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# City of Grand Island



## Tuesday, August 2, 2022 Study Session Agenda

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### **City Council:**

**Jason Conley**  
**Michelle Fitzke**  
**Bethany Guzinski**  
**Chuck Haase**  
**Maggie Mendoza**  
**Vaughn Minton**  
**Mitchell Nickerson**  
**Mike Paulick**  
**Justin Scott**  
**Mark Stelk**

### **Mayor:**

**Roger G. Steele**

### **City Administrator:**

**Jerry Janulewicz**

### **City Clerk:**

**RaNae Edwards**

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**7:00 PM**

**Council Chambers - City Hall**  
**100 East 1st Street, Grand Island, NE 68801**

## **Call to Order**

**This is an open meeting of the Grand Island City Council. The City of Grand Island abides by the Open Meetings Act in conducting business. A copy of the Open Meetings Act is displayed in the back of this room as required by state law.**

**The City Council may vote to go into Closed Session on any agenda item as allowed by state law.**

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## **Invocation**

## **Pledge of Allegiance**

## **Roll Call**

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### **A - SUBMITTAL OF REQUESTS FOR FUTURE ITEMS**

Individuals who have appropriate items for City Council consideration should complete the Request for Future Agenda Items form located at the Information Booth. If the issue can be handled administratively without Council action, notification will be provided. If the item is scheduled for a meeting or study session, notification of the date will be given.

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### **B - RESERVE TIME TO SPEAK ON AGENDA ITEMS**

This is an opportunity for individuals wishing to provide input on any of tonight's agenda items to reserve time to speak. Please come forward, state your name and address, and the Agenda topic on which you will be speaking.



