

# Analysis of Electric Vehicle Charging Infrastructure in the City of Dallas

January 2022



There are more than 7,300 electric vehicles (EVs) registered in the City of Dallas in December 2021. Regional vehicle registration trends have observed a 32.5 percent average annual growth for EVs from 2015-2020, showing an upward electrification trend that is expected to continue to grow.

In 2020, the City of Dallas passed a Comprehensive Environmental & Climate Action Plan (CECAP), which established a goal for Dallas communities have access to sustainable, affordable, transportation options. As one element in achieving this, a target was set for the city to have 1,500 EV charging station plugs by 2030 to support 39,000 EVs. Additionally, the city recognizes environmental injustices and how climate change can disproportionately affect more vulnerable communities, so are placing equity at the center of the CECAP efforts to work towards a more resilient future.

## City of Dallas Electric Vehicle Charging and Multi-Family Properties (MFP) by the Numbers:

- ❖ City goal of 1,500 accessible EV plugs by 2030
- ❖ 176 public EV charging stations with 398 plugs in 2021
- ❖ 2,253 MFPs, with over 320,000 units in 2021
- ❖ Citywide, 54% of MFPs do not have access to a charger within 1/2 a mile
- ❖ In environmental justice areas, 67% of MFPs do not have access to a charger within 1/2 a mile
- ❖ 12.4 EV plugs available per 10,000 multi-family units on average across the city

According to the Department of Energy's Alternative Fuel Station Locator Tool, Dallas currently has 176 publicly accessible EV charging stations, accounting for 398 available charging plugs in Fall 2021. The location of these public charging stations is closely correlated to the location of current registered EVs in the city. This correlation also mimics areas of higher income populations, begging the question of whether advancing more equitable distribution of charging stations in the City of Dallas may lead to more equitable adoption of EVs.

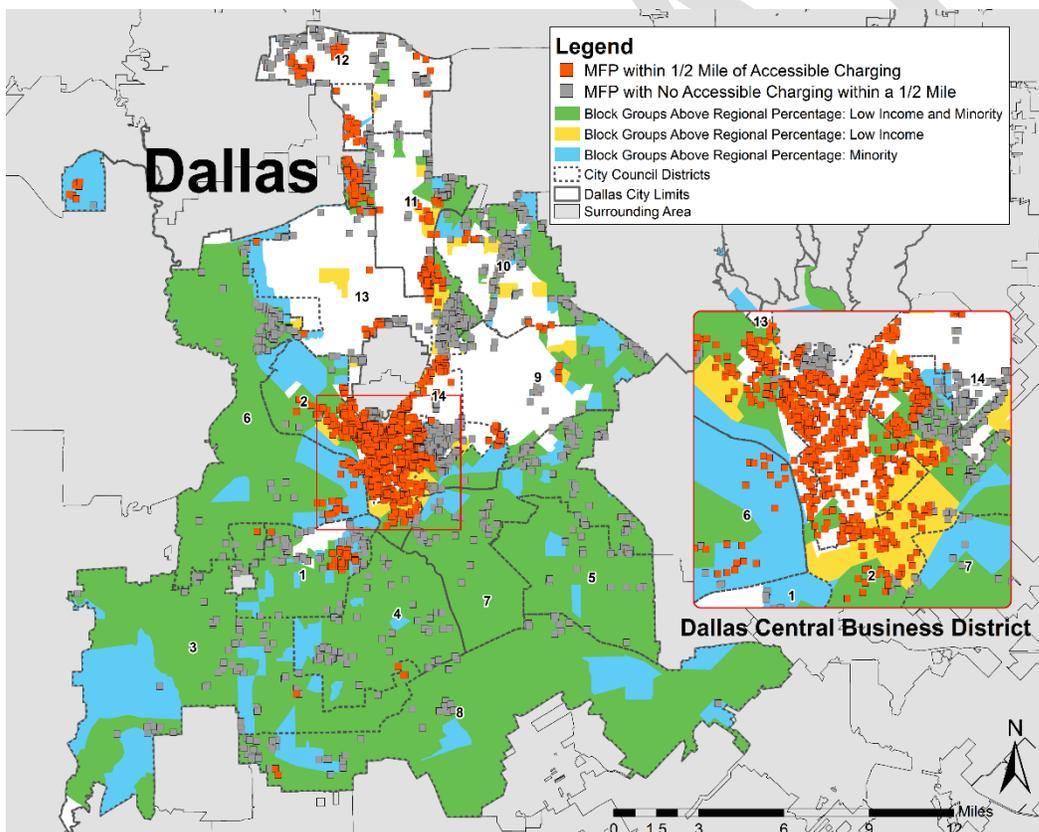


Exhibit A: City of Dallas Multi-Family Properties (MFP) with access to Public Charging (orange) and without access to public charging (gray). Environmental justice areas defined by green, blue, and yellow areas

The Department of Energy states that over 80 percent of people charge their EV at home. But for those without personal garage spaces, such as many multi-family tenants, accessibility of publicly available EV charging stations is critical in the feasibility of owning an EV.

