

91st LCA Discussion Forum

Life cycle inventories of photovoltaic systems: state of play and future prospects

Friday, 31. October 2025

Location of this DF LCA: **Wädenswil, Campus Grüental, Aula in GA 203**

The official language of this event is English

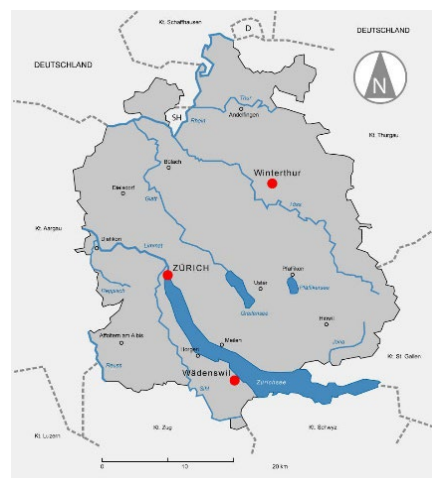
Photovoltaic (PV) electricity is a cornerstone of the global energy transition. While the environmental footprint of PV power systems has significantly decreased over the past decade, transparent and up-to-date life cycle inventory (LCI) data from manufacturers remain scarce. It is time to provide a broad overview on the state of LCI data for PV power systems and show ways forward to improve coverage and reliability of these LCI data.

This LCA Discussion Forum brings together experts from industry, academia, and consulting to critically assess the current state and future direction of PV life cycle assessment. The presentations will explore technological developments, evolving supply chains, and their implications for LCI modelling and impact assessment. Emphasis is placed on emerging technologies, circularity strategies, and the role of PV in improving the environmental performance of electricity mixes world-wide.

We look forward to welcoming you at the Campus Grüental in Wädenswil.

Matthias Stucki and Michael Götz, Zurich University of Applied Sciences (ZHAW)

Rolf Frischknecht, treeze Ltd.



Programme (as of 21 October 2025)

Time	Working Title	Speaker [Chair]
08:20	Registration and Welcome	Michael Götz, ZHAW
08:45	Introduction: Photovoltaics	[Matthias Stucki]
08:50	PV in Switzerland	Stefan Oberholzer, SFOE
09:10	Experiences of the PV industry with LCA	Abeer Ali Khan, FirstSolar
09:30	Experiences of the inverter industry with LCA	Fionn Becker, Fronius International
09:50	Discussion	
10:05	Coffee Break	
10:35	LCA of PV electricity	[Rolf Frischknecht]
10:35	LCI from the French tender process	Nouha Gazbour, CEA
10:55	Updated LCI and LCA of the global PV value chain	Michael Götz, ZHAW
11:15	LCA of perovskite single junction and perovskite-crystalline silicon tandem PV	Mariska de Wild, SmartGreenScans*
11:35	Discussion	
11:50	Lunch Break	
13:05	Short Presentations	[Michael Götz]
13:05	Prospective life cycle assessment of photovoltaic technologies: evaluating future trade-offs and environmental impacts	Mara Hauck, TNO
13:15	Offshore floating photovoltaics as a further renewable option – LCA and local marine impacts	Maximilian Breyer, ifeu
13:25	Environmental sustainability of floating photovoltaics (FPV) – a meta-analysis	Daniela M. Seitz, Radboud University
13:35	Environmental impacts of CIGSe thin-film PV	Conrad Spindler, Greendelta
13:45	Mapping the methods: a structured view of resource use impact in PV LCA	Zeena Patel, Technische Universität Ilmenau
13:55	Discussion	
14:05	PV in different application systems	[Matthias Stucki]
14:05	Agrivoltaics: the environmental impacts of combining food crop cultivation and solar energy generation	Moritz Wagner, Hochschule Geisenheim
14:25	LCA of building-integrated photovoltaics and photovoltaics in outdoor areas	Rolf Frischknecht, treeze
14:45	LCA of high-altitude photovoltaic power in the Alps	Fabian Elsener, Carbotech
15:05	Discussion	
15:20	Coffee Break	
15:50	PV circularity and outlook	[Rolf Frischknecht]
15:50	LCA of PV recycling	Mathilde Marchand Lasserre, Mines Paris*
16:10	Circular production strategies and sustainable design criteria in PV manufacturing	Peter Henri Brailovsky Signoret, Fraunhofer ISE
16:30	Prospective LCA of large scale PV market penetration pathways	Alvaro Jose Hahn Menacho - PSI
16:50	Discussion	
17:05	Synthesis, announcements and farewell	Rolf Frischknecht, treeze
17:15	End of 91st LCA Forum	

*online

Practical information

Registration

To register for the whole year or a single LCA Discussion Forum, please use the following link:

<https://ethzurich.eventsair.com/lca2025/registration/Site/Register>

To register you need to create a profile, which is done in very few steps and is self-explanatory. In case you are not able to pay by credit card, please send an e-mail to lcaforum@ethz.ch with a short notice that you want to receive an invoice instead. Please provide the full invoice address as well as the chosen fee type.

