



# IBPSA-USA BEM Compliance Reporting Automation Roadmap

Request for Proposal

6/27/2024 (working group issue date)

## Overview:

This scope builds on the previous investigation into BEM Output Reporting conducted by the IBPSA-USA Building Data Exchange (BDE) Output Reporting working group and funded by the Department of Energy (DOE). This investigation, identified as Task 1 in a series of DOE-funded projects, included a report issued in January 2024. Task 1 highlighted significant inconsistencies in how Building Energy Modeling (BEM) data is reported across different software tools and protocols.

While creating a schema is a clear step toward addressing this issue, its adoption by the industry remains uncertain without broader support. Therefore, education and consensus-building efforts are essential to ensure the proposed schema is widely accepted and implemented. Specifically, outreach to the following stakeholders is key:

1. **Authorities Having Jurisdiction (AHJs)** require education on the vast benefits of automated, standardized reporting. This includes not only generating the reports they are accustomed to but also creating dynamic, customizable reports and automated QA/QC using modern software development methods.
2. **Software vendors** must support a proposed new data schema for it to be used in BEM tools and see a need to support a newer schema outside of their existing reporting functionality. This requires discussions to ensure the future reporting infrastructure supports their software's data model & underlying engine framework, business case and their users.
3. **Practitioners** will support the project if they understand the long-term benefits to them. In turn, they can encourage software vendors to support the project and help explain the benefits to the AHJs they interface with.

To ensure future schema development is effective, the working group plans to create a BEM Compliance Reporting Automation Roadmap. This roadmap will illustrate a vision for the future of BEM data reporting and chart a path to achieve that vision. It will also educate key stakeholders about schema-based reporting and its potential benefits, collect feedback on what is needed for success, and help pave the way for adoption by these stakeholders.

Funding is provided by the Department of Energy's Building Technology Office, with a total budget of \$15,000 allocated for this scope of work.

**Scope of Work:**

IBPSA-USA is seeking a consultant to collaborate with the BDE Output Reporting working group in creating the BEM Compliance Reporting Automation Roadmap. The consultant will complete the following major tasks in coordination with the BDE Output Reporting Working Group:

**1. Collaborate with IBPSA BDE Output Reporting Working Group**

- a. Attend meetings (1 hour every 2 weeks)
- b. Provide regular updates and contribute to the group discussion

**2. Develop a Vision for the Future of BEM Reporting**

- a. Objective: Develop a vision for what the future of BEM reporting might look like using both written text and graphical examples of data-centric reporting in other fields. This vision must provide context and inspiration for stakeholders during the outreach task and to the larger industry through the deliverable in the final task.
- b. Deliverable: Presentation (slides + recording of delivering the presentation)

**3. Stakeholder Outreach**

- a. Objective: Conduct interviews with a minimum of 2 software developers and 3 authorities having jurisdiction (AHJs), or entities with experience working with AHJs. Provide context before or at the start of each interview using the vision. Prepare interview questions to understand what is necessary for the successful development and adoption of a standard output schema. Outreach to practitioners will be collected by the working group through a combination of surveys and presentations leveraging the vision provided in the roadmap.
- b. Outcome: Document whether each stakeholder supports the BEM output reporting vision (or why they do not) and what will make the road map and future schema successfully developed and adopted.
- c. Deliverable: Report describing the interview questions, responses, and conclusions pertaining to the development of the road map and schema.

**4. Develop the BEM Compliance Reporting Automation Roadmap**

- a. Objective: Based on the stakeholder outreach and schema review, develop a roadmap for schema creation and adoption. Include a refined version of the vision based on stakeholder feedback and a summary of that feedback so that the previous tasks are clear in the final report.
- b. Components:
  - i. Describe and visualize the recommended steps that must be taken over time to deliver the vision for BEM compliance reporting.
  - ii. Assume that the description of near-term steps in the roadmap could turn into project scopes and that longer-term steps could evolve slightly as initial steps are completed.



- iii. Provide a clear description of each phase and tasks within each phase, including:
  - 1. Objective of the task
  - 2. Scope of work
  - 3. Timeline
  - 4. Owner of each task in the phase (be as specific as possible and avoid assigning multiple owners to a single task)
  - 5. Success metrics for tasks (e.g., survey results, adoption rates by stakeholders, etc.)
- c. Deliverable:
  - i. Roadmap report
  - ii. 10 to 15 minute recorded presentation that will be shared with the industry

**Deliverables and Timeline:**

The following timeline identifies key deliverables and milestones:

Deliverable/Milestone	Date
0.1 Issue RFP	June 27, 2024
0.2 Proposal deadline	July 31, 2024
0.3 Project Kickoff	August 29, 2024
0.4 Monthly Progress Reports	Bi-Monthly
1.0 Task 1 Deliverable	September 30, 2024
2.0 Task 2 Deliverable	October 24, 2024
3.0 Task 3 Deliverable	December 24, 2024

**Format for Submittals:**

- 1. **CV and Team Expertise:** Description of general qualifications, specific evidence of relevant experience, and a listing of key personnel that would be available to work on this project.



2. **Cost:** Proposed hourly billing rate for each team member. Also provide a proposed total budget for this project (not-to-exceed), and a description of any match funding or in-kind contributions that would be provided.
3. **Description of Approach:** Provide a description of the consultant's approach to meeting the project objectives and creating a BEM Compliance Reporting Automation Roadmap (2 pages max). Consider including the following details:
  1. A description of the vision for future BEM reporting including sample images and graphics.
  2. An outline of the final report.
  3. Modifications to the Stakeholders outreach approach including additional stakeholder groups or format for gathering input.
  4. Changes to the tasks included in the scope of work given the budget.
4. **Comparable Projects:** Summary of past projects that demonstrate the consultant's expertise.

**Evaluation of Submittals:**

IBPSA-USA will evaluate all submittals to determine which Consultants have the experience, and qualifications, and approach that are best suited for this project.

IBPSA-USA may in the course of soliciting proposals:

- modify the timeline
- negotiate with one or more respondents to modify the proposed scope
- solicit contracts with one or more respondents for all or a portion of the work
- opt not to pursue any proposals at the current time

**Submission Schedule:**

Submit proposals in PDF form via email to Christine Do, [christine@ibpsa.us](mailto:christine@ibpsa.us), by 5:00pm Pacific time on July 31, 2024.