Charging Smart Cohort Session 2
Planning Category

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Agenda

Cohort Structure/Timeline

Introductions and Peer Updates

General Updates

Bronze Designation Requirements
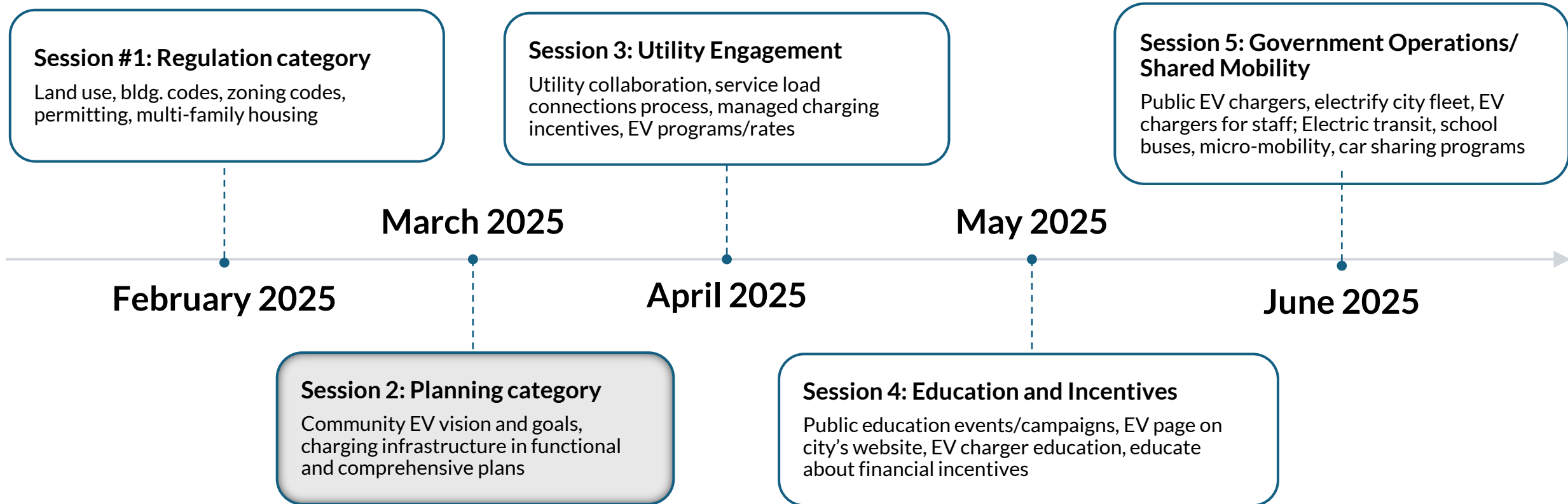
Planning Category Walk-Through

Group Discussion

EV-Ready Building Codes and Standards

Homework Assignment

Cohort Structure and Timeline

Session #1: Regulation category

Land use, bldg. codes, zoning codes, permitting, multi-family housing

Session 3: Utility Engagement

Utility collaboration, service load connections process, managed charging incentives, EV programs/rates

Session 5: Government Operations/ Shared Mobility

Public EV chargers, electrify city fleet, EV chargers for staff; Electric transit, school buses, micro-mobility, car sharing programs

March 2025

February 2025

April 2025

May 2025

June 2025

Session 2: Planning category

Community EV vision and goals, charging infrastructure in functional and comprehensive plans

Session 4: Education and Incentives

Public education events/campaigns, EV page on city's website, EV charger education, educate about financial incentives

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Introductions and Peer Updates

Please introduce yourself and answer these questions if applicable:

- Any progress on the onboarding documents?

- Any updates on addressing actions or contacting relevant departments?

