



Energy Efficiency  
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# Ameren Illinois Energy Efficiency Summer Internship Program Webinar #3

## Future of Energy Efficiency

# Meet Energy Professionals



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**Matt Armstrong**

Manager

Ameren Illinois Energy Efficiency



# Meet Energy Professionals



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**Michael Pittman**

Manager

DER and New Clean Energy Programs and Pilots



# The Clean Energy Jobs Act (CEJA)

- The Clean Energy Jobs Act (CEJA) is a comprehensive climate and energy bill that centers equity and puts Illinois on a track to achieve 100 percent renewable energy by 2050. CEJA lays the framework for continued investment and growth in the following areas:
  - › Equitable Workforce & Business Development
  - › Energy Access & Solar for All
  - › Renewable Energy
  - › Energy Efficiency
  - › Carbon-free Power
  - › Capacity Market Reform
  - › Electric Transportation
  - › Support for Fossil Fuel Workers & Communities
  - › Utility Accountability



# CEJA Programs

- Public School Carbon-Free Assessment Program
- Community-Driven Community Solar
- Equity Eligible Contractor Solar
- Clean Jobs Workforce Network Program (CEJA Workforce Hubs)
- Returning Residents
- Energy Transition Navigator Program

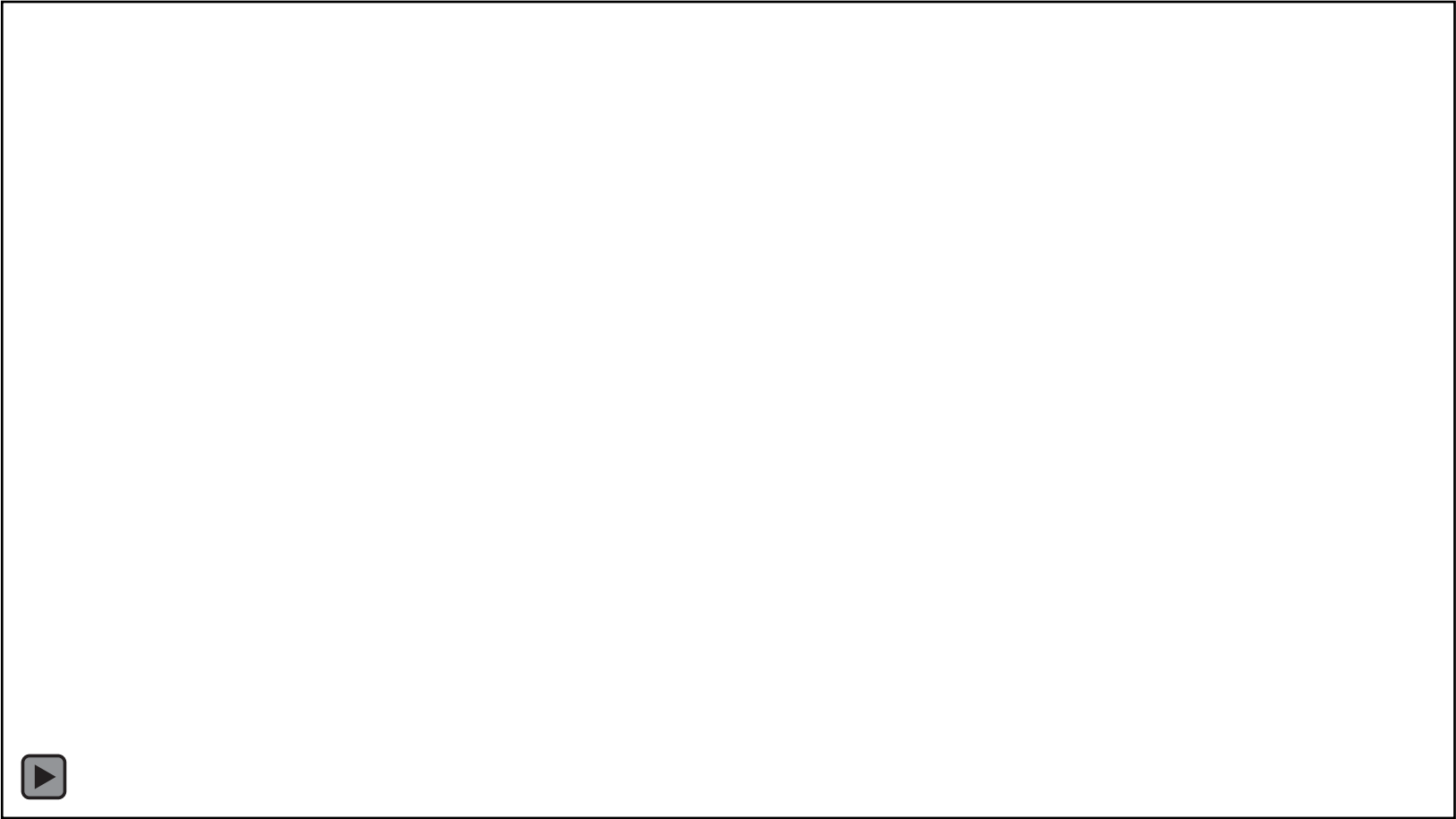
# The Transition to the Smart Grid



# The Smart Grid



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# Smart Grid Technology



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**On Your Property**  
Smart meters



**Training Center**  
Ability to test new advances in  
grid and metering technology

**On the Grid**  
Automated switches and sensors  
Voltage optimization





# Artificial Intelligence (AI)



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- Drones: increase reliability and security of the grid
- Distributed Energy Resources: solar and battery storage
- Customer Engagement: improved customer engagement
- Compliance: improved regulatory compliance



# The Technology Applications Center (TAC)





# The Transition to Smart Technology



# Examples of Smart Home Technology

Can you think of smart home or office technology you have used or seen?

