
cleanBC
CLIMATE
LEADERSHIP
SYMPOSIUM
Public Sector and Local
Government Action

Interior Health's Electric Vehicle Transition Plan

Kirby MacIver - Manager, Parking & Fleet Services
Jessica Campbell – Fleet Coordinator
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Land Acknowledgement

Interior Health would like to recognize and acknowledge the traditional, ancestral, and unceded territories of the Dãkelh Dené, Ktunaxa, Nlaka’pamux, Secwépemc, St’át’imc, Syilx, and Tŝilhqot’in Nations where we live, learn, collaborate and work together.

Influencing Factors

There are a number of government milestones, commitments and requirements which have influenced this plan and include:

- the B.C. government mandate requiring healthcare organizations to contribute to the PSO *shared* target of a 40% reduction in fleet greenhouse gas (GHG) emissions by 2030;
- our commitment to the West Coast Electric Fleet (WCEF) as an 'On-Ramp' partner - IH committed to evaluating our fleet vehicle procurements appropriate for an EV-transition;
- mirroring the requirement of core government ministries and their need to transition 10% of their fleet to EVs by 2030;

Climate Change and Sustainability Roadmap

The electrification of IH's fleet is a priority that is captured in IH's Climate Change and Sustainability Roadmap underway which:

- identifies actions Fleet Services can take to contribute to climate change mitigation and greenhouse gas (GHG) reductions from our capital assets;
- identifies strategies to reduce the environmental impact from IH operations;
- supports healthy environments for healthy populations;
- establishes accountability for climate change and sustainability action at the Fleet Services program level, and;
- supports strategic and collaborative partnerships with community service providers and stakeholders

Goals and Objectives

To identify the communities where we will focus site assessments for deploying EV-infrastructure and low-carbon vehicles, year-over-year

To identify the number of vehicles we can transition (at a minimum) by 2030

To identify the percentages of greenhouse gas emissions avoided by 2023 (from 2010 levels), based on the transition target

Engagement

The successful implementation of this plan requires:

- senior leadership endorsement
- multiple champions and commitment to ‘greening the fleet’
- interdepartmental coordination to facilitate the implementation of level 2 EV-charging stations
- commitment from the IH-Fleet Services budget to use funds for EV purchases and EV-charging infrastructure
- corporate culture that encourages environmental stewardship
- continuing to work with the Climate Action Secretariat towards the collective action BC is taking for EV-preparedness and emissions reductions
- carefully managed risk – and a willingness to experiment
- measurable and achievable goals

