

EVSEs (charge stations)

2016

- Level 1: 120V AC @12A = 1.5kW
- Level 2: 240V AC @32A = 7.6kW
- Level 3: DC 50kW

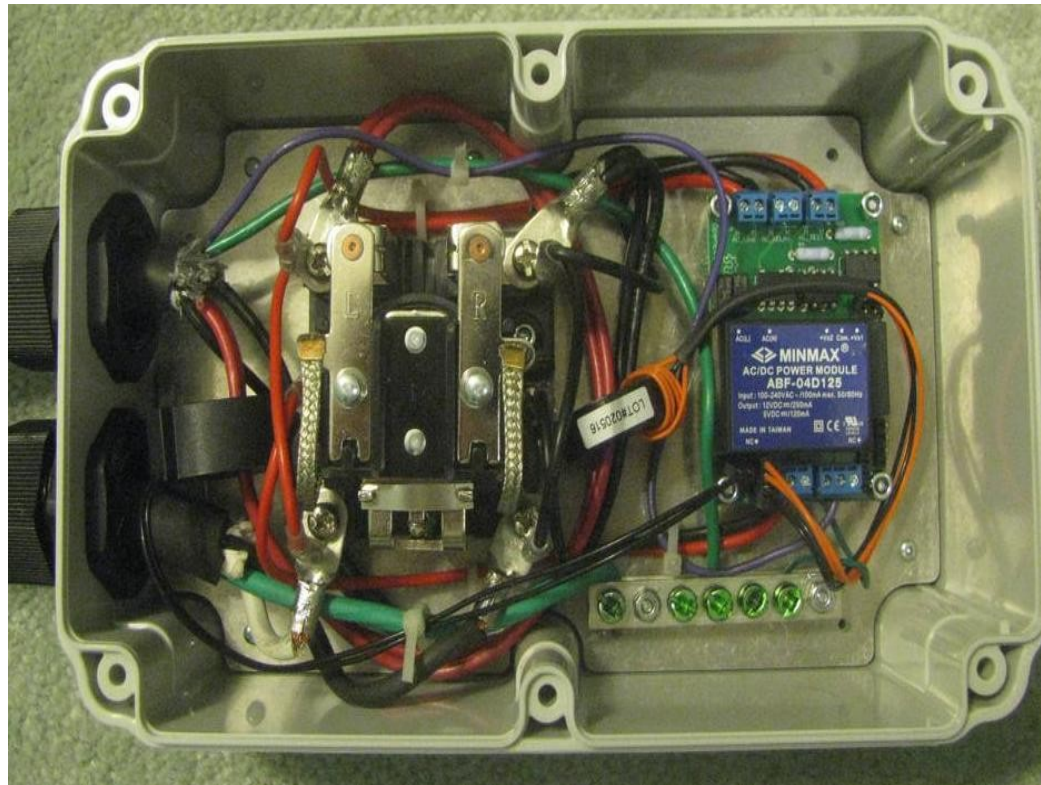
2022

- Level 1: 120V 1.5kW (comes with the car)
- Level 2: AC from 7kW to 22kW
- Level 3: DC from 50kW to 350kW

What's in an EVSE ?

Not much

It's not a charger, it's a switch.



Level 1 EVSE



EVSE operation

- Detect that there's a car plugged in
- Tell the car how much current is available
- Close the contact to deliver power to the car

The actual battery charger is in the car

Smart EVSEs

- User configurable power levels
- Timed charging
- Network connectivity
- Load balancing:
 - With other EVSEs on the same circuit
 - With the total load in a building

