



Solutions Report

Addressing Electrical Capacity in Manufactured Homes

Prepared for:



City of Nanaimo

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Submitted to:



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1. Introduction

Manufactured home communities play an important role in Nanaimo’s housing landscape, providing relatively affordable housing options for many residents. At the same time, many communities face aging infrastructure, rising energy costs, and barriers to adopting electrical technologies such as heat pumps that are key to safety and comfort in increasingly hot summers and can provide zero-emissions, low-cost heating. Notably, uncertainty regarding the electrical capacity of community-level infrastructure has emerged as a key challenge to supporting electrification and reducing greenhouse gas emissions while maintaining affordability and resident comfort.

Phase 1 of the Manufactured Home Park Energy & Emissions Reduction Strategy identified electrical capacity limitations—both real and perceived—as a significant barrier to energy retrofits and fuel switching in manufactured home parks. Through engagement with community owners, residents, utilities, and industry stakeholders, the project highlighted concerns regarding the age and condition of electrical infrastructure, uncertainty around available system capacity, the complexity of upgrade requirements, and the potentially significant costs associated with electrical improvements. Community owners and homeowners also identified a need for clearer information, technical guidance, and practical pathways to support informed decision-making around electrification and energy upgrades.

In response, Phase 2 of the project was designed to move from education and barrier identification toward implementation-focused analysis and recommendations. This Phase included a program design to develop the program and select the communities, community-level electrical capacity assessments and the development of a practical solutions report intended to address infrastructure constraints, and identify opportunities to support future electrification.

This memo provides recommendations for actions by the key stakeholders that can address the electrical capacity barriers to electrification in manufactured home communities to as well as a summary of key learnings from the capacity assessments.

2. Project Approach & Inputs

The project began with the design of a Capacity Assessment Grant Program to support the selection of participating manufactured home communities, including a program design workshop and, when launched, an information session for community owners and managers. The program guide is presented as Appendix A.

Three manufactured home communities were selected for the assessments. The assessments involved site reviews, documentation of existing electrical infrastructure, analysis of historical electricity demand data, and evaluation of the potential impacts of future electrification measures such as heat pumps and EV charging. The project also considered opportunities to use energy management and load management strategies to reduce or defer infrastructure upgrade requirements.

The three manufactured home communities selected for capacity assessments were:

- Seabreeze Manufactured Home Community

- Sharman Manufactured Home Community
- Sunnyslope Manufactured Home Community

The three electrical capacity reports are presented in Appendix B.

The findings of this memo are based on the stakeholder engagement conducted throughout Phases 1 and 2, the findings from the electrical capacity assessments, and technical analysis completed by the project team.

Data Request: A Key Process Input

A key implementation challenge during the project was accessing utility data from BC Hydro. The initial program approach asked community owners to request utility data from BC Hydro as part of their application; however, only one of the three selected owners completed this step, and the data received did not include all of the required service areas, resulting in additional follow-up requests. During the project, BC Hydro also updated its process to require a site visit prior to requesting utility data. These factors contributed to delays and highlighted the importance of early coordination, clearly defined data requirements, and additional schedule contingency for utility-related tasks.

3. The Electrical Capacity Challenge

Manufactured home communities face a distinct set of challenges in pursuing energy efficiency and electrification upgrades. While technologies such as heat pumps can improve comfort, reduce greenhouse gas emissions, and lower energy costs over time, their adoption in manufactured home communities is often constrained by real or perceived electrical capacity constraints as well as the cost and complexity of upgrades. Community owners may face limited access to capital, uncertainty regarding how upgrade costs may be recovered via rents, and limited technical capacity to coordinate electrical assessment projects. Transferring these costs onto tenants via rent increases could negatively impact an important source of affordable housing.

Through the Phase 1 and 2 engagements, we heard that many community owners and managers do not have a clear understanding of the existing electrical capacity within their communities or the extent to which electrical load may be increasing in the future. Across the three communities assessed, we did not find that the capacity was constrained across community electrical infrastructure. In many cases, community-owned service equipment showed some remaining capacity to support additional loads. However, capacity was uneven across each community, and several transformers were operating near or above typical capacity during peak conditions. This means that electrification may be feasible in some areas, but not necessarily everywhere without proper assessment and electrical upgrades when necessary.

