



City of Dallas

Energy Management for City Buildings

June 7, 2021

**Environment and Sustainability
Committee**

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Building Services Department**

Presentation Overview



- **Background**
- **Initiatives Underway**
- **Upcoming Agenda Items**
- **Next Steps**



Background



- **April 10, 2019, City Council adopted the Green Energy Policy (CR 19-0484) documenting the City of Dallas' commitment to:**
 - **Use clean and efficient energy**
 - **Purchase 100 percent renewable energy**
 - **Promote renewable energy projects and partnerships that reduce environmental impacts**
- **Resolution also provided direction to the City Manager to establish an energy management program**



Background



- **Building Services Department (BSD) is charged with implementing the energy management program and works with various stakeholder departments**
- **Early focus is on understanding current status and then developing strategies and activities to reduce energy consumption and associated greenhouse gas emissions**
 - **FY2019-2020 budget established a dedicated energy program manager position**
 - **Position filled March 2020**

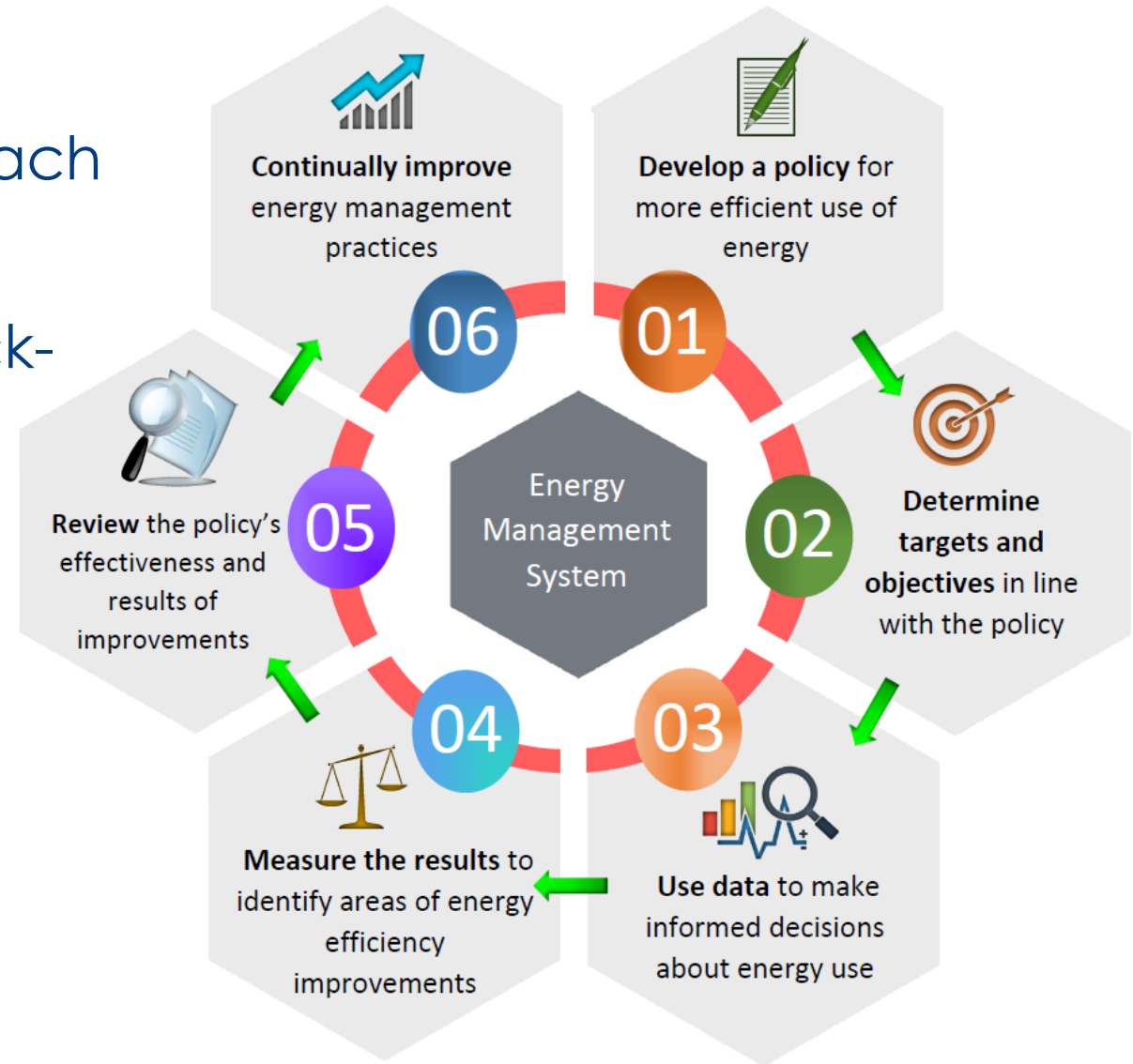


Background



Energy Management System

- Systematic and iterative approach to intentional energy decisions
- Largely based on plan-do-check-act model
- Anticipated results:
 - Reduced environmental footprint (reduced energy consumption/ increased renewable energy generation)
 - Reduced energy costs



Initiatives Underway

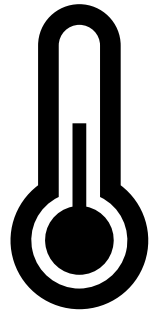


High-level overview of some key initiatives:

- Re-visiting space temperature setpoints and adjusting HVAC equipment schedules at 18 City facilities.