Adaptors

Adaptors let you use campsite or dryer outlets



Installing an EVSE

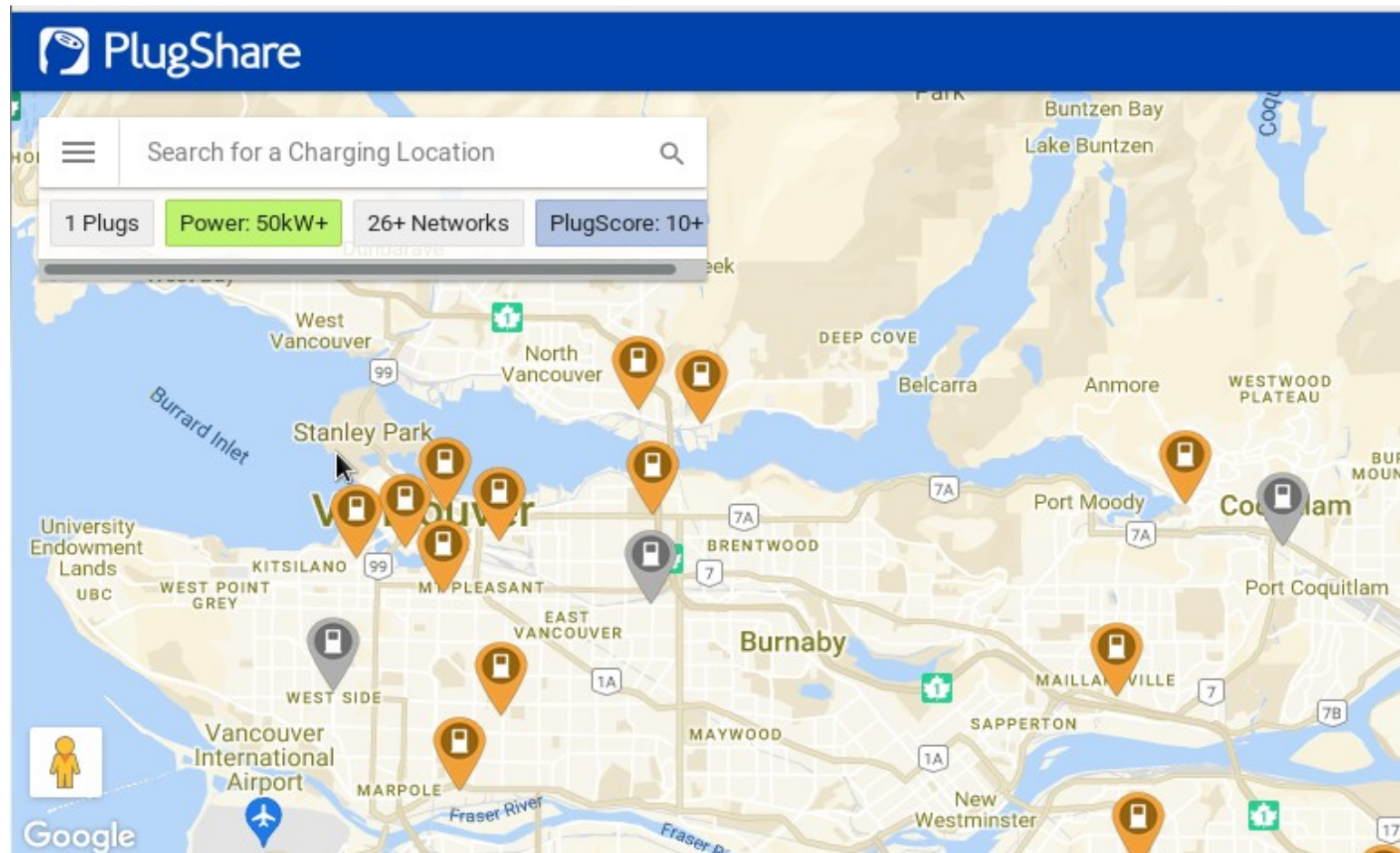
- 50A dedicated 240V circuit (125% of load)
- Within 20 feet of your car
 - EVSE cable is much dearer than NOMEX
- NEMA 14-50 or hardwired
- Level 1:
 - Dedicated 16A circuit
 - 16A extension cords are OK if you uncoil them

More details: <http://qry.cc/EV2>

(OpenEVSE kit at Instructables)

