face the greatest energy burdens. This may push the programs toward those that don't require Wi-Fi connectivity or in combination with efforts to expand Wi-Fi access.

In addition, it should make sure to address the following questions:

- What will the primary customer base and savings area be, how will it be unique when compared to Heat Savers, and how does this program enhance the current DR portfolio?
- How will the program work to improve on system performance compared to the current portfolio?
- What is the expected participation and natural gas savings, and how will the program ensure that these savings are realized?
- Does the program include mechanisms to reduce gas usage in hybrid heat pump systems?
- How will a pay-for-performance incentive structure be implemented?
- How will the program remain technology neutral for the end customer?

### Technical Requirements

All proposals must include a detailed section addressing the technical aspects of the program. Key areas of focus should include, but are not limited to:

- System level block diagram of the proposed solution, including:
  - o Control elements
  - o Interfaces
  - Databases
  - Communications (2-way)
  - Monitoring
  - Any other associated technology
- Description of features and functions of the system shown in the block diagram
- Any end-use devices or systems that the customer must have at their premise, what they are used to control, who owns these devices or systems, and how a technology neutral approach can be applied if they are customer owned
- Describe all communication paths that will be used, how the systems will be used, communications protocols and APIs that will be put in place to allow communication between the Company and any necessary equipment, and how communication will be technology neutral if customer owned equipment is required
- Describe any metering requirements and how the proposal will be capable of collecting and sharing real-time (or near real-time) usage data
- Describe how the pilot will enable the sharing of meter IDs
- Describe how the pilot will facilitate the connection to AMI meters or AMR meters
- Describe how the pilot will collect data on the timing and duration of DR events
- Describe how load curtailment will be achieved, including all processes and equipment required for curtailment, and any steps that a customer must take to participate in curtailment
- Describe interoperability of all equipment in the system, what protocols are supported, and how it will be able to scale from a pilot to full size program

- Describe all security measures taken to protect system communications, equipment, and customer data privacy and security
- Describe any expected maintenance requirements for equipment or software during the program period and how this might change with scale
- Describe what components might need upgrades, when, and why. Also discuss how future proofing is being considered when selecting hardware and software
- Describe in detail any requirements that are expected of Xcel Energy, including technology, hardware and software, databases, file transfer, telecom requirements, communications requirements, and equipment or processes that must be utilized for calling events

#### Customers

All proposals should address the following information regarding customers:

- Eligibility requirements for program participation
- Customer enrollment process
- How to distinguish potential customers from current participants in Heat Savers
- Expected recruitment and participation levels
- Expected natural gas savings and how the program will ensure performance from customers meets their commitment
- Any equipment, software or hardware, that customers must have or must acquire and how any installations will be handled
- How the program will ensure that customer sourced equipment may remain technology neutral
- Any customer education that may be required
- How a pay-for-performance incentive structure will be implemented
- How events, incentive structure, and other relevant information will be communicated with customers
- Process for customers to receive incentives and other event feedback

### Measurement and Verification

All proposals must address the measurement and verification methodology that will be applied for the pilot. This should include, but not be limited to, the following:

- What data will be collected and analyzed to determine performance, impacts, and outcomes of the program
- How many participants are required for statistically significant inferences to be made from the data
- How customer surveys and interviews will be used to measure customer satisfaction, engagement, and behavior change
- How data and feedback will be used to answer the research questions and provide recommendations for program improvement and scaling
- Expected content and timing of interim and final reports

### Financials

All proposals must provide the following budget information:

- Estimates of equipment and software costs for customers and the Company required to launch a pilot program
- Estimates of program development and ongoing program operation costs throughout a potential pilot period
- Estimates of any additional costs related to measurement and verification and customer surveys
- Cost effectiveness analysis, including customer savings, emissions reductions benefits, avoided infrastructure investments, reduced leakage benefits, and upstream savings
- Payment schedule and terms

### Project Plan

The vendor should provide an estimated timeline for completing critical milestones in the development, implementation, and review of the program. These critical milestones include, but are not limited to:

- Customer recruitment and interviews
- Equipment sourcing and install
- Customer education
- Pilot launch
- Interim report
- Pilot completion
- Customer interviews
- Final report

The project plan should also address the roles and responsibilities of the project team.

#### References

The vendor should provide an overview of their company, including:

- Qualifications in the program area
- Team members that would be involved in successfully completing the proposed project, their role, and their background
- A list of relevant past projects and references

# **RFP** Submission

#### Intent to Bid

All vendors should notify the Company of their intention to bid one week after the RFP has been issued. Notifications should be sent via email to <u>Michael.t.mangan@xcelenergy.com</u> and <u>Stephen.a.mullaly@xcelenergy.com</u>. This will ensure that vendors receive all communications

related to answering questions that come up during the RFP period. Vendors can withdraw from bidding at any time.

