



# Fresno County Rural Transit Agency

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Microgrid/Resiliency Hub Feasibility Study

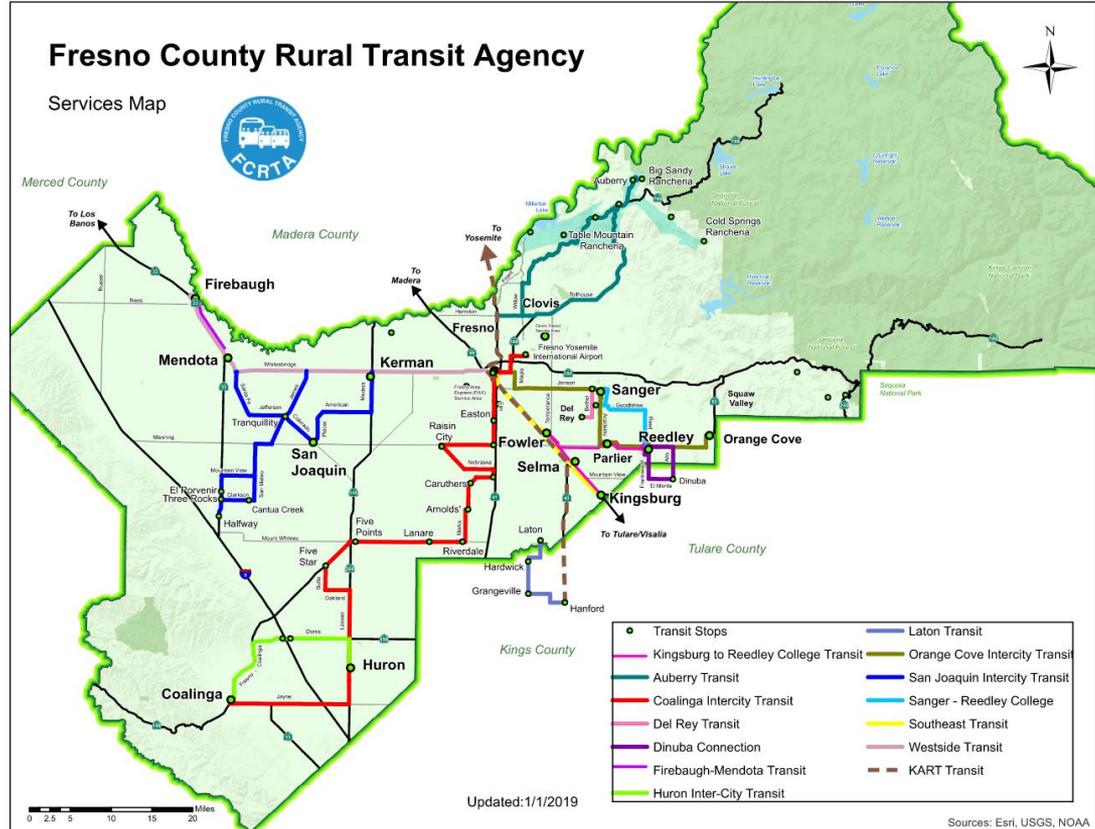
Advisory Committee Meeting #2, March 15, 2023

# Agenda

1. **Welcome and introductions**
2. **Study update**
  - EV Transition Plan
  - Outreach events and community survey
3. **Microgrid/hub operations and maintenance needs**
  - Discuss requirements and costs related to maintaining electric vehicle infrastructure and the future mobility/resiliency hubs
4. **Partnerships**
  - Discuss and define the level of participation necessary for a successful mobility/resiliency hub
    - Including resources and cost sharing
    - Review examples of FCRTA's current partnerships
5. **Review site plans**
  - Please bring in a potential site location and any information available on the site

# Fresno County Rural Transit Agency

- Serves rural communities of Fresno County
- Intra-city demand response
- Inter-city fixed-route service
- Rural Transit dial-a-ride service
- 13 incorporated cities
- 39 unincorporated communities
- Disadvantaged areas



