REGIONAL EV STRATEGY
Charging Station Initiatives on Private and MBTA Property

Thursday, April 13, 2023

MAPC
METROPOLITAN AREA PLANNING COUNCIL

Today's Agenda

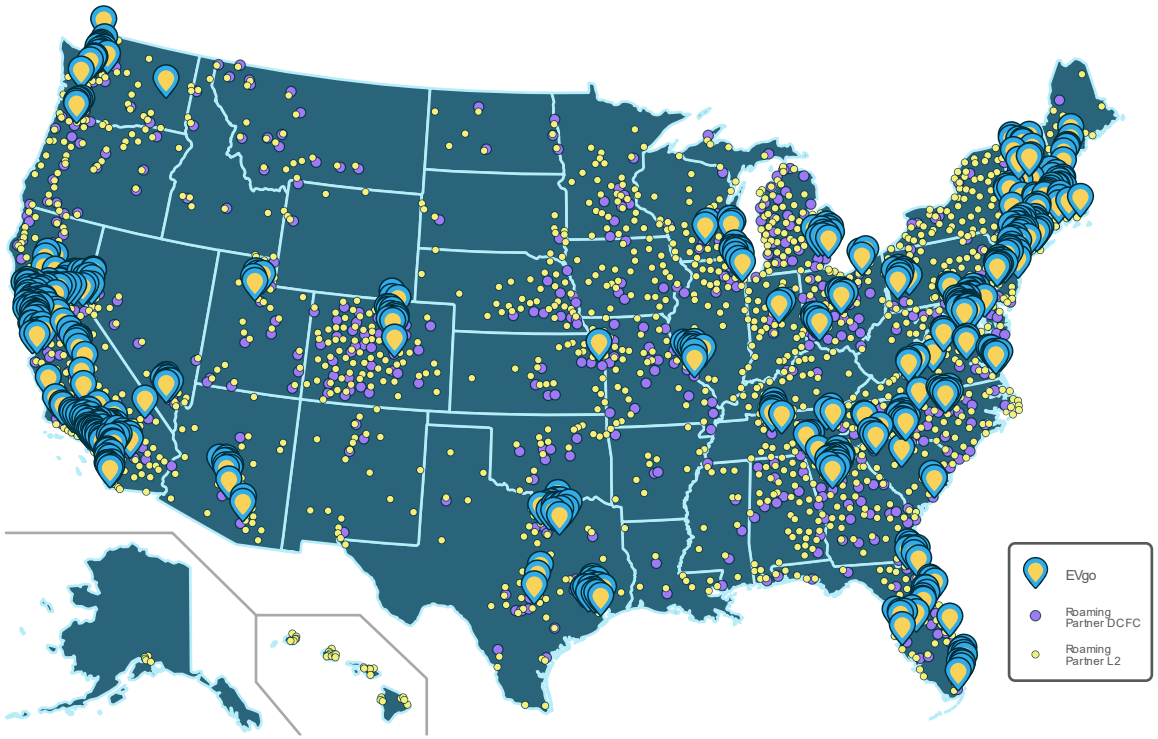
1:00 – 1:10 (10 minutes)	Welcome & Introductions	Alison Felix (MAPC) Eric Bourassa (MAPC)
1:10 – 1:20 (10 minutes)	Presentation from EVgo	Carine Dumit, EVgo
1:20 – 1:30 (10 minutes)	Presentation from MBTA	Sean Donaghy, MBTA
1:30 – 1:45 (15 minutes)	Q & A	Julia Nassar (MAPC) All
1:45 – 2:25 (40 minutes)	Municipal Updates & Discussion	All
2:25-2:30 (5 minutes)	Wrap Up and Next Steps	Alison Felix (MAPC)

Regional EV Strategy Conference Call

MAPC Regional EV Working Group

13 April 2023

EVgo IS ONE OF THE NATION'S LARGEST PUBLIC EV FAST CHARGING NETWORKS



850+ stations in 60+ cities across 30+ states

Reliable
Committed to 98% network uptime

Powered by 100% Renewable
Through purchase of RECs

140 MM
People live within 10-miles of an EVgo station

500,000+
EV driving customer accounts

EV Compatibility
Serves all fast-charging standards – including Tesla

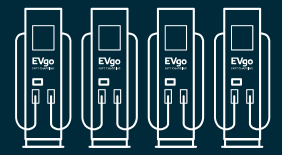
Drivers Love Us
High customer scores on PlugShare

EVgo's Partners Include:

Whole Foods Market, Albertsons, Chevron, Lucky, Save Mart, The Save Mart Companies, Raley's, Wawa, meijer, Safeway, Simon, Sheetz, Macerich

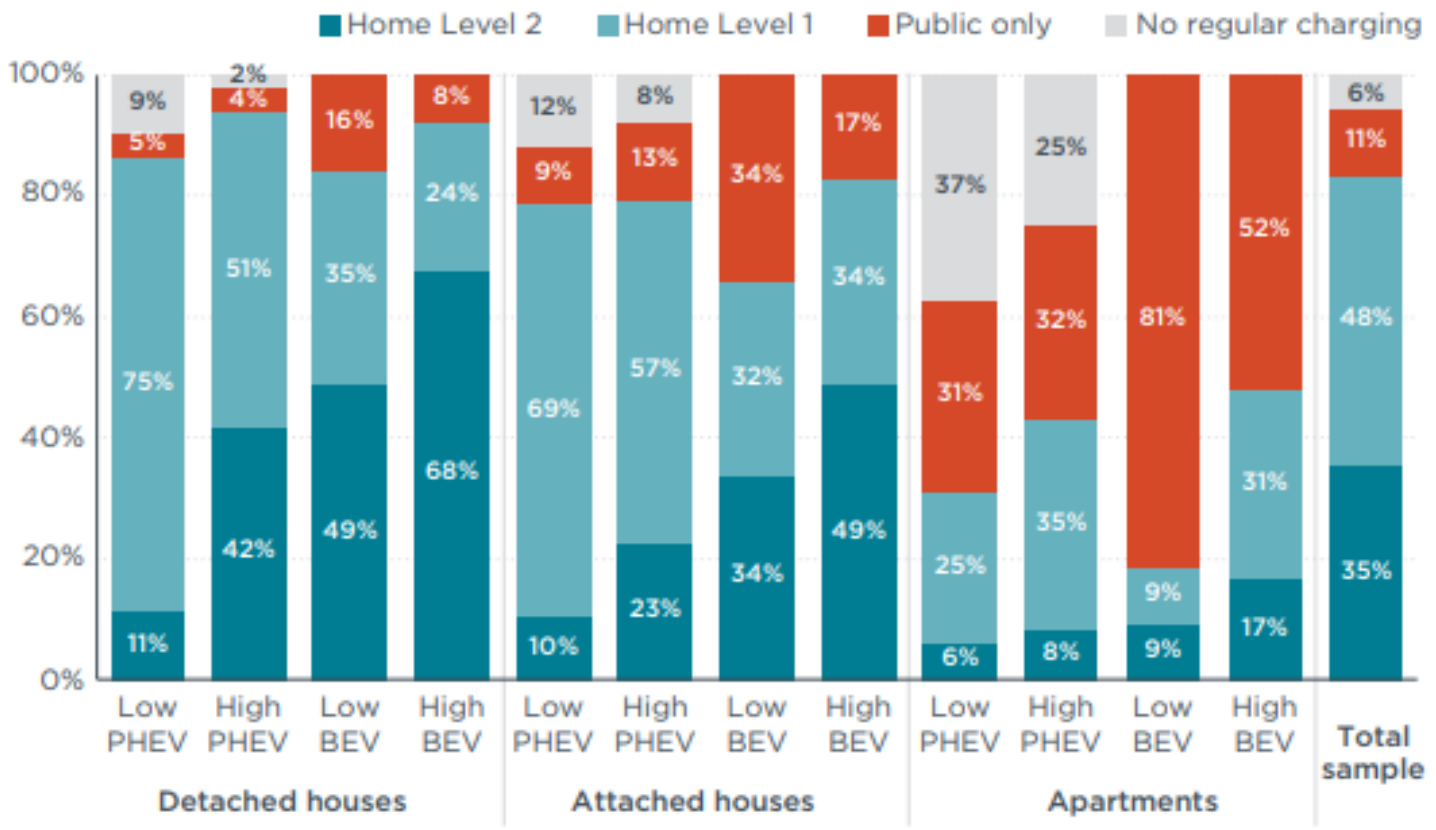
FAST CHARGING VS. LEVEL 2

- Customers charge in 15-45 minutes with fast chargers—lining up well with the time spent shopping