The assessments also confirmed that much of the electrical infrastructure in these communities is aging and, in some cases, approaching or exceeding typical service life. This creates a dual challenge: communities need to plan for electrification, but may also need to consider broader maintenance, renewal, and safety needs when assessing future upgrades. As a result, capacity assessments are an important first step. They help community owners understand where capacity is available, where constraints exist, and to define options for next steps.

At the same time, there is growing recognition that electrification does not necessarily require a “traditional” approach focused solely on major infrastructure upgrades. A range of power-efficient design strategies—including optimizing load calculations, right-sizing heat pumps based on home size, orientation, and configuration, using high-efficiency heat pumps, and energy management systems—may help reduce or defer upgrade requirements in some communities.¹ However, awareness and experience with these approaches remain limited.

Given the unique ownership and infrastructure arrangements within manufactured home communities, there may be opportunities to explore alternative delivery or management models, including a greater role for government and utilities in supporting electrical infrastructure planning and upgrades.

Addressing the electrical capacity challenge in manufactured home communities will require engaged, coordinated action across governments, utilities, regulators, industry organizations, and community owners. In addition to education, financial supports and technical guidance, supportive policy and regulatory frameworks will be important to enable cost-effective electrification pathways.

¹ Dunsky Energy + Climate Advisors. 2025. [Overview of Power Efficient Design Strategies.](#)

4. Recommendations

The recommendations in this report are focused on addressing electrical capacity challenges in manufactured home communities. The primary focus is this specific challenge because it is a systemic challenge that must be addressed to enable energy-efficient and electrification upgrades. We recognize that there are other barriers, as outlined in the Phase 1 Final Report, but they are not the focus of this Solutions Report.

We have included recommendations for each of the key actors that can directly impact or influence community electrical capacity. For each stakeholder, we identify priority actions by stakeholder that should take place in the next 1-3 years. Each of these actions includes key steps and considerations to support near-term progress. In addition, where relevant, we identify actions that should take place on an ongoing basis or in the longer term (within 4-6 years).

4.1 City of Nanaimo

The City of Nanaimo has taken a leadership role in supporting decarbonization of manufactured homes and addressing this range of barriers to these upgrades. Below, we outline priority actions (1-3 years) and ongoing or longer-term actions (4-6 years) that the City can take. Other local governments with manufactured home communities can likewise pursue these actions.

Priority Actions (Near-term, 1-3 years)

1. Consider extending the capacity assessment grants program to support other manufactured home communities in developing an accurate understanding of their electrical infrastructure and capacity to support electrification.

Key Steps	Considerations
<ul style="list-style-type: none"> Integrate feedback to adjust and improve program design based on questionnaires from participating community owners, when available. Explore funding partnerships or stacking with other actors (e.g., Province, BC Hydro). 	<ul style="list-style-type: none"> Explore which learnings could be gained from program extension - for example, it could include a community where the infrastructure requires significant upgrades and costing out these upgrades and solutions would be relevant.

2. Consider offering grants, revitalization tax-exemption, financing and/or other incentives for manufactured home communities that upgrade electrical infrastructure to enable electrification.

Key Steps	Considerations
<ul style="list-style-type: none"> Leverage the capacity assessment grant results to estimate the scale of the costs and needs across City manufactured home communities. The capital investment and payback periods, as well as Explore program designs and seek lessons learned from similar programs serving 	<ul style="list-style-type: none"> The financial tools provided by the municipality could be focused on one key tool, or a suite of tools that work in combination.

Key Steps	Considerations
<p>similar communities (e.g., multi-unit buildings). Examples include the City of Victoria’s Revitalization Tax Exemption for Multi-Unit Residential Buildings, District of Saanich’s Climate Action Tax Exemption Program, and the City of Toronto’s Hi-RES property-assessed clean energy (PACE) financing program.^{2,3,4}</p> <ul style="list-style-type: none"> • Complete a feasibility study to explore the most appropriate tool or tools to facilitate capacity upgrades, recognizing the diversity of project types and community characteristics. 	<ul style="list-style-type: none"> • When/if utility or provincial grants are available, align program to support matching funds. • Program should include tenant protections within its design (e.g., rent increase limits, renoviction protections) • Program should consider the Outreach Strategy content from Phase 1. • Integrate power-efficient considerations to reduce overall system costs and improve affordability.

3. Continue promotion of educational resources tailored to community owners (e.g., Phase 1 Educational Guide; case studies from Phase 2) and MH-specific programs from the Province or utilities when they become available.