# FCRTA EV Transition



2013: FCRTA decision to convert to a 100% electric vehicle fleet by 2025



2020: Electric Vehicle Micro Transit Plan

2016: FCRTA starts to purchase Electric Vehicles (FCRTA currently has deployed 30+ EVs and 60+ chargers)



2022: Electrical Grid Analysis Study



Planned: Provision of EV charging infrastructure at new affordable housing sites



2017: Installation of Solar Arcs throughout Fresno County



2022: Microgrid Feasibility Study



Planned: Inductive Charging Stations

2020: Installation of Solar Trees throughout Fresno County



Under construction: Selma maintenance facility and EV upgrades



Planned: Resiliency Hub with Solar Carport and EV charging stations



# New EV Microtransit Service

- New service in Biola
- Partnership with the Biola Community Services District and MV Transportation
- Hired local driver
- FCRTA vehicle will be located in Biola
- FCRTA installing charging infrastructure



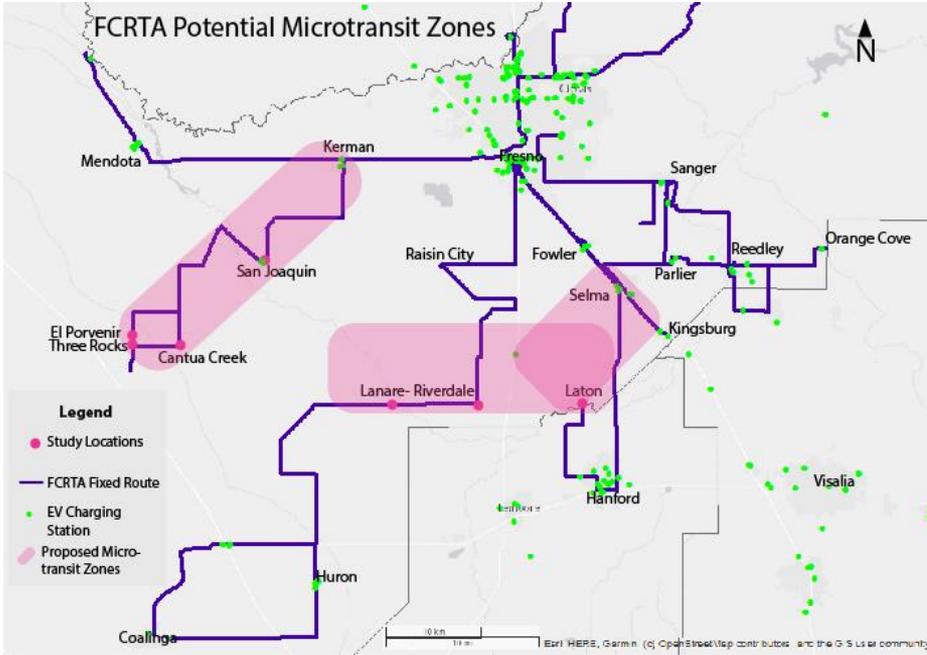
## Clean Mobility Voucher Pilot Program (CMO)

Fresno County Rural Transit Agency – Biola  
Community Transportation Needs Assessment

