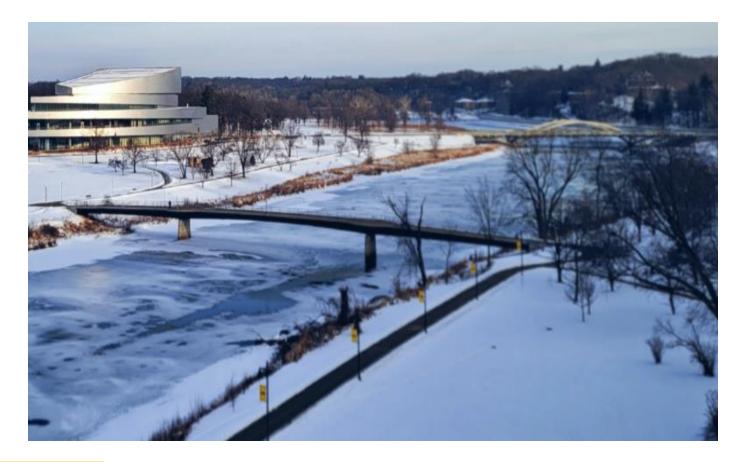
WELCOME!! Monthly Building Coordinator Meeting Via ZOOM

January 18, 2023





Agenda

Cold Weather Protocol Review – Julie Sychra, FM Director-Building Operations & Maintenance

Engie Overview—John Weyer, Distribution Plant Manager

≻Other Items



FM Cold Weather Protocol

Facilities Management

IOWA

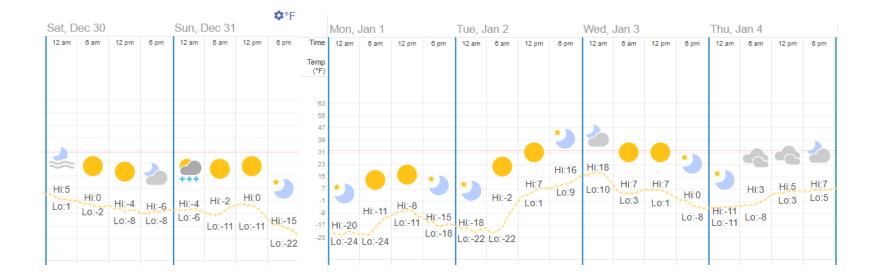
The Issue:

- Buildings are vulnerable to damage during extended periods of sub-zero temperatures
- Opportunity to pivot our approach from being person-driven to process-driven





2018



- Buildings Impacted: MRF, MERF, FH, BB, CB, BCSB, DSB
- \$1M+ Risk Management Claim

Initial Process:

Initial version of the Cold Weather Protocol was developed after 2018

- Identified a response trigger of sub-zero temperatures for more than 24 hours
- "Menu" of risk mitigation actions identified:
 - Additional standby resources
 - · Building schedule removal
 - Building walks
 - Etc.
- Communication and roles/responsibility identified

Cold Weather Response (CWR)

When we call for Cold Weather Response

Anytime OA Temp is forecasted below zero for longer than a 24 hour period, maintenance leadership will meet.

This group consists of:

- FM @ Your Service Supervisor
- Senior Manager of Operations and Maintenance
- Associate Director of Operations and Maintenance
- Manager of Data Analytics and Commissioning

This team will determine

- Agree upon the approach to activate the CWR Action Plan
- The required attendees for the CWR daily report meeting
- When it is appropriate to establish an Incident Control Center (ICC)

Cold Weather Response Action Plan

When the Cold Weather Response is activated, a daily report out meeting will be initiated. The Cold Weather Response Report out meeting will be a daily update from each of the four members of the group. If additional members are needed, they will be added in an ad hoc basis.

If a larger response is required, an Incident Control Center will be set up full-time. The procedures and members of this will be set up based upon the needs of the response.

