



An Energy Efficiency Workshop & Exposition

Palm Springs, California

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***Turn off all cell phones  
and***

***Set pagers to vibrate***



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## *FEMP Detailed Option A Guidelines*

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## *Detailed Guidelines: What?*

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- Addendum to FEMP M&V Guidelines 2.2; to be incorporated into 3.0 (?)
- Serves as reference and resource for Option A compliant M&V methods.
- Provides minimum requirements for most Option A methods in Guidelines.
- Provides recommended 'best practices' for Option A methods.



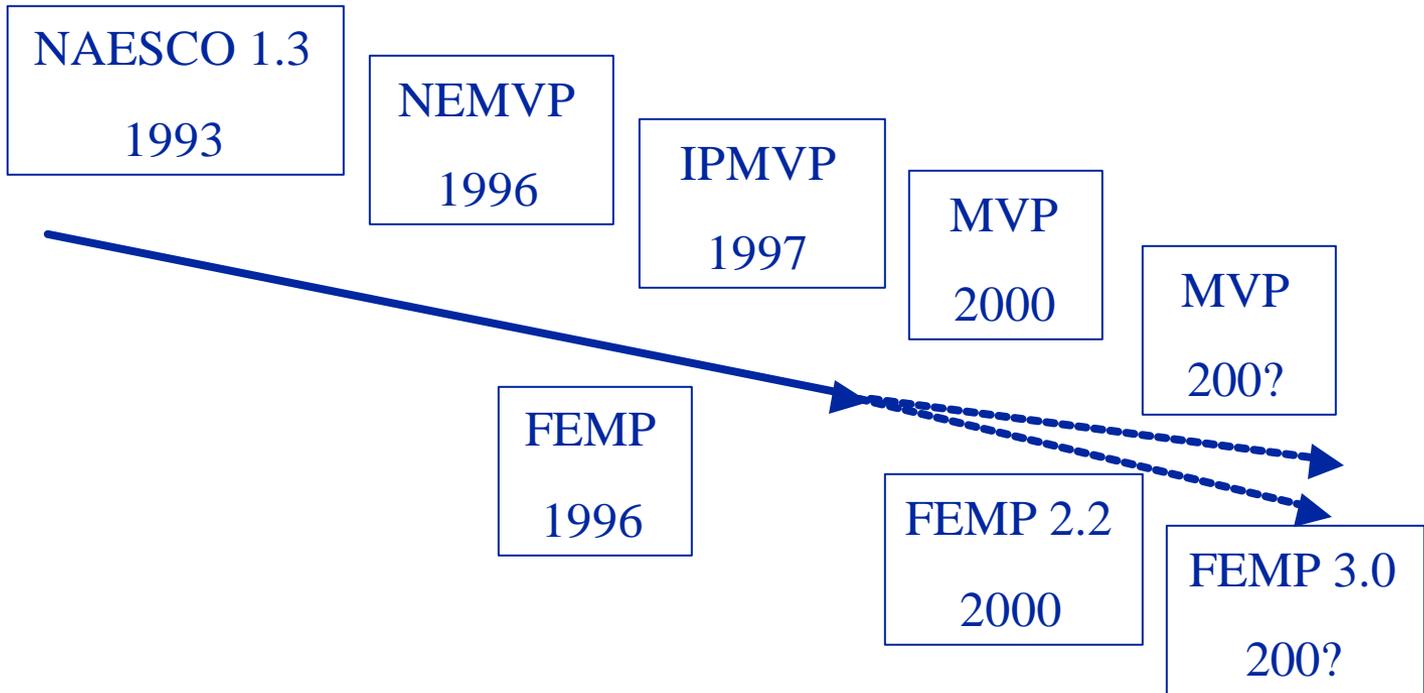
## *Detailed Guidelines: Why?*

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- 1999 report shows that Option A is most common in SuperESPC.
- Option A using 100% stipulated values very common.
- MVP 2000 now calls for ‘...at least one parameter to be measured’.



# Guideline Development





## *MVP 2000 vs FEMP 2.2*

- MVP Option A now called “partially measured retrofit isolation”. At least one parameter must be measured.
- M&V Goal: Minimize uncertainty in the savings estimate.
- FEMP 2.2 still allows 100% use of stipulations.
- M&V Goal: Allocate risks & responsibilities to the appropriate party.



- Comments and feedback from interested parties incorporated.
- Release date: Energy 2002 (June).
- Incorporates 'best practices' by ECM.
- Statistics and uncertainty discussion added.
- Available at <http://ateam.lbl.gov/mv/>



## *Highlights*

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- Use of “stipulate” now consistent with IPMVP 2000, e.g.
  - STIPULATE = NOT MEASURED
- Guidelines deviate from MVP - allows ALL values to be stipulated in certain cases.
- Standard lighting tables accepted as measurements.



## *Using the Guidelines*

- The Guidelines provide
  - Appropriate use of stipulations
  - Acceptable sources of stipulations
  - Minimum M&V activities & reporting
  - Where FEMP deviates from IPMVP



## *Appropriate use of Stipulations*

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- Agency willing to accept risk
- Agency has previous experience
- Probable success of ECM
- Small savings and/or small uncertainty
- Greater M&V costs not justified
- Stipulations don't add to uncertainty
- Monitoring serves no other purpose



## *Inappropriate use of Stipulations*

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- Agency unwilling to assume risk
- Parameters not known with reasonable certainty
- Potential for technical problems
- Monitoring provides valuable information
- Stipulation significantly contributes to overall uncertainty



## *Required Minimum M&V Activities*

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- Baseline definition in DES with supporting information.
- Post-installation report with first-year estimates.
- Annual M&V verification - “potential to perform.”
- Annual M&V reports.



- Guidelines move M&V closer to IPMVP compliance while retaining flexibility.
- Guidelines provide specific recommendations for each ECM.
- Guidelines promote M&V that satisfies legal intent and enforces guarantees.