IMPLEMENTATION UPDATE: C&I RETROFIT

A Deeper Dive

July 8, 2014
SUMMARY OF KEY POINTS

► Why CI Retrofit Deeper Dive

► Large Retrofit shortfall
  – What happened in 2013
  – Likely to persist in 2014 and 15
  – Cumulative effect of 3 years of shortfalls is significant to 3 Yr. Plan Goals

► Increased savings in other initiatives and programs

► PAs and Consultants working to accelerate savings

► Areas to improve
  – Systematically review and adopt effective practices
  – Need information to forecast the 3 Year portfolio
PURPOSE

► Implementation Update:
  - Check in on performance relative to 3YP

► Deeper Dive
  - Understand PA projections and adjustments in IU
  - Understand deviations from interim targets
  - Inform course corrections
C&I Large Retrofit 39% of three year goal

Missing CI target has large impact on total EE portfolio
- Large Retrofit shortfall is an ongoing issue

Resulted in deeper dive
CI RETROFIT DEEP DIVE – KEY QUESTIONS

► Why did many PAs come up short in 2013
► What changes are in progress to increase savings
► What level of savings can we expect in 2014 & 2015
► Are there additional adjustments or course corrections needed
2013 IN REVIEW

► 3 smaller PAs exceeded goal
  - Focus on engineering
  - Invest early to fill pipeline
  - Developed large projects that comprised 40-50% of goal

► Reasons CI Retrofit savings below goal
  - Longer ramp up time for new initiatives
    • Tuning market stimulus to meet actual market needs
  - Ramping up resources (staff/vendors) in 2013
  - Territory specific differences
    • Increase new construction in 495 circumference & upstream lighting
      – shift savings to new construction
    • Large business closures in Fall River area
LOOKING AHEAD

► Continued growth in CI Retrofit

► CI Retrofit savings will be lower than 3YP goals
  - Targets increase
  - Large retrofit projects have long development cycle
  - Market stimuli can take time to get right

► Continued shift to CI New Construction and Direct Install
CURRENT PA ACTIVITIES TO INCREASE SAVINGS

► **Capacity:**
  - Staffing additions
  - Reassignments and streamlining

► **Contracting**
  - Additional focused sub-contractors
  - Increase custom projects from DI vendors

► **Market Initiatives**
  - Grocery, ECM Motors, Manufacturing, Mid-sized, Muni
PA PIPELINE AND PROJECTIONS

► Pipeline information essential to forecasting savings levels
► Individual conversations with each PA
► Limited 2014 data – varied by PA
► Very little 2015 information except CHP
► Developed Large Retrofit projections year over year for each PA
SAVINGS FORECAST – LARGE ELECTRIC PAs

![Graph showing savings forecast for large electric PAs across different years and utilities.](image-url)
SAVINGS FORECAST - SMALL ELECTRIC PAs

![Chart showing savings forecast for different companies over the years.](chart.png)
SAVINGS FORECAST – LARGE GAS PAs
SAVINGS FORECAST – SMALL GAS PAs
CUMULATIVE EFFECTS:
SAVINGS SHORT OF 3 YR GOAL & LARGE % OF SAVINGS UNKNOWN Q4 2015

MWh

1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0

MA Three Year Electric

Savings through Q3 2015

IU Revised Target

Actual/Predicted Goal

Natural Gas Three Year Savings

Savings through Q3 2015

IU Revised Target

Actual/Predicted Goal

Therms

25,000,000
20,000,000
15,000,000
10,000,000
5,000,000
0

Q4 2015 Savings unknown until February 2016
ACCELERATING SAVINGS THROUGH ADVANCING EFFECTIVE PRACTICES

► PA specific responses to short falls
  - PAs need flexibility
  - Opportunity – test and expand effective practices

► Model for advancing effective practices
  - Identify practices
  - Determine viability and approach
  - Limited engagement test
  - Track and assess
  - Share successful models
  - Replicate across PAs

► PA innovative approaches - CIMC quarterly topic
ADVANCING EFFECTIVE PRACTICES: CONSULTANT FOCUS

► Retrocommissioning (RCx)
  - Selected PAs, customers and RCx providers
  - High up-front incentive (up to 100%) tied to project implementation by 2015
  - Focused studies and projects – single system NOT whole building
  - RCx provider technical training fall 2014

► Health Care Best Practices Study in Sept.

► Advancing Segmentation - Hospitality

► New Areas of Focus:
  - Energy Performance Metrics (major systems: chiller plants, boiler plants, air handlers)
  - Turn-key CHP
  - Ramp up LED lighting - comprehensive retrofit
  - Ventilation
CONCLUSION

► PA focus and push toward higher levels of savings
  − Good, but unlikely to be enough
► Consultants closely engaged in identifying and advancing additional effective practices
  − Need: improved method for PAs to systematically prototype, review and adopt effective practices statewide
► New information available in fall 2014
  − Successful project study
  − PA differences study
  − 2013 DNV GL data tables - to provide more detailed 2013 data
  \[To\ \textit{help identify and promote best practices}\]
► Need: mechanism to understand progress towards targets
  − Large Retrofit savings rates and pipeline
  − Savings shifts to Direct Install, New Construction and Residential
THANK YOU

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