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General Updates

- New Teams Channel for the Charging Smart Cohort
  - Can use either the Google Drive OR the Teams Channel
  - Each city has access to the shared general channel and an individual private channel

- Upcoming Earth Day Events
  - Can earn points from the Education and Incentives category for hosting an informational booth promoting EVs and the benefits of EVs (E1.4)

Bronze Designation Point Breakdown

General Points

Prerequisites	35
Education & Incentives	15
Planning	10
Actions of Your Choice	20
Total (General Points)	80

R1.6: Review zoning requirements and identify restrictions that intentionally or unintentionally prohibit EVSE deployment (15 points)

R3.1: Adopt a standard EV charging infrastructure permit application process (10 points)

R3.4: Develop a charging infrastructure permitting checklist (5 points)

U1.1: Meet with utilities to discuss EV collaboration opportunities (5 points)

Planning Category Explanation

Actions local governments can take to establish a policy environment and community-wide vision that supports EV adoption

This includes:

- Proactively addressing EVs and charging infrastructure in community plans
  - Specific-area, Functional, Comprehensive plans

- Conducting a needs assessment to inform planning

- Mapping favorable locations for charging buildout

- Setting SMART (Specific, Measurable, Attainable, Relevant, Time-based) goals to track progress over time

Planning Category Criteria Action P1.1

P1.1: Create a community-wide EV vision (10 points)

- Create a document that will serve as your guide during planning and implementation of EV and EVSE integration into the community.
  - **What** you want to do
  - **Why** you want to do it
  - **How** you want to do it

- Should inform goal-setting and focus your efforts

- Should reflect your community's unique voice and shared intention

Verification: Provide a link to, a copy of, or attach the completed community-wide EV vision.

P1.1: EV Vision Examples

City of Fort Collins, Colorado: EV Readiness Roadmap

Fort Collins will be a leader and innovator in supporting the use of EVs within the community's sustainable transportation system. Residents, businesses, and visitors to Fort Collins will choose EVs over conventional fuel vehicles.

City of Northglenn, Colorado: EV Action Plan
Northglenn will reduce greenhouse gas emissions and improve air quality through electric vehicle adoption and infrastructure that is inclusive, sustainable, cost-effective, and innovative.

Planning Category Criteria Action P1.3

P1.3: Develop goals that are specific, measurable, attainable, relevant, and time-based surrounding EV actions (10 points)

To address SMART goals in planning documents, ask these questions about the goals:

- **S**pecific: What will the goal accomplish?
- **M**easurable: What data is available to evaluate current vs future conditions?
- **A**ttainable: Does the staff have enough time and resources to achieve the goal?
- **R**elevant: How does this goal align with the community's overarching vision and goals?
- **T**ime-based: Is there a reasonable timeframe to complete the goal or measure the progress?

Some EV initiatives may not be easily quantifiable, but having clear objectives, implementation tasks, and timelines may be enough.

Verification: Provide a link to or attach a document that contains the list of goals developed.

P1.3: SMART Goal Examples

Chicago, IL: Climate Action Plan (2022)

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Enable 2,500 new public passenger electric vehicle charging stations by 2035

GHG Impacts

◆◆◇

City Partners

CDOT, CTA, DPD

Electric vehicles provide a clean mobility option for those in communities where a car is a necessity, provide significant cost savings to drivers due to lower operation costs and fuel savings, reduce street-level air pollution, and lead to reduced GHG emissions if the charge source is powered with clean energy. While continuing to invest in strategies that enable residents to reduce the number of vehicle miles traveled, the City will also support equitable adoption of electric vehicles by expanding and improving Chicago's charging infrastructure. In 2020, every community area has a registered electric vehicle. However, 70% of public electric vehicle charging infrastructure is concentrated in 3 community areas, and 47 community areas don't have a single public electric vehicle charger. In coordination with private and public electric vehicle charger operators and building owners, the City will enable the installation of 2,500 new commercial-grade, Level 2 public passenger electric vehicle charging stations by 2035, with priority given to low- and middle-income communities. Because electric vehicle uptake will not enable the City to provide safe, affordable and efficient transportation for all, the City will continue to prioritize investments in transit, walking, biking, and shared mobility.