Example: Preliminary projected energy savings of 5,300,000 kWh/year or 3,750 metric tons of CO₂ offset by

1. Adjusting cooling and heating setpoints to:
 - Occupied / Unoccupied Cooling Setpoint: 75°F / 85°F
 - Occupied / Unoccupied Heating Setpoint: 70°F / 55°F
2. Adjusting HVAC equipment schedules to more closely align with building operating schedules (turn the HVAC equipment ON & OFF 1 to 2 hours before and after normal operating hours)



5,300,000 kWh is approximately 0.75% of the annual overall City electricity purchased, or about \$350,000



Initiatives Underway



High-level overview of some key initiatives, continued:

Benchmarking energy consumption of City facilities to help identify underperforming buildings and prioritize energy conservation measures

Name	Energy Current Date	ENERGY STAR Score	Site EUI (kBtu/ft ²)	National Median Site EUI (kBtu/ft ²)
Arcadia Park Branch Library 11987135	12/31/2019	NA	76.6	51.3
Audelia Road Branch Library 11987082	12/31/2019	NA	71.2	58.5
Bachman Lake Branch Library 11987087	12/31/2019	NA	55.7	51.3
Dallas West Branch Library 11987088	12/31/2019	NA	164.2	78.6
Forest Green Branch Library 11987093	12/31/2019	NA	92.0	51.3



(Preliminary data for illustrative purposes)



Initiatives Underway



High-level overview of some key initiatives, continued:

- Auditing energy use in partnership with the State Energy Conservation Office (SECO)
- Assessing feasibility of solar installation at City facilities in partnership with SECO
- Establishing Energy Management System (EnMS) – preparing to launch a software system with features that include integration with Energy Star Portfolio Manager[®], measurement and verification to track energy savings associated with projects and initiatives, and dashboards
- Positioning and partnering: Two energy-related items scheduled for consideration on the June 23rd City Council Agenda



Initiatives Underway



1st agenda item (file 21-780) - Enrolling in the Oncor Commercial Standard Offer Program:

- Oncor provides incentives for energy efficiency retrofits and improvements
- City qualifies to participate by having commercial accounts and by paying the Energy Efficiency Cost Recovery Factor (EECRF) Rider as part of the transmission and distribution portion of the electricity bill
- BSD anticipates applying for incentives to partially offset costs on eligible improvements such as roof replacements, lighting upgrades, and other energy efficiency projects
- Rebates received to help fund additional improvements



Initiatives Underway



2nd agenda item (file number 21-904) - Amendment to Electricity Contract:

- Electricity supply contract with TXU encourages the City to pursue self- and co-generation projects to meet a portion of City facility electricity needs
- Any excess power generated by a project beyond a facility's needs can be exported to the electrical grid
- Contract amendment establishing that excess power exported from a facility to the grid will be valued at 95% of the “Real Time Settlement Point Price” for the facility's load zone which is calculated every 15 minutes by Electric Reliability Council of Texas (ERCOT)



Initiatives Underway



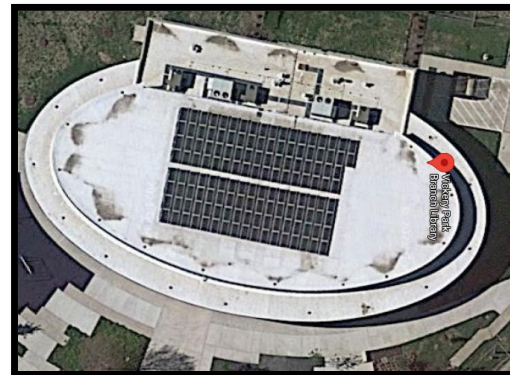
Proposed Electricity Contract Amendment, continued:

Currently, the following facilities have limited potential to benefit from this amendment:

- Vickery Park Library
- Fire Station No. 6
- Fire Station No. 27
- Kiest Park Recreation Center
- Northcentral Police Station
- Northeast Police Station
- Southeast Police Station



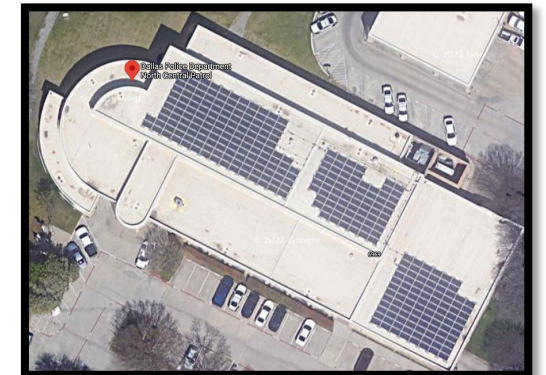
Kiest Park
Recreation
Center



Vickery Park Library



Fire Station No. 6



Northcentral Police



Recommendations



On the June 23, 2021, City Council Agenda:

1. Approval of authorization for City participation in the Oncor Commercial Standard Offer Program as a “self-provider”, enabling the City to receive cash incentives for implementing energy efficiency measures at City facilities with any incentives received used to help fund future energy efficiency projects.
2. Approval of an amendment to the electricity services contract with TXU Energy Retail Company, LLC to enroll the City in their Surplus Power Purchase Program for any self-generation or co-generation projects installed at City facilities.



Next Steps



- **Full council consideration of agenda items June 23, 2021**
- **Individual project rebate applications to Oncor (late June and on-going)**
- **Committee updates on benchmarking and energy management system fall 2021**
- **Inaugural Annual Energy Report – late 2021**





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