	 Fast Charging	 Level 2
Charge Time	15-45 Minutes	5-6 Hours
Input Voltage	480 V 3-Phase AC / Varies	240V 1-Phase AC / 32A
Charging Loads	~25 - 350 kW	~6.6 kW
Connector Types	 CCS CHAdeMO Tesla	 J1772
Use Case	Urban, Retail Adjacent, & Corridors	Workplace & Multifamily

Fast Charging is Critical to Serve MUD Residents

52 – 81 % of apartment dwellers with battery electric vehicles are relying <u>solely</u> on public charging.

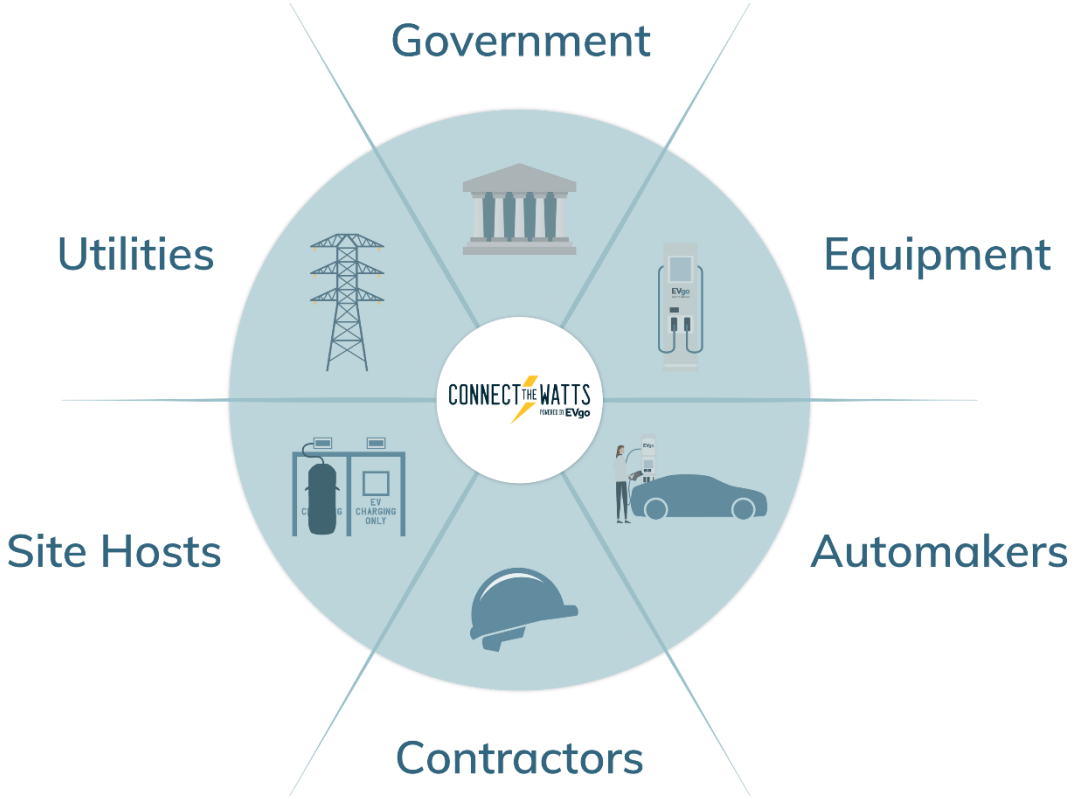


Source: International Council on Clean Transportation, *Quantifying the Electric Vehicle Charging Infrastructure Gap Across U.S. Markets* (January 2019)

Fast Charging is Critical to Support Light Duty Fleet Electrification

- Duty cycle is favorable to electrification: 3-7x more miles per car per year
- Most full time TNC EV drivers are using flexible lease program, limited/no opportunity to charging at home
- If charging is not fast and reliably available – potential lost revenue for drivers

The EV Charging Ecosystem



WHEN EVERYONE INVOLVED IN THE CHARGER DEPLOYMENT PROCESS UNDERSTANDS EACH OTHERS' CHALLENGES, WE CAN ADOPT SMARTER SOLUTIONS

- To accelerate the process of putting fast chargers on the ground, EVgo started **Connect the Watts**™, an initiative aimed at bringing the electric vehicle charging infrastructure community together to identify best practices for charger deployment.
- EVgo is uniquely positioned to lead this effort because of our experience, data, relationships, and standing as the nation's largest public fast charging network for electric vehicles.

The Challenge:

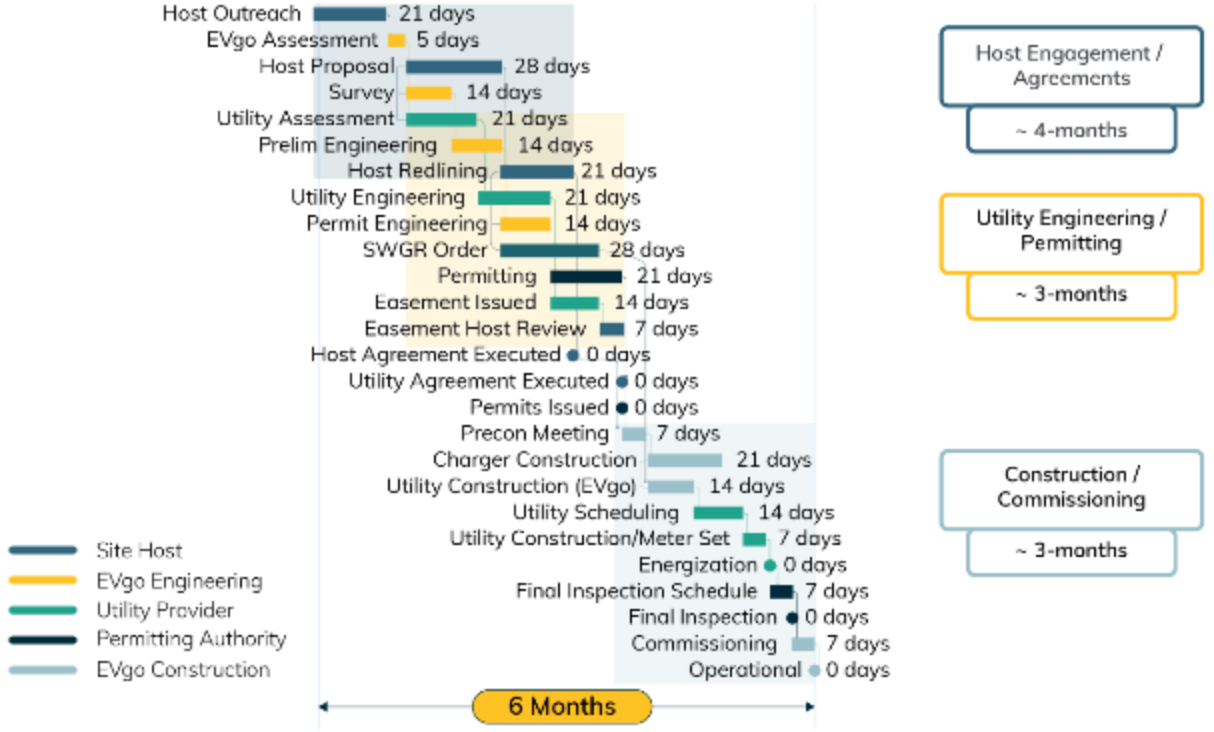
EV Charger Deployment Takes Too Long

~18 months

The average amount of time it takes to bring a fast charger online – from host engagement to utility interconnection.

