

Cal Cities Partner Webinar: Funding & Expediting Citywide Infrastructure Renewal with Energy Upgrades

July 12, 2023



LEAGUE OF
**CALIFORNIA
CITIES**

Strengthening California Cities
through Advocacy and Education



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Funding & Expediting Citywide Infrastructure Renewal with Energy Upgrades

League of California Cities Webinar



Speakers & Agenda



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City Manager,
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Agenda

1. Anchoring citywide infrastructure improvement programs
2. City of Tulare case study presentation
3. Q&A session



Anchoring Citywide Infrastructure Improvement Programs



Why Start with Energy?



Cost Reduction

Energy costs are a significant budget item that can be controlled

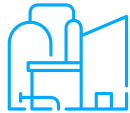
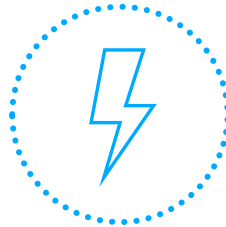
10% of a local government's annual operating budget is [spent on energy](#)



Climate Action

Energy consumption is a major contributor to carbon emissions and an opportunity for action

25% of total U.S. [greenhouse gas emissions](#) come from burning fossil fuels for electricity



Infrastructure Renewal

Energy is a ubiquitous component of city infrastructure and can become a platform for infrastructure renewal

States and localities are facing [\\$873 billion](#) in deferred maintenance costs - energy systems and infrastructure represent a significant portion of this backlog



Community Development

Energy is a powerful area of focus to advance local economies, careers, and academic collaboration

Efficiency and clean energy sectors have the [fastest growing employment](#) numbers in energy, with skilled labor identified as a barrier to continued growth

Smart Infrastructure Solutions @ the Energy Nexus

eMobility Infrastructure

Equipment and smart charging services



Renewable Energy

Onsite solar PV, performance guarantees



Building Efficiency & Automation

Energy conservation measures, building controls



Energy Storage & Resiliency (microgrids)

