

IBPSA-USA Building Data Exchange Committee: Data Model Publication Infrastructure

Request for Qualifications

August 11, 2022

Overview:

The IBPSA-USA Building Data Exchange Committee seeks assistance in the development of open-source software tools to facilitate the publication of data model consensus documents.

IBPSA-USA has received funding from the U.S. Department of Energy, and wishes to hire a contractor to lead the development of the data model publication software. The anticipated budget for this scope of work is \$13,500.

Scope of Work:

- The subcontractor will be responsible for overall project management, project coordination meetings and management of tasks as outlined below. The subcontractor will work directly with the IBPSA-USA Project Execution Committee (PEC).
- The subcontractor will develop software and content described in Tasks 1 and 2 below and address comments from the PEC and the Department of Energy.
- **Task 1: Develop an automated software workflow for creating online consensus documents and data model schemas**

The subcontractor will develop an automated software workflow to facilitate the development of consensus documents and data model schemas consistent with the IBPSA-USA Building Data Exchange consensus committee policies. This workflow will include the following features:

- Validation of YAML data models in a fashion consistent with the “metaschema” approach used by ASHRAE Standard 205P, “Representation of Performance Data for HVAC&R and Other Facility Equipment”, and the ongoing work of ASHRAE SPC 232P, “Schema-Based Building Data Model Protocols” to generalize this approach.
- Generating consensus model documentation in HTML format consistent with the data model schemas.
- Generating validating schemas in a common format (e.g., XSD and/or JSONSchema).
- Mechanisms for ongoing public review and proposed amendments to the data model schema and/or consensus documents.

Task 1 Deliverables:

- Open source software package capable of generating HTML consensus documents and validating schema from a common YAML source data model description
- Proposed mechanism for public review and proposed amendments to the data model schema and/or consensus documents

- **Task 2: Apply the automated framework to the Climate Information Consensus Document and Data Model**

Demonstrate the capability of the open source software package by applying it to the Climate Information Consensus Document and Data Model.

Task 2 Deliverables:

- Validation of the Climate Information Data Model against a “metaschema”
- HTML version of the Climate Information Consensus Document consistent with its schema

Deliverables and Timeline:

Deliverable/Milestone	Date
0.1 Issue RFQ	August 15, 2022
0.2 Proposal deadline	August 26, 2022
0.3 Progress Reports	Monthly
1.1 Task 1 Draft Deliverable	October 24, 2022
1.2 Task 1 & 2 Final Deliverable	November 14, 2022

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. Description of any match funding or in-kind contributions that would be provided.

Additional Optional Information:

3. **Description of Approach:** Up to two pages describing the team’s approach to meeting project objectives.
4. **Comparable Projects:** Summary of past projects that demonstrate the team’s expertise.

Evaluation of Submittals:

Consultants responding to this RFQ must demonstrate relevant expertise and capability in the following criteria:

- Experience with developing data models and data model schemas consistent with the metaschema approach such as described by ASHRAE Standard 205P
- Experience in developing automated software workflows including document generation
- Exceptional written and oral communication skills



- Past experience in working with key collaborators is preferred including, but not limited to, IBPSA-USA, U.S. Department of Energy, code agencies and utility program managers involved in code compliance or beyond-code compliance programs
- US company or US based team for a foreign owned company

IBPSA-USA will evaluate all submittals to determine which consultants have the experience and qualifications 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 qualifications in PDF form via email to Mike Wilson, jobs@ibpsa.us , by 5:00pm Pacific time on August 26, 2022.