



City of Columbia

701 East Broadway, Columbia, Missouri 65201

Going to Department Source: City Utilities - Water and Light

To: City Council

From: City Manager & Staff

Council Meeting Date: May 20, 2024

Re: REPORT: Energy Efficiency (Demand Side Management) Programs Revamp

Executive Summary

Staff has prepared a report regarding a revamped suite of energy efficiency, or demand side management, programs based on cost effective analysis and the 2021 Integrated Electric Resource and Master Plan (IERMP). These alternatives will allow both residential and commercial customers to improve the efficiency of their properties by reducing their energy and water use.

Discussion

The current suite of energy efficiency programming being offered by the City of Columbia Utilities is based on the 2012 Integrated Resource Plan for the electric utility, which projected potential peak reduction savings through 2022. The 2021 IERMP outlined the energy conservation goals of 47,000 MWh and 17 MW of peak load reduction by 2030. However, the IERMP based these projections on the program participation from 2018 and 2019 continuing as a constant through 2030. These two years used in the IERMP as the baseline provided the greatest two years of combined energy conservation by Utility Services Division (USD) programming. USD has experienced diminishing returns since 2019 in project participation due to market saturation, as most of the existing suite of programs were implemented between 2007 and 2012.

In order to achieve the goals as outlined in the 2021 IERMP, USD has reviewed the existing suite of programs for increased opportunities and efficiencies and is implementing a revised suite of programs. This included reviewing and revising existing programs and evaluating new programs for rebates and incentives. Cost-effectiveness for the revamped suite of energy efficiency programs was determined based on the Utility Cost Test (UCT), an industry-standard cost-effectiveness evaluation on the impact of the demand side management programs on utility finances. This evaluation includes only utility costs and benefits, as it treats energy efficiency like a utility resource. Costs included in the evaluation are incentives, rebates, and program administration paid by the utility, while benefits are avoided fuel costs and avoided capacity costs to the utility. Programs that score 1.0 or greater with the UCT are cost effective and financially beneficial to the utility. Programs that did not score 1.0 or greater are not included in the revised suite of programs. This revised suite of programs was presented to the Columbia Water & Light Advisory Board for their review on April 17, 2024. The Board supported the proposed revisions to the suite of programs offered. Included below is a summary of the programs offered. Attached is the communication provided to the Water and Light Advisory Board that includes more detailed information on each program.



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The revised suite of electric energy efficiency programs for FY2024 includes (* new program):

- Commercial Custom Rebate
- Commercial Daylight Harvesting*
- Commercial Kitchen Equipment*
- Commercial Lighting
- Commercial Variable Frequency Drives
- Commercial and Residential AC/Heat Pump Replacement
- Commercial and Residential Heat Pump Water Heater*
- Residential Attic Plus
- Residential Home Performance with Energy Star
- Residential Smart Thermostat Rebate*

The City of Columbia Utilities offers additional programs that are not evaluated based on the UCT for energy reduction. These programs are designed to promote renewables and electrification, provide financing opportunities for efficiency upgrades, reduce water usage, provide customer service, and provide efficiency opportunities to income eligible residences.

The revised suite of efficiency programs for FY2024 includes (* new program):

- Commercial Free Energy Audits
- Commercial Key Account Program
- Commercial Infrared and Compressed Air Leak Detection
- Commercial and Residential Efficient Flush Rebates
- Commercial and Residential Efficient Irrigation Rebates
- Commercial and Residential Efficiency Loan Programs
- Commercial and Residential EV Charger Rebates
- Commercial and Residential Solar (Distributed Generation) Rebates
- Residential Efficient Electrification Rebates*
- Residential Free Energy Assessments
- Residential Income Eligible Programs

Programs designed for the 2012 Integrated Resource Plan that were removed from the revised suite include:

- Commercial Motor Program (*Not cost effective*)
- Commercial and Residential Geothermal Heat Pump Rebate (*Market transformation, eligible for rebate under Commercial Custom Rebate and Residential AC/Heat Pump Replacement*)
- Commercial and Residential Solar Water Heater Program (*Market transformation*)

The City of Columbia Utilities intends to review programs on a triennial basis, compared to the current suite which has been in place since the 2012 Integrated Resource Plan. This will allow for adjustment and expansion of programs based on new technologies and changes in the market.



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Additionally, the Federal Inflation Reduction Act (IRA), has created potential funding opportunities for energy efficiency through the Missouri Department of Natural Resources. The proposed new suite of efficiency programs from City of Columbia Utilities is designed to align with the federal requirements for the IRA, when feasible, to increase incentive opportunities for customers. However, this funding is not expected to be available to Missouri residents until 2026 or later.

With the revised suite of programs, communications to promote these programs will be necessary. The Utility Services Division has an existing contract with Bucket Media for utility communications. Starting in Fiscal Year 2025, the focus of this contract will be the promotion of the revised suite of programming. This will include advertisements on TV, radio, streaming services, web searches, and social media. Utilities staff will also be promoting the revised suite of programming including, but not limited to: social media, outreach to contractors, targeted customer outreach, public events (i.e. Heritage Festival, etc.), and partnering with local organizations for additional outreach.

Fiscal Impact

Short-Term Impact: N/A
Long-Term Impact: N/A

Strategic & Comprehensive Plan Impact

Strategic Plan Impacts:

Primary Impact: Reliable and Sustainable Infrastructure, Secondary Impact: Not Applicable, Tertiary Impact: Not Applicable

Comprehensive Plan Impacts:

Primary Impact: Infrastructure, Secondary Impact: Livable & Sustainable Communities, Tertiary Impact: Environmental Management

Legislative History

9/6/2011	B222-11: Approval of proposed changes to the Energy Efficiency Ordinances for Energy Efficiency Incentives. Energy Efficiency Incentives consist of the planning, implementing, and monitoring activities of the electric utilities that are designed to encourage consumers to modify their level and pattern of electricity usage.

Suggested Council Action

For information only.