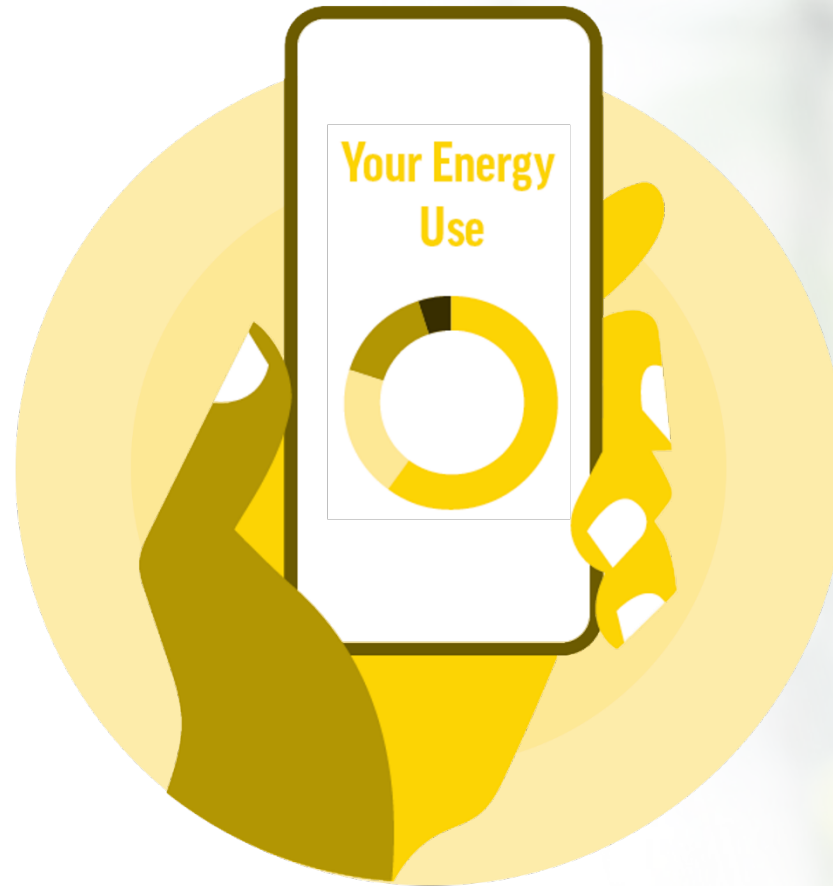


# Smart Home Technology

- Apps
  - › Control or schedule products
  - › Adjust energy use
- Devices
  - › Smart Thermostats
  - › Plugs and power strips
  - › Lights and switches
- Appliances
