<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter(s)</th>
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<tbody>
<tr>
<td>8:30a.m.</td>
<td><strong>Welcome to Minneapolis</strong></td>
<td>Dan Nygaard, Xcel Energy</td>
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<tr>
<td>10:30a.m.</td>
<td><strong>Networking Break</strong></td>
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<tr>
<td>11:00a.m.</td>
<td><strong>Breakout Session I</strong></td>
<td>Residential Water Heating Committee&lt;br&gt;Commercial Lighting Committee&lt;br&gt;Compressed Air Committee and C&amp;I Pumps&lt;br&gt;Commercial Air-Conditioning and Heat Pumps Committee I</td>
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<tr>
<td>12:30p.m.</td>
<td><strong>Lunch</strong></td>
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<tr>
<td>1:30p.m.</td>
<td><strong>Breakout Session II</strong></td>
<td>Residential HVAC Committee I&lt;br&gt;Residential Lighting Committee&lt;br&gt;Motors and Motor Systems Committee: C&amp;I Pumps</td>
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<tr>
<td>3:00p.m.</td>
<td><strong>Networking Break</strong></td>
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<tr>
<td>3:30p.m.</td>
<td><strong>Breakout Session III</strong></td>
<td>Residential HVAC Committee II&lt;br&gt;Commercial Lighting and Connected Committees: Cybersecurity&lt;br&gt;Compressed Air Committee&lt;br&gt;Gas Committee: Agriculture Exploration</td>
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<tr>
<td>5:30p.m.</td>
<td><strong>Evening Reception</strong></td>
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<tr>
<td>8:30a.m.</td>
<td><strong>From Past to Present: Energy Efficiency Programs and Industry Trends</strong></td>
<td>Kevin Bright, Duke Energy&lt;br&gt;Crawl, Walk, Run: Working Together to Advance Emerging Technologies Facilitator: Kim Erickson, CEE&lt;br&gt;Presenters: Jim Kobialko, FortisBC; Terry McGowan, American Lighting Association (ALA); Robert Wilkins, AHRI</td>
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<tr>
<td>11:00a.m.</td>
<td><strong>Breakout Session IV</strong></td>
<td>Behavior Committee&lt;br&gt;Gas Committee: Gas Heat Pumps&lt;br&gt;Strategic Energy Management Committee&lt;br&gt;Commercial Kitchens Committee: Refrigeration I</td>
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<tr>
<td>12:30p.m.</td>
<td><strong>Lunch</strong></td>
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<tr>
<td>1:30p.m.</td>
<td><strong>Breakout Session V</strong></td>
<td>Residential Whole House, Connected, and Behavior Committees: Integrated Home I&lt;br&gt;Commercial Air-Conditioning and Heat Pumps Committee II&lt;br&gt;Industrial Program Planning Committee: Combined Heat and Power I</td>
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<tr>
<td>3:00p.m.</td>
<td><strong>Networking Break</strong></td>
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<tr>
<td>3:30p.m.</td>
<td><strong>Breakout Session VI</strong></td>
<td>Residential Whole House, Connected, and Behavior Committees: Integrated Home II&lt;br&gt;Gas Committee: Gas PACs&lt;br&gt;Commercial Kitchens Committee: Refrigeration II&lt;br&gt;Industrial Program Planning Committee: Combined Heat and Power II</td>
</tr>
</tbody>
</table>

CEE staff will lead informal ‘fun runs’ each morning departing from the hotel lobby at 6:15am.

For descriptions of these sessions, please see the [Detailed Agenda](#). To register for the meeting, please visit the Industry Partners Meeting homepage ([Members](#), [Industry Partners](#)).
Wednesday, September 27, 2017

CEE Fun Run

6:15 a.m.

CEE staff will lead an energizing morning jog, the distance of which will be determined by consensus. The running groups will depart from the lobby at 6:15 a.m. and all meeting participants are invited to join.

General Session

8:30 a.m. – 10:30 a.m.

