



Village of South River Energy Conservation & Demand Management Plan July 1, 2024 to June 30, 2029

Commitment

Resolution 172- 2014

WHEREAS Ontario Regulation 25/23 under the *Electricity Act 1998* requires public agencies (municipalities, municipal service boards, school boards, universities, colleges and hospitals) to report on their energy consumption and greenhouse gas (GHG) emissions annually.

WHEREAS all public agencies are required to develop and implement energy Conservation and Demand Management (CDM); now

THEREFORE the Council of the Village of South River adopts the South River Energy Conservation & Demand Management Plan and submits it in compliance with Ontario regulation 25/23; and

FURTHER that the Council of the Village of South River will continue to allocate the necessary resources, in coordination with the municipality’s budget planning process, to develop and implement an energy management plan that will reduce the Village’s energy consumption and its related environmental impact.

Vision

South River is a small, welcoming community of approximately 1,101 year-round residents. The Village is working to position itself as a “destination” to encourage visitors and businesses to experience all this community has to offer. The Village fosters innovation, celebrates art, culture, heritage and recreation and is working hard to create a strong and resilient economy and follow a caring social and environmental stewardship.

Policy

Energy Conservation: While the Village is small it has established itself as a leader in doing all it can do to reduce energy consumption and greenhouse gas emissions. The Village will continue to incorporate energy efficiency into all areas of our activity including our procurement practices, Asset Management Plans, financial budgets, investment decisions, facility operations and maintenance. The Village will encourage, where it can, community-based energy initiatives, particularly reduce, reuse, and recycle.

Goals

To continuously improve the energy efficiency of our facilities and processes in order to reduce our operating costs and our energy consumption.

Overall Target

The Village of South River has demonstrated energy efficiency as a best practice over the years and will continue to search out new technology to provide further reductions in operating costs and energy consumption.

Objectives

- i. To undertake/implement energy audits on all the Village's facilities during the next five years
- ii. To reduce total energy consumption used in Village facilities, considering extreme and prolonged weather conditions, by a total of 5% in the next five years (average 1% per year).
- iii. To reduce the demand for energy in all Village facilities
- iv. To explore possible ways green power can be viably utilized on any of the Village facilities

Understanding

Our Municipal Energy Needs

The Village needs reliable, low-cost, sustainable energy sources delivering energy to municipal facilities using updated energy-consuming technology which is appropriate for this community.

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Stakeholder Needs

Internal stakeholders (The Council, Clerk Administrator and all staff) need to be able to clearly communicate the Village's commitment to conserve energy and to find ways to develop and implement knowledge, skills and practices which can achieve measurable energy efficiency. External stakeholders (the Province, community residents and organizational groups within the community) need the Village to be responsible to take the lead for energy performance and to minimize the energy consumption and its costs within the Village of South River.

How We Manage Energy Today

The management of energy consumption and the energy performance of the Village's facilities and equipment are the responsibilities of Council with the assistance of the Clerk Administrator, the Chief Financial Officer and each department manager.

Summary of Current Energy Consumption

See Schedule A for each building.

Trends in Energy Consumption

See Schedule A for each building.

Summary of Current Technical Practices

*Village of South River – Conservation and Demand Management Plan
June 25, 2024*

- i. Retrofit lighting in municipal facilities (arena and municipal office)
- ii. Automation at selected municipalities (motion detector lighting and timer switches, hot water tank temperatures lowered)
- iii. Reinforce behavioral changes to manage demand (turning lights off when not in use)
- iv. Geo-thermal heating/cooling system installed at the Village Office
- v. Seeking installation of vehicle chargers to facilitate replacing internal combustion engine vehicles with electric vehicles.
- vi. Sensors on high usage electricity areas, arena and water treatment plant, to monitor individual circuits for inefficient motors and pumps
- vii. Heat pump technology to be used to replace natural gas and electric heat and air conditioning where possible, the train station will receive a heat pump in 2024.

