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REGIONAL EV CHARGING NETWORK STRATEGY



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A REGIONAL APPROACH TO EV CHARGING

1. Phase I: Feasibility Study

- Initial inspiration and project goals
- Process
- Results

2. Phase II: Initiating Implementation

- Process
- Challenges
- Lessons learned (so far!)

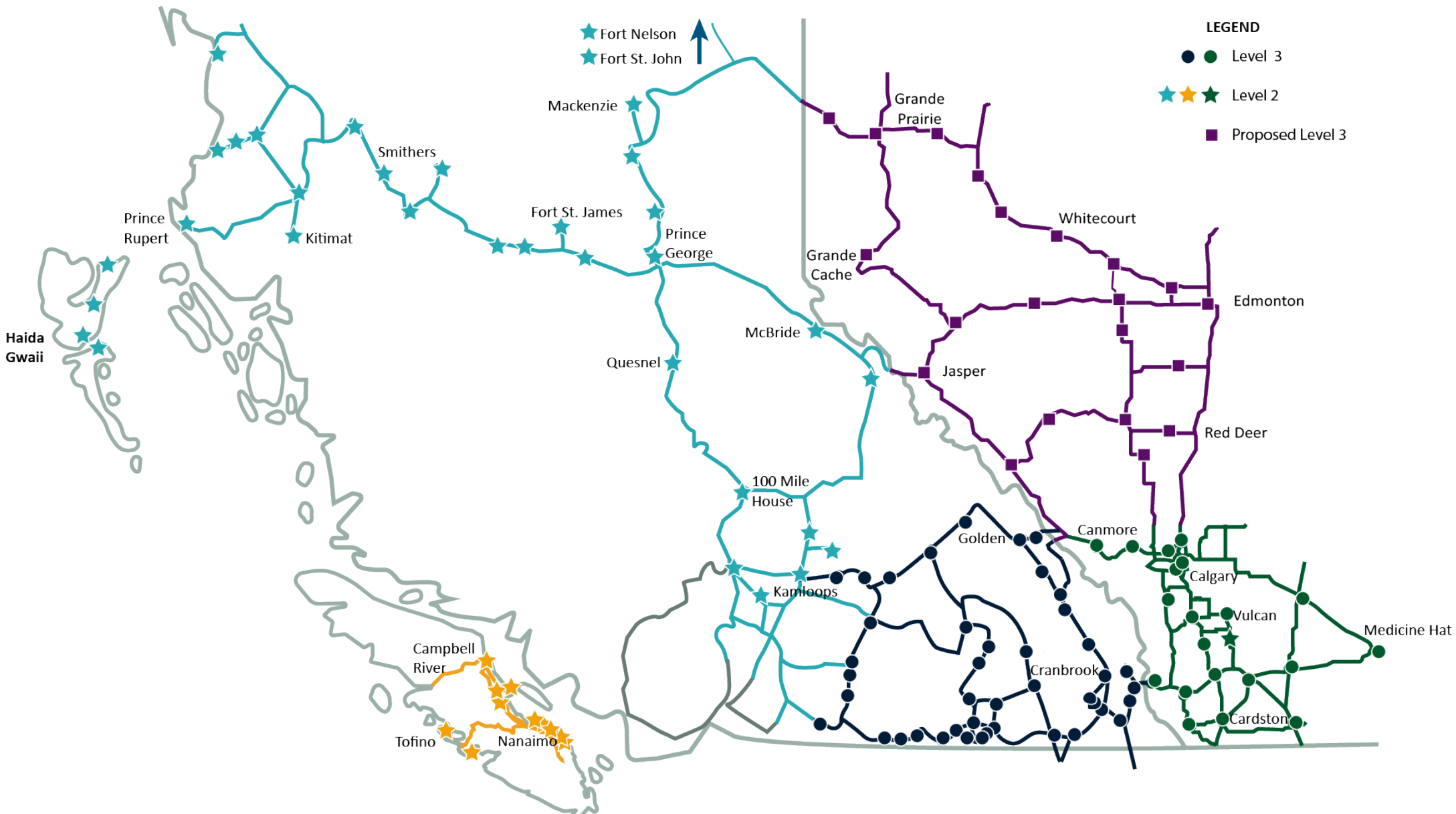
Mid-Island
28 Level 2 Stations

Charge North
58 Level 2 Stations
