



# Idaho Chapter

## MONTHLY MEETING SCHEDULE

September 2024 – June 2025

The Idaho ASHRAE Chapter meets once a month from September to June with one month skipped due to the technical conference. The following is the schedule for the 24-25 year and is subject to change at any time. If you have any comments, questions, or recommendations for meeting topics please contact Dylan Agnes.

All meetings will be held at the Idaho Water Center located at 322 E. Front Street Boise, ID 83702 but is subject to change and will be noted when sending chapter meeting announcements.

Meetings, when possible, will be schedule for 2<sup>nd</sup> Wednesday of each applicable month.

When applicable there will be a virtual option for members to attend chapter meetings.

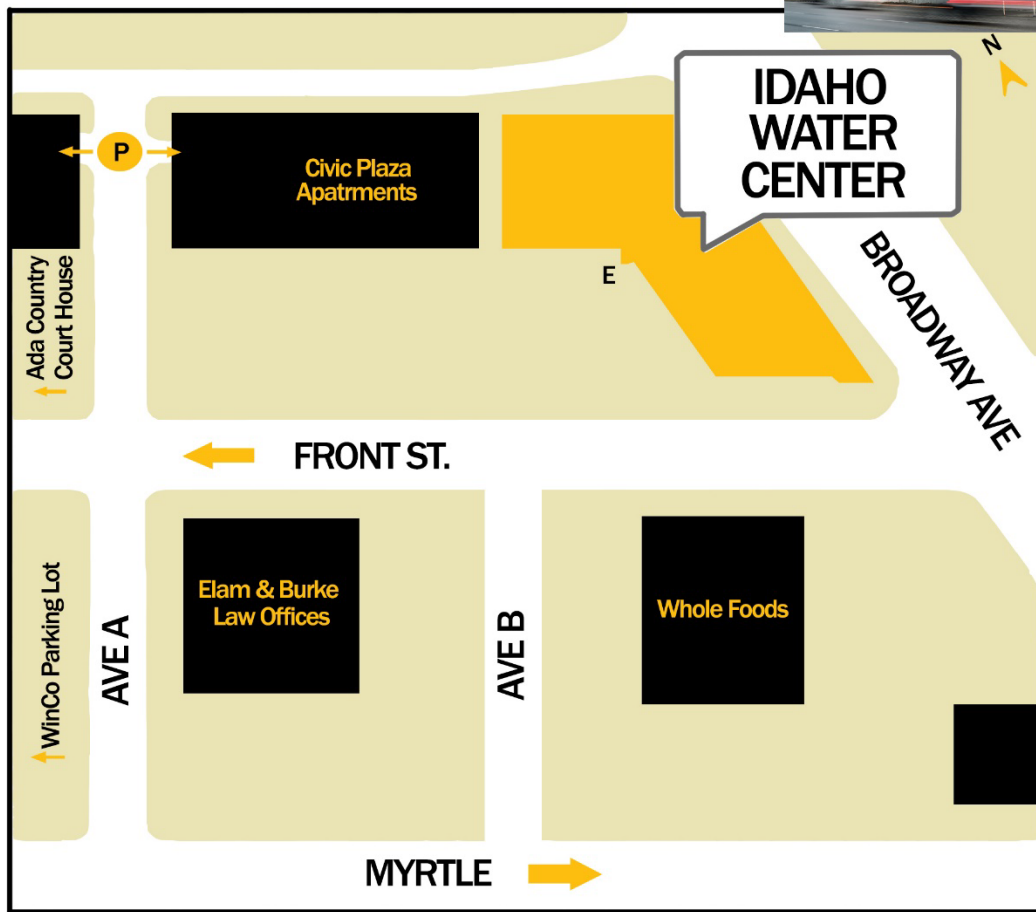
# WHERE?

## University of Idaho Boise - Idaho Water Center

The U of I is located off of Front Street near Broadway. Parking is available underneath the building or in the adjacent parking garage. The first hour of parking is free, each subsequent hour is \$1.00.



**322 E. Front St. Boise, ID 83702**



ALL MEETINGS WILL BE ON THE FIRST FLOOR IN A CLASSROOM, TYPICALLY ROOM 156 BUT IT IS SUBJECT TO CHANGE.

