November 28, 2022 Meeting

Backup Materials

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- Presentation: *EV-Ready Ordinance* {Stefan Perritano, Sustainability Coordinator}

SUSTAINABILITY ADVISORY BOARD
NOVEMBER 28, 2022

EV-READY ORDINANCE

STEFAN PERRITANO
CITY OF FORT LAUDERDALE
SUSTAINABILITY COORDINATOR
SUSTAINABILITY DIVISION

PRESENTATION OUTLINE

- FORT LAUDERDALE'S COMMITMENT TO NET ZERO
- LONG TERM TRENDS IN THE EV MARKET
- WHAT AN EV-READY ORDINANCE IS
- EV-READY ORDINANCES IN OTHER JURISDICTIONS
- COMMUNICATION TO THE COMMISSION

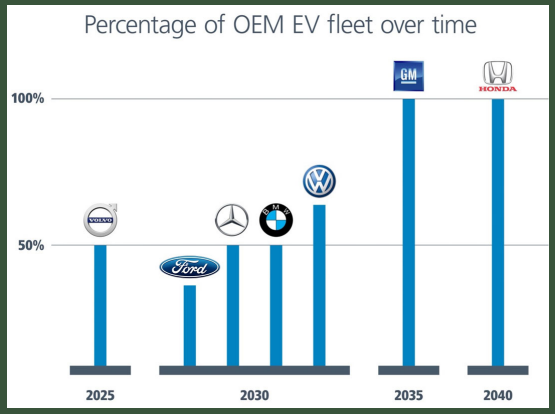



FORT LAUDERDALE'S COMMITMENT TO NET ZERO

ADOPTED NET ZERO	NET ZERO IN CITY OPERATIONS	NET ZERO CITY WIDE
in 2021	**by 2040**	**by 2050**

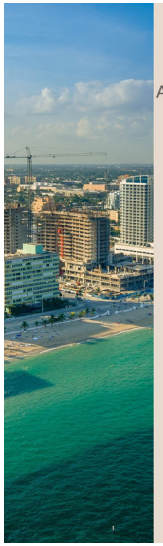
Fort Lauderdale's commitment to Net Zero and joining of the ICLEI150 Race to Zero ensures the City will strive to eliminate greenhouse gas emissions

Transitioning both the City and residential car fleets is essential in supporting the Commission's goal to achieve Net Zero



EV SALES & MARKET TRENDS

- Majority of car makers believe over 50% of new car sales will consist of EVs by 2030
- Most car-makers have goals to partially or completely transition their fleets to electric
- Toyota has announced a goal of ending production of all traditional internal combustion engines (ICE) by 2040
- European nations are beginning to ban the production of new combustion engines

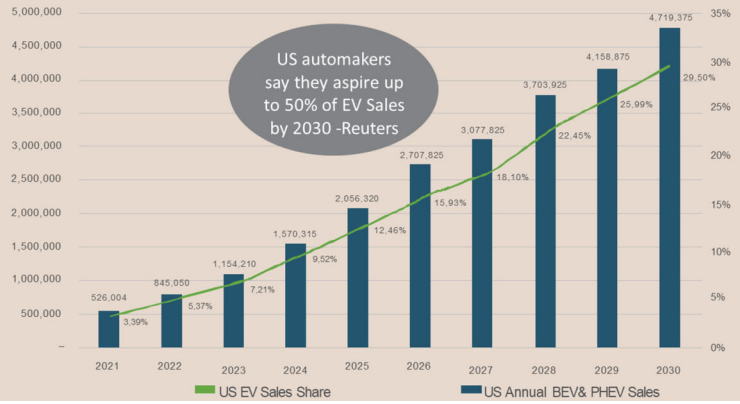


The Demand for Electric Vehicles

US Electric Vehicles Sales Forecast: 2021-2030

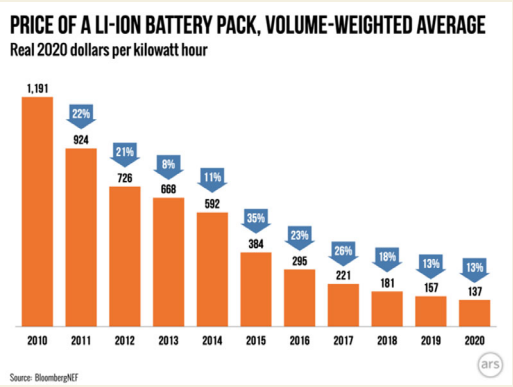
Automakers are All-In

- OEMs have committed to invest more than $300 Billion in EV research & development and manufacturing



