

Illinois Stakeholder Advisory Group

M&V 2.0: Best Practices & Opportunities

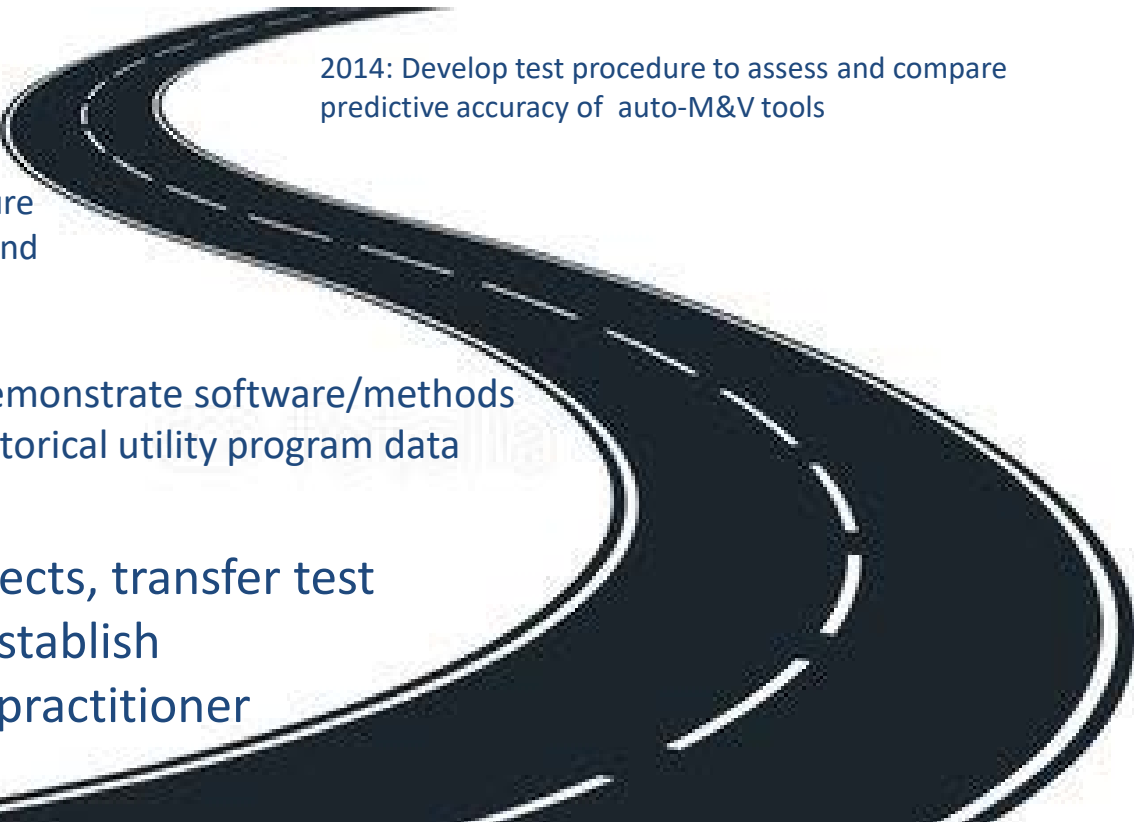
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LBNL-DOE M&V 2.0 work: Objectives and approach

Enable industry to harness emerging tools and devices to conduct scaled M&V at dramatically lower cost, with comparable or improved accuracy



2014: Develop test procedure to assess and compare predictive accuracy of auto-M&V tools

2015: Apply test procedure to evaluate proprietary and open source tools

2016: Demonstrate software/methods using historical utility program data

2017: Pilots on 'live projects, transfer test procedure to industry, establish acceptance criteria and practitioner resources

Identify, address ongoing needs for the future

Benefits & Drawbacks

Benefits

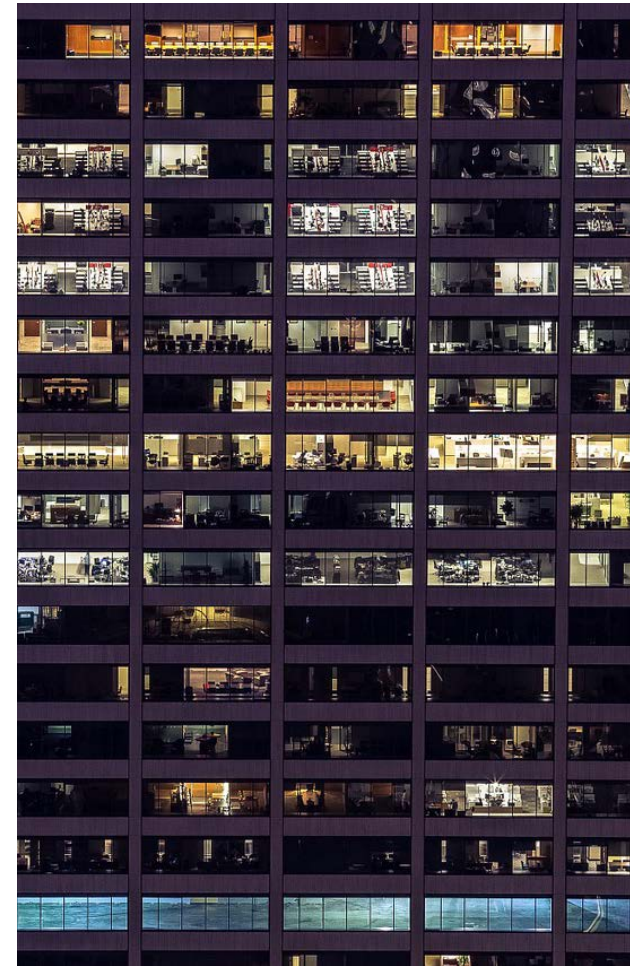
- Can help to reduce effort and reduce time to prove project results
- 'True' impact at whole building level
- Aligns with building owner priority (the bill!)
- Aligns with policy, resource & grid management
- Accounts for interaction between measures
- Can help verify measures were installed correctly
- Can catch cases where measure performance degrades
- Quantified uncertainty
- Long term potential: better data for financing; pay-for-performance model; selling EE as a resource, etc...

Drawbacks

- Methods still to be proven at scale
- Need to wait 6-12 months to determine annualized savings
- Defining measure life when mix of measures installed
- Dealing with non-routine events
- Not all sites will be suitable (need stable baseline)
- Need ~5% whole building savings or more
- Limited to existing conditions baseline

Remaining gaps

- Scaled pilots to hone processes/tools and better understand impacts
- Research on impact of continuous data feedback on owner behavior & decision-making
- Moving toward consistent regulatory requirements
- Standardized data management protocols
- Defining intersection points with EM&V



Best Practices Discussion

Data

- Make it easy to ID buildings
- Include building type
- Include sq.ft.

Projects/measures

- Existing conditions baseline
- Gross savings (>5%)

Method

- Define uncertainty/report requirements
- Upfront baseline screening
- Transparent methods and/or validated tools



Thank You!

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For more detailed reports and presentations: eis.lbl.gov/auto-mv.html