

# Invite EV and Hybrid drivers to Will County

PROVIDE EV CHARGING STATIONS

**Marta Keane**  
**Will County – Land Use – RR&E**

# Adoption of Policy & Infrastructure

- EV Basics
- Adoption of Level 1 Charging Stations
- Adoption of Level 2 or Level 3 Charging Stations
- Reasons to Install



# EV Basics

Electric Vehicles (EV) can be fully powered by batteries that are charged from an electric outlet.

Hybrid Electric Vehicles (HEV) can be partially powered by gasoline and partially powered by batteries that are charged from an electric outlet.

Regenerative braking allows all types of EVs to capture energy normally lost during braking by using the electric motor as a generator and storing the captured energy in the batteries.



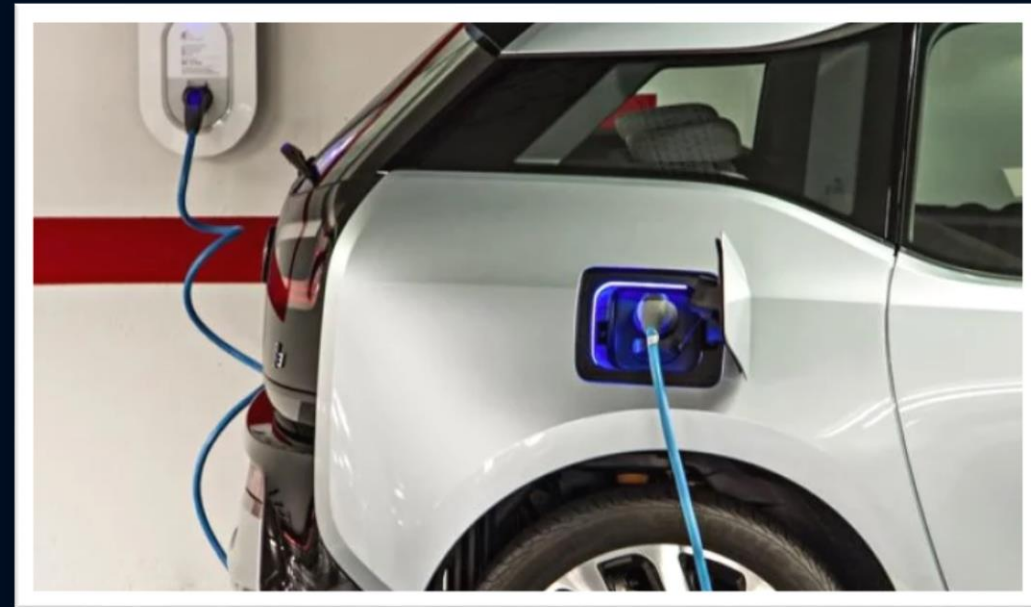
# EV Basics

- **Every Car Manufacturer makes EVs**
- **Most EVs can be charged with a standard 110 outlet. These are considered LEVEL 1.**
- **A standard outlet will recharge most EVs fully in 8-9 hours.**  
(<\$0.80 Average Cost in Illinois)  
(\$0.30 Cost to Joliet and Will County)
- **Most EV users rely on home charging.**  
(Illinois legislation under consideration to require all new multi-family buildings and those undergoing renovation to have charging available to 30% of home units)