  - › Refrigerators
  - › HVAC
  - › Washer/Dryer



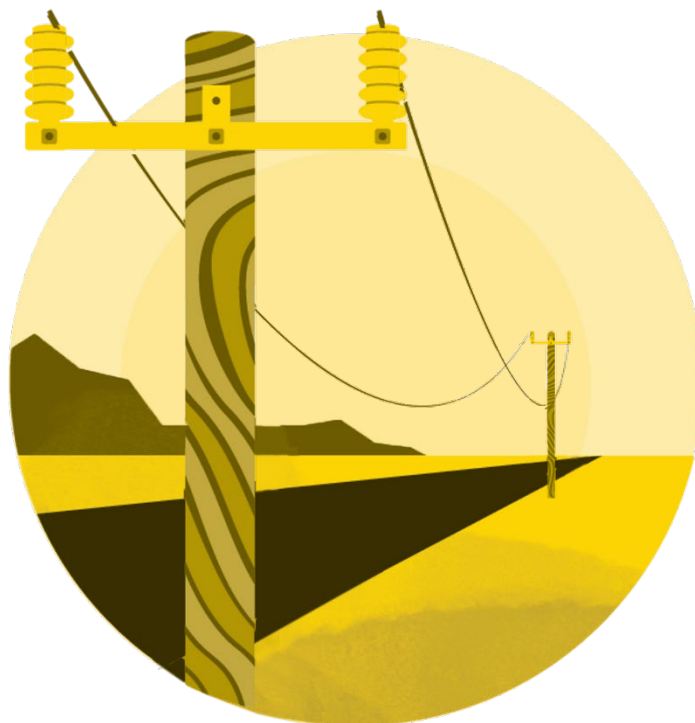
# Smart Meters



# Voltage Optimization



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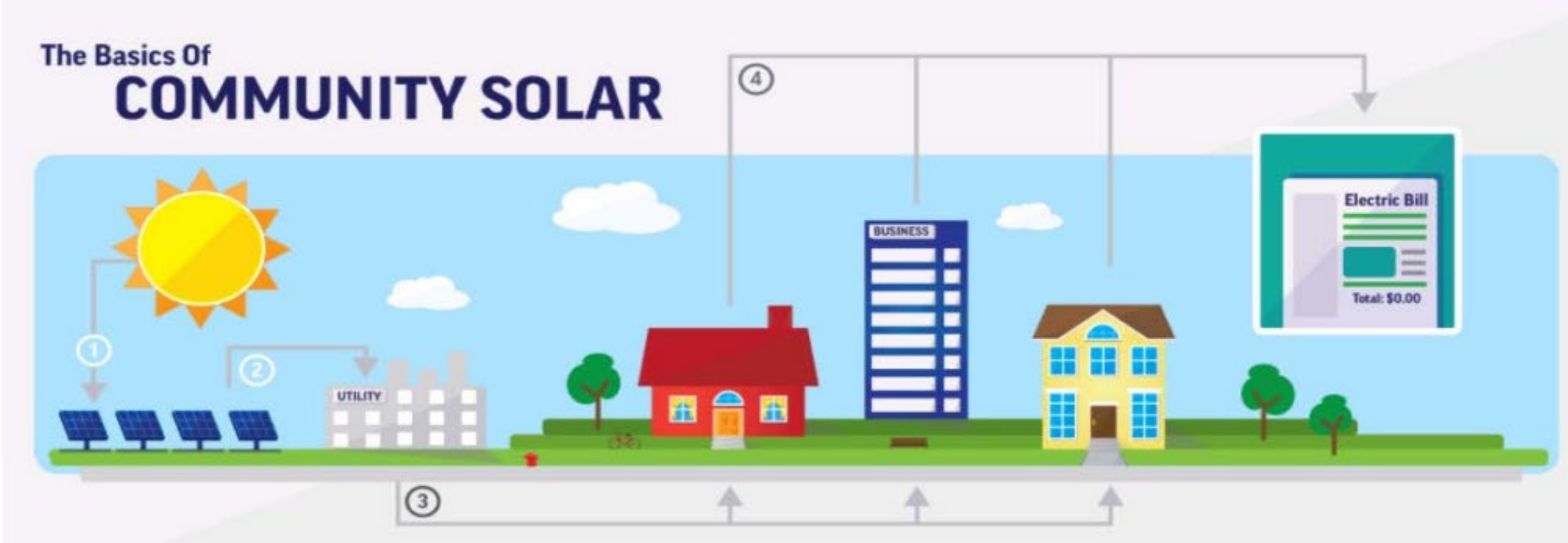