Associate Director of O&M Responsibilities

Establishes communication protocol and acts as primary contact for reporting to campus and leadership

FM @ Your Service Responsibilities

FM @ Your Service Supervisor acts as the primary contact for resource procurement and vendor communication.

If Cold Weather Response is called, will set up hotel for one on-call personnel (Primary)

A Secondary person will be assigned from the on-call list for backup for Primary

The Primary and Secondary will be in on-call paid status.

Invitations will be sent out for voluntary maintenance support to be called in as needed. These personnel will not be in on-call paid status unless actually called.

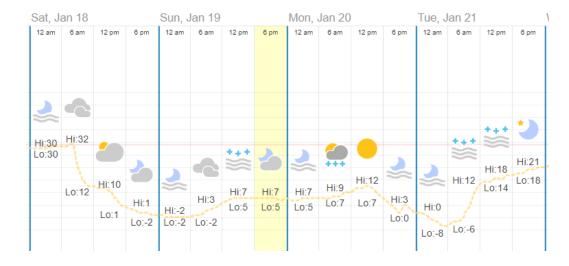
Contact DPS to let them know our staff will be walking buildings more frequently and provide the name of the primary on-call person. They will be notified of a secondary on-call person, but the name will not

2019



- Cold Weather Protocol leveraged 4 times throughout the winter, with a Thaw Protocol put into place coming out of the Polar Vortex
- Building walks caught 20 open windows in 2 buildings alone
- Buildings Impacted: ML

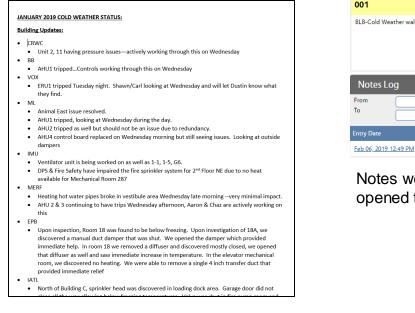
2020



• No significant Building Impact

Continuous Process Improvement:

→We had a process that was working, but information tracking and sharing was very cumbersome:



GARY MARTIN

CLOSEOUT

complete

Notes were typically non-descriptive and each w/o had to be opened to review them

GDMARTIN

Risk points were identified in a word document



The Goal:

Develop a "One-Stop Shop" leveraging our Computerized Maintenance Management Software for the process



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Collaborative Approach focused on Sustainability:

→ "Cold Weather Project" set-up in AiM with Planned Work Orders

- Pre-populated with a work order for each known area of vulnerability
- Pre-populated with a building walk work order for each building
- When trigger is met (forecast <0F for >24hrs), planned work orders are promoted and can follow the standard AiM FM Workflow
- → Mother Nature helped us with a practice round in January 2021!

<u>Project</u> ↓	Description
<u>1316</u>	Cold Weather Event 1 (1/19/20) FY21

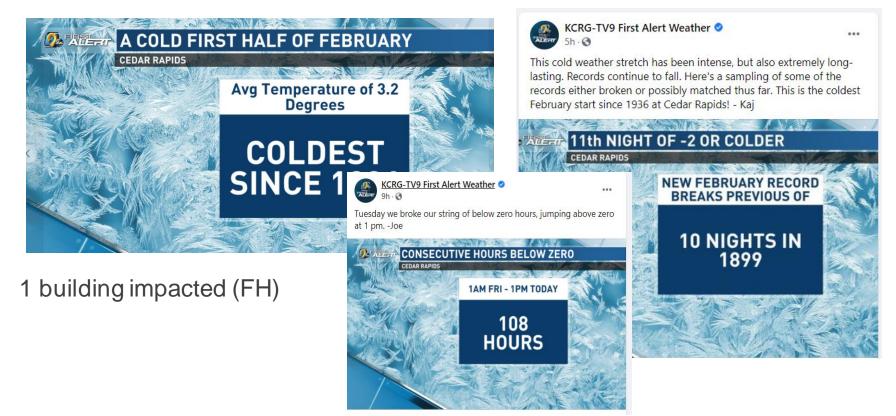
→And then came February 2021:

1322 Cold Weather Event 2 (2/5-2/19) FY21





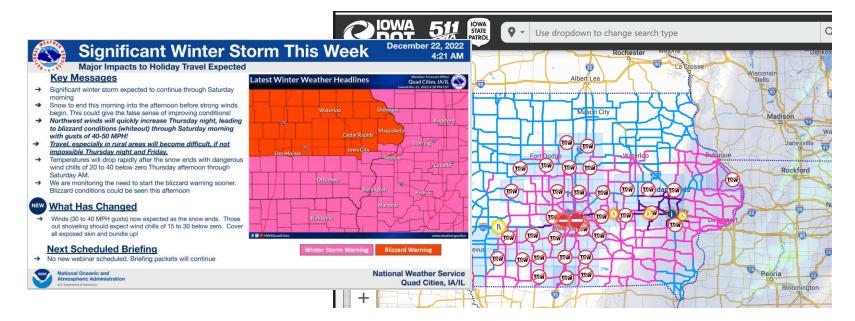
▶ 12 Days with highs 10F or lower (Feb 5-16)





Cold Weather combined with blizzard conditions and a holiday

• 45 Consecutive hours below 0F (Dec 22-24)



The Results, 2022:

→Cold Weather Project 1326 with over 120 work orders. Fantastic tool to proactively find issues, Notes examples:

Air filters were very plugged with snow. I shoveled out the intake, removed and cleaned filters with compressed air. pressures were back to normal. No abnormalities observed in the building or on the BAS.

Walked around building stairwells with thermo gun, checking temp on the HHW and the area. Found ENT 7 door seals are worn and no longer seal the outside air from coming in. GENERAL This is a stairwell entrance. Wrote up a job to have Key and Access remove old and add a new bottom and sides seal to the door. This will keep that area much warmer.

Checked today was 52f and I pulled one outside GENERAL door closed that was ajar

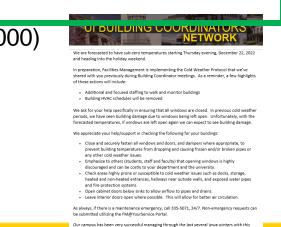
Have boiler temps set and space heater set high in door spaces.



The Results, 2022:

→ Summary of Work:

- 2 on-call technicians with 24/7 support a block from campus
- Building schedules removed
- Heightened monitoring of building alarms and support personnel response
- Multiple Outages were proactively delayed
- Several messages sent to Building Coordinators to share with occupants
 - Issues with windows found—and addressed prior to sub zero temperatures, Thank you!!
- Only 1 issue requiring ServPro at EMRB (<\$30,000)



Our campus has been very successful managing through the last several lowa winters with this process and we thank you for your partnership!

Have a good weekend. Stay safe and WARM

The Facilities Management Team

Facilities Management

Great Example!!

Sent: Thursday, Dece To: Rourke, Ste Subject: RE: Bu Sen	< <u>lisa-james@uiowa.edu</u> > mber 08_2022 1:32 PM m: Rourke, Stephanie S <sta t: Friday, December 9, 202 James, Lisa M <lisa-james@< th=""><th></th><th></th><th></th><th></th><th></th><th></th></lisa-james@<></sta 						
open- it a 23-754820	in 5H and 5W, 3rd and 4th floors -Some windows will n 319-335-6550	ot latch- top window has shifted down and top/bottom win	Created By MICHELLE MARXE Last Edited by URIAH BARNI dows will not line up in order to make la	ES On 12/14/22 3:58 PM	Status Project Customer Reques Desired Date Budget	<u>JOB COMPLETE</u> 117100	\$0.00
Dec 14, 2022 2:31 PM PHORESOW Dec 13, 2022 2:18 PM PVANELSW		PATRICK HORESOWSKY PETER VAN ELSWYK	GENERAL Roo 420 420 419 418 421 418 421 418 418 416 416 319 319 319 320 318 318 318 318 315 316		ed all windows on list. PH Number / Window 2nd window both left window desk in back, right window left window right bank of windows both and 3194- have plastic covering, not checked right and left right window 1 window back left; right window in bank desk- left back cubicle, right window		TING BUILDING Status READY TO CLOSE