2,780 km of highway

Eventure Northwest Alberta
20 + DCFC/Level 2 Combined Stations:
PROPOSED

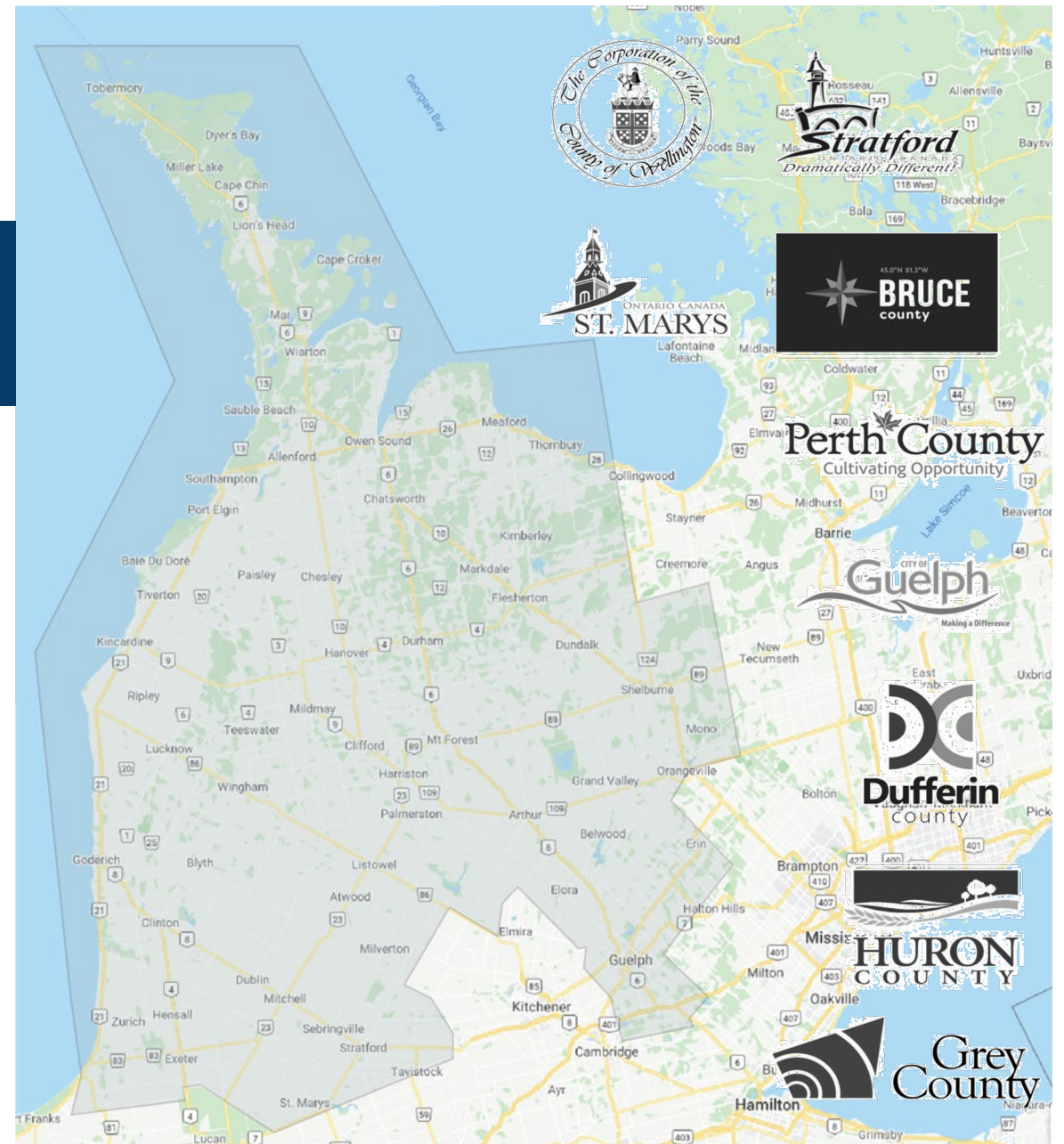
Peaks To Prairies
20 DCFC/level 2 combined stations
2020 network complete
1,800km of highway

Accelerate Kootenays
13 DCFC / 40 Level 2's
2018 DCFC network complete
1,800km of highway



GOAL:

Expand fast EV charging network across rural landscape with tourism lens to help drive economic development and reduce range anxiety.





