

WH JPA



DEC
ENERGY

LES

Lincoln Electric System



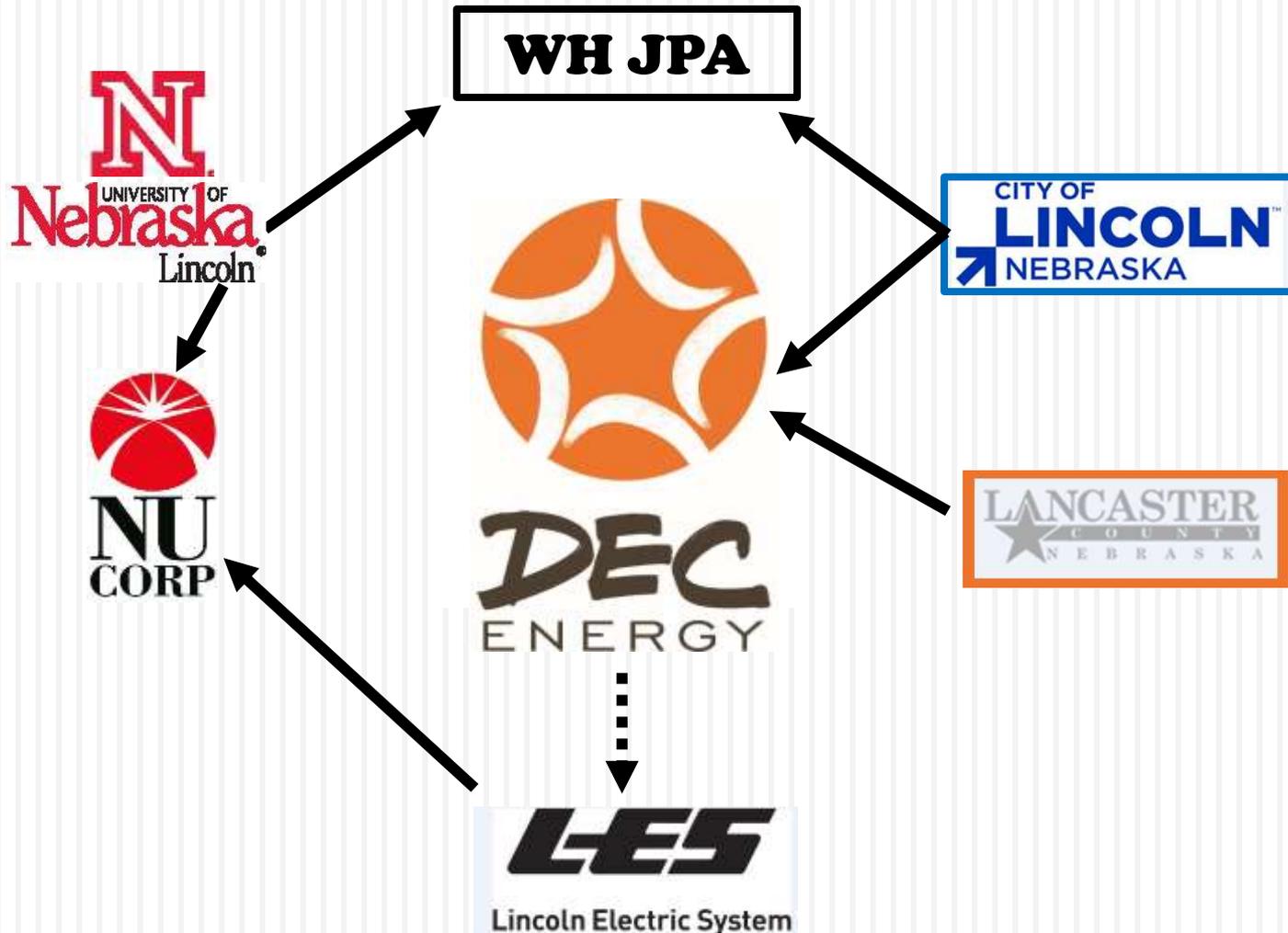
DEC Energy Overview

IDEA 106th Annual Conference & Trade Show, Saturday Workshop

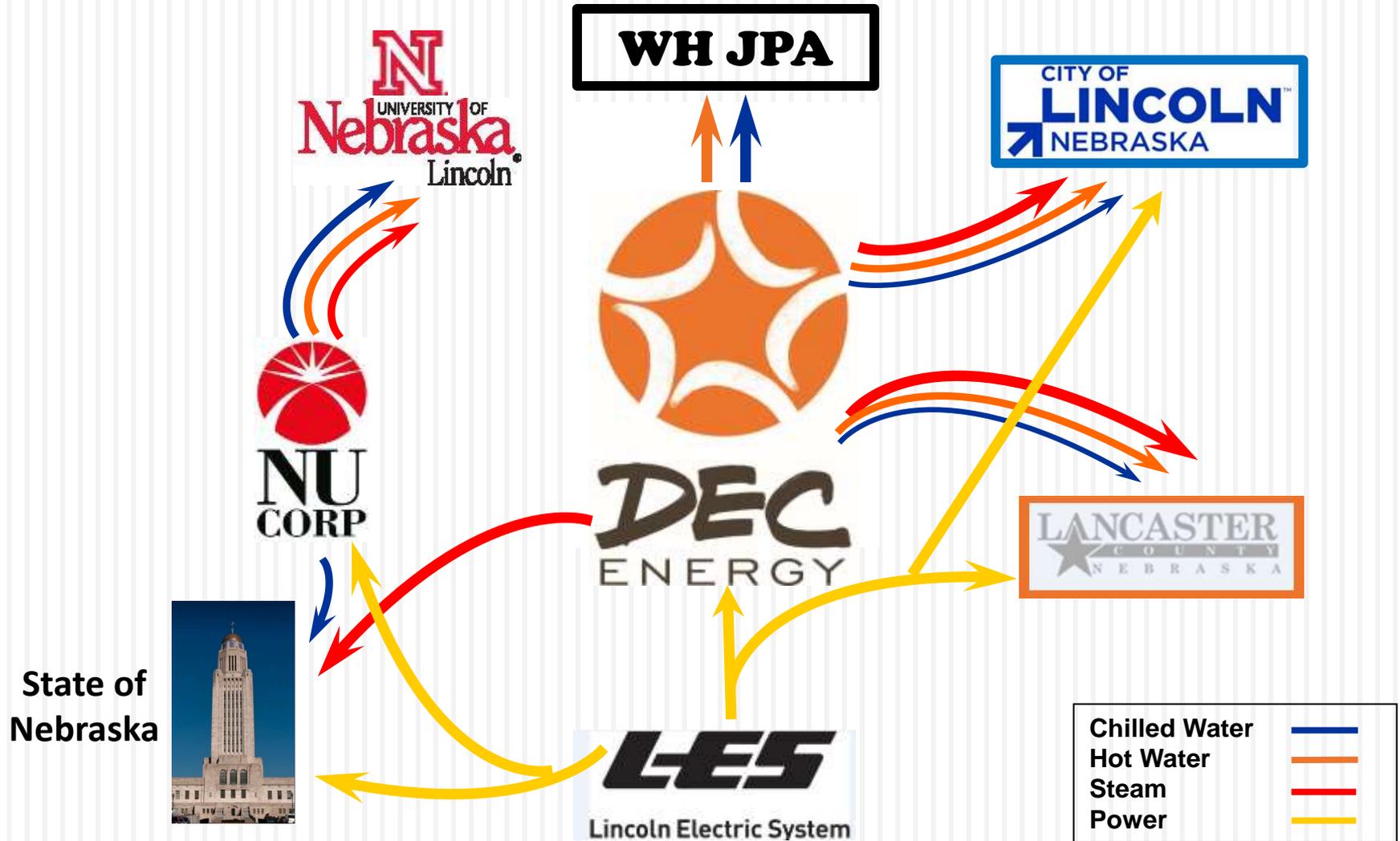
June 27, 2015

Community, Streamlined Gov't

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Efficient Use of Energy



United States Map

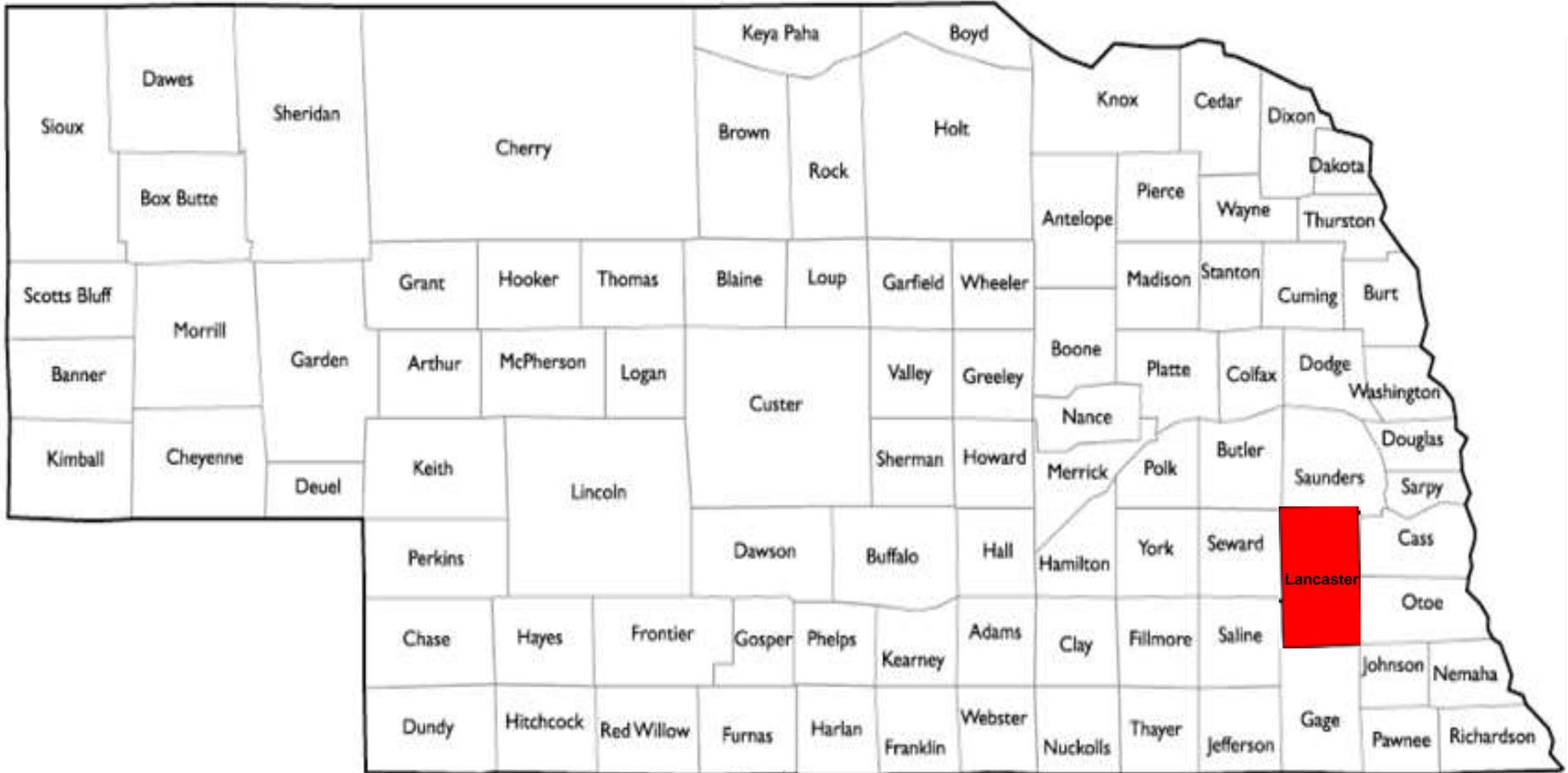
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Nebraska Lancaster County

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Capital City of Lincoln

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Population is nearly 262,500 and has increased by 14.5% over the last decade. The Lincoln Metropolitan Statistical Area is approximately 306,500 square miles.

The city of Lincoln covers an area of 91 square miles.

Home of the University of Nebraska-Lincoln and several private colleges and universities.

