

Briefing Note & Case Study

Context

Electric vehicle (EV) adoption has been accelerating globally over the past decade at an approximate rate of 60% annually (McKinsey & Company) through 2018. In Canada, electric vehicle adoption has varied by province, with Quebec, Ontario and British Columbia having the highest EV sales, primarily as a result of incentives and investment in charging infrastructure. Despite the lack of incentives, and relatively limited public EV charging infrastructure provincially, Alberta has the highest adoption of electric vehicles among provinces that have no vehicle purchase or infrastructure incentive program.

Why this collaborative conversation is important now

The Federal Government, via Natural Resources Canada (NRCan) recently released a [Request for Proposal for EV infrastructure](#) with a priority on addressing EV charging infrastructure gaps across Canada. This represents one avenue of funding that could be explored by the regional partners in NW Alberta. Should the region choose to move forward with detailed planning for an EV network, further funding opportunities can be explored. **It has been the experience of the Community Energy Association that demonstrating strong regional collaboration leads to significant funding opportunities**, as the impact of a regional initiative vs a single community is much greater.

Economic Opportunities

This presents a great opportunity to expand EV infrastructure in rural regions like NW Alberta. The growth of electric vehicle (EV) sales in Alberta is driving an expansion in charging station deployment as a means to better connect to existing networks to support further EV adoption, but also to encourage a growing segment of the tourism market - which is electric vehicle drivers. By strategically deploying fast charging stations throughout NW Alberta, we can support rural communities in gaining economic benefits from EV travel all while supporting greater adoption of EVs across the province by enabling long distance travel. With strategic siting and regional collaboration, such a network could bolster local economies, connect NW Alberta to surrounding jurisdictions (e.g. forthcoming Charge North project along BC's HWY 16) and support new innovative engagement in Alberta's electrical energy system.

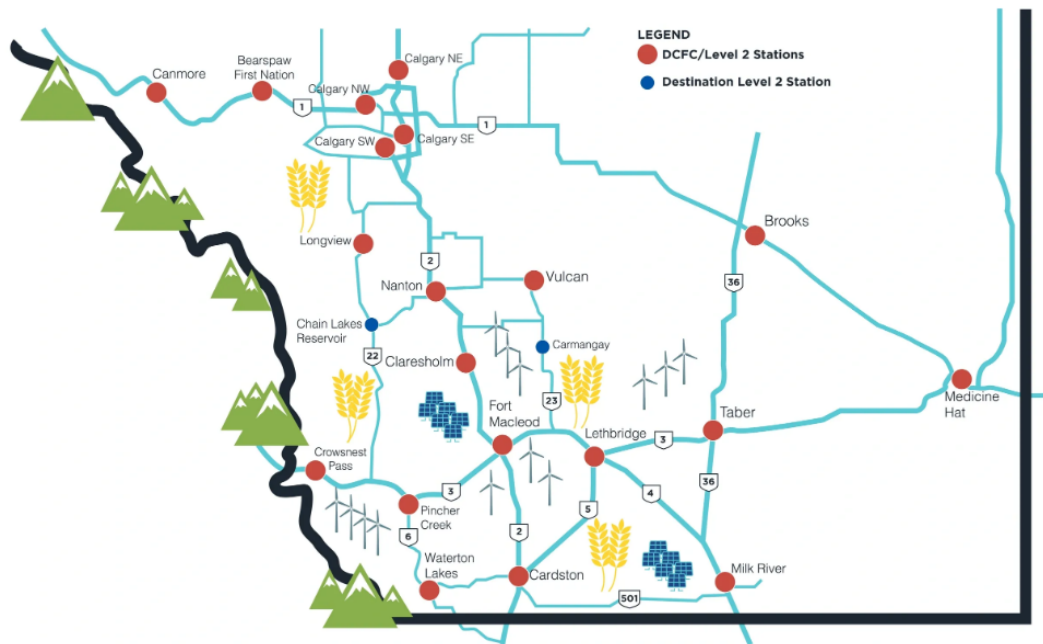
A Regional Approach

The rural and dispersed nature of NW Alberta communities demands solutions that are innovative, collaborative and reflective of the local challenges and opportunities. Further, a coordinated approach maximizes the potential co-benefits across the region, and minimizes the risk and liabilities on any one community. This is particularly important for small and rural communities, as the capital and on-going maintenance and operations costs of fast charging equipment are significant. Inspiration and lessons learned can be drawn from the experience of

communities in Southern Alberta, who have worked over the past three years to establish an electric vehicle network in that region. It should be noted that the approach and rationale in NW Alberta may be quite different from Southern Alberta, but the collaborative nature, and procurement/operations and maintenance structure may be worth exploring as an approach to reducing burden on local communities.

Case Study - Peaks to Prairies in Southern Alberta

The Peaks To Prairies EV Network is a community-driven, collaborative initiative that was developed by Alberta SouthWest Regional Alliance, SouthGrow Regional Initiative, The City of Calgary, City of Lethbridge, City of Medicine Hat and Medicine Hat College. The initiative established an EV charging network across Southern Alberta, connecting communities from Crowsnest Pass to Medicine Hat, Pincher Creek to Calgary, and west to Canmore. The full network includes 20 direct-current fast chargers (DCFCs) and Level 2 co-located stations, resulting in over 1,100kms of highway connected for EV travel. The network facilitates travel to and within the region, positioning Southern Alberta communities to benefit from increased electric vehicle tourism.



Peaks to Prairies Network Map



Peaks to Prairies is the result of collaboration across the Southern Alberta region including economic development organizations, non-profits, municipalities, provincial and federal government along with private industry. The initial seed funding from the 5 advisory partners (totaling \$210,000) was leveraged to secure grants from the Federation of Canadian Municipalities and the Government of Alberta to deploy the project at its full scope (totaling \$2.2 million).

Community Energy Association supported the regional collaboration with the planning, procurement, funding and implementation of the Peaks to Prairies project. A competitive process identified the third-party that would install, own and operate the charging network, alleviating local communities from that liability. Local governments supported through land-use agreements where the stations were sited on public property. The project will be completed in Summer 2020.

Moving Forward

Support is being provided by both Energy Futures Lab (EFL) and Community Energy Association (CEA) to progress the conversation. Moving forward, the regional partners may wish to consider formalizing an advisory committee, and seek funding for the development of a formal plan and proposal. This is work that can be supported by CEA, but would require more direct and formal structure in order to progress the work through to the planning and implementation phases.