Renewable Energy Utilized or Planned

The Village installed a geo-thermal heating/cooling system at the municipal office in 2009 and continues to reap those benefits. In 2010 the Village creates, a wholly owned power generation station located on the South River to generate electricity which is fed into the Hydro One grid. Since inception the hydroelectric plant has produced on average 4,100,000 kWh of clean renewable energy displacing over 100 tons of CO2 emissions annually that would have been emitted from hydro produced from regular sources. The Village replaced mercury vapor streetlight infrastructure with LED lights in the summer of 2014 and now has ten years of savings from this program. In 2020 the Village encouraged IVY to install two electric vehicle fast chargers on Village property. These are the only two public fast chargers on the HWY 11 corridor between North Bay and Huntsville. The Village of South River is working hard with Ontario Northland Railroad to have an exceptional visitor experience on the planned passenger rail service. This service will reduce individual long distance car trips beginning in 2026. The Village is installing circuit monitors on all its heavy electric motors at the South River Machar Arena and the South River Water Treatment Plant in late 2024 in conjunction with FCM's Green Energy program. The Village invested over \$4M in 2022 and 2023 in watermain distribution pipes eliminating and preventing leaks reducing overall treated water consumption. The projected annual savings in treated water is more than 20% over the 2017 to 2022 average. The Village also invested in sidewalks and trails to encourage non-GHG transportation modes. The next purchase of an ice resurfacer will be electric replacing the propane powered current unit.

Strategic Planning

As an integral component of the management a structure, the energy management plan is coordinated with the municipality's budget planning process, the Asset Management Plan, the Emergency Management Plan and external funding opportunities.

Structure Planning

- i. The Village of South River will incorporate energy efficiency into standard operating procedures and the knowledge requirements for all jobs.
- ii. The Village of South River will incorporate life cycle cost analysis into the design process for new capital projects as well as new capital purchases (equipment).
- iii. Energy Efficiency will be considered by staff and signed-off by the Clerk Administrator prior to the procurement documents being published for tender. The intent is to make

energy management part of the Village’s normal course of business for all facilities and all operational retrofits, including capital renewal and life cycle replacement projects. Success means incorporating energy efficiency options at the initial stages of a project design. This ensures that options for improving energy efficiency are considered, evaluated and quantified in terms of life cycle costing analysis, including cost, maintenance and emission reductions.

Resources Planning

Senior Management (Council and Clerk Administrator) will clearly designate the managers of each department to show leadership and overall responsibility for corporate energy management.

Energy Team

As of 2024, the following positions will act as energy efficiency team members: Department Heads, Chief Financial Officer, and Clerk Administrator. Each member will have a key role in providing essential input to the energy management processes.

The Energy Team will develop criteria for determining whether internal resources can be utilized for the implementation of energy projects and will support training focused on the energy use and conservation opportunities whenever possible.

The Energy Team will be expanded to include an Economic Development/Business Manager Intern for the period Sept 1, 2024 to August 31, 2025.

Procurement Planning

The Village of South River will develop a procedure to review energy efficiencies in three ways:

- i. By developing a procedure for the negotiation of energy purchasing contracts (where possible) that appropriately addresses our cost considerations, available energy services, energy quality and reliability and other performance factors.
- ii. We incorporate life cycle cost analysis into the purchase for all capital projects where it is appropriate
- iii. Purchasing procedures were modified through our Procurement By-law 35-2016 to incorporate energy efficiency into the criteria for selection of materials and equipment.

Implementation Planning

The Village of South River will develop a communication strategy that creates and sustains awareness of energy efficiency as a corporate priority among all employees and conveys our commitment and progress to the residents and tax payers of the Village of South River.

Investment Planning

During the budget process the Village of South River will determine whether existing or internal resources can be utilized for the implementation of energy projects.

Council, as per past practice, will increase the operational energy budget relative to existing or forecasted energy rates.

The Village of South River (council and staff) will investigate creative partnership arrangements, where appropriate or where possible, for the purpose of implementing energy projects.

Projects Execution

The Village of South River will carry out the required development of amendments to all administrative documents and communication and educational programs and implement them methodically according to the planned time lines within the resources constraints that apply.

The Village will use the energy team members and department staff to facilitate the implementation of facility level procedures and communication initiatives, including energy performance reporting.

Review

The Village of South River will review and evaluate our energy plan, revising and updating if necessary, on an annual basis within our corporate planning process.

Evaluation Progress

Energy consumption from buildings in 2023 using the reporting tool shows an overall consistent use of energy over the past five years. However this is unadjusted for weather and usage. Also a more rigorous reporting methodology was adopted in 2023 and will be enhanced further with the 2024 data entry.

