



AGENDA

Council Work Session Meeting

5:00 PM - Monday, June 3, 2024

Farmington City Hall, Council Chambers

Page

1. CALL TO ORDER

2. APPROVE AGENDA

3. DISCUSSION ITEMS

3.1. Alternative Urban Areawide Review (AUAR) and Data Center Overview
- Information Session

2 - 30

No action requested. These presentations are informational. Both consultants will be available to answer questions and engage in dialogue on the topics of Alternative Urban Areawide Review (environmental review) and data centers.

[Agenda Item: Alternative Urban Areawide Review \(AUAR\) and Data Center Overview - Information Session - Pdf](#)

4. CITY COUNCIL COMMITTEE UPDATE

5. CITY ADMINISTRATOR UPDATE

6. ADJOURN

COUNCIL WORK SESSION AGENDA MEMO

To: Mayor, Councilmembers and City Administrator
From: Deanna Kuennen, Community Dev Director
Department: Community Development
Subject: Alternative Urban Areawide Review (AUAR) and Data Center Overview - Information Session
Meeting: Council Work Session - Jun 03 2024

INTRODUCTION:

In an effort to keep the City Council informed on what an Alternative Urban Areawide Review (AUAR) environment review is, and to provide baseline information on what data centers are and why data center development is happening in Minnesota, Alison Harwood, Director of Natural Resources at WSB and Thom Jackson, MN AFCOM Chapter President, will present to the City Council.

DISCUSSION:

The City of Farmington has hired WSB to assist with the review and distribution, as well as the review of agency comments and preparation of the AUAR orders and adoption documents associated with two large areas. The City is the Responsible Government Unit (RGU) for the environmental review and the AUAR process, as defined in Minnesota Rule 4410 specifically identifies when a review is required, who manages the process, what topics are covered in the review, and what happens following adoption of AUAR. Alison Harwood, Director of Natural Resources at WSB, will provide information about the process, as well as information on what an AUAR is/what an AUAR isn't.

Thom Jackson, MN AFCOM Chapter President, has also been invited to present a data center overview. With the recent uptick in interest in data center development in Minnesota, it is important to understand why data centers exist, what data centers "look" like (including how they have evolved), and what the current concerns and benefits are as it pertains to this type of development. Please note - Mr. Jackson is not involved in any proposed data center development in Farmington but, instead, was recommended by the State of Minnesota as a subject expert. AFCOM's mission is to be a leader in educating, connecting, and guiding the data center community at large. [About - AFCOM](#)

BUDGET IMPACT:

Not applicable

ACTION REQUESTED:

No action requested. These presentations are informational. Both consultants will be available to answer questions and engage in dialogue on the topics of Alternative Urban Areawide Review

(environmental review) and data centers.

ATTACHMENTS:

[AUAR Overview by WSB](#)

[Data Center Overview by AFCOM](#)

Alternative Urban Areawide Reviews



Alternative Urban Areawide Review (AUAR) Process

Relevant Terms and Definitions

- EQB: Environmental Quality Board
- AUAR: Alternative Urban Areawide Review
- EAW: Environmental Assessment Worksheet
- EIS: Environmental Impact Statement
- RGU: Responsible Government Unit (City of Farmington)
- Significant: cannot be undone and/or addressed through a formal review or permitting process.

Alternative Urban Areawide Review (AUAR) Process

What is an AUAR

- State environmental review document
- Hybrid of an EAW and EIS
- Studies the effects different development scenarios may have on the environment and community infrastructure
- Updated every 5 years

Purpose

- Used as a planning tool
- Identify the potential for cumulative impacts of anticipated development within an area
- Identify mitigation measures for potential impacts
- Informs future permitting, planning, and zoning decisions
- Does not approve or deny a project

Alternative Urban Areawide Review (AUAR) Process

When is a review required?

