



# Iatan Generating Station

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# Iatan Generating Station





# Safety

- Wear Personnel Protective Equipment (PPE): glasses, hard hat, and hearing protection
- Do not separate from group
- Stay clear of areas with red flashing lights, safety tape and warning signs
- Equipment can start without warning
- Evacuation procedures
- Ammonia is on site

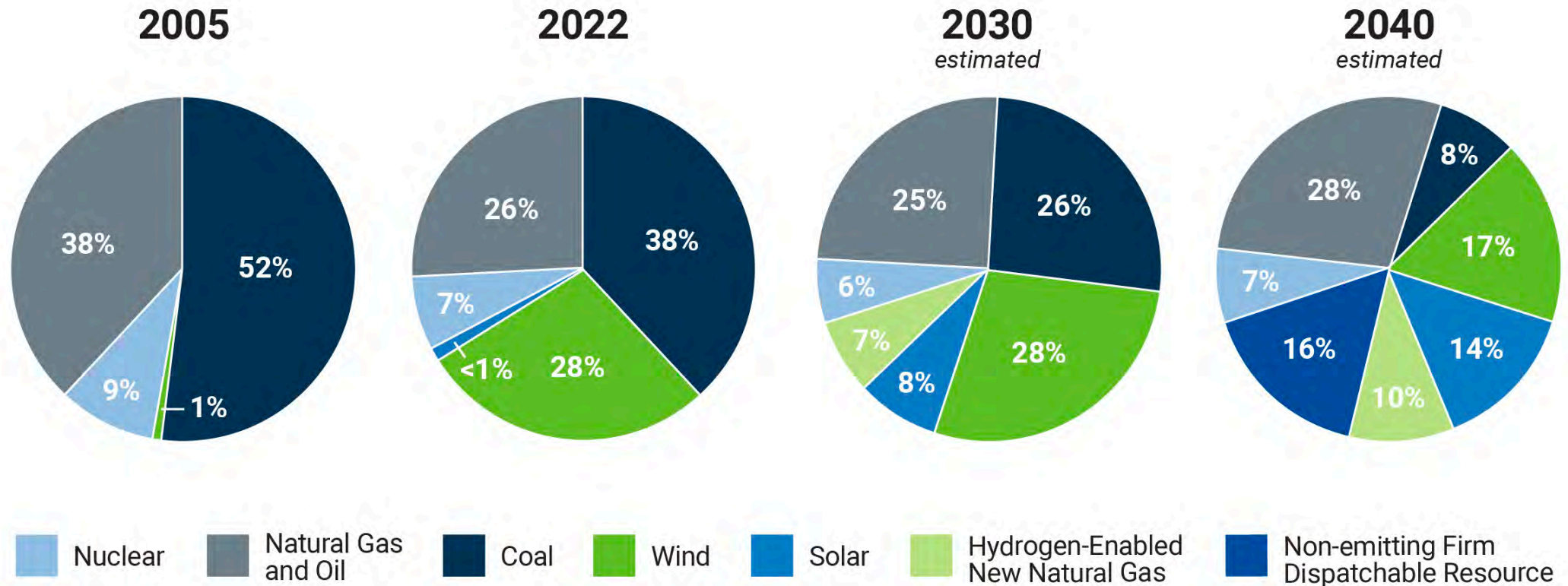
***Safety is our Top Priority***

# Evergy Generation Mix



# Evergy Generation Mix

## Generation Capacity by Fuel Type



Our goal is to achieve net-zero carbon emissions by 2045.

# Iatan Background Information





# Iatan Background Information

- Iatan – Nickname of OTOE tribe Chief who lived from 1780 – 1837
- Iatan is situated on a 3,000-acre site adjacent to the Missouri River
- The Iatan site has 2 coal-fired electric generating units – Iatan 1 & Iatan 2
- Iatan has a coal inventory target of 1.2 M tons. We consume approximately 21,000 tons of coal a day with both units at full load.
- 135 car trains deliver 16,000 tons of coal per cycle. It takes 5 – 6 hours to unload a train.

