



Better Buildings Residential Network Peer Exchange Call Series:

*How Is the Coronavirus Impacting Residential Energy
Efficiency Programs? – Perspectives from the Field*

May 14, 2020

Agenda and Ground Rules

- Agenda Review and Ground Rules
- ASHRAE Guidance for Building Operations During COVID-19
- Opening Poll
- Residential Network Overview and Upcoming Call Schedule
- Featured Speakers:
 - **Scott Boose & Emily Kemper**, CLEAResult
 - **Sally Phipps**, Austin Energy
 - **Jonathan Waterworth**, AZ Energy Efficient Home
- Open Discussion
- Closing Poll and Announcements

Ground Rules:

1. **Sales of services and commercial messages are not appropriate** during Peer Exchange Calls.
2. Calls are a safe place for discussion; **please do not attribute information to individuals** on the call.

The views expressed by speakers are their own, and do not reflect those of the Dept. of Energy.

ASHRAE Guidance for Building Operations During the COVID-19 Pandemic

ASHRAE Journal article, March 24, 2020

By Lawrence J. Schoenberg, P.E.

Chair, ASHRAE Committee that wrote the "ASHRAE Position Document on Airborne Infectious Diseases"

President & Principal Engineer, Schoen Engineering Inc.

<https://www.ashrae.org/news/ashraejournal/guidance-for-building-operations-during-the-covid-19-pandemic>

Better Buildings Residential Network

Join the Network

Member Benefits:

- Recognition in media and publications
- Speaking opportunities
- Updates on latest trends
- Voluntary member initiatives
- One-on-One brainstorming conversations

Commitment:

- Members only need to provide *one number*: their organization's number of residential energy upgrades per year, or equivalent.

Upcoming Calls (2nd & 4th Thursdays):

- May 28: Smart Home Growth as a Result of the Coronavirus
- June 11: Indoor Air Quality and Ventilation in the Current Climate: Perspectives from the Field
- June 25: Remote Energy Efficiency Assessments – the New Normal?

Peer Exchange Call summaries are posted on the Better Buildings [website](#) a few weeks after the call

For more information or to join, for no cost, email

bbresidentialnetwork@ee.doe.gov, or go to energy.gov/eere/bbrn & click Join



Scott Boose & Emily Kemper
CLEAResult

CLEAResult[®]

We change
the way people
use energy[™]

**COVID-19 IMPACT:
Residential Energy
Efficiency Programs**

Department of Energy Webinar
May 2020

Agenda

About CLEARResult (Scott)

- 2019 Highlights
- Business Response to COVID-19
- Focus on Safety
- Planning for the New Normal

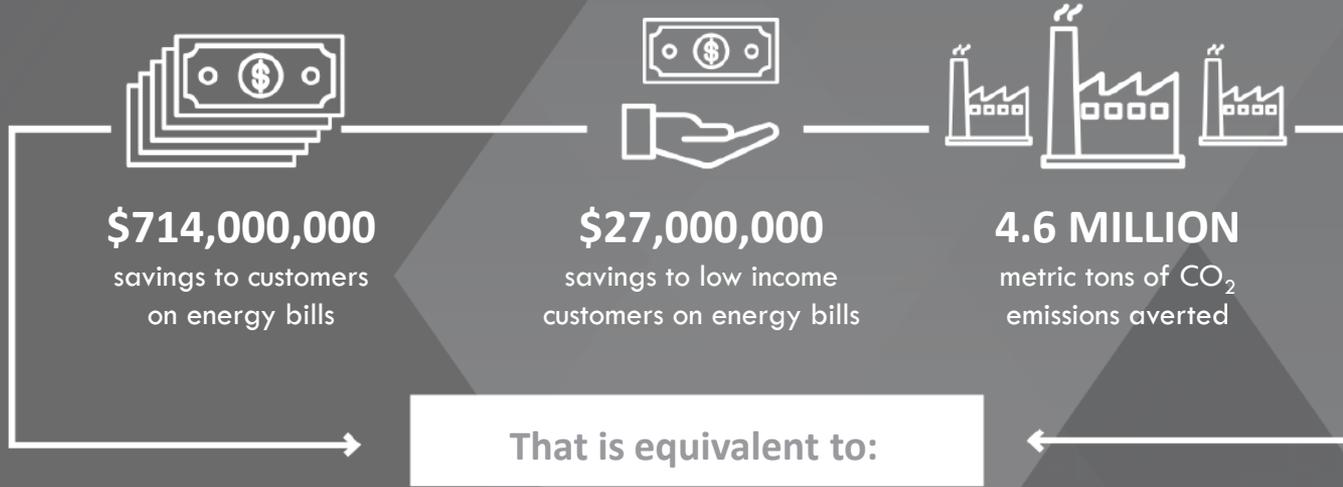
The Future (Emily)

