

Application Report

Applicant Organization: City of Northfield

Project Name: Northfield Geothermal Grant Application

Application ID: App-25-1198

Funding Announcement: Geothermal Planning Grant Program

Requested Amount:

Section Name: Project Name

Sub Section Name: Project Name

1. Applicant Question: Project Name

List the name of the local unit of government followed by the building or buildings where the geothermal planning project will take place. Example: "City of Esko – Public Works Building."

Applicant Response:

City of Northfield - Northfield Community Resource Center

Section Name: Local Unit of Government Information

Sub Section Name: Local Unit of Government Information

1. Applicant Question: Mailing Address

Please provide the mailing address for the local unit of government.

Applicant Response:

Local Unit of Government	Mailing/Office Address	City	State	Zip Code
City of Northfield	801 Washington Street	Northfield	MN	55057

2. Applicant Question: Geothermal Planning Site Address

Please provide the address of the Geothermal Planning Site.

Applicant Response:

Geothermal Planning Site Building(s) Name(s)	Address	City	State	Zip Code
Northfield Community Resource Center	1651 Jefferson Pkwy	Northfield	Minnesota	55057

3. Applicant Question: Approximate Square Footage

Provide the approximate square footage of building(s) to be assessed for geothermal feasibility. If your proposed project includes multiple buildings, share a breakdown of approximate square footage for each building.

Applicant Response:

58000

Section Name: Authority to Apply

Sub Section Name: Authority to Apply

1. Applicant Question: Authority to Apply

Upload a letter signed by an authorized local unit of government representative (City Manager, County Administrator, for example) indicating approval for the Primary Contact to pursue this grant application.

Applicant Response:

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Section Name: Project Overview

Sub Section Name: Project Overview

1. Applicant Question: Project Overview

Detail the project leading up to the submission of this Geothermal Planning grant application. Was this a recent development or in plans for a long time? Who first initiated discussions considering geothermal installations? What planning, research, or conversations have taken place to date? Have constituents/residents been involved at any stage? Have you been in discussions with any geothermal installers or other jurisdictions? Do you have an initial sense for when you would pursue project implementation? If so, please describe.

Applicant Response:

Project Overview: Geothermal Planning Grant Application for the Northfield Community Resource Center

Project Background

The City of Northfield is seeking grant funding to conduct a comprehensive feasibility study and planning process for a geothermal heating and cooling system at the Northfield Community Resource Center (NCRC). This initiative aligns with the city's commitment to sustainability, carbon reduction, and energy efficiency in municipal facilities.

Discussions about implementing geothermal energy at city facilities have been ongoing for several years, originating with the development of Northfield's Climate Action Plan (CAP) in 2019. As part of the city's long-term sustainability strategy, the CAP identified geothermal energy as a key opportunity to reduce greenhouse gas emissions, lower energy costs, and enhance system resilience for City operations.

The idea of exploring geothermal solutions for the Northfield Community Resource Center (NCRC) gained traction as city staff, sustainability advocates, and community leaders sought innovative ways to modernize city infrastructure while aligning with the CAP's goals. Given the NCRC's significant energy demands and the City's commitment to transitioning toward clean energy sources, geothermal emerged as a viable and strategic solution.

The City of Northfield has been a strong advocate and financial supporter of geothermal energy projects within the community. Recognizing the long-term benefits of geothermal technology including energy efficiency, cost savings, and

sustainability; the City has actively promoted and encouraged its adoption.

Northfield is already home to pioneering geothermal initiatives. Carleton College became the first college campus in Minnesota to install a district-scale geothermal system and fully transition away from steam heating, setting a precedent for sustainable energy use in institutional settings. Additionally, the Northfield School District is currently in the process of planning and constructing a geothermal system for the new high school, further reinforcing the community's commitment to renewable energy.

Building on this momentum, the City is eager to join its community partners in expanding geothermal infrastructure. By investing in a municipal geothermal system, Northfield aims to further demonstrate leadership in sustainability while enhancing energy resilience for public facilities. This collaboration between educational institutions, local government, and residents highlights a shared vision for a more sustainable future

Project Development & Planning Efforts

Leading up to this grant application, several steps have been taken to explore the feasibility of geothermal energy at the NCRC:

- **Initial Discussions & Stakeholder Interest:** Conversations about geothermal energy emerged as part of the city's broader sustainability goals. The Environmental Quality Commission (EQC) and city staff identified the NCRC as a potential candidate due to its high energy usage and long-term operational needs.
- **Preliminary Research & Benchmarking:** City staff have researched geothermal installations in similar community facilities, assessing benefits, costs, and best practices. Informal discussions with other municipalities that have implemented geothermal systems have provided valuable insights.
- **Engagement with Experts & Industry Professionals:** Initial conversations have taken place with geothermal system installers and consultants to assess technical feasibility, cost considerations, and site constraints. The City has previously collaborated with Ever-Green Energy, a leading expert in district energy and geothermal systems, to conduct a feasibility study as part of a larger downtown redevelopment project. This past work has provided a strong foundation for understanding how geothermal technology could be applied to Northfield's municipal infrastructure.
- **Community & Resident Engagement:** While no formal public engagement sessions have taken place, sustainability initiatives—including geothermal energy—have been part of ongoing city-wide discussions. Future planning efforts will include outreach to stakeholders and residents to ensure alignment with community priorities.