# City of Grand Island

Tuesday, August 2, 2022

Study Session

## Item -1

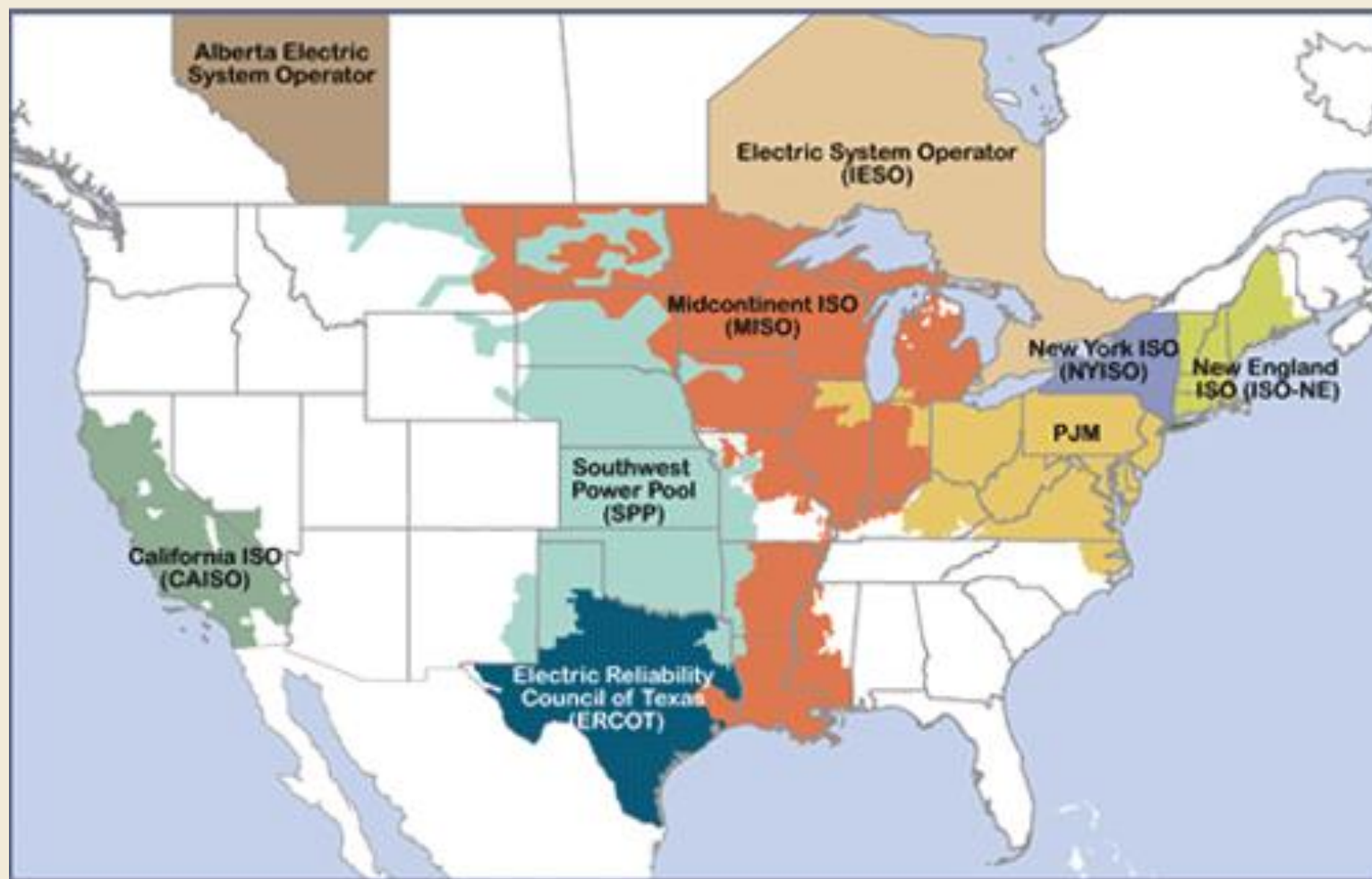
### Southwest Power Pool Overview

Staff Contact: Tim Luchsinger

# **Southwest Power Pool Overview**

**Study Session  
August 2, 2022**

- 🇺🇸 The Federal Energy Regulatory Commission(FERC) encouraged the voluntary formation of Regional Transmission Organizations (RTO) to administer the transmission grid on a regional basis throughout North America (including Canada). The purpose of the RTO is to promote economic efficiency, reliability, and non-discriminatory practices while reducing government oversight.



## Generation: Capacity vs. Energy

### Capacity

The amount of power a generating resource is producing at a single point in time, expressed in units of megawatts (MW).

### Energy

The amount of power a generating resource produces over a time, expressed in units of megawatt-hours (MWh).

## Capacity/Energy Examples

- 🌊 A resource with a rated **capacity** of 100 MW, operating at its full rating for 4 hours, would produce **energy** equivalent to the following:

$$100 \text{ MW} \times 4 \text{ hours} = 400 \text{ MWh}$$

- 🌊 A resource with a rated **capacity** of 100 MW, operating at 50% of its full rating (50 MW) for 4 hours, would produce **energy** equivalent to the following:

$$50 \text{ MW} \times 4 \text{ hours} = 200 \text{ MWh}$$



## Generation: SPP Capacity Requirements

### Nameplate Capacity


The capability of a generating resource at its full rated output.

### Accredited Capacity

Under SPP rules, each utility must secure **accredited capacity** equal to at least their peak load plus a 12% reserve margin.

