

Program will start at 10:00 am



ETCC QUARTERLY MEETING: *TRANSFORMING COMMERCIAL SPACES WITH EMERGING TECHNOLOGIES*

February 28, 2017
Energy Education Center, Irwindale
HOSTED BY: Southern California Edison

Wifi: EEC-I Wireless WIFI code: eeci6ogo

Welcome, Safety and ETCC Updates

Edwin Hornquist

Emerging Technologies Program Manager | Southern
California Edison

WELCOME!

Before we get started....
housekeeping and safety

FOR OUR ONLINE MEETING PARTICIPANTS

- Quick logistics
 - Phone lines are muted
 - Please use question field to ask questions during Q&A or if any technical issues

HOUSEKEEPING FOR ALL PARTICIPANTS

- Please **turn off** or **silence** your phone, and **step outside** for any non-program conversations
- Audio recording today's session
 - Will be posted on www.etcc-ca.com
- Slides will be posted to www.etcc-ca.com
- Don't forget to fill out evaluations!

SAFETY MESSAGE

- In the event of an emergency:
 - Earthquake
 - Fire
 - Other evacuation
- Meeting point
- 911
- CPR

TODAY'S AGENDA

10:00 AM	Welcome, Safety & ETCC Updates
10:15 AM	Roundtable: The Role of Emerging Technologies in Transforming the Commercial Market
	Roundtable: Enabling Deeper Savings with Meter Data
12:00 PM	LUNCH (provided)
1:00 PM	Panel: Implementing System and Meter-based Technologies
2:05 PM	BREAK
2:20 PM	Panel: Capturing Greater Savings with Emerging Solutions
3:30 PM	WRAP UP

EMERGING TECHNOLOGIES COORDINATING COUNCIL (ETCC)

The ETCC supports ETP efforts in the advancement of energy efficiency and demand response initiatives through its leadership, impact and influence in the emerging technology domain. It pursues this objective by strategically engaging with a wide range of external ET stakeholders and effectively and efficiently managing coordination among ETCC members.

Members include:



EMERGING TECHNOLOGIES PROGRAM MISSION

“...to increase energy efficiency market demand and technology supply through evaluation of *emerging* and *underutilized* advanced technologies to increase customer savings...”



Zero Net Energy



LED Lighting



EE Rebates



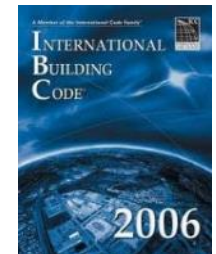
Retail and Manufacturer Strategy



Appliance Standards



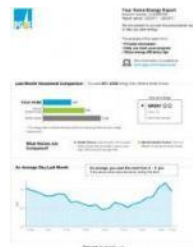
Building Codes



HVAC



Home Energy Report



Contractor Training and outreach

ET PROGRAM DESIGN

Technology Development Support

- Provide resources to transform early-stage technologies / concepts into saleable products
- Develop forward-looking product specifications
- Provide outreach to early-stage entrepreneurs, investors, and analysts (TRIO)

Technology Assessment

- Evaluate performance claims
- Generate energy savings and cost data required for regulatory approval of a new EE measures

Technology Introduction Support

- Conduct scaled field placements to foster market traction
- Build demonstration showcases to create visibility / market awareness
- Conduct third-party solicitations using competitive bidding (TRIP solicitation)

UPCOMING ETCC EVENTS

Date	Event	Location & Host
April 19-21, 2017	Emerging Technologies Summit	Ontario Convention Center, Ontario, California
September 20, 2017	Q3 Meeting: Industrial	Bay Area, PG&E
December 6, 2017	Q4 Meeting: Residential	San Diego, SDG&E

To sign up for the ETCC Insight newsletter, check the box on the sign-in / registration sheet or sign up online at: www.etcc-ca.com/subscribe

Check the ETCC website for updates: <http://www.etcc-ca.com/events>

ET SUMMIT : APRIL 19-21, 2017



Emerging Technologies Summit

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www.etsummit.com

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Rory McDonald, Ph.D.

