



**DEC**  
ENERGY



Lincoln Electric System

# DEC Energy Overview

for

Lancaster County Commissioners

Dan Dixon, P.E., DEC Project Manager

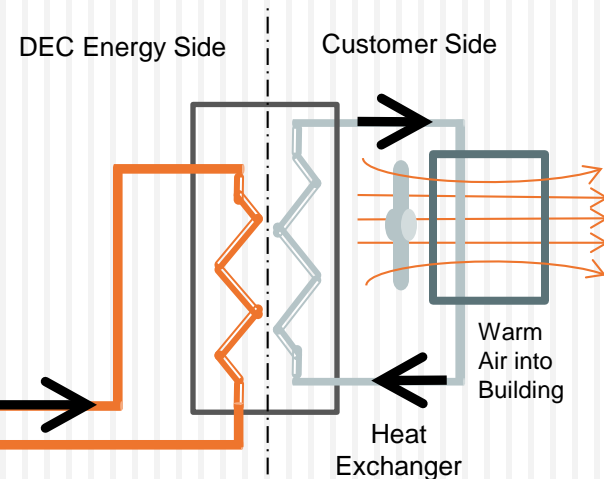
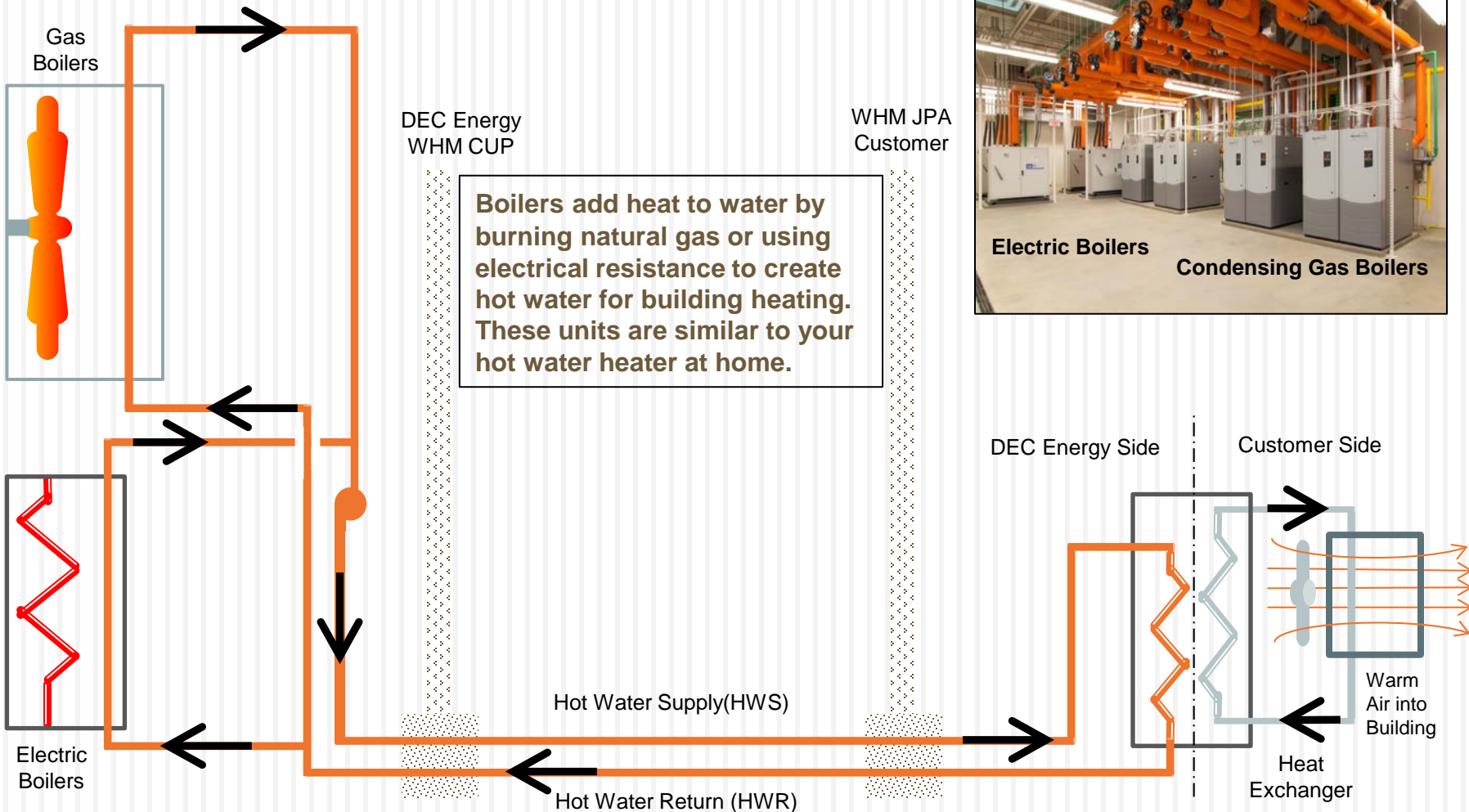
June 8, 2017