Peak demand management and emergency backup power



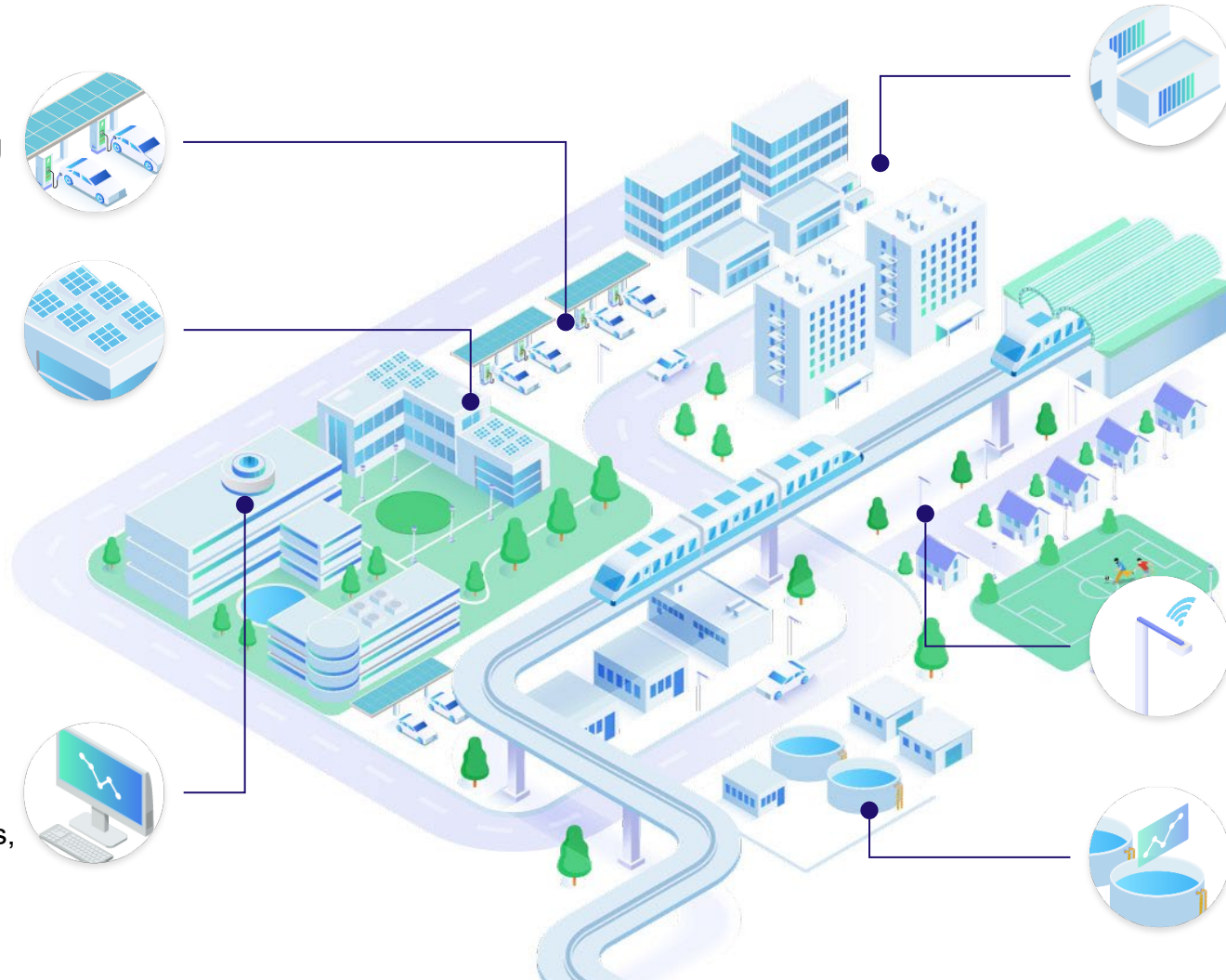
Streetlighting

Citywide LED upgrades, controls and outage detection



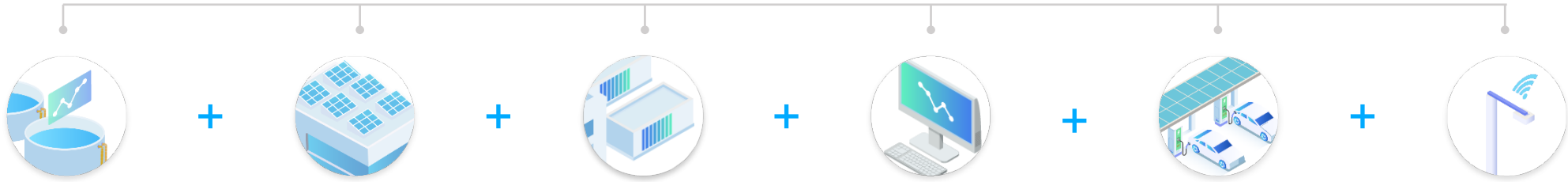
Water & Wastewater Systems

Advanced metering, pumps, and process improvements



The Benefits of Bundling Projects

Bundling upgrades across different types of municipal infrastructure can help pay for projects, improve services, and engage local communities.



More Savings

Leverage projects with long-term and short-term ROI, and a combination of energy, water and operational savings

More Incentives

Take advantage of adders for government/utility incentives to pair certain technologies or locate projects in certain areas

Deployment Efficiencies

More efficiently work through backlogs of deferred maintenance with fewer disruptions to operations

Community Engagement

Engage your local community with an innovative portfolio of upgrades – building appreciation for advanced technologies and responsible resource management