## Grand Island Generation Units

### Grand Island Units


 Platte Generating Station - 100 megawatt (MW) Coal

 Burdick Station

 GT-1 - 13.8 MW Natural Gas/Oil

 GT-2 - 34 MW Natural Gas/Oil

 GT-3 - 34 MW Natural Gas/Oil

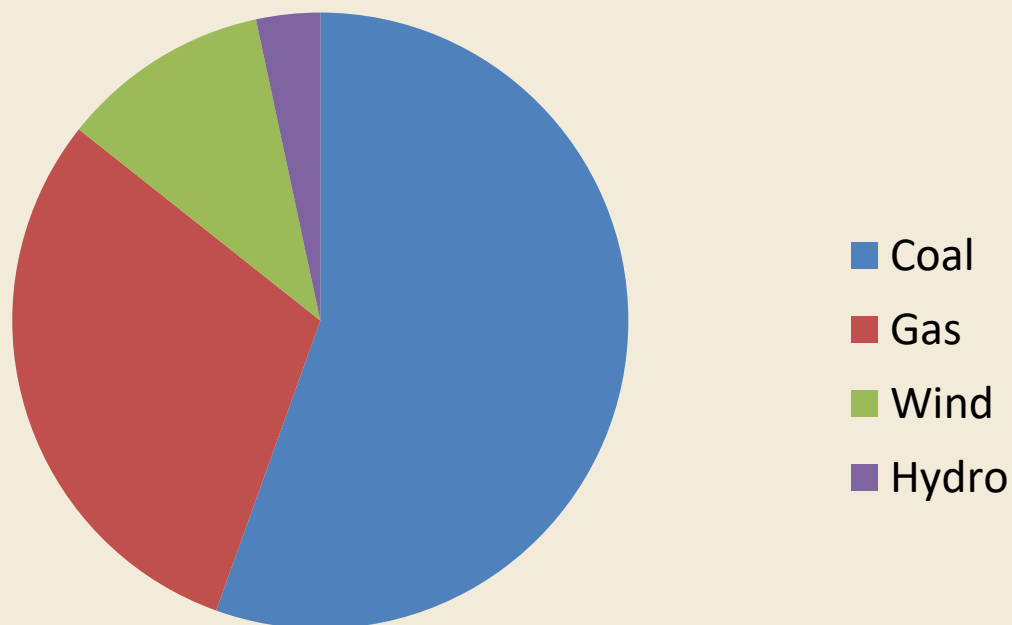
 Nebraska City 2 - 35 MW Coal

 Whelan 2 - 15 MW Coal

## Grand Island Renewable Generation

- 🇺🇸 NPPD Power Purchase Agreements with GIUD participation agreements
  - 🇺🇸 Ainsworth – 1 megawatt (MW)
  - 🇺🇸 Elkhorn Ridge – 1 MW
  - 🇺🇸 Laredo Ridge – 1 MW
  - 🇺🇸 Broken Bow – 1 MW
  - 🇺🇸 Springview 2 – minimal output – access to data
- 🇺🇸 Prairie Breeze III (Elgin) – 35.8 MW
- 🇺🇸 Museum Road Solar – 1 MW
- 🇺🇸 Western Area Power Association Hydro – 5 to 7 MW

### GIUD Generation Ratio

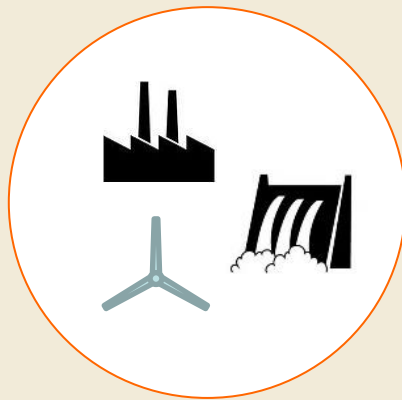


## GIUD Capacity

- GIUD Accredited Capacity = 232 MW
- GIUD Current Peak Load = 151 MW
- GIUD Required Capacity (+12%) = 170 MW