Of this time actual onsite construction is ~4 weeks.

Its possible within 6 months



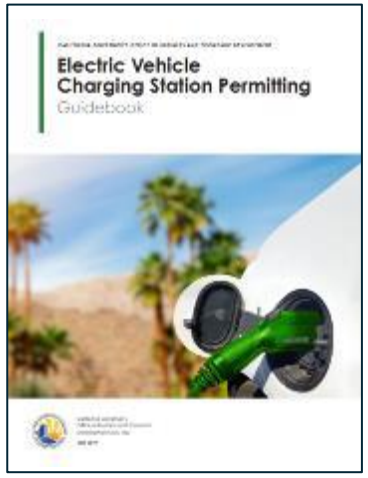
Examples in Other Jurisdictions

Examples

- Standardized and expedited EVCS permitting process
  - **AB 1236 in California**
  - **S.3223 in New Jersey**
- Efficient online permitting process & standardized guidelines
  - **City of San Diego, CA**
- Electrical permit only
  - **City of Murphy, TX**
  - **City of Carrollton, TX**
  - **City of Waterbury, CT**
  - **City of San Diego, CA**

Other Resources

- **NYSERDA** Guidebook
  - Provides DC Fast Charger Streamlined Permitting
- **California** EV Charging Station Permitting Guidebook



Carine Dumit

Director, Market Development & Public Policy

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APPENDIX

Permitting Reform: Case Study

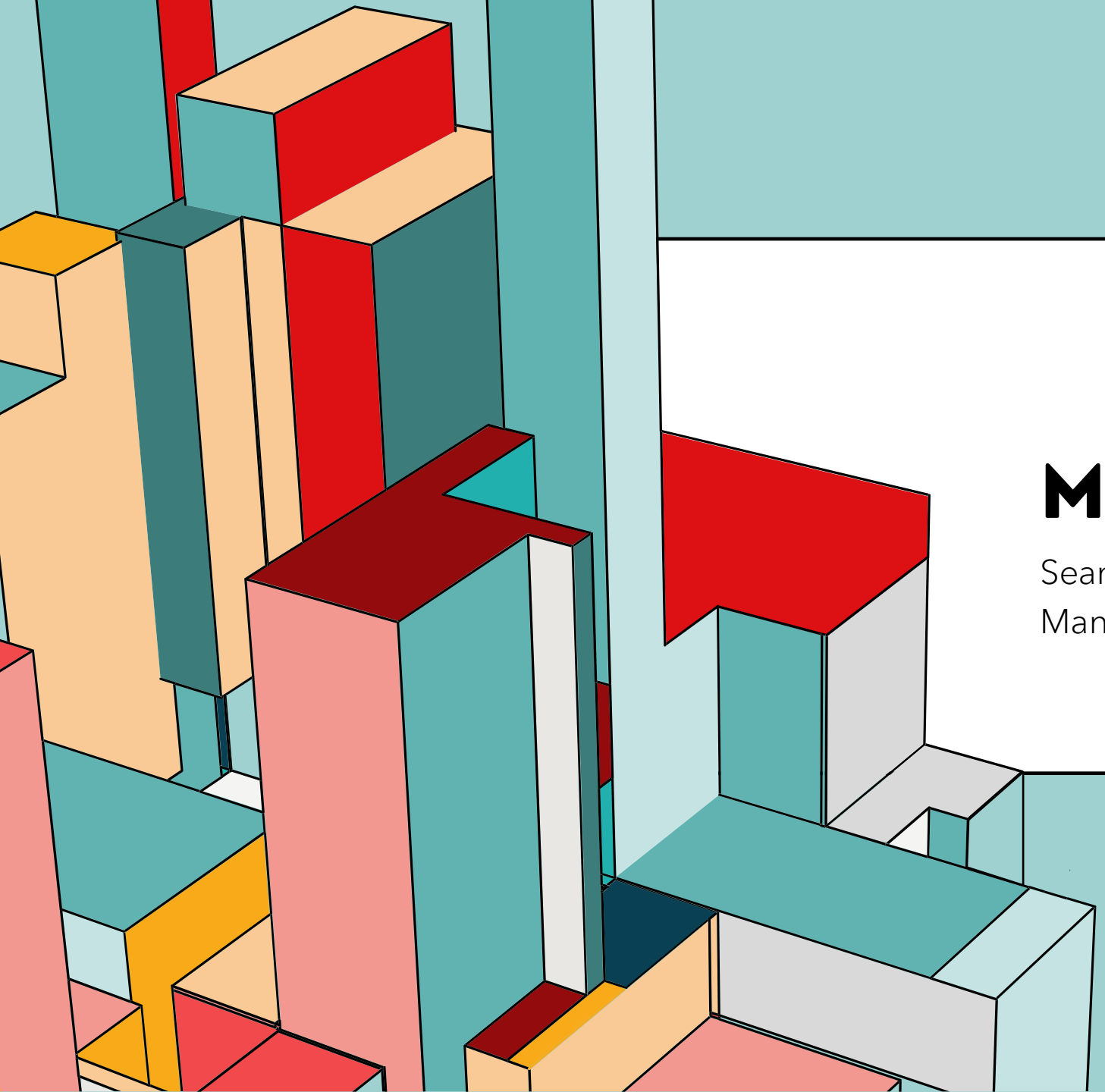
New Jersey Senate Bill 3223

P.L. 2021, c. 171

An application for development submitted solely for the installation of electric vehicle supply equipment or Make-Ready parking spaces shall be considered a ***permitted accessory use*** *and permitted accessory structure in all zoning or use districts of a municipality and shall not require a variance*

Department of Community Affairs (DCA) is required to ***publish a model land use ordinance*** *that addresses installation, sightline, setback requirements, and other health- and safety-related specifications for EVSE and Make-Ready parking spaces by incorporating the requirements of the law.*

This model land use ordinance will be effective in each municipality. Each municipality is permitted to deviate from the reasonable standards by adopting a separate electric vehicle ordinance, which cannot require more than the requirements in the model land use ordinance