Stakeholders

Recommendation: Involve stakeholders early in the planning process

Communications

Contracted Services and/or Lease Owner

Energy Management

Environmental Sustainability

Plant Services

Utilities

Overview

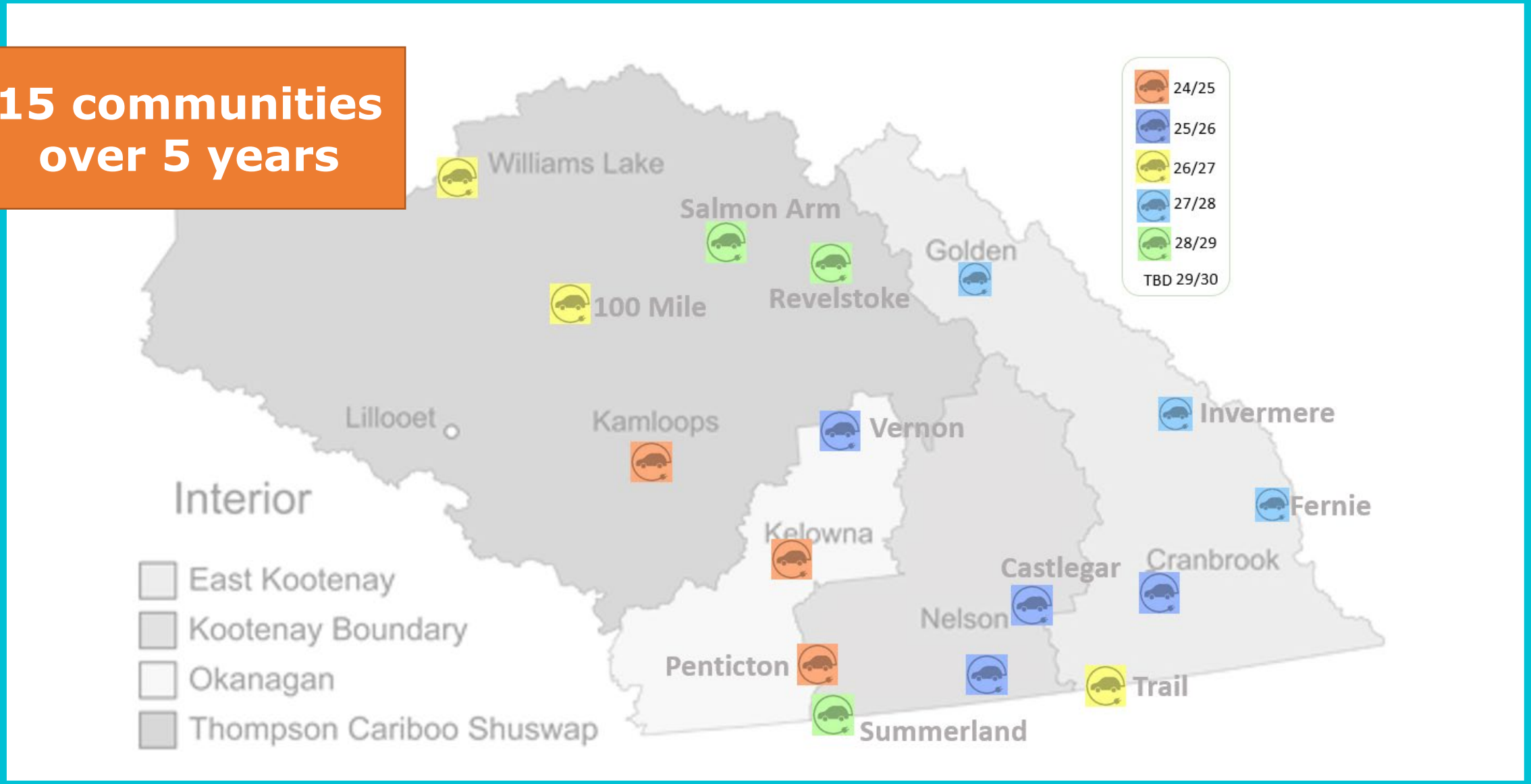
- The transition plan focused on 222 vehicles in the light-and-medium duty fleet.
- Provides a comprehensive review of current state of the fleet use, travel patterns and charging infrastructure opportunities.
- Takes into consideration replacing vehicles when they reach end-of-life.

