Accelerating EV-readiness in multi-family buildings

TAF Board meeting
November 2024

Presentation overview

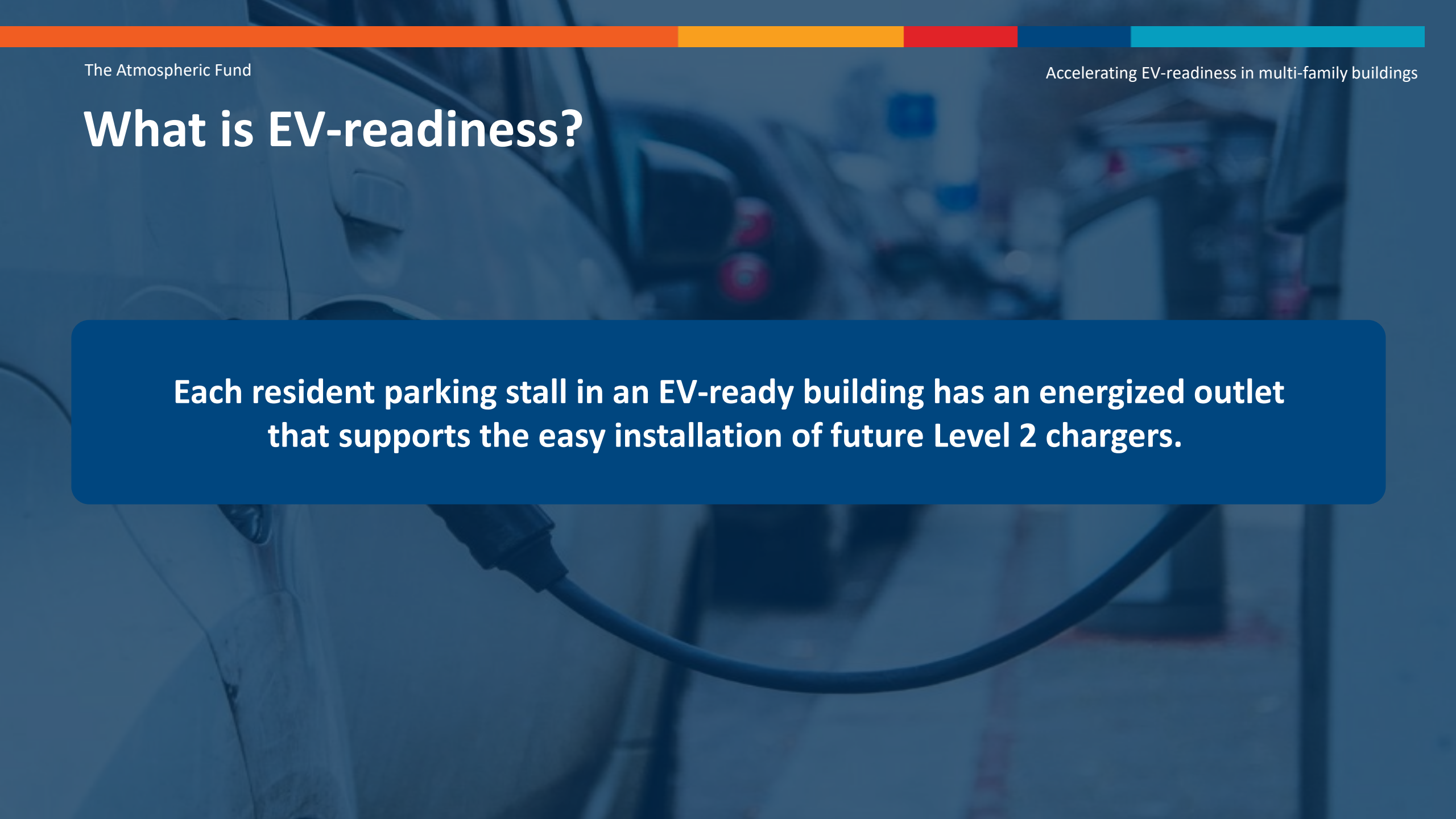
What is EV-readiness?