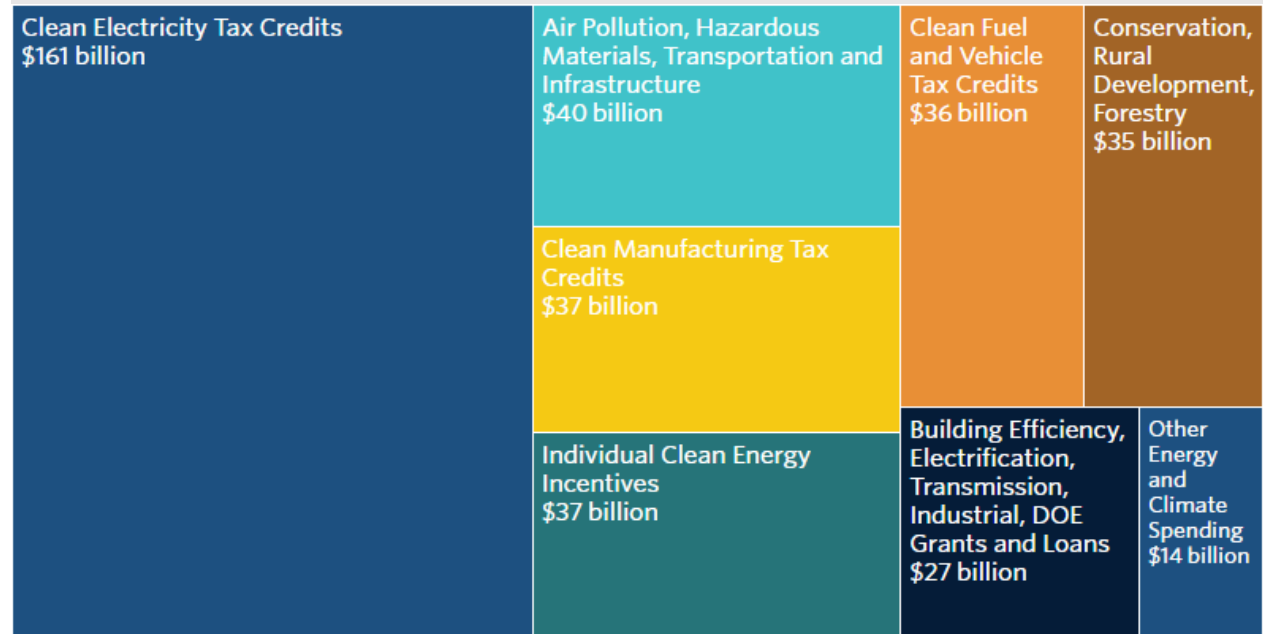
Inflation Reduction Act (IRA)

Historic Climate and Energy Legislation

Key energy and climate elements of the IRA:

- Reduces the cost of clean, renewable energy through tax incentives and grant funding
- Extension and modification of the Investment Tax Credit (ITC) for energy infrastructure
 - o **Tax exempt entities can now benefit from credit through direct payments**
- Puts US on path of 40% GHG reduction by 2030
- Supports environmental justice and domestic content preferences

The Inflation Reduction Act includes **\$369B** in climate investment, tax credits and loans



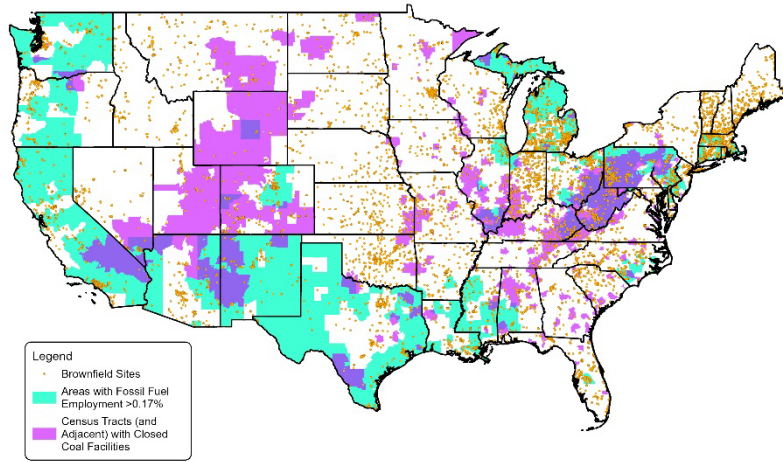
Source: Committee for a Responsible Federal Budget

Note: Senate Democrats estimate that the bill will provide \$369 billion in climate and energy investment. CFRB estimates the figure at \$386 billion.

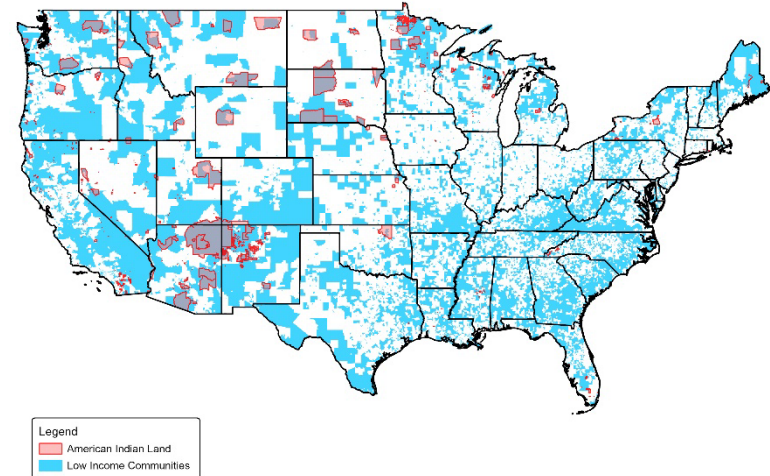
Additional ITC Bonuses Based on Location