***Iatan was named after the nickname of an OTOE tribe Chief***

# Iatan Site Overview







# Iatan Station Ownership Overview

Year Completed	Location	Energy Source	Total MW	Evergy Metro MW	Evergy Missouri West MW	Evergy Total MW	Operator	Other Owners	Other Owners	Other Owners
1980	Iatan, MO	Coal	694	486 (70%)	125 (18%)	611 (88%)	Evergy	Liberty Utilities 83 MW (12%)		
2010	Iatan, MO	Coal	900	465 (51.7%)	125 (18%)	611 (72.7%)	Evergy	Liberty Utilities 108 MW (12%)	Missouri Joint Municipal Electric Utility Commission – MJMEUC 106 MW (11.76%)	KEPCO 30 MW (3.53%)



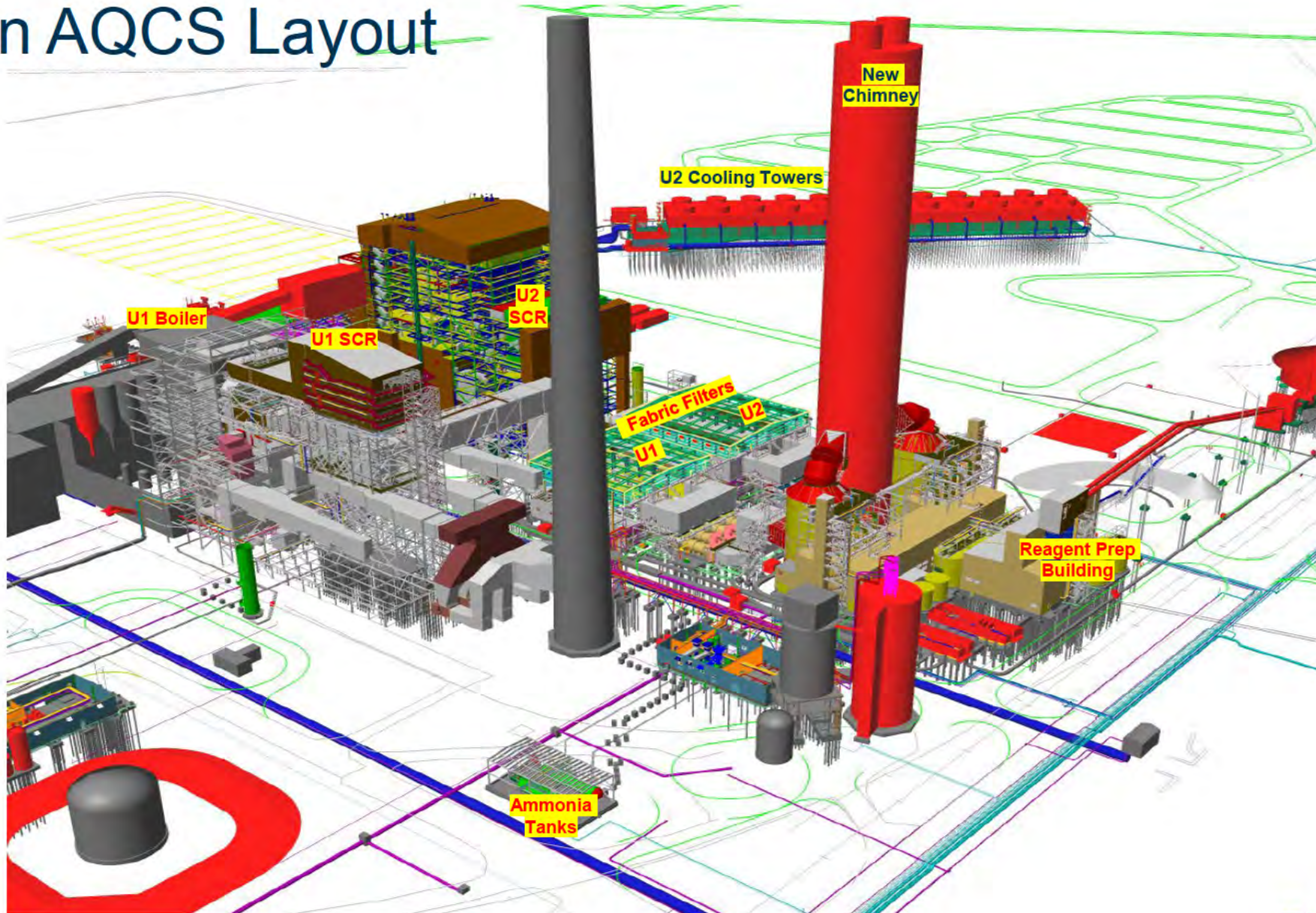
# Iatan Background Information

- Iatan is one of the cleanest coal stations in the country
- Flue Gas Desulfurization (FGD) system removes greater than 95% of the Sulfur Dioxide (SO<sub>2</sub>) in the flue gas
- Selective Catalytic Reduction (SCR) removes 66 % on Iatan 1 and 50% on Iatan 2 of the Nitrous Oxide (NO<sub>x</sub>)
- Mercury (Hg) is removed with Powder Activated Carbon (PAC) and Flue Gas Desulfurization (FGD) to greater than 90%
- Particulate is controlled with Fabric Filters with greater than 99% ash removal efficiency
- Iatan Air Quality Control System (AQCS) and Unit 2 were designed as Zero Liquid Discharge (ZLD) facilities