# TYPICAL MEETING AGENDA

- 11:00am Setup begins
- 11:30am Setup complete
- 11:45am Food and Networking
- 11:55am Chapter President welcomes everyone and opens meeting
- 12:00pm Chapter announcements & attendee Introductions
- 12:09pm Introduction of Speaker
- 12:10pm Technical Presentation
- 12:55pm Closing Remarks by Chapter President
- 1:00pm Networking
- 1:15pm Tear down begins
- 1:30pm Tear down complete.

# SCHEDULE OVERVIEW

September 10<sup>th</sup>, 2024 – Lecture + Tour – 6pm MST – Ammonia Refrigeration System Tour, Fresca Foods

October 23<sup>rd</sup>, 2024 – Lecture – Noon MST – Inside the Box, Fan Characteristics and Application by Mark Fly

November 13<sup>th</sup>, 2024 – Lecture + Tour – Noon MST – What Agriculture has to do with Ventilation or Refrigeration by Ben Ingalls

December 11<sup>th</sup>, 2024 – Lecture w/BSUG – Noon MST – Fully Leveraging Your Energy Model, A Field Guide by Amanda Bogner

January 8<sup>th</sup>, 2025 – Panel Discussion – Noon MST – The Engineer's Business Case for Energy Performance Modeling

February 19<sup>th</sup>, 2025 – Lecture – Noon MST – Hydronic Piping with PEX: Pros and Pitfalls by Devin Abellon

March 12<sup>th</sup>, 2025 – 5 to 6PM – Noon MST – IDAHO FALLS – Thermal Energy Storage Technology To Enable Microgrids With Renewable Energy Generation by Douglas Reindl

April 9<sup>th</sup>, 2025 – Lecture – 1030AM & Noon MST – Applying the IAQ Procedure of ASHRAE 62.1-2022 At K-12 Education Facilities & Moving Closer to Net Zero Building with IAQ Procedure Of ASHRAE Standard 62.1-2022 by Christopher Muller

May 9<sup>th</sup>, 2025 – Tech. Conference – Healthcare, Education (K-12), & Emerging Technology.

June 11<sup>th</sup>, 2025 – Lecture + Social – 11AM to 1PM MST – Electrification, Heat Pumps and Thermal Energy Storage, Using Yesterday's Waste Energy For Tomorrow's Heating by Chris Muller

# September 10<sup>th</sup>, 2024

Type – Lecture + Tour | When – 6pm | Where – Caldwell, ID



## INSTRUCTOR

Rich Tuttle

## PHONE

N/A

## EMAIL

N/A

## LOCATION

2009 Smeed Pkwy

Caldwell, ID 83605

## AMMONIA REFRIGERATION SYSTEM TOUR, FRESCA FOODS

### OVERVIEW

Please join us for a tour of Ammonia Refrigeration System at Fresca Foods. This joint meeting with the Treasure Valley Chapter of the Refrigeration Engineers and Technicians Association (RETA) will be a tour of the industrial refrigeration system at [Fresca Foods in Caldwell](#). We'll hear from the system operators and see the compressors, evaporators, condensers, and control system.

### LEARNING OBJECTIVES

- None listed.

## RICH TUTTLE BIOGRAPHY

Director Environment Health Safety at Fresca Mexican Foods, LLC

# October 23<sup>rd</sup>, 2024

Type – Lecture | When – Noon | Where – Boise, ID



## INSTRUCTOR

Mark Fly

## PHONE

(918) 633-7900

## EMAIL

MFly@FlyAdvising.com

## LOCATION

322 E. Front Street

Boise, ID 83702

## INSIDE THE BOX – FAN CHARACTERISTICS AND APPLICATIONS

### OVERVIEW

Fans provide the primary transport method for moving thermal energy into occupied spaces in most all cases. Designers need to understand the characteristics and limitations of fans, even if imbedded in into packaged or self-contained equipment to apply the equipment properly.