Planning Category Criteria Action P2.1

P2.1: Identify locations and frequency of charging infrastructure placement (5 points)

- Identify suitable, potential locations for new EV chargers
  - Could be on city-owned land or private land (would need to collaborate with business owners)
  - Identify gaps in access to EV charging, or where new chargers would make sense

- Consider factors such as population density, travel patterns, existing electrical infrastructure, and future development plans
  - AFDC Station Locator- provides data on pre-existing charger locations
  - GridUp Tool- shows population data from Census tracts, total ports, electricity peak load levels and daily energy consumption

Verification: Provide a link or attach a map showcasing the location of existing or proposed charging infrastructure in a planning document.

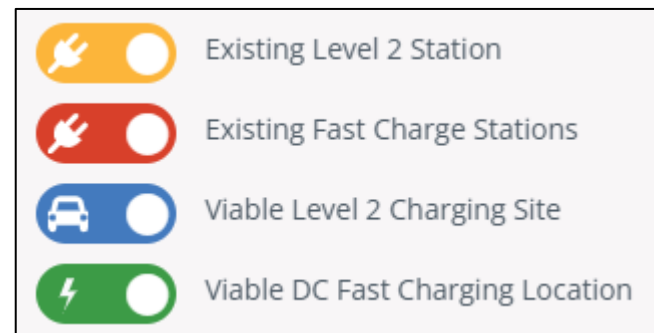# P2.1: Potential Charger Location Map Example
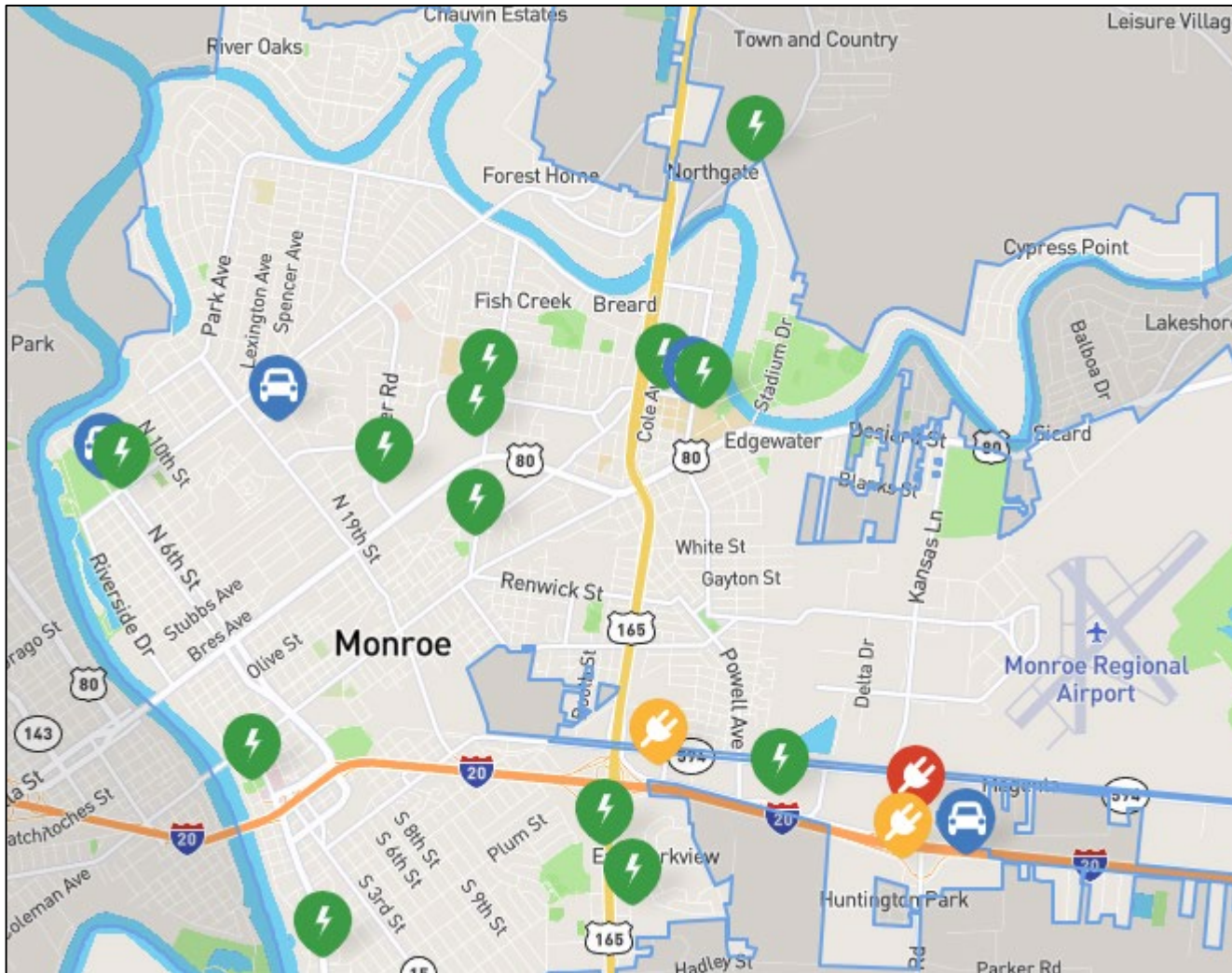
Monroe, LA | Social Pinpoint

