



American Society of Heating Refrigeration and Air Conditioning Engineers
Minnesota Chapter - Rochester Section
April 2022 ASHRAE Meeting Notice

Subject: Re-Imagining Campus Energy: Optimizing Energy, Environmental and Fiscal Stewardship

Date: Tuesday, April 19, 2022

Time: 12 pm – 1 pm

Speaker: Lee Tapper

Speaker Biography:

LEE TAPPER, PE, CIAQP, LEED® AP

Title: Senior Mechanical Engineer

Education: BSME Purdue University

Lead Design Mechanical Engineer with focused expertise on energy efficient sustainable systems design. Over the past 12 years designed mechanical systems for buildings receiving 4 Platinum, 4 Gold, and 4 Silver LEED Certifications from the USGBC. Lee has completed the design of one of the largest geothermal project in the nation; the geothermal campus conversion at Ball State University. He also conducted a feasibility study for the conversion of Carleton College, Grinnell College, Luther College, MCAD, Saint Thomas University, Dominican University and Minot State University campus to geothermal.

Presentation:

The industry is at the precipice of a new and exciting time in the approach and implementation of how energy is used and moved around a campus. Campus utility master plans provide an opportunity to outline a road map for campuses to reduce the energy footprint, the annual utility costs, and the carbon footprint of the campus utilities – all with a positive life cycle cost analysis. For the campus utility master plan to maximize all the above, the traditional approach of steam distribution systems and large equipment that only utilize one type of technology has to be challenged and re-envisioned to set up a dispatch of utilities through a common flexible backbone of energy distribution with the ability to plug and play many different technologies based on maximizing each technology's strengths. This presentation will discuss how a campus utility master plan can integrate a portfolio of energy mover technologies along with setting up flexible energy distribution systems to optimize energy, environmental, and fiscal stewardship.

Carleton College located in Northfield MN has completed the implementation a Utilities Master Plan that has eliminated the use of steam. This project will reduce the Energy footprint by 33%, the Utilities annual cost by 58%, and the Carbon footprint 74% with a positive life cycle cost analysis. The presentation will discuss the steps taken over the last 5 years. The reimaged campus utilities will integrate the use of geothermal, high efficiency condensing boilers, and solar thermal panels feeding into a new 120-degree campus heating hot water system.

Agenda:

Social: 11:20am - 11:30am
Lunch: 11:30am - 11:50am
Presentation: 12:00pm - 1:00pm

Location:

DoubleTree Hotel
150 South Broadway
Rochester, MN 55904

Parking:

1st St Parking Ramp
(Directly East of DoubleTree Hotel)

Cost:

\$25.00 per person

* **Note:** When a member does not RSVP by the listed RSVP date and time, meal availability cannot be guaranteed due to contract requirements with our meeting facility.

Please RSVP by 12:00 pm, Thursday, April 14th, 2021 at mnashrae.org

For questions please contact Blair Bestor, blair.bestor@salasobrien.com or Travis DeWeese, travisd@tmjs.com.