

## Energy & Utility Resource **Conservation Services**

City Council Presentation & Discussion



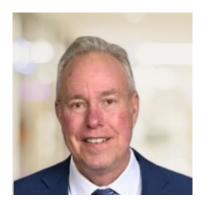
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## Introductions





**Dana Dunn**Project Administrator
Senior Account Executive



**Shaun Bauerle**Senior Program Manager



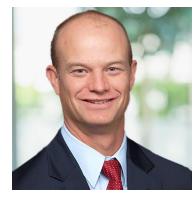
Scott Faller
Director, Operations



Angela Hedgecock, P.E Senior Development Engineer



John O'Herron
Director, Business Solutions



**Chad Nobles**AMI / Meter
Subject Matter Expert





## CoMo Request for Proposals (RFP)

**RFP:** Seeking professional services of the most qualified Energy Services Company (ESCO) to support CoMo with their continued effort to improve city infrastructure in the most efficient manner.

**Scope:** Identify, design, install, commission, guarantee & monitor performance and arrange financing of a comprehensive utility conservation program.

**State Statute RSMo 8.231:** Guaranteed Energy Saving Performance Contracting. A design-build approach with guaranteed savings. Financing up to 15 years dependent upon payback of facility improvement measures.

**To Date:** Site visits, meetings with department leaders, CoMo Water & Light and the CAAP Resource Conservation Team.







## About Ameresco

Ameresco (NYSE:AMRC) is the leading ESCO in the USA and is committed to the communities and the people we serve.

Founded in 2000 | Public in 2010



#### Comprehensive Portfolio

Objective approach and in-house technical expertise delivers the most advanced technologies to meet the unique needs of each customer. Majority of projects are budgetneutral, funded by energy cost savings.

#### **Customer Driven**

Municipal & Federal Government, K12 and Higher Education. Reputation across North America for excellence in customer service and customer satisfaction.





**\$16+ Billion I**nfrastructure projects deployed since company inception.



1,500+ Employees throughout North America and Europe



Over \$450 Million in Missouri projects with municipalities (including Columbia and the State of MO)



#### **In-House Resources**

Over 950 engineers, construction project managers, commissioning agents, and O&M professionals



70%+ Revenues derived from Federal, State and **Municipal Projects** Including municipal utilities



70% of Our Projects are conducted on a Performance Contracting basis



## Ameresco's Advanced Technology Portfolio



#### **Energy Efficiency**

- **HVAC & Ventilation**
- Boiler & Chiller System
- Interior Lighting and Controls
- **Building Envelope**
- Smart Building **Automation & Controls**
- LED Street & Area Lighting
- Water / Wastewater Efficiency & Recovery
- Advanced Metering
- **Smart Cities**
- **Industrial Optimization**



#### Distributed Energy Generation, Storage & Microgrids

- Solar (On-Grid & Off-Grid)
- Batteries and Energy Storage
- Cogeneration Plants
- Landfill Gas to Energy, RNG Biomass, Biogas,
- Microgrid
- Geothermal
- Wind
- EV Charging



#### **Energy Analytics and Supply Management**

- · Energy Analytics
  - **Portfolio Asset Management**
  - AssetPlanner®
  - Measurement & Verification
  - Advanced Metering
  - VisionDSM (AEG)
- **Energy Supply Management**



#### Infrastructure

- New Construction
- Retrofits/Expansion
- Modernization
- Monetization / Ownership & Operation
- **Advanced Metering Infrastructure** (AMI)
- Utility Distribution Systems



#### **Operations** and Maintenance

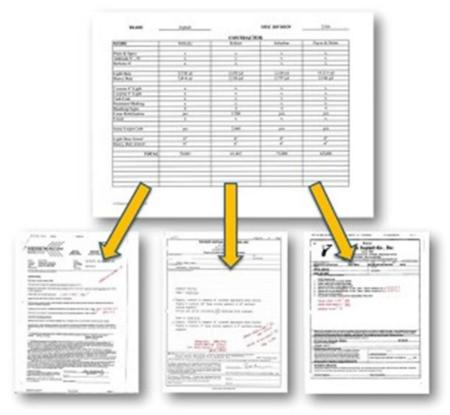
- Facility Management Services
- System Repair & Restoration
- Lighting System Maintenance
- · Control System Predictive Maintenance
- Plant O&M
- Solar O&M



