Maryland Energy
ADMINISTRATION

Powering Maryland's Future

EmPOWER Maryland Planning Overview

Kevin Lucas

Agenda

- Overview of EmPOWER Maryland
- EmPOWER Planning Group Process
- Developing a Cost Effectiveness Testing Methodology
- Progress to Date and Challenges Faced

EmPOWER Maryland Overview

- Before EmPOWER Act of 2008
  - Broad statutory framework
  - "Any cost effective and appropriate" energy efficiency and conservation program
  - Natural gas and electricity
- EmPOWER Act added specific goals for utilities
  - 15% per capita energy and demand reduction by 2015
  - 3 year plan cycles
  - Utilities responsible for ALL peak demand and "at least" 10% of energy goals
  - Covers four largest IOUs and largest coop
    - ~97% of state electric load

EmPOWER Progress to Date

- Progress accelerating in recent years
  - Over 1 million MWh annual reduction in 2013
- On target for demand reduction goals
  - 14.6% reduction through 2013
- Trailing on total energy reduction goals
  - 10.1% reduction through 2013
  - 2013 numbers helped by warm winter
  - Extreme weather spiked usage in Jan./Feb. 2014, but cool summer mitigated impact

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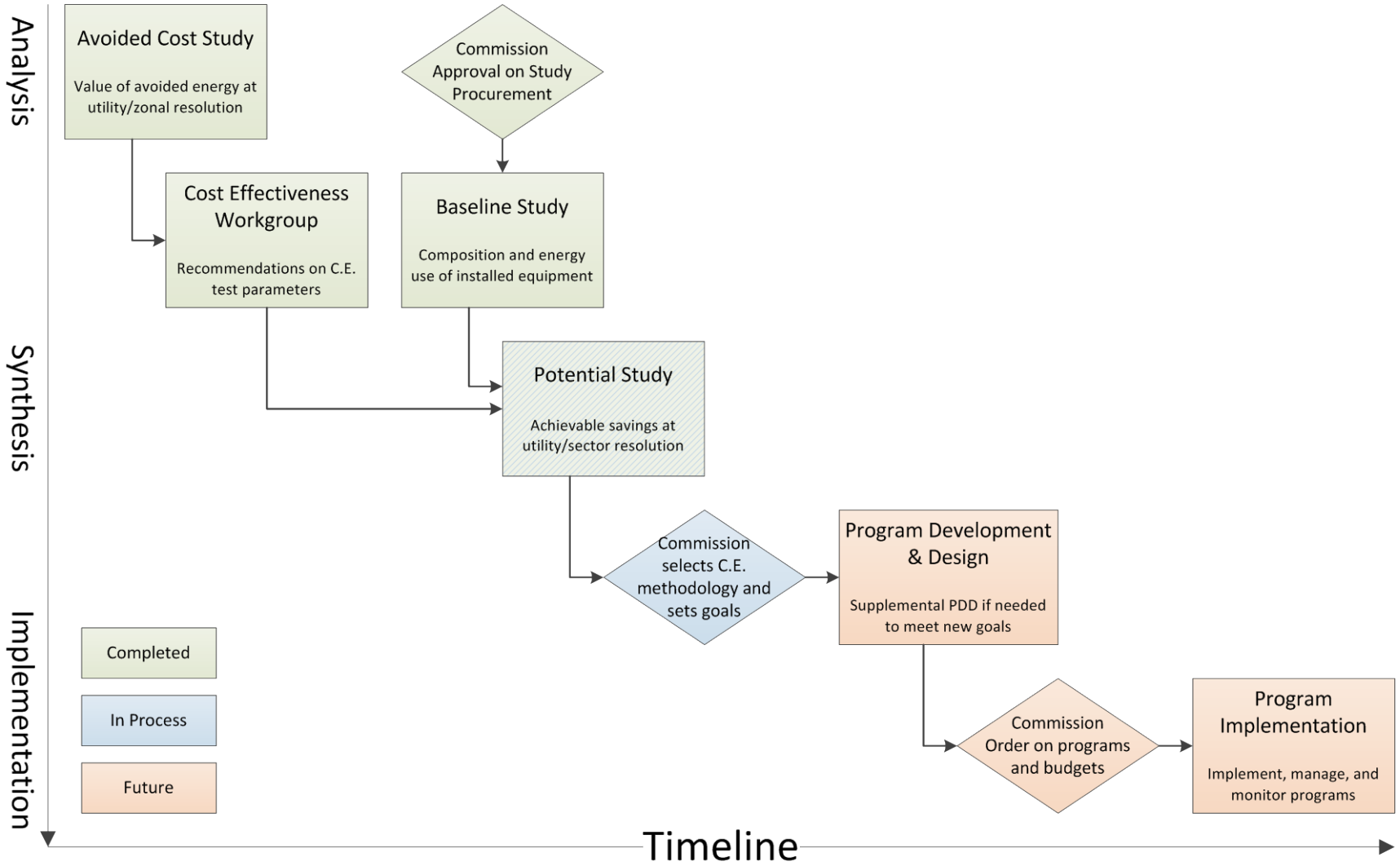
EmPOWER Planning Group