Where are we now / Where are we going-**Continuous Improvement will continue!**

- →Cold Weather Protocol Updated based on feedback from our Debrief conversations
- →Continuous Improvement and additional risk mitigation activities
- → Reviewing work orders to create Planned Project for next trigger event



Cold Weather Protocol (Updated March 2021)

- Cold Weather Protocol Steering Group Members
- FM @ Your Service Manage
- Senior Manager of Operations and Maintenance
- Associate Director of Operations and Maintenance Manager of Controls Engineering

Annual Preparation Cadence

- By November 15: o Populate a template Cold Weather Project with planned work orders (FM planner to initiate)
 - · Operations & Maintenance review of prior year's Cold Weather Event projects to inform creation of the planned work orders for the current year (review/updates to Approved project)
 - March 2021 Debrief suggestions: Add phase for simple building check
 - for negative pressure (paper test) Intentional focus on any areas currently impacted by construction or
 - maintenance projects, vulnerable areas, etc
- December Cold Weather Protocol presented at Building Coordinator Meeting*
- o Building Operations & Maintenance and FM@YS team review of Cold Weather Protocol
- Preparatory Actions when Trigger Event is forecasted
- When outside air temperature is forecasted below OF for longer than 24 hours (Accuweather), a steering group meeting will be scheduled (Associate Director responsibility) to discuss which of the following risk mitigation activities are relevant for the given cold weather situation: Resourcing Considerations:
 - Addition of a secondary on-call team member into standby status (Steph)
 - Hotel rooms secured for primary and secondary on-call members (Steph)
 - Managers secure volunteer lists of team members who will be available to take calls as needed. FM@YS manager compiles this information for the on-call
 - employee(s). (Note, these volunteer employees are paid for any time worked, not put into standby status.) (Ton





Cold Weather Protoco

- Cold Weather Protocol Steering Group Members
- FM @ Your Service Manager
- Senior Manager of Operations and Maintenance
- Director of Operations and Maintenance Manager of Controls Engineering
- Manager, Maintenance Planning

Annual Preparation Cadence:

- By Late November /early December
- o Steering Team reviews Cold Weather Protocol
- Building Operations & Maintenance and FM@YS team review of Cold Weather Protoco Update the template of the planned work order project
- Review of prior year's Cold Weather Event projects to inform creation of the planned work orders for the current year (review/updates to approved project)
 - Intentional focus on any areas currently impacted by construction or
 - maintenance projects, vulnerable areas, etc.
- December Cold Weather Protocol presented at Building Coordinator Meeting* Refresher communication for on-call team on Cold Weather Protocol

Preparatory Actions when Trigger Event is forecasted:

- When outside air temperature is forecasted below OF for longer than 24 hours (Accuweather), a steering group meeting will be scheduled (Director responsibility) to discuss which of the following risk mitigation activities are relevant for the given cold weather situation:
 - Resourcing Considerations:
 - Assign designee(s), as necessary Addition of a secondary on-call team member into standby status (FM@YS Manager)
 - Hotel rooms secured for primary and secondary on-call members (FM@YS) Manager)
 - Managers secure volunteer lists of team members who will be available to take calls as needed. FM@YS manager compiles this information for the on-call

Questions?



ENGIE North America at UI

Building Coordinator's Meeting, January 18, 2023

John Weyer, BSEE, MBA Distribution Plant Manager ENGIE North America at The University of Iowa john.weyer@engie.com M: 319 560 4133



Who is ENGIE at UI?