- State statute (MN Rule 4410) requires environmental review for various types of development types and densities.
 - e.g., residential development exceeding 250 unattached units or 375 attached units; light industrial exceeding 300,000 square feet; industrial, commercial, or institutional exceeding 200,000 square feet
- AUARs are an allowable type of environmental review for certain development types.
- Eligible development types include:
 - Residential, commercial, warehousing, and light industrial
- Who manages the AUAR?
 - City is RGU and is the owner of the document.
 - Future mitigation measures identified may be responsibility of developer or city – determined at time of plan review

Alternative Urban Areawide Review (AUAR) Process

Topics covered in an AUAR

- Land Use and Cover Types
- Required Permits/Approvals
- Geology and Grading
- Water Resources
- Wildlife and Habitat
- Contamination
- Greenhouse Gas/Climate Impacts
- Water and Sewer Infrastructure
- Transportation
- Historic Properties
- Visual
- Air and Noise
- Cumulative Potential Effects
- Mitigation Plan

Alternative Urban Areawide Review (AUAR) Process

AUAR Action

RGU Adopts Order to Prepare AUAR

RGU develops AUAR

(note: document preparation is typically started prior to Order)

RGU reviews and distributes Draft AUAR and Mitigation Plan for public and agency review

Draft AUAR and Mitigation Plan available for 30-day public and agency review

RGU revises Draft AUAR and Mitigation Plan based on comments from public and agencies

RGU distributes Final AUAR and Mitigation to agencies and Met Council for final 10-day review and objection

If no objections, RGU Adopts Final AUAR and Mitigation Plan

RGU updates AUAR every 5 years until development build-out is complete

Alternative Urban Areawide Review (AUAR) Process

What happens following adoption?

- AUAR remains valid for the studied development scenarios for 5 years.
 - All development that occurs within the limits of the studied development scenarios is covered and does not require additional environmental review.
 - Developers will review and implement mitigation measures outlined in the AUAR as development progresses.
-
- When to update the AUAR
 - The AUAR must be updated every 5 years.
 - The AUAR must be updated if a proposed development scenario is more dense/impactful than what was studied under the AUAR.

Questions

Alison Harwood

aharwood@wsbeng.com

Data Center Overview

Presented to: **City of Farmington, MN**
June 3, 2024



**GREATER MINNESOTA
CHAPTER**

Advancing Data Center and
IT Infrastructure Professionals



Data Center Overview

Thom Jackson, PE

*Data Center Design Engineer
MN AFCOM Chapter President*



GREATER MINNESOTA
CHAPTER

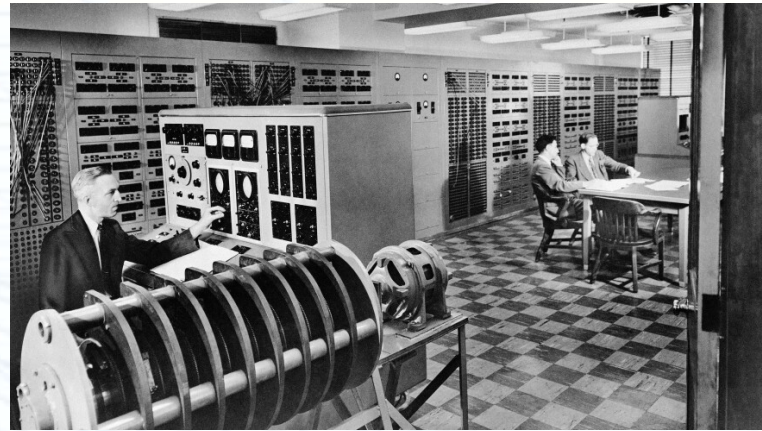
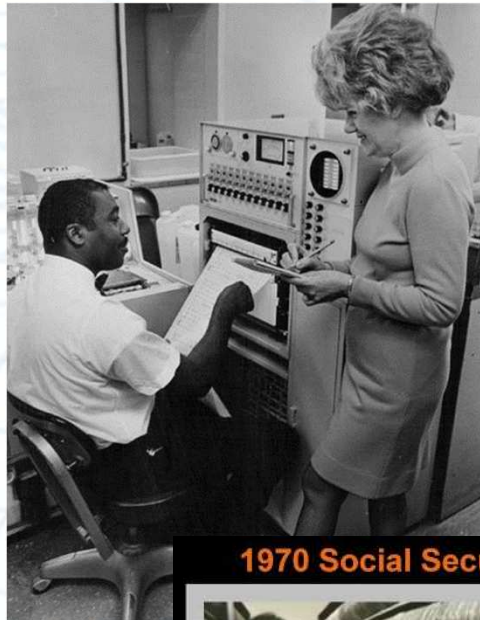
Advancing Data Center and
IT Infrastructure Professionals

- Registered Professional Engineer in MN
- LEED Accredited Professional
- Dept. of Energy Data Center Energy Practitioner
- Data Center Mentor



