

MAXIMIZE INFLATION REDUCTION ACT FUNDING FOR YOUR COMMUNITY

October 17, 2024



RESTRICTED



INTERNAL



PRIVATE



Panelists



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Discussion Overview: What is the Inflation Reduction Act?

Signed into law August 16, 2022

- **\$369 Billion in climate investments**, tax credits, and loans with a commitment to equity & environmental justice.
- Puts US on path of 40% GHG reduction by 2030

Three key components:

1. Focuses on making clean energy cheaper than fossil fuel alternatives
2. Robust support for American manufacturing of clean energy components and critical minerals
3. Addresses environmental inequities



IRA Overview

Historic Climate and Energy Legislation

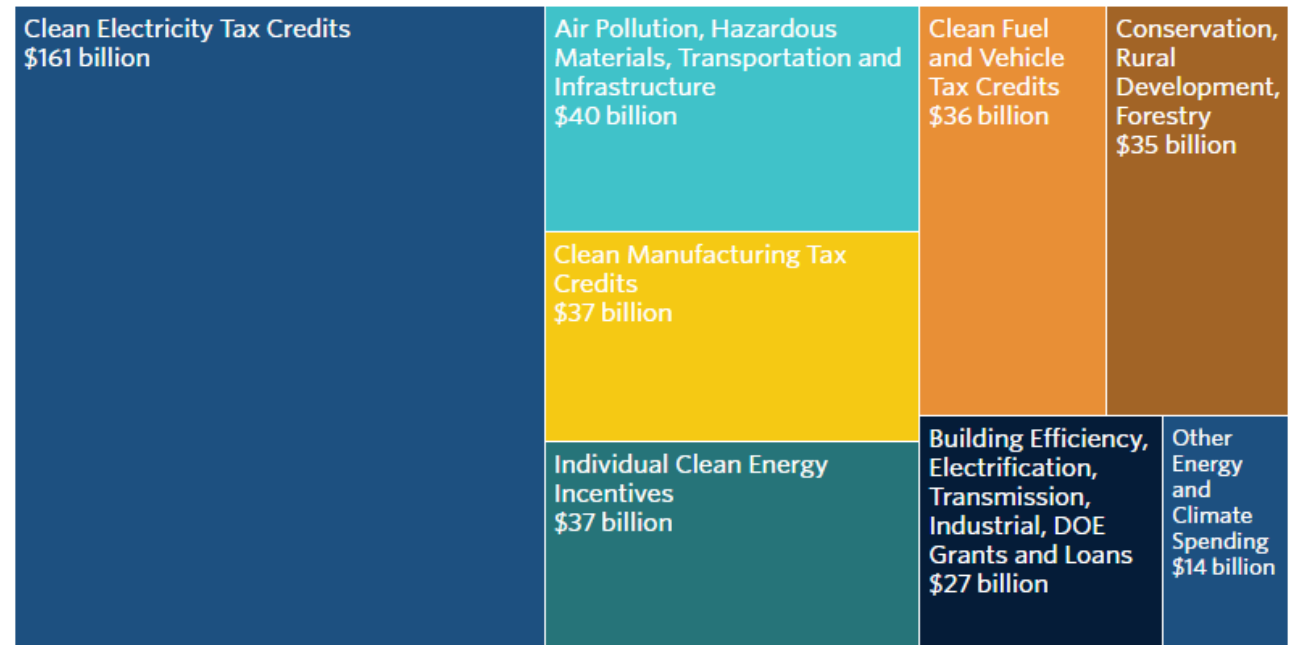
“...the IRA will be the single largest action ever taken by Congress and the US government to combat climate change”

– The Rhodium Group, August 12, 2022

Key energy and climate elements of the IRA:

- Tax credits, grants, and loan guarantees for:
- Solar, wind, energy storage, microgrid controllers and more
- Hydrogen and clean fuels
- Electric vehicles
- Energy efficiency and electrification
- Clean energy manufacturing
- Carbon capture and sequestration

The Inflation Reduction Act includes \$360B+ 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.

Highlights of IRA Tax Credits: Most Relevant for Cities

- **Investment Tax Credit (ITC) valid through 2036** or longer and applies to solar, storage, hydrogen, microgrids
 - Tax credit becomes tech-neutral starting in 2025 to capture nascent technologies. Any zero-emissions technology would qualify
- **The IRA creates a 3-tier system for determining the credit amount**, comprising of a base credit (6%) , a full credit (30%), and additional bonus credits.
- **Adders/bonuses available** for complying with domestic content requirements and investing in projects in certain energy and low-income communities.
- **Direct pay** available for non-profits, state and local governments, tribal governments, public power authorities, and for any hydrogen and carbon capture projects.

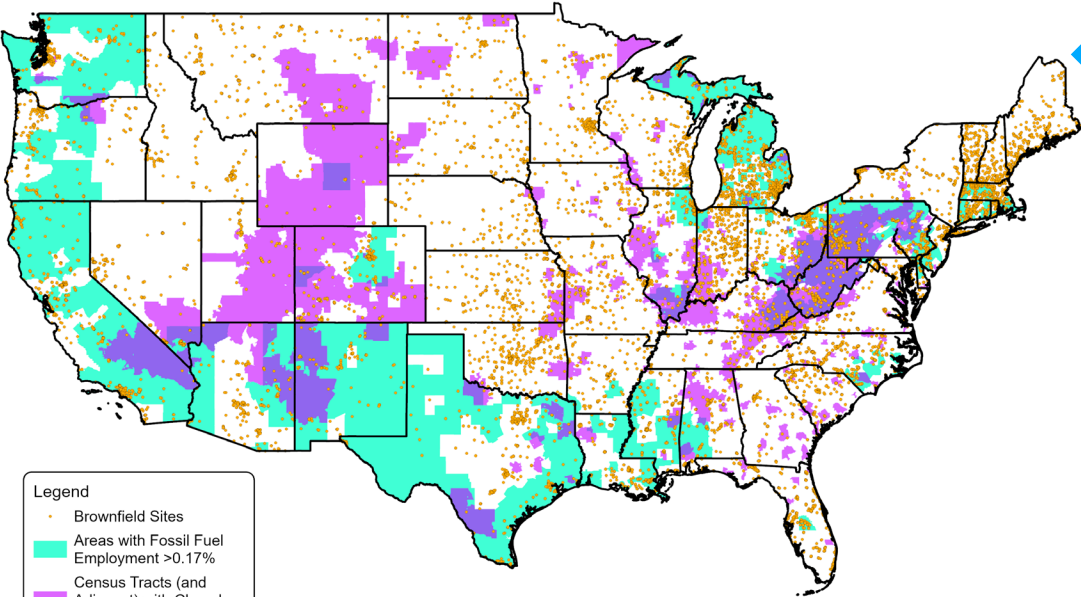
Other Tax Credits

- **Commercial Vehicle Tax Credit:** 30% The incremental cost of vehicle compared to comparable vehicle powered by a gas or diesel engine. Capped at \$40k for vehicles 14,000lbs +
- **Alternative Fuel Credit – EV Infrastructure:** Capped at \$100K per single item of qualified property
- **Energy Efficient Commercial Buildings Credit:** Tax Deduction that applies to interior lighting, HVAC and hot water, and envelope improvements that are part of a qualified retrofit plan certified by an architect or engineer

