
WOMEN IN

COMPRESSED AIR / VACUUM / COOLING

Virtual Meeting

An Exciting Preview of our Speakers Presenting at
the Best Practices 2023 EXPO & Conference

September 20, 2023

Mission Statement

The Women in Compressed Air, Vacuum and Cooling (WCVC) Networking Group provides support to women who have chosen or are thinking of choosing a career in the compressed air, vacuum or cooling industries and welcomes individuals from every job function - engineering, marketing, sales, human resources, finance, production and every job in between. The WCVC Networking Group offers quarterly virtual meetings and networking opportunities in the hopes of empowering women in the compressed air, vacuum and cooling sectors. The group will meet in-person annually at the Best Practices EXPO & Conference.

Register Now for our 1st In-Person Meeting!

BEST PRACTICES

2023 EXPO OCTOBER 23-25 CHICAGO
COMPRESSED AIR / VACUUM / COOLING
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The Women in Compressed Air, Vacuum & Cooling Networking Group Luncheon

- Monday, October 23 12:15-1:45pm
- Keynote Presentation – Jokima Hiller, PhD, MBA, CHE
- “A True Story of Women Working Together”
- Buffet Lunch and Open Networking Time
- Included with an expo hall or conference registration!

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Handout

BEST PRACTICES
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Powering Automation

2023 EVENT PROGRAM

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REGISTER NOW AND SAVE!
Early Bird Rates End on October 21

The flyer features a central image of a food processing facility with conveyor belts and machinery. The text is arranged in a clean, professional layout with various sponsor logos categorized by tier. A QR code is located in the bottom right corner of the flyer.

About the Speaker



Leslie Marshall
Atlas Copco Compressors

- National Account Manager, Atlas Copco Compressors

- **The Best Way to Remove Moisture from the Compressed Air System**

Track 2

Session #3 – Wednesday, October 25th, 8:00 am – 10:00 am

The Best Way to Remove Moisture from the Compressed Air System

9/20/2023

Leslie Marshall

National Account Manager, Atlas Copco

The Best Way to Remove Moisture from the Compressed Air System

- Current Role:
 - National Account Manager for Atlas Copco Compressors (2 years)
 - Help companies/customers strategize to improve their compressed air system
- Previous Role:
 - Energy Engineer for General Mills (4-5 years)
 - Systems Engineer for General Mills (9 years)

The Best Way to Remove Moisture from the Compressed Air System

- DRYERS, the very important but often forgotten part of a compressed air system
 - Oftentimes dryers are just not functioning as expected
 - Sized incorrectly
 - Incoming air pressure, air temperature impact to sizing
 - Impact of incorrect sizing to capital costs, ongoing operating costs, product quality
 - Poor configuration in the system
 - Little or no required maintenance

The Best Way to Remove Moisture from the Compressed Air System

Presentation will cover:

- How to tell how your dryer is performing
- How and why temperature and pressure impacts the dryer performance
- Basic configuration/installation mistakes that impact dryer performance
- Maintenance dos and don'ts for optimal dryer performance
- What to do if problems are found with your dryer

About the Speaker



Rebecca Moore
Aggreko

- Strategic Account Manager, Aggreko
- **Water Consumption and Environmental Impact: How to Reduce Water Usage While Maintaining Production Goals**

Track 1

Session #3 – Wednesday, October
25th, 8:00 am – 10:00 am

Water Consumption and Environmental Impact: How to Reduce Water Usage While Maintaining Production Goals

Rebecca Moore
Strategic Accounts, Aggreko

Introduction



Because of its relative availability and low cost, many companies consume an excessive amount of water without even realizing.



While companies across sectors are racing towards net zero goals, water usage is an equally important goal.



Nearly 50% of our national customers are looking to reduce water consumption.

Why the time for reduced water usage is now

By 2030, water supplies will meet only 60% of global demand on average.

In the United States, industrial water usage accounts for 37% of all freshwater usage.

Two-thirds of businesses have substantial risk in direct operations or in their value chain.

