

# Tuesday, February 22

Complete seven hours of CEU requirements per day. **You must attend the 7:00 a.m. session to receive all seven credits.** Check the *Credits & Designations* webpage for up-to-date information about credits.

	Emerging Technologies	Healthy Homes	Heat Pumps & Efficiency	EEBA-Mechanicals
7:00–8:15 am		<b>Asbestos - Yes, It's Still Around!</b> <i>Bob Rogalla, Todd Lewis, Lake States Environmental, Ltd.</i>	<b>Cold Climate Air Source Heat Pumps: A Primer and Launch Pad</b> <i>Rabi Vandergon and Peter Gephart, MN ASHP Collaborative</i>	
	7:30–8:30 am • Registration Check-In			
8:30–10:00 am	<b>Hydronics for Low Energy &amp; Net Zero Homes, Part 1*</b> <i>John Siegenthaler, Appropriate Designs</i>	<b>Improving Residential HVAC Performance and Energy Efficiency</b> <i>Jake McAlpine, The Energy Conservatory, and Bruce Stahlberg, Affordable Energy Solutions, Inc.</i>	<b>Energy Efficiency, Sustainability, and Climate Action in the City of Duluth</b> <i>Melinda Granley, Mike LeBeau and Alex Jackson, City of Duluth</i>	<b>EEBA: High Performance Mechanical Systems for Houses That Work, Part 1*</b> <i>Andrew Oding, EEBA</i>
	10:00–10:30 am • Break			
10:30 am–12:00 pm	<b>Hydronics for Low Energy &amp; Net Zero Homes, Part 2*</b> <i>John Siegenthaler, Appropriate Designs</i>	<b>Air Management for High-Performance, Low-Load Homes</b> <i>Patrick Huelman, University of Minnesota</i>	<b>4-Part Heat Pump Design Process, Part 1 of 2*</b> <i>Jonathan Moscatello, Daikin</i>	<b>EEBA: High Performance Mechanical Systems for Houses That Work, Part 2*</b> <i>Andrew Oding, EEBA</i>
	12:00–1:00 pm • Lunch			
1:00–2:30 pm	<b>Hydronics for Low Energy &amp; Net Zero Homes, Part 3*</b> <i>John Siegenthaler, Appropriate Designs</i>	<b>Observing Building Enclosures Leaking: Heat, Air and Water Using Infrared Thermography</b> <i>Scott Wood, VaproShield</i>	<b>4-Part Heat Pump Design Process, Part 2 of 2*</b> <i>Jonathan Moscatello, Daikin</i>	<b>EEBA: High Performance Mechanical Systems for Houses That Work, Part 3*</b> <i>Andrew Oding, EEBA</i>
	2:30–3:00 pm • Break			
3:00–4:30 pm	<b>Electric Vehicles and Charging Infrastructure: Why and How?</b> <i>Jukka Kukkonen, Shift2Electric</i>	<b>Healthy Air in Every Home We Build: Managing Humidity, Air Purity and Ventilation</b> <i>Joseph Hillenmeyer and Christopher Howell, Aprilaire</i>	<b>Heat Pumps: Tips for Operational Readiness</b> <i>Jonathan Moscatello, Daikin</i>	<b>EEBA: High Performance Mechanical Systems for Houses That Work, Part 4*</b> <i>Andrew Oding, EEBA</i>

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Please note: this agenda is subject to change on short notice due to the evolving Covid-19 pandemic.

# Wednesday, February 23

Complete seven hours of CEU requirements per day. **You must attend the 7:00 a.m. session to receive all seven credits.** Check the *Credits & Designations* webpage for up-to-date information about credits.

	Sustainable Practices	Envelope	Heat Pumps & Decarbonization	EEBA-High Performance
7:00–8:15 am	<b>Lead-Safe Methods for Remodeling, Repair and Painting Activities</b> <i>Bob Rogalla, and Nate Cox, Lake States Environmental, Ltd.</i>	<b>Designing Foam-Free Passive House Assemblies in Climate Zone 6 &amp; 7</b> <i>Shaun St. Amour and Enrico Boniauri, 475 High Performance Building Supply</i>		
	7:30–8:30 am • Registration Check-In			
8:30–10:00 am	<b>Solar + Energy Storage - Don't Miss the Clean Energy Wave!</b> <i>Christopher LaForge, Great Northern Solar</i>	<b>From Control Layers to Robust, High-Performance Enclosures</b> <i>Patrick Huelman, University of Minnesota</i>	<b>Top 10 Cold Climate Heat Pump Installation Fails</b> <i>Jonathan Moscatello, Daikin</i>	<b>EEBA: Houses That Work, Part 1*</b> <i>Andrew Oding, EEBA</i>
	10:00–10:30 am • Break			
10:30 am–12:00 pm	<b>Passive House &amp; Code, ASHRAE and other Green Building Standards</b> <i>Tim Eian, TE Studio, Ltd.</i>	<b>High Performance Window Installation</b> <i>Erick Filby and Eric Klein, Marvin Windows and Doors</i>	<b>Strategies for Heat Pump Adoption at the Time of Air Conditioning Replacement</b> <i>Rabi Vandergon, Emily McPherson and Ben Schoenbauer, MN ASHP Collaborative</i>	<b>EEBA: Houses That Work, Part 2*</b> <i>Andrew Oding, EEBA</i>
	12:00–1:00 pm • Lunch			
1:00–2:30 pm	<b>The 2000-Watt Society and Passive House</b> <i>Tim Eian, TE Studio, Ltd.</i>	<b>The Benefits of Rainscreen Design</b> <i>Scott Wood, VaproShield</i>	<b>Connecting with Air Source Heat Pump Customers</b> <i>Alexis Troschinetz, Clean Energy Resource Teams</i>	<b>EEBA: Houses That Work, Part 3*</b> <i>Andrew Oding, EEBA</i>
	2:30–3:00 pm • Break			
3:00–4:30 pm	<b>Is it Really All About Energy?</b> <i>Brian Wimmer, Franklin Energy, LLC</i>	<b>An Update on Project Overcoat: Wall Insulation Upgrade Testing at CRRF</b> <i>Garrett Mosiman, University of Minnesota</i>	<b>Decarbonizing Fuel-Fired Equipment in Buildings</b> <i>Jason LaFleur, GTI Energy</i>	<b>EEBA: Houses That Work, Part 4*</b> <i>Andrew Oding, EEBA</i>

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