Keynote Speaker, Harvard Business School



Ellen D. Williams

Plenary Speaker, University of Maryland & former ARPA-E



Commissioner Carla Peterman

Opening Session Speaker, CPUC



Ralph Cavanagh

Opening Session Speaker, National Resource Defense Council



Laurie ten Hope

Opening Session Speaker, California Energy Commission

Welcome Remarks

Steve Galanter

Principal Manager, DSM Engineering | Southern
California Edison



THE ROLE OF EMERGING TECHNOLOGIES IN TRANSFORMING THE COMMERCIAL MARKET

Carol Yin | Consultant, Yinsight - *facilitator*

Mark Rehley, Senior Manager, Emerging Technology & Product Management | Northwest Energy Efficiency Alliance

Edwin Hornquist, Emerging Technologies Program Manager | Southern California Edison

Derek Okada, Senior Manager, Policy & Planning | Southern California Edison

Mark Kootstra, Supervisor, Energy Deployment and Market Facilitation | California Energy Commission

MARKET TRANSFORMATION

“long-lasting, sustainable changes in the structure or functioning of a market achieved by reducing barriers to the adoption of energy efficiency measures.” – D. 09-09-047, p. 89.

Distinction between resource acquisition and market transformation programs (Keating & Prahl, 2014)

	Resource Acquisition	Market Transformation
Scale	Program	Entire defined market
Target	Participants	All consumers
Goal	Near-term savings	Structural changes in the market leading to long term savings
Approach	Save energy through customer participation	Save energy through mobilizing the market
Scope of Effort	Usually from a single program	Results from effects of multiple programs or interventions
Amount of Program Administrator's control	PAs can control the pace, scale, geographic location, and can identify participants in general	Markets are very dynamic, and the PAs are only one set of actors. If, how, where, and when the impacts occur are usually beyond the control of the program administrators.
What is tracked, measured, and evaluated	Energy use and savings, participants, and free-ridership	Interim and long term indicators of market penetration and structural changes, attribution to the program, and cumulative energy impacts.
Timeframe for cost-effectiveness	Usually based on 1st year or cycle savings	Is usually planned over a 5 -10 year timeframe



ROUNDTABLE PARTICIPANTS

Carol Yin | Consultant, Yinsight - *facilitator*

Mark Rehley, Senior Manager, Emerging Technology & Product Management | Northwest Energy Efficiency Alliance

Edwin Hornquist, Emerging Technologies Program Manager | Southern California Edison

Derek Okada, Senior Manager, Policy & Planning | Southern California Edison

Mark Kootstra, Supervisor, Energy Deployment and Market Facilitation | California Energy Commission

QUESTIONS FOR DISCUSSION

What market transformation efforts are your organizations supporting in the Commercial sector, and how?

QUESTIONS FOR DISCUSSION

What are some key trends that you see affecting the Commercial sector?

QUESTIONS FOR DISCUSSION

How can the different market actors coordinate to support market transformation?

DISCUSSION AND Q&A

Carol Yin

Edwin Hornquist

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Mark Kootstra

(916) 445-5299 - Mark.Kootstra@energy.ca.gov

Derek Okada

(626) 302-0790 - Derek.Okada@sce.com

Mark Rehley

(503) 688-5400 - MRehley@neea.org



ENABLING DEEPER SAVINGS WITH METER DATA

Ryan Bullard, Program/ Project Manager, Policy and Planning |
Southern California Edison - *facilitator*

Mary Ann Piette, Director of Building Technology | LBNL

Sasha Merigan, Analyst, Energy Division, Energy Efficiency Group,
Metered Energy Efficiency and Emerging Programs | CPUC

Shahana Samiullah, Ph.D., Sr Manager, Measurement and Evaluation |
Southern California Edison

LUNCH

Program will resume at 1:00 pm

SLIDES WILL BE POSTED AT ETCC-CA.COM

PLEASE FILL OUT EVALUATIONS!