- ***District Energy (DE)*** is the local production and distribution of thermal energy and comprises 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

\* *Community Energy: Planning, Development, and Delivery*, International District Energy Association, 2012

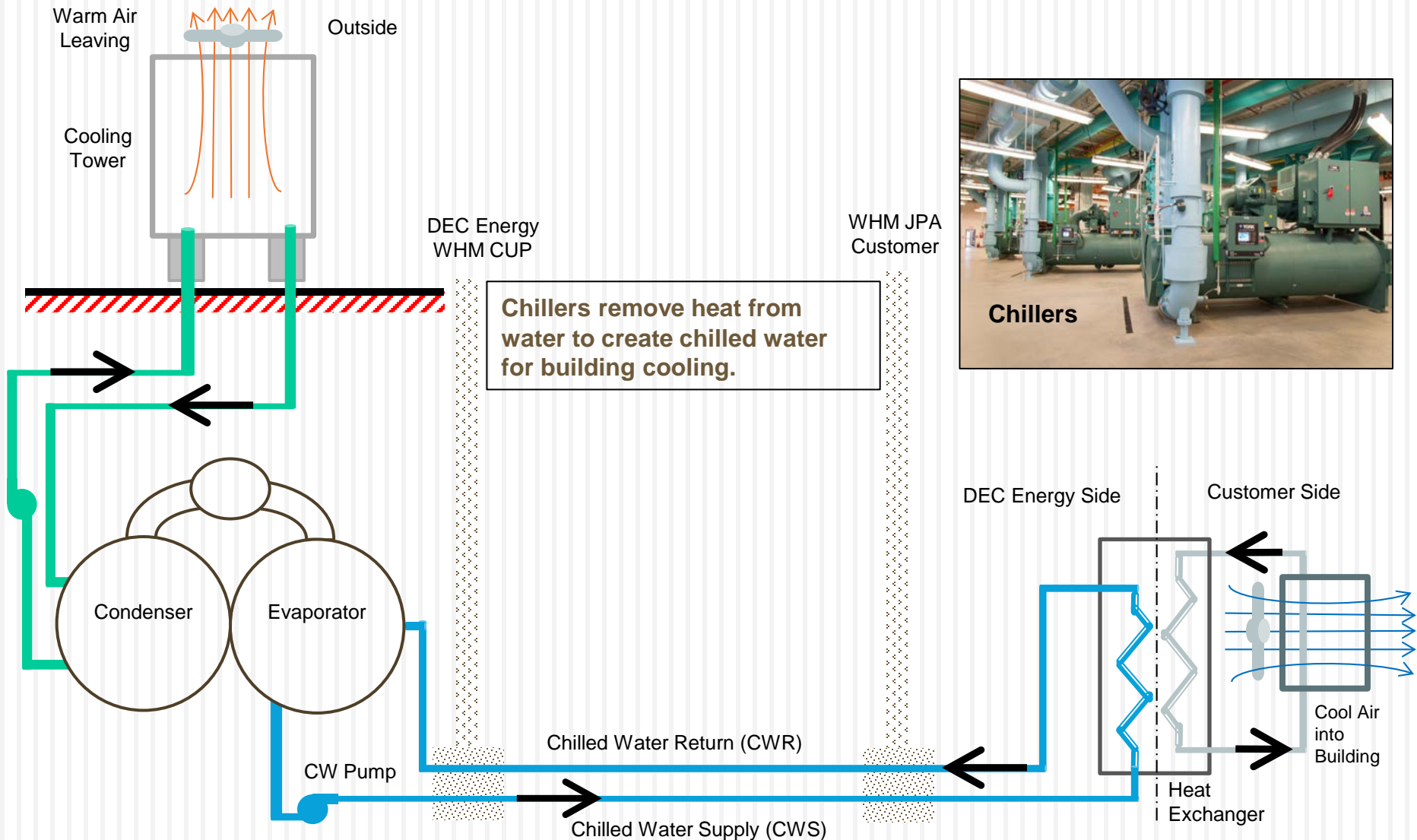
# Typical DE Heating System

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# Typical DE Cooling System