Opening Remarks and Introductions

Ed Wisniewski, Executive Director, CEE

Welcome to Minneapolis

Dan Nygaard, Vice President - Marketing, Xcel Energy

Evolving State Regulatory Policies and Implications for Efficiency Programs

Presenters: Steve Bicker, Conservation Resources Senior Manager, Tacoma Power; Kevin Bilyeu, Principal Marketing Specialist, DTE Energy
Facilitator: John Taylor, CEE

CEE members and experts from nongovernmental organizations explore the regulatory paradigm for electric and natural gas utilities, paying particular attention to how efficiency and integrated demand side programs are expected to evolve. The speakers will focus on states and provinces whose regulators are contemplating fundamental changes to the utility business model, parsing what is known and calling out the dynamic and uncertain conditions that make policy setting such a challenging task. Topics to be addressed include the regulatory compact and what it means for customers and investor-owned utilities, challenges to the integration of efficiency and load management programs, the temporal and locational value of efficiency to enhance the value of system assets, and valuing non-energy benefits and performance incentives. Presenters will strive to demonstrate how the energy efficiency industry is working together to address these changes, by enabling specific capabilities that are valuable now in some places, but should prove an effective insurance policy for others who face uncertain regulatory expectations.

Progress on Standardizing System Based Energy Performance

Presenters: Maria Northup, Industry Director - Lighting Systems Division, National Electrical Manufacturers Association (NEMA); Karen Willis, Program Manager, NEMA; Robert Hick, VP Engineering, Leviton Lighting and Energy Solutions
Facilitator: Ted Jones, CEE

While progress has been made in recent years to create new test procedures for energy efficiency and enhance existing procedures, opportunities to more accurately measure the efficiency of lighting, HVAC, or whole building systems exist. Further, new hybrid technologies and connected products are emerging that require enhanced test methods. During this session industry will share efforts to improve energy efficiency measurement, with an emphasis on minimizing test burden and the associated costs, while instilling confidence in represented outcomes.

Networking Break

10:30 a.m. – 11:00 a.m.
RESIDENTIAL WATER HEATING COMMITTEE

Going with the Flow: Working Together to Deploy Water Heaters

Description The CEE Residential Water Heating Committee has worked to craft a revised CEE Residential Water Heating Initiative. This resource includes product specifications for gas storage units, gas tankless units, and heat pump water heaters. It also includes minimum requirements for program approaches to address market barriers through design and implementation. Over the summer, manufacturer, retailer, and distributor partners were invited to review this proposal and provide CEE with comments. During this session, program administrators and industry stakeholders work together to assess ways to collectively deploy the Initiative in the market. The group will identify effective mechanisms for driving broad scale market transformation through shared approaches and interventions.

Target Outcome Participants will work to develop consensus approaches for effectively deploying the CEE Residential Water Heating Initiative in the market. This includes shared platforms for implementing successful programs, driving increased product uptake at scale, and instilling effective strategies that address persistent midstream and upstream barriers.

COMMERCIAL LIGHTING COMMITTEE

Charting a New Course for T8 Replacement Lamp Retrofits

Description CEE T8 Replacement Lamp Specification defines efficient, technology-neutral, replacement lamps, allowing them to serve planned and emergency maintenance applications. Many CEE members continue to leverage this CEE specification to capture savings in this market with more than 60 members offering four-foot linear replacement lamp programs in 2016. On January 26, 2018, new DOE energy conservation standards for General Service Fluorescent Lamps will go into effect, raising the federal baseline for linear fluorescent lamps. As a result, CEE is in a position to update its strategy with regards to replacement lamps to account for the forthcoming federal baseline increase and market trends.

In this session, lighting industry and CEE Member participants will discuss strategic considerations for programs with regard to replacement lamps, in the context of deeper savings opportunities associated with controls and lighting system optimization. Participants will discuss opportunities to promote quality in conjunction with high efficacy with LED replacement lamps. Additionally, participants will discuss the future of the market for fluorescent T8 lamps and weigh in on a strategy to promote high efficacy lamps in light of market trends.

Target Outcome Participants will identify proposed metrics to promote quality LED T8 replacement lamps, and reach consensus on a strategy for fluorescent T8 lamps.
COMPRESSED AIR COMMITTEE AND C&I PUMPS GROUP

New C&I Motor System Energy Efficiency Tools and Resources

Description For several years, CEE member program administrators have been working with partners in different industries to identify new energy efficiency opportunities. This work has sparked new program administrator activities as well as new tools and resources from industry that can support energy efficiency programs through customer education and vendor training. Session participants will hear updates from program administrator peers and relevant industry partners regarding new program ideas and industry tools and resources relevant to C&I pump equipment and compressed air system measures.

Target Outcome This session will lay the groundwork for subsequent sessions by providing an overview of relevant program administrator and industry activities. Participants will learn about new tools and resources that support market transformation objectives and which will help inform in depth discussion on C&I pump equipment and compressed air system audits, respectively.