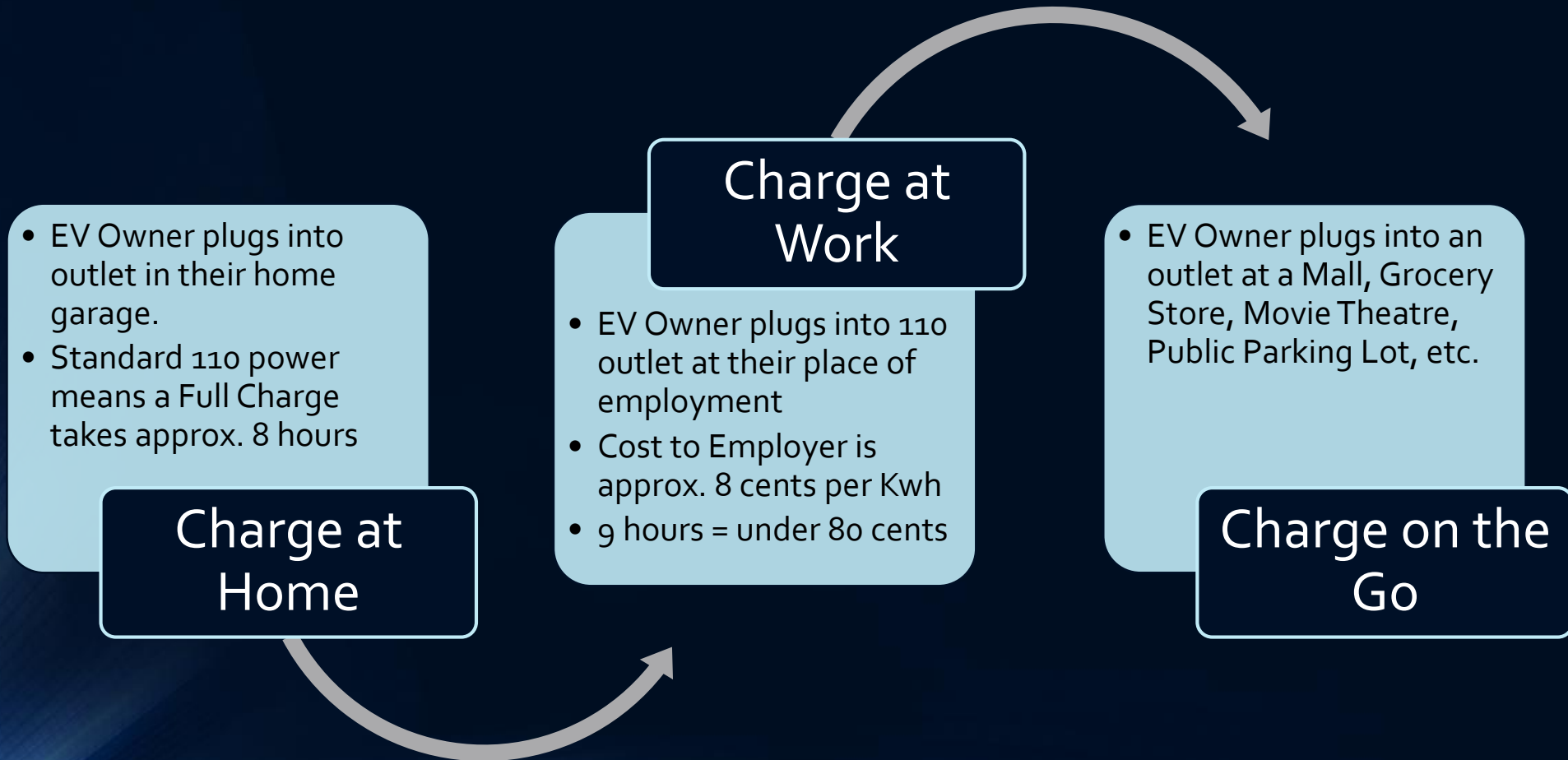


# EV Basics

- Some EV owners choose to add a 240 Volt adapter for faster charging at home. These are considered LEVEL 2.
- A LEVEL 2 Charging Station will fully power an EV in less than 3 hours.  
(<\$1.59 Average Cost in Illinois)  
(\$0.60 Cost to Joliet and Will County)
- There are fast charging stations that are 360 Volt and greater. These are considered LEVEL 3 stations and will charge an EV fully in 15-30 minutes.



# EV Basics: Charging Stations



# Becoming an EV Friendly Community

- **Bloomington and Normal Illinois decided to become known as forward thinking through the adoption of an EV Charging infrastructure.**
  - The Start in 2011: [https://localwiki.org/bloomington-normal/EV\\_Town\\_Initiative](https://localwiki.org/bloomington-normal/EV_Town_Initiative)
  - The Situation in 2019: [https://www.pantagraph.com/news/local/evtown-to-electric-avenue-can-a-new-decade-and-a/article\\_bf51d5a8-85b9-5dc5-a76f-b74aa66cd89d.html](https://www.pantagraph.com/news/local/evtown-to-electric-avenue-can-a-new-decade-and-a/article_bf51d5a8-85b9-5dc5-a76f-b74aa66cd89d.html)
- **McLean County is home to approximately 170,000 residents.**
- **Today there are 62 EV charging stations available in the area.**
- **In 2011 set a goal registering 1,000 EV users of the approximate 143,700 vehicles and installing 30 Level 2 Charging Stations throughout the area.**
- **At one point they had 300 EVs registered, by 2019 that decreased to 210**
- **Mitsubishi's closure in 2016 was a serious cause for the decrease.**
- **However, their community's support quickly drew a new auto maker Rivian, dedicated to making electric vehicles and bringing back jobs to the community.**

# Advantages of EV and Hybrid Plug-Ins

- Electric Vehicles are emission free. They reduce air pollution.
- Electric Vehicles are quiet since they lack exhaust. They reduce noise.
- The price of new EVs is falling and used EVs are in the marketplace. This is translating to more purchases of EVs and Hybrid Plug-Ins.
- People with EVs are more likely to shop, attend events and pursue recreational activities where they have a place to charge, generating an economic increase for the entire community.
- Becoming an EV friendly community can be done inexpensively.