Inflation Reduction Act (IRA)

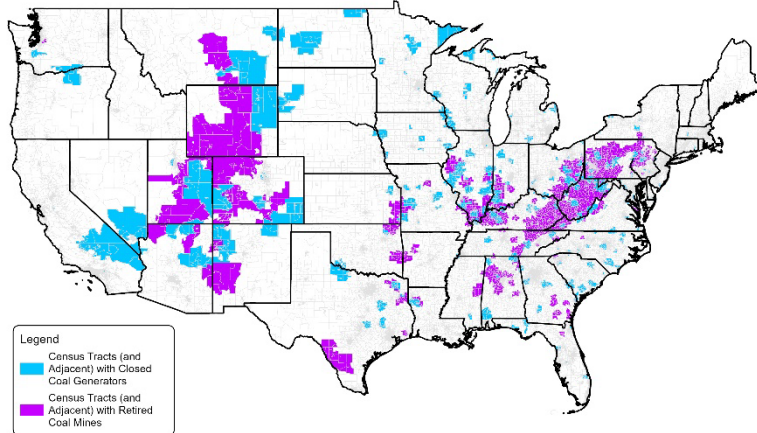
Energy Communities (+10%)



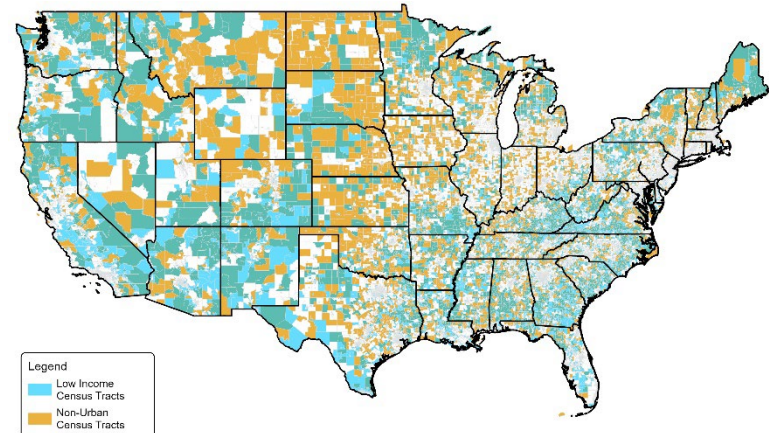
Low Income Areas (+10-20%)



Retired Coal Facility Communities



Low Income & Non-Urban Areas



ITC Credits Stack for Significant Value Inflation Reduction Act (IRA)

Credit Rates

Credit	Base Credit	Full Credit: 5X Base for Prevailing Wage	Full + Domestic Content OR Energy Community Bonus	Full + Domestic Content Bonus + Energy Community Bonus	Full + Domestic Content Bonus + Energy Community Bonus + Low- Income Community Bonus
ITC	6%	30%	40%	50%	60-70%

About ENGIE

Delivering comprehensive, integrated services across the entire energy value chain. A preferred provider to cities, counties, universities, school districts, healthcare providers, and other social infrastructure organizations.

Clean Energy Leader

49 Years' Experience

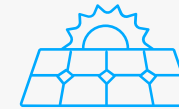
in the U.S. researching, designing, operating, and investing in a wide range of energy solutions

Access to Intelligence

from ENGIE's \$230 million annual R&D investment globally

1,740 Public Serving Organizations

served in the U.S. (municipalities, universities, schools, and hospitals)



38 GW

of renewable energy capacity worldwide in 2022



26 Mt

of CO2eq emissions avoided globally by ENGIE projects with customers



ENGIE's Comprehensive Design-Build Approach

ENGIE is with you every step of the way providing detailed infrastructure audits, financing solutions, project management, and stakeholder engagement.



