



**Cedar Falls Utilities**  
THE POWER OF SERVICE



# CFU Stats

- Electric, Natural Gas, Water, Communications (Internet, Video, Telephone)
- Electric Stats
  - Electric Meters – 20,000
  - Peak Load (firm load) – 110 MW
  - Non-Firm Load – 34.5 MW
  - Total End-Use Energy Sales (2023) – 593,488 MWh
- MISO Transmission Owner
  - Network Service

# CFU GENERATION

Unit	Nameplate	Fuel	Year Mfg	Heat Rate (btu/kWh)
Streeter 6	16.5 MW	NG/Coal	1963	12,152
Streeter 7	35 MW	NG/Coal	1973	11,627
Gas Turbine #1	19.6 MW	NG/FO	1968	15,057
Gas Turbine #2	23.8 MW	NG/FO	1972	15,925
Prairie Lake	1.5 MW	Solar	2016	n/a
Joint Units	53.0 MW	PRB Coal	1978-2007	10,006
Total	149.4 MW			

➤ **131.3 MW (88%) are pre-1980 vintage**

# Why New Generation?

- Existing fleet is aging
  - Especially Local Units
    - High Heat Rates
- Capacity Rule Changes
  - Will Existing Units get Accredited?
- EPA Rule Changes
  - CASPR
  - New Greenhouse Gas Rules



# MISO/NERC Studies and Reports

- Common Themes
  - Retirement of Coal Resources
  - Growth of Wind & Solar Resources
  - Need of Flexibility & Availability
  - Reliability Concerns due to Accredited Capacity Shortages
- Causes
  - Pace of the Fleet Change
  - Pace of Electrification
  - Pace of New Loads (Data Centers, Industrial)
  - Pace of New Technologies (mainly Batteries)



# New Generation Criteria

- Good Capacity Resource
  - Maintain ZRC balance
- Scale
  - 25 MW to 40 MW total
  - Connect to Distribution System (Generator < 25 MW)
- Fast Start/Stop/Ramp
  - Need Identified in MISO/NERC reports
  - MISO Market volatility
- Backup Fuel
  - 7 days without Primary Fuel Source (Winter Storm Uri)
- Good Heat Rate

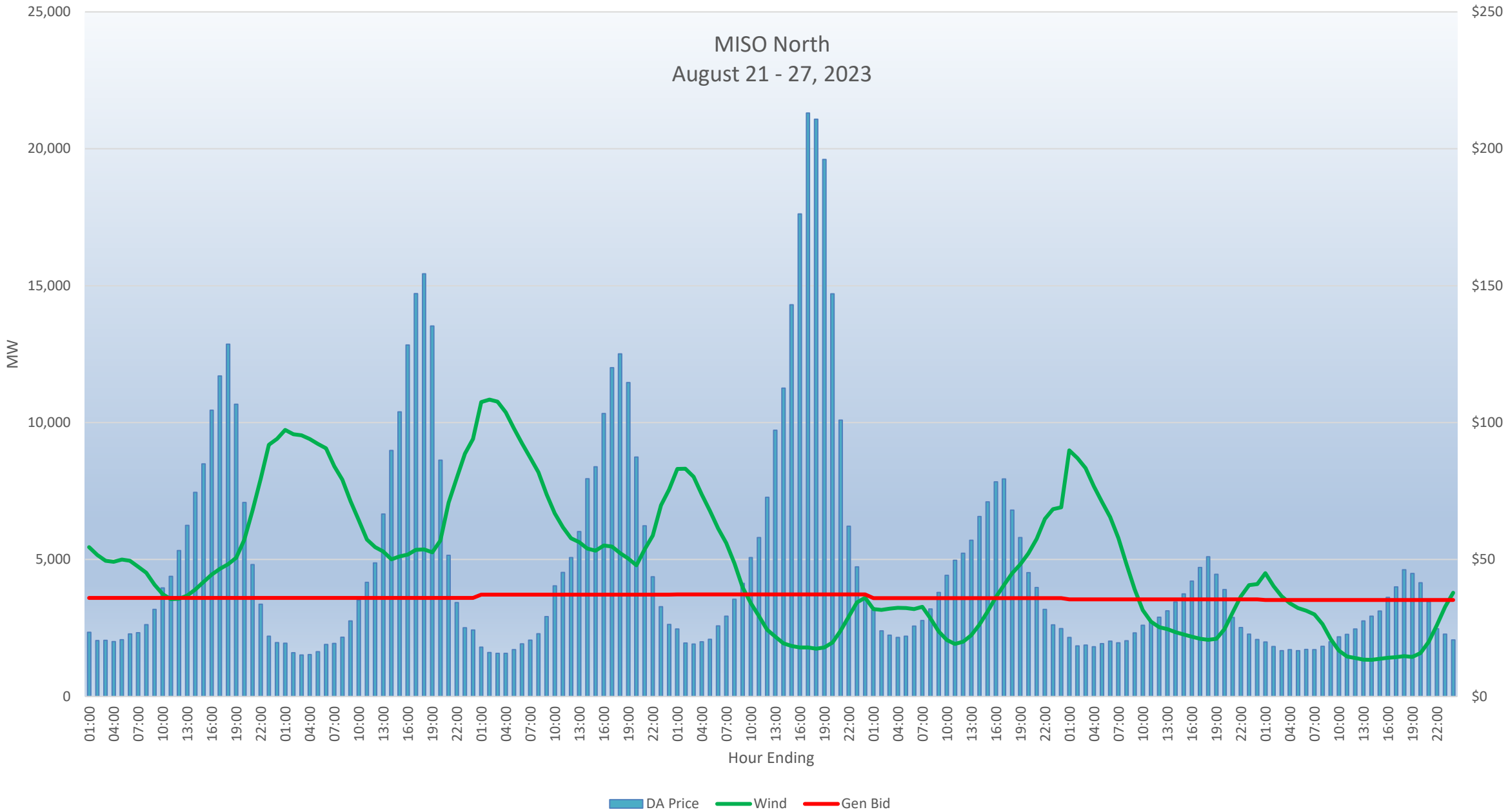
# New Generation Criteria (continued)

