



## Warm in the winter and cool in the summer since 1989.



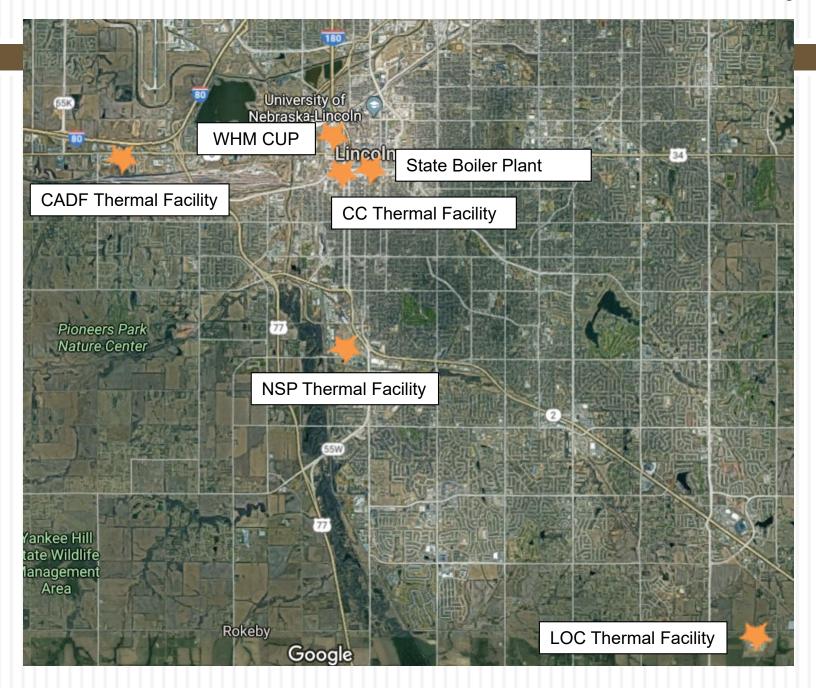
## **District Energy**

- □ District Energy (DE) is the local production and distribution of thermal energy and is comprised of two main elements\*
  - A central energy plant containing equipment that produces thermal energy in the form of steam or hot water for heating, or chilled water for cooling. The central plant may also incorporate combined heat and power (CHP) units which produce electricity and useful thermal energy
  - □ A network of pipes to distribute the thermal energy from the central plant to the buildings. This network of underground pipes can carry hot water, steam, or chilled water
- DE is a long-term investment to improve the physical infrastructure of the community it serves\*
- DE systems are commonly found at universities, downtown business centers, hospital campuses, and industrial parks

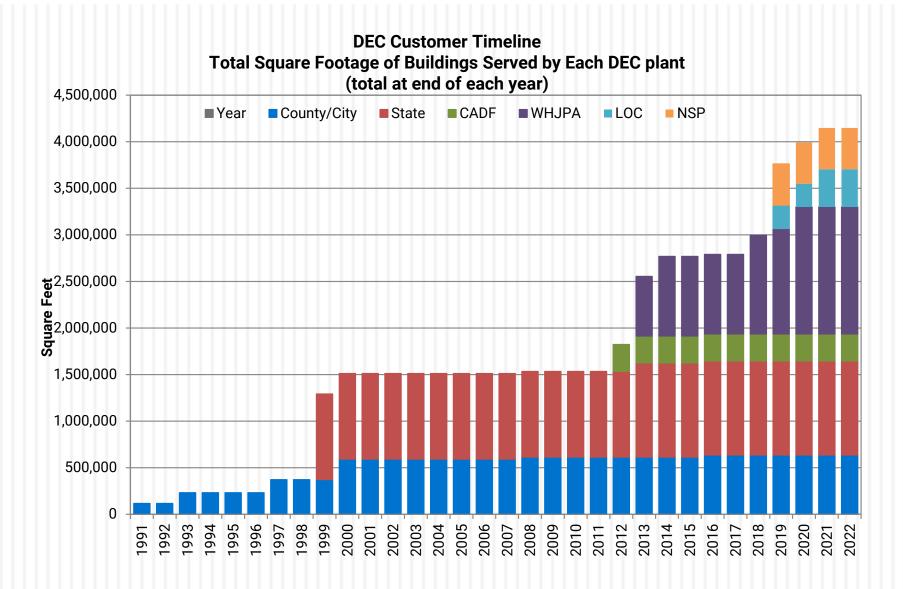
<sup>\*</sup> Community Energy: Planning, Development, and Delivery, International District Energy Association, 2012



