



# EV Charging and Energy Management at Multi-Unit Buildings

Massachusetts EV Infrastructure Coordinating Council  
November 6, 2024

# SWTCH is the leader in EV charging for multi-tenant buildings

SWTCH simplifies EV charging operations for building owners, enabling them to comply with regulations, retain tenants and increase net operating income.



Design, installation, operations & maintenance of EV charging stations



Software suite solving key challenges of shared charging and electrical infrastructure



Dozens of building technology partner integrations





# SWTCH is OCPP Certified

In March 2023, SWTCH was officially OCPP-certified by the Open Charge Alliance.

SWTCH's OCPP certification is proof that our charging network meets the highest standards of compatibility, security and interoperability in the industry.

- **SWTCH is 1 of only 4 North American charging networks to achieve OCPP certification**



# SWTCH works with many EV charger manufacturers

## LEVEL 2

ZEROVA

LITEON

EVBOX

wallbox

LG



## DC FAST

ABB

ZEROVA



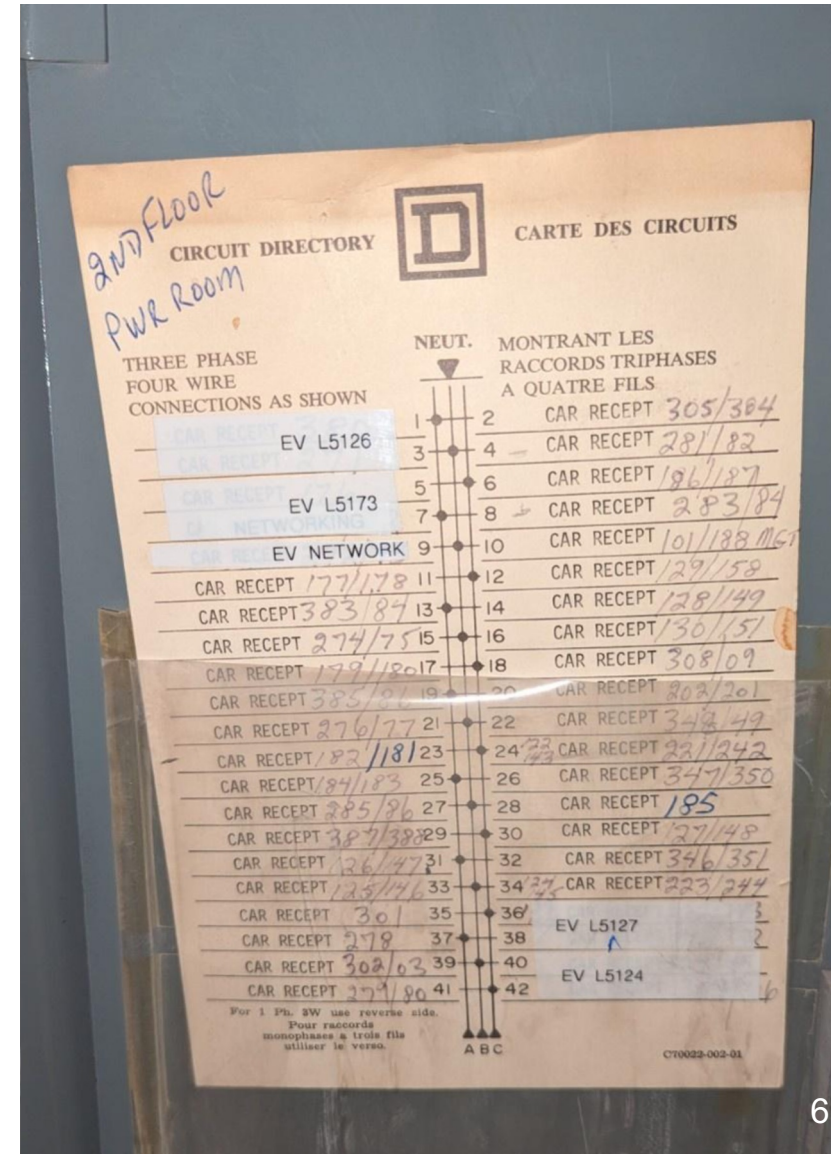




Multifamily properties often  
face **unique challenges** with  
EV charging deployment