Please follow this link for the [programme and updates](#).

For all further questions regarding the registration process, please do not hesitate to contact: lcaforum@ethz.ch

Lunch

We will have lunch at the ZHAW restaurant in the building GD. Please indicate to the cashiers that you are attending the LCA Discussion Forum, so that they can add your order to the event tab. The registration fee only covers the daily menu or buffet. Drinks other than tap water and any other items in the ZHAW restaurant are at your own expense. A vegetarian meal option is always on offer.

Location

Pay attention that this DF will not take place at ETH in Zürich, but in the **main auditorium GA203** in the building GA of the **Campus Grüental, Zürich University of Applied Sciences (ZHAW), 8820 Wädenswil**.

How to get there

The bus stop is called “Wädenswil, Campus Grüental”. Please find your most convenient connection here: www.sbb.ch. If you use a car, please follow the signs to the official parking spaces or study the map provided below.

The auditorium, in German “Aula”, is close to the main entry of the ZHAW Campus Grüental (GA), see <https://tinyurl.com/ZHAWGA>.

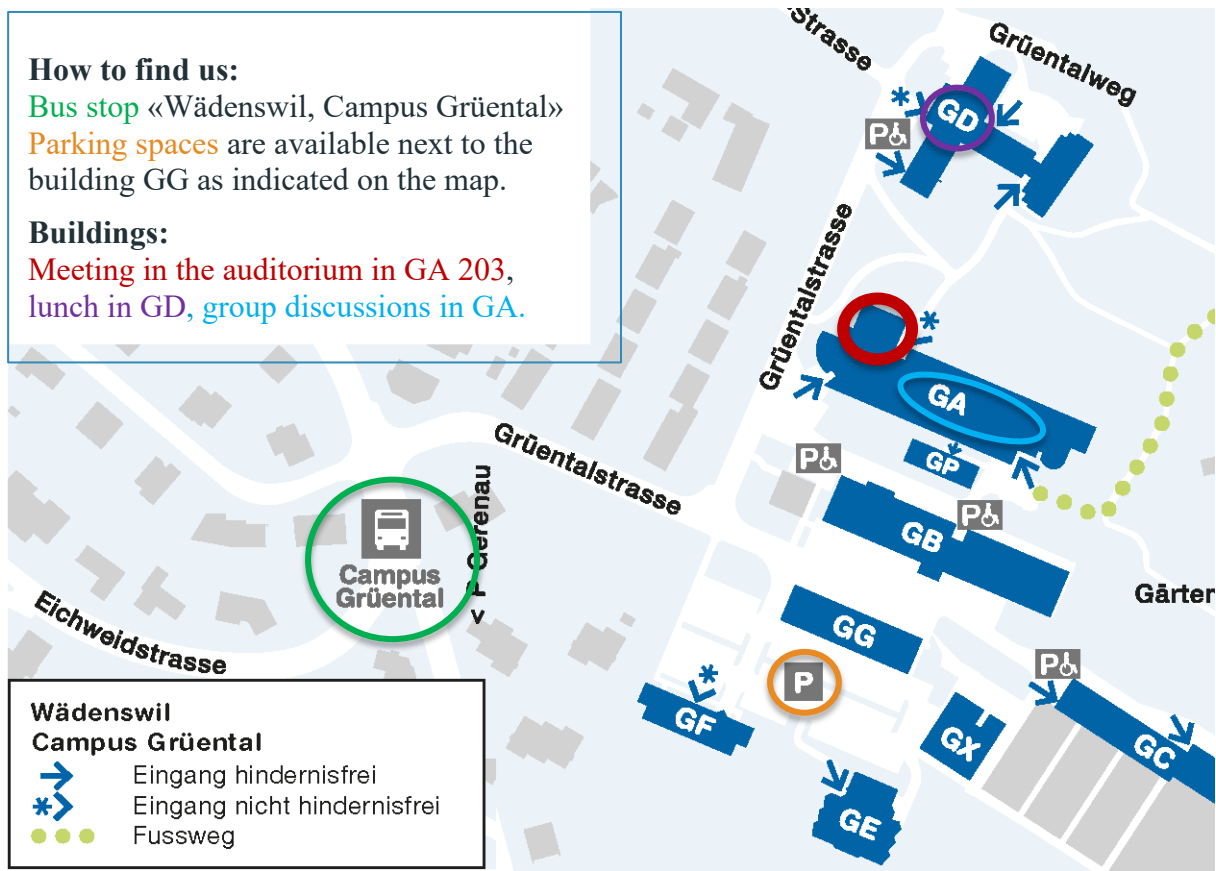
How to find us:

Bus stop «Wädenswil, Campus Grüental»

Parking spaces are available next to the building GG as indicated on the map.

Buildings:

Meeting in the auditorium in GA 203,
lunch in GD, group discussions in GA.



For further information, please contact Barbara Dold: lcaforum@ethz.ch