### **DEC Locations within Lincoln, NE**



## **Square Footage Served Timeline**



## DEC Thermal Facilities Customer Service Summary

Plant	Cooling	Heating	Fuel Sources	Backup Power**
CC	CW (Chillers/ICE)	HW	Natural Gas/Fuel Oil	Plant
SBP	No Service	Steam	Natural Gas/Fuel Oil	Plant
CADF	CW	HW	Geothermal*	Plant/Customer
WHM	CW (Chillers)	HW	Natural Gas/Electric	Plant
LOC	CW	HW	Geothermal*	Plant/Customer
NSP	CW (Chillers)	Steam	Natural Gas/Fuel Oil	Plant/Customer

\*All ground-coupled, electric heat pumps \*\* Not Emergency Power/ Life Safety CC = County City Thermal Facility

SBP = State Boiler Plant

CADF = County Adult Detention Thermal Facility

WHM = West Haymarket Central Utility Plant

LOC = LES Operations Center Thermal Facility

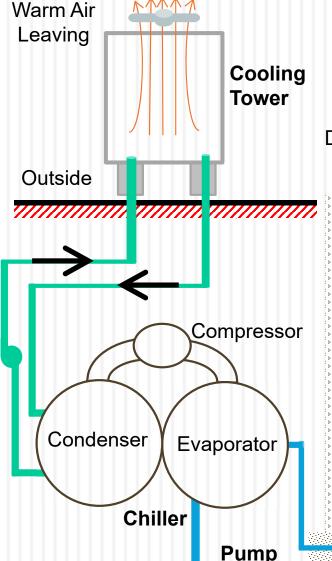
NSP = Nebraska State Penitentiary Thermal Facility