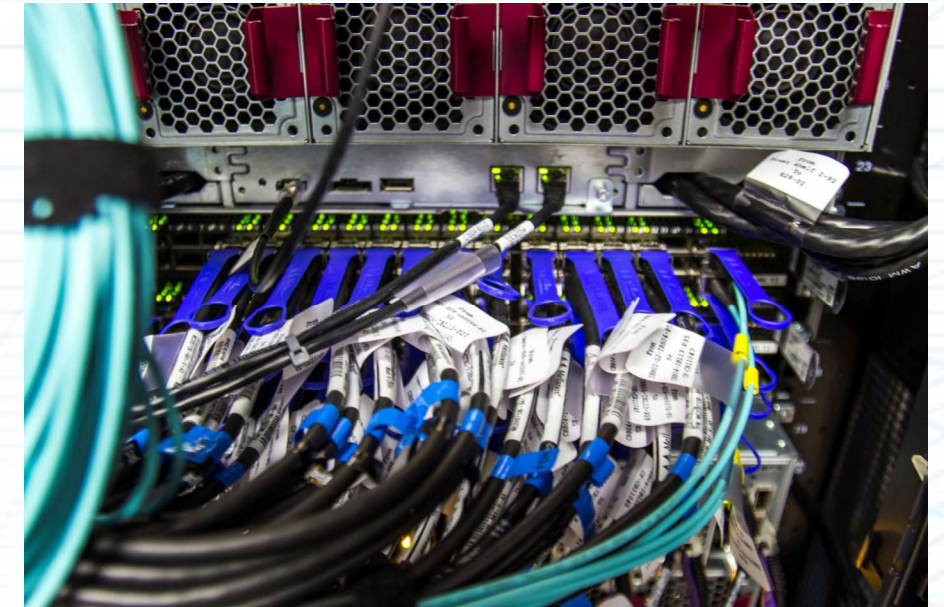
Data Center Overview

Just a room full of computers



Data Center Overview

Just a room full of computers



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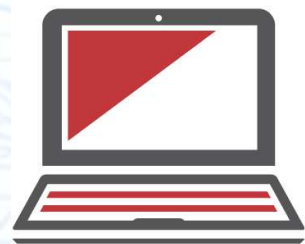
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Data Center Overview

What uses a data center?

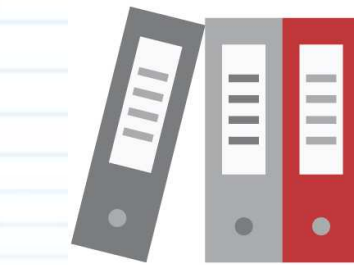
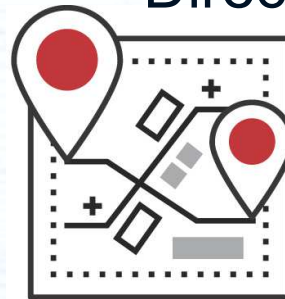