***Iatan is one of the cleanest coal stations in the country***



# Iatan AQCS Layout



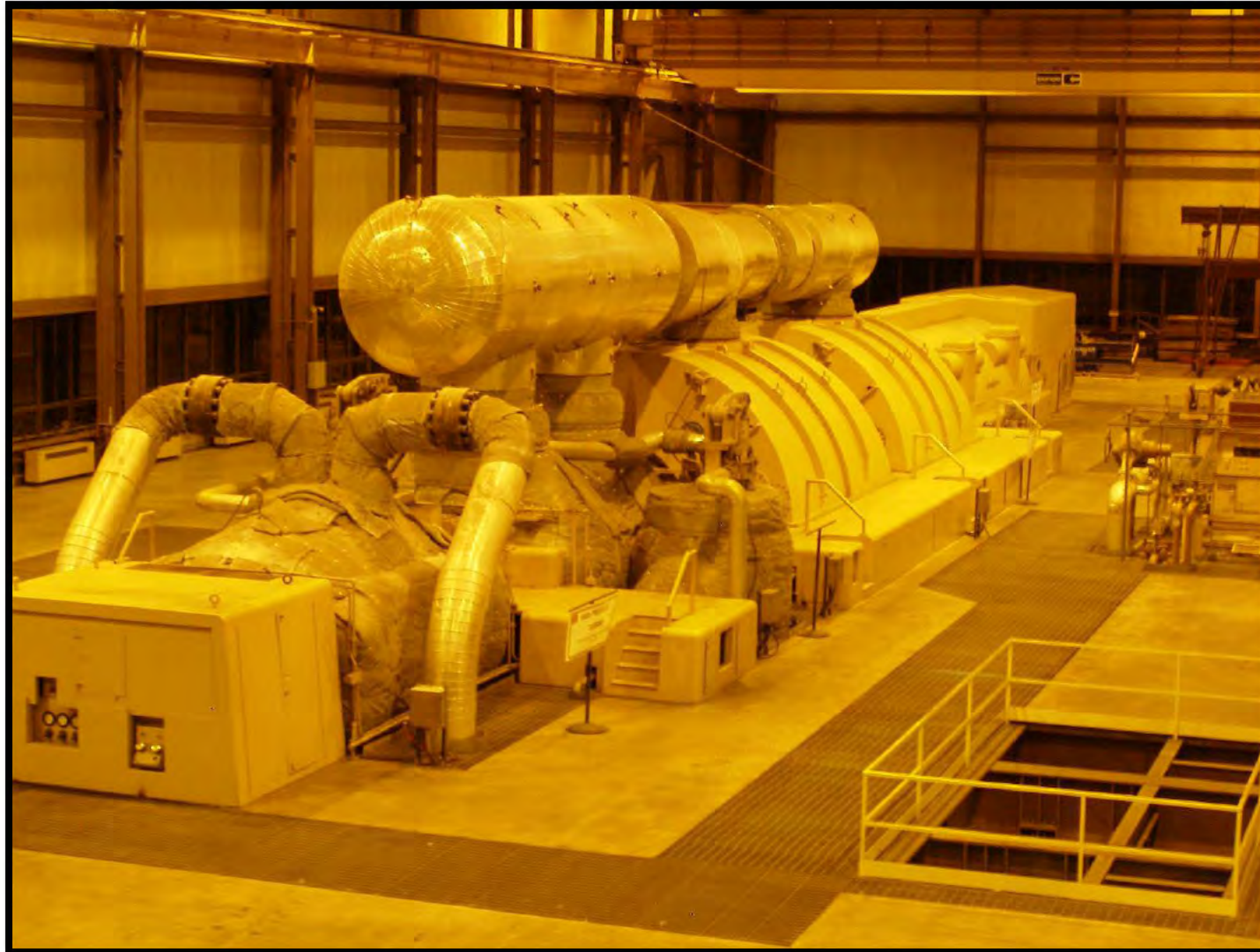


# Iatan 1

- Commercial operation in 1980. 694 MW net generation
- Babcock & Wilcox Subcritical Boiler
- General Electric Turbine/Generator
- Unit 1 burns approximately 8,500 tons of coal per day
- Main Steam Conditions – 4,900,000 pph @ 2,400 psi, 1005 deg. F.
- Condenser cooling from the Missouri River – 300,000 gpm

***Iatan 1 went into Commercial Operation in 1980***

# Iatan 1 Turbine-Generator





## Iatan 2

- Commercial operation in 2010. 900 MW net generation
- Alstom Supercritical Boiler
- Toshiba Turbine/Generator
- Unit 2 burns 12,500 tons of coal per day
- Main Steam Conditions – 6,200,000 pph @ 3,600 psi, 1080 deg. F.
- Condenser cooling from well water circulated through a cooling tower