COMMERCIAL AIR-CONDITIONING AND HEAT PUMPS COMMITTEE

Revising the CEE Initiative to Usher in the Next Phase of Efficiency

Description CEE is revising the CEE High Efficiency Commercial Air Conditioning (AC) and Heat Pumps (HP) Initiative and equipment specifications to continue to identify equipment that saves energy compared to changing energy efficiency program baselines, and support mass market program offerings for variable refrigerant flow (VRF) multisplit heat pump systems. Program baselines for unitary AC and HP equipment are changing with new federal minimum standards that will take effect January 1, 2018. The CEE specifications for VRF have not been widely adopted by CEE members. ASHRAE 90.1-2016 and the latest ENERGY STAR® Light Commercial HVAC Specification that takes effect next year have adopted performance requirements that are more stringent than those of CEE. At this session, participants will discuss a draft Commercial Unitary AC and HP Specification with the goal of coming to consensus on Initiative revisions that will provide a platform to continue to transform the market for high efficiency commercial AC and HP equipment.

Target Outcome Consensus on CEE high efficiency specifications for commercial unitary air conditioners and air source heat pumps, with a goal of finalizing proposed levels in 2017.

Lunch 12:30 p.m.–1:30 p.m.
RESIDENTIAL HVAC COMMITTEE

**Savings Slipping Through the Cracks: Verifying QI Approaches**

**Description** CEE members and industry allies have long recognized the energy savings opportunities that are lost through poor installation practices. While the national quality installation standard developed through ACCA has helped address this market challenge, ensuring and verifying the proper application of the standard remains a challenge. Recently, a number of tools, including hardware, software, and app approaches have come on the market to potentially address the challenge of verification, and help enable program administrators to rely on the savings through quality installation approaches. In particular, duct leakage is well understood as an area where gas and electric savings can (literally) slip through the cracks. This session allows CEE members and industry partners to discuss the capabilities of these verification tools, as well as the elements necessary for program administrators to confidently associate energy savings with their deployment. In addition, participants will consider how these tools may enable broader adoption of quality installation practices. The group will identify effective mechanisms for driving broad scale market transformation through shared approaches and interventions.

**Target Outcome** Participants will work to develop consensus approaches for effectively deploying quality installation verification tools, the critical elements these tools must possess in order to provide reliable energy savings, with a particular emphasis on those tools addressing duct leakage.

RESIDENTIAL LIGHTING COMMITTEE

**What’s Known in a Time of Uncertainty?**

**Description** Efficiency programs and industry stakeholders alike have been struggling with the uncertainty in the residential lighting market, which largely stems from the confusion surrounding the DOE general service lamp rulemaking and unknown performance baselines. During this session, you will get the most recent updates on what’s happening at the federal level and in the state of California, and discuss how that will be impacting manufacturer production plans and efficiency program offerings in 2018 and beyond.

**Target Outcome** Greater insight into industry and efficiency program plans for 2018-2020.
Market Conditions Driving C&I Pump Energy Efficiency Opportunities

Description: Over the last 18 months, CEE members have been discussing opportunities to advance the market for high efficiency C&I pumps, focusing primarily on a new DOE rule that regulates certain pumps for the first time. Meanwhile, pump manufacturers are hard at work adjusting product lines, testing products, and working out performance representation ahead of the 2020 effective date of the DOE rule. At CEE, program administrators continue to explore program designs to address pump efficiency that leverage a consensus binational strategy. In this session, program administrators and industry partners take stock of the C&I pump market, seek consensus on energy efficiency opportunities in key markets, identify barriers to those opportunities, and outline a strategy and roles for overcoming particular market barriers to achieve energy efficiency objectives.

Target Outcome: Program administrator participants will better understand the market for C&I pumps, including packaged products, in order to inform the development of a binational, program administrator-led market transformation strategy. Industry partners will identify where they can play a supporting role.

Networking Break 3:00 p.m.–3:30 p.m.
2017 Industry Partners Meeting

Breakout Session III  Wednesday, September 27  3:30 p.m. – 5:00 p.m.

RESIDENTIAL HVAC COMMITTEE

How Can Connected and Efficient Equipment Help Achieve In-Field Efficiency?

**Description** Residential HVAC equipment is getting smarter. Efforts are underway to assist technicians to identify the most common faults encountered in the field, and efficiency programs are increasingly looking to assist customers and trade allies in optimizing the performance of their HVAC system. While several third-party services exist, OEM supplied equipment is sometimes equipped with on-board capabilities. ENERGY STAR Most Efficient continues to specify system status and messaging requirements, including a fault history report. During this session, industry partners and efficiency program administrators will learn about currently available energy saving functionality, and explore how voluntary programs can recognize and support this functionality in the market.