We will share 10 case studies to address water conservation concerns. Included will be ways that facilities can reduce water while maintaining production goals and ESG targets

About the Speaker



**Suzan Sun-Yuan, PE,
CDT, LEED AP**
ESD Consulting Engineers/Stantec

- Technical Authority – Mechanical, ESD Consulting Engineers/Stantec
- **Central Utility Plant (CUP) Promises Reliability, Reduced Capital Cost, and Energy Savings**
Track 2
Session #1 – Monday, October 23rd,
10:15 am – 12:15 pm

Central Utility Plant (CUP) Promises Reliability, Reduced Capital Cost, and Energy Savings

MONDAY, OCTOBER 23,

Suzan Sun-Yuan PE, CDT, LEED AP
Technical Authority, ESD now Stantec



now



Suzan Sun-Yuan PE, CDT, LEED AP

Design and Engineering as the lead mechanical engineer for central utility plants, large complex assembly facilities; supertall mixed-use high-rise buildings, food research labs, vehicle maintenance centers, warehouses, and equipment testing labs.

Quality Control and Assurance: group-level responsibility for technical risk management and is heavily engaged with engineers to ensure projects are technically sound and conform to QA/QC procedures.

Sun-Yuan is also a voting member of the ASHRAE Technical Committee (TC 9.12).

Contact Information:

ESD now Stantec

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now



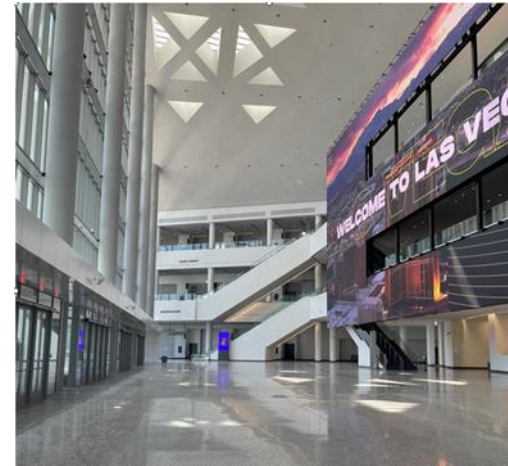
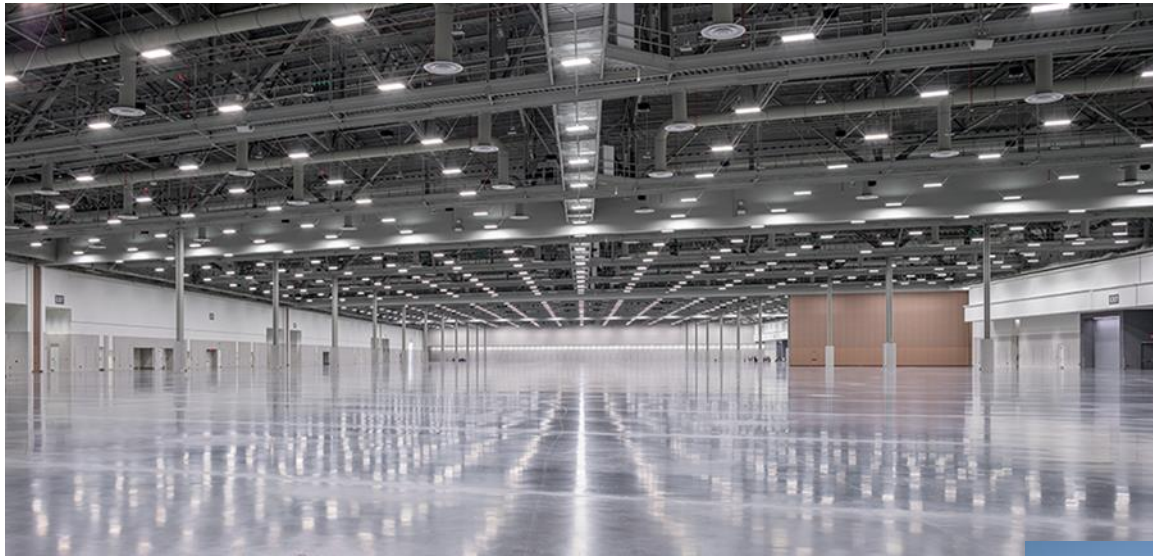
Showcase Building for the Central Utility Plant (CUP) Design



Las Vegas Convention Center West Hall

Las Vegas, Nevada
**2023 Honorable
Mention in the
ASHRAE
Technology Award
Competition in the
V: Public Assembly
(New) category**