***Iatan 2 went into Commercial Operation in 2010***

# Iatan 2 Turbine-Generator

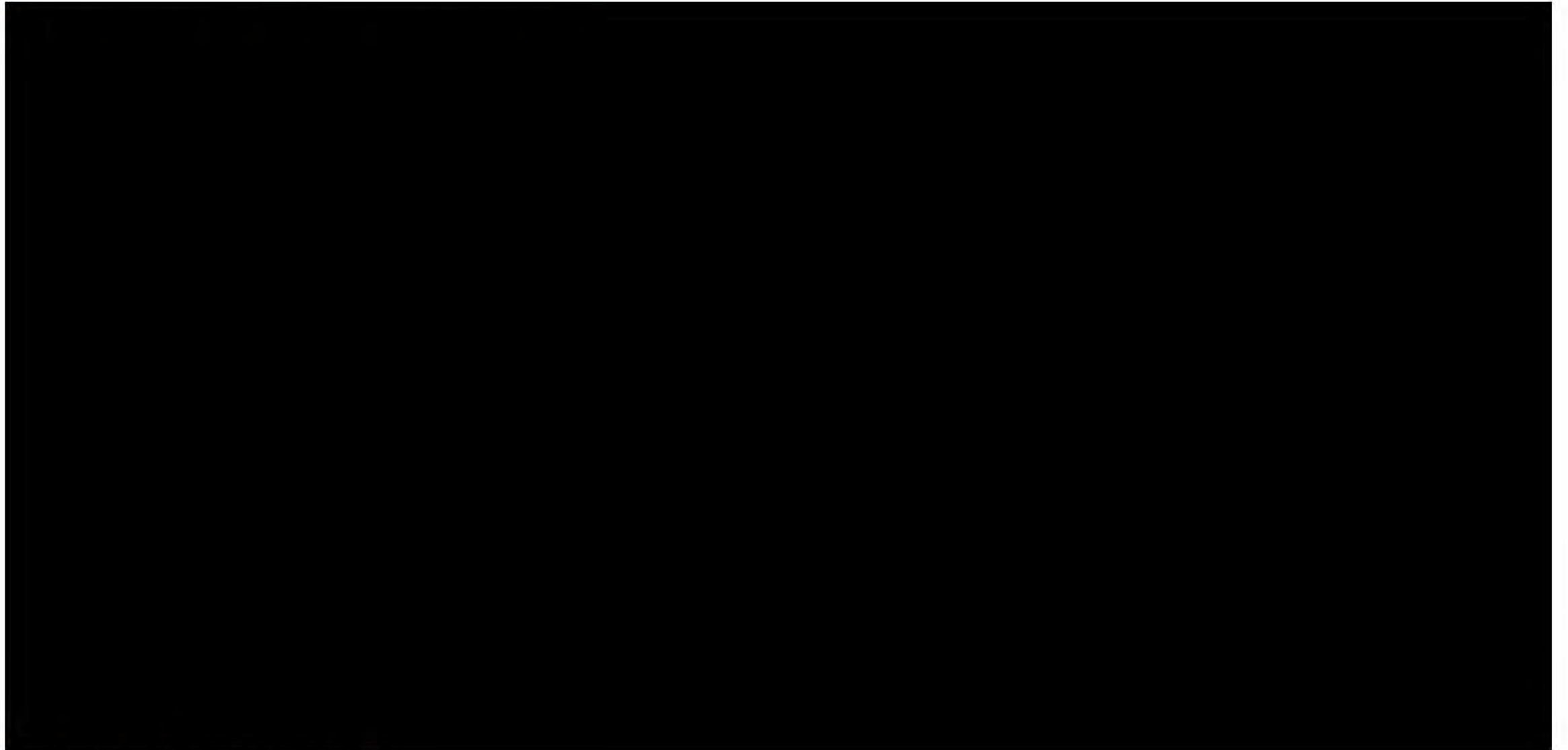


# Coal Inventory Update





# Iatan Coal Inventory



# Seasonal Operations Update





# Seasonal Operations

- Iatan 1 was placed in seasonal operations in the Spring of 2023
- From March 1, 2023 to May 9, 2023
- Less wear and tear on equipment due to cycling the unit on and off during shoulder month operation
- Currently working on results of Seasonal Operations

# Missouri River Drought Resiliency Update



# Missouri River Drought Resiliency

## *Iatan 1 River Intake Vacuum Lift System*

- (2) 50 HP vacuum pumps added, achieve ~3.5psi vacuum (7ft water column)
- Vacuum walls added intake side of screens
- Reinforced structure to retain load ratings
- Installed during the Fall 2022 Outage and was operational for the winter



# Environmental Update



# Environmental Update

- Proposed Greenhouse Gas Regulation
- Good Neighbor State Implementation Plan Stay/Status of Good Neighbor Federal Implementation Plan
- Proposed Updates to the Mercury and Air Toxics Standards (MATS) Regulation
- Regional Haze Regulations – 2nd Planning Period
- Effluent Limitation Guidelines
- River Intake Requirements (Clean Water Act 316(a))
- Thermal Discharge Requirements (Clean Water Act 316(b))
- Coal Combustion Residuals Regulation – Legacy Units

***EPA is continuing to modify existing regulations and propose additional regulations for electric generating facilities***



# Proposed EPA GHG Standard Overview

- On May 23, 2023, EPA published proposed greenhouse gas standards and guidelines for fossil fuel-fired power plants