- Resilience
- Unprecedented Times = Innovation
- Virtual Assessment & Assurance
- Delivering Benefits to Residential Customers

PRESENTERS

- Scott Boose, CEO
- Emily Kemper, Director

CLEAResult 2019 IMPACT



CLEAResult®

C H A N G E

A hand is pointing at the word 'CHANGE' which is spelled out using circular tiles on a wooden surface. The tiles for 'C', 'H', 'A', 'N', and 'E' are light-colored wood, while the tiles for 'C' and 'G' are bright red. The tiles are arranged in a slightly curved line. A hand is visible in the bottom right corner, with the index finger pointing towards the red 'G' tile.

Business Response to COVID-19

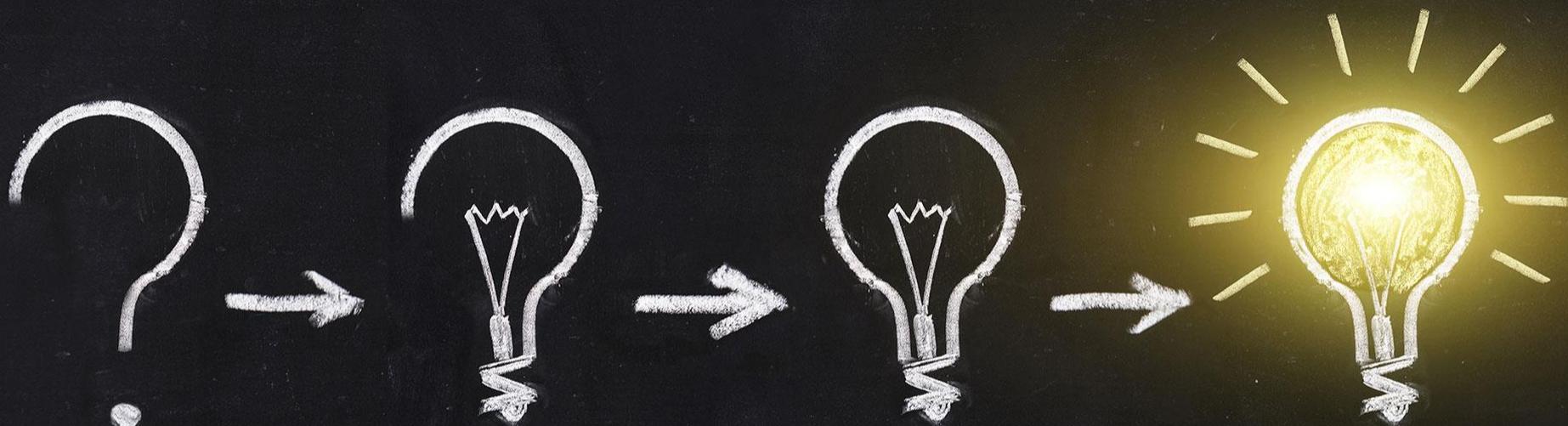
Evolution and Innovation



SAFETY IS #1



NEW NORMAL



INNOVATE

CLEAResult[®]



The Future

Emily Kemper, Director

Resilience in Energy Efficiency



Broadly defined, resilience is the *capacity to adapt to changing conditions and to maintain or regain functionality and vitality in the face of stress.*

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Resilience in Energy Efficiency



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Resilient building practices are those that **enable a dwelling to shelter its inhabitants through extreme weather events and beyond.**

Resilience in Energy Efficiency



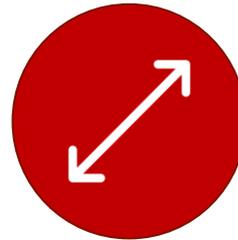
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In our industry, ***we should be innovating to make our businesses more resilient to external impacts (such as field work shut-downs).***

A photograph of the Hoover Dam at dusk. The dam's massive concrete structure is illuminated with warm lights, and the surrounding desert landscape is also lit up. In the foreground, two large, cylindrical concrete structures are visible. In the background, a bridge spans across the canyon, and power lines are visible against the sky.