Transition Plan Steps

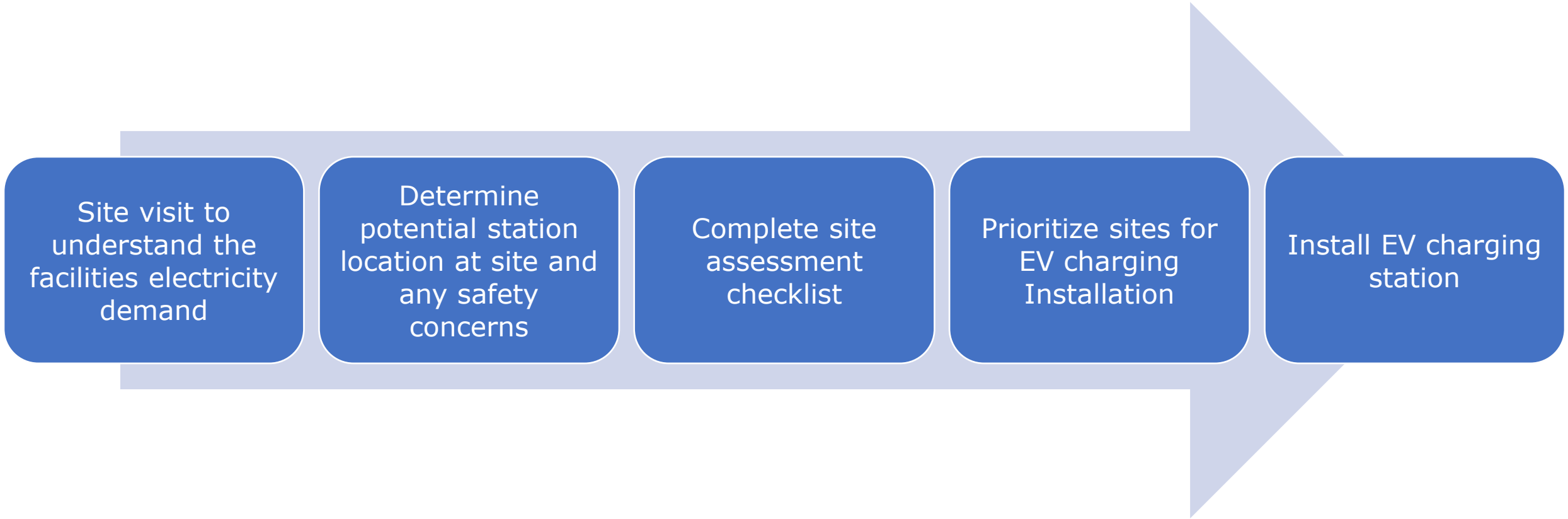
- A vehicle end-of-life forecasting exercise was completed to identify the number of vehicles expected to be end-of-life and requiring replacement in future years.
- The vehicle inventory was reviewed by site/community to determine if appropriate for transition to EVs or PHEVs.
- Community reviews took into consideration travel patterns to determine distances regularly travelled.
- Electric vehicle range and public charging options while a vehicle is in transit.

Goal:
60 EVs by 2030

15 communities over 5 years



Site Assessments



Site Assessment Overview

Consider:
Future Proofing
New Builds or Renos

	SITE	STIMATED EVS	VEHICLE ADOPTION 2030	Total Vehicles	CAPACITY BEFORE Electrician/C	CAPACITY AFTER Estimated	AVAILABLE PARK	ELECTRIC PANEL/TRANSFROMER LOCATIONS	IDEAL PARKING SPACES	MAP	SUMMARY	Ranking	Final
1		2	1	2	0 / 180	100	45	One in the centre of the building, one near the East parking lot	Right outside the electrical room, in the corner of eastern parking lot.	Vehicles\Student - Simon\Finished\Sites\Merritt\Gillis House\MapFILLED.png	The ideal area is slightly cramped albet very close to the charger. Slight PARKING line changes may be needed to accommodate. Don't add EVSE on pavement that needs to be fixed.	1	Easy
2		4	4	4	0 / 23	0	45	4 in building, all small. 2 in electrical rooms, bigger, but still full 400 and 225.	Right across from one of the electrical rooms.	Vehicles\Student - Simon\Finished\Sites\Salmon Arm\MapFILLED.png	The site has easy to access to electrical rooms, however the panels would need an upgrade. As well there is a signifigant slope down from the lot to the building which would need to be accouned for.	2	Easy, Many cars
3		2	3	3	80 / 0	0	50	Bottom left of the building. Full electrical room.	Right outside the electrical room on the bottom floor, far left.	Vehicles\Student - Simon\Finished\Sites\Summerland\HUMapFILLED.png	The back lot is already perfect for EVSEs. One (maybe 2) EVSEs can be added to the main transformer. An upgrade would be needed.	3	Easy
4		1	3	8	0 / 0	0	20	The fleet lot is far away from all panels and right behind the main room doesn't have great space. However near the fleet a new panel is being put	Main Panels centre behind the residential care facility. Additional small panel in lot building out back. Small full.	Vehicles\Student - Simon\Completed Work\Site Assessments\Kamloops\KOFC\MapFILLED.	Hard site to do normally, would require either sizable upgrades or absolutley massive trenching. However a new post mounted panel is being added right near fleet vehicles. If that was upgraded to a better version EVSEs could be added to it .	4	Being Done
5		3	3	7	0 / 673	552.5	1000	In the Hillside building where there are currently EVSEs and plans for more. Or in the underground staff parking where the infrastructure could easily	In Hillside adjacent to the parkade. In the underground parking lot. Adjacent to the bottom floor of the outside parkade.		Hillside will be an easy upgrade to continue with no issues. The underground lot would also be very easy with ample power and infrastrucutre in place.	4	Being Done
6		2	3	6	0 / 0	0	50	Electrical room was in the centre back of the building from the entrance. Slightly to the left	The end of the staff parking lot has 2 non-functional EVSEs. Add them in the same location. Staff parking on the left side.	Vehicles\Student - Simon\Completed Work\Site Assessments\Vernon\VHUMapFilled.png	Currently upgrading the electrical sytem. Should add EVSEs while doing the upgrade if possible. Contact soon. Probably will require trenching, but may be able to continue from current EVSE wiring.	5	Currently Upgrading
7		2	11	19	0 / 75	0	80	Current Fleet parking is across the street. The ideal parking is behind the building close to the ravine.	Many small scattered throughout building. Two electric rooms in basement. One panel near creek wall/ideal parking.	Vehicles\Student - Simon\Completed Work\Site Assessments\Kamloops\HUMAPFilled.png	Would require an upgrade and to move fleet parking onto the creek side of the building. Closes panel is only a wall apart, but couuld only take one EVSe at best.	6	Moderate