- → Former UI Utilities department of UI Facilities Management,
 - Operating UI's utility production and distribution systems on the main campus and Oakdale:
 - Steam
 - Chilled Water
 - Electricity
 - Water
 - High Quality Water



→ ENGIE North America is the Utilities Operator for the University of Iowa Energy Collaborative (UIEC). UIEC is the Concessionaire selected by UI for the P3 (UI Utilities "Public-Private-Partnership") in December 2019. Operations transitioned March 2020.



Concession Agreement





\$1.165B up-front payment





Coal-free by 2025

X

Deliver reliable electricity, water, heating, and cooling services to the UI campus community.

• Enforced thru Key Performance Indicators (KPIs)



Invest in the University's core missions of teaching, research, and scholarship



Prepare students to live and work in the 21st century through direct engagement and education in sustainable energy technologies and processes



Facilitate knowledge exchange among the campus community and the State of Iowa, Nation and World



Building Coordinator's Meeting, January 18, 2023

ENGIE NA

→ ENGIE North America

- 1,500 employees
- Headquartered Houston TX
- Providing energy services to:
 - K-12 and Community College Education
 - Higher Education

INWA

- State and Local Government
- Federal Government
- Hospitals and Medical Research
- Renewable grid wind, solar and storage projects
- Electric and gas energy supply retailer





ENGIE NA



→ ENGIE North America

- Energy Solutions fleet operates district energy or combined heat & power (CHP) systems at:
 - The University of Iowa
 - The Ohio State University, Columbus
 - Harvard Medical School and five affiliated hospitals and research institutions, Boston
 - University of Maryland, College Park
 - Nassau District Energy, Nassau County, Long Island, NY
 - Coors, Golden CO
 - United Launch Alliance, Decatur AL
 - Georgetown University, Washington DC



ENGIE Globally



→ ENGIE Global

- 101,500 employees
- Headquartered Paris, France. Key player in European energy.
- Operates in dozens of countries worldwide, on 5 of 7 continents.
- Solar, wind, natural gas and electricity networks, district energy, thermal production.
- Committed to accelerate the transition towards a carbon-neutral world.
 - Target of Net Zero Carbon by 2045, for us and for our clients

ENGIE at UI



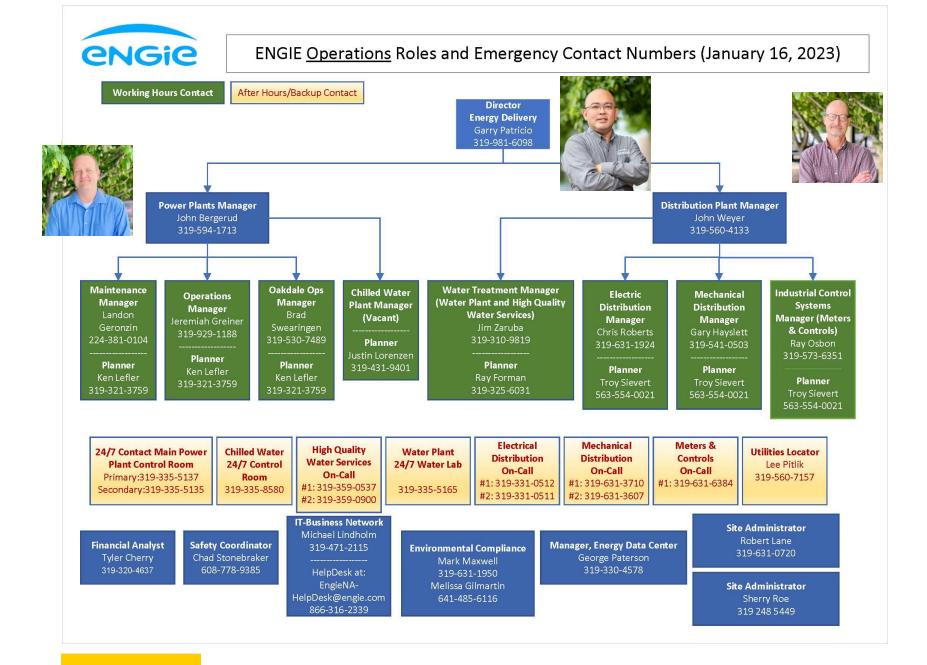
→ Demographics:

- Approximately 120 employees total. About 100 in Operations. Balance in administration, purchasing & accounting, IT, data management, environmental, safety, capital projects.
- In March 2020, ~80% of UI Utilities employees transitioned to ENGIE.
 We continue to have a strong core of employees from UI.
- ~10 full-time positions currently open.
- ~16 part-time students currently employed.

Building Coordinator's Meeting, January 18, 2023

 Staff at Main Power Plant, Oakdale Power Plant, Water Plant, West Campus Chilled Water Plant, Madison Street Services Building and University Services Building.

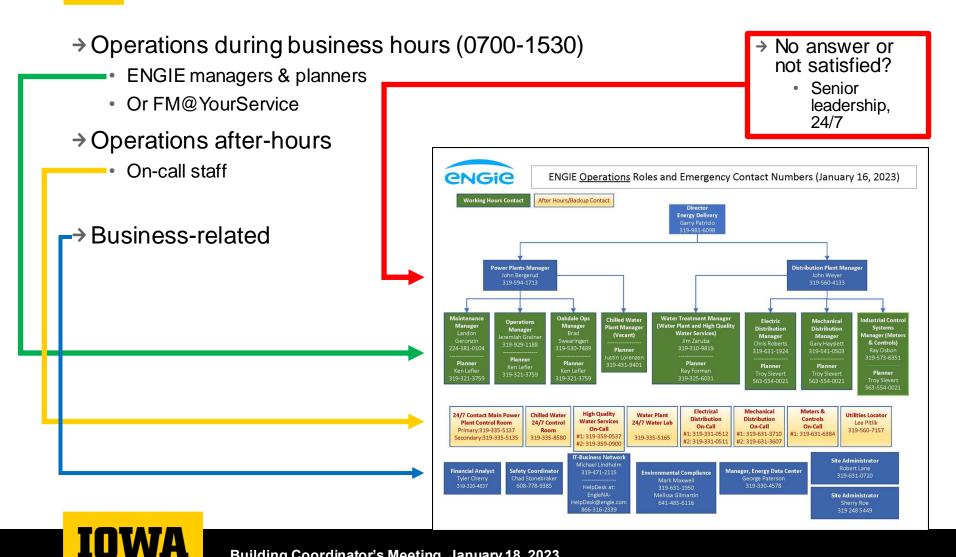




Building Coordinator's Meeting, January 18, 2023

IOWA

Who to call?



Building Coordinator's Meeting, January 18, 2023

- →Main Power Plant
 - 7 boilers
 - 2 satellite boilers
 - 795 kpph capacity
 - 3 steam turbine generators
 - 4 natural gas engines
 - 39.2 MW capacity









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CAT

CATERPILLAR 001

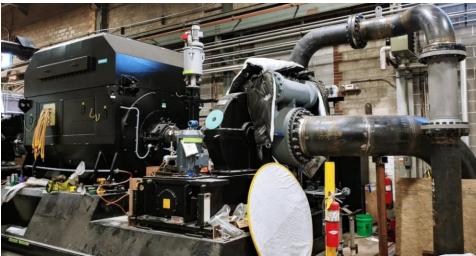




Boiler 10







NEW TURBINE GENERATORS 7 and 8







- →Water Plant
 - Source of Potable Water for the Campus.
 - Research facility for advanced studies in Environmental Engineering
 - Production Capacity
 - Average Daily Production: 2.4 MG
 - Max Day Production: 5.3 MG