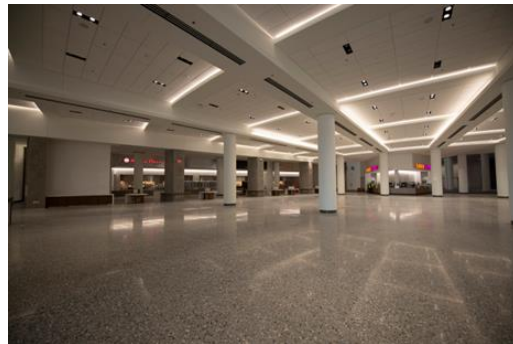
Showcase Building for the Central Utility Plant Design



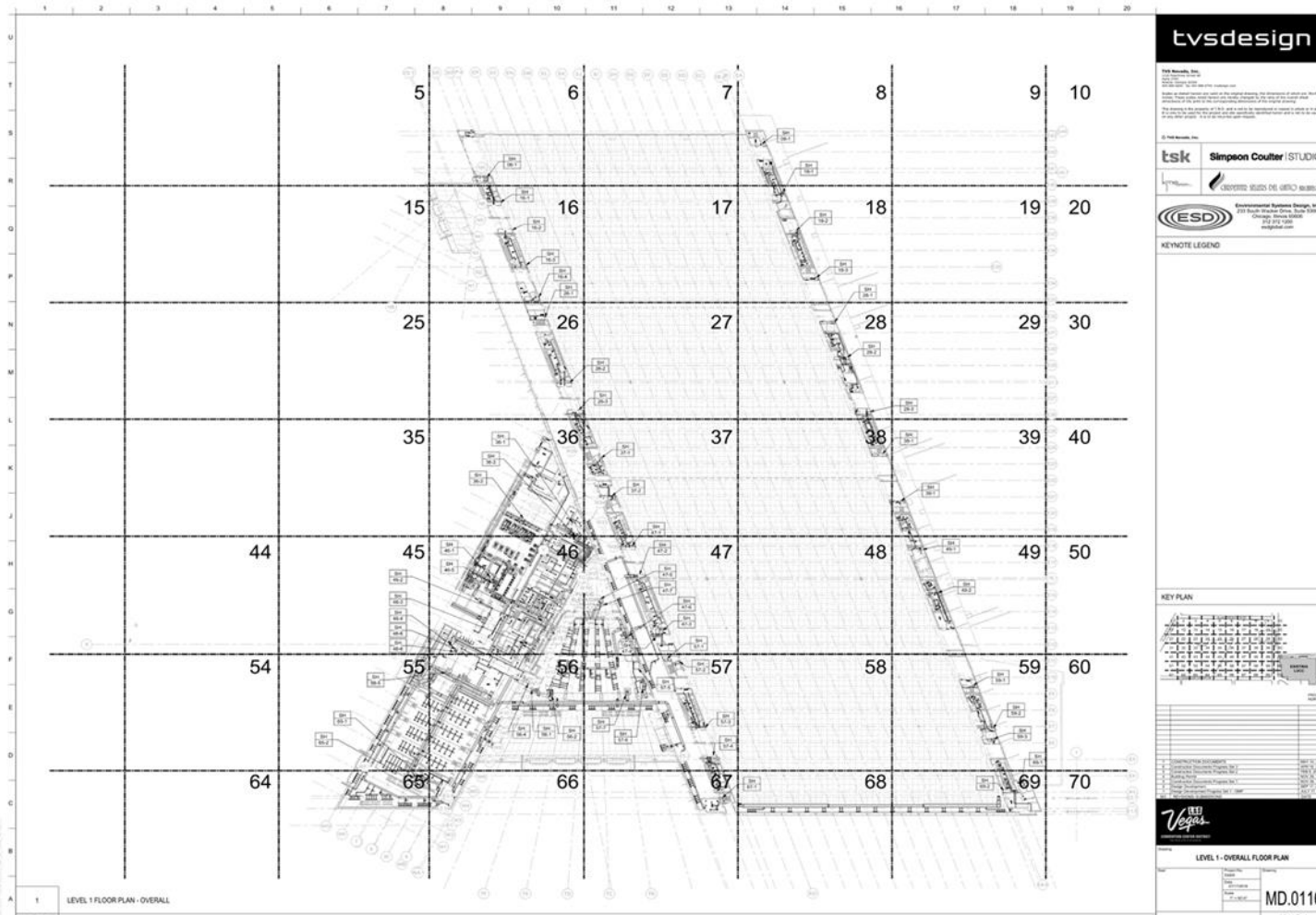
Las Vegas Convention Center West Hall

Las Vegas, Nevada

2023 Honorable Mention in the ASHRAE Technology Award Competition in the V: Public Assembly (New) category



Showcase Building for the Central Utility Plant Design



Las Vegas Convention Center West Hall

- ❖ 1.4 million square foot West Hall addition:
