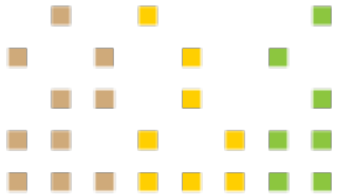
Measure Cost Guidance

Subcommittee Meeting #2



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JULY 9, 2020

Agenda

- Introductions & Objectives
- Recap from meeting #1
  - “Fundamentals”
  - Data sources
- Analytical Methods
  - Guideline: Preferred analytical methods
  - Guideline: Estimate base and measure costs using same method
  - Guideline: Validate estimates
- Operational/Process
  - Guideline: Timing of reviewing/updating costs
  - Guideline: Collect data during implementation
  - Guideline: Cost documentation
  - Other (cross-cutting) recommendations
- Close

Objectives and Timeline

- Goal
  - Create guiding principles for measure developers (utility and 3Ps)
- Value
  - Create broad understanding of measure cost requirements and "fundamentals"
  - Facilitate the consistency of data sources and methods
  - Provide greater transparency into measure development
  - Provide measure developers with trade-offs associated with data sources & analytical methods to ensure accuracy, transparency, and cost-efficiency
- Timeline

Recap: Fundamentals

Measure cost estimates should ….

1. Comply with regulatory direction
   - Inputs for TRC
     - *Lifecycle costs*
   - Rules for measure application types
   - *Subject to CPUC/EAR review & approval for IOU portfolios*
2. Represent average prices actually paid by customers
3. Represent current market conditions
4. Enable an "apples to apples" comparisons between base and measure case costs *using cost data of the same vintage*
5. Exclude cost associated with product or feature choices not directly related to EE *when IMC is relevant.*
   - *Exclude O&M, permit fees, salvage when not related to EE and exclude if same between base and measure case*
6. *Be developed with rigor appropriate for contribution to portfolio.*

Recap: Measure Cost Data Sources

- Preferred data source depends upon the measure, the market through which it is sold.
  - *Hierarchy or put weights on "best" data source for specific measures*
- Considerations …
  - The point in the supply chain that data will most closely represent price actually paid
  - Data availability
  - Primary vs secondary
  - Cost to collect and process data
- Guideline of preferred data sources: Data Sources Matrix
  - Refresh/update what we know
  - Strengths/weakness
  - Identify best data sources for measure types and cost components

Need your input on matrix by Friday 7/10!

Common Analytical Methods

- There is not one correct method to estimate measure cost.
- Considerations …
  - Characteristics of the data
    - # of sample points
    - Distribution and variability of data
    - Availability of measure attributes
    - Missing data points
  - Cost / Time
  - Expertise
  - # of measures in analysis
  - Measure contribution to portfolio

- *Are there other key considerations?*

Guideline: Preferred Analytical Methods

- Guideline will provide measure developers with a matrix of alternative methods, strengths/weaknesses
- **See Analytic Methods Matrix**
  - *Provide your input/experience with methods, strengths/weaknesses*
  - *Any distinction for HIMs?*
  - *Should guidance include a hierarchy of analytical methods specific measure groups? Or more generally present pros/cons and applicability?*
  - *Is there one method that is always superior to others?*

Homework Assignment:

Send comments/revisions/additions to Jennifer Holmes by Friday July 17.

Guideline: Estimate base & measure costs using same method

- Supports true apples to apples comparison for IMC
- Use same baseline and measure definitions that savings are based upon

Guideline: Validate Cost Estimate

- Validation = cross-check estimate against “out of sample” data
  - Published list prices
  - Artificial contractor bids
  - Customer invoices
  - Online price lists
  - RSMeans and other secondary resources
- Particularly for simple averages

- *Distinction for HIMs vs others?*

Operational/Process Guidelines

- Guideline: Timing of measure cost review/updates
- Guideline: Data should be collected during implementation
- Guideline: Measure cost documentation

Guideline: Timing of measure cost updates

- Measure developers should propose cost "expiration date" to indicate when costs should be reviewed and (potentially) updated
  - Based upon their understanding of pace of market change, historical trends
- Measure costs should be adjusted for inflation every two years (using RSMeans price indices?)
- Measure costs should be reviewed and updated if baseline and/or offerings change

  - *What are other triggers?*
  - *When should costs be updated instead of adjusted for inflation?*

Guideline: Define data that should be collected during implementation

- Data collection requirements should specify cost components to be collected
  - Installation costs
  - Make/model and cost of equipment
  - Infrastructure costs (for fuel substitution measures)

- To support validation of cost estimates
- To accurately reflect actual prices paid (incl. markups)
- To accurately reflect equipment installed through programs

Guideline: Measure cost documentation

- Measure characterization fields (4):
  - Base and measure case material costs
  - Base and measure case labor costs
- Explain data sources and analysis method to develop cost estimates
  - Reflect understanding of market
  - Reflect nature of data (variability, etc.)
  - Document rationale for method and other considerations
  - Treatment of outliers, missing data points
  - If/how estimates were validated
- To ensure transparency and reproducibility
- To ensure knowledge is transferred

Other Recommendations

- Leverage eTRM to plan for updates
  - Claims data, sales data, other historical trends
  - Track key "quality" indicators to prioritize updates – vintage, sample size, etc.
  - Consistency of cost inputs across measures (i.e., installation costs, labor rates)
- Synchronize measure cost reviews/updates for groups of measures
  - Leverage data sources
  - Cost efficiency
  - Leverage other market/eval studies

What are other opportunities/obstacles from a process perspective?

Next Steps

- Provide input on data sources by 7/10
- Provide input on methods by 7/17
- Review and comment on draft white paper
- Participate in 3rd subcommittee meeting if needed

Thank you!