



Prepare Your Strata for the EV Revolution

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EV Trends, Considerations, and Common Misconceptions



- **Adoption:** 14+ EV manufacturers coming this year. Sub \$30K models available. Sub \$25K models by end of 2025. 8-10% of new vehicle sales expected in 2025...**30% by 2027.**



- **Safety:** No increased fire risk. 8 EV fires since 2010
 - Avg of 7 petrol/diesel vehicle fires/day

- **Insurance:** Providers (Chu for ex) have clarified that there are no rate or risk changes for EV charging in strata properties

- **Regulation:**

- *Construction:* NCC 2022 but still no clear 'Right to Charge'
- *Fire:* No EV-specific fire regulations. Only a set of recommendations, largely geared towards e-scooter/bike/tool charging
- *Chargers:* Regulations set since 2018, but are still in the 'guidance' (not mandatory) phase under AS 3000:2018

• **SUMMARY:** Strata residents are/will be buying EVs and will demand access to EV charging. **Expect roughly 2-5% of your residents to adopt EV's each year.** Most importantly, there are no safety, insurance, or regulatory blockers to installing charging in strata properties.

EV Charging Definitions



Charger type	Distance/charge time	Strata Building Suitability	Subject to EV Charging Specific Regulations	Costs/Car Space
Level 1 Charger (2.4 – 3.6 kW - typically using a standard household plug)	12-20 km per hour	Yes	No	\$500 - \$1,000
Level 2 Charger (7.4-22 kW – EV specific, with their own attached cables)	40-110 km per hour	Yes	Yes	\$2,000 - \$5,000
Level 3 Charger (DC) (25-350 kW – faster chargers)	120-240 km per hour	No	Yes	\$50,000+



The 5 Typical OC Approach's to EV Charging (and why they are generally bad)



1. **Nope! (*Get your lawyer ready*)**
 - Pros: Cheap and easy
 - Cons: Recent legislation means if an OC were to refuse such a request without valid reasons, it could open the door for legal challenge



2. **Sure, but figure it out yourself. (*Hope you like outages*)**
 - Pros: No OC responsibilities
 - Cons: No consideration for the shared electrical infrastructure



3. **No, but how about we get some shared chargers instead? (*Your property manager is now a parking cop*)**
 - Pros: Cheaper than a full retrofit and (temporarily) placates residents
 - Cons: Loss of amenity, regulating parking duration, eventually overwhelmed



4. **Let's do this, break out the check book! (*Get ready for whingy, wealthy residents*)**
 - Pros: Gold-plated solution. L2 Chargers for everyone!
 - Cons: Prohibitively expensive and doesn't account for energy supply constraints