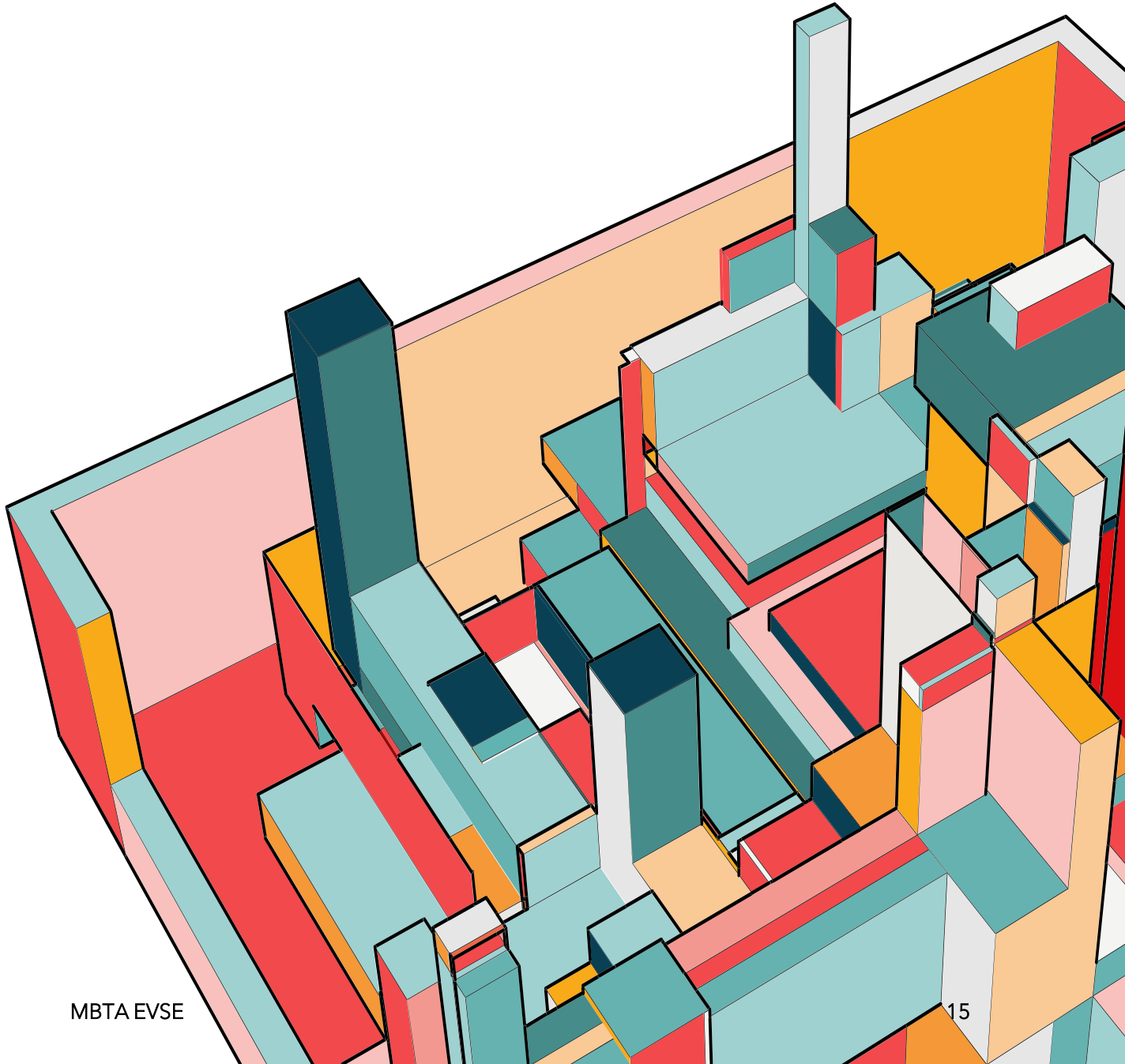


MBTA EVSE

Sean Donaghy
Manager of Energy Programs

ABOUT US

The MBTA provides Rapid Transit, Bus, Ferry, and Commuter Rail Services to the greater Boston Area. MBTA is the largest mover of Electric Vehicles in the commonwealth. We are the second largest owner of parking in MA and the largest single user of electricity.



HISTORY OF EVSE AT THE T

DOER 2009 Grant

- Installed 30 Level 1 EVSE at 8 stations

2019 RFI

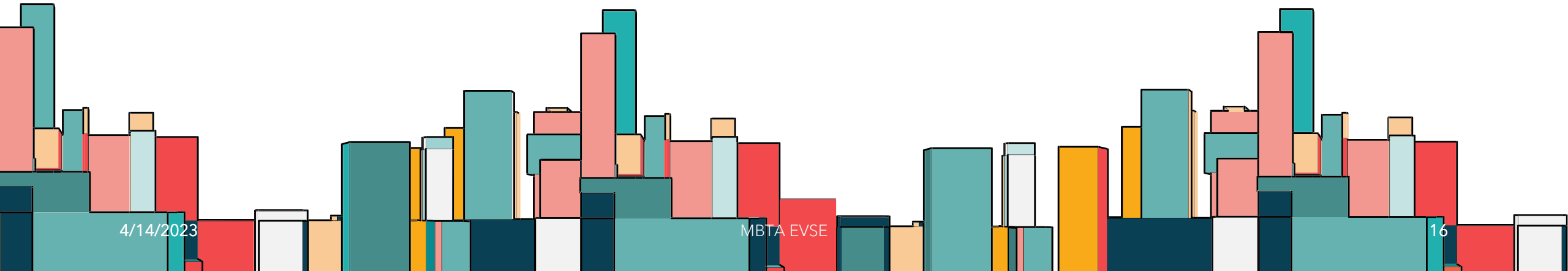
- Conducted an RFI with the EVSE industry to find potential solution for the MBTA

2022 Legislation

- EO594
- An Act relative to Offshore wind and Clean Energy

2023 Installations

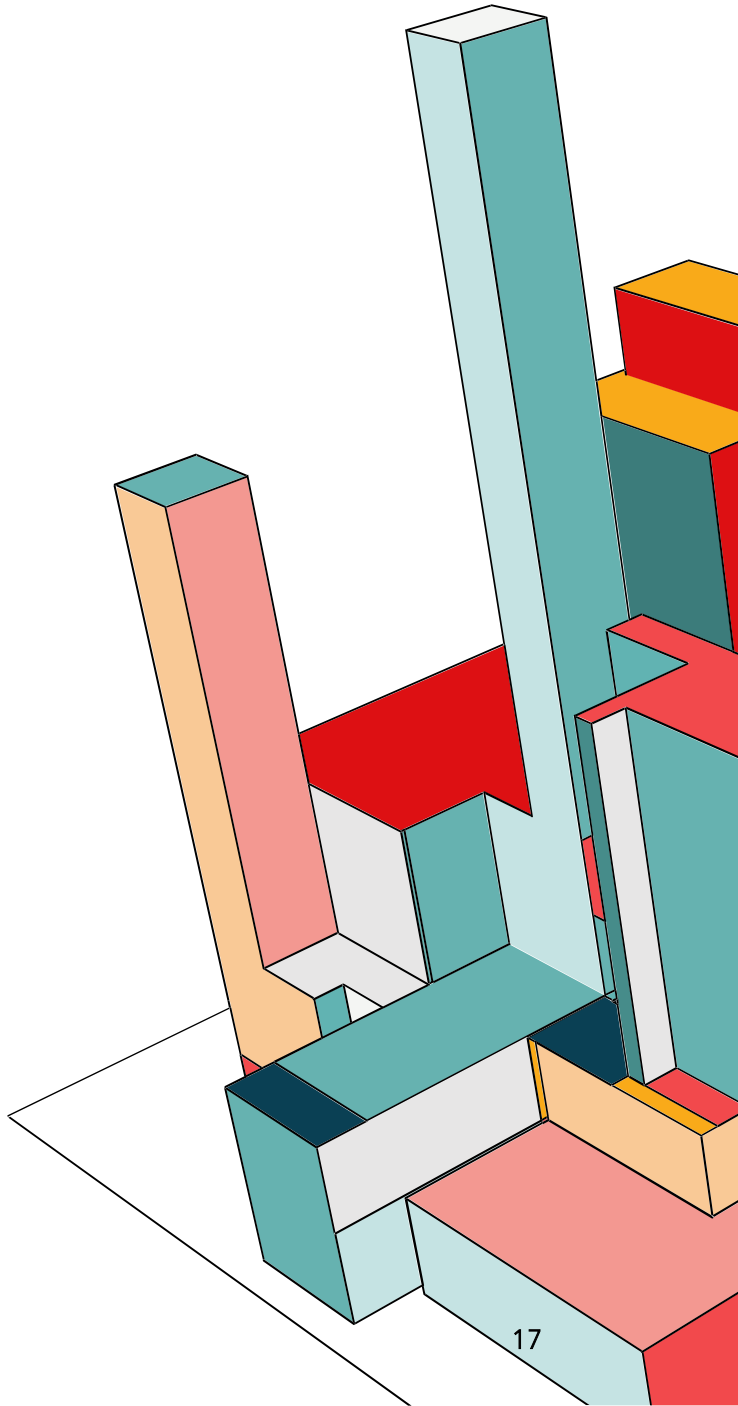
- New Projects at the MBTA required to install EVSE
- 4 installed on the South Coast Rail



