



Apartment EV Charging Options



Important Notice

JET Charge Pty Ltd (**JET Charge**) owns all Intellectual Property Rights in and to this document and any material provided, created or developed by or on behalf of JET Charge in connection with this document (**Materials**). Neither this document nor any Material may be reproduced, redistributed or commercially exploited without the prior written consent of JET Charge. The information contained in this document is provided as at the date of this document, and JET Charge makes no representations or warranties in respect of its accuracy at any future date. The information contained in this document may be subject to change due to, among other things, government regulation, changes in commercial or technological conditions, or consumer behaviour. In addition, the recommendations provided in this document is based on the industry experience and independent research of JET Charge. Its application to the addressee may be affected by circumstances of which JET Charge is not aware and JET Charge makes no representations or warranties as to any recommendation's suitability for the addressee.

“Intellectual Property Rights” means patents, design rights, trademarks, copyright, moral rights and rights to register those or like rights, and rights to protect confidential information, trade secrets and know-how, whether at law or in equity, in Australia or elsewhere and whether or not in existence at the date of this document.

Apartment Charging Options



Shared AC Charging

Starting Budget \$5,000

Pg 17



Shared DC Charging

Starting Budget \$30,000

Pg 19



Backbone EV Charging

Starting Budget \$2,000 per lot owner

Pg 21

We Fuel EVs



JET Charge



OEM Partnership

We are the official installation partner of 24 of the major automakers in the country



Industry Trust

Our specialist experience is respected and recognised by industry leaders and clients nationwide