Planning

- **Infrastructure & inventory assessment:** state of current equipment and operations (needs assessment)
- **Solution integration:** technology options and configurations (sensors, controls, other peripheral smart technology)
- **Financial analysis:** cost and savings estimates, incentives, financing and ownership structures
- **Stakeholder engagement:** communications, outreach and approvals



Implementation

- **Site design:** engineering, mechanical and electrical design
- **Incentive applications:** filing and compliance support
- **Procurement:** energy system equipment, luminaires, nodes, controls, poles, wires, peripheral smart technology (cameras, sensors, data, etc.)
- **Installation:** construction, testing and commissioning



Operation

- **Operations & maintenance:** preventive maintenance and repairs
- **Energy management:** IOT platform (automatic/remote controls, outage detection, repair dispatch)
- **Measurement & verification:** report on performance and savings
- **Community engagement:** programming and project impact

Community Engagement & Development

ENGIE smart infrastructure programs provide city leaders with an opportunity to advance their local economies and partner with industry on academic and career development initiatives.

STEM Education Programs

Connect data and technology from real-world energy projects to engage local students in STEM education programs supported by ENGIE.



Public Communications

ENGIE supports public information staff to get the word out and keep local communities informed.



Local Job Creation

ENGIE supports and prioritizes sustainable job creation – hiring local vendors when possible.

Internships

Smart infrastructure programs can offer unique opportunities to sponsor paid internships in relevant fields of study and work.



City of Milpitas

Smart City Infrastructure Program

Opportunity

The City of Milpitas is a Silicon Valley community of about 84,000 residents. As part of an ongoing effort to maintain and improve public services, City leadership solicited innovative ways to improve public facilities and infrastructure, reduce operating costs, and positively impact the local environment.

Solution

ENGIE proposed a comprehensive smart city program with a portfolio of sustainable infrastructure upgrades including:

- **200 kW solar PV system**; resilient microgrid solution for the city's senior and community centers; electric vehicle charging stations
- **15,600 advanced metering infrastructure (AMI) water meters** with leak detection; water, wastewater, and stormwater management automation; touchless efficient water fixtures
- **2,185 LED streetlight retrofits**; **4,453 streetlight controls** upgrades with outage detection; City wide LED lighting upgrades in parks, sports fields, City buildings, and community facilities
- Integrated **community impact program**; **O&M** and performance guarantees

Benefits

- **\$50M in net savings** over the life of the program
- Improves city services and infrastructure for residents and businesses
- Energy resiliency (back up power) for community centers
- Addresses safety, efficiency and climate action goals
- Provides workforce and education opportunities



West County Wastewater District (WCWD)

Comprehensive Infrastructure Project

Need for Comprehensive Energy, Infrastructure, and Process Improvement

West County Wastewater District, located in Richmond, California, needed comprehensive energy, infrastructure, and process improvement programs designed to significantly reduce the organization's carbon footprint and greenhouse gas emissions.