**Target Outcome** Attendees will understand the currently available technologies within existing HVAC systems to support achievement of in-field efficiency, discuss the extent to which efficiency programs can incent, or otherwise promote smart products that enhance realized savings, and identify next steps in promoting the best-available HVAC systems.

COMMERCIAL LIGHTING AND CONNECTED COMMITTEES

Hack Attack: Cybersecurity and the Connected Space—Commercial Lighting Systems as a Case Study

**Description** The increasingly connected world boasts numerous potential benefits and opportunities for industry, demand side management programs, and customers alike. However, greater reliance on data, coupled with the interlinking of connected systems, also ushers in a new wave of related security, privacy, and vulnerability concerns. How can this level of information and control be protected, and which stakeholders are assuming what risks?

This breakout session will provide program administrators and industry partners an opportunity to engage on the topic of cybersecurity and the implications for connected systems, including some key considerations and strategies as they are being applied in the commercial lighting context. Given the digital nature of LEDs and increasing adoption of connected lighting systems, commercial lighting and its associated industry endeavors provide an illustrative example of how cybersecurity is being addressed by various players. The subsequent discussion will help inform CEE Initiatives with connected criteria and pave the way for exploring potential implications of cybersecurity for other connected devices.

**Target Outcome** Provide greater insight into cybersecurity applications and risk mitigation with regards to DSM programs for connected products and systems. Build better, collective understanding of the unique challenges of cybersecurity, and explore how programs and industry might work together to address concerns in the commercial lighting context and beyond.
COMPRESSED AIR COMMITTEE

Working Together to Shift the Compressed Air Market Toward Efficiency

Description Program administrators and industry partners have been working on parallel, complimentary efforts to improve compressed air system energy efficiency. CEE members developed a new CEE Initiative for Industrial Compressed Air Systems and an accompanying CEE Compressed Air Systems Audit Specification. The Audit Specification defines a minimum level of practice for compressed air system audits, sending a signal to audit service providers. At the same time, the Compressed Air and Gas Institute (CAGI) has been working to develop two levels of auditor certifications and the Compressed Air Challenge has been developing training for providers who seek the CAGI certifications. CEE member coordination with industry partners has ensured these separate efforts have the opportunity to be mutually reinforcing. During this session, program administrators and industry partners will confirm their shared market strategy and determine how to effectively work in parallel to achieve market transformation for compressed air system efficiency.

Target Outcome Participants will determine each other’s role in market transformation and agree on how to use each other’s tools and resources to send a clear, consistent message to the compressor and audit service market. In addition, participants will identify key performance indicators and agree on how to measure and report market impact to each other over time.

GAS COMMITTEE: AGRICULTURE EXPLORATION

Moving on Up: Turning Savings Measures into Greenhouse Programs

Description The Agriculture Gas Exploration developed the CEE Commercial Greenhouse Market Characterization and Technology Background report that identified various energy efficiency measures commonly installed in commercial greenhouses in the US and Canada. However, not all commercial greenhouses are the same and can have varying heat and energy requirements, making it difficult to develop consistent binational market strategies. Baselines can also vary between the types of commercial greenhouses and limit program opportunities or result in lost energy savings if not properly identified. This session will review the CEE Commercial Greenhouse Market Characterization and Technology Background and work to group and baseline commercial greenhouses based on characteristics such as square footage, crop type, energy intensity, or project type. By grouping commercial greenhouses, members can begin to identify the most applicable energy efficiency measures and baselines, an important step in developing a binational market approach driving opportunities for both programs and industry partners.

Target Outcome The session seek to review the CEE Commercial Greenhouse Market Characterization and Technology Background and will work to classify or group commercial greenhouses in order to identify appropriate energy efficiency measures or improvements and appropriate baselines.
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<th><strong>Evening Reception</strong></th>
<th>5:30 p.m.–7:00 p.m.</th>
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<tr>
<td>Relax with friends new and old after the exciting day of efficiency-focused collaboration with complimentary hors d’oeuvres and refreshments.</td>
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<tr>
<th><strong>Dinner</strong></th>
<th>7:00 p.m.</th>
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<tr>
<td>Following the Reception, several CEE staff will be available to lead interested attendees to dinner at one of the many nearby world-class restaurants.</td>
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Thursday, September 28, 2017

CEE Fun Run

6:15 a.m.