Great Change Yields Great Innovations

- Hoover Dam was built at the height of the Great Depression
- Six Companies, **over 5200 workers** at the peak

Speaking of Innovations...

CLEAResult Launches Virtual Assessment and Assurance Service, Protecting Public Health While Helping Consumers Manage Their Energy Costs

Published April 30, 2020

Austin, Texas (April 30, 2020) – [CLEAResult](#), a leader in designing and implementing technology-enabled energy efficiency programs for utilities, is the first to bring a fully-featured Virtual Assessment and Assurance offering to market through a partnership with [Stroom](#), an award-winning technology firm and part of the [Frontdoor](#) (FTDR:NASDAQ) portfolio of brands.

“CLEAResult is thrilled to offer this innovative and easy-to-use platform to our clients at a time when social distancing has disrupted their ability to deliver traditional energy assessments to their commercial and residential customers,” shared CLEAResult CEO Scott Boose. “We are already piloting the offering with several clients and plan to bring on more utilities in the coming weeks.”

The offering goes beyond a simple video call with an energy advisor. Virtual Assessment and Assurance is a live, augmented reality remote-support platform with built-in tools that enable professional energy assessments and post-assessment quality checks to be conducted from a distance.

“Our Virtual Assessment and Assurance products were developed to deliver **more choice, control, and convenience** to customers,” says Dan Ridings, VP of Virtual Delivery at CLEAResult. “Connecting our experts to utility program stakeholders through Stroom’s powerful technology is a real game-changer for delivering utility programs during the COVID-19 constraints and after.”

Choice

Control

Convenience

Virtual Assessment and Assurance

What is it?

CLEAResult's Virtual Assessment is a live augmented reality (AR) support platform enabling remote home energy assessments.

CLEAResult's Virtual Assurance allows remote viewing of any in-progress installation or remote inspections.



Remote assessments and inspections



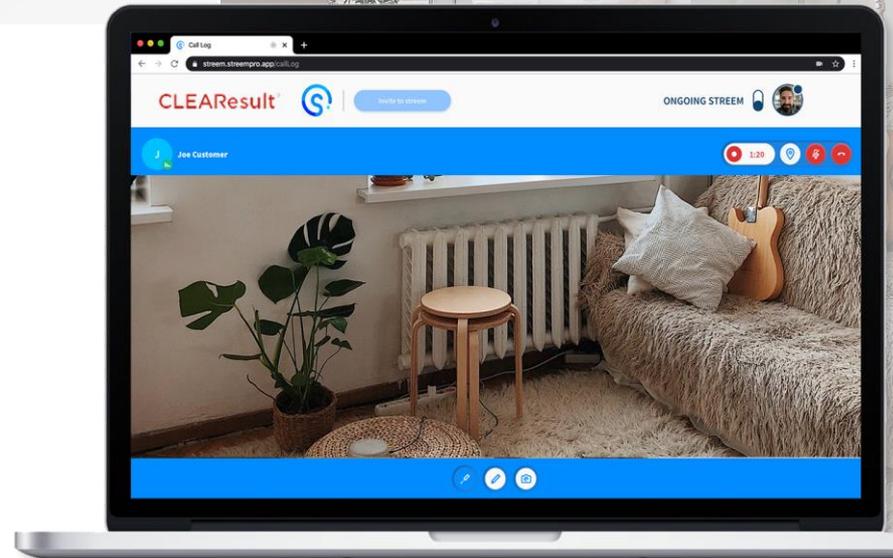
Direct customer engagement



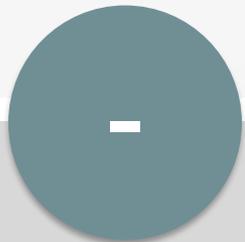
Faster EE initiative rollouts for utilities



Lower costs for everyone

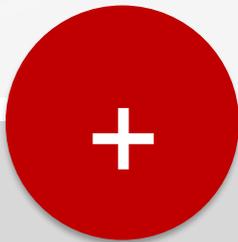


Virtual Delivery Highlights



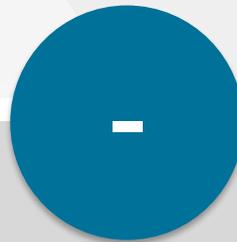
LABOR

More customer and stakeholder engagements per labor hour



SAFETY

Reduced in-field and driving hazards



GHG

26.4lbs of CO2 saved for each avoided site visit. *(Based on average trip of 30 miles @ 22 mpg)*