ACHIEVING PRICE PARITY: EV & COMBUSTION

- 51% of an electric vehicle's cost is in the powertrain—battery, motor(s), and their associated electronics
- The price of lithium-ion batteries dropped 97% since they were commercially introduced in 1991
- Once batteries cost less than $100 per kilowatt-hour, price parity with internal combustion vehicles will be reached
- EVs will achieve price parity with combustion engines by 2025/2026
- Sales of internal combustion engine vehicles likely hit their peak in 2017



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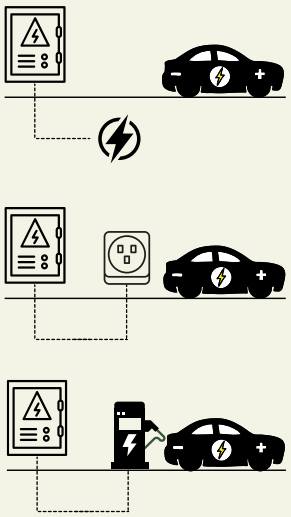

WHAT IS AN EV ORDINANCE?

EV-CAPABLE

Parking spaces that have listed raceway (conduit) and electrical capacity (breaker space) allocated in a local subpanel to accommodate future EVSE installation.

EV-READY

Parking space that includes the following components: listed raceway (conduit), sufficient electrical panel service capacity, overcurrent protection devices, wire, and suitable termination points such as a junction box with a service loop.

EVSE INSTALLED

A fully installed and operating EV charging unit. The equipment, as defined by the national Electrical Code, is provided to support future electric charging. This shall include but not be limited to: the design load placed on electrical panels and service equipment to support the additional electrical demand, the panel capacity to support additional feeder/branch circuits, the installation of raceways, both underground and surfacee mounted, to support the electric vehicle supply equipment.

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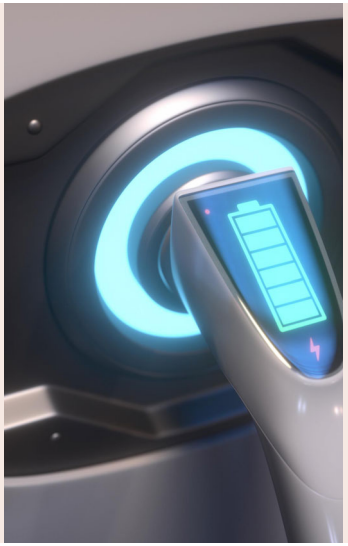

PLANNING FOR THE FUTURE SAVES DEVELOPERS MONEY

Cost per EV Parking Space: New Construction vs Retrofit

Case Study prepared for the City and County of San Francisco (2016)

The case study considers a parking lot with ten total spaces and two EV parking spaces, and compares the EV infrastructure installation costs at the time of new construction versus building retrofit. "EV parking spaces" define spaces that have an EV-ready outlet, and include the electrical panel capacity, raceways, breakers, outlet boxes, and wiring to install an EV charger at any given time in the future.

- Balance of Circuit
- Raceway
- Permitting & Inspection
- Construction Management

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WHAT DOES THE EV-READY ORDINANCE ACHIEVE?

Lowers cost for developers

Residents of the future will expect EV infrastructure in the places where they live and shop. In comparison to initial construction, retrofitting EV charging stations costs three times more.

Prepares the city for the future

After the passage of the Inflation Reduction Act, EVs are expected to make up the majority of new car sales in the United States by 2030. In order to accommodate the growth of electric and hybrid vehicles, the City will need to significantly expand its EV infrastructure.

Encourages a cleaner Fort Lauderdale

Electric Vehicles will play a critical part in Fort Lauderdale achieving Net Zero. EVs improve air quality, reduce urban noise, and limit spills associated with combustion engines. This will leave Fort Lauderdale's air, waterways, and environments cleaner than ever.