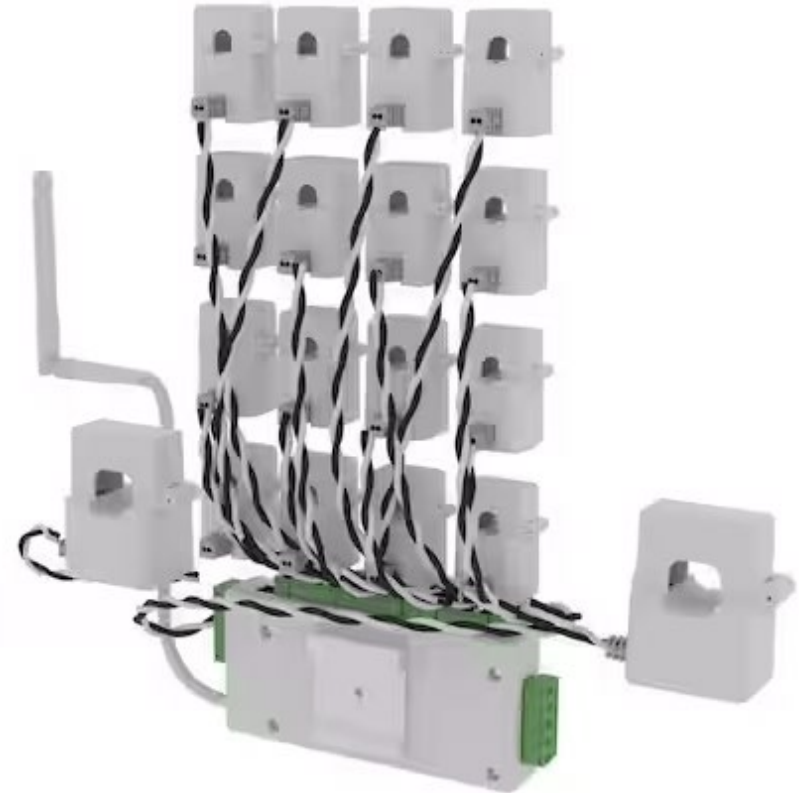
# Community Solar



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# Home Energy Monitors





# Indoor Air Quality Monitoring



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# Heat Pumps



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# Energy Storage



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# Other Energy-Saving Solutions

