



# Working Group Meeting

Technical Topics - February 25, 2015

# Meeting Objectives

Obtain input on proposed changes for V1.1

- Refinements based on current scope
- New scope

# Agenda - Day 2

1. A quick tour of BEDES V1.0 *(10 mins)*
2. Changes for V 1.1 *(30 mins)*
  - Summary of minor edits
  - Composite terms
  - Redundant terms
3. New areas *(20 mins)*
4. Wrap up *(10 mins)*

# A quick tour of BEDES V1.0

# Summary of minor changes

- Added types to constrained lists
- Fixed typos and grammar
- Reviewed and completed definitions
- Reclassified “Rating Program” with “Assessment Program”
- Added/redefined terms to accommodate new Portfolio Manager fields

# Sample mapping

Implementation Table Name	Implementation Field	Implementation Value	Implementation Units	BEDES Term	Value Mapping	BEDES Unit	Unit Conversion
Property Use Details	Adult Education - Gross Floor Area (ft <sup>2</sup> )			Premises Level	="Component"		
				Occupancy Classification	="Higher education"		
				Floor Area Qualifier	="Gross"		
		[value]	ft <sup>2</sup>	Floor Area	=[value]	ft <sup>2</sup>	=[value]

*If the implementation has fields that are separated into tables or hierarchies, the name of the table is listed here for all fields in that table.*

*The field name that is to be mapped to BEDES terms.*

*The value that is expected from the field data. If values are constrained to a list of options, each list item must be entered on a separate row.*

*The units associated with the Implementation value.*

*The BEDES terms used to describe the implementation field. Multiple terms may be needed to define a single field, but only one term would hold the value. In this example, the term Floor Area holds the actual field value, while the three above are qualifiers.*

*For fields that map one-to-one, the mapping equation is simply = [value]. Most terms will require a mapping and this column specifies the equation. If the BEDES term has a constrained list, at least one enumeration must be specified in quotes.*

*The units associated with the BEDES term.*

*If the units don't match, the conversion factor is specified here.*

# Exact Value vs. Ranges

## Portfolio Manager field

Percent that can be cooled

- No air conditioning
- Less than 50%
- 50% or more

## BEDES Terms

Conditioning Status = “Cooled”

Percentage of Total Area =  
[decimal value]

**Should BEDES be able to accommodate ranges?**

# Composite terms

Mapping a data field may require using multiple BEDES terms.

Year Site Energy Intensity



Interval Frequency = Annual  
Resource Qualifier = Site  
Energy Use Intensity = [value]

BEDES does not define order for terms:

**Annual Site Energy Use Intensity** and  
**Site Annual Energy Use Intensity**  
are both BEDES compliant mappings

Do you agree with this approach i.e. BEDES does not impose order for composite terms?

Is there value to having some composite terms explicitly defined in BEDES dictionary?

If so, what types and how do we set scope?

# Redundant Terms

- Specific terms were generalized to increase applicability
  - Energy Use
    - The amount of energy the premises consumes
    - Single kBtu unit of measure
  - Resource Use
    - The amount of resource the premises consumes
    - Resource Qualifier includes: Electricity, Gas, Fuel Oil, Water, Wind, Solar, etc.
    - Resource Unit Qualifier includes: kWh, kBtu, Gal
- This has led to Atomic Term Redundancy
  - Resource Use vs. Energy Use

Should we remove these redundancies? Or keep them for ease of use?

# Composite Term Ambiguity

- Mapping “ConsumptionOnPeak” to BEDES
  - Multiple ways to map to Atomic or Composite Term
  - Atomic Term = “Peak Demand”
  - Composite Term:
    - Resource Use = [value]
    - Reading Type = “On Peak”
- Mapping “ConsumptionOffPeak” to BEDES
  - Atomic Term = Not Available
  - Composite Term:
    - Resource Use = [value]
    - Reading Type = “Off Peak”

Is a consistent approach to Composite Term formulation preferable to specific Atomic Term listings? e.g. Should we remove “peak demand” as an atomic term?

# **New Areas for BEDES**

# BEDES Use Cases - Current

## **ENERGY EFFICIENCY INVESTMENT DECISION-MAKING**

Owners and managers use building energy performance information to assess capital and operational opportunities in individual buildings, develop energy strategies across portfolios, and identify trends in local real estate markets.

## **BUILDING PERFORMANCE TRACKING**

The implementation of disclosure policies for public or private buildings requires public officials to collect, clean and analyze massive amounts of data, then share portions of it with the public.

## **EFFICIENCY PROGRAM IMPLEMENTATION EVALUATION**

Energy efficiency programs often provide incentives or technical assistance to support owners' data collection and analysis activities. They also use data to conduct program design and outreach, track project performance, and evaluate programs.

# Should BEDES expand its scope?

- Loan data
- EMS data
- Water
- Materials properties
- Waste management
- Code compliance
- ???

What are your priorities?

What are sources for terms and definitions?

# Stay Involved!

- Share your thoughts on the Forum
- Tell us how you're using BEDES
- Develop BEDES-compliant products - we can help!
- Develop terms & definitions for new areas
- Become an Endorser
- Spread the word!

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