The research project examines both experimental field measurements [1] and computational simulation for the BIPV/T-DSF system. The computational simulation of the buildings will be conducted using TRNSYS (thermal modelling software). To date, the computational model has basically been validated against the experimental results (Figure 2 shows one of the examples). A long-term system performance and indoor thermal comfort can then be predicted confidently by using the validated computational model. The hourly acceptance thresholds of MBE and CVRMSE are ±10% and ≤30% respectively. The simulation results show that BIPV/T-DSF system gives not only good thermal performance in terms of buffering the building from summer heat gains, but reduces heat loss as well as overheat of building during winter time in the subtropical climate areas in southern hemisphere like Sydney. Further studies will concentrate on developing the specific strategies for maximizing its thermal and electrical performance and optimizing the long-term indoor comfort using the strategies.

**REFERENCES**


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