



ComEd[®]
Energy Efficiency Program

ComEd EE R&D Project Updates

MES Panel: Energy Efficiency Research and Development Lightning Round

February 16th, 2021

Recently Completed Projects

Technology Evaluations

Commercial & Industrial:

- » High Efficiency RTU Measure Study (NREL)
- » Adsorbent Air Cleaner (Slipstream)
- » Commercial Geothermal Advancement (AECOM)
- » Synchronous Motors (Slipstream)
- » Variable Frequency Drives for Refrigerator Condenser Fans (Slipstream)
- » Alternative Refrigerants (Slipstream, Alltemp)

Residential & Income Eligible:

- » Home Energy Monitor Disaggregation Tool (Bidgely)
- » Smart Home Interaction Study (Slipstream)
- » Total Connected Savings (Whisker Labs, Honeywell)
- » Ultra-HE HVAC for Public Housing (Franklin Energy, GTI, RHA)
- » Seasonal Savings (Google Nest Labs)
- » Passive House (Slipstream, LUCHA)
- » Ductless Heat Pumps (CMC Energy)

Market Research

Commercial & Industrial:

- » Networked Lighting Controls Market Adoption (ILLUME)
- » PMAC Motor Market Adoption Research (ILLUME)
- » Refrigeration Thermal Energy Storage (Slipstream)
- » Plug Load Research (CA Plug Load Research Center)
- » Upstream Small Embedded Data Centers (Slipstream)

Residential & Income Eligible:

- » Smart Vents for Homes (Slipstream)
- » Needs Assessment for Public Housing Authorities (SEDAC)
- » IE High User Needs Assessment (Evergreen Economics)
- » Energy Efficiency in 2 Unit Buildings (Elevate Energy, CIC)
- » Housing Data Analysis & Market Segmentation (Elevate Energy)

Cross-Cutting:

- » Baseline and Potential Study (Itron, Dunsky)
- » IL Building Energy Code Advancement (Slipstream, MEEA)
- » Water Market Analysis (Axiom)
- » Green Stormwater Infrastructure (Greenprint Partners)
- » Water-Energy Nexus Savings Research (Elevate Energy)

Program Design and Outreach Strategy

Commercial & Industrial:

- » TOS Energy Incentive Acceleration (AECOM)
- » Retrofit Chicago Roadmapping (AECOM)

Residential & Income Eligible:

- » HVAC SAVE (CLEARResult, MEEA)
- » LED Holiday Light Exchange (CLEARResult)
- » Healthy Homes (Elevate Energy, GHHI)
- » Residential Real Estate Opportunities (Elevate Energy, MEEA)
- » IE Wx Program Design (Franklin Energy)
- » Multifamily Benchmarking Outreach (Elevate Energy)
- » Savings for IE Seniors (Green Home Experts)
- » Street Operating System (Blacks in Green)
- » Save and Share App (Uplight, MeterGenius, L3, Faith in Place)
- » Home Energy Reports Target Rank (Oracle)
- » EcoAdvocates (Slipstream, Faith in Place)
- » Breathe Easy (Elevate Energy, IIT)

Active Projects

Technology Evaluations

Commercial & Industrial:

- » VHE HVAC Systems (IMT, Slipstream)
- » Flash Gas Condensers Field Evaluation (DNV)
- » Liquid-Cooled Server Racks (Franklin Energy)
- » Commercial Interior Insulated Shades (IIT, Parata)
- » Real-Time Virtual Commissioning (Power TakeOff)
- » Variable Refrigerant Flow for Cold Climates (Slipstream)
- » Switched Reluctance Motors Field Evaluation (Slipstream)
- » Refrigerated Display Cases with Propane Refrigerant (NREL)
- » Smart Pressure Independent Control Valves (Slipstream, FlowEnergy)
- » Switched Reluctance Motor Conveyor Systems (NREL)
- » Industrial EMIS (Leidos)

Residential & Income Eligible:

- » All-Electric Residential Homes New Construction (Slipstream)
- » Heat Pumps in Cold Climate Applications (NREL)
- » Dryer Moisture Sensor Evaluation (GTI)

Market Research

Commercial & Industrial:

- » Indoor Agriculture Future Opportunities (Energy & Resource Solutions, ACEEE, D+R International, RII)
- » Municipal Water Infrastructure Leak Reduction (TRC)
- » Dipper Well Market Research (Frontier Energy)
- » Innovations in Efficient Elevator Systems (360 Energy Group, Kone)

Cross-Cutting:

- » Hybrid Heat Pump Systems & Future Electrification Opportunities (CEE)
- » Understanding Water Solution Providers (Axiom)
- » Cooling Tower Future Opportunities (AWE, PNNL)
- » Water Heating Technology Opportunities (Evergreen Economics, GDS Associates)
- » Fan Energy Index (Slipstream)