HW = Hot Water, CW = Chilled Water



## Typical DE Cooling System-Conventional Chillers

6

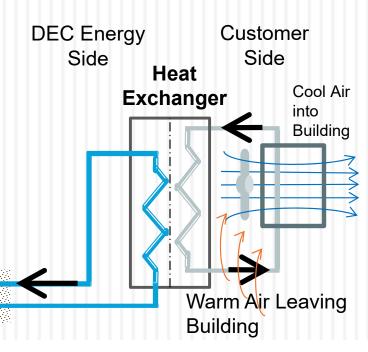


**DEC Plant** 

DEC Customer

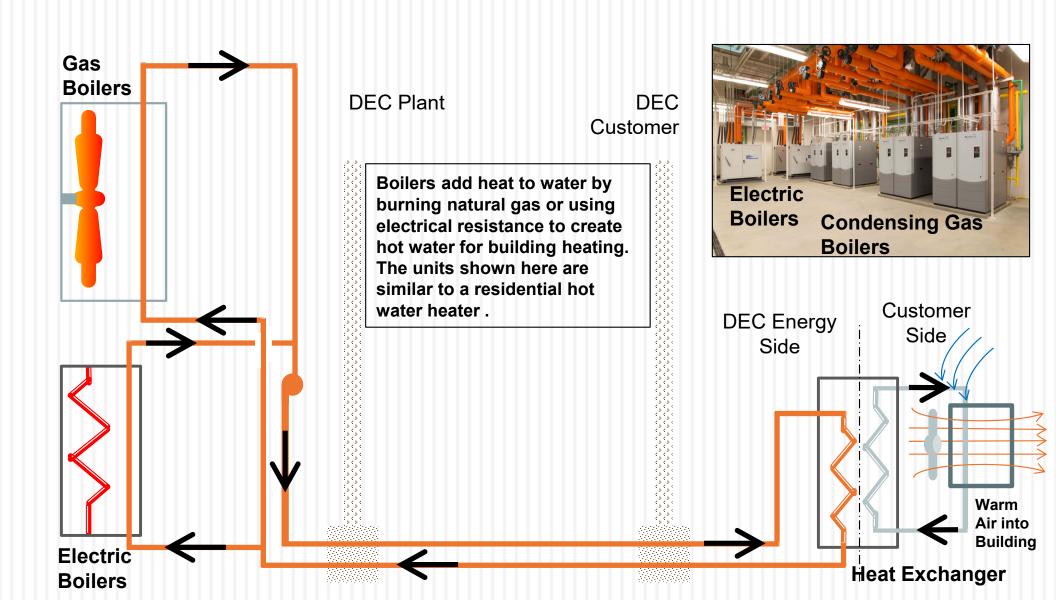
Chillers remove heat from water to create chilled water for building cooling. Heat energy from warm air inside customer's building is removed by DEC chilled water. Warmer chilled water returns to plant where the heat is removed by the chillers and is transferred to cooling tower water. Ultimately, the heat energy that was inside the customer's building is rejected by the cooling tower to outdoor air.





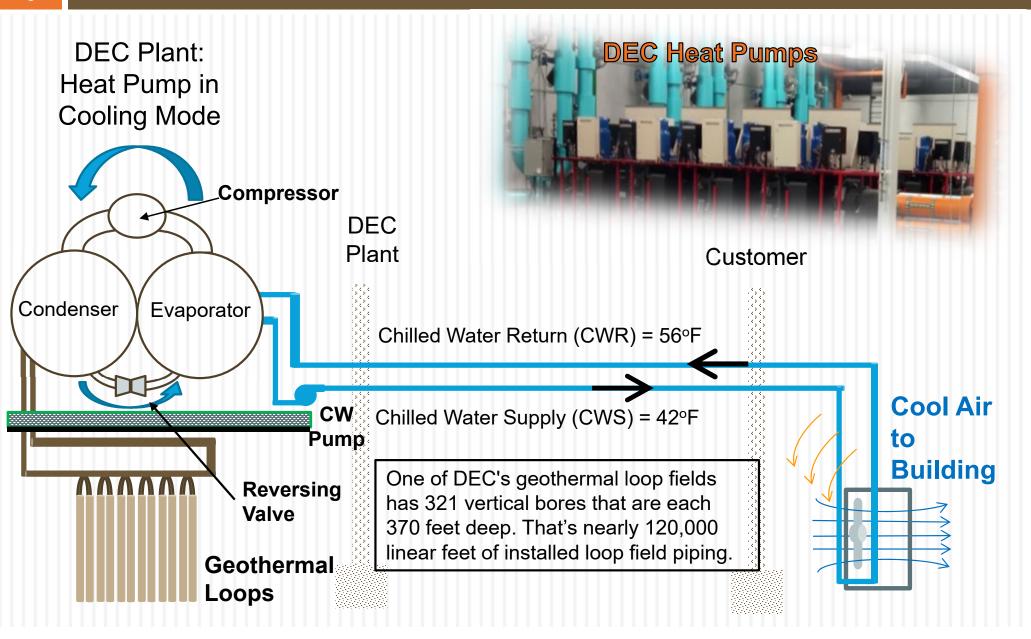
## Typical DE Heating System-Conventional Boilers