Credits Vary by Geography

Incentives Limited, or Bonuses Available, Based on Location

Energy Communities (+10%)

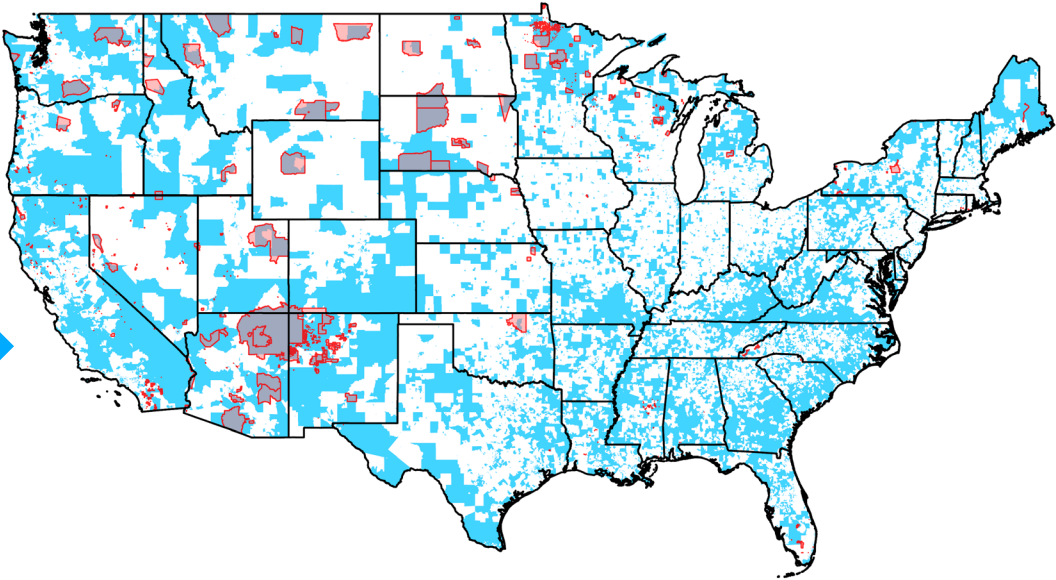


- Legend
- Brownfield Sites
 - Areas with Fossil Fuel Employment >0.17%
 - Census Tracts (and Adjacent) with Closed Coal Facilities

PTC,
ITC,
CEPTC,
CEITC

ITC
(Solar +
Storage
, Wind
<=5MW
ac),
CEITC

Low Income Areas (+10-20%)



- Legend
- American Indian Land
 - Low Income Communities

Credits Stack for Significant Value

ITC Credits Could be as High as 70% Of Project Value

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%

Infrastructure Investment and Jobs Act: Funding for Cities

Sample List

Agency	Program	Description	Eligible Recipients	Funding	Examples
 SCEP STATE & COMMUNITY ENERGY PROGRAMS	Energy Efficiency & Conservation Block Grant Program (EECBGB)	Funding to assist in planning and implementing program and policies to reduce energy use, reduce fossil fuel emissions and improve energy efficiency	States, Local Governments, Tribes	\$550 million (until expended)	HVAC, solar, energy storage
 Federal Highway Administration U.S. Department of Transportation	National Electric Vehicle Infrastructure (NEVI) Grant Program	Deploy EV charging infrastructure and develop and interconnected national network	States, Local Governments	\$5 billion/year for 5 years	Public transportation charging
 EPA United States Environmental Protection Agency	Clean Water Infrastructure Resiliency and Sustainability	Grants to increase resiliency of publicly owned treatment works to cybersecurity or natural hazards	Municipalities, State Agencies	\$125 million	Water conservation, enhancement of water use efficiency, stormwater management

What is Elective Pay AKA Direct Pay?

The IRA allows governmental entities, including Cities, for the first time to be able to receive a tax “refund” payment equal to the full value of tax credits for building qualifying clean energy projects.