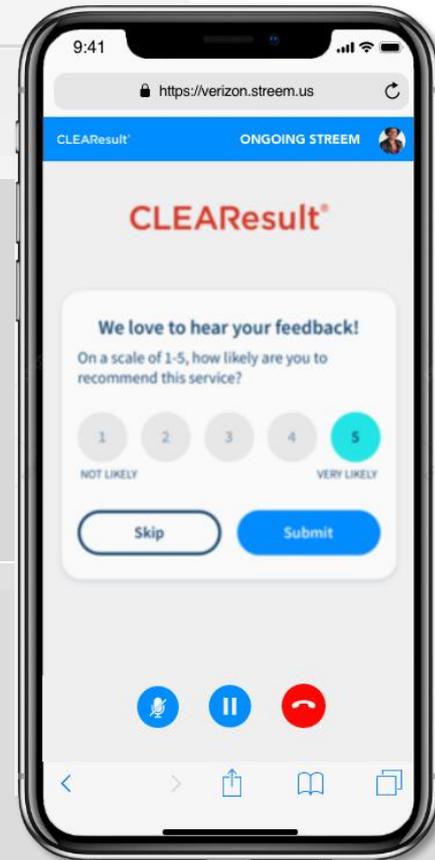
PRODUCTION

Allows reduced training time with remote shadowing



INNOVATION

Innovative approach and nimble response to changing conditions



Delivering Benefits to Utilities, Contractors, and Customers



Benefits for Utilities

- Keeps home assessment programs running and delivering on goals
- Provides an option for **greatly reduced human contact**
- Enhances rigor around **quality control**
- **Reduces carbon emissions** due to fewer field visits and truck rolls
- **Lower costs, fewer liabilities**



Benefits for Contractors

- **Allows contractors to course correct with an inspector** via augmented reality streaming technology
- **Cuts down schedule disruptions**, no shows, and remediation callbacks
- **Safer and less costly** for inspectors than in-home work



Benefits for Customers

- **Flexible scheduling**
 - Technology provides customers with options that are convenient for them.
- **Teams no longer need to physically enter the home**, allowing for increased social distancing, convenience, and safety

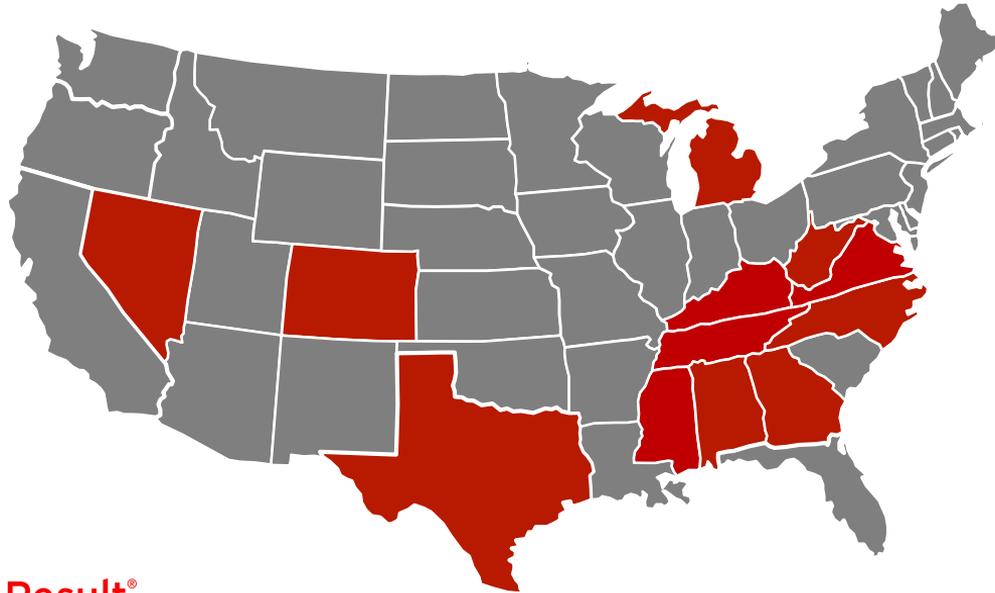
QUOTE

As people are working more from home, they are starting to notice problems with their house.