- Black Start Capable
- Future Proof (Renewable Fuel capable)
  - RNG (Renewable Natural Gas)
  - Bio Diesel
  - Hydrogen
  - Ammonia
  - Methanol
- Commercially Available
- RICE Units Best Meet these Criteria

# RICE units

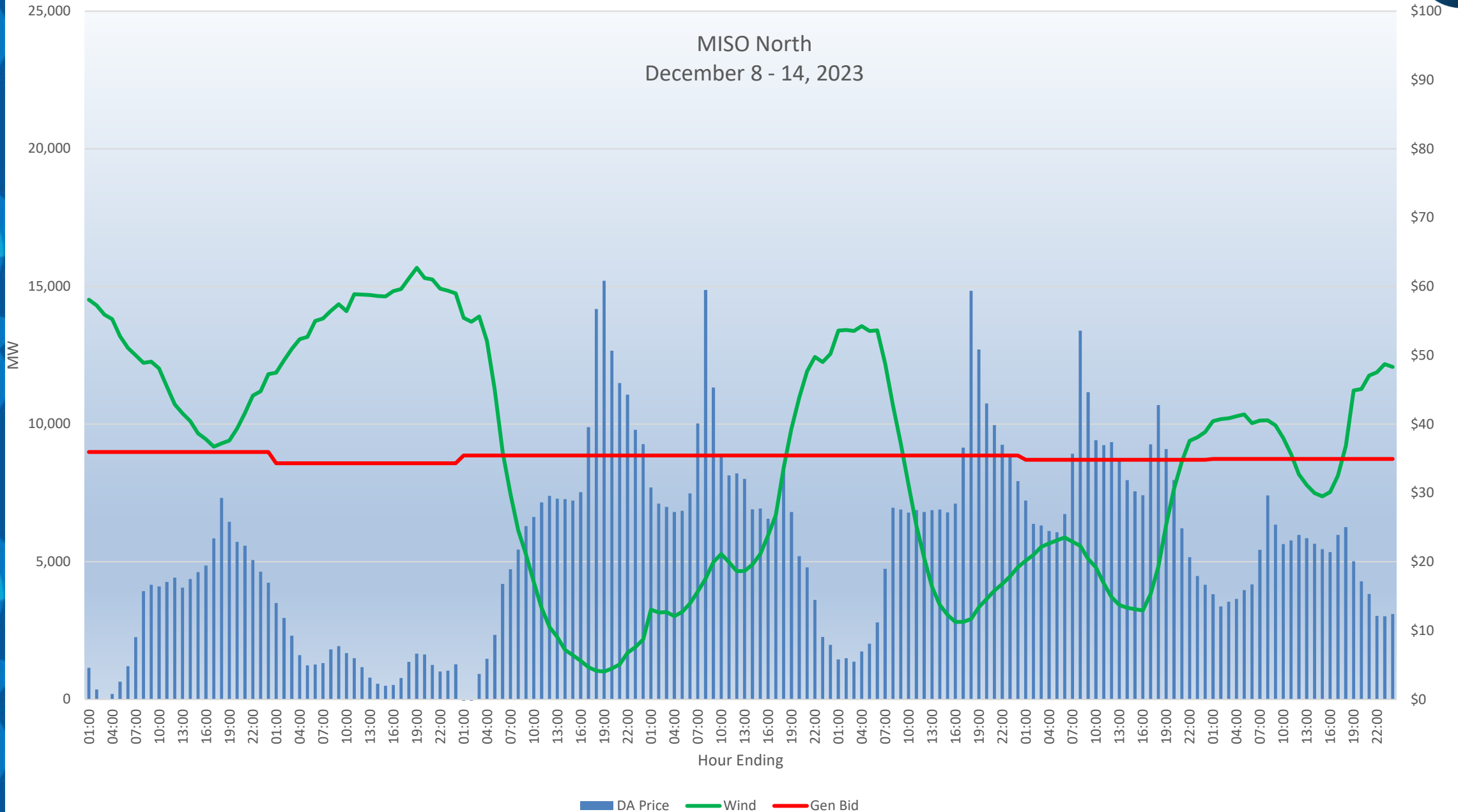
- Economic Evaluation
  - Back Tested 10 years
    - Economical 1300 hrs/yr 10 yr Average
    - Economical 1550 hrs/yr 5 yr Average
    - Economical 2100 hrs/yr 3 yr Average
  - Economic in Volatile Market
  - Hedge Against Extreme High Prices
    - Still buy economical Market Energy when Prices are Low
- Lower Emissions
  - Only Run when Needed/Economical
- Local Reliability







# MISO North December 8 - 14, 2023



# Current Status

- Size and Number of Generators
  - 3 ~9 MW Units
  - 2 ~18 MW Units
- Backup Fuel
  - Fuel Oil vs LNG
- Commercial Operation estimated 2027

Questions?