CEE staff will lead an energizing morning jog, the distance of which will be determined by consensus. The running groups will depart from the lobby at 6:15 a.m. and all meeting participants are invited to join.

General Session

8:30 a.m. – 10:30 a.m.

Welcome Back

John Taylor, Deputy Director, CEE

From Past to Present: Energy Efficiency Programs and Industry Trends

Presenter: Kevin Bright, Managing Director - Customer Efficiency Programs, Duke Energy

By sharing the evolution of energy efficiency program funding, a perspective on the recent changes in priorities affords the audience insight into general program trends in the US and Canada. Specifically, the presenter will offer preliminary findings from the 2017 CEE Annual Industry Report, which measures efficiency program budgets, expenditures, and impacts. Using this dataset, which has been extensively cited by energy media, financial analysts, government agencies, energy management companies, and CEE members over the years, the presenter will highlight unique findings for gas and electric programs relevant for industry partners.

Crawl, Walk, Run: Working Together to Advance Emerging Technologies

Presenters: Jim Kobialko, Innovative Technologies Program Manager, FortisBC; Terry McGowan, Director of Engineering, American Lighting Association (ALA); Robert Wilkins, Consultant to AHRI

Facilitator: Kim Erickson, CEE

Manufacturers are continuously bringing innovations to market, many of which can also help energy efficiency program administrators save energy when they need it, where they need it. With common objectives in mind, manufacturers and program administrators have a strong track record for working together to evaluate and advance emerging technologies. But like infants and toddlers, each emerging technology moves at its own pace, and in its own way. This session highlights how manufacturers and program administrators are working together to accelerate introduction and uptake of emerging technologies by crafting strategies that address the unique barriers in commercialization and program readiness.

CEE Short Takes

Presenters: CEE Staff

Networking Break

10:30 a.m.–11:00 a.m.
BEHAVIOR COMMITTEE

Behavior 101: Behavior Program Basics and Implications for Products

**Description** This session introduces the topic of behavior as it relates to energy efficiency programs, geared toward both program administrators and industry partners. The session begins by providing an overview of the landscape of behavioral social science and how it can enhance program efficacy. The session also highlights some of the key behavioral topics that are top of mind for program administrators, including behavioral persistence, attribution, and how to integrate behavioral science techniques with new technologies that aim to change customers' behavior. The subsequent discussion will draw connections between these behavioral challenges and opportunities and the implications for (1) programs and (2) manufacturers of efficient products and related dashboards.

**Target Outcome** Attendees to this session will come away with a better understanding of some of the unique challenges and opportunities of behavioral approaches, as well as feature considerations for products and dashboards to help spur end users' behavior change.

GAS COMMITTEE

It’s NOT Electric: Gas Heat Pumps Get Ready to Boogie

**Description** CEE gas members are always looking for new energy saving technologies, and gas heat pumps are a particularly promising opportunity. In particular, products that provide space and water heating, and potentially cooling, could provide significant value for gas program residential portfolios. Last year the CEE Emerging Technology Collaborative convened a working group to review this technology, and identify potential opportunities and market barriers. Two potential challenges stood out from these efforts. The first was understanding the appropriate applications for these products, both in terms of household characteristics such as energy use and hot water consumption, as well as performance and savings in different climate zones. In order for many programs to even test these products, they require better information about the saving potential in their region, through either modeled or tested information. The second challenge was evaluating the performance of these products, both relative to one another, and relative to competing technologies such as high efficiency water heaters or heating systems.

Program administrators are charged with promoting savings over certain baselines, but these baselines are based on the rated performance of standard water and space heating equipment. In order to understand the opportunity for gas heat pump products, programs need to compare their performance against these established baselines. This session provides an opportunity for industry partners and CEE members to identify opportunities for collaborative approaches to overcoming both of these identified barriers. Participants will share information and experience regarding both real world and modeled performance, as well as identify additional resources or market factors necessary to help potentially prepare the market for greater adoption of this promising technology.
Target Outcome Participants will work to develop consensus approaches for addressing market barriers related to identifying appropriate applications for these products, as well as quantifying their savings potential over established baseline technologies.

STRATEGIC ENERGY MANAGEMENT COMMITTEE

Better Together: Pairing Energy Information Technologies and SEM

Description The Strategic Energy Management (SEM) Committee is developing a new guidance specification for industrial energy information technologies ("energy IT"), to clarify the market for energy IT tools and services, and to increase the availability of systems that meet SEM program needs. Through data visualization, performance tracking, and automated reporting, energy IT offers the potential to reveal new savings opportunities, improve measurement accuracy, and enhance executives’ abilities to manage energy performance and cost. During this meeting, Committee members and industry partners will share input on the draft guidance specification, and finalize the threshold criteria in the specification for SEM program support, and discuss next steps.