Email

Phone Call



Directions



Documentation

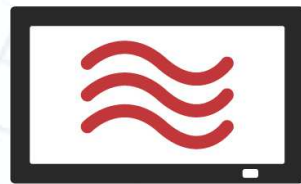
Retail Transactions



Health Records



Internet



Streaming TV



Banking



Social Media Apps



Music Streaming



Data Center Sizes / Types

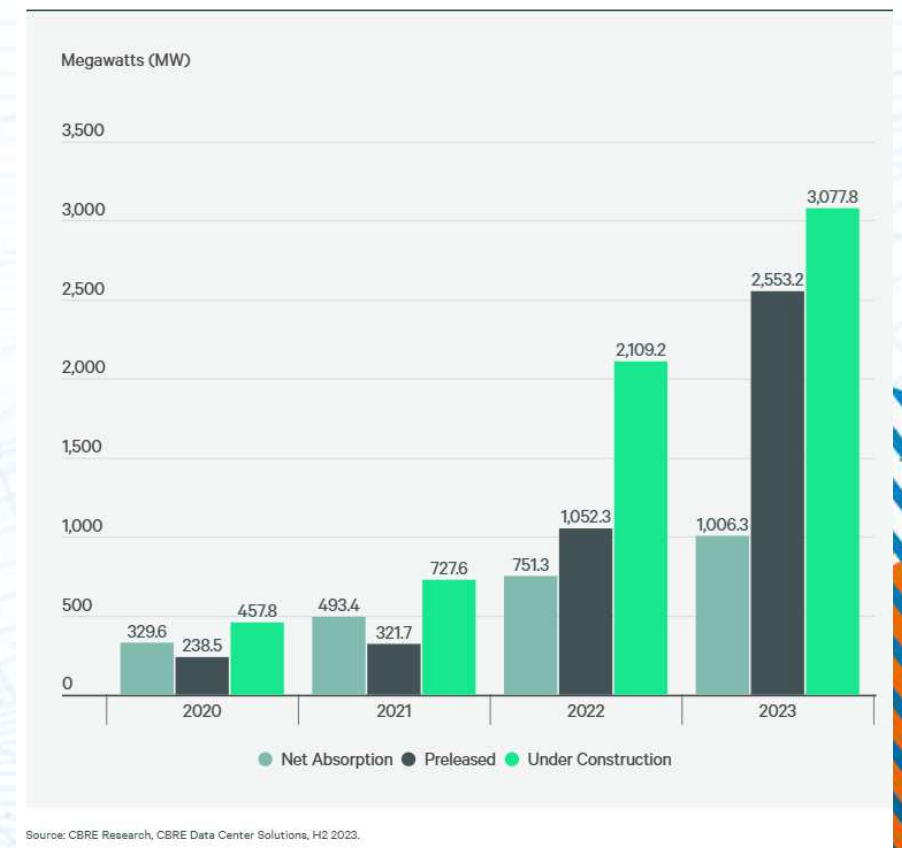
Types

- Enterprise
- Colocation
- Edge
- Hyperscale

Growth Rate

- 2000 - 1 MW
- 2010 - 10 MW
- 2024 - 100 MW+

Figure 5: Primary Markets Historic Net Absorption, Preleasing & Under Construction



Data Center Overview

Where is the Cloud?



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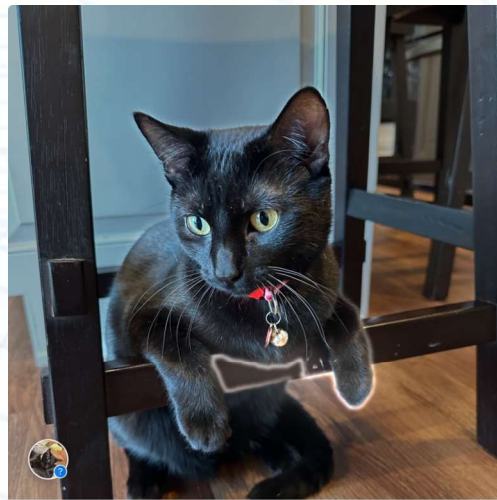


Are data centers important?

- **Outages**
 - 911 calls, Retail, Internet connectivity for business
- **Security**
 - Health Records, Financial, School Records, Photos
- **Speed and Accuracy**
 - Bank transactions, Stock Market, Favorite Show!



Artificial Intelligence – Data Center Impact



Add a Caption

Look Up **Bombay** >

Friday • Mar 15, 2024 • 8:06 AM

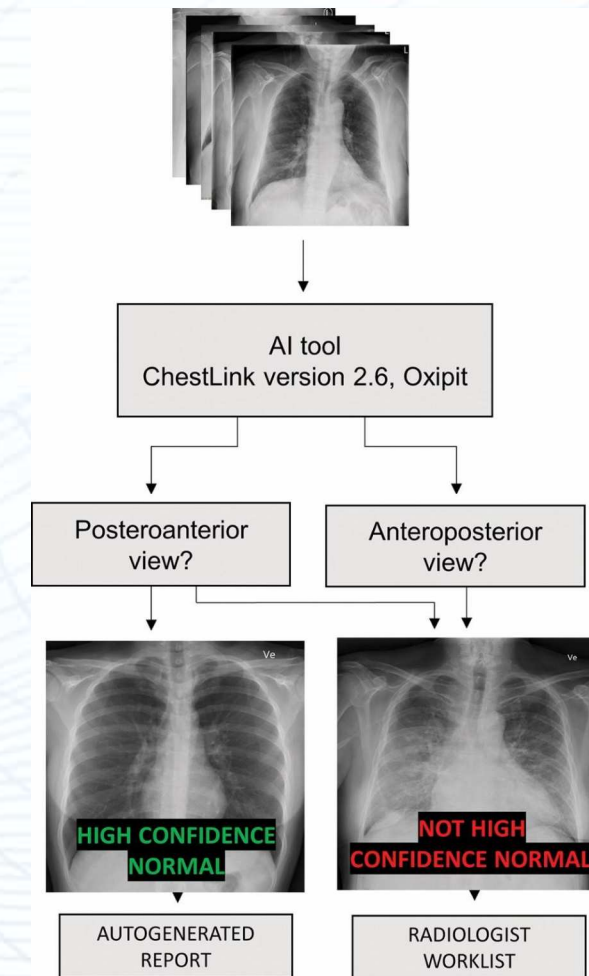
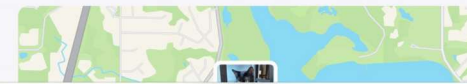
IMG_5649