Finding a Charge Station

- Plugshare is one of the easiest apps
- Configure for your car



Know what to look for

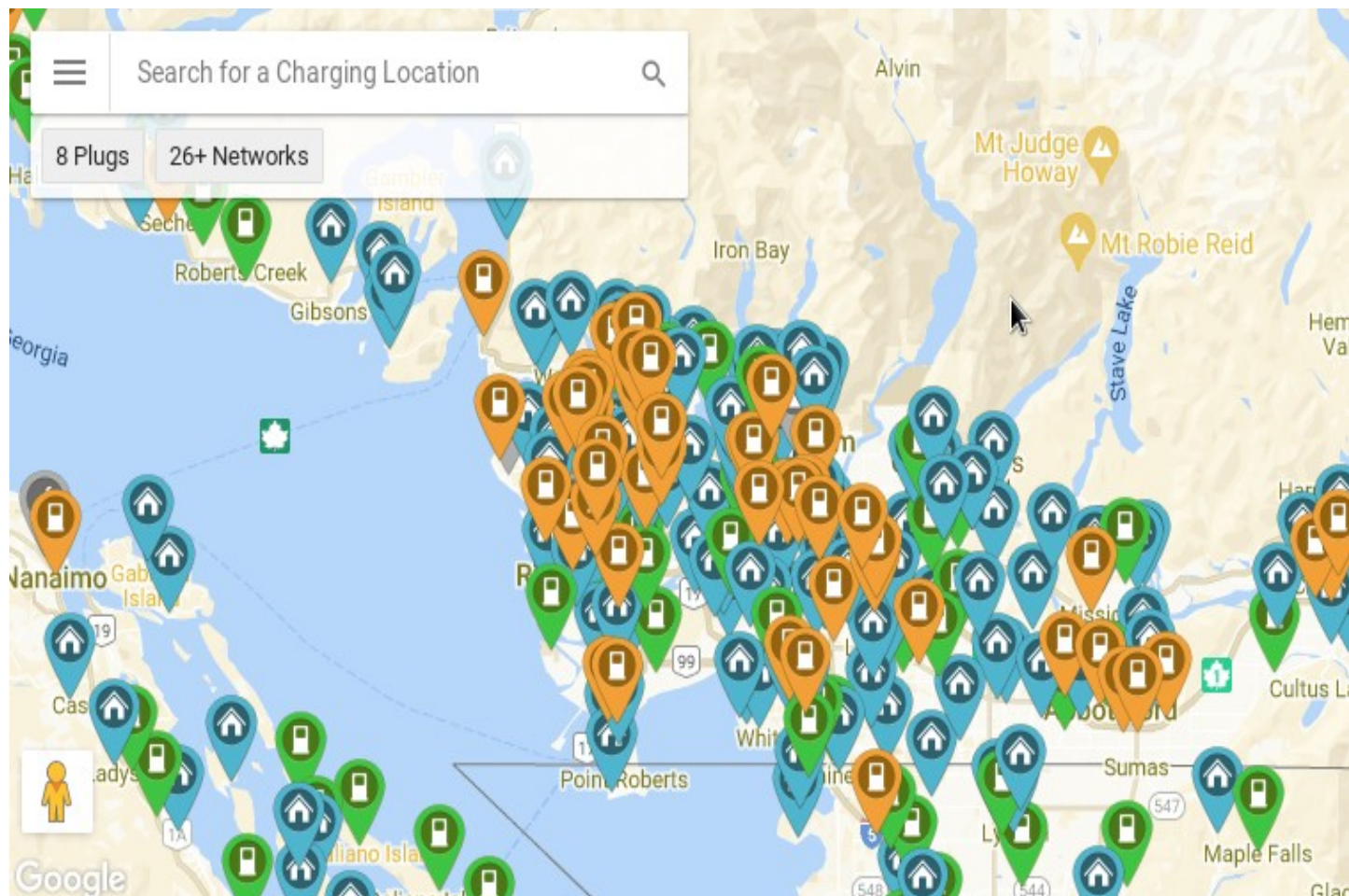
- Chargestations come in all shapes and sizes, and they're hard to find
- Use GPS and read directions