 - 601,960 square feet of exhibition space
 - 150,141 square feet of meeting rooms
 - 1,000-customer capacity food service component complete with food courts, pantry, and a full-service kitchen

❖ CUP Includes

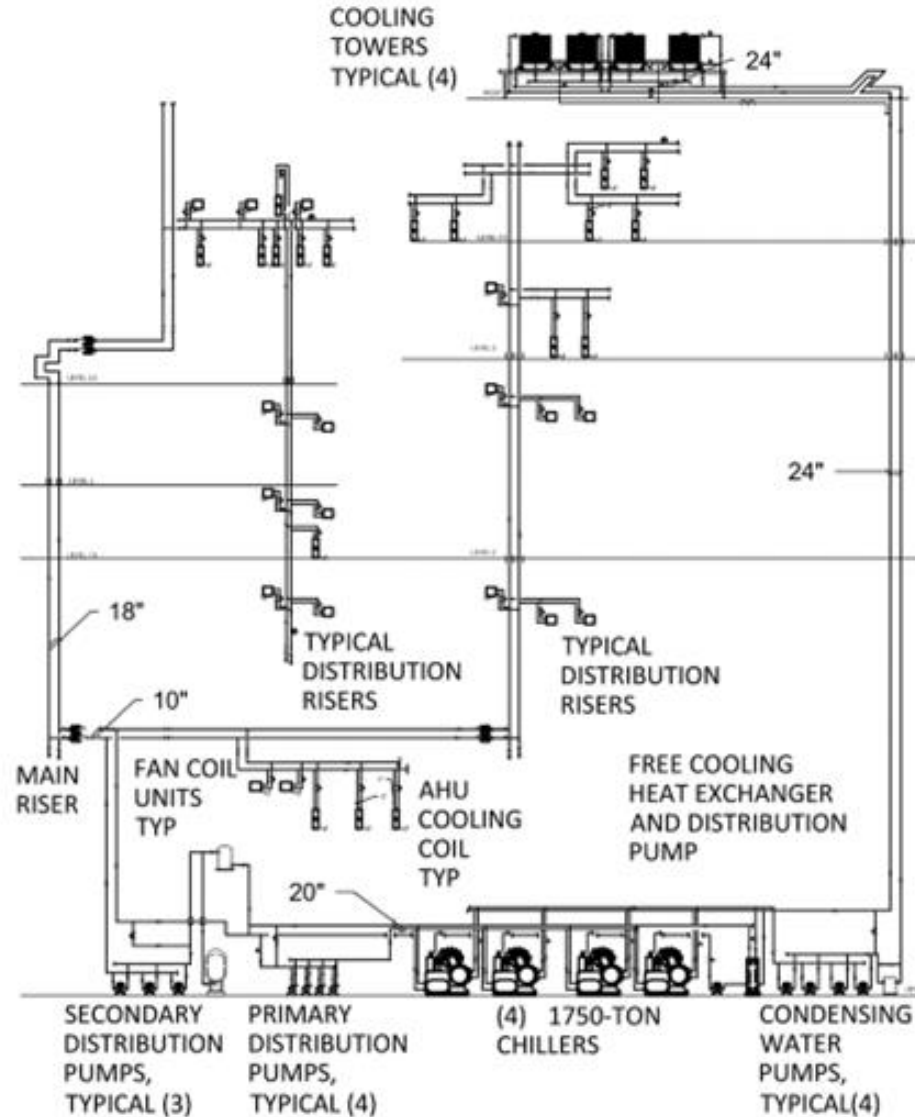
- (4) 1,750-ton 4,160 voltage centrifugal chillers with variable frequency drives (VFD)
- (4) 4 MMBTU gas-fired condensing boilers.
- (4) crossflow cooling towers