Apple iPhone 14 Pro

Main Camera — 24 mm f1.78

12 MP • 3024 x 4032 • 2.5 MB

ISO 800 | 24 mm | 0 ev | f1.78 | 1/60 s



Data Center Overview

What supports a Data Center?



Building



Power



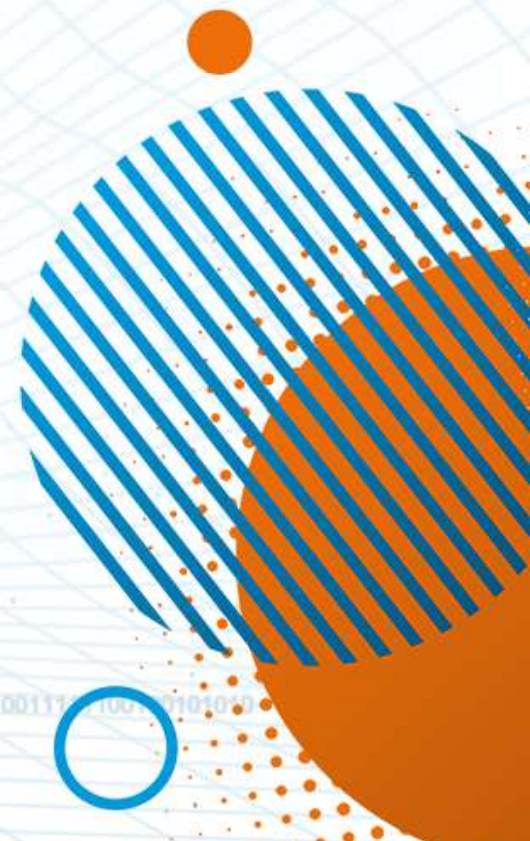
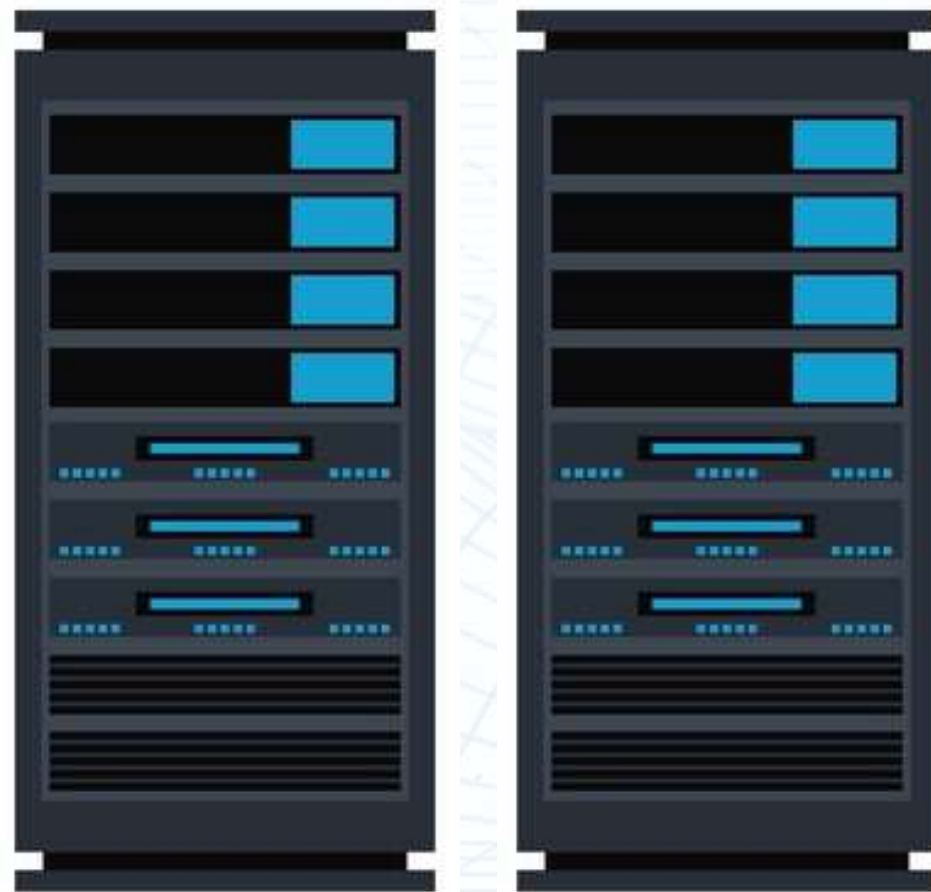
Cooling