Ongoing or Longer-Term (4-6 years) Actions

4. Advocate to the Province for funding and supports as outlined in the sections below.
5. If the Province does not pursue “Right-to-Cooling and Efficient-Electrical Heating” legislation as noted in Section 4.2, the City could consider exploring amending the City’s Building By-law⁵ or the other relevant by-law (such as in New Westminister⁶) to require cooling in rental properties, particularly to address formal and informal manufactured home community heat pump bans.
6. Prioritize manufactured home community neighbourhoods when allocating municipal climate action funding for electrification projects.

The Scale of the Investment to Maintain Affordable, Electrified Housing

For communities that exceed their available capacity, the upgrades may require significant capital investment into the electrical infrastructure as well as load management technologies to enable electrification. Manufactured home community owners can fund the upgrades via reserves or by applying for rent increases. However, intervention is needed to limit the potential for significant rent impact on residents and to facilitate the pace of electrification. Therefore, providing financial support for these upgrades is a key action identified in our recommendations for the City, the Province and BC Hydro.

² City of Victoria. [Market Rental Building Revitalization Tax Exemption Bylaw](#).

³ District of Saanich. [Climate Action Tax Exemption Program](#). Accessed online June 22, 2026.

⁴ City of Toronto. [High-Rise Retrofit Improvement Support Program \(Hi-RIS\)](#). Accessed online June 22, 2026.

⁵ Community Energy Association. 2025. [Cooling requirements](#). Accessed online May 28, 2026.

⁶ City of New Westminister. 2026. [Cooling Requirements for Rental Units](#). Accessed online May 28, 2026.

The total cost ranges widely based on the community size and existing infrastructure. As outlined in Section 5, the load management technology upgrades range from \$5,000 to \$7,000 per home before design, installation labour and other costs. We recommend funding a substantial portion (at least 50%) of the upgrade and associated costs, which could be divided between the Province, BC Hydro and the City. In addition, further capital upgrades can range widely which will also likely need funding to unlock electrification. The diversity of needs requires a flexible program and is best coordinated by the Province or BC Hydro given their province-wide perspective.

4.2 Province of British Columbia

The Province, particularly the Ministry of Energy and Climate Solutions and the Ministry for Housing & Municipal Affairs, play a key role in providing the supporting context and, in the longer-term, the regulatory environment to ensure that manufactured home communities can pursue electrical upgrades and energy-efficiency upgrades while maintaining affordability.

Priority Actions (Near-term, 1-3 years)

1. Integrate manufactured home-specific funding stream or criteria into existing CleanBC programs to fund capacity assessments and enable electrification.

Key Steps	Considerations
<ul style="list-style-type: none"> • Extend the multi-unit residential building Opportunity Assessment funding to manufactured home communities to assess capacity and plan for electrification. • Expand Energy Savings Program to include energy management systems for manufactured homes, with the opportunity to connect or require connection with community-wide load management efforts. 	<ul style="list-style-type: none"> • If the existing CleanBC program expansion is not appropriate or feasible, a standalone MH program should be designed. • Programs should make clear to community owners that simply by completing a capacity assessment, the recommended upgrades are not required to be completed. This communication will need to be careful adjusted and promoted if regulations come into effect as recommended in this section.

2. Update *BC Electrical Code* to allow energy management systems (e.g. “power control systems” and “electrical energy regulating equipment”) to control all end loads and power sources (e.g. batteries).

Key Steps	Considerations
<ul style="list-style-type: none"> • Adopt the 2027 CE Code with suitable amendments to enable these strategies in new and existing buildings. 	<ul style="list-style-type: none"> • Ontario has already adopted similar provisions in its electrical code.

3. Create a grant, tailored financing, or other financial supports for community-wide capital electrical upgrades. This effort should align and build on the efforts to enable capacity assessment efforts under Action 1.

Key Steps	Considerations
<ul style="list-style-type: none"> Design the capital investment program to tool to incorporate unique MH community considerations: <ul style="list-style-type: none"> Program design should integrate housing affordability. For example, higher funding could be provided for low-income / older parks to avoid resident displacement. Integrate with capacity assessment / electrification opportunity assessment programs to ensure program funds holistic upgrades. Support capacity upgrades that consider the aging electrical infrastructure of many communities 	<ul style="list-style-type: none"> A capital grant could be designed to stack with or match municipal funding. It may be paired with utility funding or administered via a utility.