# What are some of the challenges?

- Higher installation costs
- Multiple layers of decision-making authority
- Technical complexity
- Business model uncertainty
- Who pays
- Electrical constraints on site
- Electrical constraints on the grid







67%



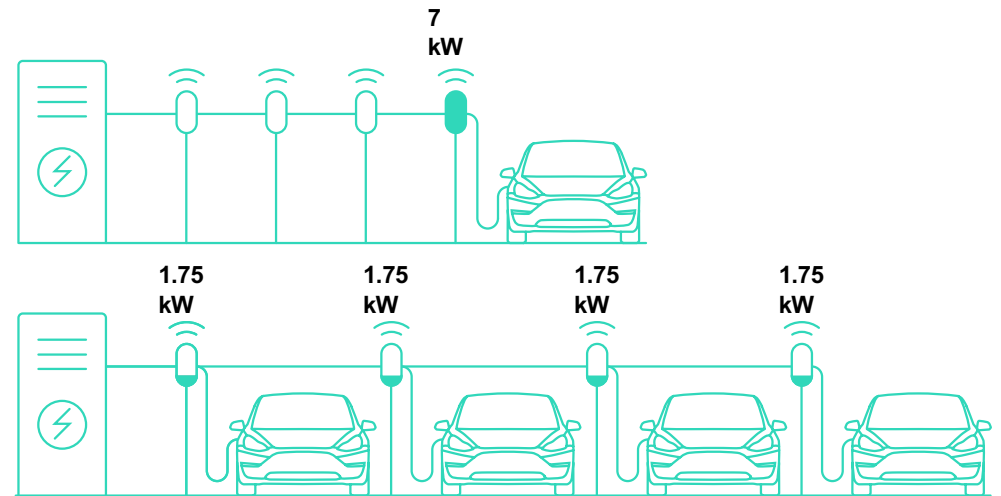
27%

*43 million households live  
in multifamily properties*

# What is Energy Load Management?

Electric vehicles can draw a significant amount of energy while charging. If you want to allow multiple vehicles to charge simultaneously, the energy will need to be shared so your electrical system isn't overwhelmed.

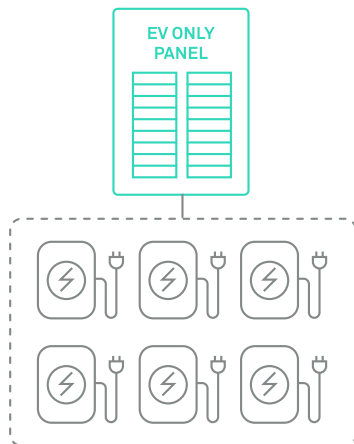
The most basic form of this is done by simply splitting the energy made available to the chargers across active chargers.



