ElectroPark: Pioneering Smart Charging for All Parking Spots



Soneil Group of Companies

- Has been in charger business for 30 years (est. 1994)
- Leading global designer and manufacturer of battery chargers and new generation AGM batteries
- Located in Brampton, Ontario

SONELL GROUP OF COMPANIES

Meet our team



Sonya Jain Senior Vice President

- Worked in Silicon Valley for a decade at companies such as Apple, BlackBerry, Credit Karma
- Extensive experience in consumer products, startups, and growth-stage ventures



Haitham Mazen

Head of Research & Development

- Over 38 years of experience in hardware and software development
- Expertise in inventing technologies and implementing innovative solutions

 Comprising hardware, software, and mechanical engineers, the team is focused on the development of high-speed electric vehicle chargers and batteries.

ENGINEERING

DEPARTMENT

EV BASICS

Three types of EV chargers:

- Level 1 AC Charging (Slow Charging): Takes between 11-20 hours for a full charge.
- Level 2 AC Charging (Fast Charging): Takes between 4-6 hours for a full charge.

• Level 3 DC Charging (Rapid Charging): Takes about 30-60 min for a full charge.





EV LANDSPACE



- Federal Directive: Canada will ban the sale of gas-powered
 vehicles by 2035
- Significant growth of the global Electric Vehicle and EV charging industry due to increased consumer adoption, government incentives, and investments by automakers.
- Expected growth of the global EV market size from CAD 668.34 billion in 2023 to CAD 2,108.73 billion in 2030.
- <u>Record-high electric vehicle sales in Canada: A substantial</u> increase of EV registration from 1% of total vehicle registration in 2017 to 5.3% in 2021.

Future Proofing

Given EV growth, here are issues that will grow

- Not enough spots for charging
- Gas cars using EV spots for parking
- Limited grid capacity
- Expensive and long wait times for power upgrades
- Changing technology in EV cars (one of the fastest growing areas of innovation)



Project Concept:

- Smart Power Distribution System
- Smart Charging Solutions
- Intelligent Allocation of Power among
 Connected Electric Vehicles
- The Hub and Spoke Model
- Large, scalable electrification of space

OVIN R&D Partnership Fund Program

This project will contribute value to the City of Brampton, positioning it as a pioneering city that offers forward-thinking solutions for the future of the growing electric vehicle industry.

CONTRIBUTIONS:

- OVIN: 1 Million Dollars
- Soneil: 2 Million Dollars
- City of Brampton: Staff Hours, Authorizing Parking Access, and Providing Electrical Requirements

Implementation

- Conducting Power Assessment

- Identifying Suitable Development Space (e.g., City of Brampton parking lots, Go Stations' parking, innovation districts, etc.)

- Beginning with a modest space allocation (5-10 parking spots)

- Carrying out Research and Development (R&D) with testing over a span of 2 years.

Infrastructure

- Hub and Spoke Model
- Each spot will have a charging access point
- Using existing power (will not look for power upgrade)
- Scalable

Maintenance & Liability

- Soneil to provide ongoing hardware and software support

- Will meet all safety and certifications requirements
- Maintenance procedures to be established through future agreement (pilot project)



PARTNERSHIP GOALS

• As a Brampton-based company, our objective is to establish this city as a leading hub that offers progressive and innovative solutions for the future of the ever-growing EV industry.

NEXT STEPS:

- Full application submission deadline: January 24, 2024
- Signed Letter of Support from authorized Municipality of the City of Brampton representative due by January 23, 2024
- Completion of Section 4.2 (basic organizational information) by the City of Brampton by January 23, 2024





Thank you