4. Require Electrical Planning Reports (EPR) for manufactured home communities, with minimum criteria that facilitate solutions that enable electrification and energy efficiency upgrades.

Key Steps	Considerations
<ul style="list-style-type: none"> Collect feedback on the strata EPR efforts to understand and build on implementation lessons learned. Engage with manufactured home owners and their association to understand the technical and financial supports needed to ensure successful manufactured home community EPR compliance Develop and implement manufactured home community EPR requirements, integrating a ramp-up period. 	<ul style="list-style-type: none"> The manufactured home community EPR should include regular (annual, multi-year) reporting requirements to ensure changes within the community and electrical planning needs are reassessed regularly.

5. Develop manufactured home community-specific guidance within the Residential Tenancy Branch (RTB) on the eligibility of electrical capacity upgrades for rent increases.

Key Steps	Considerations
<ul style="list-style-type: none"> Explore the eligibility for electrical capacity upgrades or alternative solutions for pre-approval for investment, with engagement from stakeholders. Explore amending regulation to provide additional certainty on the eligibility and pre- 	<ul style="list-style-type: none"> Upgrade costs should be determined based on capacity assessments that include load forecast, and may be mitigated via alternative solutions (e.g., EMS). These factors can be considered in providing

Key Steps	Considerations
approval of costs for electrical capacity upgrades prior to investment.	<p>guidance on eligible costs and/or processes to determine eligible costs.</p> <ul style="list-style-type: none"> Consider impacts to affordability for manufactured home community residents, as well as potential solutions (i.e., residents could pay for rent increases due to capital upgrades from energy savings, where available).

6. Consider “Right-to-Cooling and Efficient-Electrical Heating” legislation to ensure manufactured home residents, and other BC residents in existing buildings, can access heat pumps.

Key Steps	Considerations
<ul style="list-style-type: none"> Explore policy options that establish clearer resident rights to install high-efficiency cooling and heating technologies, subject to safety, electrical capacity, and building requirements. Consider requiring capacity assessments to be completed prior to limiting heat pump or other electrification (i.e., EV charging) installations, particularly in a manufactured home community. Explore options that provide flexibility through phased installation approaches where capacity constraints exist, prioritizing homes with the greatest cooling and heating needs. Embed power-efficient design approaches into the processes for such requirements. 	<ul style="list-style-type: none"> There are formal and informal ‘heat pump bans’ in place across manufactured home communities today. This restriction places a partial barrier to resident cooling access. Education alongside a requirement is important, which could include developing guidance for community owners on evaluating heat pump requests, including consideration of load management technologies and power-efficient design strategies.

Case Study: City of New Westminster's Cooling Requirements for Rental Units

In response to the 2021 heat dome, during which 33 New Westminster residents died from extreme heat, the City of New Westminster introduced two bylaw amendments to improve tenant access to cooling. In 2025, the City prohibited landlords from banning tenant-installed cooling devices such as portable air conditioners. In 2026, the City further amended its Rental Units Bylaw to require that at least one living space in an occupied rental unit maintain an average indoor temperature of 26°C or lower between 8:00 p.m. and 8:00 a.m. from April 1 to October 31. Importantly, the bylaw is performance-based and does not prescribe a specific technology, allowing building owners flexibility in how they achieve compliance. The City also encourages

building owners to complete cooling audits and identify the most cost-effective cooling solutions for their buildings.

Ongoing or Longer-Term (4-6 years) Actions

- 7. Offer tailored energy coaches/technical navigator stream specific to manufactured home community owners/managers.
- 8. Set requirements that utility DSM programs support manufactured home community efficiency and electrification

4.3 BC Hydro

BC Hydro is a key partner for community owners navigating the current electrical context as well as understanding and costing future upgrades. Further, BC Hydro transformers are currently the leading capacity constraint for these communities. Therefore, technical and timely support is essential to encourage and enable assessments and upgrades.

Priority Actions (Near-term, 1-3 years)

- 1. Modify the current data request portal to facilitate manufactured home community-specific data requests, as well as provide timely data delivery.

