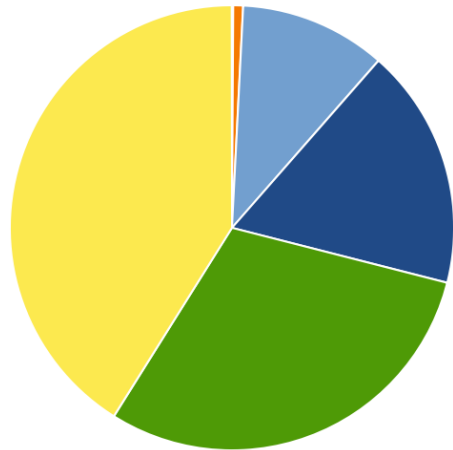


EV Policy Discussion

Plan Commission – Monday, February 10, 2020

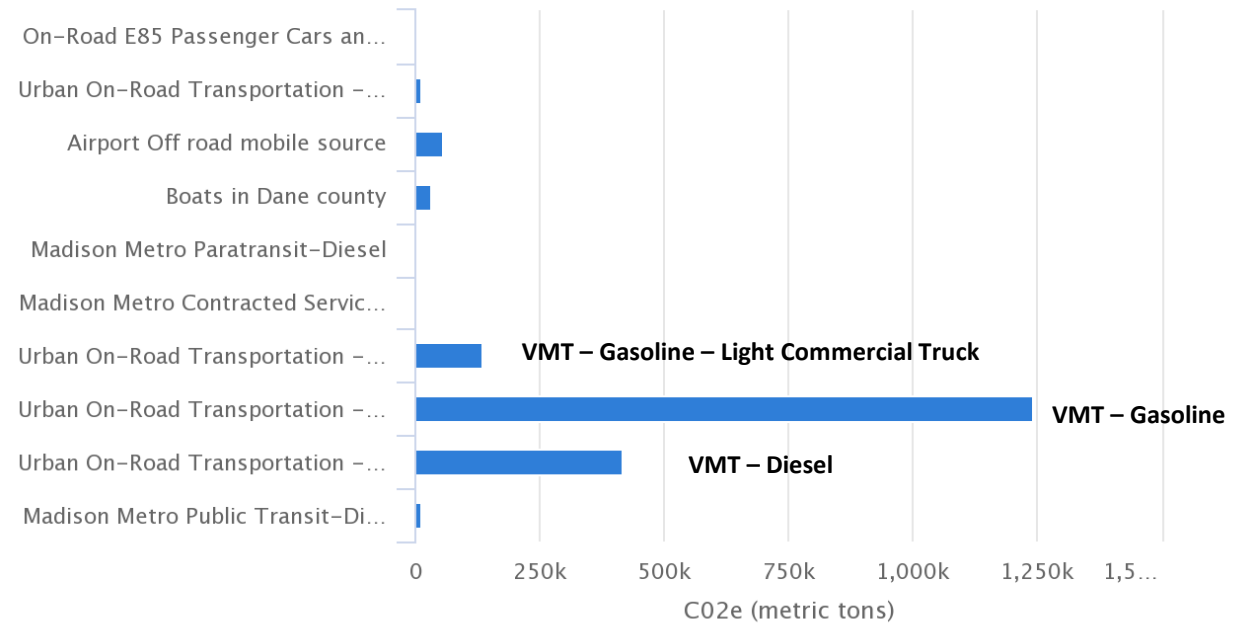
2014 City of Madison Community Inventory

CO2e By Category



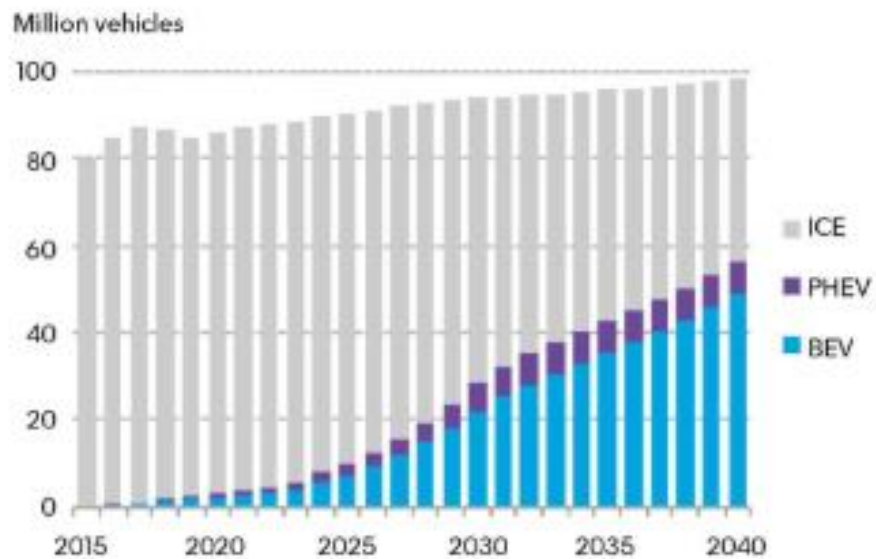
- Solid Waste
- Water & Wastewater
- Industrial Energy
- Residential Energy
- Commercial Energy
- Transportation & Mobile Sources