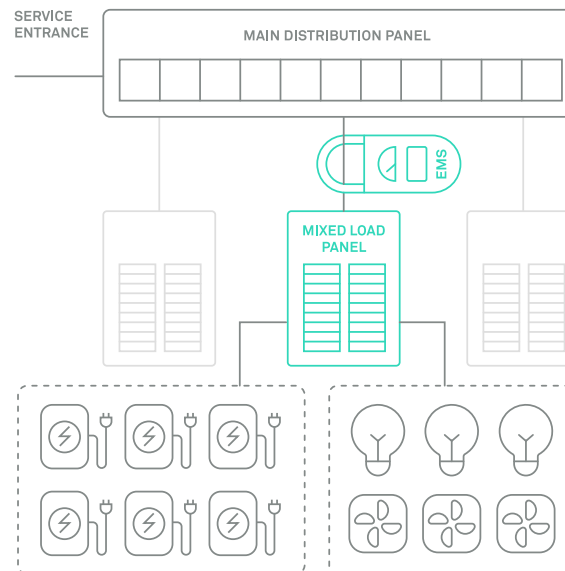


# SWTCH Control™ Configurations

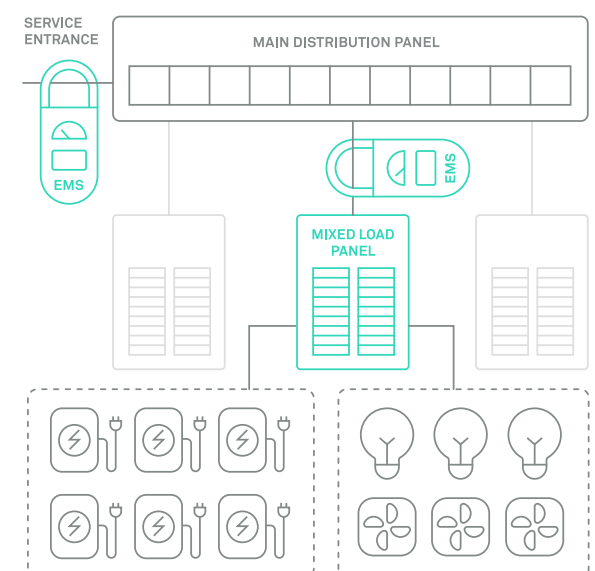
## Dedicated EV panel



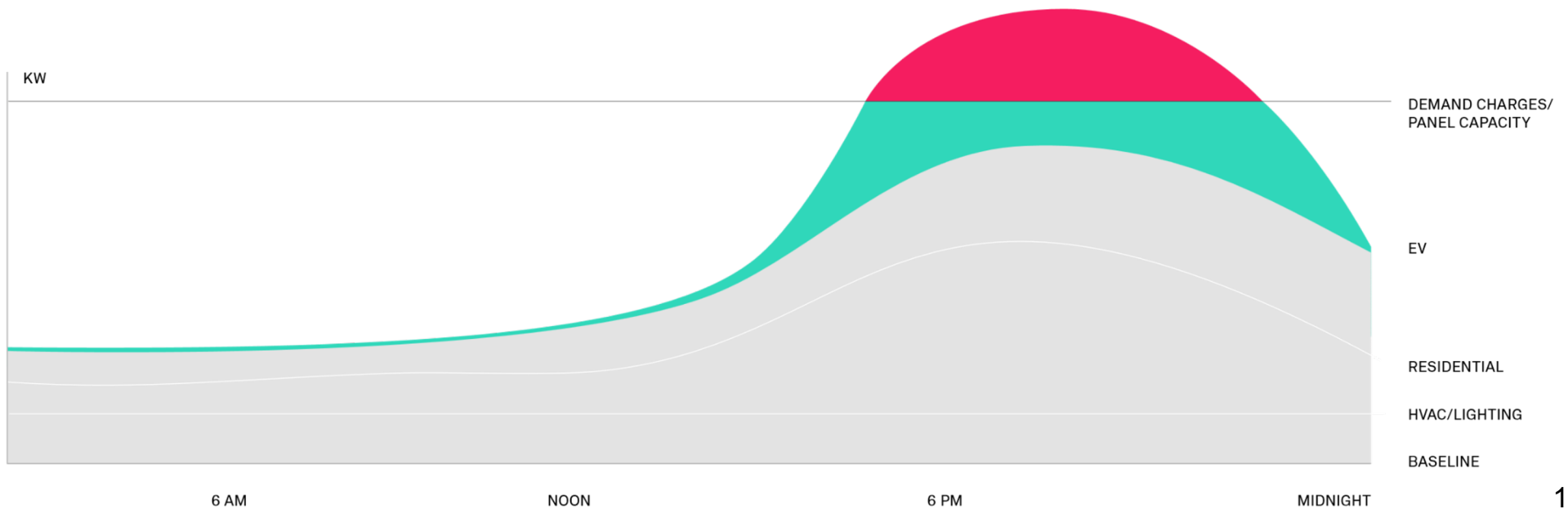
## Mixed load panel



## Comprehensive building monitoring

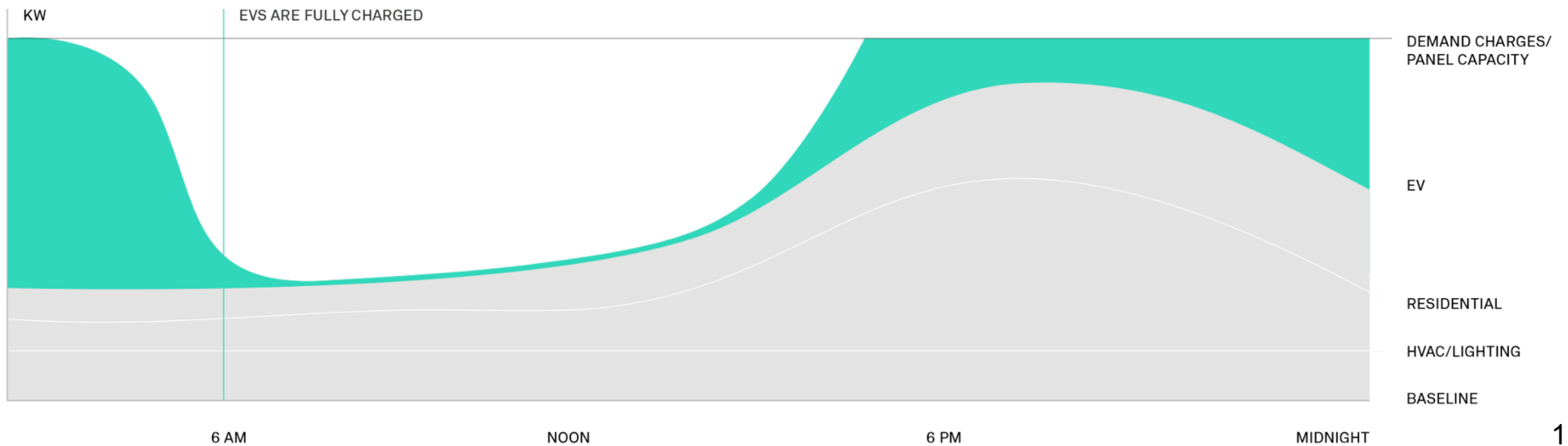


# EV Charging Scenario: Unmanaged Charging





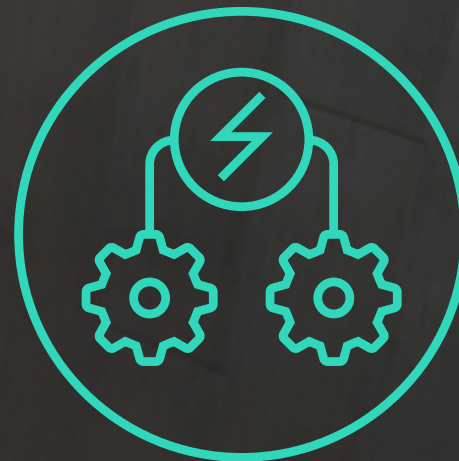
# EV Charging Scenario: Managed Charging





**3%**

*Incremental infrastructure and  
financial grid investments*



**30%**

*Reduction in utility investments  
with basic managed charging*

Source: U.S. DOE, [Multi-State Transportation Electrification Impact Study](#)





## BC Hydro Multifamily EV Charging Demand Response Project



UTILITY



SMART  
CHARGING



DER  
AGGREGATOR

# BC Hydro / AutoGrid project details

The first utility scale multifamily EV Charging Demand Response program in North America

## Program design

- Modeled after the BC Hydro Peak Rewards program in which AutoGrid sends DR commands via OpenADR2.0b