Key Steps	Considerations
<ul style="list-style-type: none"> • Refine the current portal to include clear options for manufactured home community data, as well as any specific information that would facilitate and streamline data sharing. 	<ul style="list-style-type: none"> • Access to data and technical supports to community owners and their electrical professionals is a key first step. The current data portal is designed for strata and commercial requests, without an option for MH communities. • Clarify and publish the full process requirements for manufactured home community utility data requests, including site visit prerequisites, expected data package contents, and typical timelines, so that owners and consultants can plan assessment work more effectively. • Could provide clarity on the portal that the data request is free to manufactured home community owners/operators.

2. Explore utility-side transformer-level upgrade costs and prioritize efforts to complete upgrades to support manufactured home community electrification.

Key Steps	Considerations
<ul style="list-style-type: none"> Complete further review and costing of transformer replacements or upgrades to enable manufactured home community electrification. Work with manufactured home communities to understand electrification plans and prioritize local transformer upgrades. 	<ul style="list-style-type: none"> The BC Hydro-owned transformer and upstream utility upgrades were identified as the primary constraint in many service areas (see Section 5). In the three communities studied, the community itself does not require any increase to the existing service rating.

3. Offer a demand side management (DSM) program for electrical capacity assessments of manufactured home communities.

Key Steps	Considerations
<ul style="list-style-type: none"> Program could expand on established CleanBC programs (see actions in Section 4.2) or develop a standalone program 	<ul style="list-style-type: none"> See Considerations outlined in Section 4.2.

4. Offer prioritized and supported grid interconnection reviews for manufactured home communities.

Key Steps	Considerations
<ul style="list-style-type: none"> Support internal prioritization of manufactured home community requests. 	<ul style="list-style-type: none"> The review cost can be cost-shared or waived as it is for social housing projects. This support can be incorporated within the capacity assessment funding program noted in Action 2.

5. Develop an energy management system pilot to explore the practical implementation at the MH community scale (e.g., at powerhouses)

Key Steps	Considerations
<ul style="list-style-type: none"> Explore current leading technologies and solutions for energy management systems that would be appropriate for MH communities. Design pilot program to incorporate appropriate technologies. 	<ul style="list-style-type: none"> Pilot program should serve a range of community types (e.g., variation in heating system fuels; age of infrastructure, etc.) to test solutions across a range of scenarios.

6. Provide dedicated educational resources for manufactured home community electrification to support owners navigating the process from awareness to assessment to, if needed, upgrades and solutions. Educational resources will be needed to support any of the above utility actions.

Key Steps	Considerations
<ul style="list-style-type: none"> • Develop dedicated educational resources based on the learning from the City of Nanaimo project and established resources. • Incorporate BC Hydro actions and new/expanded programs into the educational materials. 	<ul style="list-style-type: none"> • It is preferable to have a 'one-stop-shop' for manufactured home community owners to provide reliable and clear information on the process. This could sit with the utility or the Province (e.g., CleanBC) and should have clear coordination between parties.

Ongoing or Longer-Term (4-6 years) Actions

7. Create a "MH community-level demand management" program (e.g., time-of-use incentives, managed charging pilots, or shared smart chargers) to reduce required immediate transformer/service upgrades and lower costs.
8. Review options to offer BC Hydro acquiring the electrical distribution system at manufactured home communities, if property owners wish BC Hydro to assume this function. This could enable better-informed utility management of the infrastructure. It would also better enable electrical upgrades to these facilities where necessary to accommodate further electrification, as BC Hydro has more financing systems (e.g. rate-base) and experience increasing capacity of electrical distribution systems.
9. Future utility review processes should also consider the need to estimate transformer and upstream system upgrade costs, so that the full infrastructure implications of electrification are better understood at the community and system levels.

4.4 Community owners and/or operators

Priority Actions (Near-term, 1-3 years)

1. Complete capacity assessments for the community to determine the available capacity to support electrification and resident heat pump requests.

Key Steps	Considerations
<ul style="list-style-type: none"> • Scope the work based on the Phase 1 Educational Guide ("Detailed scope of work for the electrical capacity assessment of a manufactured home park"). • Engage electrical engineer or professional to proceed with the assessment. • Verify installed fuse sizes, disconnect ratings, and field labelling during site reviews and future electrical work, rather than relying 	<ul style="list-style-type: none"> • Some owners have established "heat pump bans" due to capacity concerns without an assessment. There may be additional capacity available to support resident requests.