- Louisiana Clean Fuels worked with Monroe to help determine the best locations for new chargers, including receiving community feedback through this tool

Texas Electric Vehicle (EV) Charging Plan | Engage TXDOT

- Texas' version, showing where chargers are needed/desired

🔌 (orange)	Existing Level 2 Station
🔌 (red)	Existing Fast Charge Stations
🚗 (blue)	Viable Level 2 Charging Site
⚡ (green)	Viable DC Fast Charging Location

Planning Category Criteria Action P3.2

P3.2: Promote co-benefits: public health, noise/pollution reduction (5 points)

- Is an action for both the functional (climate action, energy, transportation, etc) and comprehensive plans

- Can include the common benefits of EVs
  - No tailpipe emissions
  - EVs are relatively quiet compared to an ICE vehicle
  - Energy independence- electricity is domestically sourced
  - TX leads the nation in renewable energy, wind and solar
  - TX grid generation sources will continue to get cleaner over time

Verification: Provide a link to or attach a document of the promoted co-benefits. Describe where the section detailing co-benefits can be found.

P3.2: EV Co-Benefits Example

Fort Collins, Colorado EV Readiness Roadmap:

The benefits of EVs include:
- EVs have little or no tailpipe emissions (depending on the type of vehicle), meaning they support the City's goals to reduce local air pollution and improve public health.
- Depending on the electricity generation mix, EVs have much lower GHG emissions than conventional vehicles. Even in areas that primarily use coal as an electricity source, such as Colorado, EVs offer life-cycle GHG emissions reductions.
- EVs can use cleaner sources of electricity, such as solar, to charge. The City can use EVs as a reason to justify the diversification of electricity sources to include renewable fuels, in the effort to increase emissions benefits of EVs.
- The cost to charge an EV is much cheaper than the cost to fuel a conventional vehicle with gasoline, by about 50%. The U.S. Department of Energy's (DOE) eGallon tool provides an up-to-date cost comparison.
- EVs, particularly BEVs, which do not have an ICE, require very little maintenance. Because of these lower maintenance and fuel costs, EVs have a lower lifetime cost of ownership than conventional vehicles.