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EV-READY ORDINANCES IN FLORIDA

	Single Family, Duplex			Multifamily			Commercial		
	EV Capable	EV Ready	EVSE Installed	EV Capable	EV Ready	EVSE Installed	EV Capable	EV Ready	EVSE Installed
Miami Beach, FL					20+ units 2% of req. spaces	20+ units 2% of req. spaces			
Hollywood, FL	1 space			min. 1 space			min. 1 space		
Boca Raton, FL				50+ units min. 1 space			50+ units min. 1 space		
Miami Dade County, FL					10+ spaces 10% of req. spaces		10+ spaces 10% of req. spaces	10+ spaces 10% of req. spaces	
Coral Gables, FL*				10+ spaces 20% of req. spaces	10+ spaces 15% of req. spaces	10+ parking spaces 5% of req. spaces	10+ spaces 20% of req. spaces	10+ spaces 15% of req. spaces	10+ parking spaces 5% of req. spaces
Boynton Beach, FL						2/50 units			2/50,000 sq. ft
Winter Park, FL							10% of req. spaces		1/20 req. spaces
Orlando, FL				20% of req. spaces		250+ spaces, 2% of req. spaces	20% of req. spaces		250+ spaces, 2% of req. spaces
Orange County, FL				20% of req. spaces		250+ spaces, 2% of req. spaces	20% of req. spaces		250+ spaces, 2% of req. spaces
Miami, FL				20% of req. spaces			20% of req. spaces		

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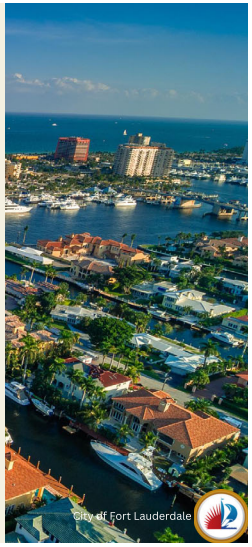
COMMUNICATION TO THE COMMISSION

The Sustainability Advisory Board recommends that the City Commission direct the City Manager to draft an ordinance intended to expand the number of electric vehicle (EV) charging stations throughout the City. In 2021, the City of Fort Lauderdale set Net-Zero greenhouse gas emissions goals for government operations and the community. One of the cornerstones of any net zero effort will be to transition away from fossil-fuel burning vehicles to lower emissions electric vehicles. With the significant increases in both federal incentives and sales of electric vehicles in recent years, additional infrastructure will be necessary to support the EV charging demand of residents and visitors.

Ordinances aimed at requiring EV charging infrastructure installation upon new or redevelopment have been passed in Coral Gables, Miami Beach, Orlando, Miami, Boca Raton, Winter Park, Hollywood, Jupiter, and the counties of Miami-Dade, Leon, and Orange. Adopting such an ordinance would prepare the City for the shift to EV vehicles as well as establish the City as a leader in environmental policy in Broward County.

Preparation of such an ordinance would support the following parts of the City's Advance Fort Lauderdale Comprehensive Plan:

·POLICY CC 1.1.1: The City of Fort Lauderdale shall work city-wide to reduce greenhouse gas emissions generated by government operations with the goal of achieving 80% reduction below 2010 levels by 2050. The City will continue to regularly monitor and track progress of programs and initiatives that contribute to reaching this goal.
·POLICY CC 1.1.2: The City of Fort Lauderdale shall consider greenhouse gas emissions when making decisions related to procurement, capital improvements, operations, programs, events, long-term planning, land-use, and City operations.
·POLICY CC 1.1.5: The City of Fort Lauderdale shall promote and support the expansion of alternative and renewable energy on residential, commercial and municipal properties by working to reduce regulatory encumbrances and to develop incentives for renewable and alternative energy installations.
·POLICY CC 1.1.10: The City shall explore education and implementation incentives for business and residences in regard to solar power, energy efficiencies, and electric vehicle technology that can be incorporated on-site.
·OBJECTIVE FLU 2: Sustainable Development: The City shall encourage sustainable, smart growth which designates areas for future growth, promotes connectivity, social equity, preservation of neighborhood character and compatibility of uses.



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