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# District Energy Corporation

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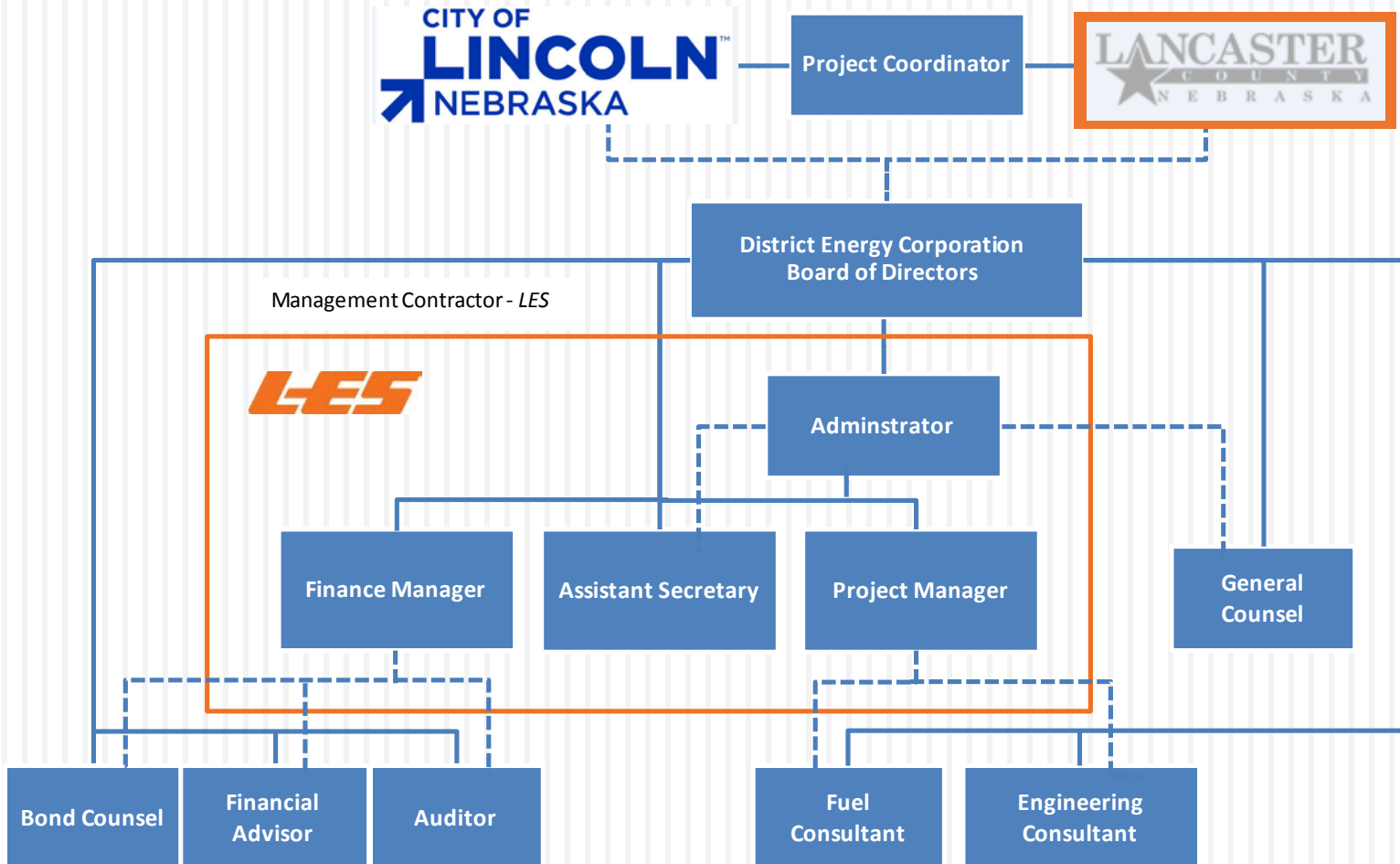
- ❑ **District Energy Corporation (DEC) is a nonprofit corporation and City of Lincoln and Lancaster County inter-local agency organized pursuant to**
  - ❑ **The Nebraska Nonprofit Corporation Act**
  - ❑ **The Nebraska Interlocal Cooperation Act**
  