Site: Blue
Electric: Yellow
Fleet: Red
Potential: Green
Location Consideration:
Close to Electrical Source
Secure and Safe

Charger Types

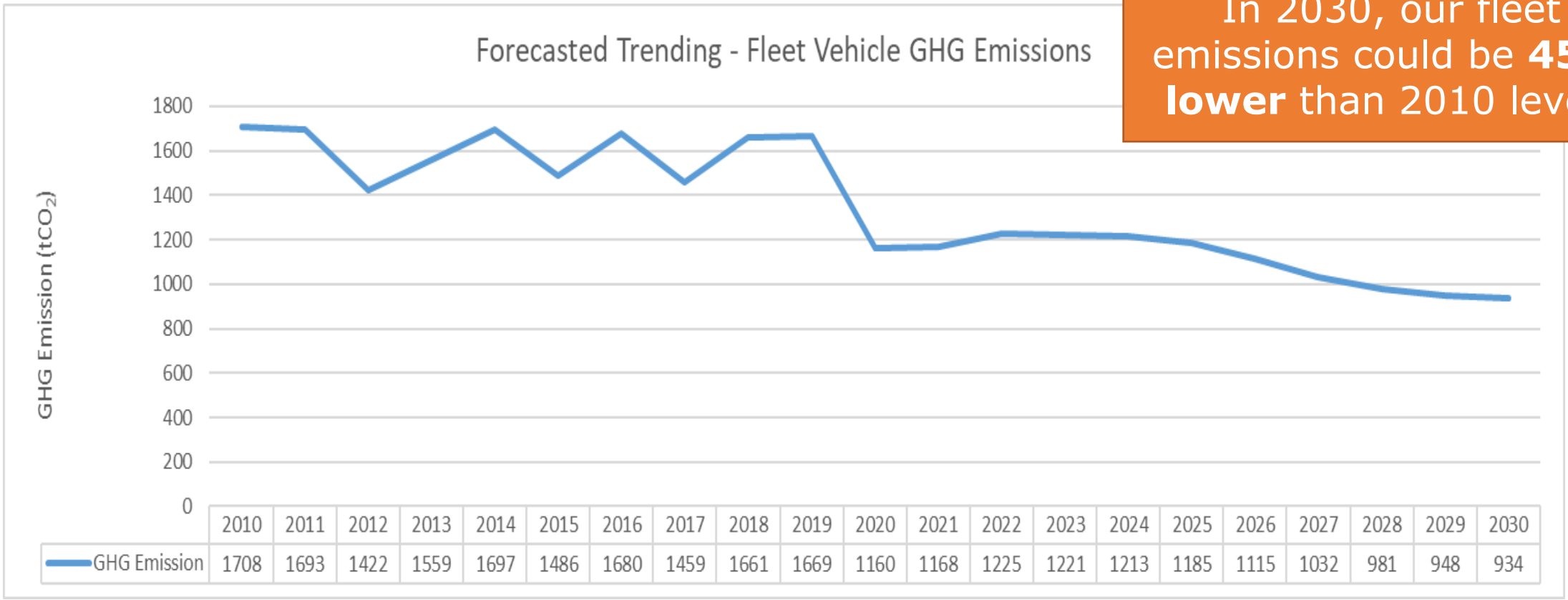
Recommendation:
Install a Level 2 **Network** charger for each Fleet EV