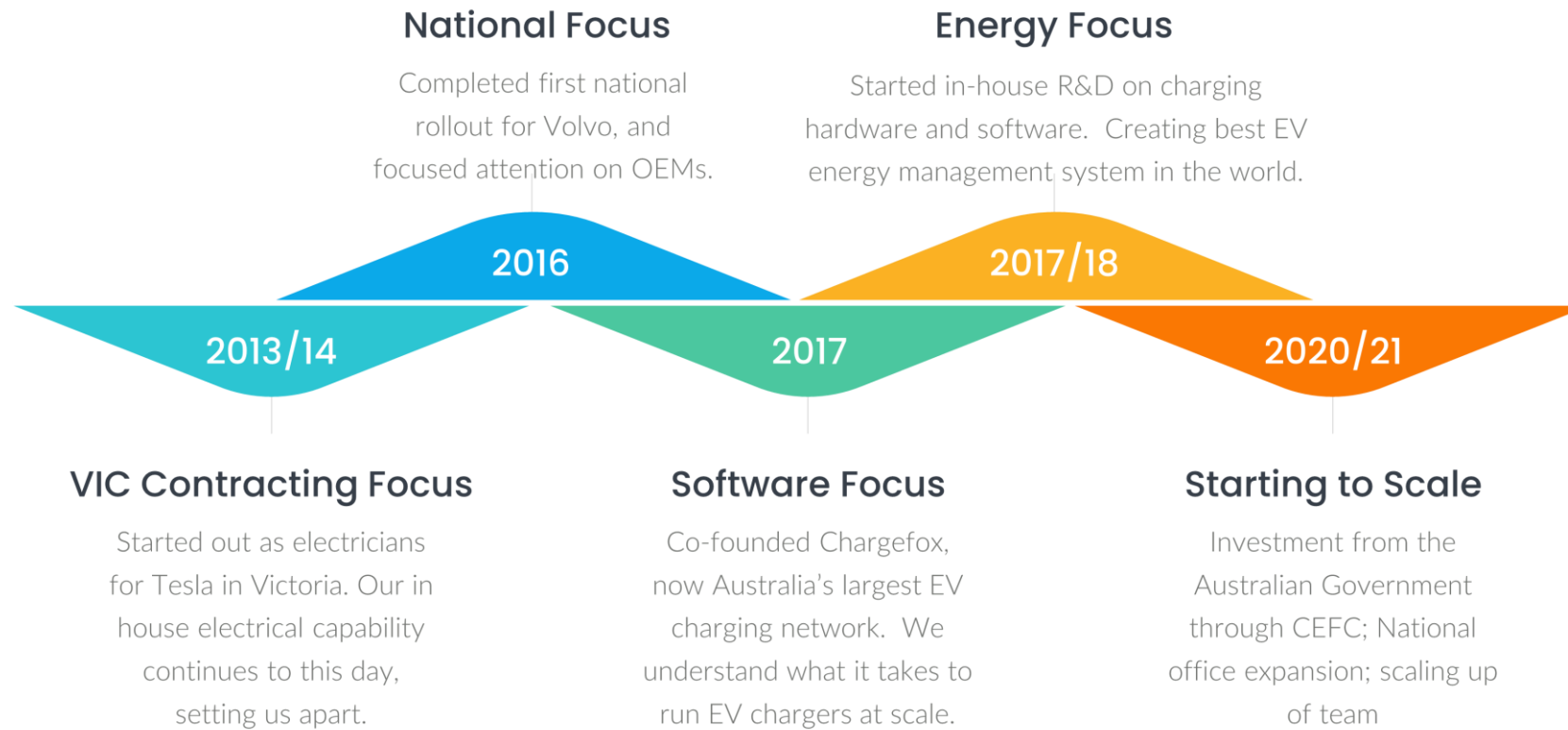


Apartment EV Charging Experts

Over 100 EV charging installations in apartment settings



Here to Service Your Long-Term EV Charging Needs



Major EV Charging Projects



Apartment Retrofit: Triptych Apartments (Southbank, VIC)

- Long-term EV charging solution developed at building
- 150 EVs supported at building
- JET Charge Core energy management system critical



Apartment Retrofit: Richmont Apartments (Pyrmont, NSW)

- Visitor EV chargers installed as interim solution
- Backbone EV charging infrastructure installed for future private car space connections



OEM: Porsche National Rollout

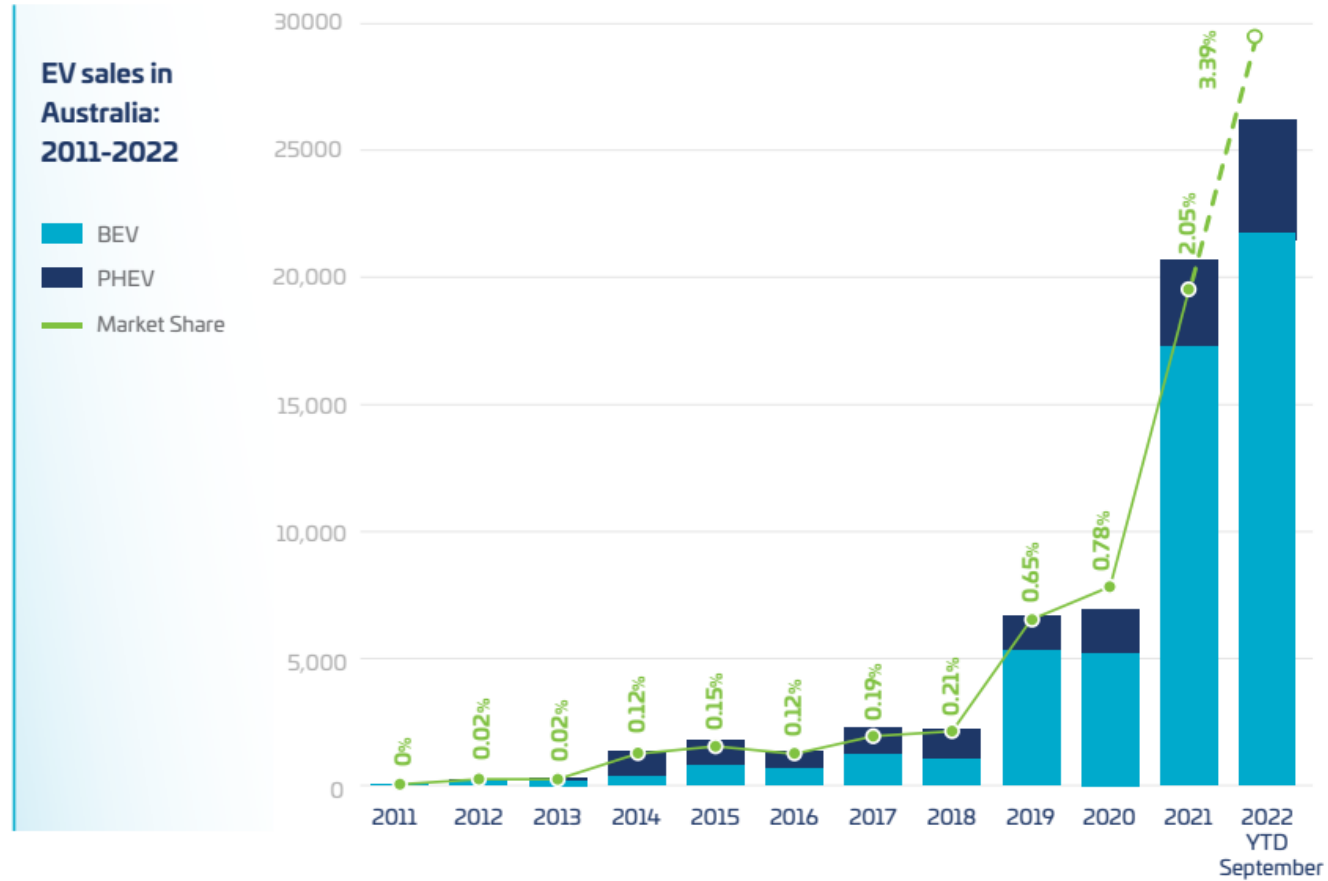
- 4-year planning, design and installation program
- Introduction of the Porsche Taycan required high-power charging across dealerships