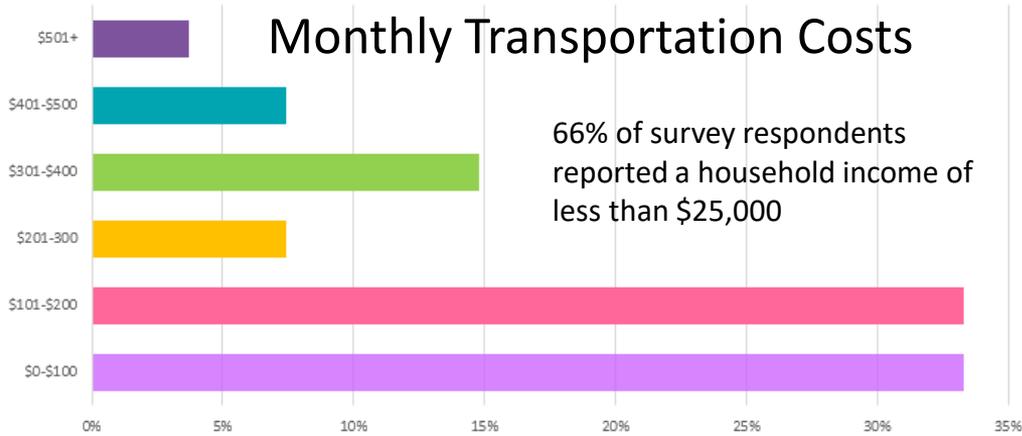
September 20, 2021



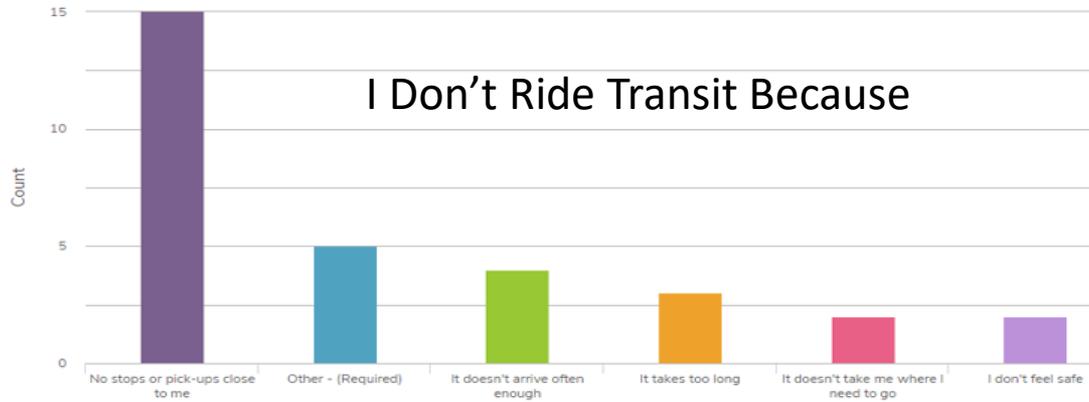
# Studying Expanded EV Microtransit Service



# Monthly Transportation Costs



66% of survey respondents reported a household income of less than \$25,000



JOIN US FOR

Transportation & Tacos

August 17th 5PM - 7PM  
Biola Chamber of Commerce  
12535 C Street  
*Food and Beverages will be served*

Tell us about your transportation needs for a taco and a chance to win a gift card!