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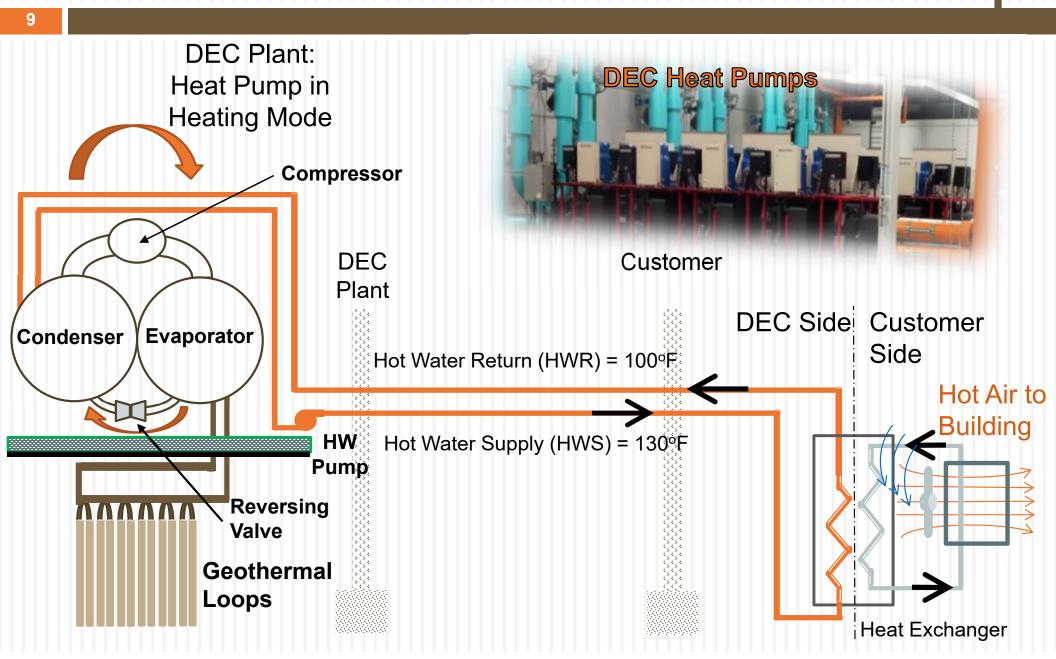
## DEC Cooling System –Geothermal Heat Pumps

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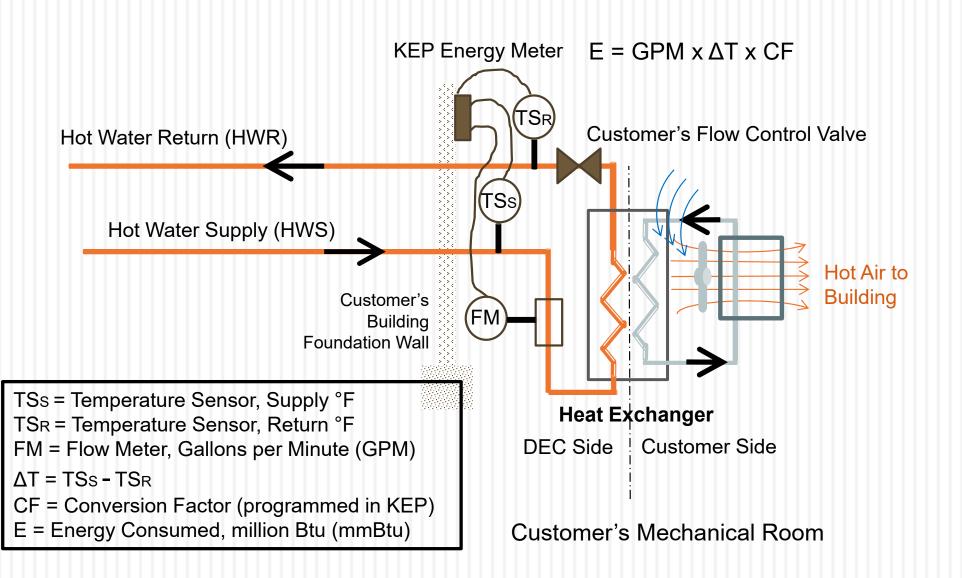
## DEC Heating System -Geothermal Heat Pumps



## **Typical Metering Configuration**

(applies for either chilled or hot water)

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### **District Energy Corporation**

- District Energy Corporation (DEC) is a nonprofit joint entity\* and City of Lincoln and Lancaster County interlocal agency organized pursuant to
  - □ The Nebraska Interlocal Cooperation Act
- DEC Energy is a political subdivision created and existing under the laws of the State of Nebraska

<sup>\*</sup>It is important to note that under the Nebraska Nonprofit Corporation Act DEC was once considered a nonprofit corporation. The nonprofit corporation has since been dissolved and on December 21, 2020, the interlocal cooperation agreement between the City and County was amended and restated.