ADMINISTRATION

- Wellington (administrator)
- MOU incl. \$5000 + Staff time
- TOR/Scope of Work
- Funding (50%)
- Procurement – Community Energy Association

EARLY ENGAGEMENT

- Project management meetings – biweekly.
- Partnership meetings – monthly and as needed.
- Technical Advisory Group meetings (Utility Stakeholders) – 2
- Member municipalities (through County leads, altogether)

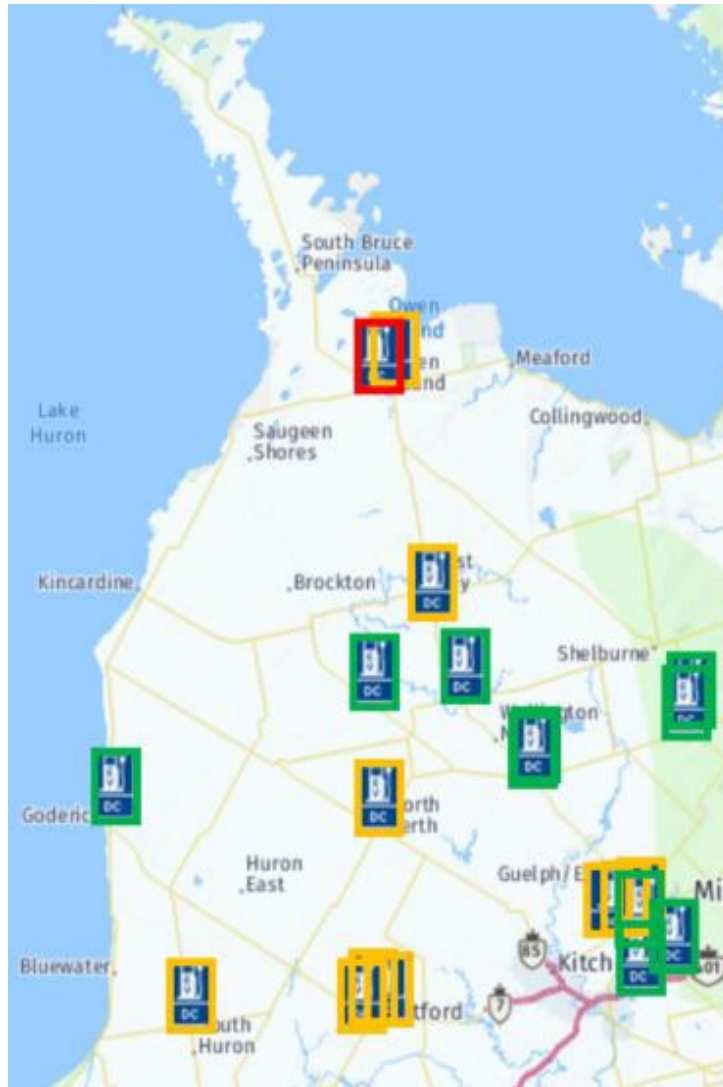


TERMS OF REFERENCE

- Geospatial analysis of existing charging stations in study area.
- Modeled design of future regional network.
- Criteria for site selection with emphasis on tourism and economic development.
- Identification of proposed charging locations.
- Consideration of solar arrays to support EV charging stations.