## Chargers & buildings

- 150 networked chargers in 10-15 buildings

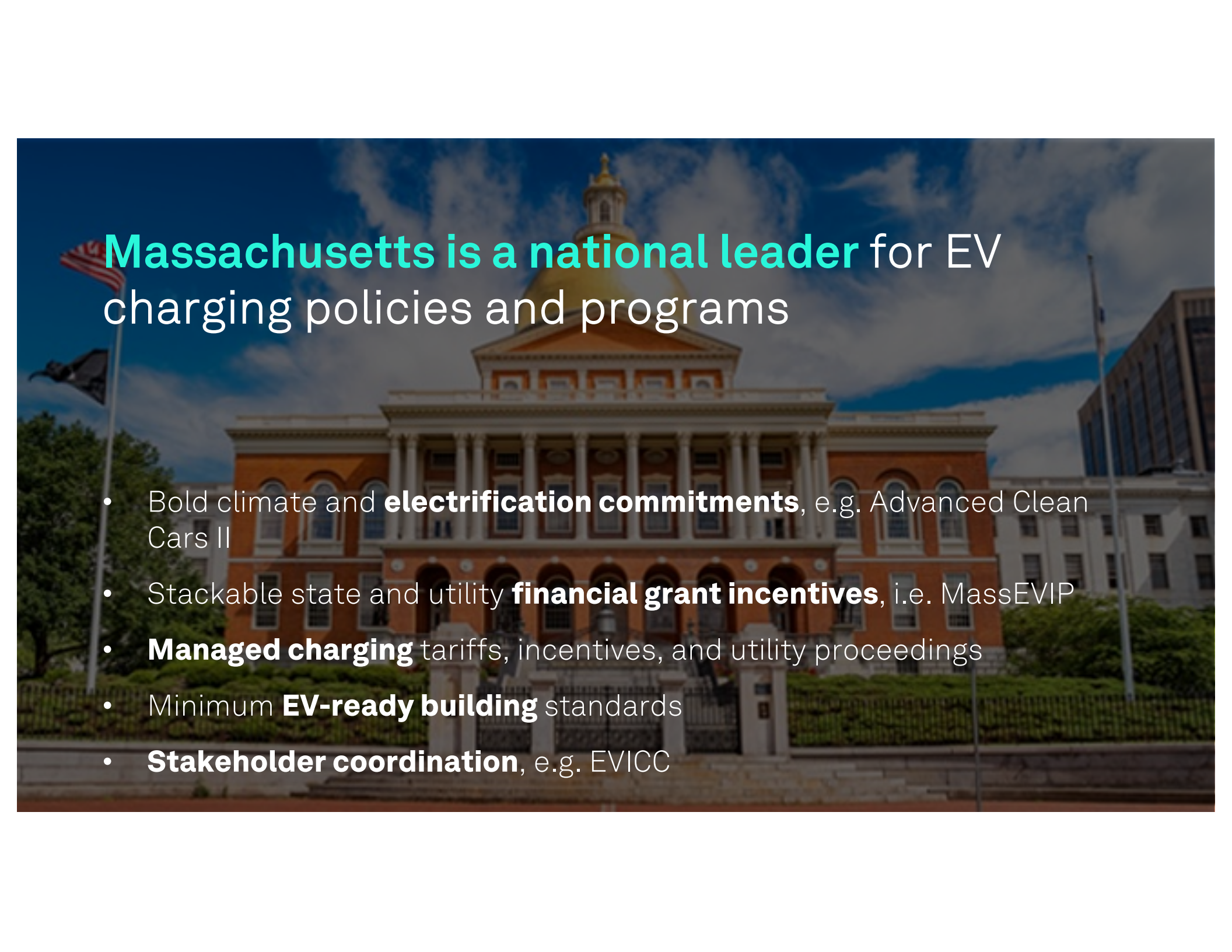
## Demand Response Events

- Drivers are free to opt in / out of each event and out of the program altogether

## Payments

- Building owners and drivers both are eligible for financial incentives



The background of the slide is a photograph of the Massachusetts State House, a large, ornate building with a prominent golden dome and classical columns. The sky is blue with some clouds. The text is overlaid on the left side of the image.

# Massachusetts is a national leader for EV charging policies and programs

- Bold climate and **electrification commitments**, e.g. Advanced Clean Cars II
- Stackable state and utility **financial grant incentives**, i.e. MassEVIP
- **Managed charging** tariffs, incentives, and utility proceedings
- Minimum **EV-ready building** standards
- **Stakeholder coordination**, e.g. EVICC



# Policy considerations for Massachusetts

- **"Right-to-charge" protections** democratize access to charging and the benefits of driving electric.
- **Software-enabled charging** is key to saving money by managing electrical impacts both onsite and on the grid.
- **Modernized EV-ready building codes** reduce charger install costs, support widespread and equitable EV adoption, and incentivize software-based charging management.
- **Clean Fuel Standards** help support transportation electrification.

Source: [Wikimedia Commons](#)







# EV Charging Policy Roadmap:

[swtchenergy.com/US-Policy-Roadmap](https://swtchenergy.com/US-Policy-Roadmap)



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