# Designate Public Parking Spaces

LEVEL 1 - USE EXISTING PARKING SPACES UNDER STREET LIGHTS



Please ask for  
a key from  
reception

**ELECTRIC VEHICLE  
PARKING ONLY**

Level 1 Charging  
[willcountygreen.com](http://willcountygreen.com)  
Use at your own risk

# Proposed at Will County Health

THREE STREET LIGHTS TO HAVE OUTLETS & SIGNS ADDED

# LEVEL 2

Level 2 Charging Requires:

- 240 Volt Power Supply

Additional Considerations:

- Metering
- Internet Connection
- Fee for Use

Fully Charges within 3 Hours

Note: The Chicago City Council voted Oct. 16 2019 to require new buildings with 24 residential units or more to have at least two electric vehicle charging-ready spaces.



Volta



ChargePoint



SemaConnect

# LEVEL 2



**FREE to Users, Funded by Host and Advertisers**

- **240 Volt Power Supply**

**Additional Considerations:**

- **Metering**
- **Wifi Connection**
- **Fee for Use**

**Fully Charges within 3 Hours**

**Staff is currently inquiring as to possible fit for public lots**

# LEVEL 2



**Fully Charges within 3 Hours**

**Host with Charge to Users or Offer without a Fee**

**Cost of Electricity based on other similar stations:**

**1 Vehicle charging approx. \$1.59  
(rate at County or Joliet Lot \$0.60)**

**Cost of Operation Considerations:**

- **Annual fee includes Metering, Wifi Connection**  
**\$1,200 to accept payment**  
**\$200 to meter but not charge users**
- **It is not currently possible to recover the cost of charging users**

# LEVEL 3

Level 3 Charging Requires:

- **360 minimum Volt Power Supply**

Additional Considerations:

- **Metering**
- **Internet Connection**
- **Fee for Use**

This differs as AC-to-DC power conversion takes place in the charging station. Level 3 DC fast charging stations are usually found in public, shared settings and gas stations near interstate highways.

Fully charges a vehicle in less than 30 minutes.



# Encourage Employees to use EVs and Hybrids

The City of Normal, Illinois adopted a pro-EV stance and Illinois State University quickly added Level 2 EV Charging stations around the campus.

A few years ago DCEO grants assisted many colleges and universities with initial costs for installations of EV Charging stations.

Fee Perspective: Kane County has three Level 2 dual head stations at various County Facilities.

Two of the three offer FREE charging, the one at the Courthouse charges 15 cents per kWh to cover network fees.

Lewis Unv and JJC both offer Level 2 Charging. Lewis made theirs FREE a year ago to increase use.



# Summary Reasons to Add EV Stations

- People with a Plug-In Option at work are more likely to invest
- Forward Planning, Shows Leadership
- Every location is listed on EV Maps meaning local recognition
- Employees with EVs become more productive, improves employee satisfaction and contributes to recruiting
- Demonstrates concern for the environment
- Makes the community more attractive to businesses and home buyers
- Will County currently offering a Grant for Level 1 and Level 2



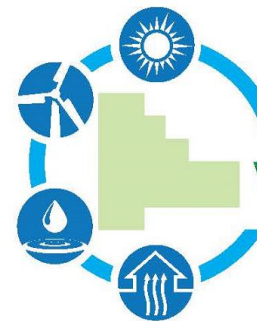
# Next Steps:

- Encourage Level 1 Stations in existing parking lots
- Please promote the County's EV Charging Station Grants
- Ask Employees and Residents about their interest in EVs
- Reach out to me for needed assistance

**Marta Keane**

[MKEANE@WILLCOUNTYGREEN.COM](mailto:MKEANE@WILLCOUNTYGREEN.COM)

815-774-4343



**willcountygreen.com**

The **will** power to rethink, renew, reduce and recycle.