PROBLEMS

MAINTENANCE

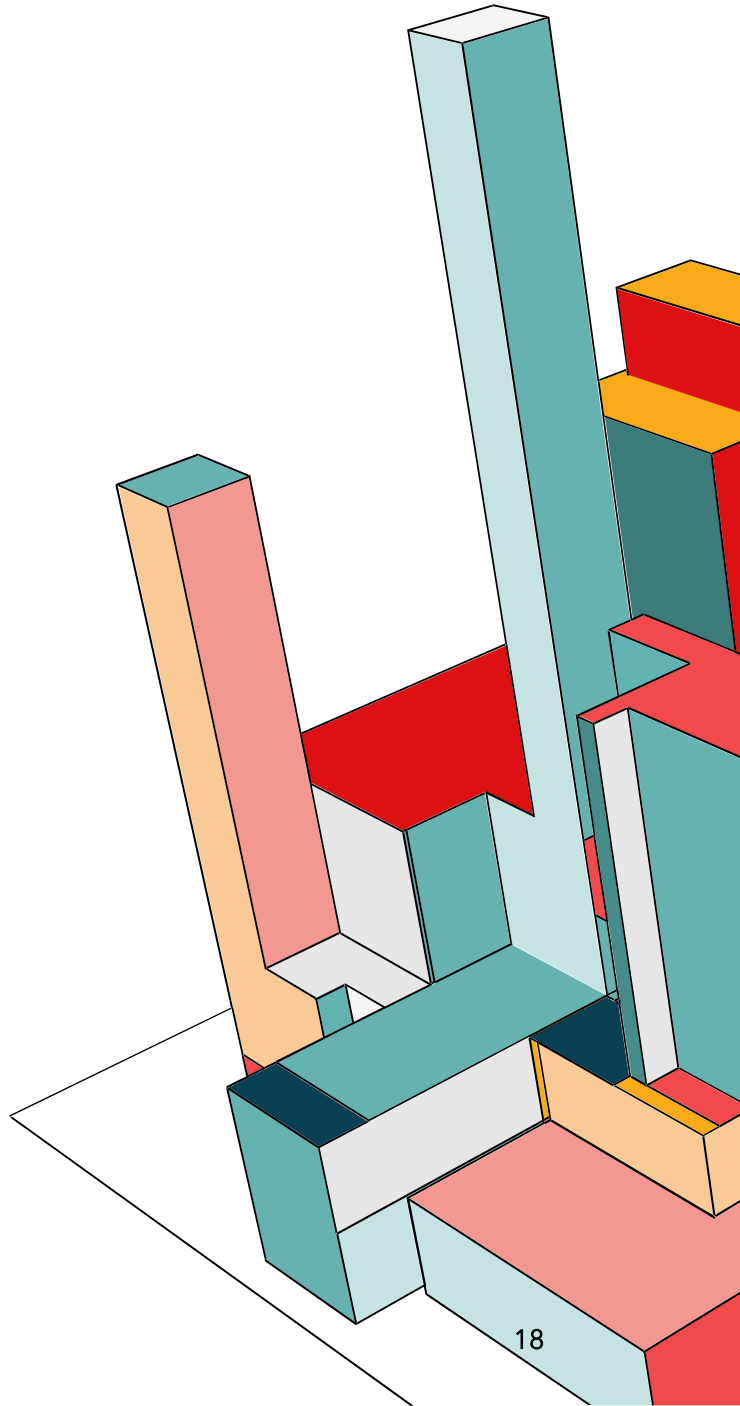
- Long term maintenance has been issue
- Internal electricians do not have bandwidth to maintain or support a EVSE company



PROBLEMS

CUSTOMERS

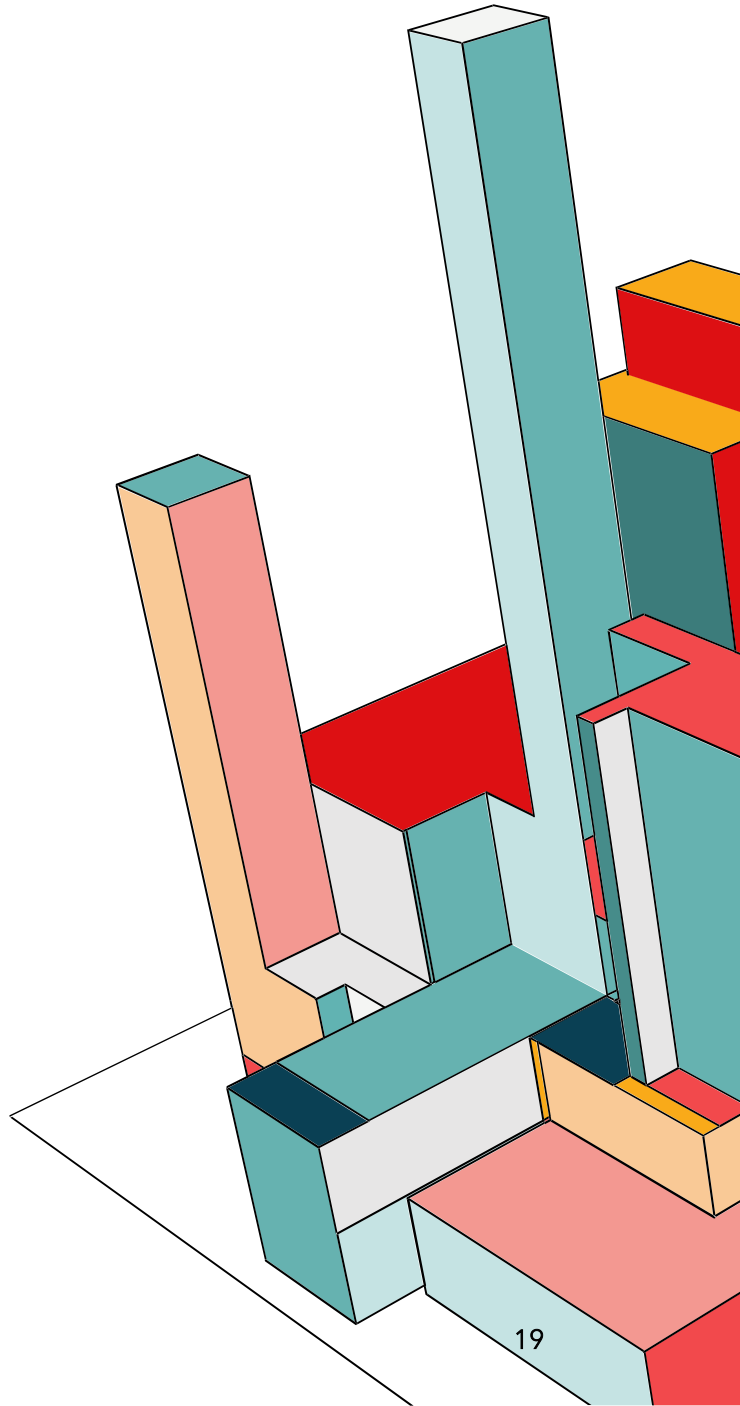
- Currently charge for parking
- Customers are parked for 8+ hours
- Unwilling to pay a premium over home electricity price –
  - $0.50/kWh vs ~$0.35/kWh