Yes, that is an old gas pump

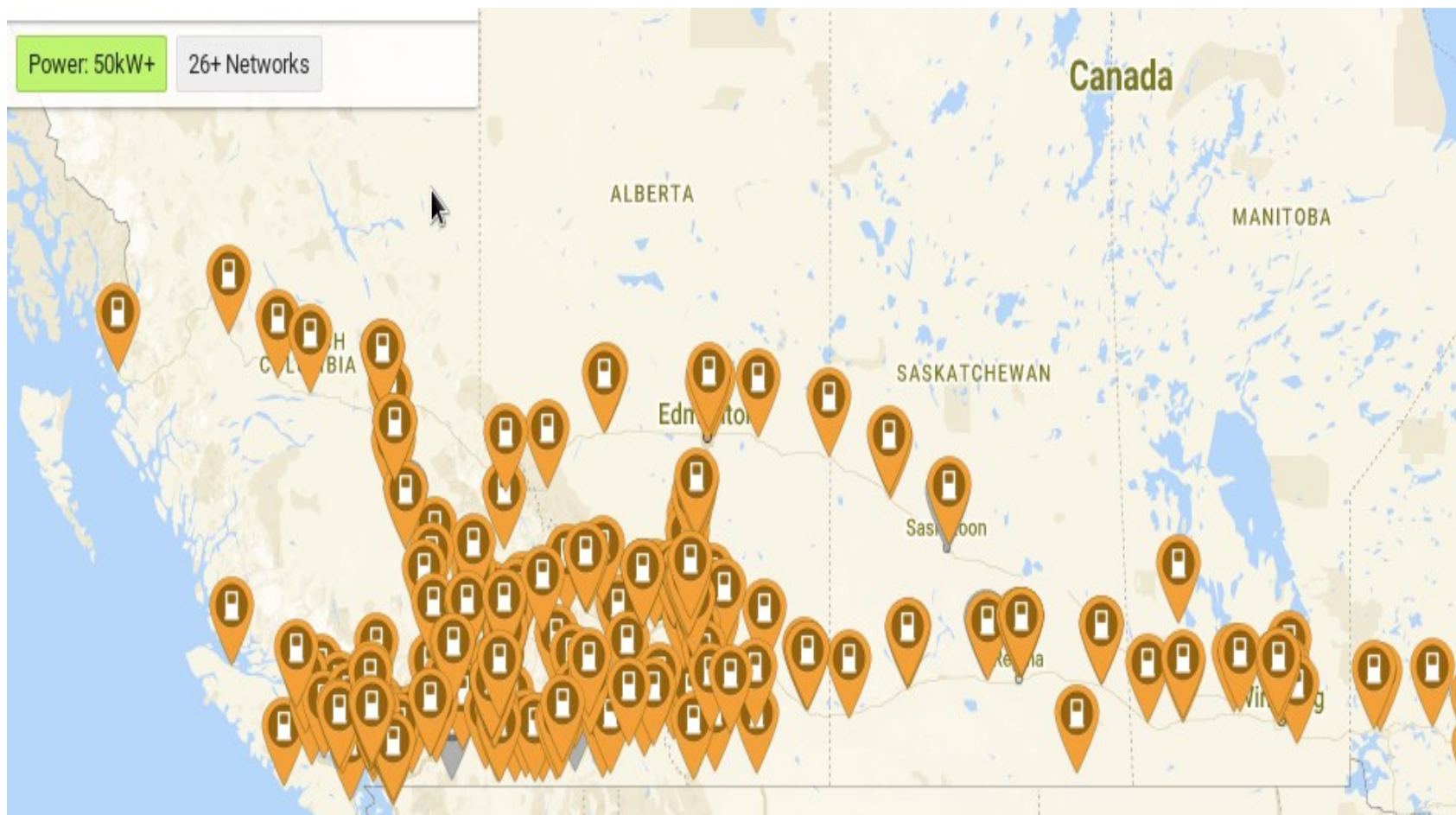
Use the filters

- All stations in Vancouver, including private ones



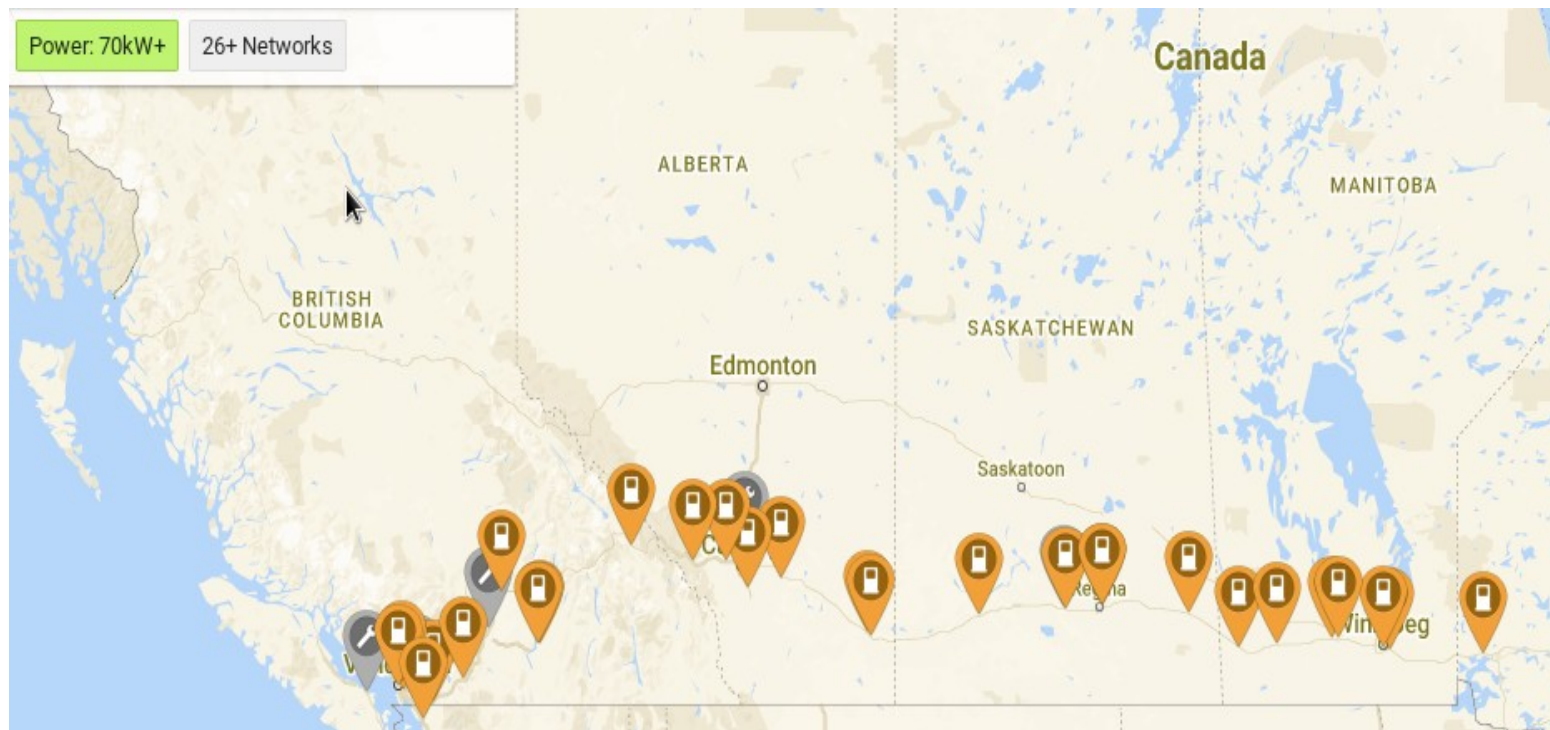
Use the filters

- Fast chargers across Canada



Use the filters

- 70kW and greater charge stations
- More being built every month



Charge Networks

- Many charge stations are networked
- But not on the same network
- Payment, authentication, monitoring
 - It might be free, but you have to login
 - With the right app, you can check it's available
- RFID cards and phone apps

RFID Cards



Resources

- More details: <http://qry.cc/EV>