  - Proposal would set CO<sub>2</sub> limitations for new gas-fired combustion turbines, existing coal, oil and gas-fired steam generating units, and certain existing gas-fired combustion turbines
  - Represents latest in a series of similar proposals made over the years which included the Clean Power Plan (CPP) and Affordable Clean Energy (ACE) rule
  - The proposed CO<sub>2</sub> limitations assume technologies such as carbon capture and sequestration/storage (CCS), hydrogen co-firing, and natural gas co-firing will be utilized
    - Existing coal-fired generation **will** be impacted
      - Emission limitations are effective beginning on January 1, 2030
    - Existing combined cycle generation **could** be impacted
    - Future simple and combined cycle generation **may** be impacted
    - Comments are due on August 8, 2023

***Proposed regulation is extremely aggressive for both CO<sub>2</sub> reductions and implementation timeline***





# Coal Combustion Residual (CCR) Overview

- Regulations first established in 2015 to regulate handling, disposal, and remediation associated with CCR or coal ash
- Since 2015, Evergy has ceased operations of all coal ash ponds and either recycles CCR or disposes of it in landfills
- In May 2023, EPA proposed the Legacy CCR Unit regulation to expand rule applicability to units closed prior to 2015
  - This regulation, if finalized, will require Evergy to reevaluate CCR disposal units closed under state regulation prior to 2015
  - Some units may require re-opening and reconstruction of cap
  - Regulation expected to be finalized in mid 2024

***Proposed regulation would require Evergy to reevaluate CCR units previously closed under state regulation***



# Tour Route

- Please be safe
- Please stay close to the group
- Open grating

*Stay with your Tour Guide*