Internet /
Cabling



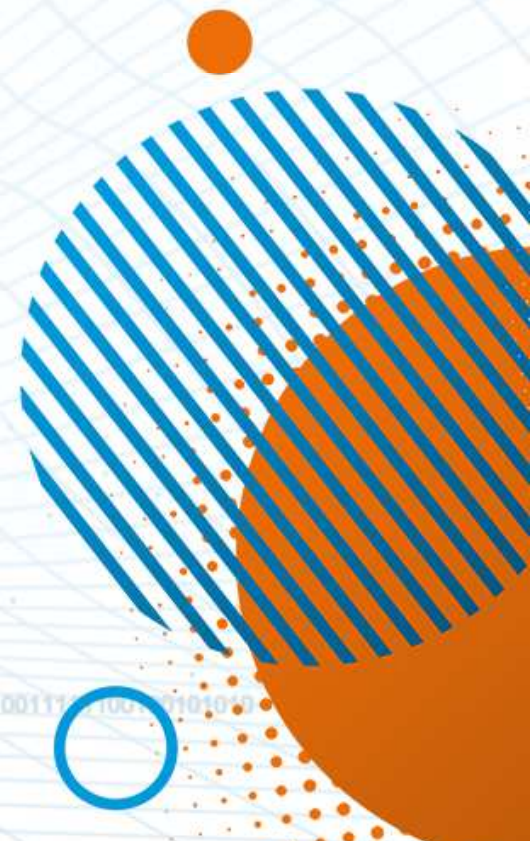
IT





Recent Concerns – Energy Usage

- Always Increasing Energy Efficiencies
- Renewable Energy Deployments
- Green Grid – founded in 2007
 - Defined Power Usage Effectiveness (PUE)
 - Defined Water Usage Effectiveness (WUE)



Recent Concerns – Water Usage



- Depends on available water utility
- Depends on chosen cooling technology
 - Evaporative Cooling Tower – up to 15 gpm / MW
 - Closed Air-Cooled Chiller – minimal



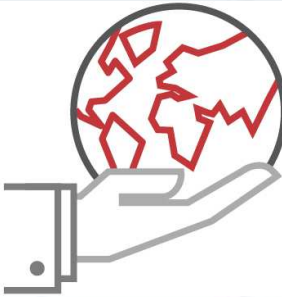
Recent Concerns – Noise



- **IT Equipment Noise**
 - Far within concrete building
- **Generators – Emergency use only**
 - Sound Attenuation
- **Cooling Equipment**
 - Sound Dampening Fans



Recent Concerns – Pollution



- **Emergency Generators**
 - **Used just like Hospitals – only during utility outage**
 - **Testing one hour per month**
 - **Meets EPA requirements**

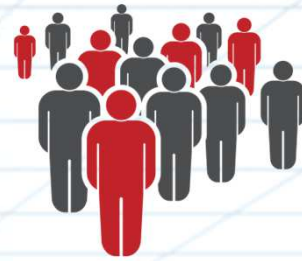


Recent Concerns – Traffic



- **Construction Traffic**
- **Once Built, box truck deliveries of:**
 - **IT equipment**
 - **Maintenance materials**
- **Employees 24/7**





Recent Concerns – Jobs for Local Area

- Hundreds of trades jobs during ~24-month construction
- Highly skilled IT workforce
- Trades jobs to maintain MEP equipment



Why Minnesota?

- Considered a Tier 2 Market
- Free Cooling Potential > 80% of the year
- MN tax incentive program
- Available Power & Land



Take aways

- Data Centers are behind every business
- Technology Growing
 - AI will require more
- Good Neighbor
- Great Jobs
- Concerns Manageable



Data Center Overview



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