TAKE THE SURVEY

HTTPS://SURVEY.ALCHEMER.COM/S3/6075034/BIOLA-ENG

English Survey

Spanish Survey

Hmong Survey

# Upcoming Projects

## TIRCP Grant – Fresno Resiliency Hub



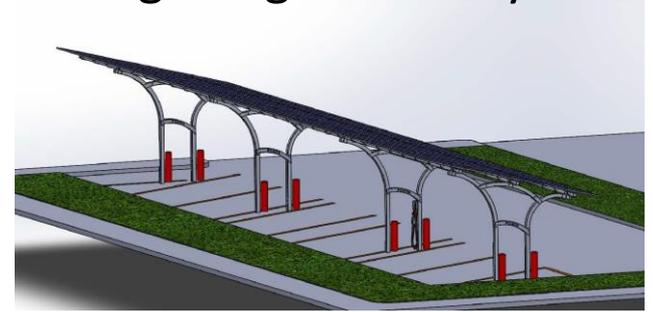
## Biola EV Microtransit



## Selma Maintenance Facility



## Kingsburg Resiliency Hub



## SR 99 Light Rail/BRT Feasibility Study



# Microgrid/Resiliency Hub Feasibility Study

## What are Microgrids?

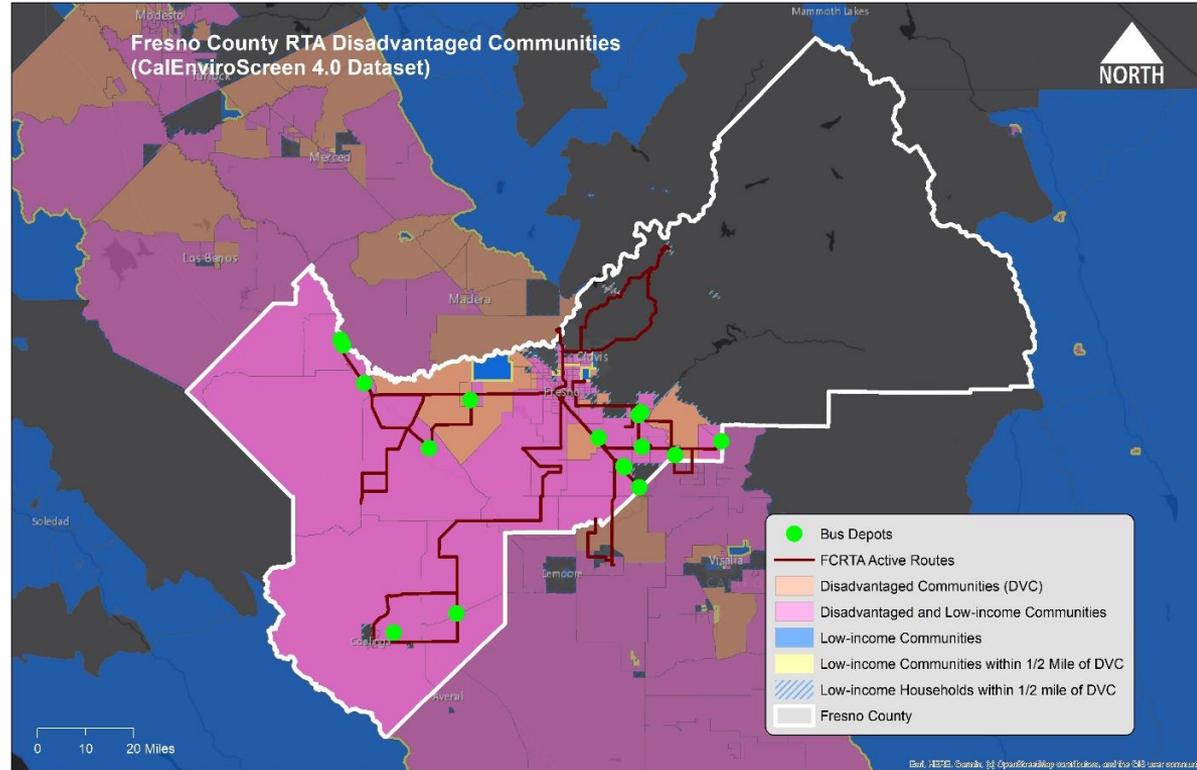
Small, independent power systems that use sustainable energy to power everything from electric buses to cell phones





# Zero Emissions Bus Rollout Plan

- 100% of all new bus purchases must be zero emissions by 2029
- FCRTA's goal is 100 percent electrification by 2030
- \$34.2 million in a battery electric bus fleet
  - Focus on disadvantaged areas
- \$3 million in charging infrastructure
  - All bus depots need infrastructure and/or grid upgrade
  - Will not retire fleet before end of useful life



# Zero Emissions Bus Rollout Plan: Challenges

- Costs and funding
- Energy management system
- Battery replacement
- Technology advancement
- Range limitations
- Grid resiliency
- Lack of vehicle types



# Community Events

- **Parlier** Heritage Park, Tuesday **March 14th, 3:30pm to 6:30pm**
- **Fowler** Council Chambers, 128 South 5th Street, Tuesday **March 14th, 4:00pm to 6pm**
- **Kerman** Farmers Market, 15101 W. Kearney Blvd., Wednesday **March 15th, 5pm to 8pm**
- **Reedley** Community Center, 100 N. East Avenue, Wednesday **March 15th 4:30pm to 7pm**
- **Firebaugh** 1655 13th Street, Thursday **March 16th, 9am to Noon**
- **Huron** Council Chambers, 17051 12th Street, Thursday **March 16th, 3pm to 6pm**

**Join Us For Resilient Fresno County**

**Dinner's On Us!**

**Thursday, March 16th**  
3:00PM-6:00PM

**City of Huron Council Chambers**  
17051 12<sup>th</sup> Street

Food and Beverages will be served

The Fresno County Rural Transit Agency is working to create community resiliency hubs to expand transportation and provide services during emergencies. The hubs will also have year-round programming and amenities like electric vehicle charging, Wi-Fi, and community gardens.