Tech and Innovation: REVS - V2G (ACT)

- ARENA funded project with 51 bi-directional chargers
- Demonstrating V2G technology
- Partnering with ANU, Nissan, ACT Government, ActewAGL, Evoenergy and SGFleet

Australian EV Market Growth



Source: EV Council State of EVs October 2022

Importance of Apartment EV Charging



Meet Owner Demand

- Providing access to EV charging is becoming a necessity in apartment buildings
- EV owners may move buildings if there is no action on EV charging



Invest in your Building

- EV charging access will become a critical decision factor for prospective purchasers and tenants
- Apartment buildings offering EV charging will receive a premium when selling or renting units



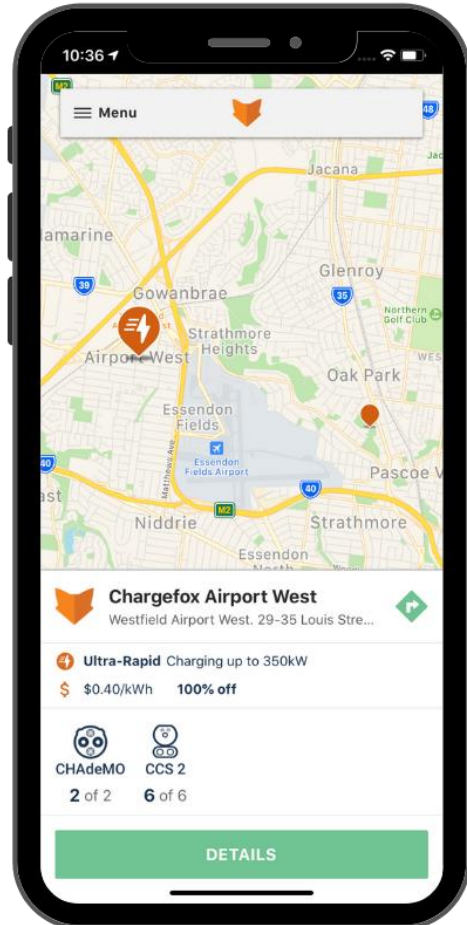
Keep up with New Developments

- Revisions to the National Construction Code will mandate that new residential developments be built with infrastructure to provision for 100% EV charging in the carpark