Identify Project and
tax credits



Place Project in
Service



Pre-Register
Project through IRS
Portal



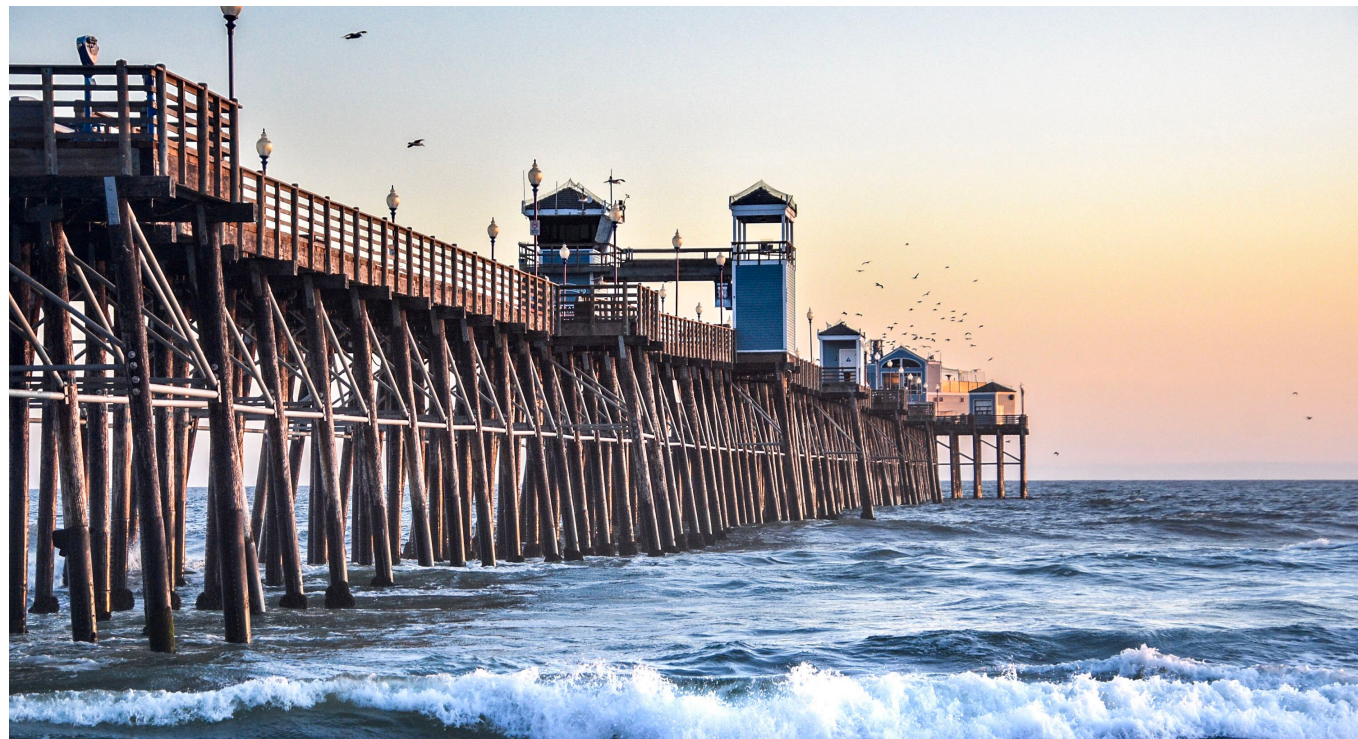
File Form 990T



Await Payment



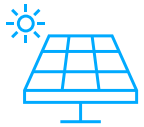
City of Oceanside



Opportunity at City of Oceanside



Project Scope



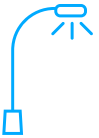
Solar PV
1,632 kWdc at 5 sites



Generator heat pumps
at 3 sites



Smart thermostats at
25 sites



Interior and exterior
lighting at 18 sites



Utility rate change at 3
sites



Transformer
replacement at 4 sites



HVAC replacement at
16 sites



Roof replacement at
Civic Center



Battery energy
storage at 1 site



HVAC refurbishment
at 20 sites

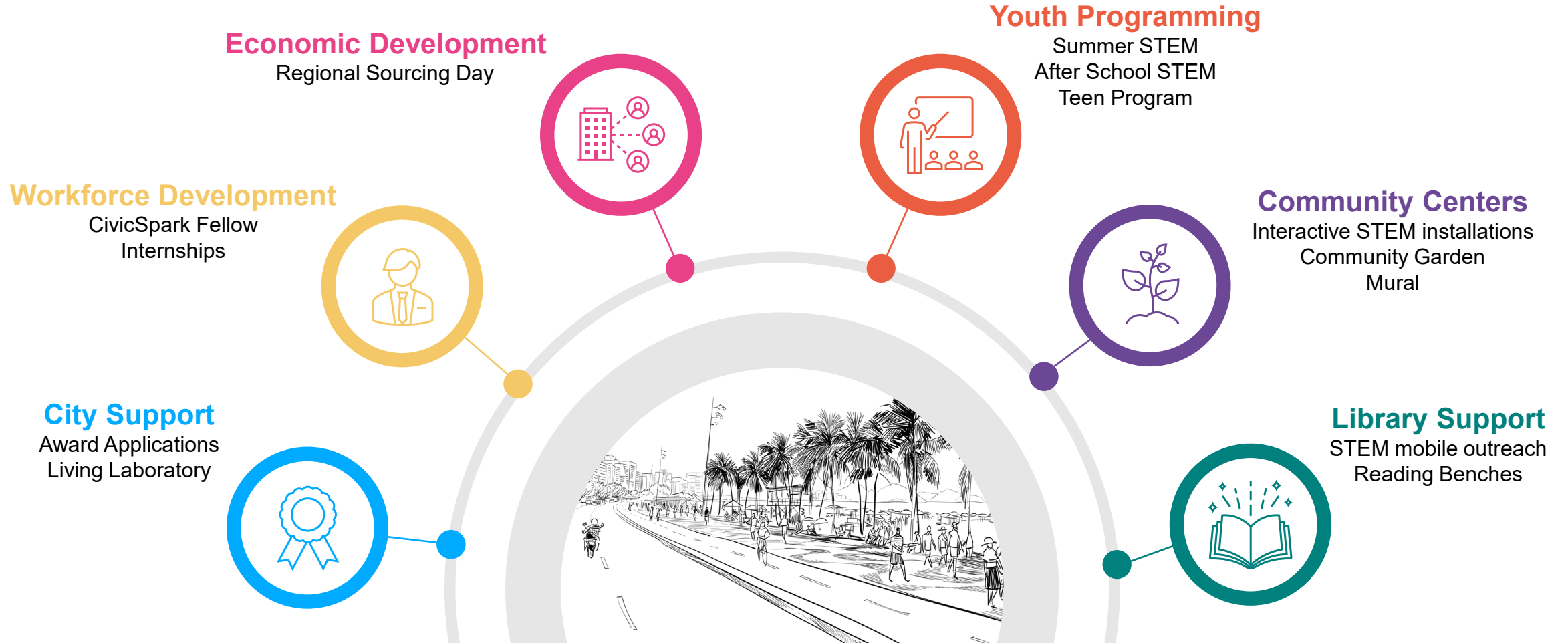


New central plant at
Civic Center



Community
engagement program
at multiple sites

Engagement at City of Oceanside



Additional Benefits in Support of City Goals

Capital Improvement Projects

- Civic Center Chiller Replacement
- Civic Center Roof Replacement
- John Landes Recreation Center Renovation
- HVAC Improvements across multiple City facilities

American Rescue Plan Act Goals

Input obtained from Community Meetings, identified top City priorities as:

- ✓ Access to services/programs for youth and seniors
- ✓ Job/employment training and job creation/retention
- ✓ Deferred maintenance of City facilities
- ✓ Investments in operational efficiency
- ✓ Building stronger communities through investments in housing and neighborhoods
- ✓ Facility improvements and programming at Landes Recreation Center

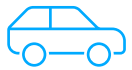
Oceanside by the Numbers

Project Size	\$20,849,222
IRA Direct Pay	\$3.2MM
Self Generation Incentive Plan (SGIP)	\$150k
Positive Cash Flow	\$383k after debt service from year one
Overall Project Savings over Program Lifetime	\$26,085,009
NEM 2.0	City is grandfathered into NEM 2.0
Business Impact Scope	Significant budget included

Environmental Impact- Climate Action Plan

The proposed program for the City of Oceanside provides a significant reduction in greenhouse gas (GHG) emissions of 2,732 metric tons of CO₂, every year.

