

Stakeholder Workshop on the Building-Integrated Photovoltaics Design Tool

Date: 31 August 2026 | Time: 9:00 a.m.–5:00 p.m.

Venue: Conference Room 2, India International Centre, New Delhi

Concept Note

India has set an ambitious target of 500 GW of renewable energy capacity by 2030. Innovative solar applications are expected to play a critical role in meeting this goal. Building-integrated photovoltaics (BIPV) has been identified by the Ministry of New and Renewable Energy (MNRE) as a key New and Innovative Solar Application (NISA) and is now also covered under the PM Surya Ghar: Muft Bijli Yojana, owing to its potential to integrate clean energy generation directly into the building envelope while contributing to architectural aesthetics and material substitution.

The potential of BIPV in India is estimated at approximately 309 GW¹. However, large-scale adoption of BIPV in India remains low because of limited awareness, fragmented technical and market information, and the absence of user-friendly decision-support tools. To address these challenges, the German Federal Ministry for Economic Cooperation and Development (Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung [BMZ]), through its Development Partnership with the Private Sector (develoPPP) programme, is funding a project implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) to facilitate BIPV adoption in India in partnership with Ornate Agencies Private Limited (Ornate Solar). Under this project, a BIPV portal is being developed as a one-stop digital platform to support informed planning and implementation of BIPV projects in India. The project is undertaken by the Center for Study of Science, Technology and Policy (CSTEP), in collaboration with various experts, including Prof Jyotirmay Mathur, Malaviya National Institute of Technology (MNIT) Jaipur; Dr Khushal Matai, School of Planning and Architecture (SPA), New Delhi; Dr Adersh Asok, Council of Scientific and Industrial Research - National Institute for Interdisciplinary Science and Technology (CSIR-NIIST); and Ar Shilpi Saboo, Sahyog Designway Pvt Ltd.

¹ <https://staai.cstep.in/staai/#/nisadownload>

As part of the portal, an online BIPV Design Tool is being developed to support architects, engineers, façade professionals, developers, and other stakeholders in the early-stage planning and design of BIPV projects.

The BIPV Design Tool will provide indicative BIPV design configurations and estimates of key parameters such as system size, energy generation, project cost, payback period, and environmental impact based on project-specific inputs. The Tool is designed to provide users with detailed BIPV design and assessment support, with a methodology that incorporates building-specific parameters, solar irradiance data, module characteristics, and other relevant project information.

The workshop will present the purpose and features of the Tool, its underlying methodology, and the inputs and outputs used, followed by live demonstrations using representative building scenarios. It will provide an opportunity for stakeholders to review the Tool from a practical perspective and provide feedback, which will help further strengthen and enhance the Tool's functionality, usability, and relevance.

Workshop Objectives

- Introduce the purpose, scope, and key features of the BIPV Design Tool.
- Present the methodology, assumptions, and key inputs used by the Tool.
- Explain the outputs generated, including indicative designs, energy generation, cost, payback, and environmental impact.
- Conduct a live demonstration through representative use cases.
- Obtain stakeholder feedback for further enhancements in the Indian context.

Agenda

Time	Session	Person/Organisation
09:00–10:00 a.m.	Registration	
10:00–10:15 a.m.	Welcome remarks and opening address	GIZ
10:15–10:30 a.m.	Context setting: BIPV in India and the need for decision-support tools	GIZ
10:30–11:00 a.m.	BIPV Design Tool: Purpose, scope, and key features	CSTEP, MNIT Jaipur, SPA New Delhi, CSIR-NIIST, and Sahyog Designway Pvt Ltd
11:00 a.m.–12:00 p.m.	Methodology and framework • Approach • Assumptions • Calculation methodology	CSTEP, MNIT Jaipur, SPA New Delhi, CSIR-NIIST, and Sahyog Designway Pvt Ltd
12:00 noon–12:15 p.m.	Tea break	
12:15–12:30 p.m.	Inputs and outputs: • Key inputs • Data requirements • Outputs generated by the BIPV Design tool	CSTEP, MNIT Jaipur, SPA New Delhi, CSIR-NIIST, and Sahyog Designway Pvt Ltd
12:30–01:30 p.m.	Live demonstration: Representative BIPV project use cases	CSTEP, MNIT Jaipur, SPA New Delhi, CSIR-NIIST, and Sahyog Designway Pvt Ltd
01:30–02:15 p.m.	Lunch	
02:15–03:15 p.m.	Stakeholder discussion and feedback	CSTEP, MNIT Jaipur, SPA New Delhi, CSIR-NIIST, and Sahyog Designway Pvt Ltd
03:15–03:30 p.m.	Way forward	GIZ
03:30–05:00 p.m.	Discussion and synthesis of stakeholder inputs	CSTEP, MNIT Jaipur, SPA New Delhi, CSIR-NIIST, Sahyog Designway Pvt Ltd, and GIZ