### LEARNING OBJECTIVES

- Different fan types and their characteristics
- Fan curves and fan laws, how to use and apply them
- Fan stall and unstable regions of operation
- How to select the best fan for the flow, static and acoustical performance desired

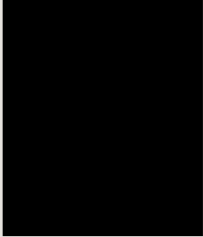
## MARK FLY BIOGRAPHY

Mr. Fly has 40+ years of experience as a Researcher, Consulting Engineer, Contractor, and Manufacturer in the HVAC Industry. He was formerly the Executive Director of Research and Development at AAON, Inc. in Tulsa, Oklahoma prior to his retirement after almost 18 years of engineering leadership at AAON. He holds a Bachelor of Science in Engineering Physics from Missouri State University and is a Licensed Professional Engineer.

In ASHRAE, Mr. Fly holds the grade of Fellow and is a Life Member having been honored with both the Distinguished Service and Exceptional Service Awards. He has been and is currently active on numerous Technical Committees, Standing Committees and Councils, and is currently serving as a Trustee on the ASHRAE Foundation Board and as a Member-at-Large on Technology Council. He served as a director at Large on the ASHRAE Board of Directors from 2014-2017.

# November 13<sup>th</sup>, 2024

Type – Lecture + Tour | When – Noon | Where – Boise & Wilder, ID



## INSTRUCTOR

Ben Ingalls

## PHONE

(208) 465-3766

## EMAIL

BenI@ivi.us.com

## LOCATION

322 E. Front Street

Boise, ID 83702

## WHAT AGRICULTURE HAS TO DO WITH VENTILATION OR REFRIGERATION

### OVERVIEW

While each building project is unique and challenging for creature comforts, it is just as important for produce. Maintaining a stable environment is crucial to the success of the food supply chain. The focus of this topic is to cover fundamental challenges from not just building designs, but environmental climate conditions and legislative challenges.

### LEARNING OBJECTIVES

- None listed.

## BEN INGALLS BIOGRAPHY

Ben Ingalls earned his Bachelor of Science in Mechanical Engineering from Boise State University and a Master of Business Administration from Eastern Washington University. He started his career at Industrial Ventilation Inc as a Design Engineer. He has been with the same company for 11 years and during that time he became a licensed Professional Engineer. His work has primarily been focused on agriculture ventilation and refrigeration. Currently he is the Chief Growth Office of Industrial Ventilation Inc and oversees Engineering, IT, Software Development and Sales.

# December 11<sup>th</sup>, 2024

Type – Lecture | When – Noon | Where – Boise, ID



## INSTRUCTOR

Amanda Bogner

## PHONE

(888) 503-7591

## EMAIL

abogner@energystudio.com

## LOCATION

322 E. Front Street

Boise, ID 83702

## FULLY LEVERAGING YOUR ENERGY MODEL: A FIELD GUIDE

### OVERVIEW

The profession needs to advance high-performance in challenging markets and climate regions. The speaker describes the top five considerations that should be evaluated for every zero-net energy project during the pre-RFP process. Then, the speaker explains how to set a meaningful energy target on a proposed project - which is critical to achieving zero-net energy. Finally, the speaker identifies the crucial design decisions that make (or break) the potential for zero-net energy. The truth is that every energy model is WRONG to some degree - and yet they are essential to an integrative design process for high-performance project outcomes. In the spirit of the integrative process, at key points during the session, the audience will be prompted to participate in real-time performance modeling decision-making using cloud-based building energy modeling tools. In one specific example, a seemingly "good" decision when considered in isolation will be shown to be detrimental to overall energy performance when considered in the context of the whole building using dynamic real-time tools. The audience will also be introduced to "next generation" energy modeling using genetic algorithms to achieve design optimization solutions and total carbon modeling, which incorporates emerging processes and databases for assessing and optimizing embodied carbon intensity as part of a project lifecycle carbon assessment.

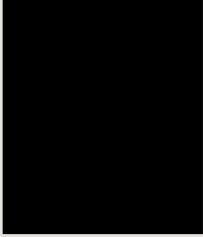
## AMANDA BOGNER BIOGRAPHY

Amanda Bogner is passionate about architecture and sustainability; she lives and breathes energy savings and provides clients with meaningful energy modeling analysis. She has significant knowledge of building systems, and how those systems affect a facility's overall performance. Her company's tagline reflects her deep passion: "become more powerless." Sometimes, Amanda whispers that she's trying to "convert the heathens."