Equivalent to GHGs from:



650 gasoline powered vehicles for one year

OR



539 homes' electricity use for one year

OR



180,375,312 number of smart phones charged

Equivalent to GHGs avoided by:



949 tons of waste recycled instead of landfilled

OR



104,753 incandescent lamps switched to LED

Equivalent to GHGs sequestered by:



45,178 tree seedlings grown for 10 years

OR



3,190 acres of U.S forests

City of Milpitas



Project Focus: City of Milpitas, California

The Crossroads of Silicon Valley

POPULATION

80,000+

SIZE

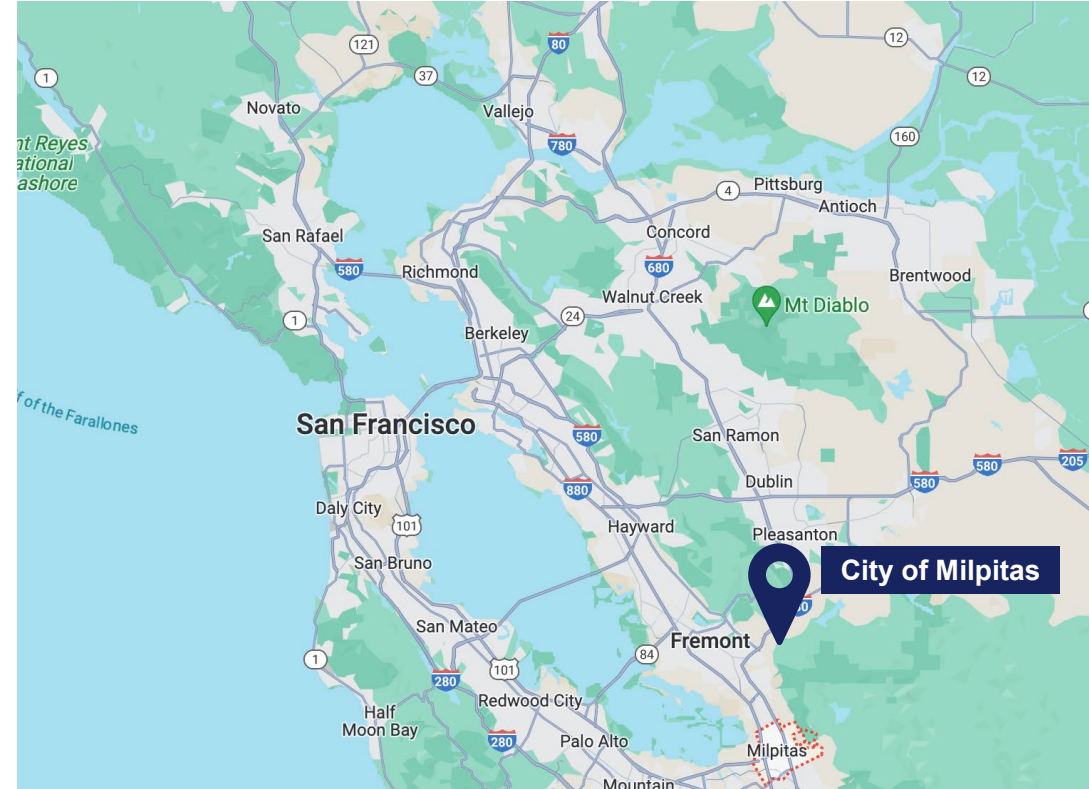
13.6 mi²

DEMOGRAPHIC

Diverse &
Educated

ECONOMY

Middle
income



Project Overview

The City of Milpitas is a Silicon Valley community of 84,000 residents.

In an ongoing effort to maintain and improve public services, city leadership solicited innovative ways to improve public facilities, services and supportive infrastructure.

- The program consists of 10 different measures covering three broad categories: **advanced water infrastructure, efficient lighting upgrades, and energy resiliency**
- Community engagement and communications support are also provided – including the sponsorship of a CivicSpark fellowship
- Savings and grant funding are completely offsetting the costs of the program
- Funding came from a mix of city-issued bonds and public sources—including state incentives and clean energy resiliency funds from Silicon Valley Clean Energy—the water and energy we save pays for the Smart City program.

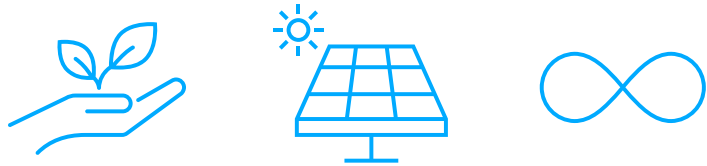
\$30M

Lifetime
Savings

STUDIOS Architecture

2022 Smart Cities Award Recipient

- Recognized for comprehensive energy and water efficiency program that included microgrid project in addition to full LED streetlight retrofit, smart water meters, energy and water efficient fixture retrofits, and more.
- Program conservation measures will generate enough guaranteed savings on operations and maintenance to more than offset the costs of the program.



- Most importantly, the program will help the City of Milpitas will reach their bold and ambitious climate targets with safety, efficiency, and decarbonization goals in mind.



SMART CITIES

These courageous and progressive actions have led to the City of Milpitas to be recognized by Smart Cities Connect as a Smart 50 City Awards winner!

Smart City Solutions

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

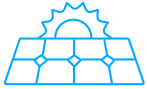


Water & Wastewater Systems

Advanced metering, pumps, and process improvements



Measures Implemented



200kw of solar PV
at city facilities



Battery storage to reduce peak demand, **provide resilient backup power** for the community center, and controls for critical loads



Lighting retrofits
in buildings, parks, sports fields, streetlights, plus controls



Electric vehicle charging
stations on city property



Upgrade and tune water fixtures



City-wide automated metering infrastructure to improve meter accuracy and automate reading



Smart controllers (SCADA) on City at City water, wastewater, and stormwater facilities and pump stations to improve monitoring, operational data, and staff oversight



Education and community
engagement via broad outreach campaign in multiple languages



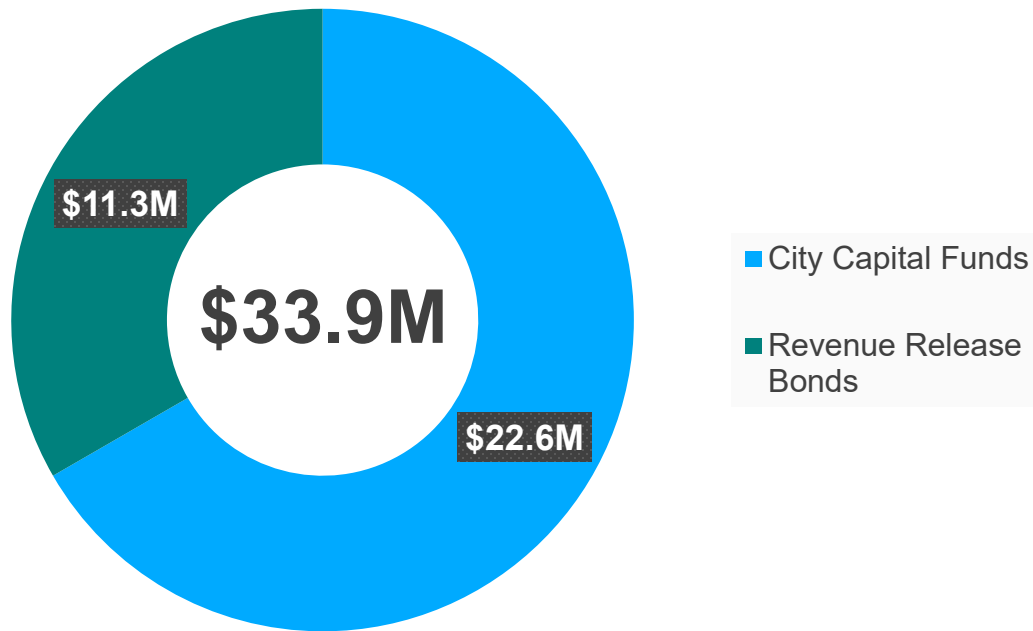
Ongoing customer care:
5-year operations & maintenance contract and measurement & verification contract, including guaranteed savings