#### **Services**

- DEC Energy was formed in 1989 by the City of Lincoln and Lancaster County for purposes of:
  - □ Constructing
  - □ Financing
  - □ Furnishing
  - □ Operating thermal energy facilities and related services for providing heating and cooling to governmental entities
    - □ DEC can now provide services to private entities as well.
- □ Initiated because of a County project to build a then new detention facility at 605 South 10<sup>th</sup> Street



### Management Agreement

- Why does LES manage DEC?
  - □ LES was instrumental in its creation
  - Synergy between LES and DEC Energy allows for mutual benefits
  - □ Focus on reliability, efficiency, sustainability, robustness, value justified on life cycle cost analysis; profits are not a motive for either LES/DEC Energy
  - □ LES had experience operating a CHP in downtown Lincoln
  - □ Aligns with LES Vision and MissionStatements



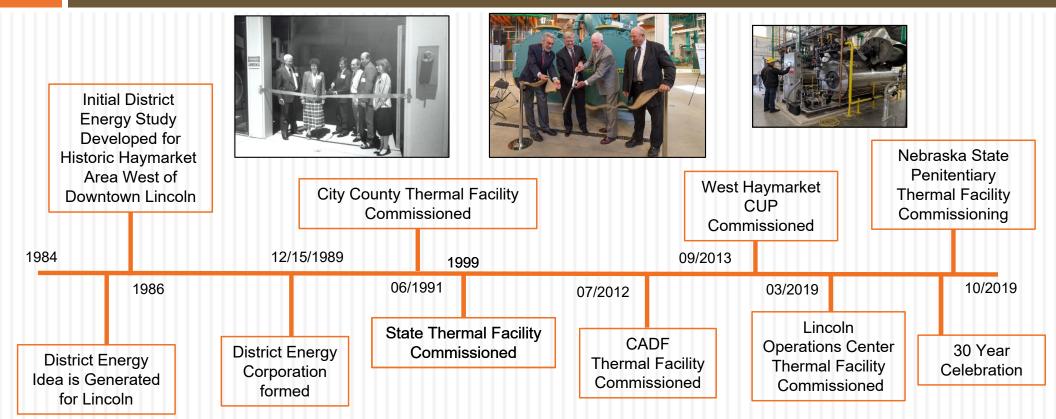


### **Management Agreement**

- Pursuant to a Management Agreement between LES and the Corporation, LES manages DEC's systems and affairs:
  - □ LES is responsible for the overall operation, maintenance and administration resulting in the equivalent labor of 11 full time positions
  - □ Initial term of 20 years; currently 5 year rolling term
  - □ LES is not responsible for any liabilities of the Corporation, including its indebtedness, and the Corporation has agreed to indemnify LES



#### **DEC Timeline**













#### Governance

- DEC Energy is governed by a 5-member Board of Directors
  - □ 2 County Representatives
  - □ 2 City Representatives (1 Council, 1 Mayor appointed)
  - □ 1 LES Representative
- Directors serve two-year terms and are eligible for reappointment



### **Board of Directors**



Rick Vest Director County Commissioner



Tammy Ward Board Vice Chair City Council



Kim Morrow Director City Representative



Carl Eskridge Director LES Board



Sean Flowerday Director County Commissioner



## Mission/Vison

LES Mission: "LES is a progressive leader, partnering with the community to maximize energy value and quality of life in an environmentally-responsible manner"

LES Vision: "Striving to be the world's best energy company"

**DEC Mission**: "Provide low-cost, reliable and efficient thermal energy services to enhance and enable economic development of the Lincoln community"