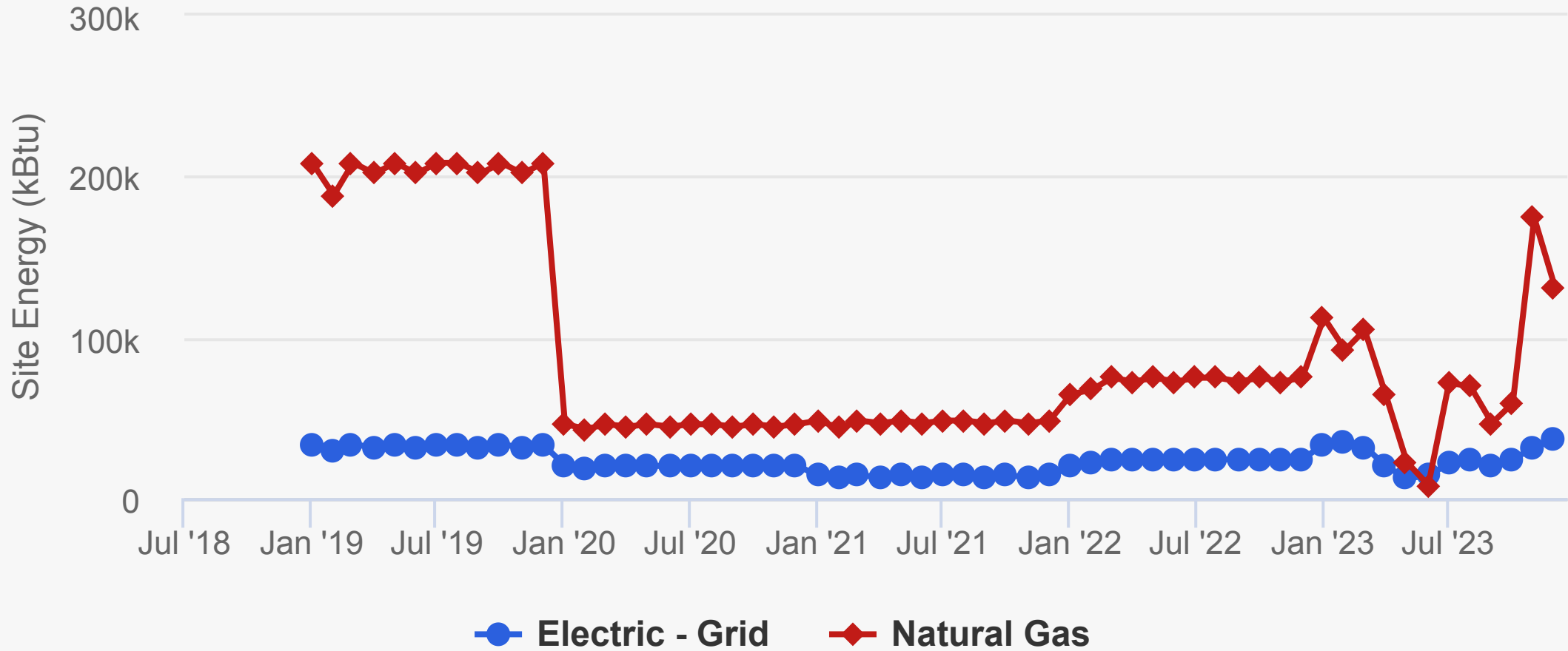
The Village of South River has not been able to reconcile its energy consumption with the GHG emissions completely as it does not have that level of expertise in house but in striving to reduce consumption are confident the savings from past initiatives is significant.