This session is of particular relevance to program administrators that offer or are considering support for energy IT to their industrial customers or SEM program participants.

Target Outcome Review member and industry partner information regarding the impact of industrial energy IT on energy savings, and finalize the draft specification for industrial energy IT.

COMMERCIAL KITCHENS COMMITTEE

Is your Refrigerator Running? Capturing Additional Commercial Refrigeration Equipment Savings

Description The total electricity consumption of refrigeration in commercial buildings has risen 76 percent from 2003 to 2012 according to CBECs data. In the last few years there have also been significant changes to the marketplace, including revisions to federal minimum energy efficiency standards for multiple product types and new regulations from EPA phasing out certain common refrigerants. The substantial rise in energy consumption and these market changes have motivated the CEE Commercial Kitchens Committee to explore and assess program opportunities beyond self-contained refrigeration products. In particular, the Committee has identified energy efficient remote condensing units and open display cases as potentially favorable opportunities to capture additional savings. During this session, CEE members and industry partners consider how changes in regulation and technology impact the refrigeration market and identify the potential to expand the CEE Commercial Refrigerator and Freezer Specification to include other refrigeration equipment categories.

Target Outcome Discuss the opportunity to expand the CEE Commercial Kitchens Initiative to include performance criteria for remote condensing units and open display cases.

Lunch 12:30 p.m.–1:30 p.m.
### RESIDENTIAL WHOLE HOUSE, CONNECTED, BEHAVIOR, HOME APPLIANCES AND CONSUMER ELECTRONICS COMMITTEES

#### The Integrated Home Part I: In Data We Trust

**Description** Data, data everywhere. Communicating devices, smart meters, and connected capabilities have increased the amount of residential energy information by an order of magnitude. Programs and stakeholders alike are wrestling with questions like:

- Who owns various data and how do others access it?
- What level of detail and data reporting frequency is important to have?
- What data is actually useful and what is just noise?
- How do we use and present this information in a meaningful way?
- What do customers care about and want to know?

This session will work to un-package some of these shared challenges and opportunities by discussing successful applications. Participants will assess the ways that multiple datasets are effectively leveraged to create meaningful and actionable information. The group will look at examples of efforts that layer discreet data in innovative ways that unlock new savings opportunities and potential benefits for residential customers.

**Target Outcome** Participants will work together to identify ways that collective and enhanced data can be used to drive greater energy savings in the residential whole house space. Attendees will share how their own work to apply data in a meaningful way to customers is currently being adopted in the market and collectively brainstorm new applications for potential future efforts.

### COMMERCIAL AIR-CONDITIONING AND HEAT PUMPS COMMITTEE

#### Supporting Market Development and Deployment of Advanced Rooftop Unit Controls

**Description** Through their participation in the CEE High Efficiency Commercial Air-conditioning (AC) and Heat Pumps (HP) Initiative, CEE members have been encouraging the installation of new, high efficiency AC and HP equipment for nearly 25 years. CEE members are now also seeking to enhance the efficiency of installed equipment that lacks advanced controls and has significant remaining useful life through advanced rooftop unit control (ARC) retrofits. CEE member field and lab tests have demonstrated that, when applied appropriately, ARC retrofits typically reduce unitary HVAC electricity consumption by 20 percent to 50 percent in commercial buildings.

Earlier this year, the Committee circulated a draft ARC retrofits program guide to HVAC industry stakeholders for review and comment. In response, several unitary equipment manufacturers’ comments expressed concern that ARC retrofits could pose risks of RTU failure and risks to safety. Unitary manufacturers also commented on the need for a more detailed ARC specification and process for verifying ARC retrofit product performance and RTU compatibility. The Committee agrees that in order for ARC retrofits to be delivered to the market at scale, a standard methodology is needed to define and validate ARC energy performance. At this session, participants will discuss proposed guidance on equipment reliability and safety issues, draft prescriptive specification
Industry Partners Meeting

Language for ARC retrofits, and options for verifying ARC product performance and RTU compatibility.

**Target Outcome** Refinement of consensus guidance for ARC retrofits programs via industry input on a prescriptive specification for ARC retrofits and standard data request for verifying performance.