Contract Highlights:

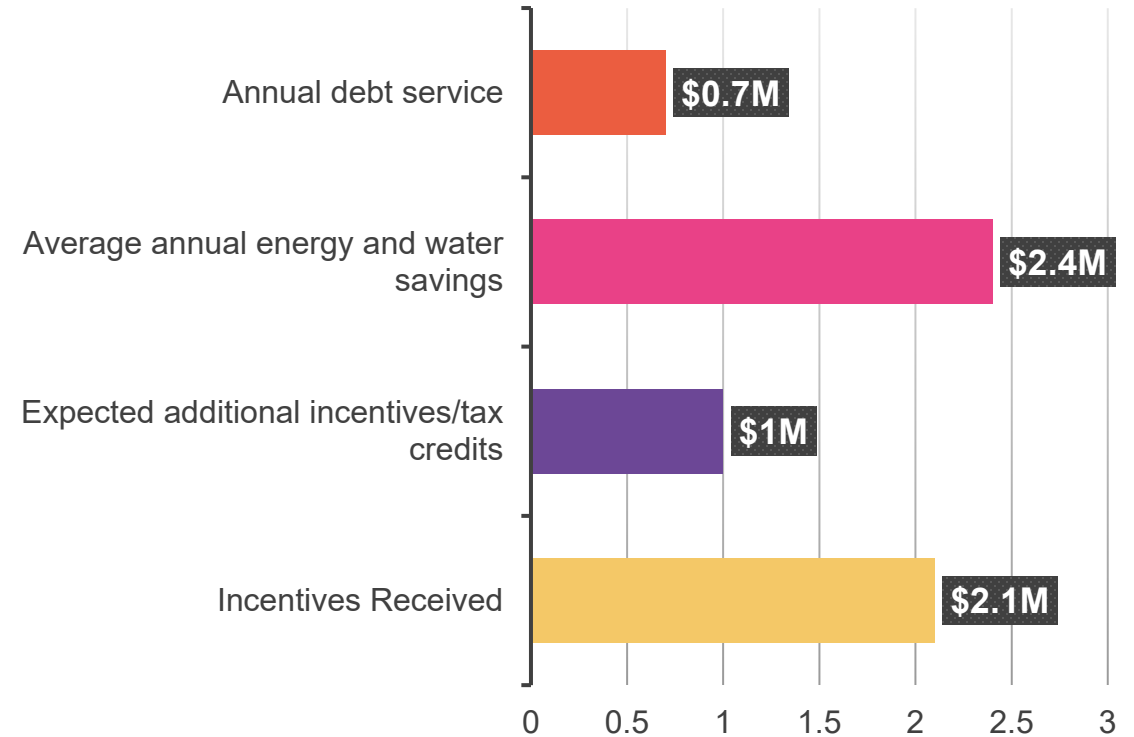
- Initial tender in 2019, awarded in 2020, construction started 2021
- \$34 million energy performance contract
- Focus on modernizing City infrastructure leading to reducing maintenance and utility costs, building resiliency, and community outreach

Project Funding

Capital Outlay



Savings & Incentives



Resource Savings and Financial Benefits



Energy and Water Conservation

- 4.2 million kWh per year reduction in electricity utility usage
- 21,342,300 lbs reduction in CO₂ output per year
- Millions of gallons of water saved per year

Cost Savings

- Annual utility savings:
 - \$1.4M in water costs*
 - \$1.1M in energy costs
 - \$600k in O&M costs

Financial Incentives

- ENGIE helped secure \$2M of incentives and counting to help reduce the cost of the program for the City of Milpitas
- Expecting \$1M in Federal tax credits for solar and battery