Next Steps & Project Implementation Timeline

If awarded, this grant will support a structured planning process that includes:

1. **Comprehensive Site Analysis** – Conducting technical assessments to determine the suitability of geothermal at the NCRC.
2. **Cost-Benefit Analysis** – Evaluating financial implications, including long-term savings, upfront costs, and potential funding sources.
3. **Stakeholder & Community Engagement** – Gathering input from key stakeholders, including city leadership, residents, and local businesses.
4. **Collaboration with Industry Experts** – Working with geothermal consultants and engineers to develop a roadmap for implementation.
5. **Final Report & Implementation Planning** – Producing a detailed report outlining findings, recommendations, and a

phased approach for project execution.

The city anticipates using findings from this planning process to pursue funding for full implementation in the next 3–5 years, depending on project feasibility, budget availability, and grant opportunities.

This grant represents a critical step in the city's efforts to integrate renewable energy solutions into the City infrastructure and serve as a model for sustainable energy use in Northfield.

Section Name: Performance Capacity

Sub Section Name: Performance Capacity

1. Applicant Question: History of Work Performance

Please describe your history of performing the work that will be funded by the grant. This includes describing your organization's current staffing and current budget.

Applicant Response:

History of Performing Geothermal and Sustainability Work

The City of Northfield has a strong track record of advancing sustainability initiatives, including renewable energy and energy efficiency projects. The City has been actively engaged in climate action planning, facility energy upgrades, and policy development aimed at reducing greenhouse gas emissions and promoting sustainable infrastructure.

One of the City's major milestones in this work was the adoption of the Climate Action Plan (CAP) in 2019, which outlined ambitious goals to transition municipal operations toward carbon neutrality. Since then, Northfield has pursued various energy efficiency and renewable energy projects, including:

- Conducting facility energy audits and implementing efficiency improvements.
- Supporting local institutions, such as Carleton College and the Northfield School District, in their geothermal projects.
- Collaborating with Ever-Green Energy on a feasibility study for geothermal infrastructure as part of a downtown redevelopment initiative.
- Deploying Level 2 chargers on city owned property for public use
- Successfully applied and awarded funding for the state Solar installation at NCRC

The City has successfully managed grant-funded sustainability projects in the past, including state and federal grants for renewable energy and energy efficiency. This experience ensures that Northfield has the administrative capacity to effectively manage grant funds, coordinate stakeholders, and execute complex energy projects.

Current Staffing & Budget

The City of Northfield's sustainability and facilities management efforts are overseen by a combination of city staff, advisory boards, and external consultants. Key personnel involved in this project include:

- City Administrator – Provides leadership and oversight for municipal projects.
- Assistant to the City Administrator – Manages climate action initiatives and renewable energy projects.
- Facilities & Public Works Staff – Responsible for infrastructure maintenance and energy system implementation.
- Environmental Quality Commission (EQC) – An advisory board that supports sustainability planning and community engagement.

The City established the Carbon Reduction Fund to support initiatives aligned with its Climate Action Plan (CAP). This fund is partly fueled by up to 8% of the annual revenues from Xcel Energy's franchise fees, capped at \$100,000 annually. The fund is dedicated to sustainability efforts, energy efficiency projects, and facility improvements. Additionally, the City actively seeks external funding sources, such as grants and partnerships, to further advance its renewable energy goals.

With a proven commitment to sustainability and a strong track record in managing large-scale energy projects, Northfield is well-equipped to successfully carry out the planning and feasibility work funded by this geothermal grant.

2. Applicant Question: Previous Grant Contracts

Have you been awarded or have an active grant from Commerce in the past 5 years?

Applicant Response:

Yes

Section Name: Estimated Cost Range

Sub Section Name: Estimated Cost Range

1. Applicant Question: Estimated Cost Range

Please provide the estimated cost for the geothermal planning for this project.

Applicant Response:

The estimated cost of a geothermal feasibility study for a building like the Northfield Community Resource Center (NCRC) is \$150,000. The study would typically include: Site evaluation (soil testing, subsurface conditions) Test well drilling Energy modeling and heat load assessments System design considerations (horizontal or vertical loop systems) Cost analysis and potential savings projections Funding opportunities and incentives evaluation

2. Applicant Question: Requested Grant Amount

Please provide the requested grant amount (maximum \$150,000)

Applicant Response:

\$150,000

Section Name: Project Budget

Sub Section Name: Project Budget

1. Applicant Question: Project Budget

Upload a full Project Budget plan and any other details pertaining to how you plan to pay for the project. List each funding source/type (e.g., bank loan, operating budget, fundraised dollars), the amount (range or specific amount) and whether it is secured or not. Include the Geothermal Planning Grant value on this list.

Applicant Response:

[138187151_Attachment_2_Budget_Template.pdf](#) - PDF FILE