IMPLEMENTING SYSTEM AND METER-BASED TECHNOLOGIES

Brian Smith, Principal Analyst | PG&E - *moderator*

Peter Schwartz, Building Technology and Urban Systems | LBNL

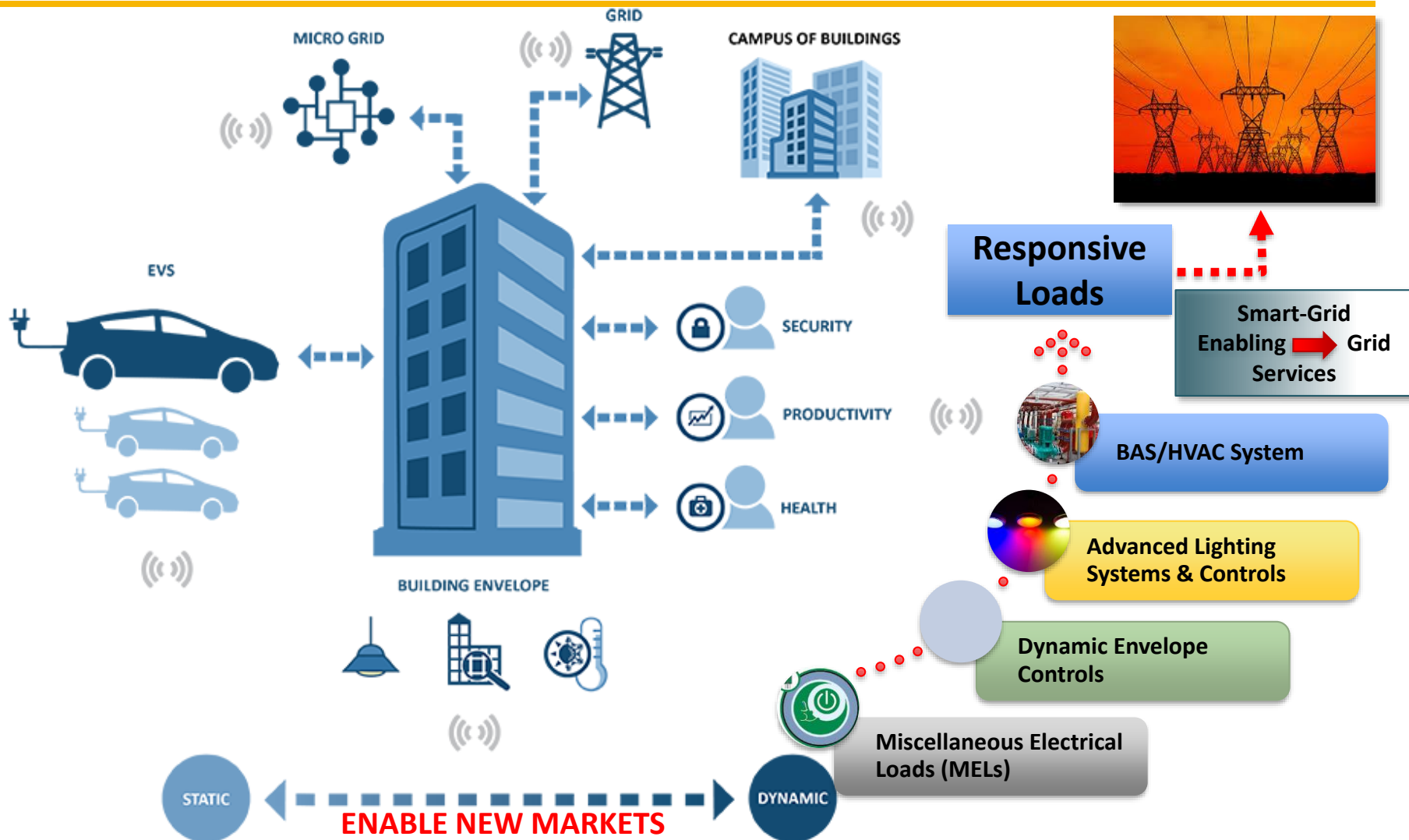
Neha Arora, Project Manager | Southern California Edison