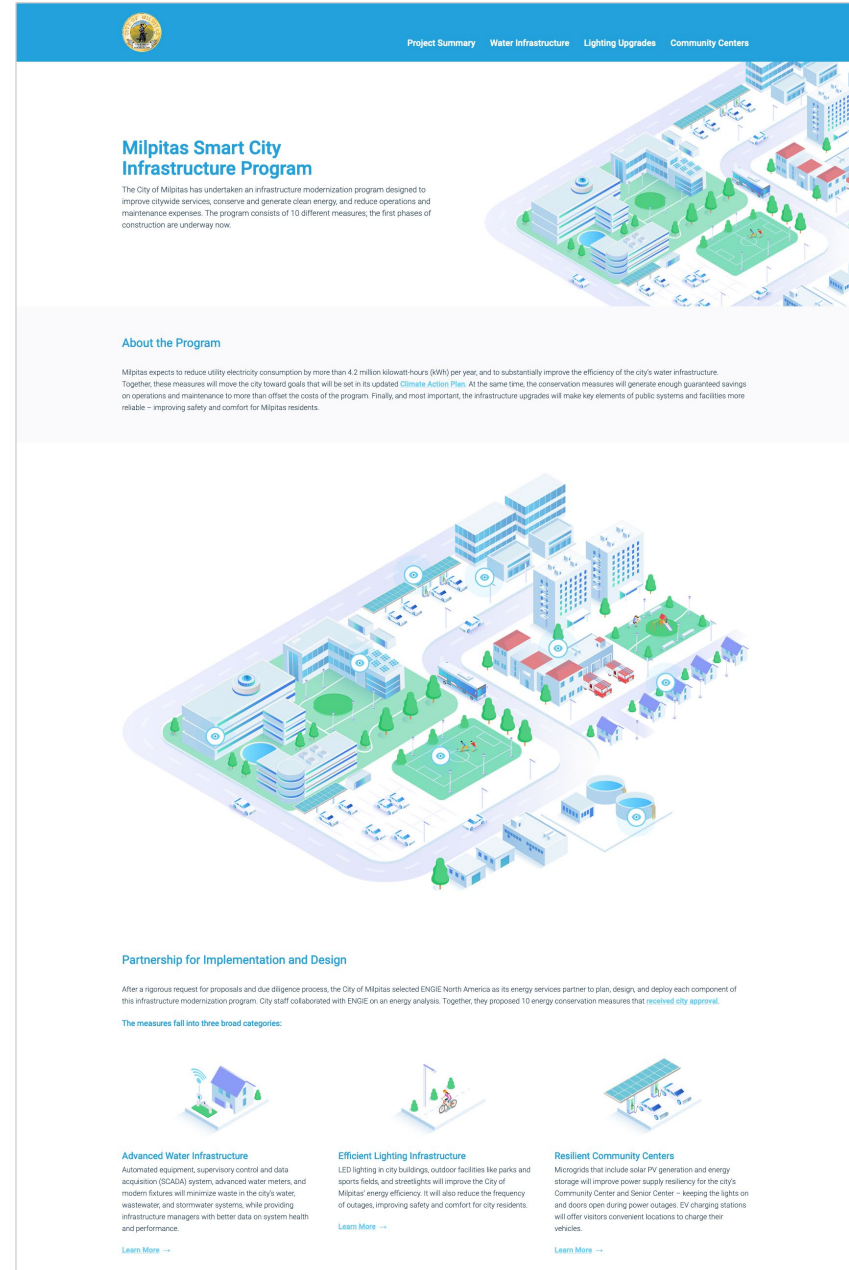
Community Outreach

CivicSpark

- 11-month, post-graduate fellow to expand City capacity
- City selected project focused on youth engagement with Climate Action

Engaging Residents

- Culturally relevant and multi-lingual
- Custom sustainability website for full project summary
- Water meter microsite for AMI schedule lookup



Milpitas Smart City Infrastructure Program

The City of Milpitas has undertaken an infrastructure modernization program designed to improve citywide services, conserve and generate clean energy, and reduce operations and maintenance expenses. The program consists of 10 different measures, the first phases of construction are underway now.

About the Program

Milpitas expects to reduce utility electricity consumption by more than 4.2 million kilowatt hours (kWh) per year, and to substantially improve the efficiency of the city's water infrastructure. Together, these measures will move the city toward goals that will be set in its updated [Climate Action Plan](#). At the same time, the conservation measures will generate enough guaranteed savings on operations and maintenance to more than offset the costs of the program. Finally, and most important, the infrastructure upgrades will make key elements of public systems and facilities more reliable – improving safety and comfort for Milpitas residents.

Partnership for Implementation and Design

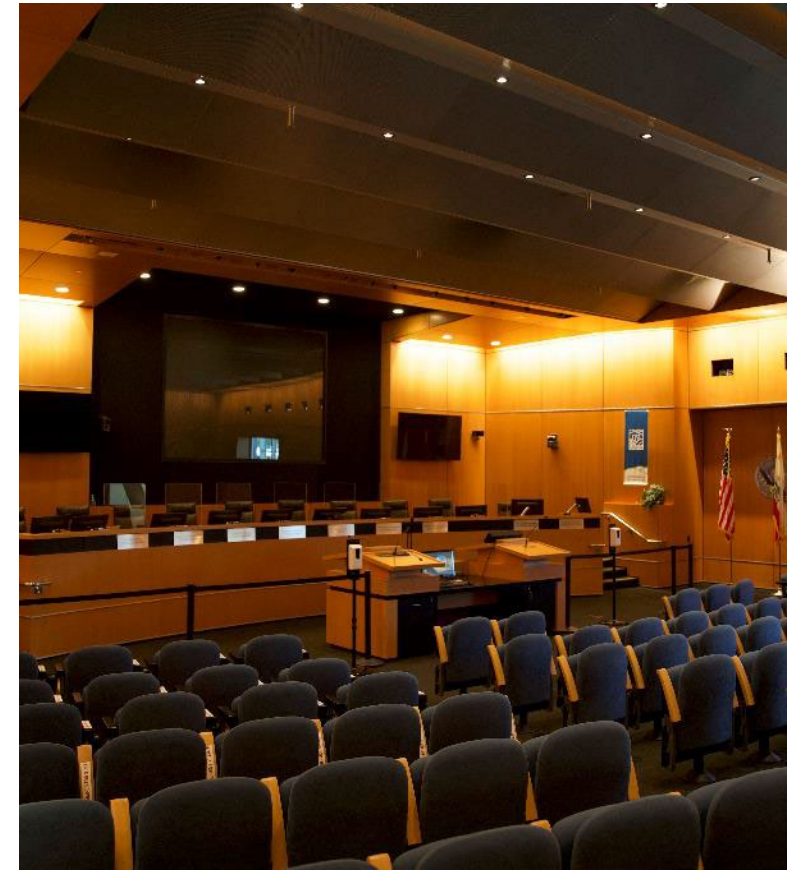
After a rigorous request for proposals and due diligence process, the City of Milpitas selected ENGIE North America as its energy services partner to plan, design, and deploy each component of this infrastructure modernization program. City staff collaborated with ENGIE on an energy analysis. Together, they proposed 10 energy conservation measures that [received city approval](#).

The measures fall into three broad categories:

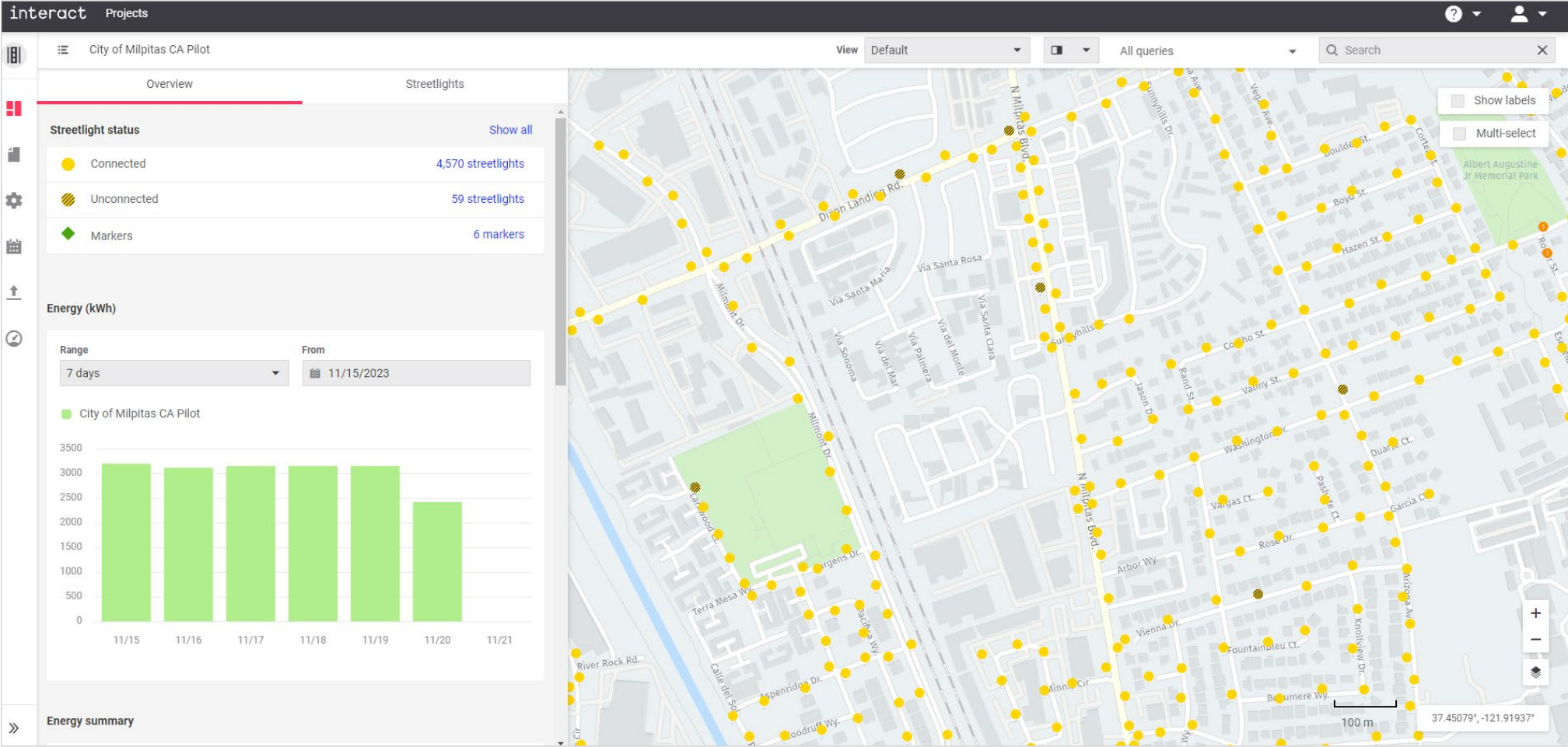
- Advanced Water Infrastructure**
Automated equipment, supervisory control and data acquisition (SCADA) system, advanced water meters, and modern fixtures will minimize waste in the city's water, wastewater, and stormwater systems, while providing infrastructure managers with better data on system health and performance.
[Learn More](#)
- Efficient Lighting Infrastructure**
LED lighting in city buildings, outdoor facilities like parks and sports fields, and streetlights will improve the City of Milpitas' energy efficiency. It will also reduce the frequency of outages, improving safety and comfort for city residents.
[Learn More](#)
- Resilient Community Centers**
Microgrids that include solar PV generation and energy storage will improve power supply resiliency for the city's Community Center and Senior Center – keeping the lights on and doors open during power outages. EV charging stations will offer visitors convenient locations to charge their vehicles.
[Learn More](#)

Additional Smart City Components

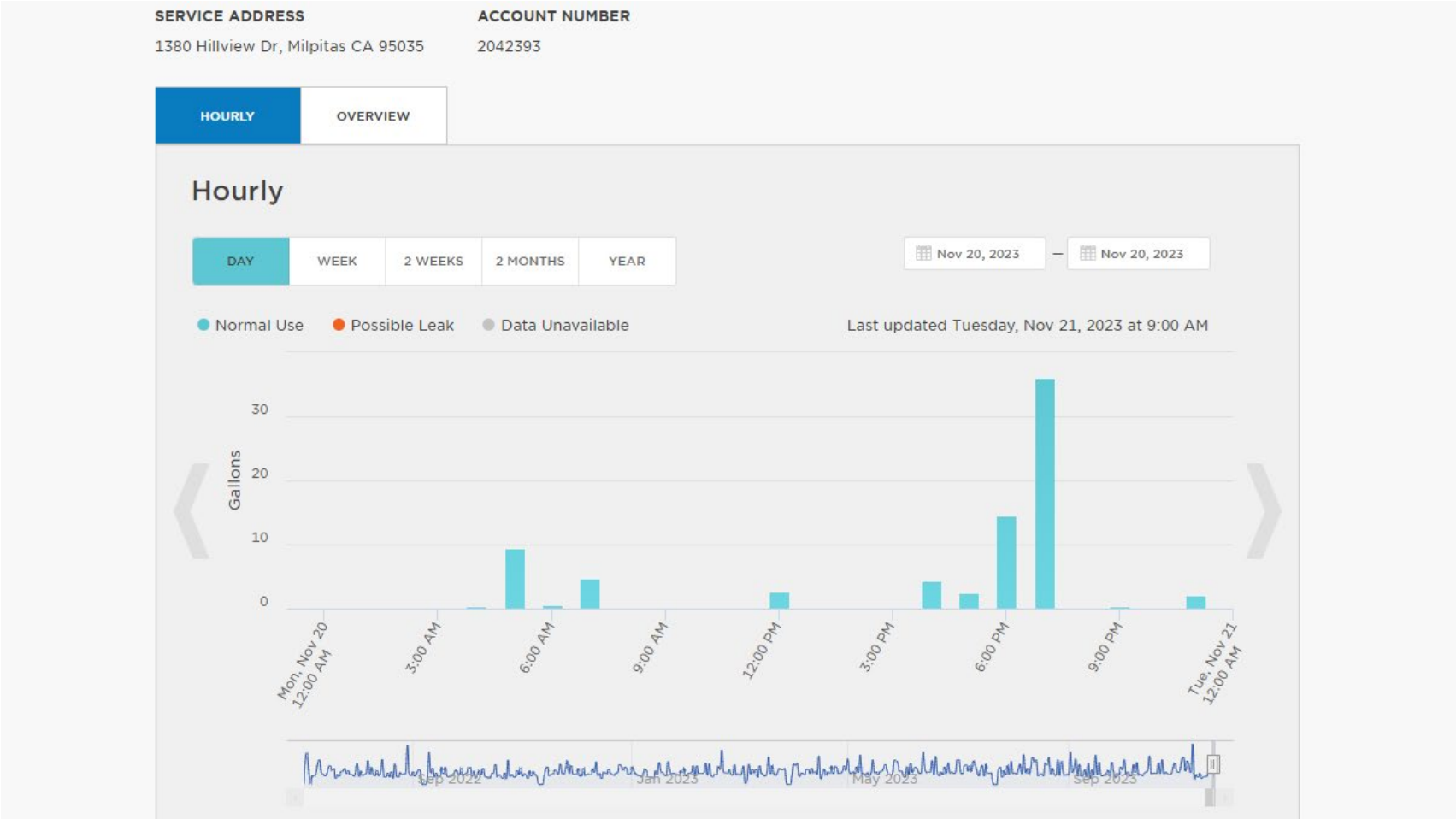
- Smart streetlighting: tilt sensors, dimmability, maintenance alarms
- Searchable GIS Map highlighting water meter replacement schedule
- Logging City's lighting points into GIS database
- Improving ventilation in public spaces and offices to re-open during COVID and touchless water fixtures
- Customer facing WaterSmart portal for real time water use and leak detection notifications
- Phase 2 underway to leverage additional funding and build more resiliency