- Chris Baker, APS

Looking Past COVID-19

- Seven virtual pilots, and counting
- Serving market-rate and low-to-moderate income customers



WHAT'S NEXT?

What other benefits can we deliver to residential customers using Energy Efficiency channels and services?

CLEAResult[®]

Thank you!

Scott Boose, CEO

Emily Kemper, Director
Emily.Kemper@CLEAResult.com



Sally Phipps
Austin Energy

The Impact of the Coronavirus on Residential Energy Efficiency Programs: Perspectives from the Field

Austin Energy's Residential Programs

Sally Phipps

Environmental Program Coordinator



5/14/2020

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Agenda

- COVID-19 Response
- Teleworking & Program Operations
- Affects on Residential Programs
- Transition Planning
- Questions and Conversation



COVID-19 Response



Teleworking Preparation

Austin Energy was monitoring the situation and pre-planning for teleworking where possible

Many Austin Energy departments began teleworking on 3/16/2020



Stay Home – Work Safe

[Stay Home – Work Safe Order 20200324-007](#) issued by Mayor Steve Adler effective on 11:59 p.m. 3/24/2020

Essential Business

Interpreted that HVAC and associated trades fell under the Critical Trades identified in the order and therefore as Essential Businesses



Communication

Regularly issued memorandums to staff and contractors on staff teleworking, project processing, program status, and the inspection process



COVID-19 Response

Residential Programs

- **Remaining Active**
 - Home Performance with ENERGY STAR (HPwES)
 - Appliance Efficiency Program (AEP)
 - Instant Savings Program
 - Power Partner Thermostats
- **Suspended Programs & Services**
 - Weatherization Assistance Program
 - Onsite Energy Advisor
 - Third Party QA/QC

Program Marketing & Outreach

- Suspended program marketing and outreach events
- Incoming projects based only on market demand

Teleworking & Remote Inspections

- Office staff
 - Email, phone, Microsoft Teams, WebEx
- Remote inspections for HPwES and AEP
 - Inspections directed by the field inspectors
 - Email, phone, photos, FaceTime, Duo, Skype



HPwES Remote Inspection Process

- **Standard Inspection Process:**
 - 100% onsite Pre-inspection and Post Inspections
 - Data and signatures gathered in our rebate processing tool called the Energy Efficiency Collaboration Platform (EECP)
 - Austin Energy inspectors view all work and close the mechanical permits
- **Remote Inspection Process:**
 - Only proceeding if customers feel comfortable, holding projects open longer than normal
 - 100% remote Pre-inspection and Post Inspections
 - Austin Energy inspectors remotely view all work and close the mechanical permits
 - Combination of paper forms, photos, video and EECP to gather information



HPwES Remote Inspection Process



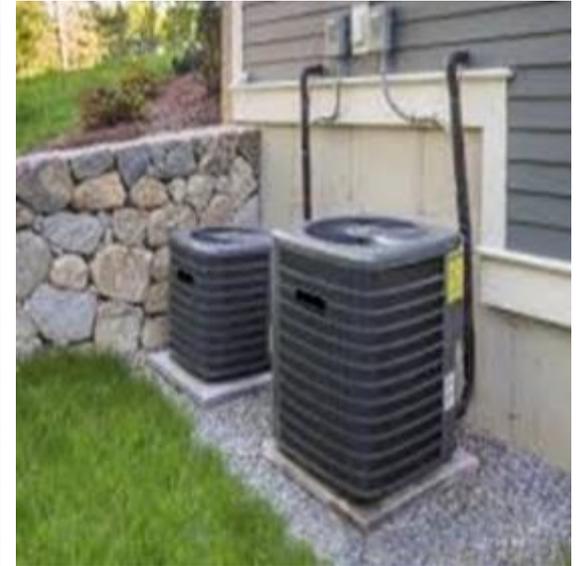
Scheduling

Scheduler works with contractor and customer to schedule the Pre-inspection (verification) or Post Inspection as normal. Contractors are reminded on the remote inspection process.



At the Job

Inspector communicates with the contractor remotely via phone, FaceTime, Duo or other application. Contractor takes pictures and/or video per inspector requests and sends to Austin Energy. Paper forms, photos, and other records are uploaded to our rebate software.