CO2e By Record



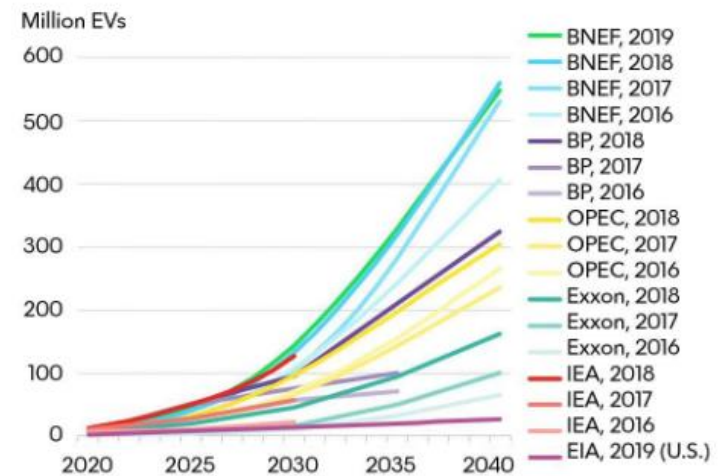
Bloomberg New Energy Finance: 56 million EV sales estimated in 2040, which is over 57% of the total new car market. In about 2038 passenger EV sales will eclipse internal combustion engine vehicle sales.