A Note on OCPP Compliance

- Open Charge Point Protocol (OCPP) is the global communications standard for EV charging hardware and software
- Critical to ensuring the greatest range of choice (both hardware and software) for building and EV owners
- Allows EV owners to select most suitable charging station for their needs in their private car space
- Allows Committee to change software providers
- Not locked into any hardware or software



Chargefox Billing Software

- Critical component of any scalable apartment EV charging solution when connection point is the building common power
- Electricity consumption initially paid for by Committee (through existing energy bills) but costs fully recovered from EV owners
- EV owners billed at \$ / kWh rate set by Committee with funds collected by Chargefox and transferred to Committee at regular intervals
- All reimbursements performed automatically so no management overhead
- Chargefox is the largest public charging network so makes for a seamless transition from public to home charging
- Annual licensing fee:
 - a) \$165 ex GST per port per year (connection to building internet)
 - b) \$225 ex GST per port per year (via 4G modem)

JET Charge Core Energy Management System

- Critical for long-term EV charging at the building
- Monitors load available at building and allocates safe amount to EV charging
- Avoids overloads and tripping by dialing down or suspending EV charging operation
- OCPP compliant
- JET Charge Core cabinet and all internal equipment provided to Committee under a lease arrangement to ensure ongoing support, maintenance and firmware updates to the system



4 EV Solution Fundamentals



Electrical Infrastructure

Key upgrades to your electrical distribution systems are essential to support the demands & scaling up of multiple EV chargers



Energy Management System

JET Charge Core energy management system is critical to ensure your building can safely manage EV charging load



EV Charger

Smart EV chargers best suited to match your needs. Compatible with any EV and features RFID, OCPP and dynamic control



EV Charger Billing

Chargefox is a cloud platform to track all EV charger transactions and ensure everyone pays or gets paid for electricity consumption

Apartment EV Charging Options



Shared AC Charging

- Low upfront cost
- Short-term solution
- Installation in visitor car spaces



Shared DC Charging

- Higher upfront cost
- Service more EVs
- Installation in visitor car spaces



EV Backbone

- Best solution if budget available
- Significant investment required
- Truly scalable solution

Shared AC Charging

Simplest starting point for Committees looking to offer EV charging



JET Charge ChargeMate

- Committee funds the supply and installation of a shared use charger (typically in a visitor car space)
- Committee pays for electricity consumption through EV charger so a billing method to ensure a user-pays system is critical
- Suitable as a short-term solution but as EV numbers increase management and logistics of sharing the charger will become cumbersome
- Charge speed: 7 – 22kW
- Charge time:
 - a) 2 – 4 hours (top up)
 - b) 4 – 8 hours (full charge)

Shared AC Charging Budget

Budget figures below show starting budget for 1x AC charger within ~20m of switchboard. Please speak to us regarding project specifics for more accurate budget pricing.

Budget Cost	Component	Who Pays?
\$5,000 ex GST	Capital Cost (EV charger supply and installation) – provided EV charger location is close to connection point	Committee
\$440 per year	Operational Cost (Billing software fees and maintenance)	Committee
Committee \$ / kWh rate from energy retailer	Electricity consumption fees	EV Owner



Shared DC Charging

Premium offering for shared EV charging systems

ABB Terra DC Wallbox

- Committee funded
- Reimbursement of electricity consumption to Committee via billing software
- Expect better longevity of solution however issues with sharing and management of charger still apparent
- Charge speed: 24 kW
- DC charging are currently suffering long lead times, please speak to us about current lead times and availability
- Charge time:
 - a) 1 hour (top up)
 - b) 2 – 4 hours (full charge)

Shared DC Charging Budget

Budget figures below show starting budget for 1x DC charger within ~20m of switchboard. Please speak to us regarding project specifics for more accurate budget pricing.