Reviewing

Inspector remotely reviews the submitted photos/video/records and requests additional documents, enters notes, passes the inspection or fails the inspection. Some projects are flagged for follow-up in person inspections when possible.



AEP Remote Inspection Process

- **Standard Inspection Process:**
 - Percentage of projects are flagged for quality control inspections
 - Onsite inspections to view equipment, check model numbers, serial numbers, size of conditioned space, etc. Mechanical inspections are not performed by Austin Energy.
- **Remote Inspection Process:**
 - Flagged projects receive only remote inspections
 - New collaborative approach where customers talk with the inspectors via phone and email and submit pictures of the equipment (if accessible and safe)



Shift in Marketing & Communications

COVID-19 Focus and Customer Support



Public Information Office/Customer/Employee Communications

Redirected news releases, media relations, website, social media, daily employee emails, transactional customer communications to COVID-19 information, scam alerts, and utility bill relief



Marketing Communications

Halted active campaigns and in-person events. Redirected to utility messaging to City of Austin Announcements and utility messaging and educational outreach



Informal Customer Communications

Informed customers of needed shifts in standard operations but all other non-essential customer communications were paused



Shift in Marketing & Communications

So what does it means for Residential rebate programs?

Temporarily Suspended Marketing & Outreach

- Reduced program visibility
 - Programs are not actively encouraging customers to participate
 - Customers decide based on need and comfort level
- Maintained marketing and program messaging on our website and existing flyers
<https://savings.austinenergy.com/rebates/>
- We are monitoring the situation and will resume marketing when appropriate

Drivers of Program Participation

- Market driven
- Unit or equipment failure
- Existing customer knowledge of the programs
- Participating contracts promoting or selling the program



Affects on Residential Programs

Increased Inspection Times

Inspections take longer and more back and forth with contractors. We take the time to ensure a complete inspection and health and safety requirements met.

Reduced Participation

Some reduction due to current circumstances and time of year. However, as the hot weather moves in we are seeing participation rise.

Increased Collaboration

Team and customer collaboration increased. Some challenges with contractor training, but we are transitioning to web based communications.

Gained Efficiencies

Office staff observed increased efficiency and productivity while teleworking.

Austin Energy's Residential programs had to rapidly adapt to a new way of doing business. We had to determine which programs we could continue to operate safely and modify our processes.



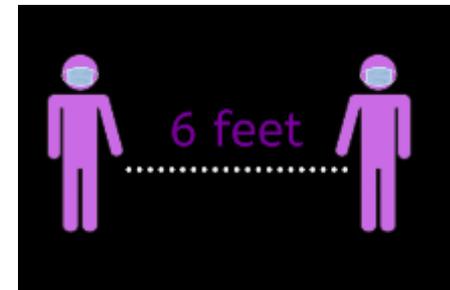
Transition Planning

- As the state moves towards reopening, transition planning is underway
 - Reviewing safety policies and procedures
 - Gathering input from staff on teleworking (pros and cons), safety concerns, and program needs
 - Actively monitoring the situation and issued guidance within the organization and at the local, state and federal level



Transition Planning Back Into the Office

- Exploring expanded and extended teleworking options
- Developing transition plans
- Monitoring the evolving situation and will adapt to issued guidance
- Transition plans prioritize employee and customer safety



Transition Planning Back Into the Field

- Exploring extending remote inspections for some programs
- Developing transition plan to resume onsite inspections as appropriate
 - Social distancing, PPE requirements, City of Austin and Austin Energy requirements, CDC guidelines, local, state, and federal guidelines
- Transition plans prioritize employee, contractor and customer safety
- Timeline is to be determined



Transition Planning

We are proud of how quickly our team planned, adapted and collaborated through these new and challenging times.

THANK YOU!