Key Steps	Considerations
solely on handwritten markings or legacy labels on existing equipment	

2. Develop guidance for residents on the process to request and proceed with heat pump installation.

Key Steps	Considerations
<ul style="list-style-type: none"> • Articulate power efficient strategies that can support heat pump installation (e.g. list of lower-power heat pump technologies; hybrid systems; etc.) • Develop or update community guidance based on the current community electrical capacity considerations and electrical planning needs. • Provide and promote guidance to residents. 	<ul style="list-style-type: none"> • The guidance can include information needed for electrical planning in the community, as well as , including siting and installation guidance to limit noise concerns. • The Phase 1 Educational Guide could be provided alongside the guidance.

4.5 Manufactured Home Park Owners Alliance of British Columbia (MHPO)

Priority Actions (Near-term, 1-3 years)

1. Share data and common site plans to help aggregated grid studies (e.g., several communities in a municipality present a single aggregated application to funders).

Key Steps	Considerations
<ul style="list-style-type: none"> • Explore member interest by region for a collective project to complete capacity assessments. • Develop proposal for aggregated grid study for participating parks with cost sharing. 	<ul style="list-style-type: none"> • Recent member experience with assessments/upgrades could be shared to support future collaborative efforts.

2. Share electrical contractor contacts and reviews.

Key Steps	Considerations
<ul style="list-style-type: none"> • Develop list of contractors with experience with manufactured home communities from member recommendations. • Provide and maintain updates to list of contractors. 	<ul style="list-style-type: none"> • Could be aligned with utility-recommended contractors.

3. Consider bulk procurement of contractors.

Key Steps	Considerations
<ul style="list-style-type: none">• Engage members to determine interest.• Negotiate with contractors to complete multiple assessments, which could include the opportunity to expand into upgrades.	<ul style="list-style-type: none">• MHPO should develop a clear scope of work using the Phase 1 Educational Guide and the Phase 2 capacity assessment outcomes.• This action could also be coordinated by the City of Nanaimo or supported by BC Hydro.

4. Share educational resources regarding energy efficiency, electrification and heat pumps with members. These resources can include the City of Nanaimo’s [Energy Efficient Upgrades in Manufactured Home Parks Guide for Residents and Park Managers](#) guide.

Ongoing or Longer-Term (4-6 years) Actions

5. Establish cost-share arrangements or revolving loan funds for owners who need capital for service upgrades.

5. Key Learnings & Costs from Capacity Scans

The three capacity assessments provide important insight into the nature of electrical capacity barriers in Nanaimo’s manufactured home communities. They confirm that capacity constraints are highly site-specific and unevenly distributed within and across communities. Seabreeze showed moderate electrification potential but significant transformer constraints, with most utility transformers at or above typical capacity despite spare capacity on much of the community-owned equipment. Sharman showed stronger overall electrification potential, though several transformers still had limited or negative spare utility capacity. Sunnyslope, while smaller, also demonstrated that some transformer areas have significant spare capacity while others are constrained, underscoring the importance of transformer-level analysis.

The scans show that community-owned service equipment is often not the primary limiting factor. In all three communities, many service areas had some remaining electrical service spare capacity, meaning that selective electrification may be possible where supported by phased implementation, load management, and careful monitoring. However, the scans also confirm that broad or unmanaged electrification cannot be assumed to be feasible and that utility coordination will remain essential in communities where transformer constraints are already present.

Overall, the capacity scans reinforce the importance of integrating electrical capacity planning with asset management. Much of the observed infrastructure appears to be original to the communities and is approaching or exceeding typical service life. This means that electrical planning is not only about enabling heat pumps or EV charging, but also about understanding the condition, reliability, and renewal needs of aging infrastructure. Together, these findings support the report’s emphasis on capacity assessments as a foundational step, as well as the value of targeted funding, technical support, and load management strategies to enable electrification while maintaining affordability and system reliability.

5.1 Lessons Learned on Utility Data Access

The pilot capacity scan process highlighted that obtaining utility data can be a significant implementation step and a source of project delay if not planned carefully. The project initially assumed that community owners could easily request and obtain the required BC Hydro data during part of the application process. In practice, this did not occur consistently. Only one of the three selected owners requested utility data as part of the process, and the data received did not initially include all of the required service areas, which created additional follow-up and re-request work.

A further lesson learned was that BC Hydro’s process now requires a site visit to be completed as a prerequisite for requesting utility data. While this will improve the quality and clarity of future requests, it also introduces an additional step that should be accounted for in future program design, assessment workflows, and project timelines.