### **Business Model**



- Vendor Neutral (Manufacturers / Equipment / Subcontractors)
- Open Book Pricing / Full Transparency
- Quotes & Pricing Shared with CoMo. (Vendors, Subcontractors & Equipment)
- Guaranteed Fixed Price
- Zero Change Orders
- Energy Savings Guarantee (1 to 15 years)



Open Book Full Transparency

## Columbia Water & Light (Since 2009)

Landfill Gas-to-Energy and Waste Heat Utilization 3.2 MW Renewable Energy Cogeneration

#### Jefferson City Landfill



Biogas generated at the Jefferson City Landfill is captured and piped three miles to Ameresco's electricity generation facility.

#### Renewable Energy Generation



Biogas is used as fuel to generate 3.2 MW of renewable energy. The green power is wheeled onto the grid and purchased by Columbia Water & Light.



**Provides Columbia Water & Light** ~ 2% of Renewable Energy

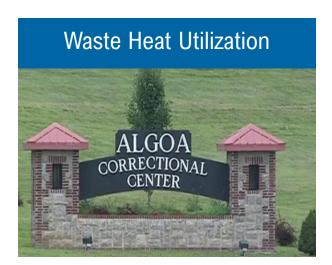
**Annual greenhouse gas** emissions equivalent to one of the following:



31,000 Acres of Trees



28,000 Cars Off MO Roads



Waste heat from the engines is captured and used to supply steam and hot water to the Algoa state-owned correctional facility.

## Columbia Housing Authority (12-Year Partnership)



- 2011 to 2023
- 719 Units / \$1,935,930
- 12 Year Measurement & Verification
- \$1.5M Total Savings to 2023
- \$398K Total Net Savings to 2023

Cumulative Financial Performance (Over Contract Term)

Year	Period	Total Dollar Savings		Annual Debt Payment		Savings Net of Debt		Ameresco Annual Fee		Net Savings	
1	2012	\$	224,502	\$	161,154	\$	63,348	\$	17,210	\$	46,138
2	2013	\$	235,947	\$	164,977	\$	70,970	\$	18,258	\$	52,712
3	2014	\$	215,350	\$	168,898	\$	46,452	\$	18,806	\$	27,646
4	2015	\$	203,405	\$	172,919	\$	30,486	\$	19,370	\$	11,116
5	2016	\$	103,124	\$	60,634	\$	42,490	\$	35,966	\$	6,524
6	2017	\$	118,389	\$	57,567	\$	60,822	\$	11,204	\$	49,618
7	2018	\$	79,284	\$	32,106	\$	47,178	\$	11,539	\$	35,639
8	2019	\$	87,441	\$	32,748	\$	54,694	\$	11,886	\$	42,808
9	2020	\$	83,397	\$	33,403	\$	49,994	\$	12,242	\$	37,752
10	2021	\$	79,168	\$	34,071	\$	45,098	\$	12,610	\$	32,488
11	2022	\$	86,188	\$	34,752	\$	51,436	\$	12,988	\$	38,447
12	2023	\$	76,310	\$	45,458	\$	30,851	\$	13,377	\$	17,474
Total		\$	1,592,505	\$	998,686	\$	593,819	\$	195,456	\$	398,363

Long-Term Guaranteed Performance Contract

## RSMo 8.231 Energy Savings Performance Contracts (ESPC)

Funded from Reduced Energy, Operations and Maintenance Expense and/or Capital Cost Avoidance.



