“The Internet of Things” - Opportunity or Threat for the Utility Sector?

David Dollihite, *Moderator*
Specialist Leader, Deloitte Consulting LLP

Val Jensen
Senior Vice President
Customer Operations
ComEd

Jim Steffes
Senior Vice President and
Retail Regional President, Northeast
NRG Energy, Inc.

Rob Harmon
President and CEO
EnergyRM
Meter Energy Efficiency: Ending the Utility Death Spiral

Rob Harmon
President and CEO
EnergyRM
Problem: Utility Economics (IOUs)

Wall Street Journal: Companies Unplug From the Electric Grid, Delivering a Jolt to Utilities

Forbes: Time To Short Your Electric Utility?

Citi: Energy Darwinism
The Evolution of the Energy Industry
Halving of the addressable market over the next 2 decades

Image: australianinvestmenteducation.com.au
Energy efficiency currently represents utility red ink
Utilities earn on investments like generation

Traditional EE = Negative sales
= Lost revenue
= Lost investment
Problem: Utility Economics (IOUs)
Energy Efficiency and Distributed Generation

“Could have a major impact on
- realized equity returns
- required investor returns
&
- credit quality”
Solution: Make EE = Generation

1. Meter it

2. Buy and sell it *just like generation*
A New Approach

• The Metered Energy Efficiency Transaction Structure:

MEETS
COMMERCIAL BUILDING

- Regular Tenants
  - Pay energy bill: (kWhs)

POWER PLANT

- Builder/Owner
  - Site tenant
  - Puts in improvements
  - Sells yield to Utility
  - Maintains Performance

LAND OWNER

- Receives lease payments

Utility Bills for All Metered kWhs

Conventional Utility Meter

Building/Tenant Pays Energy Bill

PPA for kWhs

Power Plant Builder/Owner

Investment to Build Power Plant (Requires a PPA)

Investment

$-Returns

Project Investors

Equity & Debt
MEETS: A Building is a Power Plant

COMMERCIAL BUILDING
- Regular Tenants
  - Pay energy bill: (kWhs)

MEETS POWER PLANT
- Energy Operator
  - Site tenant
  - Puts in improvements
  - Sells EE yield to Utility
  - Maintains Performance
- Building Owner
  - Receives lease payments
  - And reduced capital improvement spending
  - And Increased building value

DeltaMeter™
Dynamic Baseline Utility Meter

Utility Bills for All Metered kWhs
Including the DeltaMeter kWhs

Building/Tenant Pays Energy Bill

Power Plant Builder/Owner

Investment to Build Power Plant (Requires a PPA)

Project Investors
Equity & Debt

$-Returns

PPA for kWhs

DeltaMeter kWhs

kWhs

Conventional Utility Meter

MEETS: A Building is a Power Plant

Power Plant Builder/Owner

Investment

$-Returns

Project Investors
Equity & Debt

PPA for kWhs
MEETS: A Building is a Power Plant

**Commercial Building**
- Regular Tenants
  - Pay energy bill: (kWhs)

**MEETS Power Plant**
- Energy Operator
  - Site tenant
  - Puts in improvements
  - Maintains Performance
- Building Owner
  - Receives lease payments
  - And reduced capital improvement spending
  - And increased building value

**Utility**
- Utility Bills for All Metered kWhs
  - Including the DeltaMeter kWhs
  - Building/Tenant Pays Energy Bill

**DeltaMeter™**
Dynamic Baseline Utility Meter

- kWhs
- Ratebased, long-term capital deployed on customer premises for energy efficiency yield
Seattle City Light Pilot

Bullitt Foundation Building – Living Building Challenge

• Funding Support for
  – Baseline and meter process: NW Energy Efficiency Alliance
  – Billing interface (automated) – OregonBEST

• Terms
  – 20 year agreement
  – PPA price is retail plus standard incentives
  – Building pays retail (for both used and “saved” units)
  – Energy yield from efficiency metered by DeltaMeter

• Parties:
  – Bullitt Foundation is Investor and EnergyTenant™
  – Bullitt Subsidiary is Building Owner/Master Tenant
  – Commercial Tenants Occupy Most of the Building
  – Seattle City Light: Jorge Carrasco
  – Bullitt Foundation: Denis Hayes
MEETS Benefits

**Utility**
New Load Management Resource
Location-Specific and Reliable
Only Pay for Units Received
Rate-baseable: Earnings Opportunity
No revenue loss

**Building Owner**
New 20 to 30 Year Tenant
New Revenue Stream
Increased Building Value
Frees Up Capital
Owner Stays Out of Energy Business

**Investors**
Finance Based on Utility PPA
Strong Counterparty
Lower and Rated Payment Risk
Well-Understood Instruments
Scale Through Aggregation

**Society**
Domestic Jobs
Environmental Benefit
Enhanced Building Stock
Price Stability
No Tax Dollars Required

*DeltaMeter™*
More information

• MEETS
  – The Metered Energy Efficiency Transaction Structure

• MEETS AC
  – The MEETS Accelerator Coalition
  • www.MeetsCoalition.org
Questions?
“The Internet of Things” - Opportunity or Threat for the Utility Sector?

David Dollihite, Moderator
Specialist Leader, Deloitte Consulting LLP

Val Jensen
Senior Vice President
Customer Operations
ComEd

Jim Steffes
Senior Vice President and Retail Regional President, Northeast NRG Energy, Inc.

Rob Harmon
President & CEO
EnergyRM