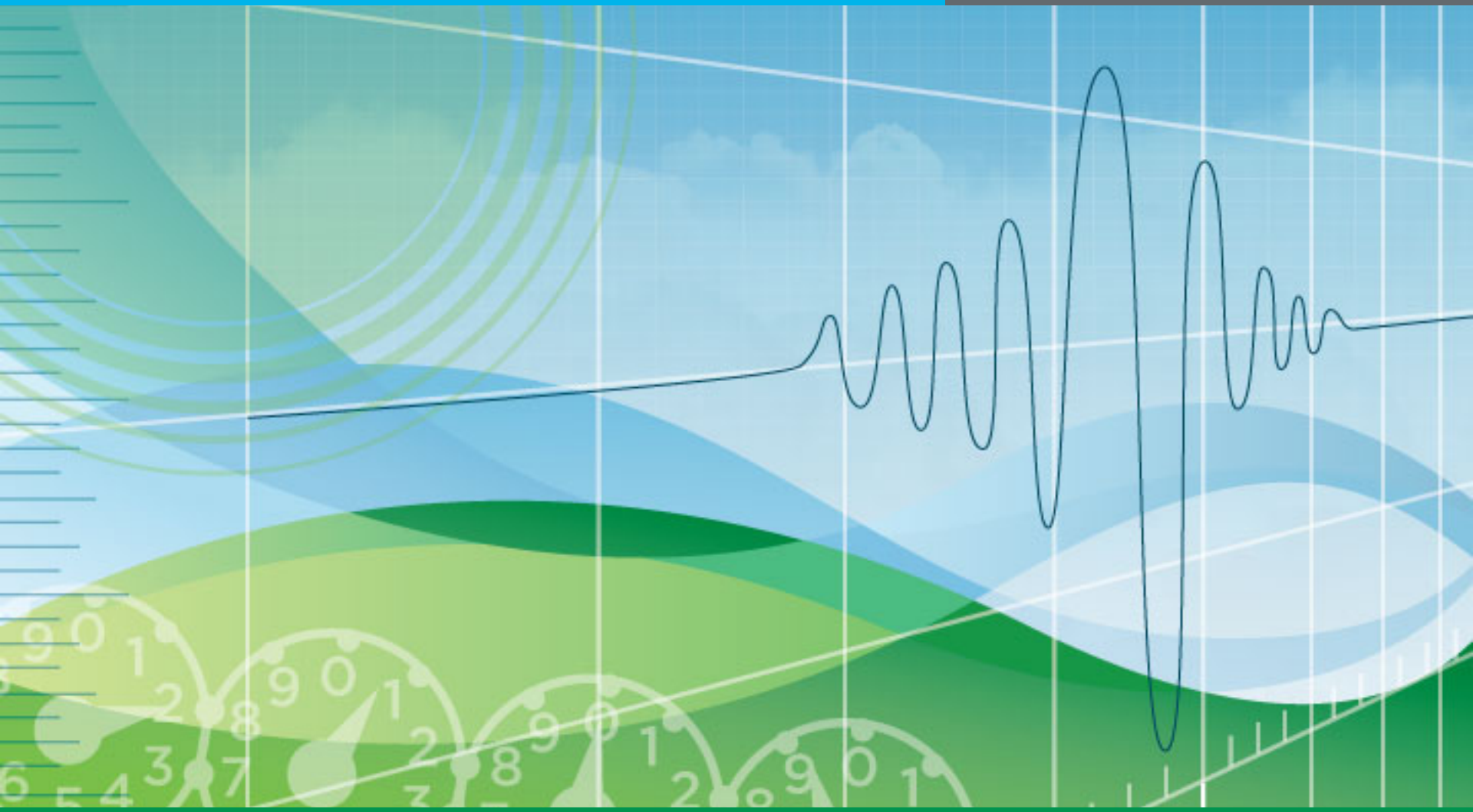

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UNIFORM METHODS PROJECT

Jointly managed by the U.S. Department of Energy Office of Electricity Delivery and Energy Reliability and Office of Energy Efficiency and Renewable Energy

Estimating Net Energy Savings

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- **Estimating Net Energy Savings Chapter**
  - Designed to build on prior work and, particularly, on the December 2012 SEE Action Guidebook to EM&V
  - Practitioner's guide to methods that can be used to address the estimation of net savings
  - Discussion of selected issues important to net savings estimation

Estimating Net Energy Savings

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- **The net impacts challenge**
  - Applicable to many investments in a resource
    - Healthcare
    - Education
    - Tax subsidies
    - Energy efficiency
  - Need to approximate the appropriate counterfactual
    - What would have happened in the absence of the resource investment??
  - What is the appropriate baseline?
- **Why estimate Net Savings?**

Estimating Net Energy Savings

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- **Definitions of factors used in net savings calculations**
  - Gross savings
  - Net savings
  - Free ridership
  - Spillover
  - Market effects
  - Net-to-gross

Estimating Net Energy Savings

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- **Methods for net savings estimation (per revised outline)**
  - Randomized controlled experiments and quasi-experimental designs
  - Survey Methods
  - Common practice baseline
  - Market sales data analysis
  - Top-down evaluations
  - Structured expert judgment approaches
  - Deemed or stipulated NTG ratios
  - Other methods – Historical tracing

Estimating Net Energy Savings

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- **Discussion around each method:**
  - What the method entails
  - Key advantages of method
  - Key issues to be aware of
  - Practical example(s) of the method being used in energy efficiency evaluation
  - Added a short section on the application of each method for estimating net savings factors (FR, SO, and ME).

Estimating Net Energy Savings

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- **Conclusions and recommendations:**
  - Factors that drive the strategy and selection of methods
    - Evaluation objectives
    - Available information (potential constraints)
    - Value of information –
      - Cost versus benefits in higher levels of precision around net savings
      - Goal is to produce the information decision-makers need to make good investments in energy efficiency.
    - Strategies to consider
    - Trends in the estimation of Net Savings Estimation
  - Implications for method selection for different types of programs

Modifications to this Final Draft

- Suggestions were made to definitions and changes were made to better align the definitions with other precedent setting guides.
- Clarifications and some additions were recommended which resulted in some additional language.
- A major comments was the recommendation for a section on price elasticity methods for producing net savings estimates.
  - These price elasticity methods have been applied to one set of measures – residential lighting with a focus on upstream programs.
  - A section was written to address the price elasticity method and after several trys at incorporating this section in the document, it seemed best to include it as an appendix.
- A number of suggestions for additional references were received and we referred to them in the text or in footnotes and added them to the Bibliography.

Modifications to this Final Draft

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- Many comments were received:
  - In a number of instances, comments were often received on the same paragraph that involved further explanation or the addition of what could be viewed as nuanced clarifications.
  - Addressing these multiple comments in the same paragraph or in a new paragraph sometimes seemed to make the paragraph(s) more complex and key point would seem to get lost – this was one of the trade-offs considered.
  - Where possible, the comment was placed elsewhere in the chapter.
- A short section was added illustrating the applicability of methods for estimating net savings factors – FR, SO, and ME.
- An effort was made to provide more guidance in the conclusions.
- A lot of comments were received and many adjustments in the examples and text were made to accommodate these comments.
- One addition we might suggest is an example of where the preponderance of the evidence concept is used in estimating NTG factors (part of the value of information versus the cost of the analysis).