PROBLEMS

PARTNERS

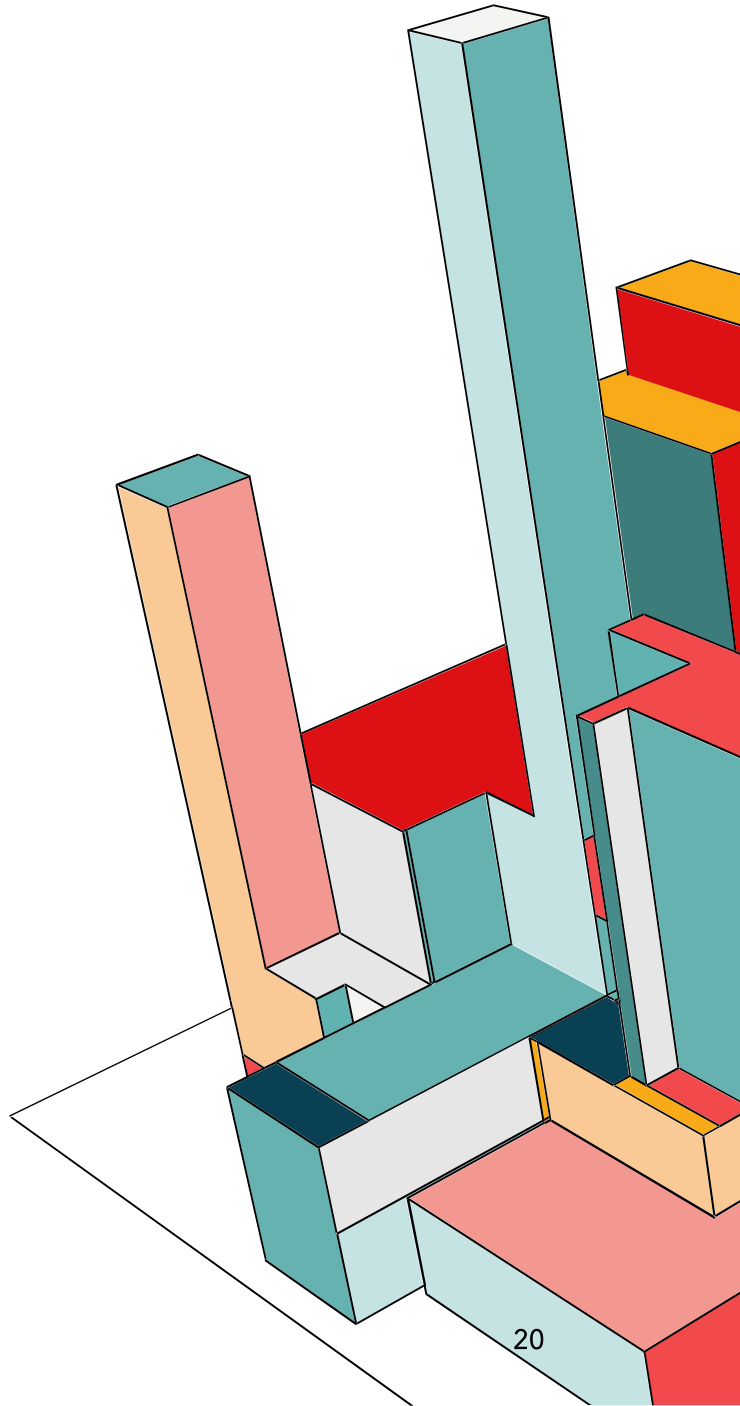
- Lack of EVSE companies that are willing to work with MBTA business constraints
- Parking lots managed by third party



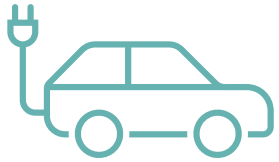
PROBLEMS

FINANCIALS

- MBTA has not authorized capital funding to purchase EVSE
- No EVSE operational budget