- ❑ **DEC Energy is a political subdivision created and existing under the laws of the State of Nebraska**



- ❑ **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**
- ❑ **Initiated because of a County project to build a then new detention facility at 605 South 10<sup>th</sup> Street**

- ❑ **DEC Energy is governed by a 5 member Board of Directors**
  - ❑ **2 county commissioners**
  - ❑ **2 city representatives**
    - **Council member**
    - **Mayor appointee**
  - ❑ **1 LES Board member**
  
- ❑ **Board members serve two-year terms and are eligible for reappointment**

# Organization Structure







# Management Agreement

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- ❑ 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 7 full time positions for 2017
  - ❑ As of June 1, 2017, 20 year term
  - ❑ LES is not responsible for any liabilities of the Corporation, including its indebtedness, and the Corporation has agreed to indemnify LES

# Management Agreement

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- ❑ **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 Combined Heat & Power Plant in downtown Lincoln**
  - ❑ **Aligns with LES Vision and Mission Statements**



Initial District Energy Study Developed for Historic Haymarket Area West of Downtown Lincoln



City County Thermal Facility Commissioned



SW 40<sup>th</sup> Thermal Facility Commissioned

Energy Service Agreement signed with LES

1984

1986

12/15/1989

06/1991

1999

07/2012

09/2013

10/2016

District Energy Idea is Generated for Lincoln

District Energy Corporation formed



State Thermal Facility Commissioned



West Haymarket CUP Commissioned







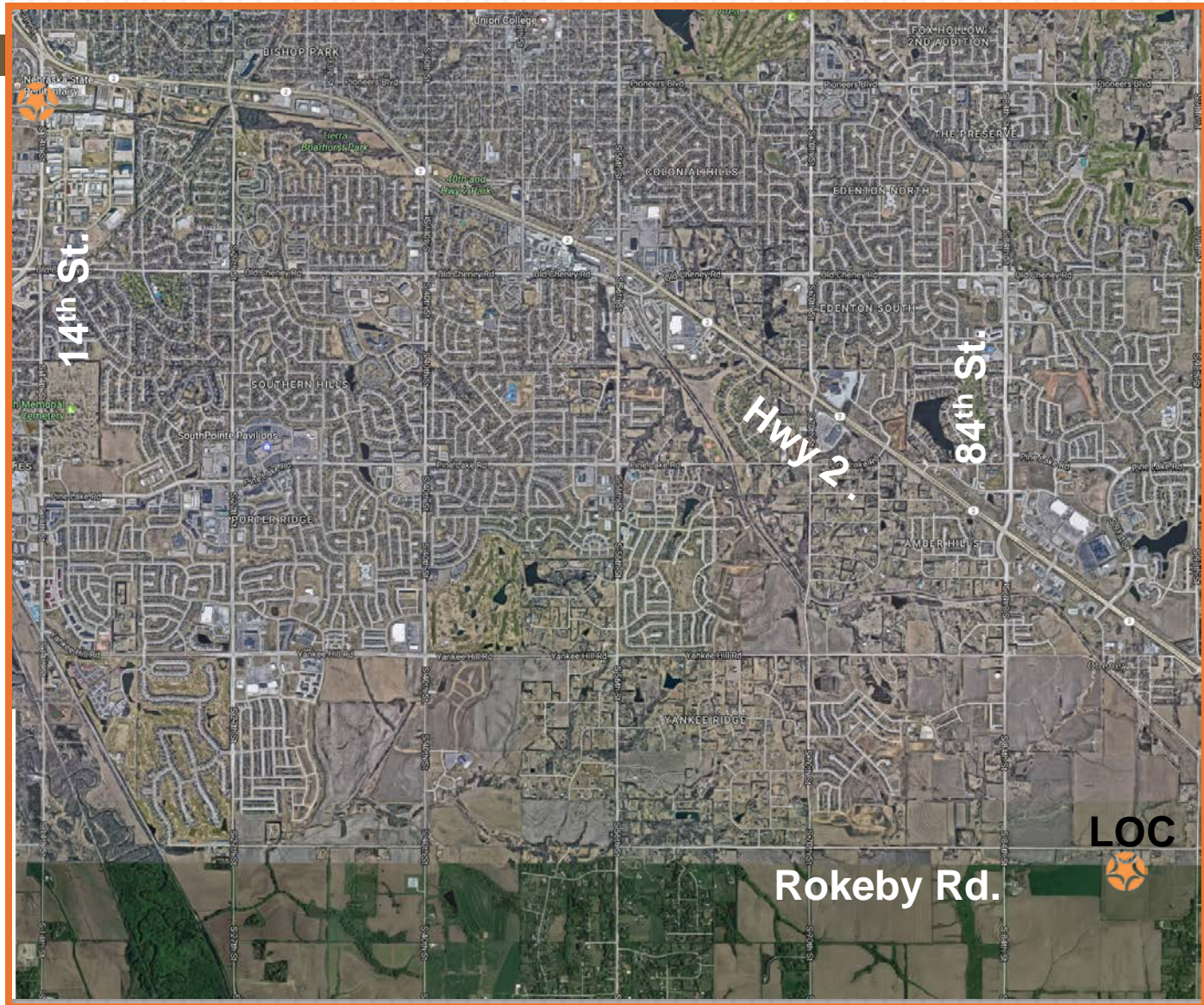
# DEC Locations within Lincoln, NE

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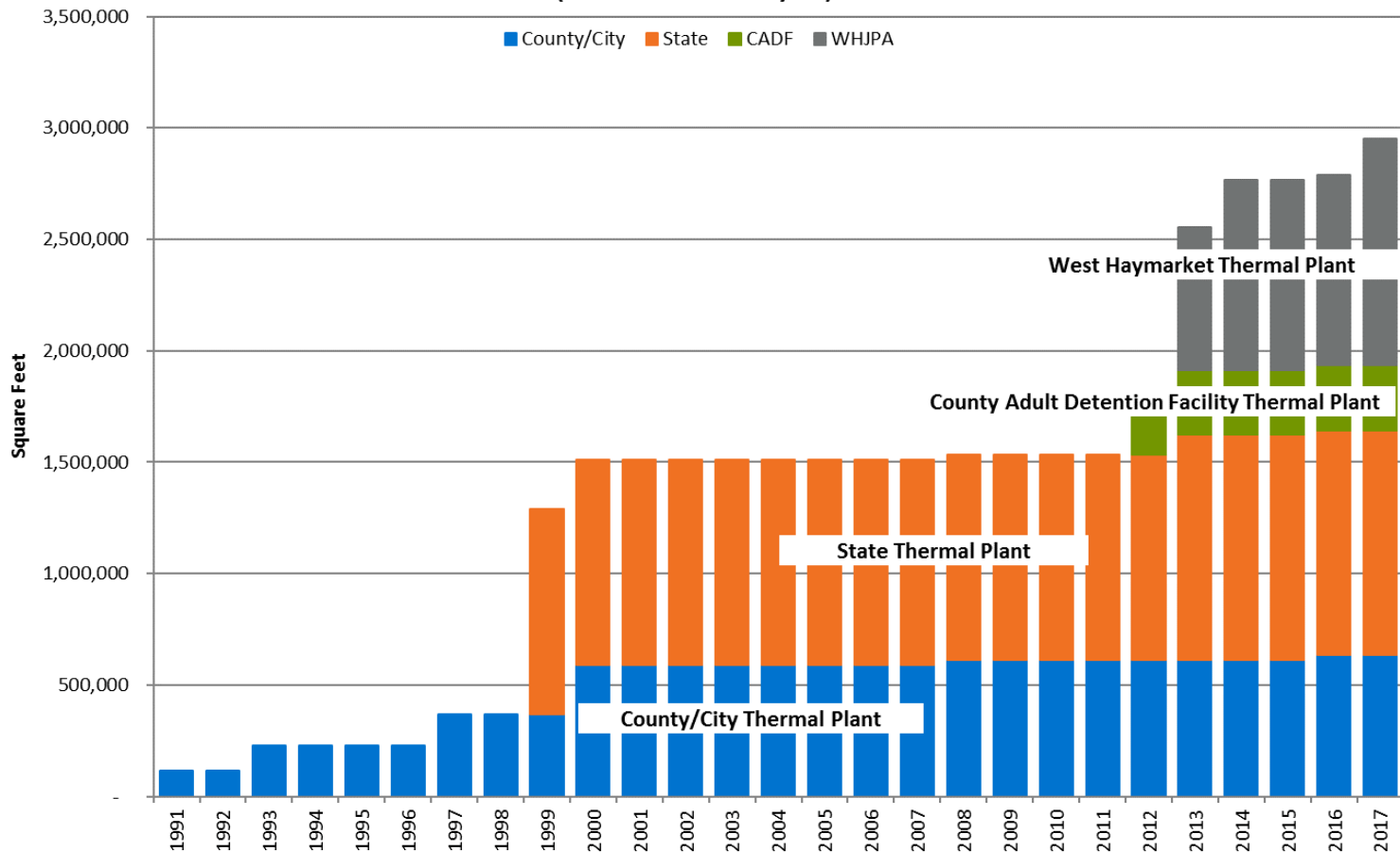


