IBPSA Project 2: BOPTEST
In-Person Meeting at IBPSA USA SimBuild 2024

May 22, 2024
Denver, CO
7:30 – 8:30 AM Local Time

Location

Room: Denver 5-6 (See conference maps)

Participation

Name	Institution
David Blum	LBNL
Kyle Benne	NREL
Michael Wetter	LBNL
Xing Lu	PNNL
Sen Huang	ORNL
Manuel Koch	EPFL
Carrie Brown	Resource Refocus
Yan Chen	PNNL
Louis Hermans	KU Leuven
Xu Han	University of Kansas
Brian Schmidly	Siemens
Laura Zabala	R2M Solutions
Paul Caicedo	EMBE Consulting
Zoltan Naggy	UT Austin
Chris Mackey	Ladybug Tools

Total: 15

Agenda and Notes

Introductions (~5 min)

- Each state name, affiliation, and one sentence about interest/relation to IBPSA Project 2.

Project Overview and Status (~35 min)

- Dave presented tasks overview, participation, recent updates, ongoing efforts.
  See presentation.
- Questions, comments, discussion
  - Q: Is the BOPTEST project interested in or moving towards grid simulation?
  - A: The ongoing DOPTEST effort within Project 2 is developing and applying the framework to district scale electrical and thermal networks. The approach is including such simulation of networks in a single Modelica model and test case FMU.
    See https://publications.ibpsa.org/proceedings/bs/2023/papers/bs2023_1493.pdf.
    There are currently no coordinated efforts in Project 2 to co-simulate BOPTEST with e.g. grid simulators.
  - Q: There are issues simulating some Modelica models with OpenModelica. Suggestions on how to approach?
  - A: LBNL is working with the OpenModelica development team to report and correct issues related to compiling and simulating models from the Modelica Buildings Library, which is an extension of the kernel Modelica IBPSA Library, as well as exporting as ME FMU. We encourage others to also report issues. It might be good to try the GBODE solver in OpenModelica.

Weather Forecast Uncertainty (~20 min)

- Laura presented overview and next steps.
  See presentation.
- Questions, comments, discussion
  - Q: How is the stochastic nature of error generation handled for benchmarking?
  - A: The current API design is such that there is a default seed that a user can specify differently if they want. In this way, the seed ensures the same error can be generated time after time, but the user also has the capability to run many iterations of the same test with a larger sample of error generation to generate a distribution of results. Reporting the seed(s) with results will help ensure benchmarking capability.

Adjourn