**Instructions when you submit your Data in Brief with your research article**

1. Complete this template below. Make sure you reference all data files directly in this template at the appropriate point.
2. Zip this completed Word document and any data files relevant to the Data in Brief (whichever supplementary data files you have chosen to include) into a single. Zip file. When you submit your revised research article, please upload this .zip file as a “Data in Brief” item.
3. Double check in your research article that any reference to supplementary files that have been converted to your Data in Brief article now properly reference the Data in Brief instead. i.e. (see supplementary Figure 1) should now say, (see Figure 1 in Ref [#]) where your Data in Brief article is included in the reference list of your research article (including title, authors, journal name *Data in Brief* and the text “*submitted”*)
4. Make sure you reference your associated research article in the reference list here as well. You may reference this as “in press”

GENERAL INFORMATION

Throughout your entire Data in Brief (DiB) article keep in mind that you are simply describing data and not providing conclusions/interpretive insights. Please avoid using words such as 'study, 'studied, 'results', 'conclusions', etc. Please do use the word “data” throughout your DiB paper wherever possible.

*[please fill in this template below and delete all instruction text above and below before submitting]*

*Data article*

**Title: *Life Cycle Inventories of Dynamic Building Integrated Photovoltaic Systems***

**Authors:** P. Jayathissa 6a,∗, M. Jansen6a, N. Heerenb, Z. Nagya, S. Hellwegb, A. Schlueter a,

**Affiliations:**

a)Architecture and Building Systems, Institute of Technology in Architecture, Department of Architecture, ETH Zurich, Switzerland

b) Ecological System Design, Institute of Environmental Engineering, ETH Zurich, Switzerland

**Contact email: jayathissa@arch.ethz.ch**

**Abstract**

This data contains the LCA inventories that were created in the analysis of Dynamic Building Integrated Photovoltaic (BIPV) Systems. The data can be found in excel spreadsheets, and JSON files. This data also contains a results spreadsheet that details the PV generation calculations

*[Explicitly tell the reader what data and information they will find in this data article. Please only describe the data contents presented in this DiB article and do not describe your related research article. The DiB abstract should be purely descriptive (i.e., no results, conclusions or insightful observations about the data) If the data you describe in this article is hosted in a public repository instead of directly with this data article, state the repository name and reference number. You may also directly point the reader to your research article for further interpretation and discussion, here in the abstract]*

**Specifications Table** *[please fill in right-hand column of the table below]*

|  |  |
| --- | --- |
| Subject area | *Environmental Assessment* |
| More specific subject area | *Building Integrated Photovoltaics* |
| Type of data | *Tables* |
| How data was acquired | *technical drawings, research papers describing the technology, and expert judgment* |
| Data format | *Analysed* |
| Experimental factors |  |
| Experimental features |  |
| Data source location |  |
| Data accessibility | *State if data is with this article or in public repository. If public repository, please explicitly name repository and data identification number and provide a direct URL to data* |

**Value of the data** *[Describe in 3-5 bulleted points why this data is of value to the scientific community.* *Broadly explain to other researchers how the data could be potentially valuable to them, with an eye towards possibly opening up doors for new collaborations. For example, how could this data: be compared to other data for further insight, serve as a benchmark for other researchers, be used in the development of further experiments in a particular area, etc. Please do not offer interpretative statements or conclusions about the data, nor state why this data was valuable for an already-published research study.]*

* **Can be used for further life cycle assessment research of photovoltaic systems**
* **Can be used in the design of BIPV systems**
* **Can be used by LCIA databases to expand their databases**

**Data**

[*Briefly describe the data you are sharing with this data article here, to give the reader context before you describe the materials and methods]*

*The data contains the inventories of all components used to construct dynamic BIPV systems. It also consists of calculations undertaken to determine the PV generation on the panels*

**Experimental Design, Materials and Methods**

[*Complete description of the Experimental design and methods used to acquire the data and where applicable, in the analysis. Include any relevant figures/tables needed to fully understand the data. Please also provide, where applicable, any code files used to provide base-level analysis or filtering of the data.*]

The raw LCA data was acquired from the Eco-Invent v3.1 libraries. Inventories of the components were obtained through technical drawings, and expert judgment on the topic. These inventories have been summarized in this data folder.

The calculation of PV generation was based from PVGIS

**Acknowledgements**

**References**

[1] R. Frischknecht, N. Jungbluth, H.-J. Althaus, G. Doka, R. Dones, T. Heck, S. Hellweg, R. Hischier, T. Nemecek, G. Rebitzer, et al., The ecoinvent database: Overview and methodological framework (7 pp), The international journal of life cycle assessment 10 (1) (2005) 3–9.