# **Energy Savings**

**Utility Savings** 

## **Operational and Maintenance Savings**

Maintenance,
Subcontracted Services,
Equipment, and Parts

## Capital Cost Avoidance

Future Capital Cost
Brought Forward to Avoid
Deferred Expenditures

**State Statute RSMo 8.231:** Guaranteed Energy Saving Performance Contracting. A design-build approach with guaranteed saving options. Financing available up to 15 years dependent upon payback of facility improvement measures.

- Leverage energy, operations and maintenance savings to generate capital to refresh facilities & building systems.
- Potentially a budgetneutral solution.
- Excess savings remains with CoMo for use on other non-energy projects.

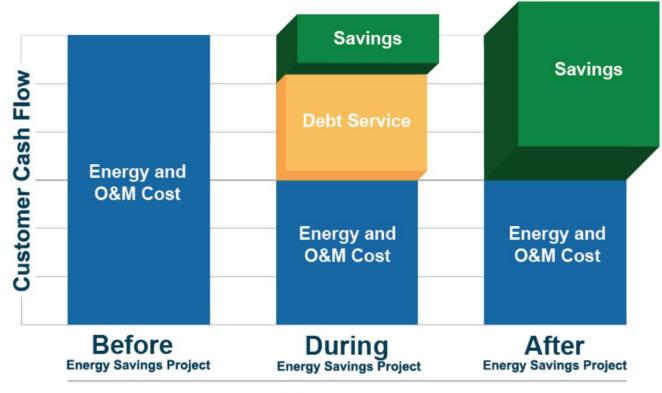


Illustration only. % of savings varies from project-to-project

Leverage energy, operational and maintenance savings to generate capital.

## **Funding Sources**

Capital Funding / Financing

#### **Existing Budgets**

(avoided Utility and O&M costs)

#### **Operating Budget**

(Procurement Options: Power Purchase Agreements, Design-Build-Own-Operate-Maintain, Meters as a Service, )

Cash

#### **Subsidies**

(e.g., grants, rebates, RECs, etc)

#### **Increased Revenue**

(water, membership fees, billing fees, etc.)



## Financing

- Financing: Up to 15 years per RSMo 8.231
- Tax Exempt Lease (TELP): Not considered debt because it is a lease structure with ownership transferred at the end of the lease.
- Budget-Neutral: Infrastructure upgrades use energy, operating and maintenance savings to pay for the projects over time. The goal is budget neutral.
- Bonding Limits: If utilizing a TELP, does not limit bonding capacity.



## **Project Update**







#### Facilities: Armory, ARC and City Hall

- Multiple site visits. Interviews with building operators and staff
- Stakeholder meetings with Parks & Rec, Public Works, CAAP Team
- Verification Meeting #1 Completed 7/15/25 (Identification of ECM's and FIM's)

#### AMI: Columbia Water & Light Advanced Metering Infrastructure

- Multiple meetings with CW&L Team
- Next Step: Investment Grade Audit Project Development Agreement

## Armory (1938)

#### **Energy Conservation Measures**

#### Heating & Cooling (HVAC)

- Replace Gym Roof Top Units
- Replace Office Units
- Combine Ground Floor Roof Top Units and install Variable Air Volume boxes

#### Lighting Redesign / Retrofit

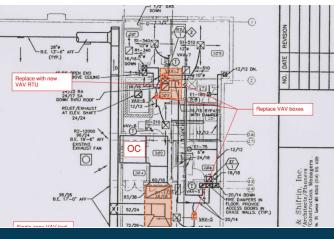
- Complete Lighting Retrofit
- Limited down-lighting
- **Light Harvesting**
- Occupancy Sensors

#### Misc Energy Conservation Measures

- **Building Envelope**
- TVs and Computers
- PA Amp







#### **EXISTING CONFIGURATION 2ND FLOOR**



**EXISTING CONFIGURATION 1ST FLOOR** 

## Activities & Recreation Center (2000)

#### **Energy Conservation Measures**

#### Pool

- ✓ Pumps / Soft Starts
- ✓ Liquid Pool Cover
- Capture Pool Unit Condensate
- ✓ Solar Thermal Pool Heaters