Why focus on EV-ready multi-family buildings?

Dunsky EV-ready report: key findings and recommendations

Next step: a GTHA demonstration

What is EV-readiness?



Each resident parking stall in an EV-ready building has an energized outlet that supports the easy installation of future Level 2 chargers.

Two approaches to EV charging

Incremental Approach

Prepare a few parking spots at a time.

There's a lower upfront cost, but:

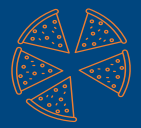
- Higher overall cost
- Multiple renovations
- Less convenient
- May exhaust electrical capacity before all users are served
- Potential for stranded assets

Comprehensive Approach

Prepare all parking spaces to easily install EV charging.

There's a higher upfront cost, but:

- Lower total cost
- Fewer renovations
- Fair access for all users
- Simple process for users



Why focus on EV-ready multi-family buildings?

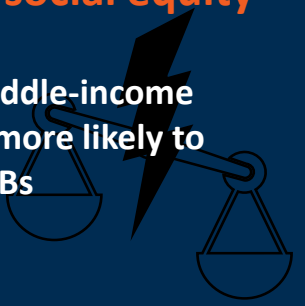
The EV wave is on its way

By 2035, all new passenger vehicles sold need to be ZEVs

Most people want to charge at home

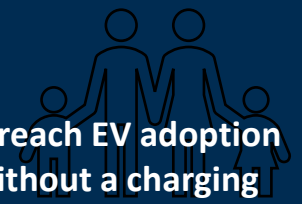
It’s the most convenient and affordable option

Universal access supports social equity



Low-and middle-income people are more likely to live in MURBs

Lots of people live in MURBs



We can’t reach EV adoption targets without a charging solution for MURBs

Existing buildings are the toughest nut to crack

Green Development Standards can require EV-readiness in new buildings. We like doing the hardest things!

There’s a market gap

Identified from EVSF, ZEVIP supports a piecemeal approach that doesn’t consider future charging needs

Aligns with wider building retrofits agenda

To reach climate targets, MURBs need to electrify space and water heating and transportation. There are benefits to working with TAF's RA team on holistic electrification planning to optimize electrical capacity.

Dunsky EV-ready report: Key findings

EV-ready retrofits are technically feasible

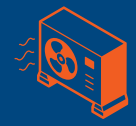
Comprehensive EV-ready retrofits make the best use of existing electrical infrastructure and avoid or minimize the need for upgrades down the road

EV-ready retrofits save money in the long run

While they require larger upfront capital, EV-ready retrofits involve much lower lifecycle costs on a per-stall basis than a piecemeal approach

EV-ready retrofits promote social equity

Piecemeal approaches tend to favour early adopters who get low-cost access to existing infrastructure. EV-ready retrofits solve for this by ensuring drivers who switch to EVs later can access charging at a lower cost.



EV-ready retrofits complement other building upgrades

They provide an opportunity to plan optimal electrical systems to support electrification of other building systems.

Dunsky EV-ready report: Key recommendations

Enact supporting policies

Example: EV-ready requirements for new construction

Offer tailored incentives

Example: Programs to support EV-ready planning and retrofits in existing MURBs

Pilot new financing solutions

Example: Led by development finance institutions like the Canada Infrastructure Bank (CIB), Green Municipal Fund, LC3 networks

Develop standard specifications and industry capacity

Example: Education of condo boards and apartment landlords about the value proposition, standardization of EV-ready and holistic electrification planning studies

Next step: a GTHA demonstration

- TAF and allies are championing EV-ready programs and policies
- There remains a need for a scalable business model
- Programs and Investing teams have collaborated on a financing structure to test and refine
- Government and building owner contributions would reduce TAF’s investment risk
- Project has secured initial commitments from key partners
- TAF investment aligns with TAF's new strategic directions