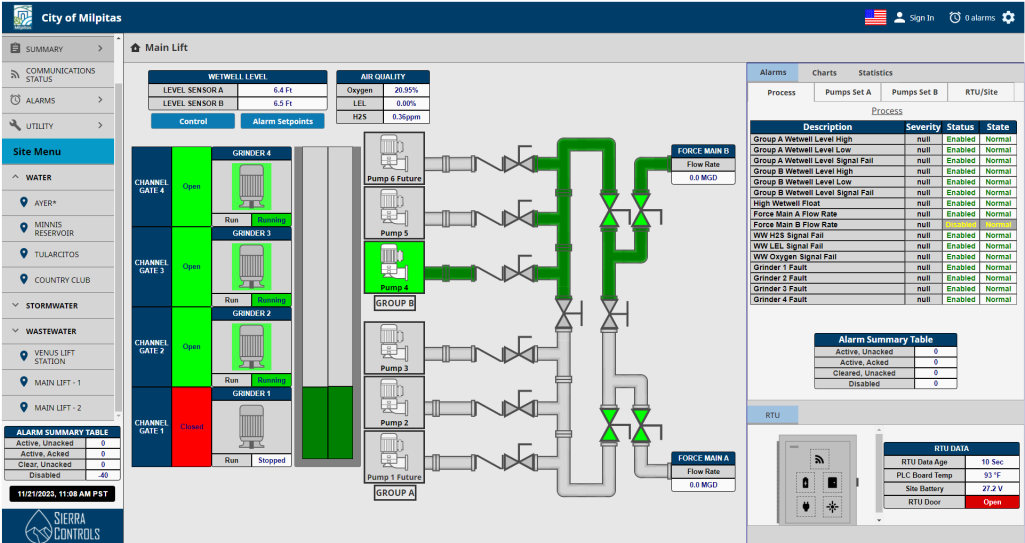
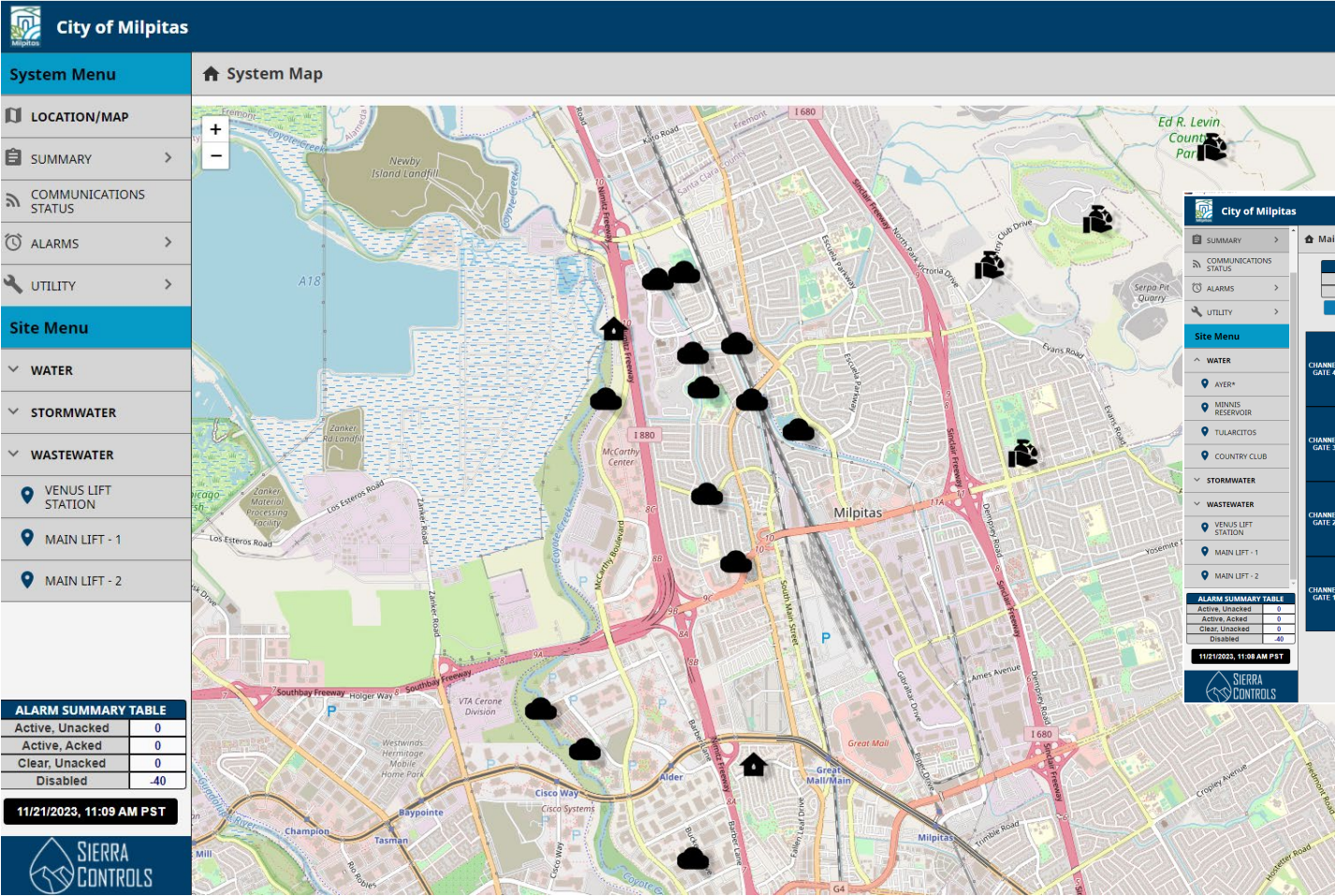


Smart Streetlight Portal



Customer Water Use Portal integrated with AMI





By the Numbers + Video

\$30M in lifetime savings

Reduce electricity consumption

by more than 4,200,000 kWh per year, equivalent to 388 households average consumption

200 kilowatts of solar

15,600 advanced metering infrastructure (AMI) water meters

with leak detection

2,185 LED streetlight retrofits

4,453 streetlight controls upgrades

with outage detection





Q&A



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