## Heating Ventilation & Air Conditioning (HVAC)

- ✓ Replace Roof Top Units
- ✓ Replace Pool HVAC Unit
- Replace Fan Terminal Units

#### Lighting Redesign / Retrofit

- ✓ Light Harvesting
- ✓ Occupancy Sensors

#### Other Energy Conservation Measures

- Roof Replacement
- ✓ Solar & Battery Storage
- ✓ Low E Window Film
- ✓ TVs and Computers
- ✓ Building Envelope

#### Other Facility Improvement Measures

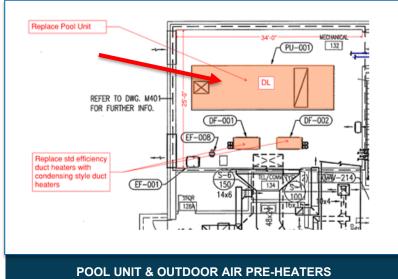
 Sandblast & Paint Pool Structural Steel Decking

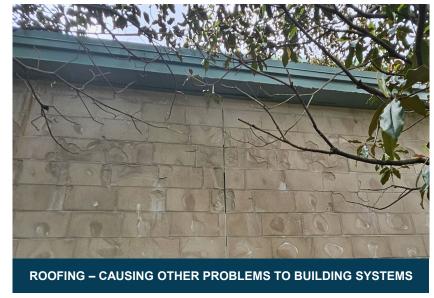


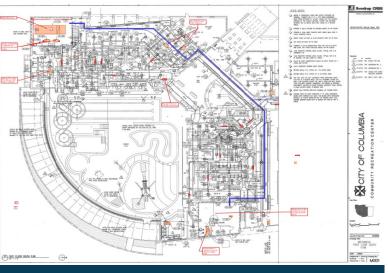
Potential resilience hub designed to support residents before, during and after emergencies or disasters.

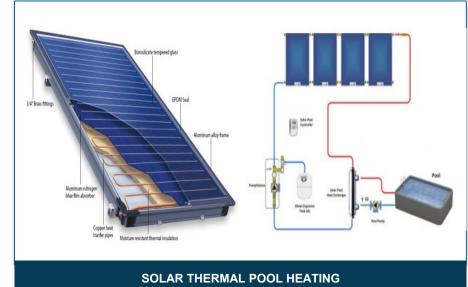
## Activities & Recreation Center (2000)











## Next Steps









#### Next Steps

- City Hall
- Verification Meeting #2
  - October 1, 2025
  - 90% Completion Stage
- Verification Meeting #3
  - October/November 2025
  - Final Scope of Work Identified
- Investment Grade Audit Delivered
  - Completion Before End of Year (for summer 2026 work to begin)

#### Columbia Water & Light

- Project Development Agreement
  - o Investment Grade Audit (design, engineering, meter testing & scope development, create savings and enhancement models, workshops for evaluating equipment and technology)



# Q&A Thank You!

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# Supplemental Slides



## Kansas City, Kansas

Unified Government of Wyandotte County



Ameresco was selected as the city's energy partner as a part of an RFQ response. Design, Engineering, Subcontracted Services, Project Management, Permitting, Bonding and Construction Management.

#### **Project Highlights**

#### **Energy Measures Implemented**

Roofing/Cooling Tower/Chiller
Controls/DDC Controls/Building
Envelope/Interior-Exterior LED Lighting;
Installation of Bi-Polar Ionization in various
KCUG facilities; Installation of Bi-Polar
Ionization in various KCUG Park facilities/

Ameresco is also the Construction Manager for the historic Courthouse renovation project.

#### **Project Size**

14 Buildings

#### **Parks & Recreation**

Installed AC to the gyms at numerous locations, installed windows, water heaters, installed controls, upgraded fire alarm systems, plus various other Facility Improvement Measures.

#### **Project Size**

9 Park Facilities



## City of Boulder, Colorado

Building and Facility Upgrades



Numerous projects since 2019.