Leading National and International Businesses in Lincoln include Cabela's, Kawasaki Motors Manufacturing Corporation, Pfizer Inc., Novartis, Molex, State Farm, Square D Company and Veyance Technologies Inc.





State of Nebraska

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- ❑ **37th state admitted to US in 1867**
- ❑ **Ranked 37th in population, 16th in area & 43rd in population density (compared to 14th, 44th & 3rd for Mass)**
- ❑ **Population density of 24/square mile (compared to 840/square mile for Mass)**
- ❑ **Unique characteristics**
 - **Only state in US to have a Unicameral legislature**
 - **State constitution forbids issuing debt**
 - **Only state in US to have its entire electric service supplied public power where all electric facilities are publicly-owned or member-owned (no private, investor-owned power companies)**



Public Power

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- There are about 169 systems in Nebraska. About 121 of those are municipalities**
- Electric service is supplied by state government subdivisions called public power districts, electric cooperatives and municipal electric systems**
 - Public power districts tend to serve larger, sparsely populated areas and are governed by boards of directors elected during general elections**
 - Cooperatives elect directors at their annual meetings**
 - Municipal utilities tend to serve more compact, densely populated areas and are governed by elected City Council or locally appointed boards (e.g. LES)**



Lincoln Electric System

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- Publicly-Owned Municipal Utility Serving Approximately 200 sq. Miles
- Governed by a 9 Member Board Appointed by the Mayor and Approved by the City Council
- Serves 133,285 Retail Customers and 14,363 Residential Customers
- LES is the 42nd Largest Public Power Utility in the U.S. for Retail Energy Sales
- Average Outage Time Per Customer is 21.6 Minutes in 2014
- The Record Peak Demand is 786 MW and was set in August, 2011
- Progressive lead and innovator