In 2021, the Dallas-Fort Worth Clean Cities Coalition (DFWCC) completed an analysis for the City of Dallas on the accessibility of existing publicly available EV chargers in the city limits, with a specific focus on multi-family properties and environmental justice (EJ) populations. To do this work, DFWCC used the Environmental Justice Index created by its host agency, the North Central Texas Council of

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Governments, which identifies populations that are above the regional average for minority and lower income. This analysis was completed to support the city as they work to meet their 2030 goal and to better support equitable investments to expand EV charging station accessibility and fill in geographic gaps in charging station availability for all residents.

The study found of the 2,253 total multi-family properties across the City of Dallas, only 54 percent of properties were within a walkable radius (defined as a half-mile) of an existing publicly available EV charger. However, this percentage increases to 67 percent when analysis is limited to multi-family properties that lie within EJ areas. This indicates that areas of higher minority and lower income populations are less able to access EV charging stations. Exhibit A shows the geographic distribution of multi-family properties with access to EV charging in orange and those without access in gray. As shown, most properties with access to EV chargers are clustered towards the central business district. Many properties across the city lack walkable charging access.

While having locational proximity to a charger is important, true accessibility is in part determined by the ratio of people needing charging access to available plugs. To determine this density-based accessibility, DFWCC calculated the ratio of the number of publicly available EV charging plugs accessible compared to the amount of total multi-family units. There are nearly 320,000 multi-family units and 398 EV charging plugs across the City of Dallas. Citywide, there is an average of 12.4 accessible EV charger plugs per 10,000 multi-family units. However, as shown in Exhibit B, when broken down by city council districts, the amount of accessible EV charger plugs varies greatly. Working to create a higher and more consistent ratio of plugs to housing units across all parts of the city may be helpful in improving charging accessibility, and this analysis helps focus on where those efforts may need to take priority.

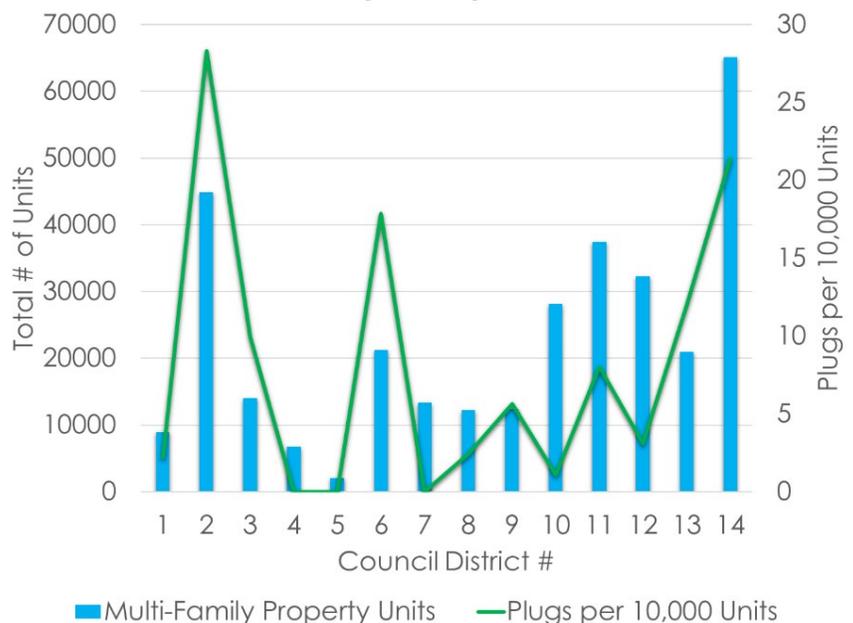


Exhibit B: Availability of Publicly Accessible Charging Plugs and Multi-Family Units by Council District

DFWCC presented the study data to City of Dallas as a starting point for understanding existing EV charging accessibility in relation to multi-family and EJ populations. As the city has made equity a priority in all initiatives, DFWCC hopes this analysis will be useful in guiding investments to fill EV charging gaps for residents across Dallas.

**To learn more about electric vehicles and infrastructure, visit Electric Vehicles North Texas Initiative through DFW Clean Cities at [www.dfwcleancities.org](http://www.dfwcleancities.org)**

*The Dallas-Fort Worth (DFW) Clean Cities Coalition is hosted within NCTCOG. DFW was one of the first regions to be designated as part of the Department of Energy Clean Cities initiative in 1995 to reduce transportation energy use and improve air quality.*