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**INDUSTRIAL PROGRAM PLANNING COMMITTEE**

**Are Smaller CHP Projects a Sweet Spot for Programs and Industry?**

**Part 1 of 2**

**Description** Energy efficiency programs across the United States and Canada support combined heat and power (CHP) projects in order to achieve multiple objectives, including reaching energy, demand and emissions savings targets, and to enhance customer benefit (i.e., cost savings, resiliency, etc.). Members of the CEE Industrial Program Planning Committee report that the size and complexity of many CHP projects require large capital investments and long development cycles, which often limit the number of projects programs can support each year. To provide added context on CEE member program experience with CHP, a panel of CEE members will describe their CHP program objectives, requirements, and results. Session discussion will focus on the opportunity for programs and industry partners to work together to enhance market understanding and demand for CHP projects in specific, scalable market segments. Session participants will discuss candidate customer segments (and CHP project types) to focus on that are small (<500 kW), repeatable, low risk, and supportable by programs. Participants will then discuss how to identify and engage these customers, including relevant project screening criteria and success factors.

**Target Outcome** Provide CEE members and CHP industry partners with a landscape view of energy efficiency program support for CHP and to update CEE members on CHP industry market and technology developments, including the emergence of smaller (<500 kW) packaged CHP units. Identify specific target markets for smaller CHP projects that are repeatable, low risk, and supportable by programs, including relevant project screening criteria and success factors.

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**Networking Break**

3:00 p.m.–3:30 p.m.
RESIDENTIAL WHOLE HOUSE, CONNECTED, BEHAVIOR, HOME APPLIANCES AND CONSUMER ELECTRONICS COMMITTEES

The Integrated Home – Part II: In Data We Must

Description Part II of the Integrated Home session will take insights about data from the previous breakout and apply those to the consumer experience. The group will look through the lens of the shared customer to assess ways for increasing program uptake, behavior change, and overall satisfaction.

Participants will explore ways in which multiple data sources can be used in customized and targeted ways to enhance the relationship with individual customers. This could entail outputs such as personalized upgrade recommendations, real-time disaggregated energy feedback, comparisons to neighbors, or applied behavioral tools and insights.

Target Outcome Identify unique and effective applications of data that ultimately drive customer action or lasting behavior change. This includes both the sources of information as well as the ways in which content is ultimately presented to the customer. The group will also work to determine strategies for leveraging enhanced data so as to elicit homeowners to have an improved experience while also consuming less energy.

GAS COMMITTEE: GAS PAC EXPLORATION

(Don’t Just) Show Me the Money: Market Transformation Strategies Beyond Incentives

Description The Gas Committee continues to explore the energy savings and performance of weatherized, commercial gas-fired packaged rooftop units with condensing furnaces, also known as condensing gas PACs. Recent field tests have helped to demonstrate the energy savings and payback periods of condensing gas PACs under certain conditions and two members currently offer rebate and incentive programs for general rooftop units (RTUs) and dedicated outdoor air systems (DOAS). However, condensing gas PACs still constitute a small share of these regional and binational commercial markets despite available, cost effective products and the support of rebate and incentive programs, highlighting the need for additional market transformation strategies to increase the market share of condensing gas PACs. This session seeks to understand the market forces impacting condensing gas PACs in the commercial market and how members and industry partners can collaboratively address and solve these barriers. Industry insight from the comment period for the CEE Gas PAC Market Characterization and Technology Assessment Draft report will be shared with attendees, followed by an overview of currently available condensing gas PAC rebate programs. This discussion will provide an overview of condensing gas PAC rebate programs and their market barriers, followed by a discussion of how to address these barriers through market and program development.

Target Outcome The session seeks to share and discuss feedback from industry comments related to the CEE Gas PAC Market Characterization and Technology Assessment Draft report. The discussion session will identify additional market forces impacting the market penetration of condensing gas PACs as well as collaborative strategies for overcoming market barriers.
COMMERCIAL KITCHENS COMMITTEE

Taking the Temperature of the Efficiency Impact of Emerging Refrigerants, Part 2 of 2

Description According to US Energy Information Administration, refrigeration represents about 10 percent of the energy use in commercial buildings. Within refrigeration equipment, refrigerants can impact the energy consumption of these products, with industry estimates of energy savings potential from alternative refrigerants ranging from 5-30% depending on individual factors of the unit. During this second session, participants will take stock of the recent refrigerant market trends, including the current and upcoming federal regulations, the emergence of natural refrigerants and new refrigerant blends. Participants will also learn about research underway on energy efficiency and safety impacts of these market changes. Participants will discuss how changing refrigerant requirements are impacting the commercial refrigeration market, including changes in equipment design and energy performance. This discussion will inform future updates to the CEE Commercial Refrigerator and Freezer Specification, including how changes in refrigerants impact efficiency, and other performance factors.