## Historical Utility Operations

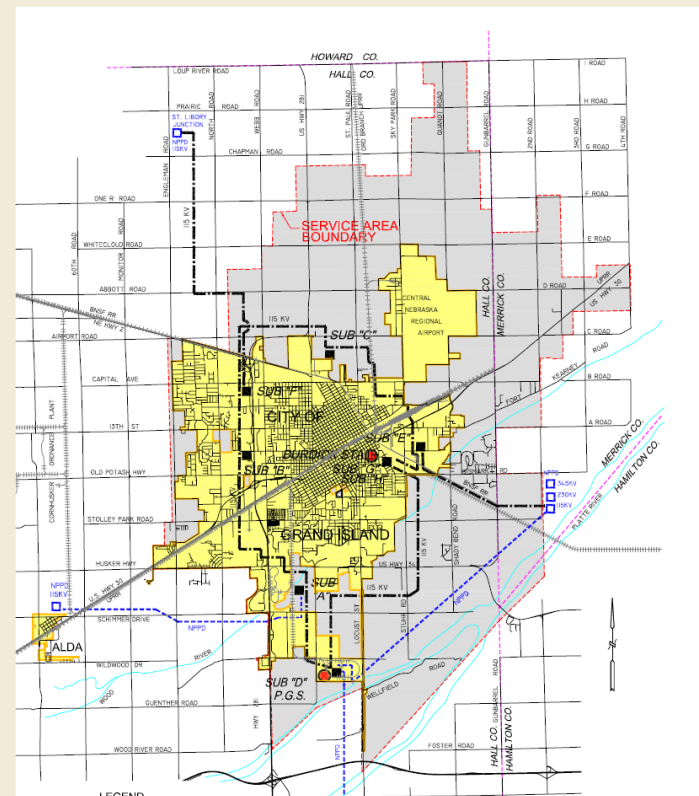
UTILITY GENERATION



ENERGY SALES



UTILITY LOAD



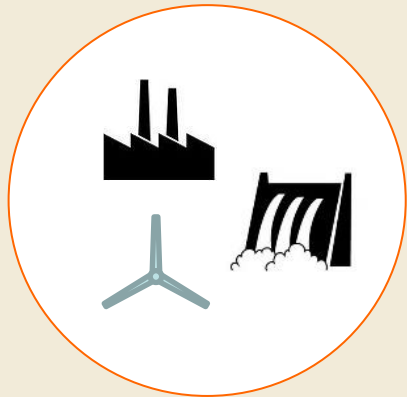
ENERGY PURCHASES

## SPP Energy Market

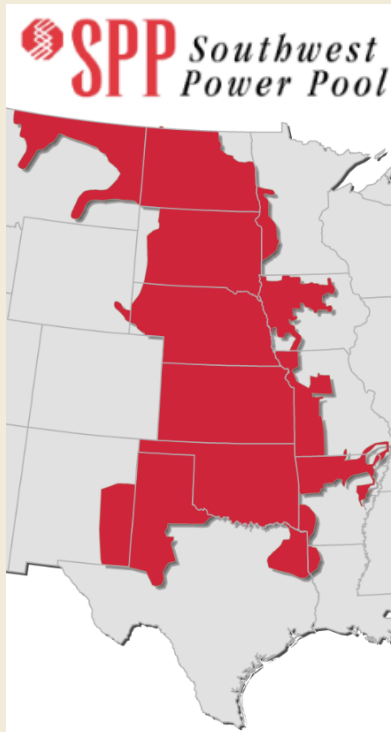
- 🌐 A utility's portfolio must be constructed to fulfill SPP capacity requirements, but the portfolio's standing in the SPP market goes a long ways toward determining its economic viability.
- 🌐 Unless out of service, each of a utility's resources must be offered to serve the SPP energy market.