- MEA submitted report to GA in Jan 2013
  - Whether to set goals beyond 2015
  - Whether to set natural gas goals beyond 2015
  - MEA recommended doing both
- EmPOWER Planning Group (EPG) formed Spring 2013
  - Working group structure with state agencies, utilities, advocates, and industry stakeholders
  - 2015-2017 target program cycle design and development

EmPOWER Planning Group

- Key Tasks
  - Update avoided cost of energy and non-energy benefits for each utility
  - Standardize cost effectiveness testing methodology for program design
  - Update baseline and potential studies to determine achievable levels of cost effective savings
  - Consider changes or additions to current program offerings
  - Develop program proposals for for 2015-2017 cycle
    - Utility in lead with review by PSC Staff and MEA

EmPOWER Planning Proposed Process



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Developing a CE Testing Methodology

- In a perfect world
  - All cost and benefits are completely quantifiable and deterministic
  - NEB and OPI are easily obtained and readily incorporated
  - Policy and financial goals are aligned between utilities, participants, non-participants, and governments
  - Development of internally consistent methodology produces a simple input > output process
  - Bright line test determines which programs or portfolios make sense
- In the real world
  - Not so much!

Real World Issues

- Given the real-world constraints, how do policy makers construct a good methodology?
  - First, develop a methodology!
  - Understand the true options that are being considered
  - Uncertainty is no reason to ignore something
  - Calculate sensitivity of tests to certain key assumptions
  - Consider impact of programs on different players
  - Address market failures to reduce or eliminate barriers to participation

Methodology Development Challenges

- Pushed for consensus where possible, but key differences remained
  - Avoided Costs
    - Modeling produced capacity values above current market rates
  - Discount rates
    - Utilities wanted WACC; EE advocates pushed for lower rates
  - NEBs
    - Pushback from some utilities on uncertainty of values and appropriateness of inclusion
  - Establishment of baseline assumptions
    - Always planned on running sensitivities, but hard to establish what was in baseline.
- Ultimately, went with "80%" rather than consensus filing
  - Still, process elevated all parties understanding of issues

Methodology Development Challenges

- NEBs were particularly challenging
  - Debate amongst participants of threshold question of should they be included
  - Additional debate about valuation and certainty of quantified NEBs
  - Engaged Itron to do a literature survey to develop quantitative estimates for four key NEBs
    - Air emissions (health impacts), Comfort, Reduced Arrearages, C&I O&M reductions
    - Developed low, medium, and high values
  - Application of NEBs was done in scenario/sensitivity analysis

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Overall Progress to Date

- Solid progress on analytical aspects
  - Study on Avoided Cost completed
  - Cost effectiveness methodology guidelines completed
  - Scenario/Sensitivities defined for Potential Study
  - Potential Study results due mid-January
- Commission holding hearing for cost effectiveness and post-2015 goals in Mid-February
  - Comments due by Jan 30
  - Opportunity for parties to advocate for their positions
  - Topics will include policy guidance, goal structures, and quantitative results of potential study

Challenges Faced, Lessons Learned

- Challenges
  - Additional savings over standards vs. ratepayer impacts
  - Uncertainty over forecast values for avoided costs
  - Non-energy benefits: treatment and valuation
  - Timeline compression
- Lessons Learned
  - Wide-ranging stakeholder groups are critical
  - Start early!
  - Consensus requires cooperation by all parties
  - Even if you don't attain consensus, there is significant value in the process

Thank You!

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