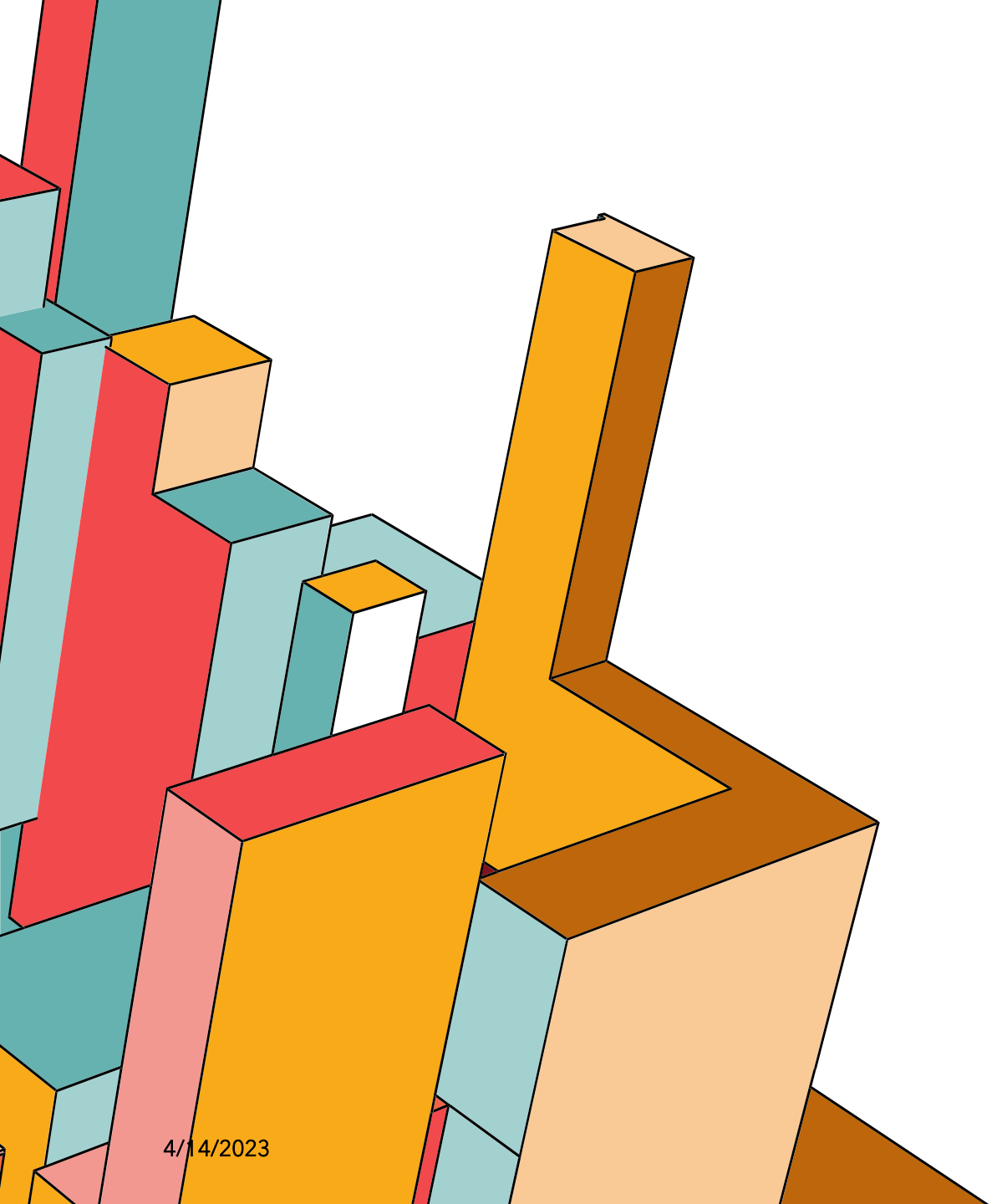
EVSE TARGETS AND REQUIREMENTS



Must install 8 EVSE at Subway, commuter rail, and ferry parking lots by 2024

Require new Parking lots to have EVSE (2 per 25): EO594

MassDOT wide goals for EVSE deployments and EV adoption



SOLUTIONS

MAKE READY PROGRAMS

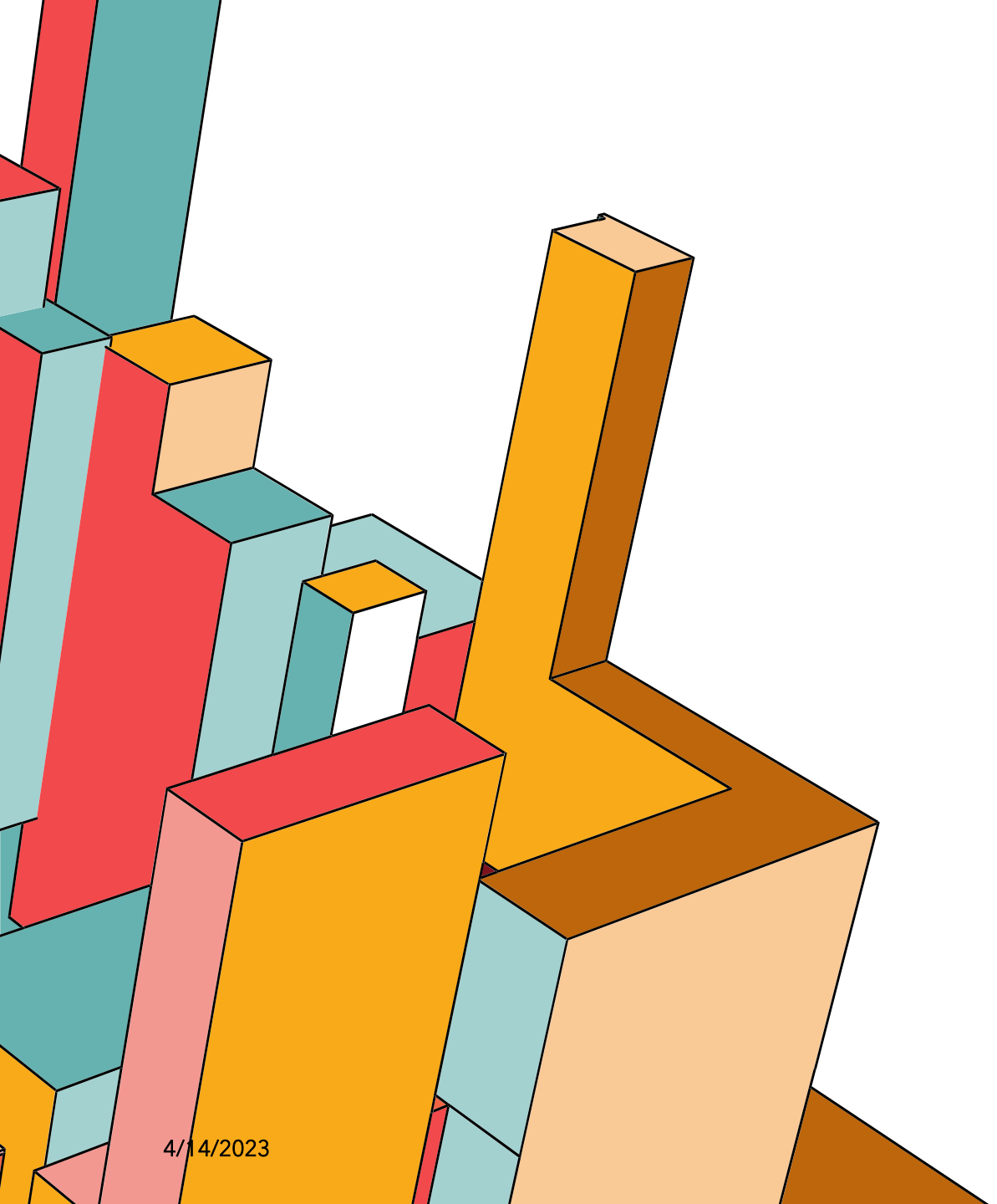
- Directly connect to grid instead of MBTA's distribution system

FIND NEW PARTNERS

- EVSE Company willing to invest
- Municipality looking for parking spaces

FUNDING

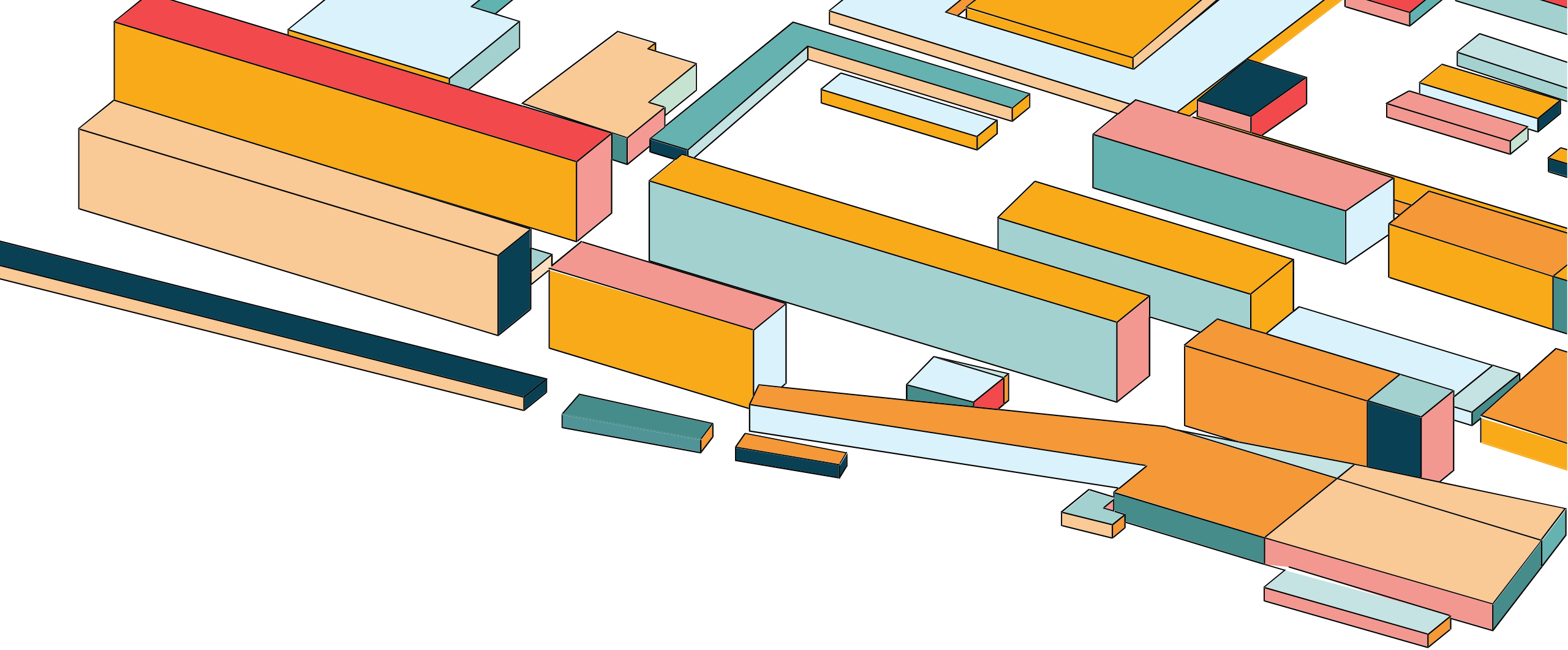
- Apply for IRA Grants
- Include in our Capital Investment Plan