Schedule A

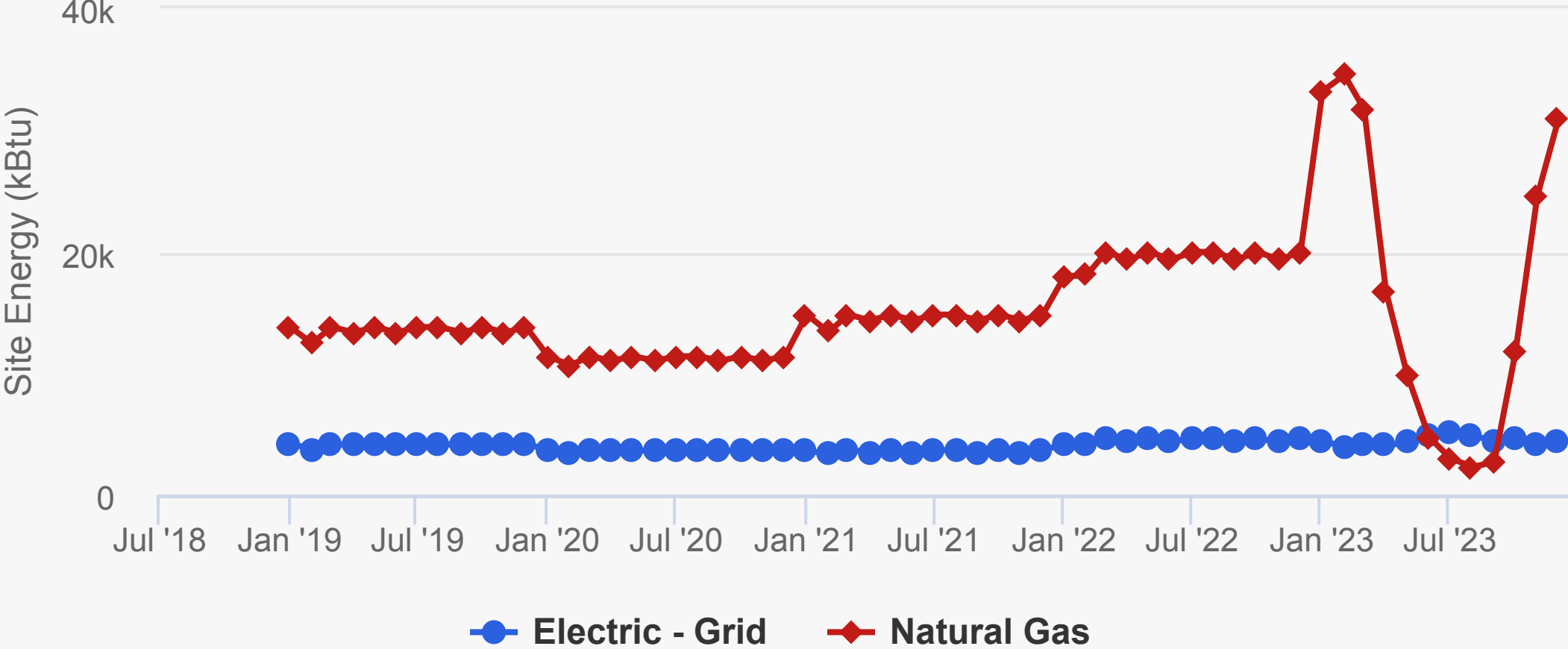
Energy use charts by building 2018 to 2023

Schedule "A"

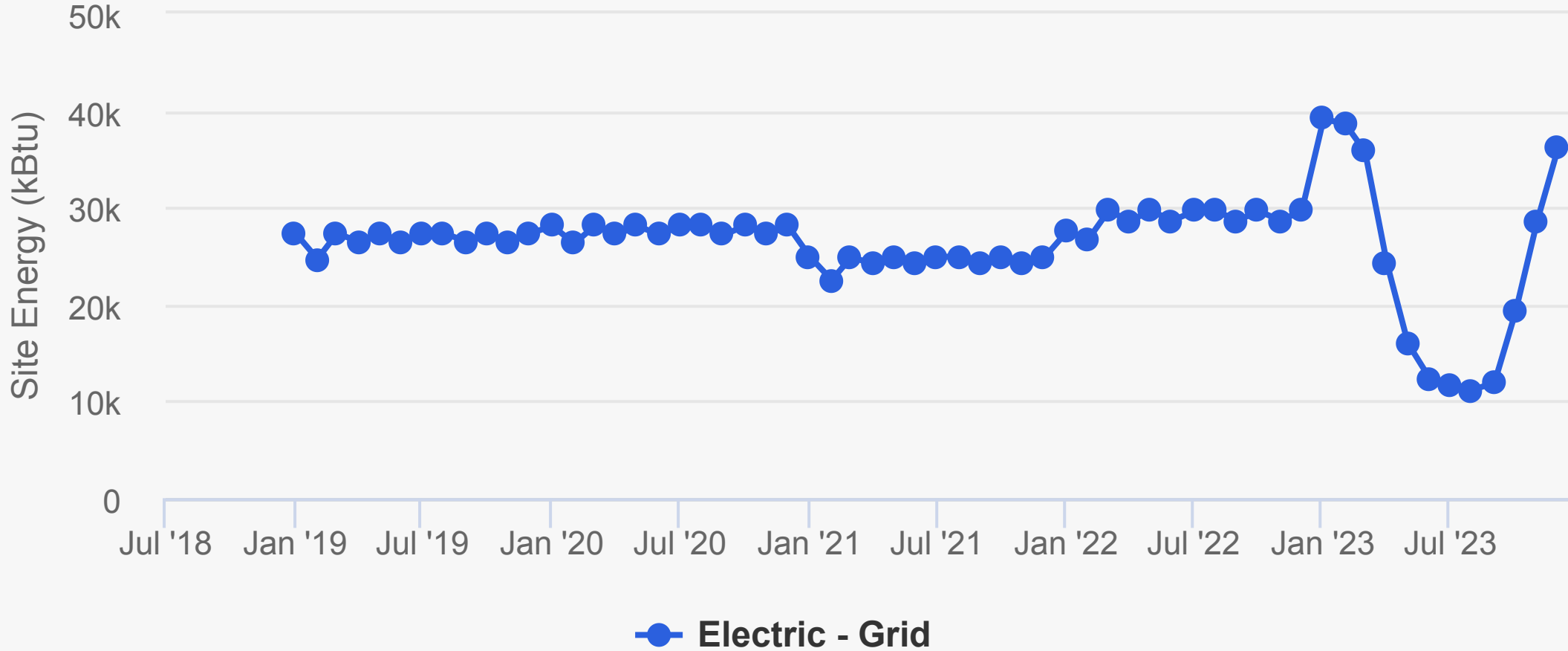
Energy Use by Calendar Month (Not Weather Normalized) for Community Centre & Arena



