Commercial Building Integration: Data Tools Overview

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

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The Problem

Tons of Data

More building data is being produced than ever before

Lack of Insight

However, this data is decentralized and in varying formats, making data exchange and analysis difficult and leaving huge opportunities for efficiency gains and market activity untapped

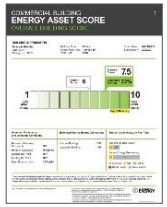
No Insight = No Action

When decision makers understand how buildings use energy and can predict results from upgrades, they can support smarter investments, design better policies, and implement better programs

Integrated Network of Building Data Tools

BEDES
BUILDING ENERGY DATA EXCHANGE SPECIFICATION

Asset Score



BuildingSync XML

SEED
STANDARD ENERGY EFFICIENCY DATA PLATFORM™
U.S. DEPARTMENT OF ENERGY

BPD
BUILDING PERFORMANCE DATABASE

CLOS TX

EnergyPlus

Why is this the solution?

- DOE is in a unique position to provide a standardized, integrated tool set to the market at no-cost
- Tools are designed to help markets function more efficiently
- Tools address each phase of a building's lifecycle (design, operations, retrofit)
- Tools serve as a foundation for private sector products to build upon
- Tools aim to inform wise investments, grow new markets, and make buildings more competitive and resilient

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Data Infrastructure for Decision Support

Building Owners
Building Managers
Service Providers
EE Contractors

OS

3rd Party Tools & Software

salesforce

earth advantage

maalka

BPD
BUILDING PERFORMANCE DATABASE

Asset Score Audit Template

Centralize | Customize | Collect | Validate | Report | Share

BSXML

BSXML

ENERGY STAR® Portfolio Manager®

SEED PLATFORM™

Import | Map | Match | Cleanse | Analyze | Export

BSXML

Asset Score

Public Agencies, REIT,
Program Implementers, etc.

Today's Sessions

- PSD, IMT, Milwaukee will be focusing on tool adoption and implementation
- Lab projects will cover technical development, user support, and research
- Many of these tools started in different contexts but have evolved into a synergistic framework

Tool Function Cheat Sheet	
BEDES	Dictionary of building attribute and energy term
SEED	Open source database for mapping, matching, sharing, and more around building energy data and programs
BPD	Largest publicly accessible database of actual building performance data
Asset Score	Tool to measure the efficiency of a building assets and suggest cost-effective upgrades
BSXML	BEDES-based exchange schema for building energy audit data

We Value Your Feedback

- Value Proposition
  - Are these tools/programs providing value in the market?
  - Is our theory of market change viable?
  - How can we measure the impact of tools?
- Development
  - Are these tools positioned to respond to the next wave of market and policy actions?
- Adoption
  - Are there other use cases for these tools that we should explore?
  - What other partners should we bring to the table?

Today's Schedule

Time	Session Topic
11:30 – 12:00	Performance Systems Development – Open Efficiency Initiative
12:00 – 12:30	Institute for Market Transformation – Putting Data to Work
12:30 – 1:30	Lunch
1:30 – 2:00	City of Milwaukee Award
2:00 – 2:30	PNNL – Building Energy Asset Scoring Tool
2:30 – 3:00	NREL – SEED Development
3:00 – 3:30	NREL – BuildingSync XML
3:30 – 4:00	Break
4:00 – 4:30	LBNL – SEED, BEDES, BPD
4:30 – 5:00	LBNL – M&V 2.0
5:00 – 5:30	Wrap up [Reviewers Only]

We would like to hear from you

- What do you already know about these tools?
- What are you looking to take away from these presentations?
- What questions do you have about the DOE vision for data tools?