Budget Cost	Component	Who Pays?
\$30,000 ex GST	Capital Cost (EV charger supply and installation) – provided EV charger location is close to connection point	Committee
\$990 per year	Operational Cost (software fees and maintenance)	Committee
Committee \$ / kWh rate from energy retailer	Electricity consumption fees	EV Owner

EV Backbone

Installation of Committee funded infrastructure permits a truly scalable approach to EV charging



- Committee funds all common infrastructure (we call this the ‘backbone’)
- EV owners fund connection of private EV charger and cabling (‘last leg connection’) to the backbone
- Significant investment required by Committee
- Equitable final solution for EV owners as everyone can be provided with access to private charging

Backbone Infrastructure



DB-EVs

- Connection point for EV charger power circuits
- Minimum 1x per carpark level



Data Racks

- Connection point for EV charger comms circuits
- Minimum 1x per carpark level



JET Charge Core EMS

- Controls EV charging load within safe limits
- Rotates operation of EV chargers for equal access of charger



Cable Tray

- Provides connection path from DB-EVs and data racks to EV chargers
- Avoids installation of surface conduit

EV Backbone Budget

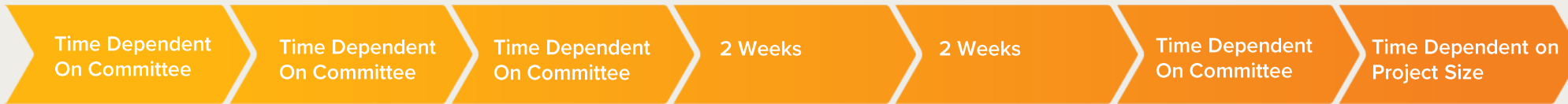
Due to the turnkey nature of backbone EV charging installations, budget costs are to be taken as an indication of the scale of investment required. Significant further investigations, engineering and design are typically required to firm up the value of the project.

Budget Cost	Component	Who Pays?
\$2,000 per lot owner	Installation of common EV charging backbone	Committee
\$3,500 - \$5,500	Last leg connection (EV charger supply and installation)	EV Owner
\$265 per year	Annual software fees	EV Owner

Funding Options

Funding Option	Description
Surplus Budget	If the Committee has surplus budget available then this surplus budget can be used to fund any EV charging projects. This is commonly most suitable for the shared charging options due to the lower CAPEX investment.
Sinking Fund/Maintenance Plan	Funding an EV charging solution from the sinking fund/maintenance plan is also a common approach and is particularly useful for the larger investment required in the EV backbone option.
Special Levy	A third approach to funding the EV charging solution is a special levy to raise the funds for the project.
Alternative funding options	JET Charge is happy to assist and discuss any other suitable methods to fund an EV charging project at your building.

EV Charging Installation Roadmap



Preferred Solution

We will work with a building representative to determine the most suitable solution using the options and budget costs in this document as a guide.

Budget Available?

If there is funding method and timeline for installation known, then JET Charge can attend site to provide a quotation.

Desktop Review

To prepare for a site inspection we will request building information such as drawings, photos and electricity bills.

Site Inspection

We will send a technician to site to finalise scope for pricing. This usually takes 1 – 2 weeks depending on our team's availability.

Quotation Presented

With the information collected from the site inspection we will present a final quotation and proposal for the project.