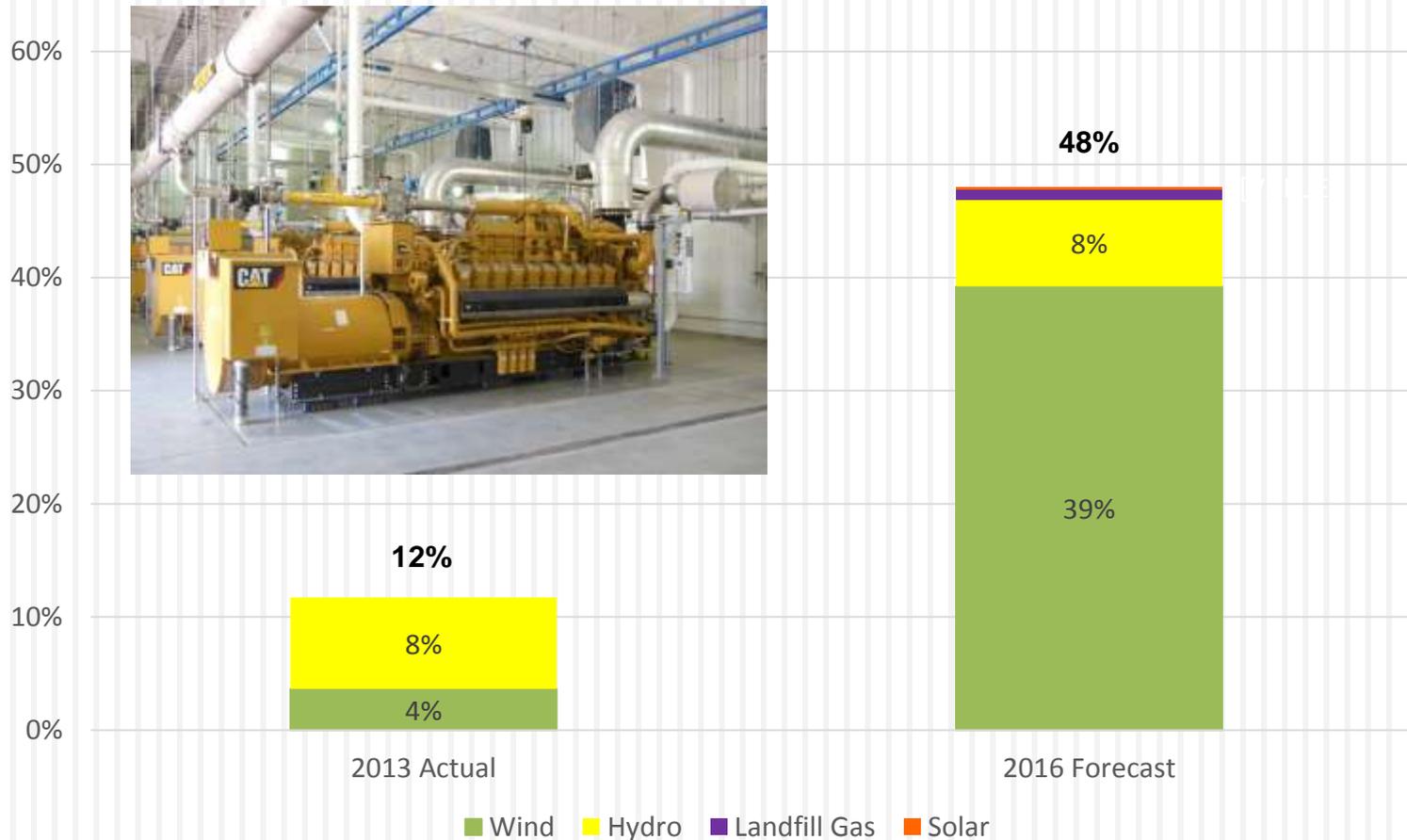
First utility in the world to use thermal energy storage for turbine inlet cooling



Wind Capacity by 2016



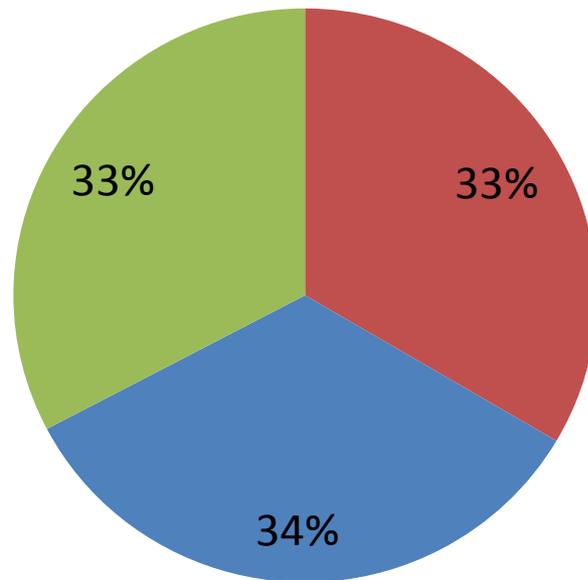
Renewable resource generation expressed as equivalent annual retail sales





LES 2016 "Nameplate" Portfolio

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■ Gas ■ Coal ■ Renewables

* Chart reflects nameplate rating of resources, not accredited capacity levels



District Energy Corporation

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- ❑ **District Energy Corporation (DEC) is a nonprofit corporation and interlocal 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**