**DEC Vision:** "Striving for energy excellence"

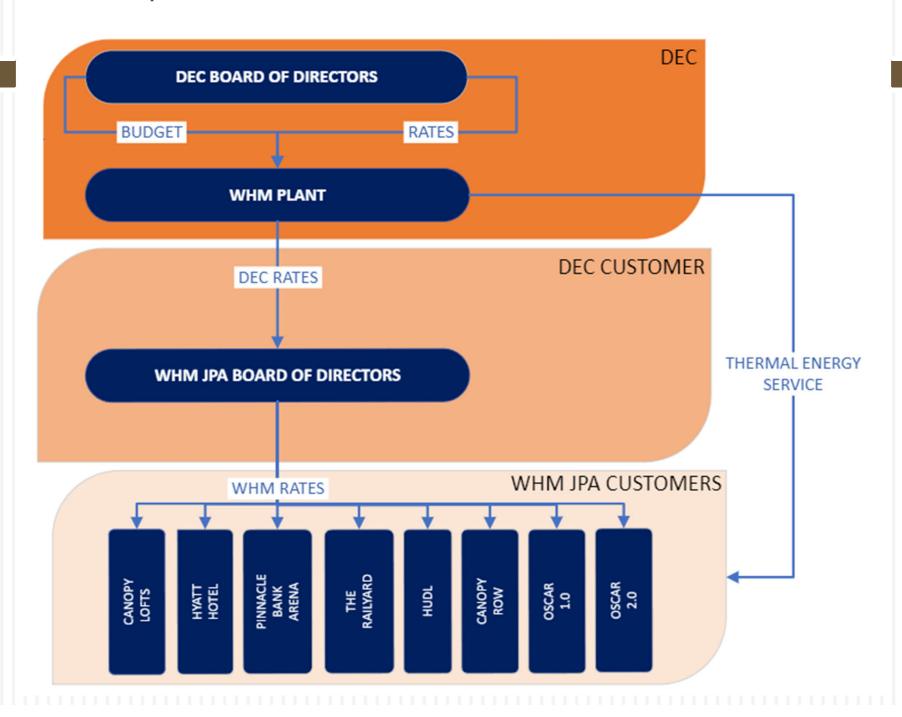


# DEC Rates are set using Cost of Service Principles

#### **Energy Services Agreement General Rate Principles**

- Cost of Service
- □ Through its General Bond Resolution, DEC is obligated to set rates sufficient to collect funds to meet
  - □ All Debt
  - **□** Operations & Maintenance
  - **□** Commodity Expenses

#### DEC/WEST HAYMARKET JPA RELATIONSHIP



## DEC Thermal Facilities Customer Service Summary

Plant	Cooling	Heating	Natural Gas	Backup Power **
CC	Yes	Yes (HW)	Yes	No
SBP	No	Yes (Steam)	Yes	No
CADF	Yes	Yes (HW)	No*	Yes
WHM	Yes	Yes (HW)	Yes	No
LOC	Yes	Yes (HW)	No*	Yes
NSP	Yes	Yes (Steam)	Yes	Yes

\*All ground-coupled, electric heat pumps \*\* Not Emergency Power/ Life Safety CC = County City Thermal Facility