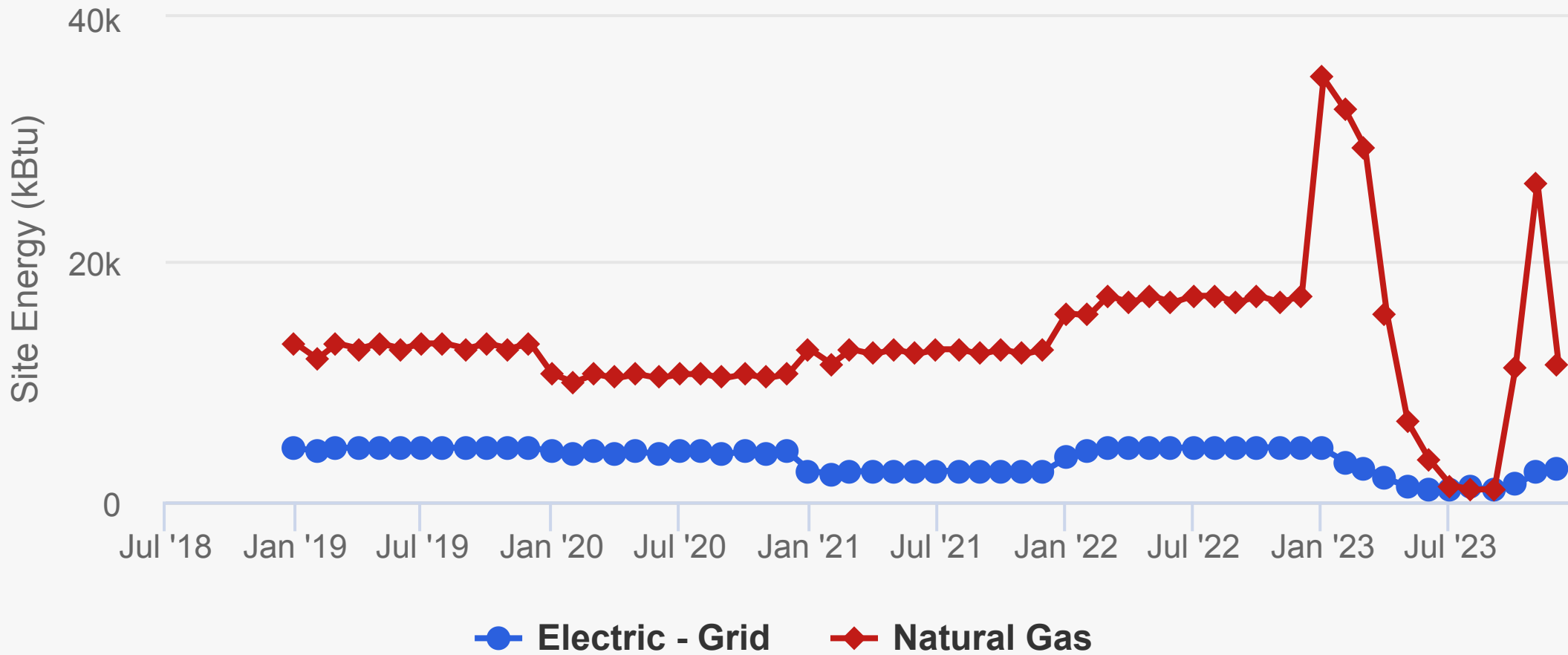
Energy Use by Calendar Month (Not Weather Normalized) for Fire Hall



Energy Use by Calendar Month (Not Weather Normalized) for Municipal Office



Energy Use by Calendar Month (Not Weather Normalized) for Public Works



Energy Use by Calendar Month (Not Weather Normalized) for Water Plant