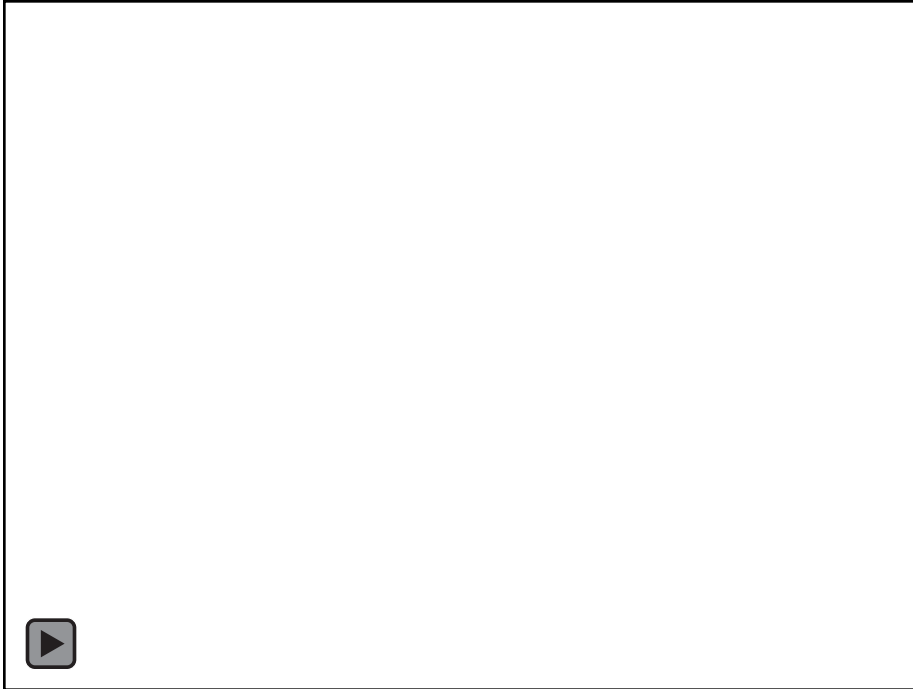
- Carbon-fighting clothes dryers
- Magnetic refrigerators
- Advanced window controls
- Next generation insulation
- Reflective roofing materials
- Brighter, better lighting

# Transportation





# Electric Vehicles



# Electrification



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# Electrification in the Real World

Can you think of some examples of electrification that you may soon see in your home or across your community?



# Carbon Capture, Utilization and Storage



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# Renewable Natural Gas (RNG)



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- **Collects:** Organic waste is collected from sources such as landfills, agriculture, wastewater plants and compost sites.
- **Captures:** Methane from the organic waste is captured.
- **Supplies:** The gas is cleaned and supplied into the natural gas network.
- **Uses:** Customers can use RNG in their homes and businesses.
- **Benefits:** Clean-energy jobs are created, waste management solutions are offered and a carbon-neutral future is fueled.



# Why is it important to conserve natural resources and be more energy-efficient?



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1. Energy efficiency can result in lowered greenhouse gas emissions and water use.
2. Conserving energy can reduce pollution and improve air quality.
3. Reducing energy usage can result in reduced energy costs.
4. All of the above.



**CEJA is a bold law that puts Illinois on a path to a 100% clean energy future by 2050.**

1. True
2. False



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# How are electric vehicles (EVs) reducing carbon impact?



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1. EVs have zero tailpipe emissions.
2. They can be set to charge at home during off-peak hours.
3. They can be less dependent on fossil fuels, using renewable energy sources to charge when and where it's available.
4. All of the above.



**A smart meter is a digital meter that collects a home or business' energy use in minute and hourly increments. The smart meter and other system upgrades are allowing:**



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1. Customers the option to participate in programs that can help them control their energy usage and costs.
2. Utility companies to detect and isolate outages sooner.
3. Two-way wireless communication between Ameren and the meters.
4. All of the above.

# Coming Up



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## No Webinar Next Week!

**Next One is:**

**Innovation and Inclusion in Energy Efficiency Programs**

Guest Speaker: Jonathan James

Wednesday, July 9

Time: 8:30 A.M.- 9:30 A.M.

# Coming Up



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## Volunteer Event #2 :

Date: Friday, July 25

Time: 10:00 A.M. – 3:00 P.M.

Location: Park Avenue Baptist Church  
900 Park Ave.  
Mt. Vernon, IL 62864

# Questions?