



# Planning for Electric Mobility – A Snapshot into Charging Infrastructure

**World Town Planning Day Symposium**

**November 8th, 2022**

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# Road to Electrification of Transport

## Government

- Set policy and incentivize the uptake of EV

## Utility

- Be ready to handle the increased load from EVs

## Private Sector

- Supporting systems

## Citizens

- Embrace technology



# Mandate of Megapower

**“Encourage the uptake of Electric  
Vehicles powered by renewable  
energy sources”**

**Since 2013.**

# Megapower Summary

## Sale of Electric Vehicles

- Nissan Leaf, eNV200 and Ariya
- MG ZS and 4
- Jaquar IPACE
- BMW I3
- BYD

## Maintenance and Repair of EVs

- Passenger Vehicles (1000+ Electric Cars and Vans)
- Buses (49 buses currently supported, 10 more expected soon)

## Installation of Private EV charging

- 700+ private chargers

## Public EV Charging Network

- 40+ charging locations

## Renewable Energy (0.5 MW + installed)

- Rooftop Solar
- Solar Carports

## Training and Education

- Numerous technicians trained regionally



# EV Charging and Suitability

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Megapower caters to various types of charging. All are required for the best customer experience for all segments of vehicle users.

- **Home Charging**
  - Fixed Location
  - Clear defined routines
  - Convenient to charge overnight
- **Workplace Charging**
  - Fleets
  - Employees
  - Convenient to charge
- **Destination Charging**
  - Tourism market (rental cars)
  - High mileage vehicles (delivery vehicles)
  - No defined/fixed resting place





# Home EV Charging

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Typical Level 2 home EV charger operates at 6.6 kW (32 amps at 230V)

- **40 amp breaker and circuit required**

1. **Are we putting things in place to ensure all modern homes have put provisions in place for EV charging?**
  - **Appropriately sized main breaker, conduits in place**
2. **Should we mandate this in some building regulation or code?**

**UK new building regulation enforced from June 2022**

“Every new home, including those created from a change of use, with associated parking must have an EV chargepoint.”



# Workplace Charging

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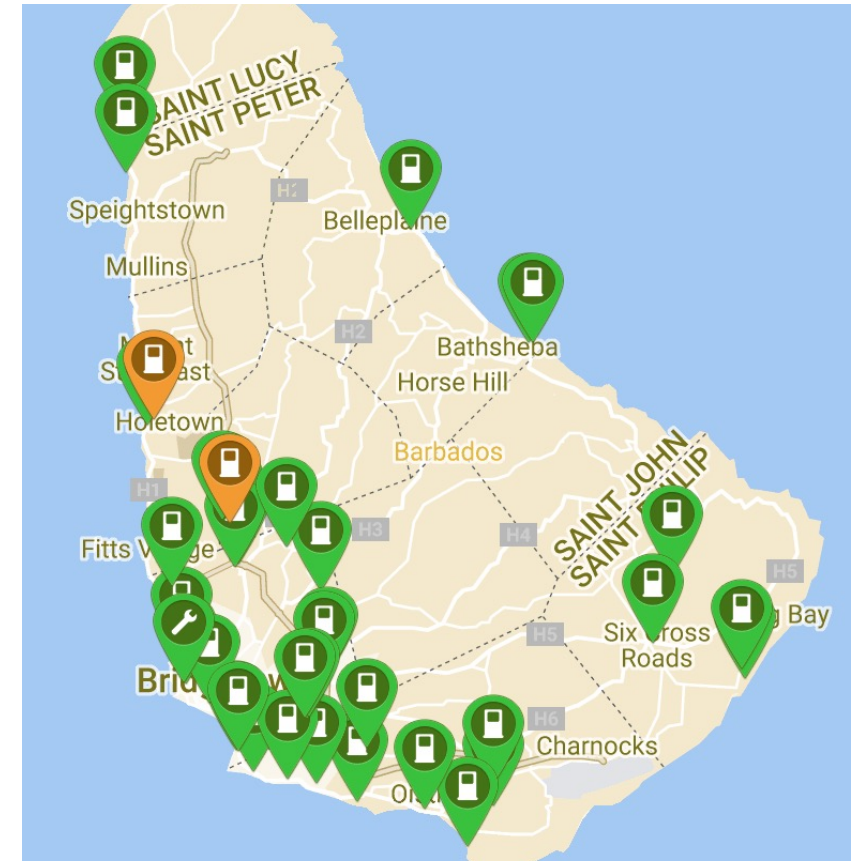
- Provisions should be put in place for workplace charging for all new constructions
  - **Basic** – put containment in the ground for future EV chargepoints and incorporate EV charging load in electrical designs
  - **Intermediate** – Build charging pads for future chargers while constructing carparks
  - **Advanced** – put provisions in place for future Solar Car Ports

N.B. - Typical dual outlet workplace or public charger requires 64 amps at 230V

# Public EV Charging Network

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- Currently 40+ public EV charging locations across the island.
- Charging an EV is around 1/3 of the cost of fuelling your vehicle traditionally. There is a slight premium for public charging.
- The public charging network is currently a loss leader and is a needed service to EV owners. Subsidized from sale of EVs, Renewable Energy and other streams.





# New Public EV Charging Infrastructure

## Faster

- From 50 kVA to 100 kVA for fastest units
- Multiple vehicles can simultaneously charge
- Rapid charge in 30-60 mins

## More Reliable

- Aging units to be replaced with newer units

## Digitalisation

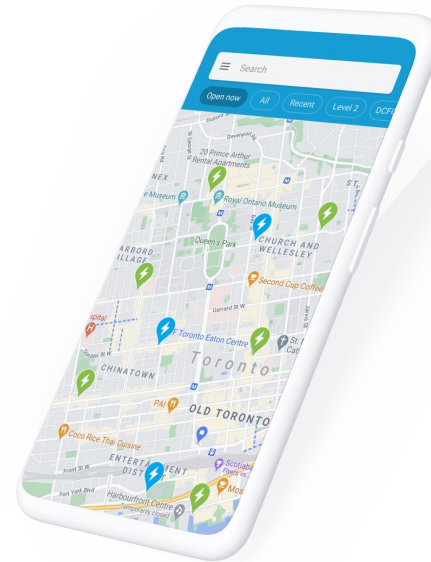
- Web App
- Mobile App

## Automated Payments Processing

- New modern back-office management system
- True Pay as you use vs. monthly billing
- Credit Card

# New Partners

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# Key Segment for Public Charging - TOURISM

The **hired car, taxi and rental car** segment is very keen on electrification. However there is a concern about the charging infrastructure being in place in the right areas for this segment.

Megapower is working with partners to close this loop:

- **Hotels**
- **Condos**
- **Villas**
- **Tourist Attractions**





# Value Proposition for Businesses

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1. Additional amenity to attract clientele to property
  - Analogous to free Wi-Fi
2. Will eventually become a standard requirement for facilities
3. Proper planning now could save you in the future
  - Put infrastructure in place for charging during construction
  - Reduce cost of retrofitting in the future



# Projects to Support Tourism Segment

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1. Few rental car companies already on board with EVs
2. Charger Projects In Progress
  - Speightstown Esplanade (in conjunction with NCC)
    - Preliminary discussion on other NCC locations (beaches, parks, etc.)
  - Royal Westmoreland, Apes Hill and other similar developments
  - Limegrove Lifestyle Center
3. We need more partners to come on board to help this segment

# Sample of EV Charging Sites





# Partners for EV Charging Infrastructure

Property managers, landlords and owners of  
commercial establishments....

Let's Chat about your EV Charging options!

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