Projects include Dushanbe Teahouse HVAC upgrades, library controls replacements, Brenton Building remodel, city-wide exterior and interior lighting projects, and sustainable deconstruction of the Community Hospital and Hospital Pavilion buildings.

#### **Project Highlights**

#### **Technology Types**

LED Lighting, Water Efficiency, HVAC & Lighting Controls

#### **Facilities**

Facilities including Dushanbe Teahouse, Brenton Building, Library and Hospital Buildings



# City of Boulder Sustainable Deconstruction *Boulder, CO*



Ameresco partnered with the City of Boulder on sustainable deconstruction of former Boulder Community Health Hospital. The deconstructed building materials will be used for a new fire station and other city projects. These efforts are part of the City of Boulder's overall goal to divert 85% of its waste from landfills by 2025.

#### **Project Highlights**

#### **Technology Types:**

#### **Sustainable Deconstruction:**

A sustainable alternative to traditional demolition, which can often have detrimental impacts on the surrounding environment. Deconstruction is also a way to reduce greenhouse gas emissions and energy waste.

- Deconstructed building material will be used for a new fire station and other city projects.
- Exceeded the city's target of repurposing, reusing, and recycling more than 75% of the building's materials.

## San Antonio Water System, TX

Power Purchase Agreement (PPA)



"SAWS is constantly improving its operations to become more sustainable. By reusing biogas instead of burning it off, we are helping protect the city's air quality and developing a renewable energy source."

Robert R. Puente

President & CEO, San Antonio Water Supply

#### **Project Highlights**

#### **Technology Types:**

Biogas; Design-Build; Own, Operate & Maintain; Power Purchase Agreement, Wastewater

#### **Biogas Processed Daily:**

1.5 million standard cubic feet

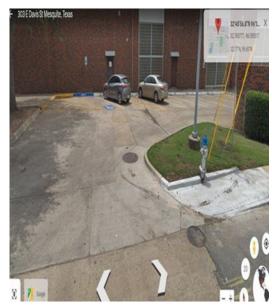
#### **Natural Gas Delivered Daily:**

900,000 cubic feet

#### **Recycled Water Daily Community**

Use: 115 million gallons

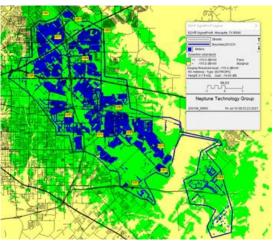
## City of Mesquite, TX







- AMI Meter replacement scope development
- Large meter vault scope development
- Meter testing (large and small)
- AMI system scope development



#### **Project Highlights**

#### **Project Size:**

42,070 Water Meters

#### **Project Scope:**

- AMI
- City-wide water meter and box replacements
- Large meter vault replacements (9)
- Neptune R900 IoT AMI 14 Gateways
- 4 New Monopoles + 4 Replacements
- Integration into Tyler MUNIS
- Neptune Mach 10 Meters
- WaterSmart (VX1) Customer Portal

#### **Water Meter Annual Savings:**

• \$2.6M per year

# City of Phoenix, AZ Wastewater Treatment Plant



Ameresco designed, built, owns, operates, and maintains one of the largest wastewater treatment biogas-to-renewable natural gas (RNG) facility of its kind in the United States. The Energy as a Service (EaaS) solution delivers a credit positive energy infrastructure solution to the wastewater treatment plant owned by the sub-regional operating group member cities: **Phoenix, Glendale, Mesa, Scottsdale, and Tempe and is operated by the City of Phoenix.** 

#### **Project Highlights**

#### **Technology Types:**

Design, Build, Own, Operate & Maintain; Energy as a Service; Wastewater Biogas-to-RNG:

(Used as Vehicle Fuel under EPA's Renewable Fuel Standard Program)

#### **Facility Size:**

~1 acre of land connected to an interstate pipeline via a 3-mile dedicated RNG pipeline

#### **Capable of Processing Raw Biogas:**

3,250 Standard Cubic Feet per Minute

**Annual RNG Injection Into Commercial Pipeline:**693,500 DTH

## **Annual Carbon Emissions Reduction:** 45,000 Tons



# Joint Base San Antonio, TX (Army, Air Force and Navy)



A self-funding \$133.5M energy security and resiliency infrastructure project at Joint Base San Antonio (JBSA) in Texas. The project integrates on-site renewable energy generation, battery energy storage, and microgrid technologies allowing for seamless transition to backup power in order to maintain operation of critical loads.