Global long-term passenger vehicle sales by drivetrain



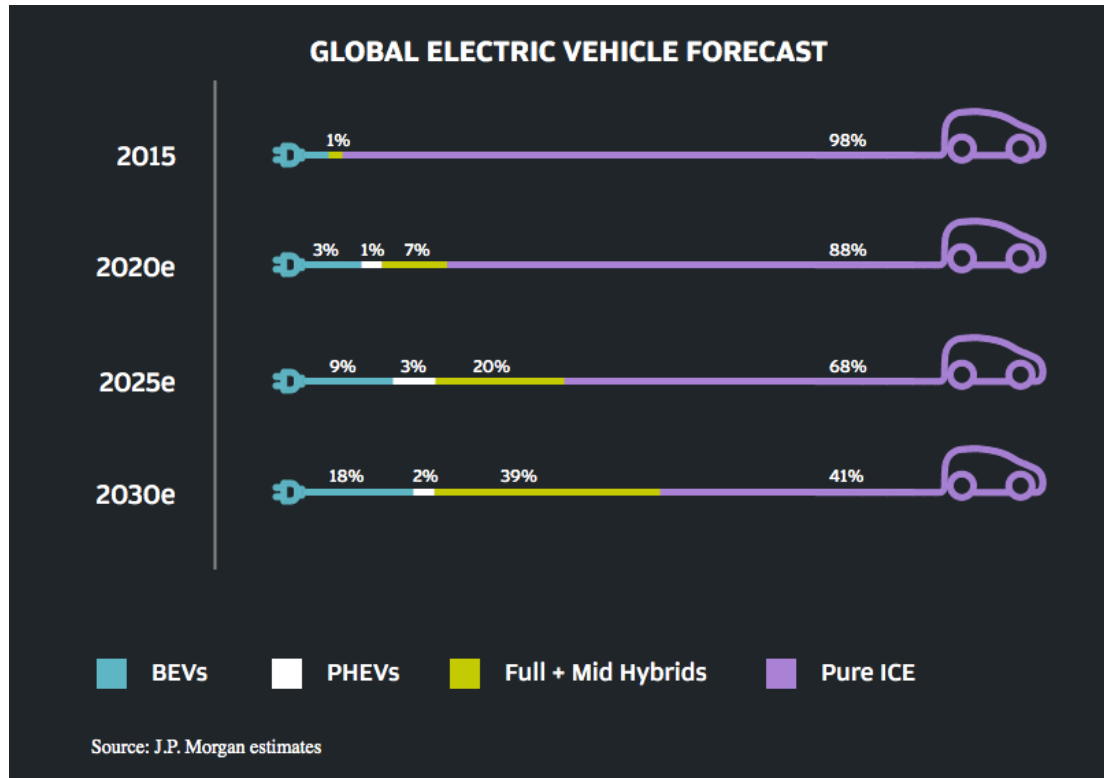
Source: BloombergNEF

EV Outlooks then and now

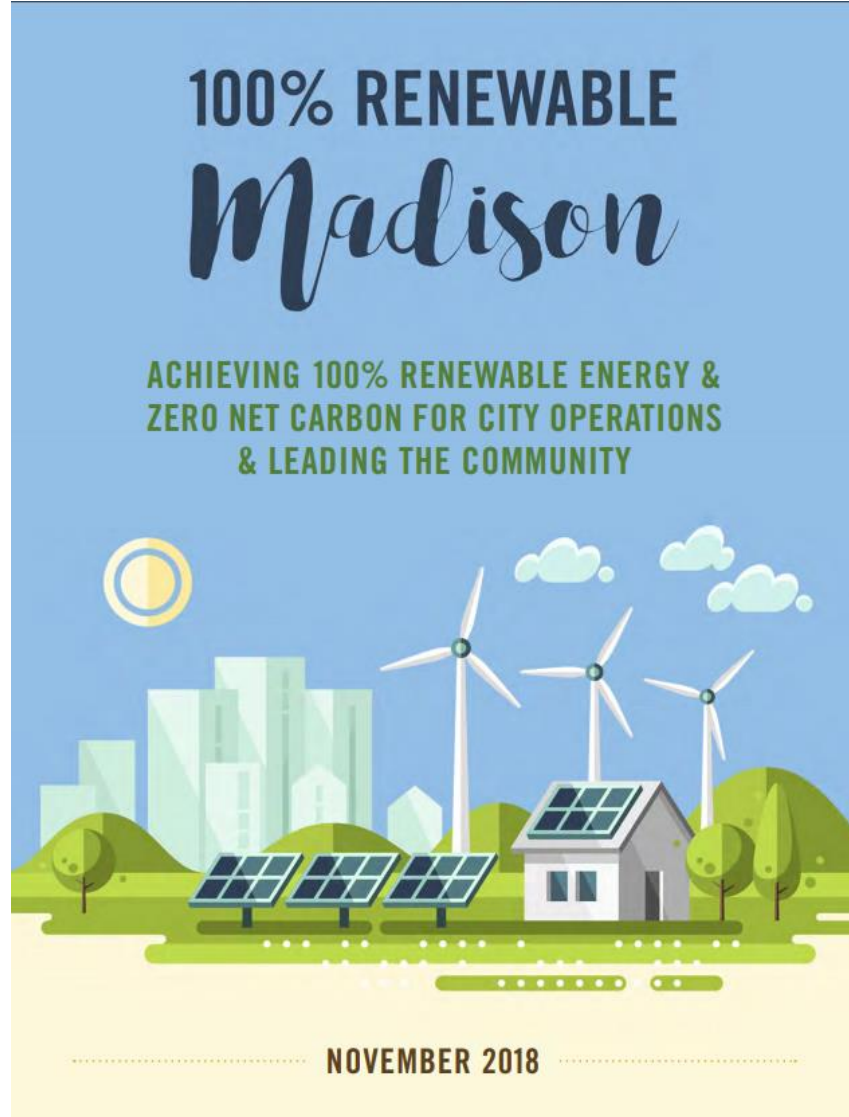


Source: BloombergNEF, organization websites. Note: BNEF's 2019 outlook includes passenger and commercial EVs. Some values for other outlooks are BNEF estimates based on organization charts, reports and/or data (estimates assume linear growth between known data points). Outlook assumptions and methodologies vary. See organization publications for more.

JP Morgan: Worldwide, by 2030 we'll have 20% market share for EVs. North American sales will lag slightly, and the Midwest will likely lag by another 2 years from national #s.



- Madison has 1.9% EV market share, the highest in the Midwest
- The most common EV in Madison is the Chevy Volt, followed by the Nissan LEAF which is tied with the total number of Teslas in the city
- There have been 9207 EVs sold in Wisconsin, but only 4785 are currently registered in the state
- Wisconsin EV sales increased by 24.11% from 2017 to 2018



“Electric vehicle (EV) growth in Madison and the surrounding area is estimated at 50%-60% per year... Lack of publicly available charging stations is one of the primary barriers to increased adoption of electric vehicles, along with battery life and customer choices. As batteries continue to improve and more EV options become available leading to increased customer uptake, Madison will need more public EV charging stations to accommodate this growth.”

4.1.3 Review Madison City Policies and Practices to Align with 100% Renewable Energy Goal

- Provide incentives for developers and contractors to build solar-ready and EV-ready for 5-10 years, as appropriate;
- Electric vehicle zoning and permitting: The City of Madison should implement an EV and EV charging station zoning and permitting policy.