## Operations within the Southwest Power Pool (SPP)

### UTILITY GENERATION



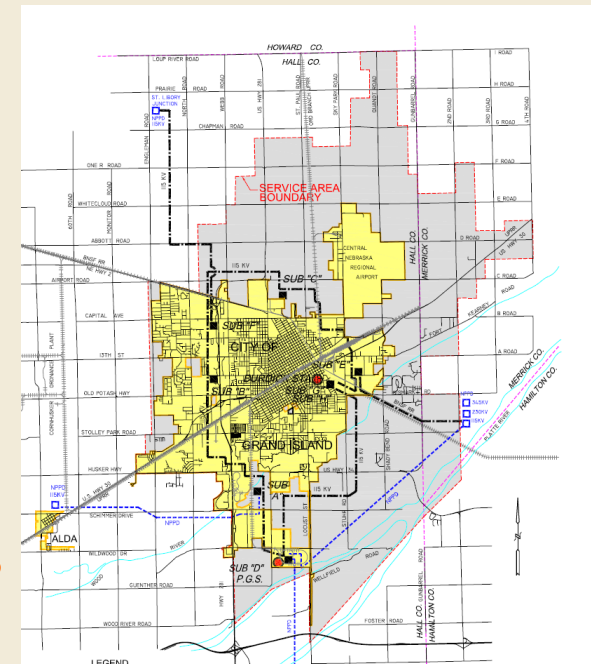
ENERGY  
SALES



ENERGY  
PURCHASES

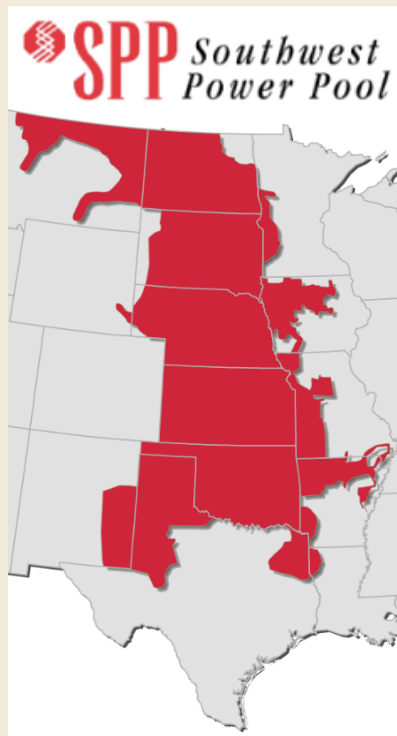


### UTILITY LOAD





## SPP Market Operations



HIGH COST  
GENERATION

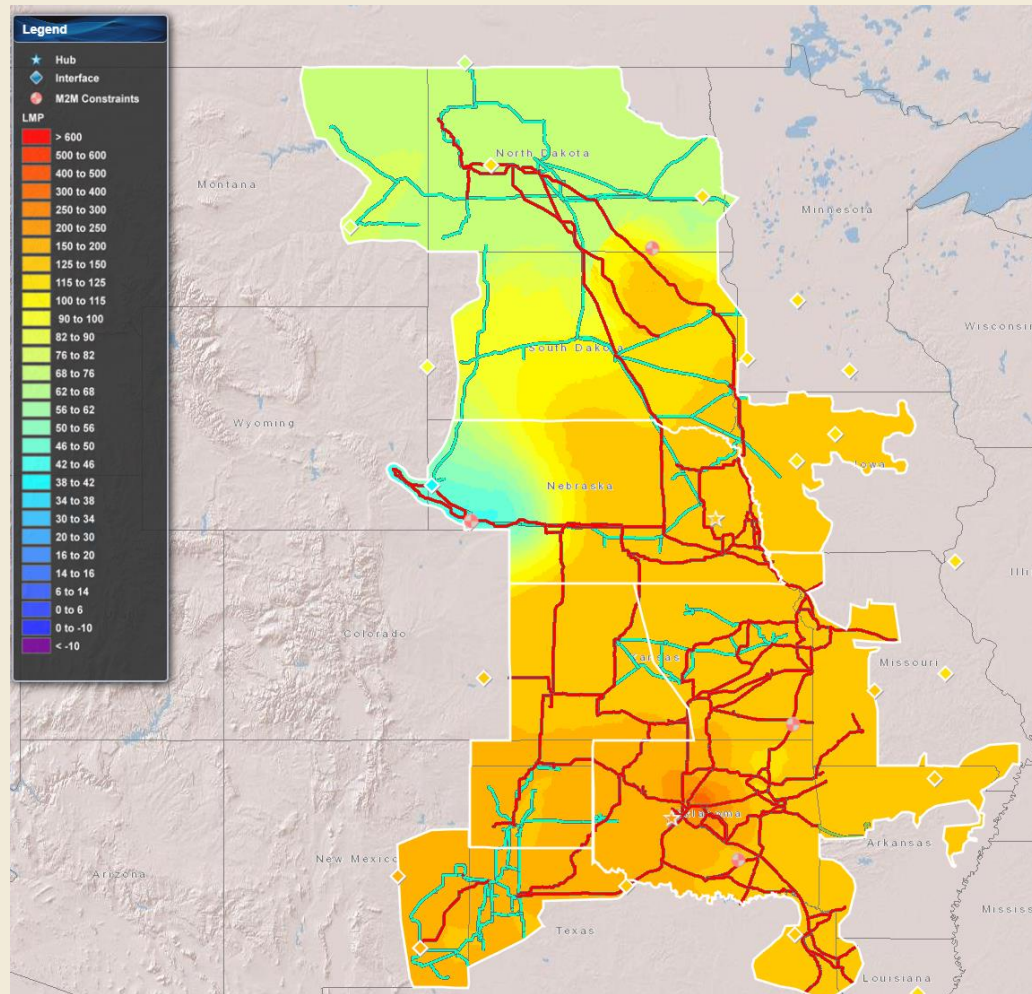
MARKET  
PRICE

LOW COST  
GENERATION

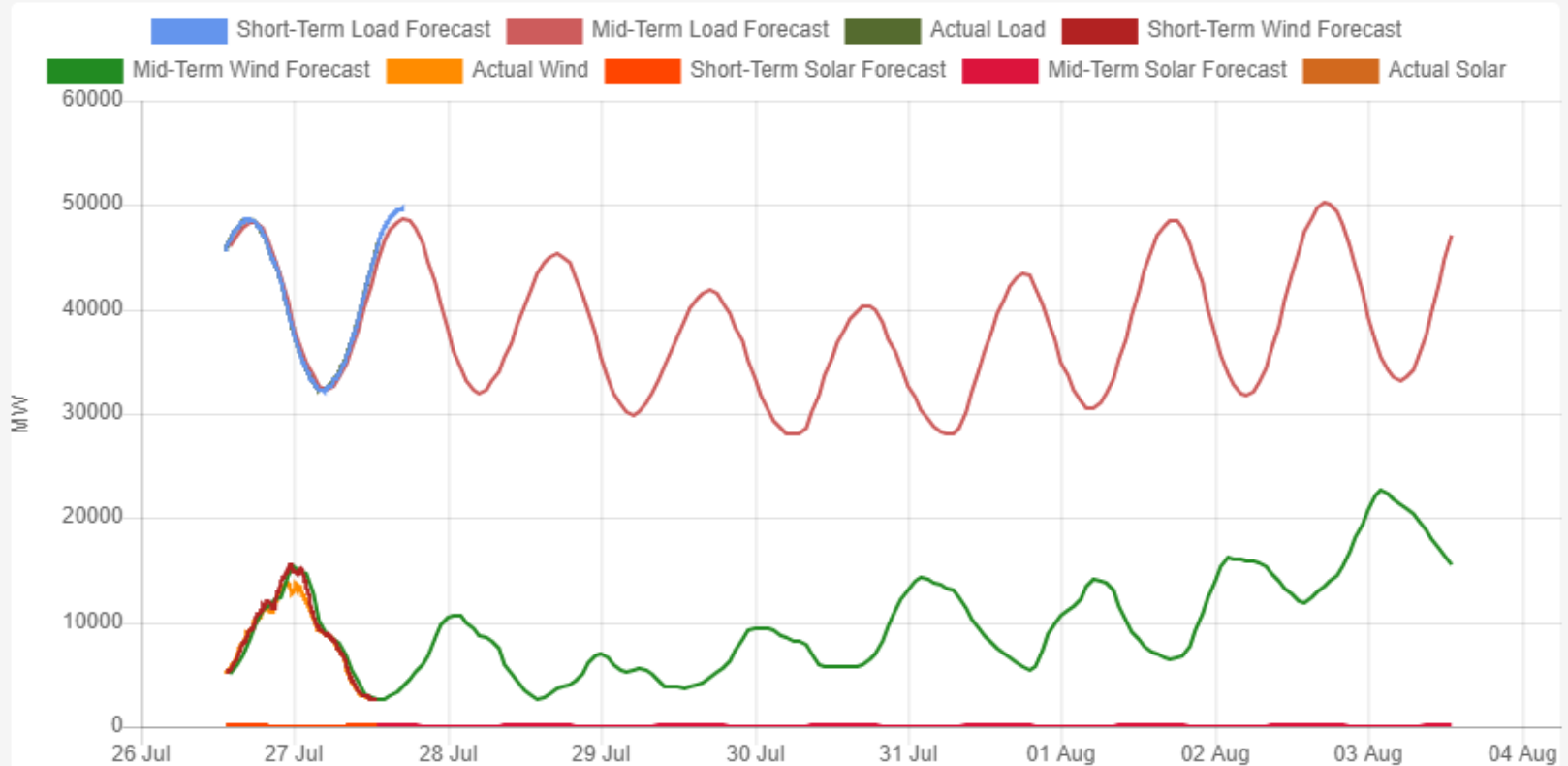


SPP LOAD