Amanda, president of ENERGY STUDIO, is a registered mechanical engineer and is a certified ASHRAE building energy modeling professional (BEMP) with 20-years of project experience. She has dedicated her career to providing meaningful energy modeling analysis to owners and design teams.

# January 8<sup>th</sup>, 2025

Type – Panel Discussion | When – Noon | Where – Boise, ID



## INSTRUCTORS

Tim Johnson

Bob Tikker

Idaho Power

## LOCATION

322 E. Front Street

Boise, ID 83702

## THE ENGINEER'S BUSINESS CASE FOR ENERGY PERFORMANCE MODELING

### OVERVIEW

Building Energy Modeling (BEM) can help identify areas for improvement, such as inefficient insulation or lighting, and suggest changes to reduce energy bills. BEM can also help reduce the first cost of a building by helping to simplify systems and right-size equipment.

BEM is useful throughout the design process but is especially important at the beginning and end. BEM can help architects maximize energy-efficiency early in the design process.

BEM can be used to assess a building's performance, which can be used for code compliance, green certification, and financial incentives.

### PANEL QUESTIONS – PREVIEW

- What is energy modeling and how do you use it?
- What role does energy modeling play in your design process?
- How do you explain energy modeling to your clients?
- What is your primary energy modeling software and why?
- What is the best practice or workflow you utilize for energy modeling?
- GIGO – How do you gather data for inputs into your energy model?
- How do you determine accurate savings or cost estimates?
- How do you present your findings or analysis?
- What's the best way to achieve actionable data-driven recommendations for a client?

## PANEL BIOGRAPHY

TIM JOHNSON – Cushing Terrell Architects – Energy Services Lead

BOB TIKKER – Tikker Engineering – Principal

Idaho Power Representative – Incentive Programs – SW Idaho Utility provider

# February 19<sup>th</sup>, 2025

Type – Lecture | When – Noon | Where – Boise, ID



## INSTRUCTOR

Devin Abellon

## PHONE

(760) 902-4879

## EMAIL

dabellon@pwsigroup.com

## LOCATION

322 E. Front Street

Boise, ID 83702

## HYDRONIC PIPING WITH PEX: PROS AND PITFALLS

### OVERVIEW

While the use of crosslinked polyethylene (PEX) piping has been widespread in residential applications for some time, building owners, contractors and engineers are moving towards it as a cost-effective and flexible alternative to conventional metallic piping systems on large-scale commercial projects. PEX has become a proven system solution that can reduce both material and labor costs while providing the reliability and peace of mind that building owners demand. When considering PEX, however, it is important that contractors and engineers understand not only the benefits but the challenges and potential pitfalls.

### LEARNING OBJECTIVES

- What is crosslinked polyethylene (PEX)?
- What are the different types of PEX available in the commercial marketplace?
- What are the advantages of PEX compared to conventional metallic systems?
- How does a PEX design differ from a metallic pipe design?
- What are common design and installation best practices?

## SPEAKER BIOGRAPHY

Devin Abellon, P.E. is the Director of Engineered Solutions at Pac West Sales. He has 30 years of experience in the HVAC and plumbing industries with a focus on high-performance and sustainable building design and construction. He holds a Bachelor of Science degree in Mechanical Engineering from the University of California at Santa Barbara and is a registered professional engineer in California and Arizona. He has been an active member of ASHRAE at the chapter, regional and society levels and currently serves as an ASHRAE Society Vice President, on ASHRAE's Planning Committee and the Board of Directors DEI Advisory Subcommittee. He is also co-host of The Flourish Podcast.

# March 12<sup>th</sup>, 2025

Type – Lecture | When – 5 to 6 PM | Where – IDAHO FALLS, ID



## INSTRUCTOR

Douglas Reindl

## PHONE

(608) 262-6381

## EMAIL

dreindl@wisc.edu

## LOCATION

1776 Science Center Dr

Suite 304, Idaho Falls, ID

## THERMAL ENERGY STORAGE TECHNOLOGY TO ENABLE MICROGRIDS WITH RENEWABLE ENERGY GENERATION

### OVERVIEW

Microgrids are smaller networks that include electric generation and distribution capability to provide power to users. Although microgrids are interconnected to larger utility networks, they are capable of disconnecting and operating independently; thereby, offering the potential to increase resiliency. Because the generation of electricity needs to constantly balance the demand, some form of energy storage is important to maximize the potential benefits of microgrids. This presentation will discuss how thermal energy storage is a strategic technology to incorporate into microgrids and how thermal storage can actually increase the proportion of electricity generated by renewable energy to further increase reliability.