CITY OF MADISON Comprehensive Plan

Imagine Madison
People Powered Planning



Green & Resilient

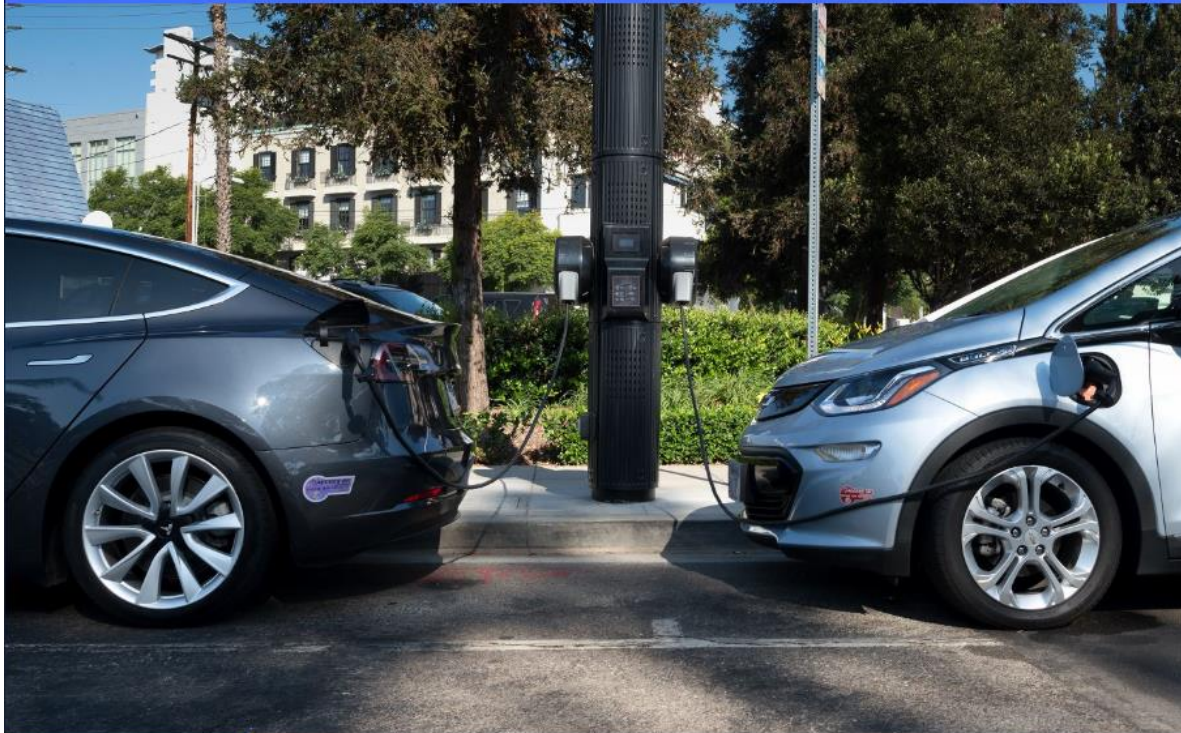
Strategy 3

Increase the use and accessibility of energy efficiency upgrades and renewable energy.

Action:

d. Support infrastructure to expand the use of electric vehicles and other eco-friendly fuel sources.

“the City should plan for and support infrastructure to expand the use of electric vehicles”



THE FUTURE OF WHAT'S NEXT



Lack of Electric Vehicle Charging Stations a Growing Concern

High costs, driven by permitting, building code and regulatory red tape, could hamper growth of stations needed to power the EV market, but some states and localities are starting to change the status quo.

CARL SMITH, CONTRIBUTING WRITER | JANUARY 30, 2020 | ANALYSIS

An analysis by Pacific Gas and Electric found that [installing charging capacity](#) during construction could reduce the cost per EV charging space by as much as 75 percent.

Code developers have been working on this issue, and guidelines for incorporating charging capability in commercial buildings and high-rise residential buildings are [included in proposed changes](#) to the International Energy Conservation Code.

<https://www.governing.com/next/Lack-of-Electric-Vehicle-Charging-Stations-a-Growing-Concern.html>

Proposed **DRAFT** Ordinance

- This ordinance creates a new use in the Zoning Code, Electric Vehicle Charging Facility. This would be a stand-alone facility existing for the purpose of providing electric vehicle charging on a retail basis—like a gas station.
- This ordinance also creates a requirement that commercial and residential parking facilities of a certain size and constructed after the effective date of this ordinance be constructed so that 50% of all spaces are electric vehicle capable (served with conduit/raceways and panel capacity to allow for the future installation of an EV charging station) and 10% of all residential spaces and 5% of all commercial spaces be electric vehicle ready (served with at least a Level II electric vehicle charging station).