#### **Project Highlights**

#### **Technology Types:**

Microgrid Control System, Battery Energy Storage, Onsite Energy Generation, Solar PV, HVAC, Combined Heat and Power System, Energy Efficiency, ESPC, Distributed Energy Resources, Smart Buildings

#### **Facility Size:**

14.7M square feet

#### **Task Order Size:**

\$133.5M

## **Annual Energy Consumption Reduction:**

24%

#### **Annual Energy Savings:**

\$8.7M

## City of Columbus, Ohio

#### Parks & Recreation



Ameresco was selected as the Master System Integrator for all Parks and Recreation buildings. Ameresco was selected for an integration project to bring the buildings onto a common building automation front-end to jumpstart the modernization of the maintenance department.

#### **Project Highlights**

#### **Energy Measures Implemented**

Control systems integration

#### **Project Size**

68 Buildings

#### **4 Different Existing Control Systems**

Invensys, Reliable, ASI, and legacy pneumatics system

#### **City of Columbus**

14th most populous city in the U.S.

Plans for growth to support metro area.

Long-term Ameresco customer



## City of Cincinnati, Ohio

Phase 1 & 2 (Currently engaged in Phase 3)



Ameresco performed a lighting system retrofit for 20 of the City's fire stations, 13 recreation centers, five Cincinnati Department of Health (DOH) locations, the Cincinnati Municipal Lunken Airport (CMLA), the Centennial Plaza II office building and the Duke Energy Convention Center facilities.

#### **Project Highlights**

#### **Technology Types**

Lighting System Improvements, Building Automation Control System Improvements, Solar PV Installation, Programmable Thermostats, Mechanical Renovations

#### **Savings Amount**

\$153,731 annually (Phase 1)

\$324,819 annually (Phase 2)



## City of Chicago, Illinois

Streetlighting & Building Upgrades



Ameresco has done multiple projects within the City of Chicago:

- The Chicago Smart Lighting program where over 270,000 streetlights will be converted to LED
- The Public Building Commission of Chicago included upgrades to over 36 buildings including 5 police stations, a library and the Chicago Cultural Center.



#### **Project Highlights**

#### **Project Cost & Savings**

**270,000 Streetlights**. \$150,000,000 cost, >\$10M in annual energy savings (*Smart Lighting Program*)

\$6,000,000, \$702,492 annual energy savings (*Public Building Commission of Chicago*)

## **Key project components of Smart Lighting Program:**

GIS audit and condition survey of 343,000 street, alley and viaduct lights

>\$30M of infrastructure stabilization repairs (pole and wiring replacements)

Conversion of approximately >270,000 streetlights to LED

Installation of a citywide IoT network and lighting management system (LMS)

Integration of the LMS with 311 & other City systems



## City Memphis, Tennessee

LED Streetlight Conversion



City of Memphis and Memphis, Light, Gas & Water contracted with Ameresco to upgrade approximately 77,300 existing high pressure sodium streetlights and underpass lights within the city limits with new LED streetlights.

Lighting Management System (LMS) will provide real-time monitoring, improved customer satisfaction, and additional energy and maintenance savings.

#### **Project Highlights**

#### **Technology Type**

LED Lighting
Lighting Management Controls
77,300 Streetlights

#### **Project Cost**

\$47 million

#### **Estimated Savings Amount**

Over \$3.5 million in energy and maintenance savings in year one; estimated 23,000 less truck rolls annually

## **Expected Annual Carbon Emissions Reduction**

26,221 metric tons