Quote Acceptance

Committee acceptance of quote to proceed with installation

Installation

Project manager assigned and installation commences

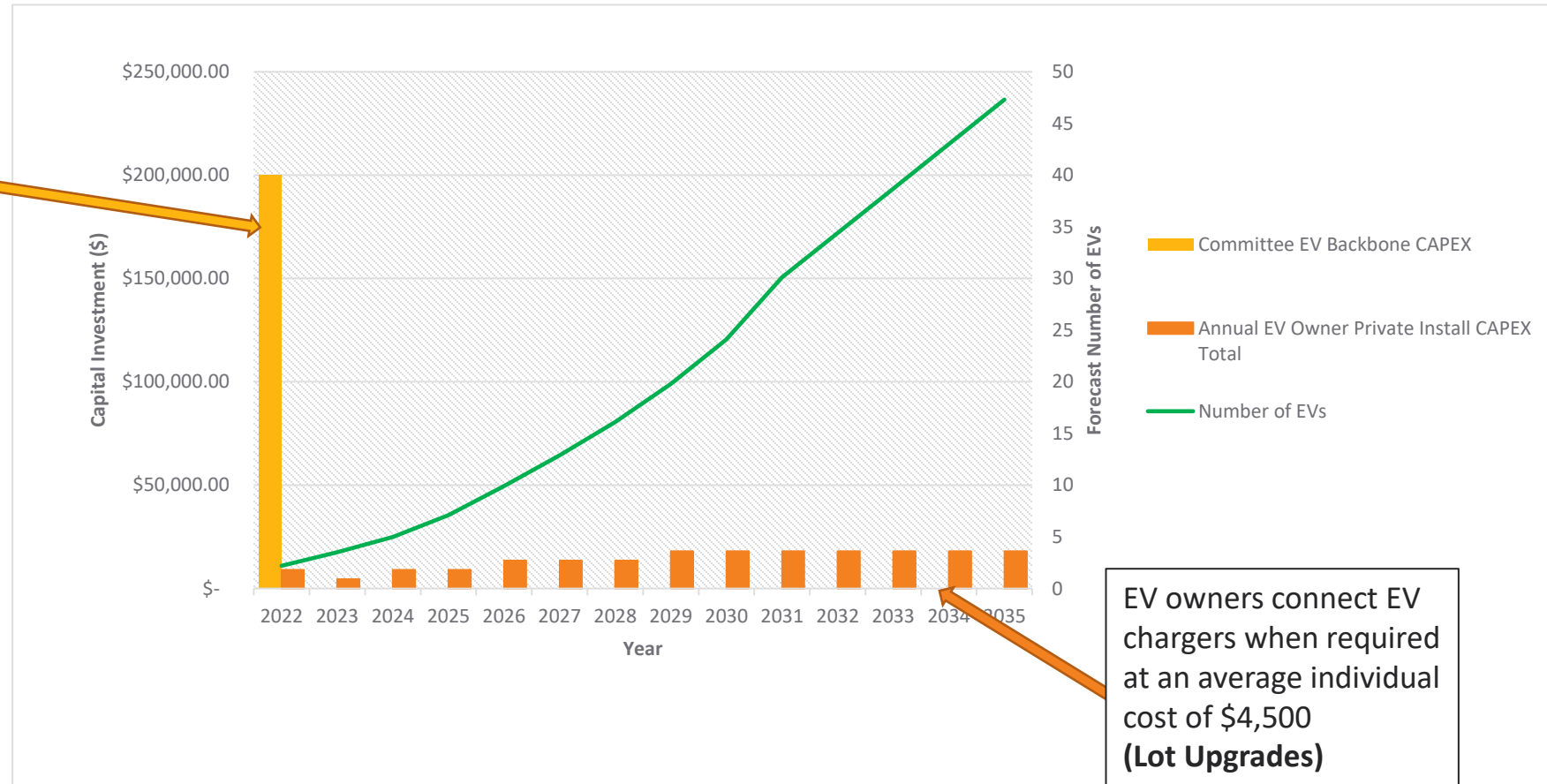


Case Study – 100 Apartment Lots

- Budget cost for EV Backbone = Number of lots x \$2,000
- EV Backbone budget = \$200,000
- Committee must have budget available or raise funds for \$200,000 capital works project to facilitate private EV charging at the building. The EV Backbone is considered a **Building Upgrade**
- After EV Backbone has been installed, individual lot owners can then begin connecting private EV chargers at their own cost when they need it for their EV
- Lot owners can expect to pay on average **\$4,500 to purchase and install their own EV charger** provided the EV Backbone is in place. Installation of an EV charger in a private car space is a **Lot Upgrade**
- This comes to a **total average investment per lot owner of \$6,500** to get an EV charger in their car space. \$2,000 as an immediate contribution to the EV Backbone, and \$4,500 towards their own private charger when they need it

Forecast Capital Investment by Committee and EV Owners

Committee initial investment of \$2,000 per lot owner for EV Backbone (Building Upgrade)



EV owners connect EV chargers when required at an average individual cost of \$4,500 (Lot Upgrades)



JETCHARGE