Level	1	2	3 (DCFC)
			
Power (kW)	1	3 to 20, typically 6	Typically 50, occasionally 20
Approx. Charging Time (per 200 km)	+/- 20 hours	+\- 5 hours	+\- 30 mins* To 80%

Interior Health's Electric Fleet

Community	Site	Vehicle Type	Charging Infrastructure
Kamloops	Royal Inland Hospital	Mitsubishi Outlander PHEV	Level 2
Kelowna	Kelowna General Hospital	Chevy Bolt EV Nissan Leaf EV Kia Soul EV	Level 2
Kelowna	Kelowna - CHSC	Chevy Bolt EV	Level 2
Kelowna	Kelowna – Reid's Corner	Chevy Bolt EV	Level 2
Penticton	Penticton Regional Hospital	Mitsubishi Outlander PHEV Chevy Bolt EV	Level 2

Greenhouse Gas Emissions



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
GHG Emission	1708	1693	1422	1559	1697	1486	1680	1459	1661	1669	1160	1168	1225	1221	1213	1185	1115	1032	981	948	934

In 2030, our fleet emissions could be **45% lower** than 2010 levels

Operating Costs

Vehicle Type	Annual Operating Cost per Km
Car	$0.27
SUV	$0.29
Van	$0.33
Truck	$0.29
Electric Vehicle	**$0.16**

Gas Vehicles
Average: $0.29 / km

Operating cost savings of **$0.13 per km** for an EV

Total annual operating cost savings of **$2,982 per EV**

Expected Results (2030)

- 60 EVs by 2030
- 27% of our light/medium duty fleet will be electrified
- Annual operating cost savings of $2,982 per EV
- Charging infrastructure in place at the majority of IH sites
- Fleet emissions reduced by 45% from 2010 baseline year
- Cumulative annual total of 278.9 tonnes of carbon dioxide equivalent avoided and $6933 in cumulative carbon offset payments

Education

Battery Range

How to Charge – site and public

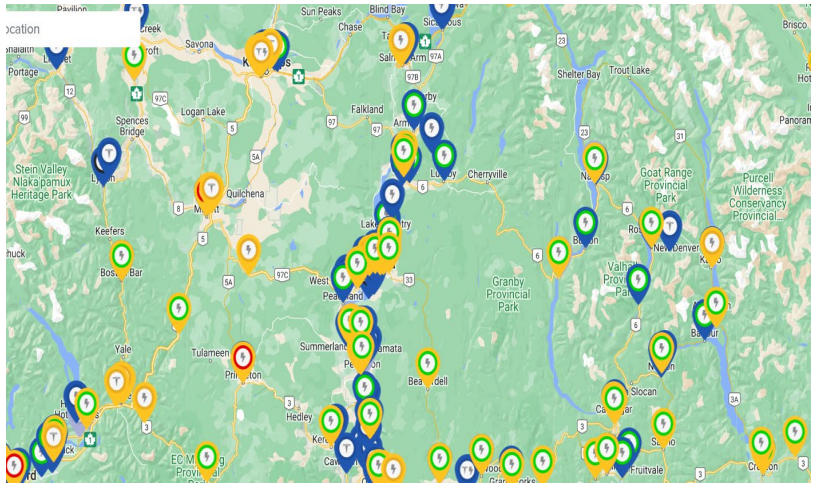
Regenerative braking or “One Pedal Driving”

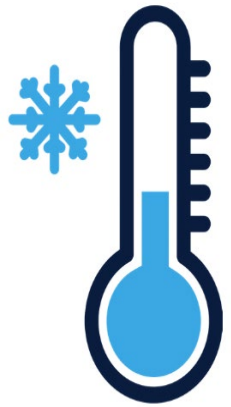
Route Planning

Silent Engine

Temperature

Towing





Questions?