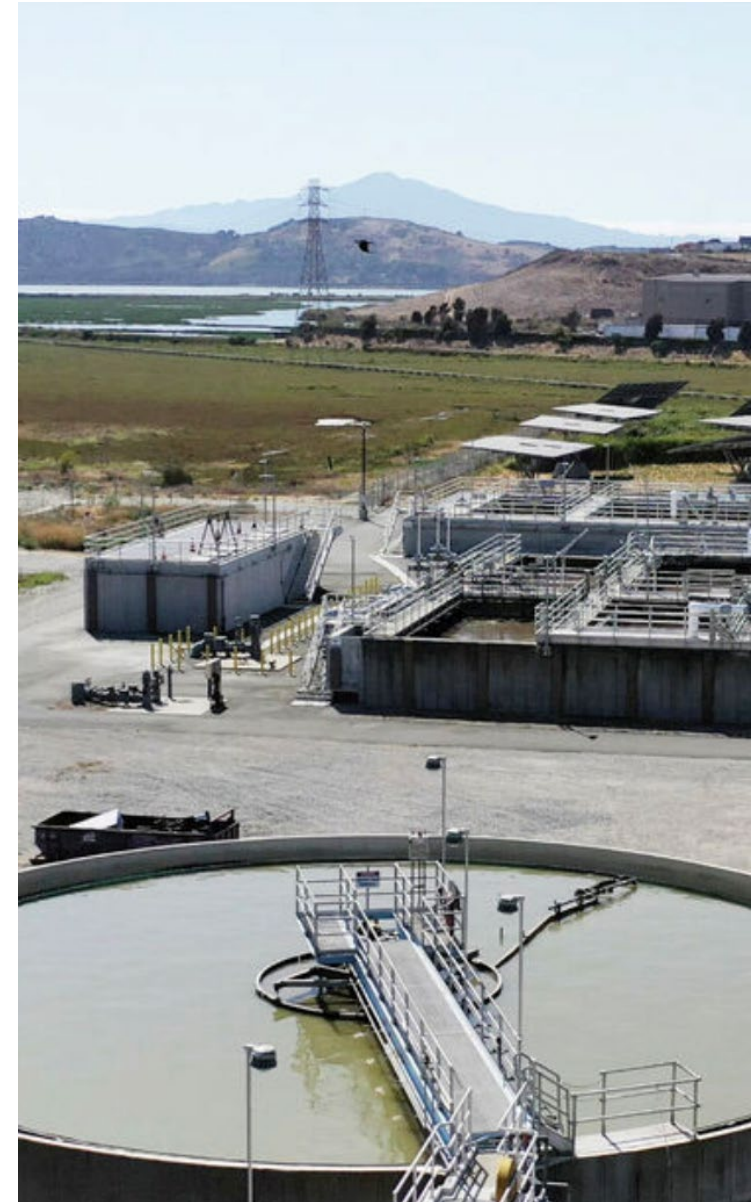
Solution

By partnering with ENGIE, WCWD will move toward a cleaner future, by:

- Implementing renewable energy generation: **1.1 MW** solar PV, LED lighting, and EV charging stations
- Upgrading the wastewater treatment plant
- Implementing a **450 kW** cogeneration system powered by biogas
- Generating Class A biosolid for agricultural and reclamation uses

Benefits

- **4.2 million kWh** energy use reduction per year
- **93%** greenhouse gas reduction over program life
- **\$83 million** net program life savings
- Significantly improve process control over wastewater treatment and digestion
- Reduce disposal costs of organic material destined to landfills
- Includes robust community impact program with internship opportunities and career paths for high school and college students



City of Tulare



City of Tulare Profile

The City of Tulare is situated in the Central San Joaquin Valley along Highway 99, 45 miles south of Fresno and 60 miles north of Bakersfield. It was founded in 1872 by the Southern Pacific Railroad to serve as its San Joaquin Valley headquarters. The City was incorporated in 1888.



Agriculture

is the lifeblood of the local economy with some of the most productive farmland in the world



Full-Service City

water and wastewater utilities, police, fire, and airport



69,462

residents within
22 square miles (2022)



2023 General Fund \$55,841,187

Fund Balance \$182,982,670
Total Assets \$656,000,000



Goals of Citywide Infrastructure Upgrade

- Address aging infrastructure, equipment, and facilities
- Respond to resident's concerns about inadequate park and streetlighting
- Address council priorities



- Implement solutions quickly
- Finance through energy savings without impacting the General Fund
- Require minimal staff time
- Deliver through design-build process with guaranteed savings to minimize ongoing performance issues

Why ENGIE?

- **Reputation**
 - Checked references
- **Local experience**
 - Over \$300 million of successful projects in the Central Valley
 - Tulare County (3 projects), Tulare Joint UHSD, Tulare Local Healthcare District
- **Size of company**
 - 100,000 employees
 - \$100 billion annual revenue
- **Track record**
 - Company in existence for 200 years
 - US legacy of 50 years
- **Deep bench of expertise**
 - Solar, HVAC, lighting, water & wastewater, utility rates
- **Guaranteed performance**
- **No upfront cost**
- **Experienced project team**
- **Practical recommendations**
- **Expedited construction schedule**



Scope of the Project



Building LED Lighting	10 facilities
Parks LED Lighting	17 parks
Sports Field LED Lighting	6 parks/sports complex
HVAC Units Replacement	9 facilities
Solar Projects	4 facilities
EV Chargers	1 facility
Existing RES-BCT Solar Project Reallocation Savings	\$78,000 annually
Utility Bill Rate Change Savings	\$52,000 annually
WWTP Bill Totalization Savings	Over \$800,000 annually

Financial Considerations

- Inflation Reduction Act elective payment
- Net Energy Metering 2.0 grandfathering
- Tax-exempt lease purchase negotiated sole source
- Expedited close of financing to counter inflation
- Project cost – \$12.8 million
- Project net savings – \$9 million+ over the life of the project



Questions?



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For questions related to your infrastructure needs, email info@es.engie-na.com