Cost of Service

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- ❑ **Energy Services Agreement General Rate Principles**
 - ❑ **Cost of Service; non-profit**
 - ❑ **Through its General Bond Resolution, DEC is obligated to set rates sufficient to collect funds to meet**
 - **All Debt**
 - **Operations & Maintenance**
 - **Commodity Expenses**
 - ❑ **Debt Service Coverage Ratio of 1.10 is targeted**

- ❑ **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**

Board of Directors

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Left to Right: Larry Hudkins – Vice Chair, County Commissioner; W. Don Nelson – LES Board; Deb Schorr – County Commissioner; Jon Camp – City Council; Mike Lang – City of Lincoln (Mayor’s Office)



- ❑ **DEC Energy was formed in 1989 by the city of Lincoln and Lancaster County for purposes of:**
 - ❑ **Constructing**
 - ❑ **Financing**
 - ❑ **Furnishing**
 - ❑ **and Operating thermal energy facilities and related services for governmental entities**

County/City Complex

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New chiller system
for County City
building, 1991



C/C Building from
1999 to present

Original C/C Building

Hall of Justice from
1991 to present

County Jail from
1991 to 2013;
currently under
renovation for local
government offices



DEC Energy Locations within Lincoln, NE

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**SW 40th
Thermal Facility**

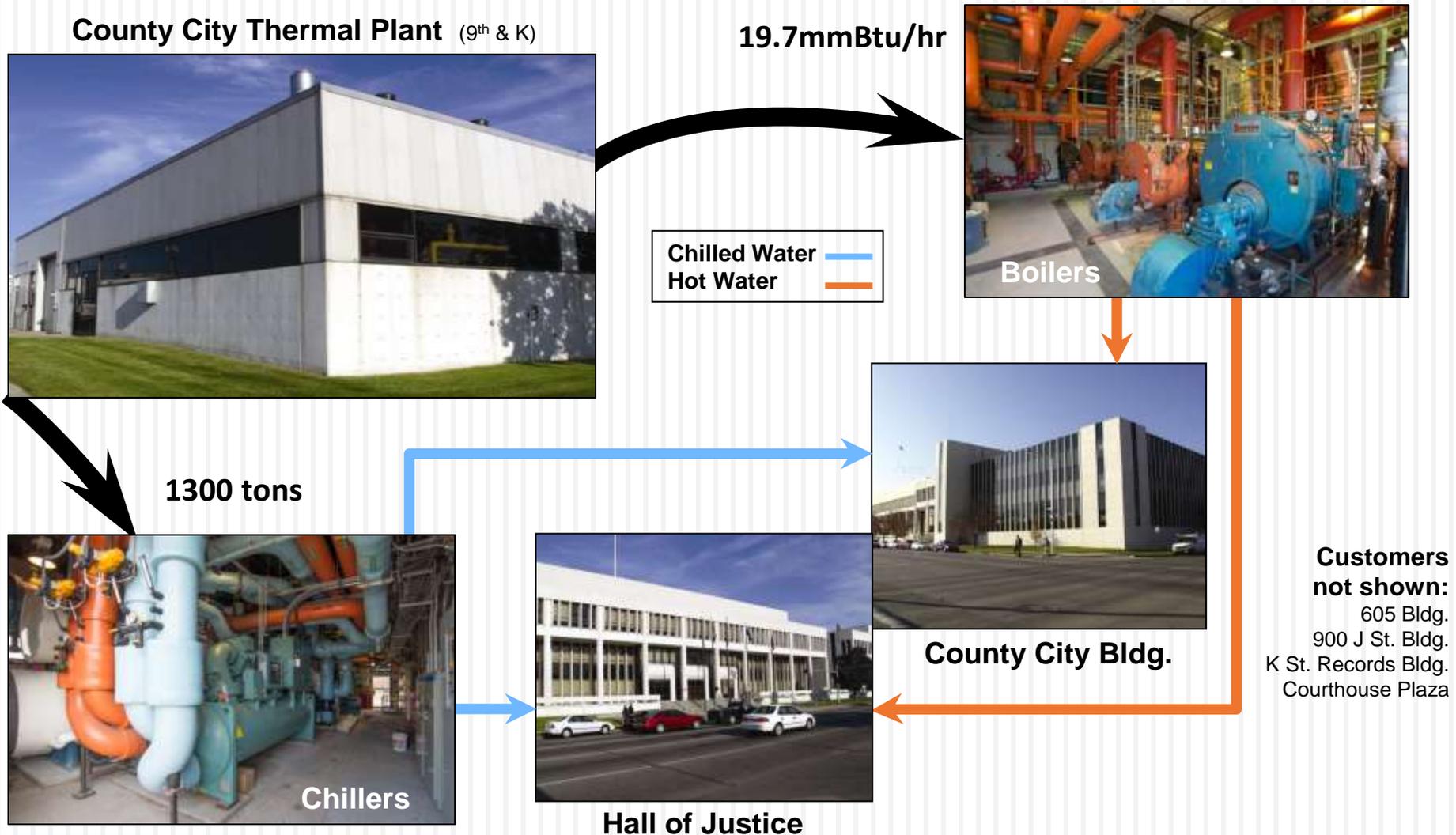
WHM CUP

**CC
Thermal
Facility**

**State
Thermal
Facility**

County City Thermal Plant

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State Thermal Plant

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State Thermal Plant (14th & K)