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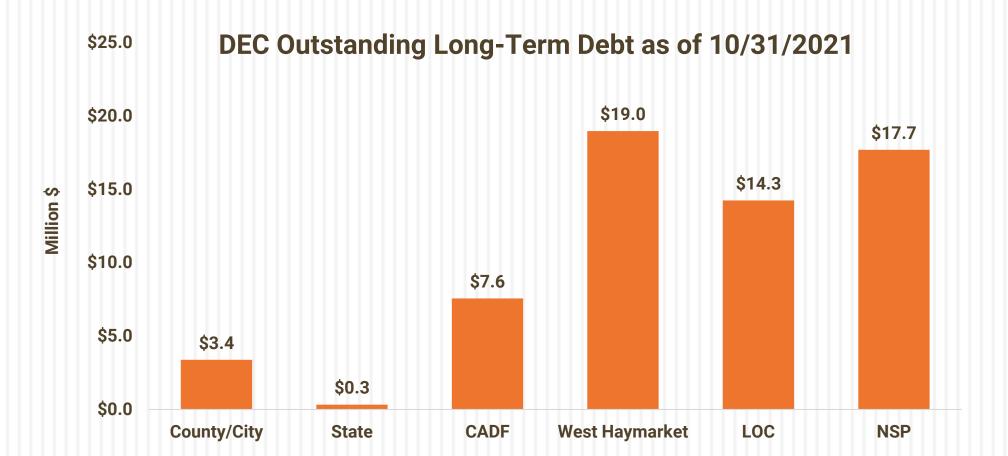
HW = Hot Water

### **DEC Metrics**

DEC Metric	Forecasted 2021 Amounts	Budgeted 2022 Amounts	% Growth
Annual Sales	281,133 mmBtu	264,891 mmBtu	-5.8%
Annual Revenue	\$10.5M	\$12.0M	14.1%
Installed Asset Cost	\$84.3M	\$85.1M	1.0%
Outstanding Debt	\$62.2M	\$59.1M	-5.3%
Square Footage Served	3,929,925 sq. ft.	4,136,125 sq. ft.	5.2%
Customers Served	6	6	0.0%

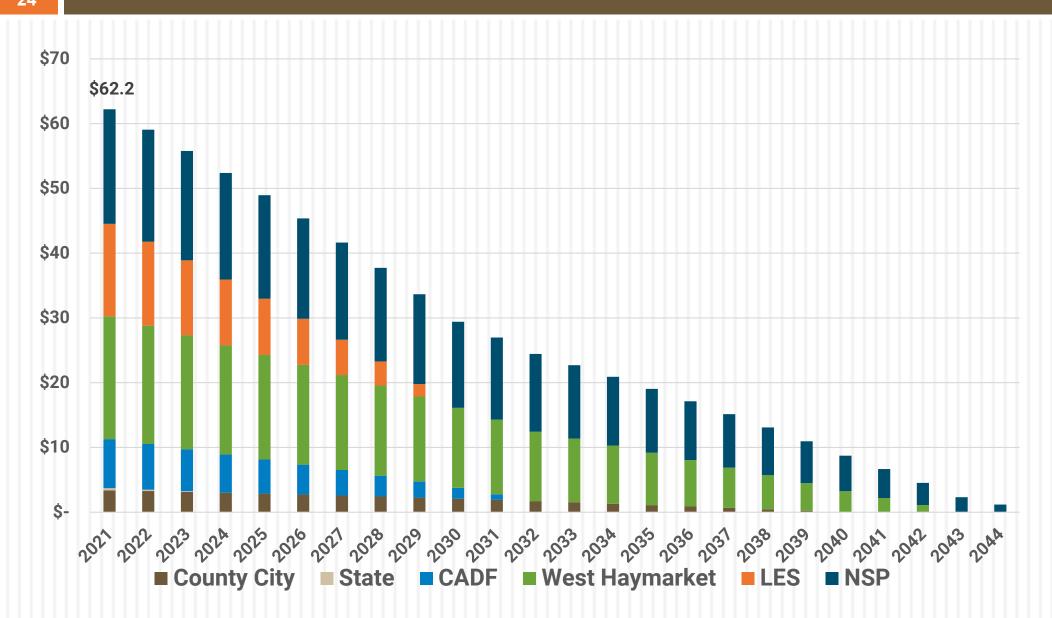
All amounts are displayed as of year-end

## **DEC Outstanding Debt**









## **DEC Financial Support**

## The DEC Board has hired professionals to assist with financial activities

- LES Accounting, Budgeting, Financial Planning, Rate Design, Investments, Insurance (through Management Agreement)
- Kutak Rock, LLP Bond Counsel (Dawn Roth & John Petr)
- □ PFM Financial Advisor (Michael Mace)