Tell us what services you want at the hubs by joining us for dinner and fun!

Take the Short Survey!

Link Here:  
<https://www.surveymonkey.com/r/microgrid>

For more information please visit  
[www.ruraltransit.org](http://www.ruraltransit.org)

**FCRTA** **Caltrans**

**Únase a nosotros para el Condado de Fresno Resiliente**

**¡La cena va por nosotros!**

**El Jueves, el 16 de marzo**  
3:00PM-6:00PM

**Cámaras del Consejo de la Ciudad de Huron**  
17051 12<sup>th</sup> Street

Se servirán alimentos y bebidas

La Agencia de Tránsito Rural del Condado de Fresno (FCRTA) está trabajando para crear centros de resiliencia comunitaria para expandir el transporte y proveer servicios durante emergencias. Los centros también tendrán programación durante todo el año y servicios como carga de vehículos eléctricos, Wi-Fi, y jardines comunitarios.

¡Cuéntanos qué servicios le gustaría ver en los centros uniéndose a nosotros en la cena y diversión!

¡Realice la breve encuesta!

Enlace aquí:  
<https://www.surveymonkey.com/r/microgrid>

Para obtener más información, visite [www.ruraltransit.org](http://www.ruraltransit.org)

**FCRTA** **Caltrans**



# Community Survey

Please help spread the word:

Tell us your community's needs! [Take the Short Survey!](#)

¡Cuéntanos las necesidades de tu comunidad! [¡Realice la breve encuesta!](#)

<https://www.ruraltransit.org/transit-microgrid-feasibility-study/>

# Features of Resiliency Hubs • Características de los centros de resiliencia

English description •  
Spanish description



## What should be at a mobility/resiliency hub? Vote • ¿Qué debería haber en un centro de movilidad/resiliencia? Vota.

<input type="checkbox"/>	 LESS THAN FIVE MINUTES AWAY A MENOS DE CINCO MINUTOS DE DISTANCIA.	<input type="checkbox"/>	 SUPPLIES SUMINISTROS	<input type="checkbox"/>	 COMMUNITY GARDEN JARDÍN COMUNITARIO
<input type="checkbox"/>	 FOOD SERVICE SERVICIO DE COMIDA	<input type="checkbox"/>	 ELECTRIC VEHICLE CHARGING RECARGA DE VEHÍCULOS ELÉCTRICOS	<input type="checkbox"/>	 HEATING AND COOLING CENTER CENTRO DE CALEFACCIÓN Y RE- FRIGERACIÓN
<input type="checkbox"/>	 BIKE OR SCOOTER SHARE COMPARTIR BICICLETA O SCOOTER	<input type="checkbox"/>	 WIFI	<input type="checkbox"/>	 CHILDCARE CUIDADO DE NIÑOS
<input type="checkbox"/>	 DELIVERY LOCKERS TAQUILLAS DE ENTREGA	<input type="checkbox"/>	 PHONE CHARGING RECARGA DE MOVIL	<input type="checkbox"/>	 MEDICAL MEDICINA
<input type="checkbox"/>	 BIKE PARKING APARCAMIENTO DE BICICLETAS	<input type="checkbox"/>	 WASTE, RECYCLING, AND COMPOST RESIDUOS, RECICLAJE Y COMPOST	<input type="checkbox"/>	 ALERTS ALERTAS
<input type="checkbox"/>	 PUBLIC TRANSPORTATION TRANSPORTE PÚBLICO	<input type="checkbox"/>	 OUTDOOR PARKS PARQUES AL AIRE LIBRE	<input type="checkbox"/>	