Questions and Conversation



Contact me:

Sally Phipps

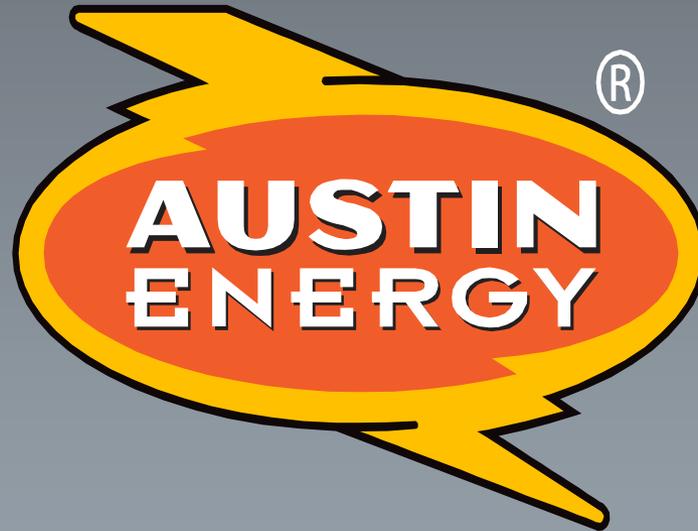
Sally.Phipps@austinenergy.com

Office: 512-505-3585



**Customer Driven.
Community Focused.SM**







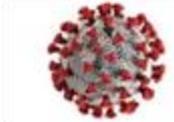
Jonathan Waterworth
AZ Energy Efficient Home



COVID-19 & Az. HPwES



MARCH 1 - MAY 1, 2020

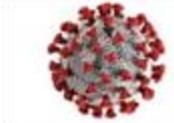


- COVID-19 Pandemic impacts Arizona on March 16, 2020
- Governor recommends shelter in place and the use of PPE
- Immediately implemented CDC guidelines into business practices
- Shared approach for compliance with Arizona Public Service





- Various industries have begun running marketing campaigns to combat COVID virus that are questionable and potentially harmful to consumers.
- We provide education to consumers about these tactics and urge caution while offering free advice on how to have a healthier home.
- We maintain that whole house HEPA filtration systems (ERV w/HEPA pictured here) are the ideal solution for a healthy home regardless of current events.

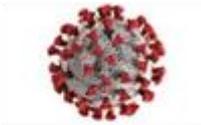


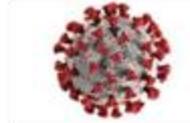


AZ ENERGY

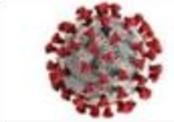
Efficient Home

- Slowing of business continues in week 2 of the pandemic in Arizona as the governor issues an executive order to “Stay Home, Stay Healthy, Stay Connected”.
- Consumers are increasingly concerned about having workers in home.
- Financial uncertainty is becoming an important concern for people as layoffs, pay cuts and furloughs continue to increase across the country.





- Week 3 was mixed. We began scheduling a small number of new service and audit appointments with people who haven't bought into the pandemic. AZ COVID cases remained low at 2700 out of 7.4 million people.
- Week 4 is looking brighter. Previously postponed retrofits are being rescheduled and small new jobs continue to be added. Mostly by people not afraid of virus.



Payroll Protection Program

My personal experience and that of others I have talked to is for 3 weeks we have been prompted by various lending institutions to “reserve a place to submit an application” for the Coronavirus Small Business Loan Program. Many of us have applications with several banks hoping one gets approved.

As of week 4, some small banks are approving applications and the program funds have dried up. The only exception that I’m aware of is Bank of America who was funding applications very early.

I requested Arizona HPwES program to conduct a survey about the effectiveness of the Paycheck Protection Program for participating contractors and the results are as follows. Out of eight responses three did not apply and of the five that did two were funded.



The first 30 day's statistics

Az. HPwES program & APS asked participating contractors what effects they have experienced related Covid-19?

- AZEEH revenue is down 34% from February and 17% from same time last year.
- Participating Contractors overall, average revenue is down 35%.
- Few new leads, however, APS customer interest is down 50%.
- APS implementing paperless forms for program.
- Less impact on HVAC participating contractors, using maintenance to fill where they can.



AZ ENERGY Efficient Home



Contact us at 480 471-0111 or office@azenergyefficienthome.com



DOE Intends to Invest \$42 Million into “Connected Communities”

Funding opportunity would enable regional GEB communities to share research results and lessons learned on projects that increase grid reliability, resilience, security and energy integration well into the future.