Both the chilled water and heating hot water system are configured as variable primary and variable secondary systems

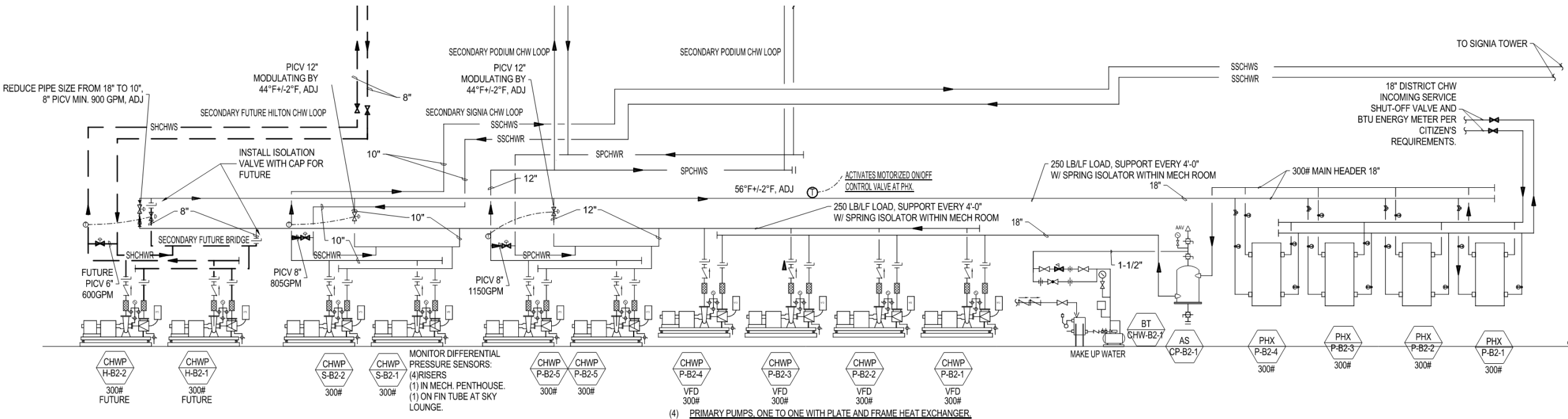
5 PSI natural gas

4000 SCFM 100 PSI compressed air

Main System Distribution and Load Reaction-Sample System



Main System Distribution and Load Reaction-Sample System



1 CHILLED WATER RISER DIAGRAM
NOT TO SCALE

Central Utility Plant Recommendations on Standardized Design

Standardized CUP Design Translates Different Variables into One Solution

- 1) KISS-Keep it simple, (a design principle) and keep an easily operated facility
 - a. Recommend a uniform-sized equipment
 - Easy to maintain equal run hours
 - Reduce the parts storage
 - b. Recommend a parallel piping arrangement
 - Provide no-hassle equipment switchover and avoid downtime
 - Fully independent operation
 - c. Recommend the variable primary and variable secondary distribution system, if the facility has complex load profiles, long distribution, and or different operation hours.
- 2) Review design and operation parameters at the plant level
 - a. Providing a more efficient solution/CUP
 - Reacting and performing more flexibly on partial load conditions
 - b. Yielding more robust operation

Central Utility Plant Offers Energy Efficiency, Reliability, and More

a. CUP versus Decentralized Local System

- ❖ Consolidated energy source for multiple building complexes.
- ❖ Reduce the overall utility connection and consumption

b. The CUP's primary benefits:

- ❖ Energy Efficiency
- ❖ Load Shifting
- ❖ Thermal Storage
- ❖ Reduce Overall System and Equipment Size
- ❖ Decrease the Initial Cost
- ❖ Built-in System Resiliency
- ❖ Operate More Efficiently
- ❖ Reduce the Downtime
- ❖ Centralized Maintainability
- ❖ Condense the Maintenance Cost

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Q&A

Please submit any questions through the Question Window on your GoToWebinar interface, directing them to Compressed Air Best Practices Magazine. Our executive council members will do their best to address your questions and will follow up with you on anything that goes unanswered during this session.

Thank you for attending!

Thank you for attending!

We need you! If you are in the cooling or vacuum industries and want to be part of the Executive Council, please contact Kimberly at kimberly@airbestpractices.com

Stay tuned for details on our next virtual meeting!

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