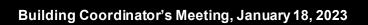
→ Chilled Water Plants

- Chiller Plant 1 & Chiller Plant 2
- North West Chiller Plant
- North Campus Chiller Plant
- 14 chillers total
 - 61% electric
 - 39% steam

IOWA

• 43,300 tons cooling capacity























- → Electrical Distribution
 - Peak load of 63 MW



- Over 45 miles of 13.8kV underground cable, via concrete-encased duct banks and approximately 300 vaults
- Over 250 building substation transformers & associated switchgear
- Connected to MidAmerican Energy grid at two substations shared with MidAmerican Energy, one at 161kV, one at 69kV. System contains an Across Campus Tie (ACT) to connect the two substations in the event of an emergency.
- Maintains ~2,700 outdoor lights-- streetlights, parking lot, and walkway lights.



→ Mechanical Distribution

- Tunnels, vaults, and direct-buried piping for steam and condensate, chilled water and domestic water piping and hydrants, compressed air, as well as storm and sanitary sewer collection systems.
- ~14,500 ft of steam distribution tunnels (roughly 2.75 miles). Most all new piping now direct buried.
- 89 steam distribution vaults.
- 4 hot water distribution vaults.
- Piping:

ΙΠΜΑ

- Steam, 78,000 feet of 1" to 30" pipe, 20 and 150 psig distribution systems
- · Chilled Water, 48,000 feet of up to 36" pipe
- Domestic Water, 186,000 feet of up to 20" pipe.
- Storm and Sanitary, 300,000 feet of up to 36" pipe.
- Hot Water, 1,628 feet of pipe.
- Compressed Air, 23,533 feet of pipe.
- Underground Locator as part of Iowa One Call system. 1,000 locate tickets annually

→ Meters & Controls

Maintains Utility Controls Network



- Platform upon which Power Plant, Chilled Water, Water Plant, substation and Oakdale control systems reside.
- Transmits meter data for revenue billing and utilities operations data for historical collection and analysis.
- Maintains 65 miles of fiber optic cable (separate from ENGIE and UI IT systems) with numerous servers, workstations, network switches, routers. Compliant with industry cybersecurity standards.
- ~425 electric meters, ~100 chilled water interfaces with 118 chilled water meters, 163 steam meters, 76 CW metering PLCs, and bringing ~100 water meters onto the network.











→Oakdale Power Plant

- 4 gas boilers, 57 kpph capacity
- 2 gas generators, 2.85 MW capacity
- 5 chillers, 2,240 tons capacity