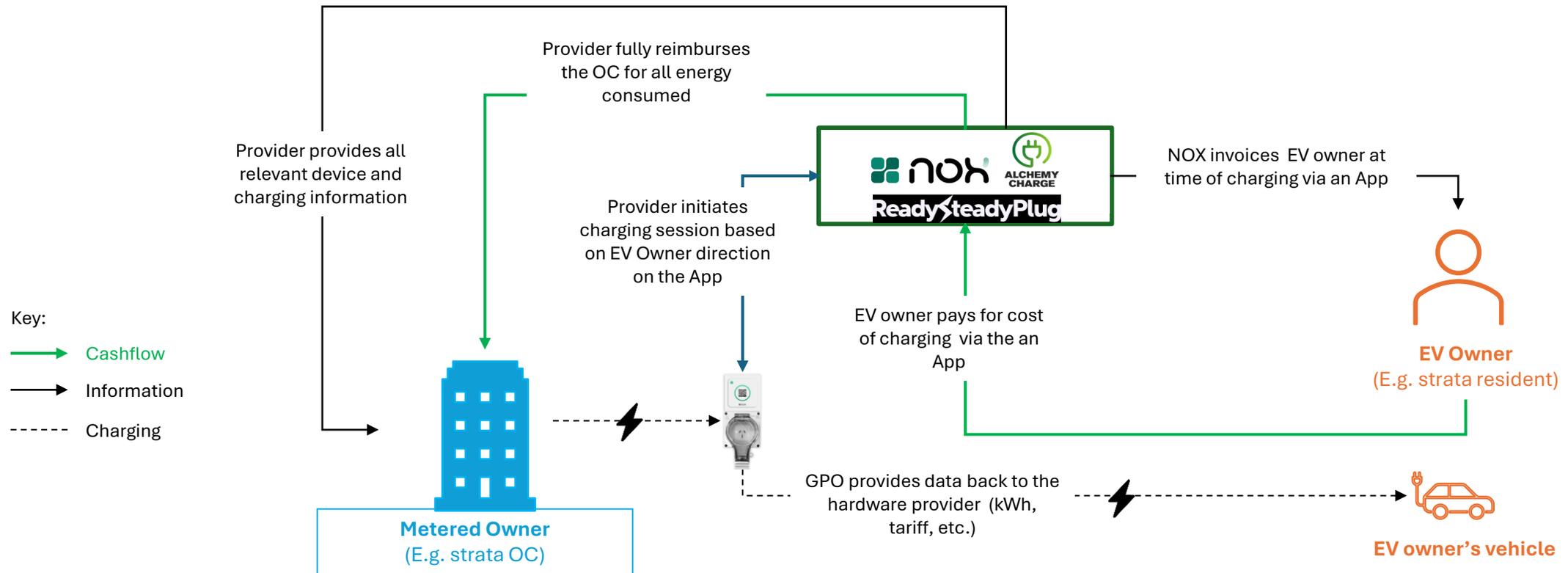
5. **Quick, turn off all the power points, the guy with the Tesla is stealing power! (*Insert funny quip here*)**
 - Pros: Saves the OC a few hundred dollars a year and improves safety
 - Cons: No one can vacuum their car and building maintenance can't use the power points

But wait, are there any other options?

6. **Yes, load balanced, level 1 (power point) charging in every car park (*The 'Oprah' Solution*)**
 1. Pros: Versatile, scalable, much lower cost and little-to-no infrastructure upgrades
 2. Cons: Slower charging speeds



Typical L1 Charging Model



OC Charging Considerations

Considerations



- **L2 is not your only option**
 - L1 is more versatile, easier to adopt, and more scalable

- **(Equitable) Load management is a must**

- No 'First in First Out'!

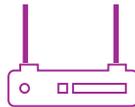


- **Wi-Fi Communication is a key**

- Everything needs to talk to the cloud

- **Cable Trays are a must**

- For scaled implementations



- **OC control is paramount**

- Control also allows for cost recovery via a tariff scheme.

- **Electricity supply is the boss**

- Supply is your limitation



- **Pay attention to eBikes and eScooters**

- More carrots, less sticks

Enough Naval Gazing...What Charging Options Do OC's Have?

Charger Type	Charge Rate/hr	EV Charging Specific Regulations	Suitable for Shared Charging	Load Balancing	Base Cost of Charging	Resident Costs/Car Space	Resident Ongoing Costs (OC Energy Rates +)	OC Upfront Costs	OC Ongoing Costs	Australian Vendors
Level 1	12-20 km	No	No	Yes Cloud-based	OC Energy Rates	\$500-\$1,000	\$0.04-\$0.10/kWh	<ul style="list-style-type: none"> • Wi-Fi: \$3k-\$5K • Cable Trays: \$30K/Level 	\$0	<ul style="list-style-type: none"> • NOX Energy • Alchemy Charge • ReadySteadyPlug
Level 2	40-110 km	Yes	Yes	Yes Hardware-based	OC Energy Rates	\$2,000-\$5,000	\$0.20-\$0.40/kWh	<ul style="list-style-type: none"> • Wi-Fi: \$3k-\$5K • Cable Trays: \$30K/Level • Load balancing Hardware: \$25K-\$200K 	<ul style="list-style-type: none"> • \$100/charger/year • Hardware subscriptions: \$2K-\$5K/year 	<ul style="list-style-type: none"> • JetCharge/ChargeFox • EVSE • EVUp • Ensol

• **SUMMARY:** L2 charging has the benefit of faster charging **BUT** has a 10X upfront cost and will ultimately be ramped down when more chargers are installed and supply constraints are hit. L1 Charging is slower, but will meet the needs of 99% of residents and doesn't require the EV-specific regulatory infrastructure upgrades.



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