SOLUTIONS

STATEWIDE PLAN

- Analysis all Parking in the state from Munis, MBTA, DOT, DCR, etc.
- Invest in the places that will serve the most EV or increase EV adoption the most
- Estimate cost of install at all chosen location
- Follow up with funding
- Should the State step in where EVSE companies are falling short?
- Does MA need a EVSE Department?



QUESTIONS, SUGGESTIONS, COMPLAINTS

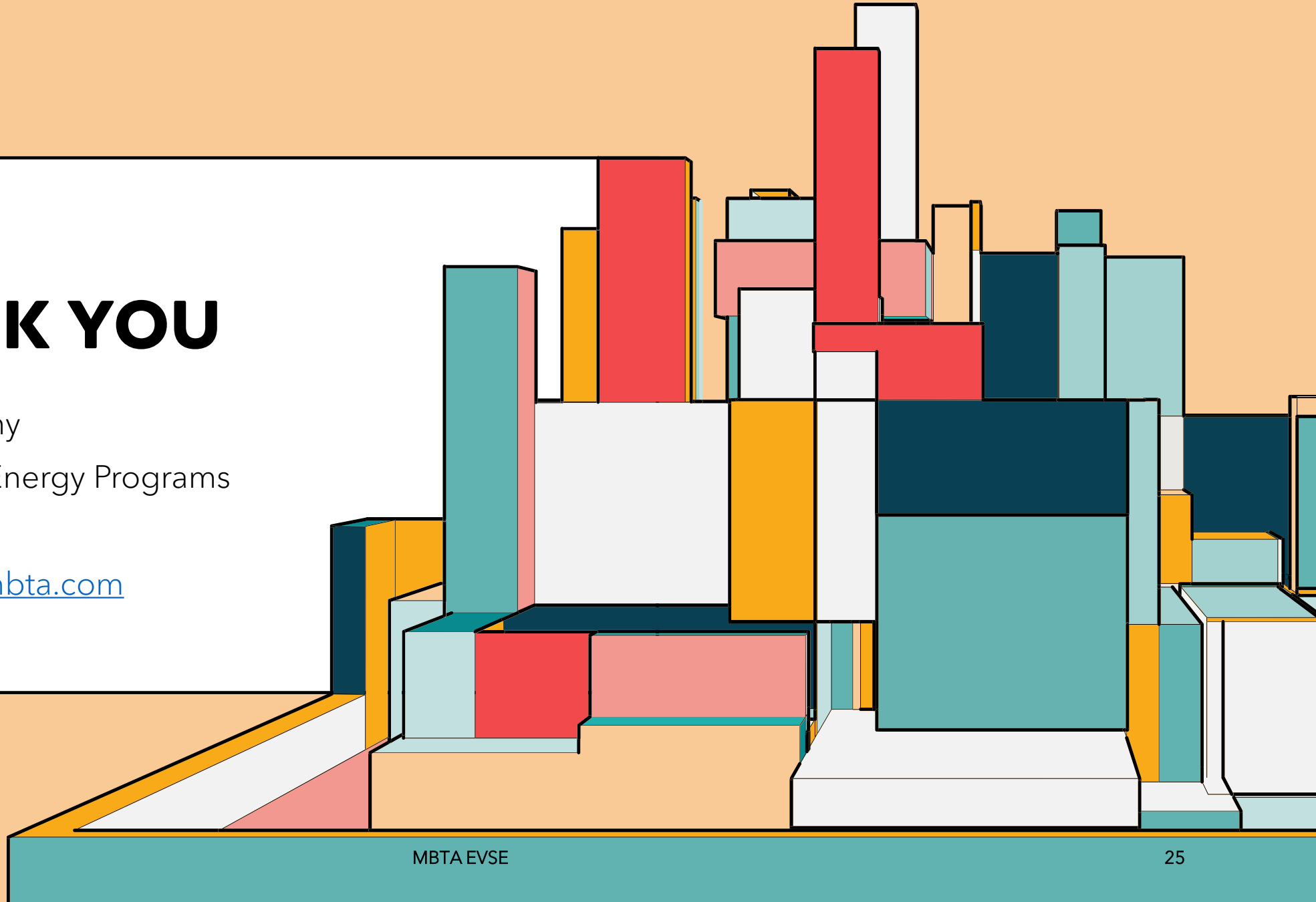
THANK YOU

Sean Donaghy

Manager of Energy Programs

MBTA

sdonaghy@mbta.com



Municipal Updates

- Name, pronouns, municipality, and position / role
- One success
- One challenge

US EPA released proposed standards to reduce emissions from light & medium-duty and heavy-duty vehicles.

- Released April 12, 2023.
- Starting with model year 2027.
- Does not mandate zero-emission vehicles.

Proposed Rule: Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles

Standards would apply to passenger cars and light trucks.
Virtual public hearings scheduled May 9 and 10, 2023.

Proposed Rule: Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles

Standards would apply to delivery trucks, refuse haulers, public utility trucks, transit, shuttle, and school buses.
Virtual public hearings scheduled May 2 and 3, 2023.

MA Formally Adopts Clean Cars II Regulations

- Adopted March 23, 2023.
- Requires auto manufacturers to ensure that every new light-duty car sold in the state is a zero-emission vehicle by 2035.

Source 310 CMR 7.00: Air Pollution Control | Mass.gov

Upcoming Webinars

Green Energy Consumers Alliance

Smart Charging in Massachusetts
Wednesday April 26th at 12pm
https://www.greenenergyconsumers.org/event/smartchargingmassachusetts

Update on the Federal Incentives for Cars
Thursday April 27th at 12 pm
https://www.greenenergyconsumers.org/event/updatefederalincentiveselectriccars

New Programs for Fleet Electrification in Massachusetts
Wednesday May 17th at 12pm
https://www.greenenergyconsumers.org/event/newprogramsfleetelectrificationmassachusetts

MAPC

Equity in Clean Energy Series: Equitable Community Engagement
Tuesday April 25th at 11am
https://us06web.zoom.us/meeting/register/tZcsdOusqDMvHtZ4hgVUErsVtuDEX0B_4Cwn#/registration

2023 Schedule

Thursday June 15th

1:00 – 2:30

Topics TBD

If you aren't already on our invite list, please email **afelix@mapc.org** to be added for future meetings

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