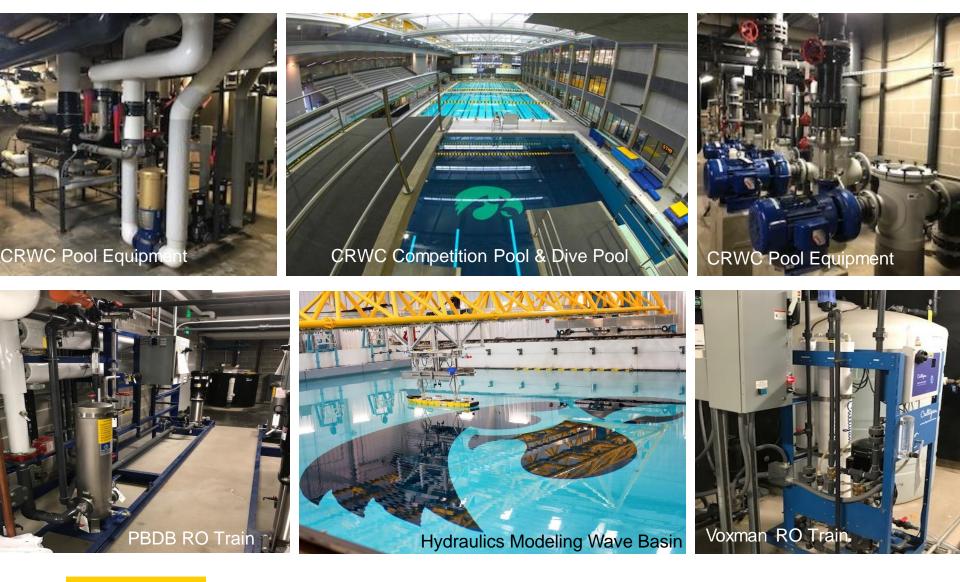








- → High Quality Water Services
 - Chemical treatment to 90 closed loops for building air conditioning systems.
 - Campus pools and therapy spas at CRWC, FH, Sports Medicine, UIHC; hydraulics modeling wave basins main and Oakdale campuses.
 - High Quality Water Systems in ~45 buildings consisting of RO, DI and softening systems for heating & cooling systems, humidification, labs, and processing of medical equipment.
 - Disinfection and sampling of new/remodeled/repaired piping systems, chlorination/dechlorination, main break sampling.
 - Oakdale Campus Water System
 - State and federal permit-required bacteria and lead/copper sampling.
 - ~300 water meters for monthly billing.
 - Sampling and analysis for regulated storm water outfall discharges and environmental regulatory reporting.





Capital Projects

Completed

- → North Campus Chiller Plant
- → Water Plant Filter Rehabilitation
- → Power Plant Roof replacement
- → Westlawn Condensate Return
- → North Clinton Steam Line

Construction

- → Steam PRV
- → Power Plant Gas Detection
- → TG-6
- → PLC Upgrades
- → Chiller Overhaul

IOWA

→ Oakdale Chiller Plant

Contracting

- Wrestling Facility Utilities
- CHA Steam and Condensate
- CHA Forced Sewer Main

Final Design Review

- Water Plant Intake Structure Replacement
- Storm Water phase 1
- North Campus Chiller Plant Safety
- EPGF
- Water Plant Ferric Sulfate and Fluoride Replacement



Contracting

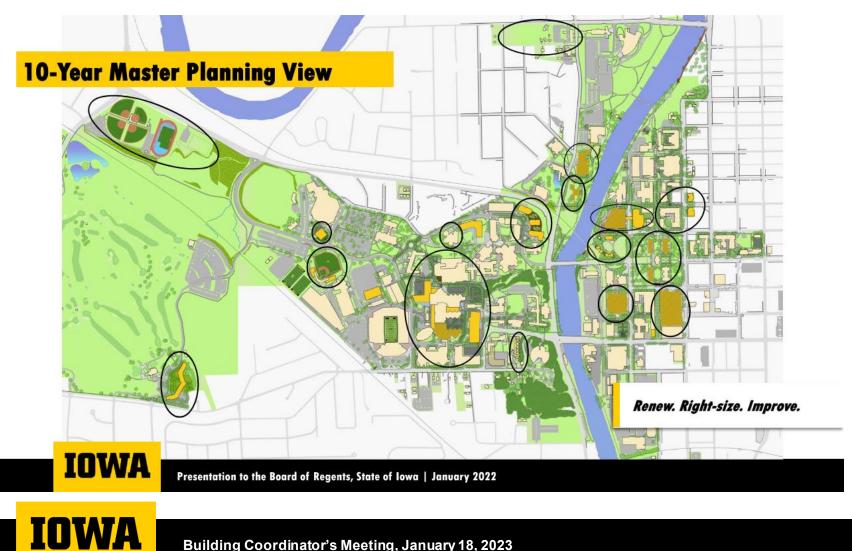
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Building Coordinator's Meeting, January 18, 2023

Capital Projects, Campus Master Plan Support



Building Coordinator's Meeting, January 18, 2023



engie-na.com

Next Meeting:



Next meeting via zoom: February 15, 2023

Proposed Agenda:

Risk Management



Thank you!