What We Hope to Achieve

- Measured impact of building as grid assets
- Solutions that address diverse grid needs that can be scaled in size and in other communities
- Input from occupants on impact and comfort level
- Demonstrated new business models for demand flexibility and DER coordination and optimization
- Online solutions center on best practices

Request for Information on Connected Communities

RFI Opened on March 27, 2020

Provide feedback and responses to key questions around FOA development by **May 12, 2020.**



Visit eere-exchange.energy.gov or **Scan the QR Code** for the Request for Information: DE-FOA-0002291: **Request for Information: Funding Opportunity Announcement 2206: “Connected Communities”**

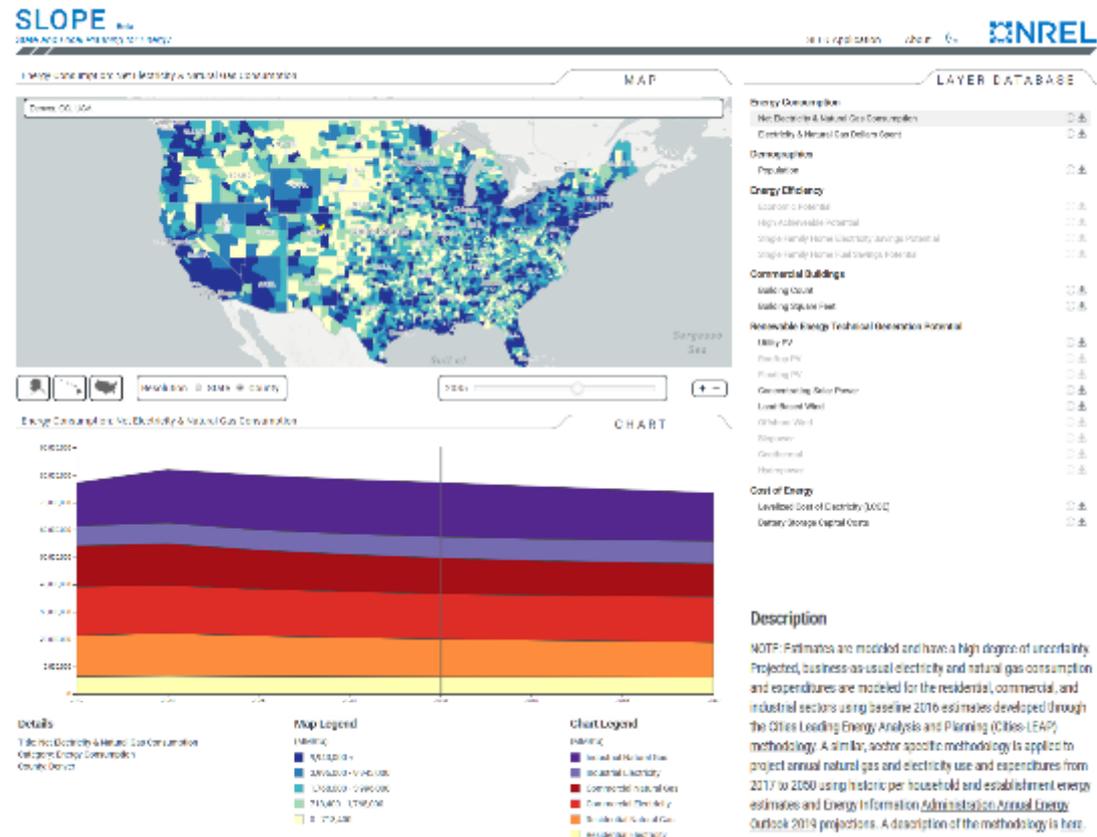
SLOPE Platform

A DOE-led collaboration between NREL and 8 EERE technology offices to create a *dynamic, comprehensive energy planning platform* of integrated, localized data for state and local decision makers

- **Phase I:** Beta version launched (Jan. 2020)
- **Phase II:** Adding transportation and generation mix data; enabling user-saved settings (under development in 2020)

Access the Platform:
<https://gds.nrel.gov/slope>

Comments or Questions?
slope@nrel.gov



Explore the Residential Program Solution Center

Resources to help improve your program and reach energy efficiency targets:

- [Handbooks](#) - explain *why* and *how* to implement specific stages of a program.
- [Quick Answers](#) - provide answers and resources for common questions.
- [Proven Practices](#) posts - include lessons learned, examples, and helpful tips from successful programs.
- [Technology Solutions](#) **NEW!** - present resources on advanced technologies, **HVAC & Heat Pump Water Heaters**, including installation guidance, marketing strategies, & potential savings.



<https://rpssc.energy.gov>

Thank You!

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Please send any follow-up questions
or future call topic ideas to:

bbresidentialnetwork@ee.doe.gov