#### Requirements of Proposals

The proposals must be submitted electronically in PDF format and proposals must include the following documents addressing each program:

- A cover letter that summarizes the main points and highlights of the proposal
- A technical proposal that describes the system design, equipment, hardware, and software requirements in detail
- A detailed breakdown of target customer segments and expected participation
- A detailed explanation of program evaluation, as well as plans to address research questions and recommendations based on the key considerations outlined above
- A budget proposal that details the cost and expenses of the proposal, as well as the payment schedule and terms
- A project plan that outlines the timeline and milestones of the proposal, as well as the roles and responsibilities of the project team
- An overview of the vendor, their qualifications, a list of team members with background information, and relevant information on past projects and references

Proposals must be submitted by March 15, 2024, 5:00 PM MST. Proposals must adhere to the requirements, evaluation criteria, and timeline of this RFP. Proposals must be signed by an authorized representative of the vendor.

#### Questions

Questions are due February 9<sup>th</sup> and responses will be available by February 23<sup>rd</sup>. Submit questions to Stephen Mullaly at Stephen.a.mullaly@xcelenergy.com

#### How to Submit

If a vendor meets all requirements and has completed all the required proposal components as outlined above, they may submit them to Xcel Energy Sourcing by email.

Emails should have a subject line that contains 'Natural Gas DR RFP Response'. All emails should be addressed to Mike Mangan at <u>Michael.t.mangan@xcelenergy.com</u> and should copy Stephen Mullaly at <u>Stephen.a.mullaly@xcelenergy.com</u>.

# **RFP** Scoring

### Scoring Criteria

All responses will be grouped by customer segment and the focus area they address for savings. Responses will then be scored based on the criteria in this RFP. A standard template for Xcel Energy will be used to create scoring specific to this RFP.

Scoring will not be conducted until after all responses are received, and all scoring criteria will be established prior to reviewing any responses. Scoring will be done by members of Product

Development, Demand Management, and Sourcing based on, but not limited to, the following criteria:

- Quality and clarity of the program design, including the program parameters, benefits, risks, and barriers
- Feasibility and effectiveness of the program implementation, including the customer recruitment, enrollment, and support strategies
- Comprehensiveness and rigor of the program evaluation, including the data collection, analysis, and reporting methods
- Relevance and innovation of the research questions and recommendations
- Experience and qualifications of the vendor and the project team
- Cost and budget of the proposal

### Vendor Requirements

The vendor must meet the following requirements to be eligible for this RFP:

- The vendor must have relevant experience and expertise in designing, implementing, and evaluating demand response and aggregation programs, preferably in the utility sector
- The vendor must have access to and knowledge of the necessary devices and software for enabling the demand response program, such as smart meters, DER controllers, and energy management platforms
- The vendor must have the capability and resources to collect and analyze data on the performance, impacts, and outcomes of the program, using quantitative and qualitative methods, and to report the results and findings in a clear and concise manner
- The vendor must comply with all applicable laws, regulations, and standards, as well as the data privacy and security policies of Xcel Energy, other stakeholders, and customers

# Pilot Program Selection and Launch

### Selection

After all responses are reviewed and scored, if there is a program or programs that will provide unique customers or peak demand savings for a customer category then a pilot may be considered. Pilots will be based on the unique customers or area of savings, and if multiple submissions address the same market area then the RFP scoring will be used to determine which vendor to move forward with a pilot program.

### Tentative Schedule for RFP and Launch

The following is the proposed schedule for this RFP, but is subject to change:

- RFP Issue Date: January 30, 2024
- RFP Questions and Answer Period: February 9, 2024 February 23, 2024
- RFP Submissions Due: March 15, 2024
- RFP Submission Review and Selection: April 12, 2024
- Target Pilot Period: 2024 2025 Heating Season

Actual Pilot program schedules will be determined along with vendors after a mutual decision to proceed has been reached.

To launch a pilot program, the vendor must meet any pre-defined metrics specified during the contract period, including but not limited to, system functionality, enrollment requirements, and installation of all required equipment in a timely manner.

Failure to meet pre-defined metrics and launch a pilot program per the contract terms, or failure to deliver agreed upon demand reductions after pilot launch may require payment of any applicable liquidated damages to the Company. Terms of payment and any associated liquidated damage provisions will be determined during the contract period.

All information submitted by you to the Company in response to this RFP, regardless of whether it is marked or identified as confidential or proprietary, will not be considered confidential. Moreover, you hereby waive any claims against Company for breach of confidentiality, trade secrets misappropriation, ownership rights in any product or program implemented by Company incorporating your ideas or information, or rights to be remunerated therefore.

Respondents are encouraged to identify and describe any patent, copyright, or other proprietary rights that you or others may possess protecting any aspects of your proposed idea and any restrictions that may affect the Company's implementation of the idea. If your idea is selected for implementation, then you should also be prepared to contract with the Company regarding the transfer of any background proprietary rights related to the idea to the Company.

Xcel Energy reserves the right to reject any and all proposals and withdraw this RFP at any time.