Jon Moeller, CEO | Mach Energy

Brian Smith
Principal Analyst | Pacific Gas &
Electric

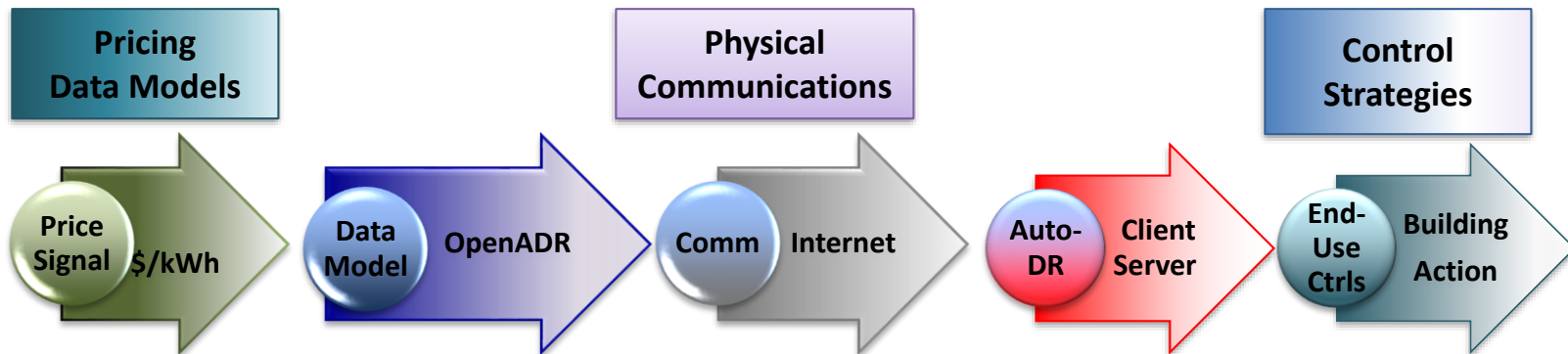
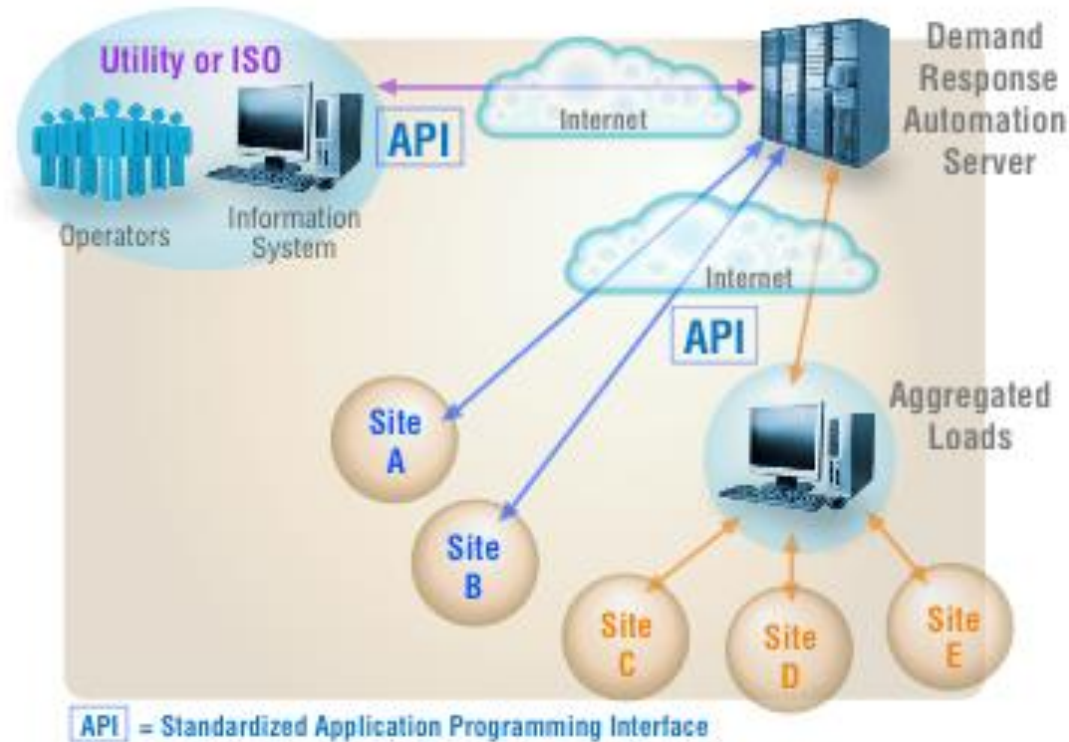
Peter Schwartz
Building Technology and Urban Systems
| Lawrence Berkeley National Laboratory

Future Smart Grid – Dynamic Communication, Control & Aggregation: Responsive Loads



Open Automated Demand Response – Open ADR

- Open standardized DR interface
- Allows electricity providers to communicate DR signals directly to customers
- Uses XML language & existing communications e.g., Internet