Total square
footage served
is 1,010,000



32.4mmBtu/hr



State Office Building



State Administration Office



State Capitol

Steam



SW 40th Thermal Plant

County Adult Detention Facility Thermal Plant
(SW 40th & O)



Back-up Power



Diesel Generators



Geothermal Heat Pumps



County Adult Detention Facility

Chilled Water	
Hot Water	
Electric Power	

12.6mmBtu/hr
1248 tons

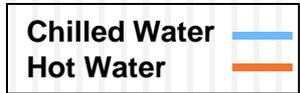
West Haymarket (WHM) Central Utility Plant (CUP)

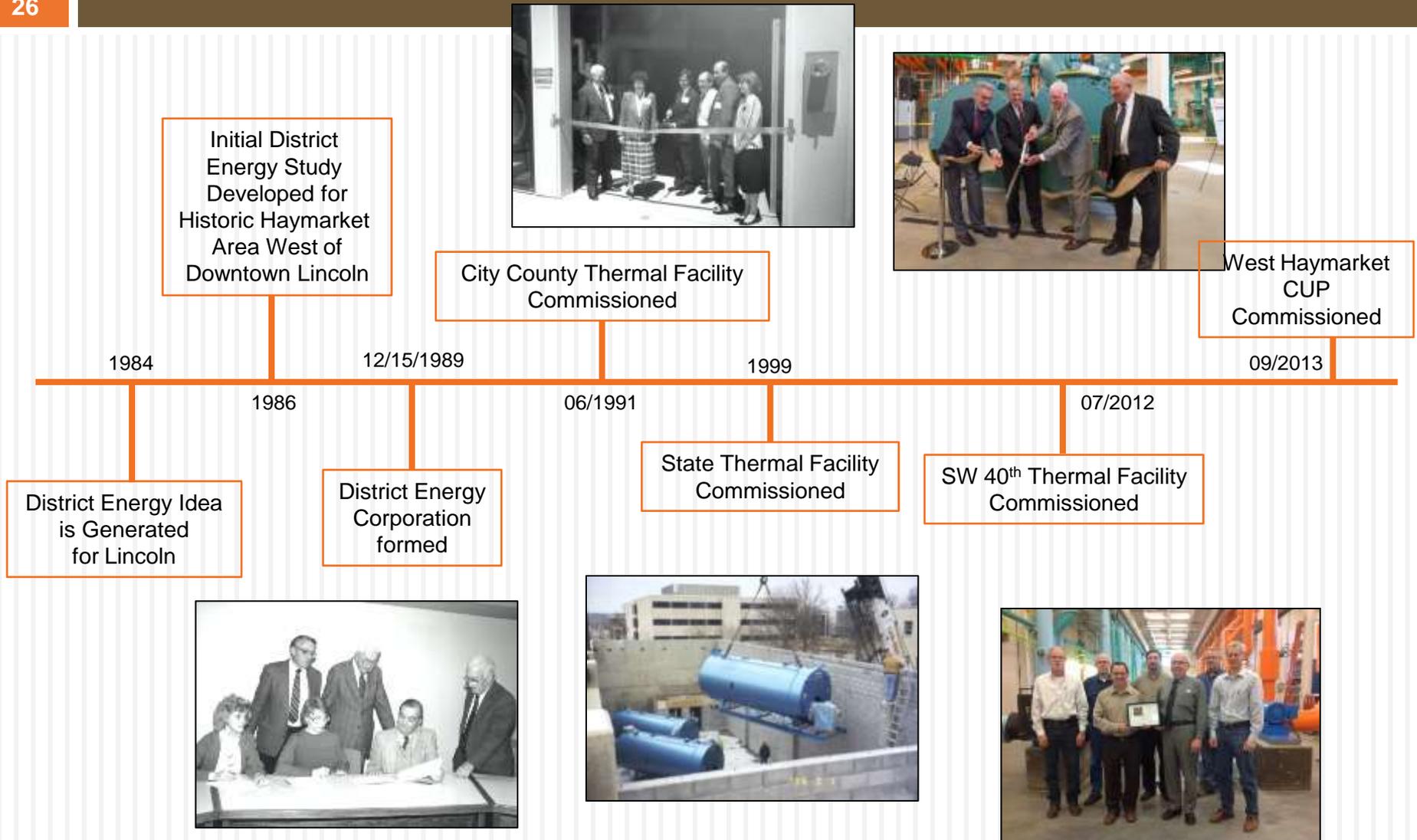
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West Haymarket Central Utility Plant (Arena & P)