PHASE I - FEASIBILITY STUDY

Modelling



Existing



DCFC Station
Government-owned



DCFC Station
Private-owned

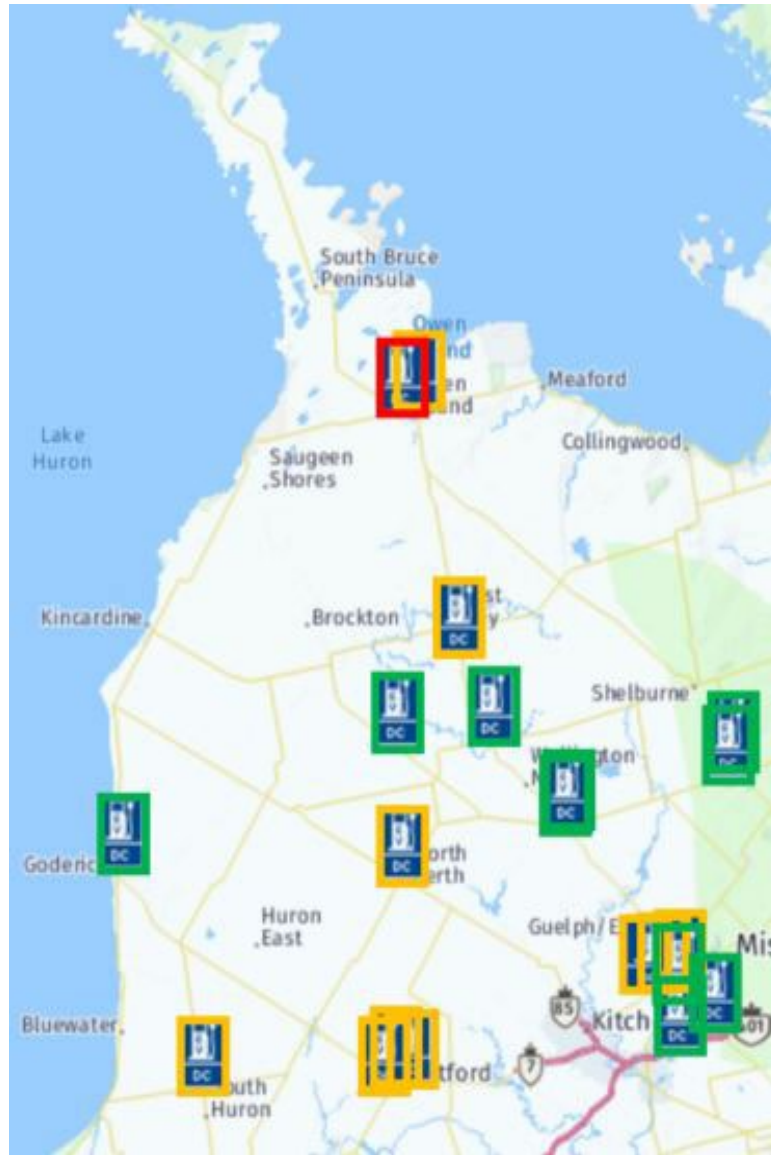


DCFC Station
Private-owned
Limited availability



Level 2 Station

LEVEL 3 DCFC CHARGERS



Existing



Proposed

SITING CRITERIA

For EV Drivers



Dedicated parking stall while charging



Accessibility



Desirable place to stop: safety & lighting



Contributes to overall network



Walkability to amenities

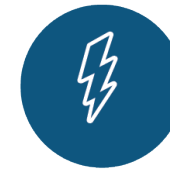


Visibility to motorists & pedestrians

For Project (Technical & Co-Benefits)



Future proofing: adding stations, accommodating car share growth



Available power source



Signage & branding for high visibility



Appropriate ownership

LEVEL 3 DCFC CHARGERS



Existing



Proposed

PHASE II - INITIATING IMPLEMENTATION

Dufferin took administrative lead for phase 2 in municipal partnership:

- Bruce County
- Dufferin County
- Grey County
- Huron County
- Perth County

Continued work with CEA to facilitate TOR and support procurement process



SITE IT, FUND IT, INSTALL IT, USE IT

- Confirming sites with property owners
- Release RFP in January 2023
- Award in February 2023 to implementation partner to apply for ZEVIP and/or Provincial Rural Connectivity Fund
- Aiming for install and commissioning in 2024



PERSISTENT CHALLENGES

- Risk and burden of owning and operating assets
- Municipal staff capacity
- Capital cost including electrical panel upgrades, moving electricity and installation
- Fee structure and demand charges
- Power availability and vast geographic area.



LESSONS LEARNED (SO FAR!)

- Prioritize collaboration
- All municipalities run differently
- Increasing levels of detail required as implementation becomes more real



THANK YOU



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