Planning Category Resources

Great Plains Institute Planning Resources

P1.1: Create a community-wide EV vision
Electric Vehicle Readiness Roadmap (p. 9) | City of Fort Collins, CO
Electric Vehicles in Northglenn | City of Northglenn, CO

P1.3: Develop goals that are SMART surrounding EV actions
Electric Vehicle Planning Language PDF
Climate Action Plan (p. 108) | City of Chicago, IL
Climate Action Plan (p. 10) | City of Phoenix, AZ

Planning Category Resources (continued)

P2.1: Identify locations and frequency of charging infrastructure placement
Conduct EV Infrastructure Planning for Communities | Drive Electric USA (Includes Monroe's example)
Alternative Fueling Station Locator | AFDC, DOE
GridUp | RMI
Electric Vehicle Infrastructure Toolbox | DOE

P3.2: Promote co-benefits: public health, noise/pollution reduction (5 points)
Electric Vehicle Readiness Roadmap (p. 17) | City of Fort Collins, CO
Zero Emission Vehicle Action Plan (pp. 14–15) | City of Oakland, CA
Zero-Emission Vehicle Roadmap | City of Boston, MA
AFDC: Electric Vehicle Benefits and Considerations
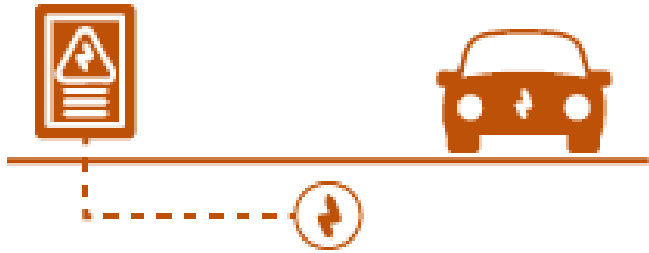
Group Discussion

Any questions, comments, or concerns?

Does your city have specific-area, functional and/or comprehensive plans?
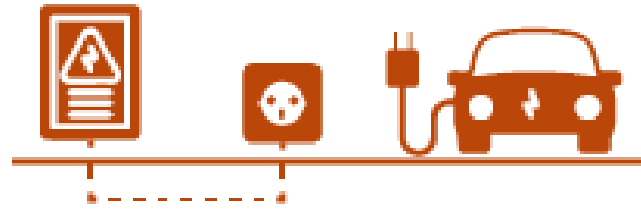-   If so, are EVs or EVSE mentioned in the plans?

Do you have any advice to share with your cohort partners? Any challenges to sort out?

EV Parking Infrastructure Specifications

EV CAPABLE SPACE
Electrical Panel Capacity + Conduit

EV READY SPACE
EV Capable + Installed Full Circuit

EVSE SPACE
Install EV Charging Station

Graphics Source: Southwest Energy Efficiency Project

4x-6x
more expensive

The cost to install EV Ready infrastructure post-construction compared to at time of new construction.

Source: Alternative Fuels Data Center

EV-Ready Building Codes and Standards

International Code Council:

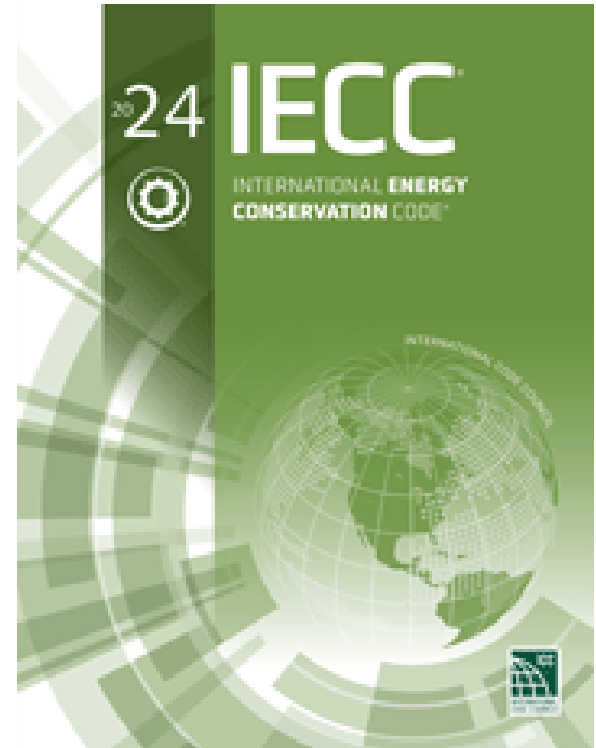International Energy Conservation Codes (IECC) - Updated May 2024
- Minimum parking space requirements for EV Capable, EV Ready, and EVSE Spaces*
- System capacity and circuit capacity requirements
- Commercial: [Appendix CG Electric Vehicle Charging Infrastructure](#)
- Residential: [Appendix RE Electric Vehicle Charging Infrastructure](#)