### LEARNING OBJECTIVES

- None provided.

## DOUGLAS REINDL BIOGRAPHY

Douglas Reindl is a professor of Mechanical Engineering at the University of Wisconsin-Madison. In addition, he is the founding director of the Industrial Refrigeration Consortium (IRC) at UW-Madison. Professor Reindl has taught at all levels: undergraduate, graduate, and continuing professional development. Professor Reindl has developed an internationally recognized series of professional development courses focused on industrial refrigeration systems with an emphasis on the safe use of ammonia as a refrigerant. Through the IRC, Professor Reindl works with some of the world's leading food companies to improve the safety, efficiency, reliability and productivity of industrial refrigeration systems and technologies.

# April 9<sup>th</sup>, 2025

Type – Lecture | When – 10:30 AM | Where – Boise, ID



## INSTRUCTOR

Chris Muller

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(404) 216-2670

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## LOCATION

322 E. Front Street

Boise, ID 83702

## MOVING CLOSER TO NET ZERO BUILDINGS WITH THE IAQ ASHRAE STANDARD 62.1 – 2016

### OVERVIEW

Being able to achieve IAQ goals while reducing energy consumption is one of the more valuable aspects of using ASHRAE Standard 62.1-2016: "Ventilation for Acceptable Indoor Air Quality". By meeting the requirements of the IAQ Procedure, one is allowed to take credit for the application of validated air cleaning technologies and reduce the amount of ventilation air that has to be heated and/or cooled. Revisions to Standard 62.1 have caused some confusion in its use and the application of energy conservation measures. This presentation will discuss the status of the Indoor Air Quality Procedure, review the applicable provisions of the Standard, discuss indoor air quality models in use, and provide examples where the IAQ Procedure has been successfully employed as part of an energy conservation program. There will also be a discussion of current activities to make it easier to validate the IAQ Procedure and make it more useful to the engineering community when designing "net zero" energy buildings.

### LEARNING OBJECTIVES

- None provided.

## CHRIS MULLER BIOGRAPHY

Recognized as a world-wide authority on the topics of indoor/environmental air quality, the application and use of gas-phase air filtration, filtration and enhanced air cleaning, corrosion control and monitoring, and electronic equipment reliability. Written and spoken extensively on these and related topics with more than 175 articles and peer-reviewed papers, more than 100 seminars, and 8 handbooks. Contributed to chapters in two handbooks on the application and use of gas-phase air filtration, wrote the chapter on contamination control in the ASHRAE Datacom Series Handbook – Particulate and Gaseous Contamination in Datacom Environments, wrote a chapter on gas-phase air filtration in the NAFA Air Filtration Handbook, a chapter on airborne molecular contamination in the Semiconductor Manufacturing Handbook, 2nd Ed. published by McGraw-Hill, and on Contamination Control in the upcoming Data Center Handbook edited by Hwaiyu Geng.

# April 9<sup>th</sup>, 2025

Type – Lecture | When – Noon | Where – Boise, ID



## INSTRUCTOR

Chris Muller

## PHONE

(404) 216-2670

## EMAIL

Christopher.muller@aafintl.com

## LOCATION

322 E. Front Street

Boise, ID 83702

## APPLYING THE IAQ PROCEDURE OF ASHRAE 62.1 – 2016 AT K-12 EDUCATION FACILITIES

### OVERVIEW

Mechanical Engineers use ASHRAE Standard 62.1-2016 to determine minimum building ventilation requirements and multiple mechanical codes refer to it as the basis for ventilation calculations. Engineers use the Indoor Air Quality Procedure (IAQP) less frequently, partly because of its perceived difficulty. This presentation provides information about the requirements of the IAQP, incentives to apply the IAQP, and experiences of one school district in using the IAQP.