# Potential Site Selection Criteria

- Provides electrical grid capacity and community resiliency
- Support from PG&E
- Return on investment to FCRTA and community
- Regional and local economic development opportunity
- Shared partnership:
  - **In-kind** (public land, staffing and maintenance resources)
  - **Financial** (shared cost of land purchase, electricity)
  - **Agree to load shedding:** Load shedding is the controlled disruption of power when a microgrid (MG) begins to run through its energy reserves while in island mode, and must isolate its highest load-serving priorities from the rest of the MG

# Site Selection Criteria: Partnerships

## Shared Resources: Costs and maintenance needs for infrastructure and hub amenities:

- Electricity
- Cleaning
- Security
- Energy management
- Site management
  - Coordination of amenities
    - During emergencies
    - Non-emergencies
  - Vendor management (i.e., food trucks, community gardens)
  - Marketing/community outreach/awareness
  - Ongoing funding

# Site Selection Criteria: Partnerships

**Shared Resources: Partnership: Defining the level of participation and commitment:**

**Goal:** Community benefit, not a fiscal burden

**Examples:**

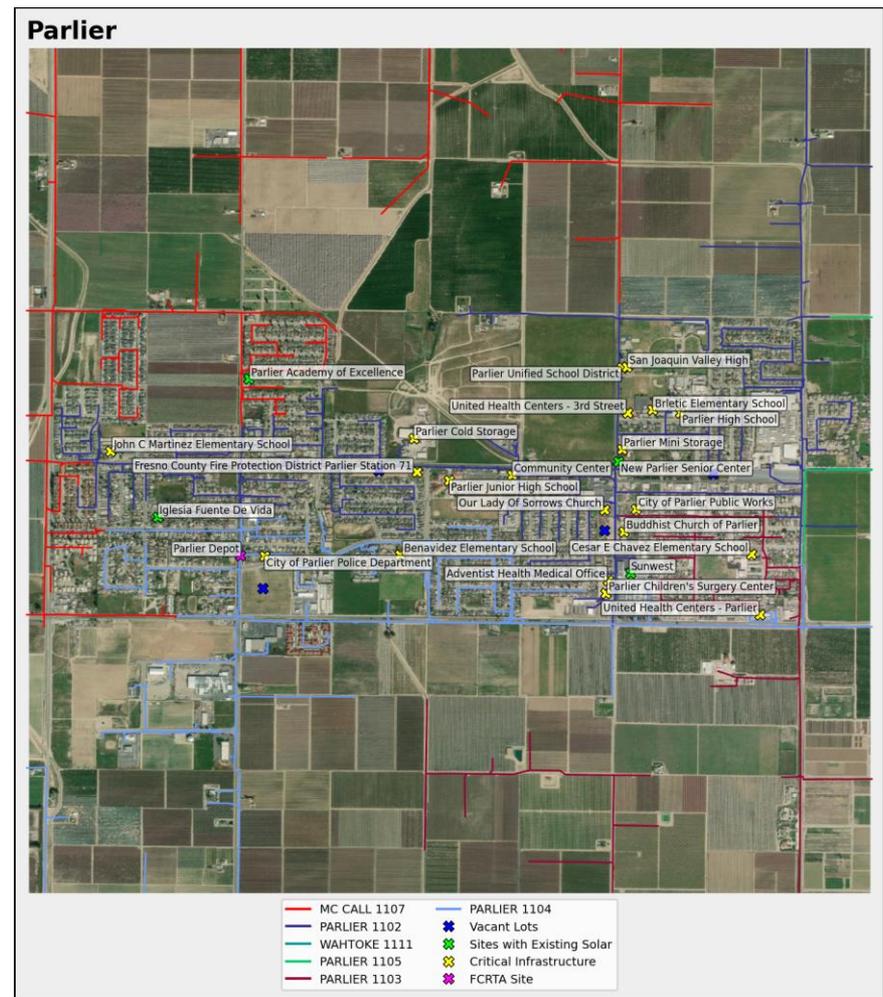
- Community fast charger for a fee to provide a revenue stream
- Biola Community Services District
- Kingsburg Resiliency Hub