Program Design and Market Transformation

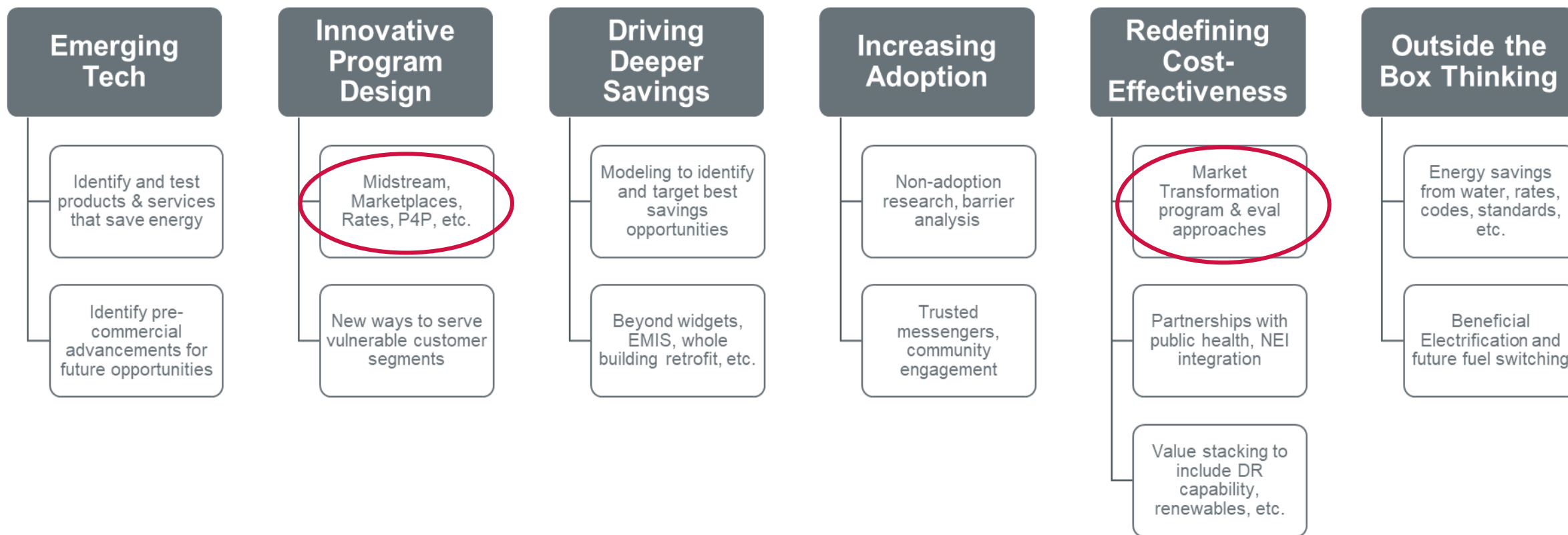
Commercial & Industrial:

- » Water Energy Savings with SEM (CLEAResult)
- » Upstream Commercial Foodservice Equipment Rebates (GTI, Frontier Energy)
- » Building Operator Certification (MEEA)
- » Customer Targeting Through NMEC (Recurve Analytics, Power TakeOff)

Residential & Income Eligible:

- » Online Efficient Choice Engine Program Model (Enervee)
- » ENERGY STAR Retail Products Platform (NEEA, US EPA)
- » BIT Building Neighborhood (Slipstream, IL Green Alliance, Environmental Defense Fund)
- » Home Energy Reports Paperless Experience (Oracle)

Many Paths within R&D



Project Highlight: Active

Title: ComEd Efficient Choice (Market-Based Savings Platform)

Partner: Enervee

Timeline: Jun 2020 – Jun 2021

The Enervee Appliances Choice Engine is an automated recommendation platform for appliances and home products. It brings together data customers may need to make energy-efficient purchasing decisions, including energy usage, pricing, features, and user reviews. Products are ranked by efficiency using a unique scoring system, and customers are then directed to nearby retailers to purchase.

Pilot site is now [live](#).

No rebates are offered but ComEd may be able to claim savings from the site's influence on shopping behavior – thus, evaluation is key.

Guidehouse (third party evaluator) launched the survey on Feb 1st and will start analyzing survey results next week. So far, high response rate. ComEd will have preliminary results in March.

Other utilities that have successfully launched include [DTE](#).

Ameren will cover Efficient Choice in their update as well.

The screenshot displays two product cards from the Enervee Efficient Choice platform. Each card features a green circular efficiency score, a product image, the model number, a descriptive title, a star rating with the number of reviews, and the current price. The top card is for a TCL 43S325 (43" Class - LED - 3-Series - 1080p) with a score of 97, 5 stars (33 reviews), and a price of \$200. The bottom card is for a Samsung UN43J5202AFXZA (43" Class - LED - J5202 Series) with a score of 96, 5 stars (834 reviews), and a price of \$320, marked with a 'PRICE DROP!' badge. Both cards include a 'See all 3 offers' link at the bottom.

Project Highlight: Active

Title: Upstream Commercial Foodservice Equipment Pilot

Partners: GTI, Frontier Energy

- Joint offering with Nicor Gas, Peoples Gas, North Shore Gas
- Ameren to join for 2021 (thus IL state-wide offering)

Timeline: Apr 2019 – Dec 2021

This pilot is testing a unique upstream program approach to promote energy efficient equipment in the food service industry. The energy intensity of a restaurant or foodservice operation can be several times higher than that of most other commercial building types due to a high density of equipment and long hours of business. However, due to the unique structure of the supply chain, EE has found that traditional rebate models may not be the most effective program approach.



Project Highlight: Active

Title: All-Electric Residential Homes New Construction (Phase 2)

Partners: Slipstream

Timeline: Jan 2020 – Dec 2021

We had 11 homes participate in the first year of pilot implementation (2020 goal was 10 participants), at \$2200 per home incentive. Participants included a variety of homes types - urban, suburban, rural / single-family, 2-3 flats / speculative and custom at variety of price points. We built case studies and refined the offering with leading edge builders, but we did not officially claim savings.

For 2021, currently we have about 25 participants confirmed in the pipeline so far (verbal commitments only at this time). We're in process of getting documented pre-applications for these participants on our new 2021 forms. Our 2021 goal is 35 (which would be \$77,000 in customer incentives).

We're amidst a major outreach/marketing campaign partnering with homebuilder associations and others to build awareness and participation. Interest is high for the upcoming ["Intro to Electric Homes" event on Feb 25th](#).



THANK YOU

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Complete EE R&D project list and proposal details at:

www.ComEdEmergingTech.com