Neha Arora
Project Manager | Southern California
Edison

Jon Moeller
CEO | Mach Energy

Trusted Leader in Building Energy Efficiency

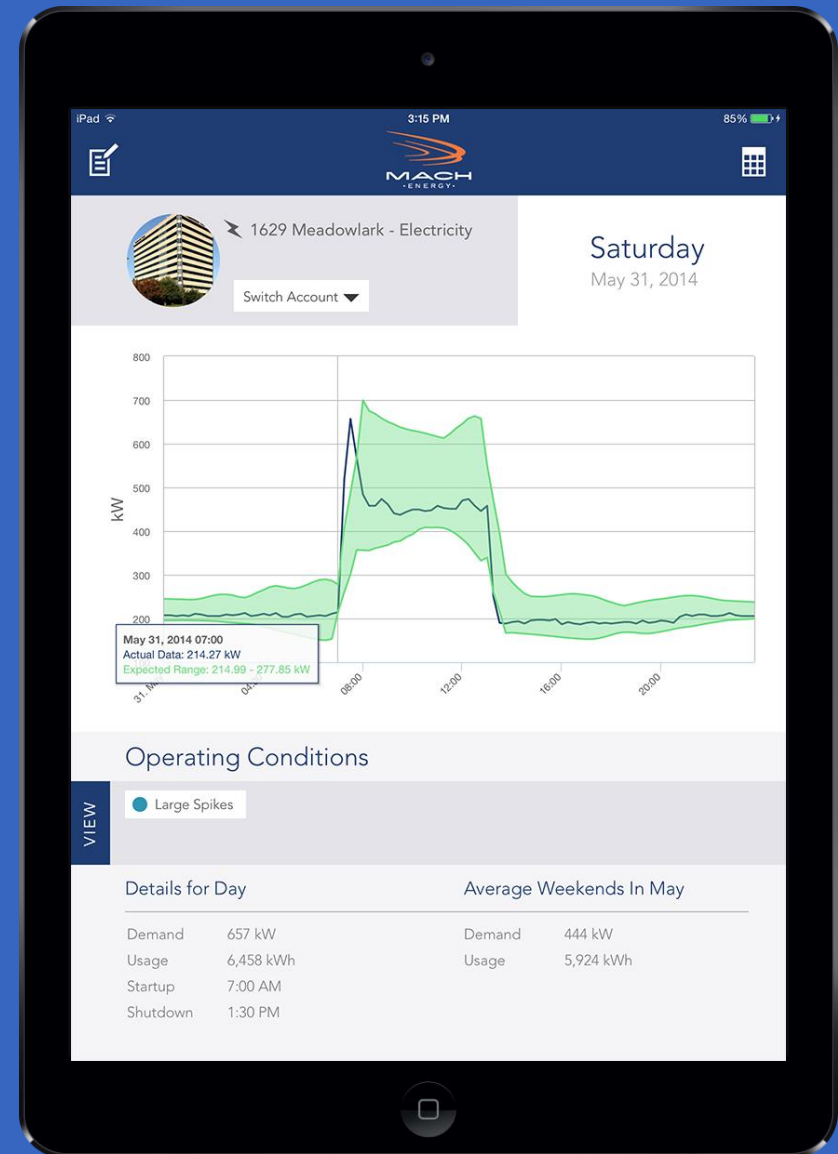


- Persistent meter-based analytics / M&V
- 100's of millions of sf / C&I+SMB
- Green Button / Energy Star Partner



Lessons on Engagement with Meter Data

- Persistence
- Fast set-up
- Utility tariffs
- Actionable info
- Mobile
- Enterprise roll-up
- M&V, other services



DISCUSSION AND Q&A

Brian Smith, Principal Analyst | PG&E - *moderator*

Peter Schwartz, Building Technology and Urban Systems | LBNL

Neha Arora, Project Manager | Southern California Edison

Jon Moeller, CEO | Mach Energy

BREAK

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CAPTURING GREATER SAVINGS WITH EMERGING SOLUTIONS

Anuj Desai, DSM Planning & Compliance | Southern California Edison - *moderator*

Bill Livingood, Group Manager, Commercial Building Systems Integration | NREL

Abhijeet Pande, Associate Vice President, Building Science Research | TRC

Aaron Panzer, Director, Business Development | Ecova

SESSION WRAP-UP

PLEASE FILL OUT EVALUATIONS!

SLIDES WILL BE POSTED AT ETCC-CA.COM
WITHIN 48 HOURS

CONTINUE THE CONVERSATION!



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