# Site Selection: Proximity to Critical Infrastructure

- **Critical infrastructure in need of enhanced resiliency from a microgrid:**
  - Medical centers/health clinics
  - Schools
  - Community centers
  - Senior centers
  - Churches
  - Law enforcement/fire stations
  - Water/waste treatment facilities
  - Communications infrastructure
  - Cooling and warming centers
- **Other key site selection considerations:**
  - Sites with existing solar
  - Sites with backup generators

# Site Selection: Examples of the Grid Capacity at our Outreach Event Locations

- Example review of grid: Parlier
- Key sites to consider for a microgrid/resilience hub include vacant lots or sites near existing solar and critical infrastructure
- Feeders (power lines) forecasted to have no additional capacity within 10 years shown in bright red



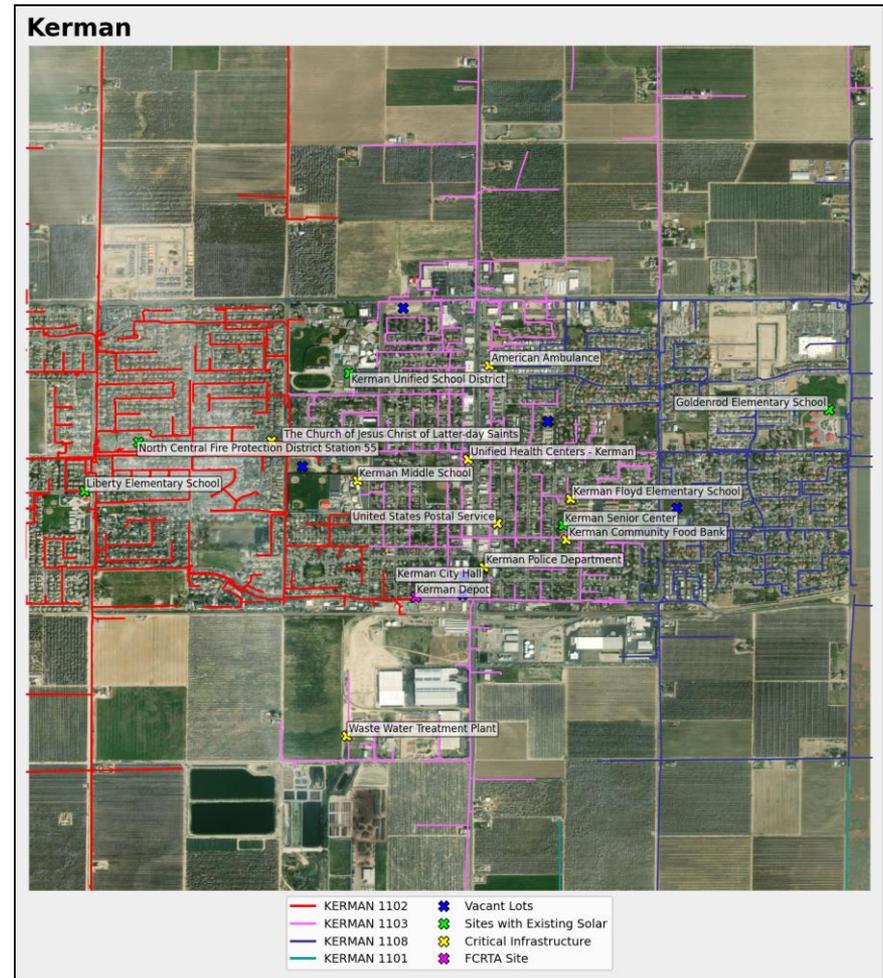
# Site Selection Site Selection: Examples of the Grid Capacity at our Outreach Event Locations