### LEARNING OBJECTIVES

- None provided.

## CHRIS MULLER BIOGRAPHY

Recognized as a world-wide authority on the topics of indoor/environmental air quality, the application and use of gas-phase air filtration, filtration and enhanced air cleaning, corrosion control and monitoring, and electronic equipment reliability. Written and spoken extensively on these and related topics with more than 175 articles and peer-reviewed papers, more than 100 seminars, and 8 handbooks. Contributed to chapters in two handbooks on the application and use of gas-phase air filtration, wrote the chapter on contamination control in the ASHRAE Datacom Series Handbook – Particulate and Gaseous Contamination in Datacom Environments, wrote a chapter on gas-phase air filtration in the NAFA Air Filtration Handbook, a chapter on airborne molecular contamination in the Semiconductor Manufacturing Handbook, 2nd Ed. published by McGraw-Hill, and on Contamination Control in the upcoming Data Center Handbook edited by Hwaiyu Geng.

# May 9<sup>th</sup>, 2025

Type – Conference | When – Friday, All Day | Where – Boise, ID

<u>TIME</u>	<u>SCHEDULE</u>		
<b>8AM</b>	Registration & Breakfast		
<b>9AM</b>	Keynote Speaker		
	<u>Tracks</u>		
	<b>Health Care</b>	<b>Education (K-12)</b>	<b>Emerging Technology</b>
<b>10 AM</b>	Presentation #1	Presentation #1	Presentation #1
<b>11 AM</b>	Lunch		
<b>1 PM</b>	Presentation #2	Presentation #2	Presentation #2
<b>2 PM</b>	Presentation #3	Presentation #3	Presentation #3
<b>3:30 PM</b>	Tradeshow & Social		
<b>6:30 PM</b>	Afterparty & Murder Mystery Party		

The conference will be held at the Boise Centre East (<http://www.boisecentre.com/>) which is located at 195 S Capitol Blvd, Boise, ID 83706.

To register for the conference please visit: <https://idahoashrae.com/meetinginfo.php>

# June 11<sup>th</sup>, 2025

Type – Lecture + Social | When – 11 AM | Where – Boise, ID



## INSTRUCTOR

Bruce Lindsay

## PHONE

(407) 919-4991

## EMAIL

bruce.lindsay@tranetechnologies.com

## LOCATIONS

322 E. Front Street

Boise, ID 83702

## ELECTRIFICATION, HEAT PUMPS, AND THERMAL ENERGY STORAGE – USING YESTERDAY’S WASTE ENERGY FOR TOMORROW’S HEATING

### OVERVIEW

Understanding the critical role of envelope design in determining heating and cooling loads, this lecture delves into various energy-efficient design metrics, and their sensitivity analysis to discern their impact effectively. Participants will gain insights into passive envelope design measures aimed at increasing energy efficiency through strategic leveraging of orientation, shading, thermal properties, and building shape considerations. Additionally, the lecture offers insights into the window glazing properties such as U-factor, Solar Heat Gain Coefficient (SHGC), Visible Transmittance (VT), and emittance. Special emphasis is placed on the advantages of Low-E Glass, particularly in colder climates, enhancing participants' understanding of how such features contribute to energy conservation. Geared towards architects and constructors, this session offers resources for deeper exploration and understanding of envelope design's pivotal role in energy efficiency.

### LEARNING OBJECTIVES

- None provided.

## BRUCE LINDSAY BIOGRAPHY

Bruce B. Lindsay is the Business Development Leader for Trane Technologies' Thermal Energy Storage systems. He has been involved in thermal energy storage research, engineering, sales, and operation for over 30 years. Bruce received his undergraduate degree in Civil Engineering from Carnegie-Mellon University. He received a Master of Science in Energy Resources at the University of Pittsburgh, where he taught graduate engineering courses. He received a Master of Management from the Kellogg Graduate School of Management at Northwestern University.

Bruce began his energy career at Peoples Natural Gas in Pittsburgh in industrial sales, conducting energy audits in Western Pennsylvania. He underwent special industry training and received a Chartered Industrial Gas Consultant designation. He was recruited by the Gas Research Institute to conduct national programs to develop new natural gas-fueled cooling and heating systems.