Target Outcome Increase understanding of current market trends, including changes in refrigerant regulations for commercial refrigeration equipment, and how these trends are impacting the efficiency and other performance factors. This information will be used to inform future modifications of the CEE Commercial Refrigerators and Freezers Specification.

INDUSTRIAL PROGRAM PLANNING COMMITTEE

Are Smaller CHP Projects a Sweet Spot for Programs and Industry? Part 2 of 2

Description Energy efficiency programs across the United States and Canada support combined heat and power (CHP) projects in order to achieve multiple objectives, including reaching energy, demand and emissions reduction targets, and to enhance consumer benefit (i.e., cost savings, resiliency, etc.). Members of the CEE Industrial Program Planning Committee report that the size and complexity of many CHP projects often require large capital investments and long development cycles, which often limit the number of projects programs can support each year. During this session, a panel of CHP manufacturers and project developers will describe recent industry developments, including the emergence of smaller, packaged CHP units (less than 500kW), performance improvements, as well as markets segments and project types for program consideration, such as multi-family housing and nursing homes. Discussion will focus on the criteria and rules of thumb used by programs and industry partners to identify successful CHP projects.

Target Outcome Provide CEE members and CHP industry partners with a landscape view of energy efficiency program support for CHP, including relevant program objectives, requirements and results. Identify specific target markets for smaller CHP projects that are repeatable, low risk, and supportable by programs, including relevant project screening criteria and success factors.

Industry Partners Meeting Adjournment 5:00 p.m.
**Day Ahead Events**

<table>
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<tr>
<th>Event</th>
<th>Time</th>
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<tbody>
<tr>
<td><strong>Mill City Museum Visit</strong></td>
<td><strong>2:00 p.m.-5:00 p.m.</strong></td>
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</table>

Industry Partner meeting attendees arriving Tuesday are welcomed to join an afternoon tour of Minneapolis’ historic Mill City Museum. Take this opportunity to socialize with CEE staff and fellow meeting attendees as well as learn about the intertwined history of the Mississippi River, the flour industry and Minneapolis. The group of CEE Staff, CEE Members, and Industry Partners will depart the lobby at 2:00 p.m.

<table>
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<tr>
<th>Event</th>
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<tr>
<td><strong>Welcome Hour</strong></td>
<td><strong>5:30 p.m.-6:30 p.m.</strong></td>
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Consortium members and invited industry partners have appreciated the chance to meet and greet to get to know each other better before delving into the content of the CEE Industry Partners Meeting over the next two days. For attendees arriving on Tuesday, please join staff representing each CEE sector for Dutch-treat style refreshments on 7th floor of the Crowne Plaza Northstar in the Fireside Room.

<table>
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<tr>
<th>Event</th>
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<tbody>
<tr>
<td><strong>Dinner</strong></td>
<td><strong>6:30 p.m.</strong></td>
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Following the Welcome Hour, several CEE staff will be available to lead interested attendees to dinner at one of the many nearby world-class restaurants.
“Who Should Attend” Descriptions

Program Design & Planning
Responsible for developing and proposing programs including specification levels, evaluating cost-effectiveness, establishing rebate amounts, and deciding which activities the program will encompass (e.g., stakeholder education)

Program Management
Oversees the delivery of programs and can provide insights for the CEE process regarding what has worked and what has not

Marketing & Outreach
Promotes programs to the public and trade allies and makes decisions regarding promotional materials, advertising placements, and conducting on-line promotions

Evaluation or Market Research
Plans and oversees: market research for program planning or baseline setting, tracking and assessment of program impacts, progress towards program goals, and/or process evaluation. May also collect and analyze data in support of these efforts

Regulatory Affairs
Responsible for working with regulators on rate cases

Technology & Engineering
Qualified to evaluate the technical potential, performance, or safety of equipment under consideration for inclusion in programs

Portfolio Management
Responsible for assessing efficiency program objectives, timelines, and resources (for a sector or the total portfolio), planning a set of sector programs needed to meet requirements beyond the current program year, and maintaining a balance of sector program activities across the portfolio in order to achieve multi-year goals, among other responsibilities

Government
Has government perspective of working toward energy efficiency goals