# DEC Locations within Lincoln, NE



# Square Footage Served Timeline

**DEC Customer Timeline**  
**Total Square Footage of Buildings Served by Each DEC plant**  
 (total at end of each year)





# Financing for Projects

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- ❑ **DEC has historically issued Tax-Exempt bonds to support capital construction funding**
  - ❑ **DEC is rated AA+ by both Fitch Ratings and Standard & Poor's**
  - ❑ **DEC receives a high bond rating due to all financings being secured by the Energy Services Agreements with governmental entities.**
  - ❑ **DEC currently has \$37.7M in outstanding debt**



# Energy Services Agreements

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- ❑ **DEC has Energy Services Agreements with:**
  - ❑ **County/City**
  - ❑ **County**
  - ❑ **Lincoln Electric System (*plant currently under construction*)**
  - ❑ **State of Nebraska**
  - ❑ **West Haymarket JPA**
    - ❑ **The West Haymarket JPA sells services to customers in the JPA “footprint”**
  
- ❑ **Energy Services Agreements:**
  - ❑ **Obligate customers to pay all debt associated with DEC, regardless of whether they continue to take service.**
  - ❑ **Outline how customer rates will be designed and how bills will be rendered.**
  - ❑ **Provide additional detail regarding the character of service and roles and responsibilities of DEC and the customer.**





# Cost of Service

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- ❑ **DEC adheres to Cost of Service principles for rate design**
  - ❑ **Rates are designed to:**
    - ❑ Be fair, reasonable and nondiscriminatory
    - ❑ Collect funds needed to operate the utility and provide sufficient reserves
  - ❑ **Rates are not designed to:**
    - ❑ Generate a profit for any stakeholders
    - ❑ Create cross-customer subsidization
  
- ❑ **Charges generally include 4 rate components:**
  - ❑ Demand Financing – fixed monthly rate which recovers debt payments
  - ❑ Demand Other – fixed monthly rate which recovers operations, maintenance, administrative and debt service coverage
  - ❑ Heating Commodity Rate – fixed rate per mMBTU
  - ❑ Cooling Commodity Rate - fixed rate per mMBTU
  
- ❑ **Rates are adopted by the DEC Board of Directors in conjunction with the annual budget process**



# Financial Metrics and Target

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- ❑ **Total Original Cost of Plant in Service > \$40M**
- ❑ **Total Annual Revenue ~ \$5.8M**
- ❑ **Debt Service Coverage Target = 1.10x – 1.20x**
- ❑ **Liquidity Target = 60-90 Days Cash on Hand**



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# COMMENTS/QUESTIONS

**Thank You**