These experiences suggest several improvements for future capacity assessment programs. Utility data access should be treated as a dedicated project task rather than an assumed owner-led step. Application materials and consultant scopes should clearly identify the exact data package required, including all service areas and transformer groupings. Site visits should be completed as early as possible, and schedules should include contingency for utility coordination, incomplete submissions, and re-requests. Future programs may also benefit from a more standardized or consultant-supported process for requesting utility data, rather than relying solely on community owners to complete this step independently.

5.2 Importance of Site Reviews

Site reviews were an essential part of the electrical capacity assessments because they allowed the project team to confirm field conditions that could not be reliably established from drawings, owner-provided information, or utility data alone. This included confirming the age and condition of electrical equipment, the location and types of enclosures, actual equipment ratings, which powerhouses were connected to which transformers, and transformer ratings where they could be identified on site.

The site reviews revealed conditions that would have been difficult to identify through desk-based analysis alone, including missing or inaccurate labelling, types and condition of enclosures, access challenges where equipment was located through or adjacent to private properties, and practical site history shared by community managers and residents. In some cases, unclear transformer-to-service connections and undocumented modifications were also observed.

The site reviews also identified examples where disconnect switches or safety switches had handwritten labels indicating one rating, while the installed fuses inside the equipment were of a different and higher rating. This highlighted an additional challenge in relying on field labels or legacy markings alone when assessing existing electrical systems. Inaccurate or outdated labelling can create uncertainty regarding actual equipment protection, available capacity, and electrical safety, and it reinforces the importance of physical verification of installed equipment during assessments and before planning or approving future electrification upgrades.

Overall, the site reviews improved the accuracy of the capacity assessments and helped identify risks, limitations, practical challenges, and potential solutions that informed the recommendations. They were critical in developing an accurate understanding of existing infrastructure conditions and grounding the assessments in the realities of each community.

5.3 Cost Implications

The three capacity scans did not establish detailed installed upgrade costs for each community-wide infrastructure scenario, but they do provide several consistent cost-related findings. Across each of the three communities, BC Hydro-owned transformer and upstream utility upgrades were identified as the primary constraint in many service areas. Where additional load can be accommodated within existing community-owned service ratings, the responsibility to ensure proper sizing of the BC Hydro-owned transformers would remain the responsibility of BC Hydro rather than that of community owners or residents. By contrast, any upgrades to community-owned distribution equipment, service equipment, load management systems, and any requests to increase the main service ratings would be the

responsibility of the community owner and/or homeowners, and be subject to project-specific design and utility review with the community owner being responsible for the associated review and upgrade costs.

The scan reports also include a preliminary budgetary indication for community-scale load management systems suitable for managing flexible residential loads. Based on supplier budget pricing referenced in the assessments, equipment-only pricing for load management panels or systems was estimated at approximately \$6,800 to \$9,000 CAD per home and \$19,500 per powerhouse, depending on configuration and control capability. This estimate includes material and installation labour costs, but excludes engineering design, taxes, and any upgrades to existing community-owned distribution equipment, and should therefore be understood as a planning-level estimate only. Detailed costing would need to be developed through site-specific design, procurement, and coordination with BC Hydro.

More broadly, the scans suggest that the most cost-effective pathways may not always involve immediate full infrastructure replacement. In some locations, phased implementation, selective electrification, interlocking controls, EV energy management systems, and broader load management approaches may help reduce or defer upgrade requirements. As a result, future program design should account for both capital upgrades and enabling solutions that improve the use of existing infrastructure.

One cost category that was not investigated in detail through the capacity scans was the potential cost of utility transformer replacements and any associated upstream utility infrastructure upgrades that may be required to support additional electrification. While these costs would generally not be the responsibility of community owners or residents where no increase to the existing service rating is required, they are still a real system cost that would need to be borne by the utility provider. As a result, the full cost implications of electrification at the community level are not yet fully understood without further utility-side review and costing.

Appendix A: Capacity Assessment Program Guide

Appendix B: Capacity Assessment Reports



"NO DISCLAIMERS" POLICY

This report was prepared by Dunsky Energy + Climate Advisors, an independent firm focused on the clean energy transition and committed to quality, integrity and unbiased analysis and counsel. Our findings and recommendations are based on the best information available at the time the work was conducted as well as our experts' professional judgment.

Dunsky is proud to stand by our work.