Benefits of integrating 2024 IECC into building and parking requirements
- Help your community be EV ready
- Earn points toward Charging Smart designation
- Cost savings to facility owner and utility for including in new construction vs retrofit

Graphics Source: International Codes Council

[dfwcleancities.org/evreadiness](#)

*EVSE Space was formerly referred to as EV-Installed

Commercial: Table CG101.2.1

Required EV Power Transfer Infrastructure

Occupancy	EVSE Space	EV Ready Space	EV Capable Space
Group A	10%	0%	10%
Group B	15%	0%	30%
Group E	15%	0%	30%
Group F	2%	0%	5%
Group H	1%	0%	0%
Group I	15%	0%	30%
Group M	15%	0%	30%
Group R-1	20%	5%	75%
Group R-2*	20%	5%	75%
Group R-3 and R-4	2%	0%	5%
Group S exclusive of parking garages	1%	0%	0%
Group S-2 parking garages	15%	0%	30%

*Based on total number of dwelling units or parking spaces, whichever is less

Texas Cities EV-Ready Requirements

City	Residential	Commercial	Compared to 2024 IECC
Austin	None	None	NA
Dallas	1- to 2-family units: 1 EV ready space/unit	3 or more units + Commercial: calculated % based on total # of spaces*	Residential: somewhat consistent Commercial: less
Farmers Branch	Draft: 1- to 2-family units: 1 EV Ready space/unit; multi-family varies based on total # of spaces*	None	Residential: somewhat consistent Commercial: less
Lewisville	100+ parking spaces must have 5% EV Ready Spaces	100+ parking spaces must have 5% EV Ready Spaces	Residential: less Commercial: less
San Antonio	1- to 2-family units: 1 EV Ready space/unit; all others - 5% EV Capable Spaces of total required parking spaces	5% EV Capable Spaces of total required parking spaces	Residential: somewhat consistent Commercial: less

*See slide for details

Texas Cities EV-Ready Requirements

City of Dallas - Multifamily (3 or more units) and Commercial Buildings

Total Parking Spaces	% EV Ready Spaces	% EV Capable Spaces
1	1	NA
2-10	2	NA
11-15	2	3
16-20	2	4
21-25	2	5
26+	2	20% of total parking spaces

Farmers Branch – Multi-family varies based on total number of parking spaces

Total Parking Spaces	Minimum EV Ready Spaces	Minimum EV Capable Spaces
1-10	1	NA
11-15	1	3
16-20	2	4
21-25	2	5
26+	2	20% of total parking spaces

Charging Smart Cohort Session 2

Homework

Priority: Complete onboarding documents

Continue addressing Regulation and Utility Prerequisites for the Bronze designation

- <u>R1.6</u>: Review zoning requirements and identify restrictions that intentionally or unintentionally prohibit EVSE deployment (15 points)
- <u>R3.1</u>: Adopt a standard EV charging infrastructure permit application process (10 points)
- <u>R3.4</u>: Develop a charging infrastructure permitting checklist (5 points)
- <u>U1.1</u>: Meet with utilities to discuss EV collaboration opportunities (5 points)

Begin assessing which Planning actions to complete (adding up to 10 points)

Contents

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