Pinnacle Bank Arena, Railyard, Lofts & Hyatt





Data Overview

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2014	CC Plant	State Plant	SW 40 th	WH CUP
Customer	County & City	State of Nebraska	County (Corrections)	West Haymarket JPA
Sq. Ft. served	612,000	1,010,000	290,000	855,400
Heating Consumption, mmBtu	16,395	41,275	18,683	27,671
Cooling Consumption, mmBtu	8,908	n.a.	17,935	35,498

Total Net Operating Revenue in 2014 (commodity plus revenue to cover capital and other fixed costs) was \$3.2 million



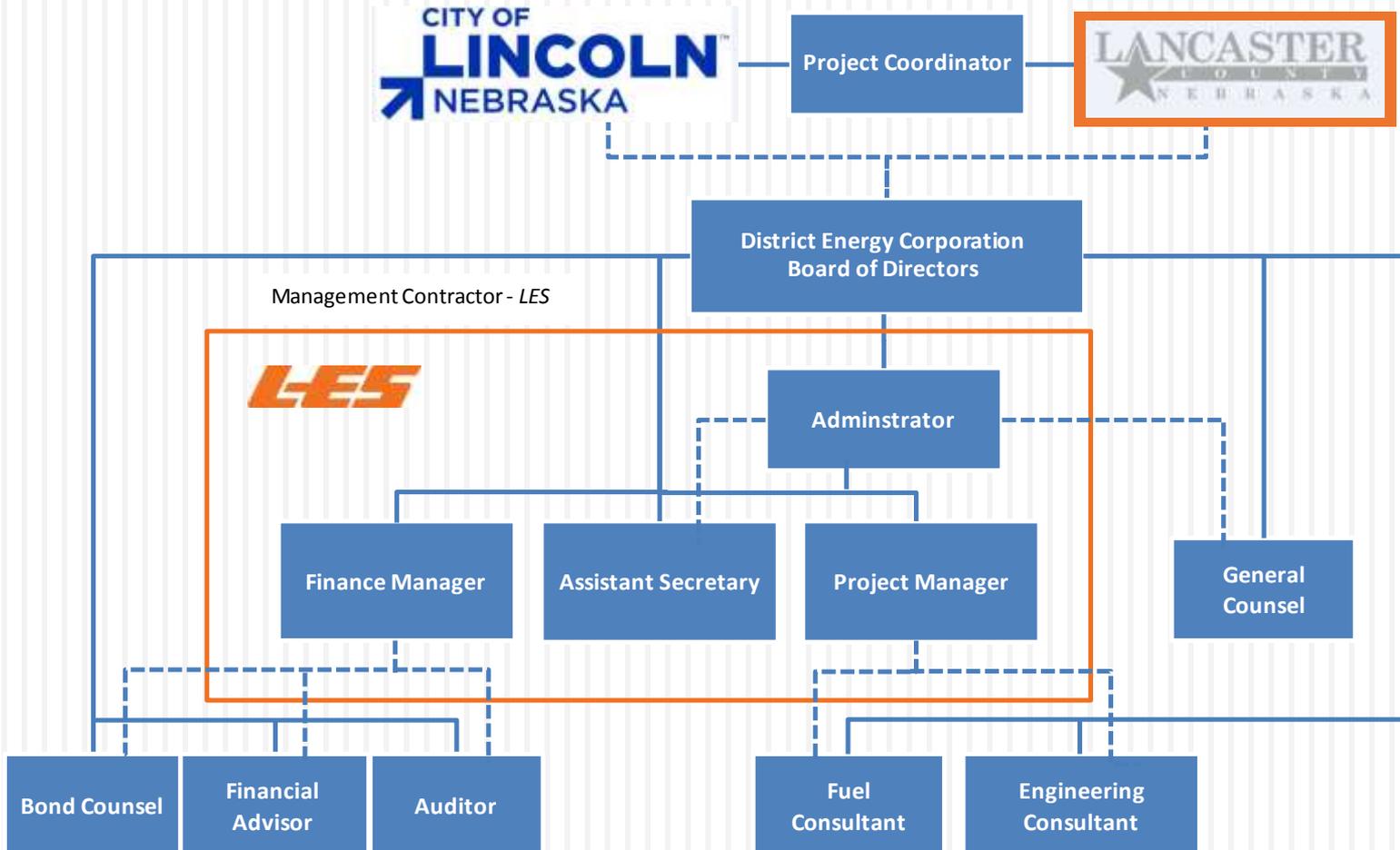
Management Agreement

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- ❑ **Pursuant to a Management Agreement between Lincoln Electric System (LES), city-owned electric utility, and the Corporation, LES manages DEC's Energy system and business affairs:**
 - **LES is responsible for the overall operation and maintenance of the Corporation's facilities**
 - **The Management Agreement is effective for 5 year periods until either party provides written notice of termination 12 months prior to the end of any such 5 year period**
 - **LES is not responsible for any liabilities of the Corporation, including its indebtedness, and the Corporation has agreed to indemnify LES**



DEC Energy Organization Chart



Management Agreement

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- ❑ **Why does LES manage DEC Energy?**
 - ❑ **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**





Management Agreement

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- Why does LES manage DEC Energy?
 - Aligns with the LES Vision/Mission
 - **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 Energy** Mission: “Provide low-cost, reliable and efficient thermal energy services to enhance and *enable economic development* of the Lincoln *community*”
 - **DEC Energy** Vision: “Striving for energy excellence”

Future Growth for DEC?