- Example review of grid: Fowler
- Key sites to consider for a microgrid/resilience hub include vacant lots or sites near existing solar and critical infrastructure
- Feeders (power lines) forecasted to have no additional capacity within 10 years shown in bright red



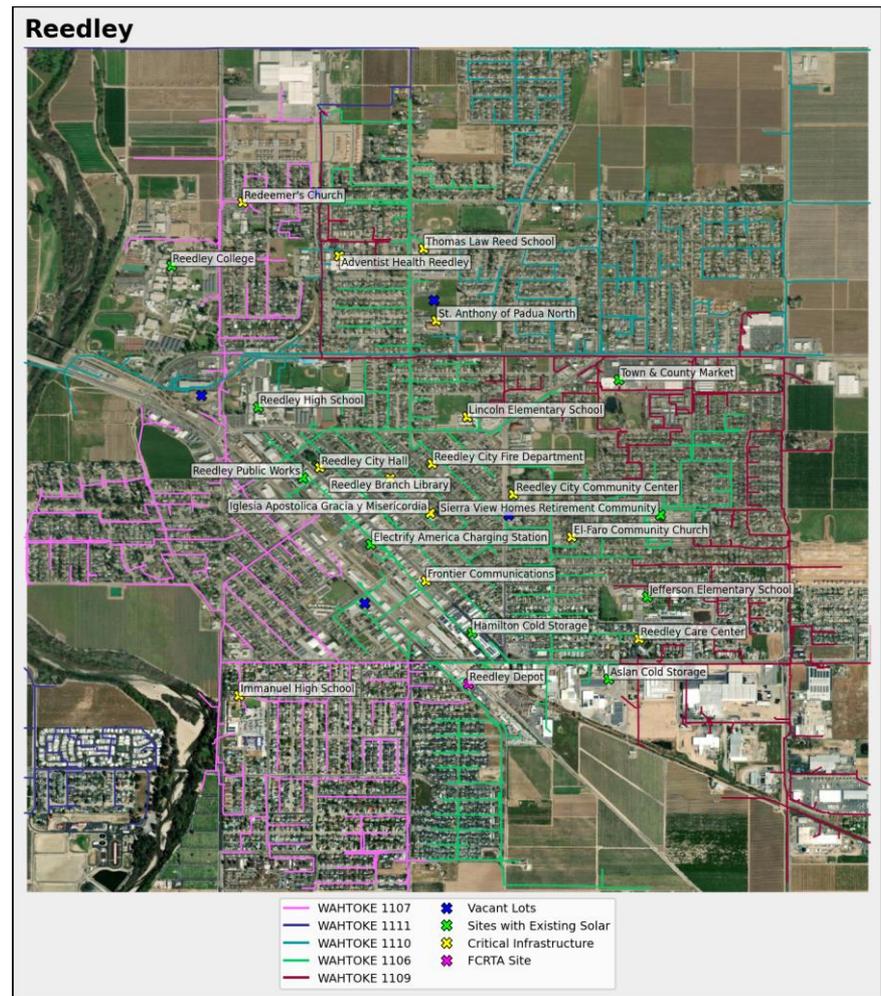
# Site Selection: Examples of the Grid Capacity at our Outreach Event Locations

- Example review of grid: Kerman
- Key sites to consider for a microgrid/resilience hub include vacant lots or sites near existing solar and critical infrastructure
- Feeders (power lines) forecasted to have no additional capacity within 10 years shown in bright red



# Site Selection: Examples of the Grid Capacity at our Outreach Event Locations

- Example review of grid: Reedley
- Key sites to consider for a microgrid/resilience hub include vacant lots or sites near existing solar and critical infrastructure



# Site Selection: Examples of the Grid Capacity at our Outreach Event Locations

- Example review of grid: Firebaugh
- Key sites to consider for a microgrid/resilience hub include vacant lots or sites near existing solar and critical infrastructure



# Site Selection: Examples of the Grid Capacity at our Outreach Event Locations

- Example review of grid: Huron
- Key sites to consider for a microgrid/resilience hub include vacant lots or sites near existing solar and critical infrastructure