## SPP Price Contour



## SPP Forecast



# Questions?



# City of Grand Island

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## Item -2

### Discussion on Downtown Festoon Lighting

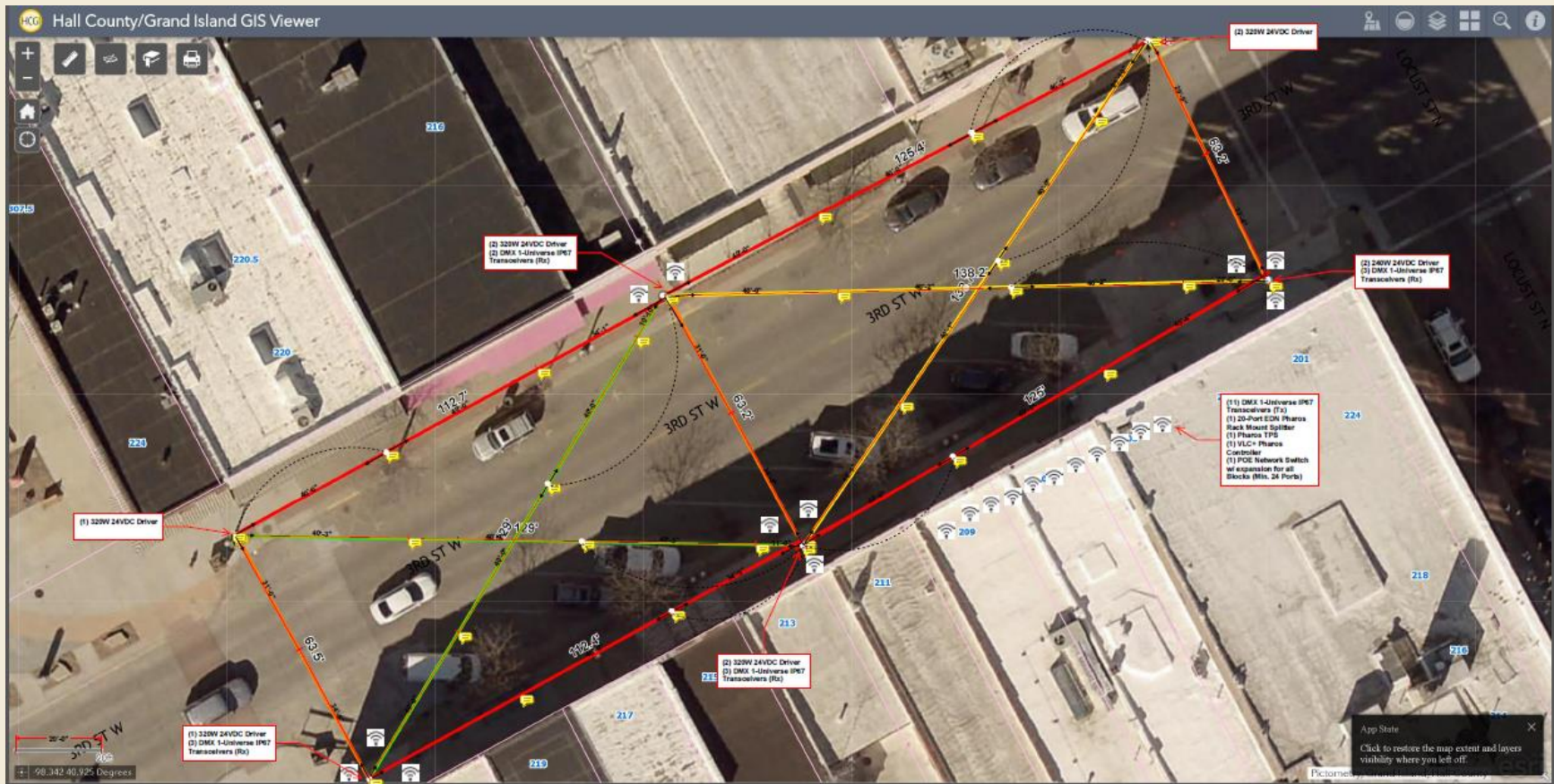
Staff Contact: Tim Luchsinger

# Downtown Festoon Lighting

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# Festoon Lighting Layout



## Festoon Lighting Options

- 🇺🇸 Option 1- Multicolor, each light is fully addressable for color changing
- 🇺🇸 Option 2 – Multicolor, each strand is addressable for color changing
- 🇺🇸 Option 3 – Strands are soft white with no color changing ( patio lights)



## Festoon Lighting Pricing Estimate

	Option 1	Option 2	Option 3
Festoon lighting materials	\$298,000	\$205,000	\$18,000
Poles and power materials and installation	\$105,000	\$105,000	\$90,000
Total	\$403,000	\$310,000	\$108,000

# Christmas Lighting Area