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HUDL INTERNATIONAL HQ
5000 W. WASHINGTON ST. - CHICAGO, IL 60644

- Six-Story Structure to stand 110 ft. tall
- 85,000 sq. feet of available office/retail space
- Increased employment from 229 to 750
- Outside structure complete early/mid 2017



Future Growth for DEC?

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State Agencies

Dept. of Roads

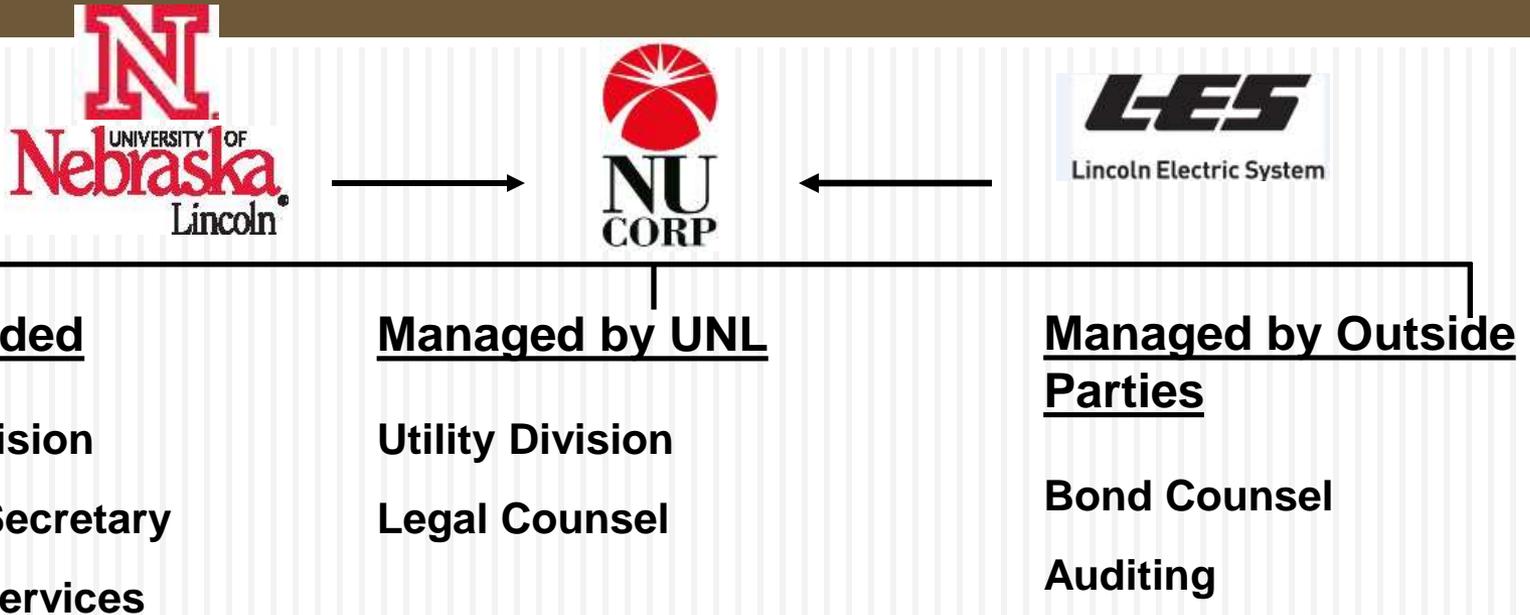
Penitentiary





NUCorp Organization Chart

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Formed in 2001, Nebraska Utilities Corp. is a not-for-profit corporation acting through an inter-local cooperation agreement between the University of Nebraska Board of Regents and Lincoln Electric System



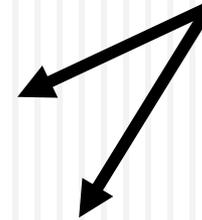


Demand Reduction with TES

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Thermal Storage at DEC CC Plant



Proposed UNL City Campus Thermal Storage



- “Our collaboration with District Energy Corporation and Nebraska Utility Corporation supports their mission to provide a sustainable, economical and reliable source of energy to their customers while minimizing environmental impacts. The efficient thermal energy plants that serve their needs utilize technologies that reduce electric demand, which ultimately decreases overall energy costs for LES and its customers. We value these partnerships and the benefits they provide to the communities we serve.”

THANK-YOU, COMMENTS/QUESTIONS?

