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TECHNO-ECONOMIC ANALYSIS OF CARBON MITIGATION TECHNOLOGIES
CA21127

Call for Workshop participation at the Trinity College Dublin, Ireland 4-5 September 2025

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Description

We are pleased to announce that the **Workshop on process modelling, TEA and LCA of sustainable fuels production** of a COST Action **TrANsMIT** will be held in the **Trinity College Dublin** in Ireland. It is a leading research institution renowned for its contributions to energy and environmental sustainability. The college is actively engaged in advancing aviation fuel technologies, with a focus on developing sustainable alternatives to traditional jet fuel, aiming to significantly reduce the carbon footprint of the aviation industry. Additionally, Trinity College Dublin is actively investigating Carbon Capture, Utilization, and Storage (CCUS) systems, focusing on innovative methods to capture CO_2 from industrial processes and convert it into valuable products. By integrating these technologies, Trinity College Dublin is contributing to the transition toward a low-carbon economy and addressing critical challenges in the fight against climate change.

Aims of the Workshop

The upcoming **TrANsMIT Action Workshop** aims to achieve several key objectives, including:

1. **Progress of the TrANsMIT open-access CCUS database**

The workshop will provide a comprehensive update on the latest advancements in the development of the TrANsMIT CCUS database. This session will review the data collected through the online CCUS database form, identify any overlaps, and consolidate entries to ensure a cohesive and detailed database that will serve as a valuable resource. The database focus on three core areas:

- **Process modelling:** Data for model calibration and validation, including modeling objectives, techniques, software used, key parameters (e.g., flow rates, concentrations), assumptions, and validation status.
- **Techno-Economic Analysis (TEA):** Information on capital and operating costs, economic parameters (e.g. interest rate) profitability indicators (e.g. payback periods), revenue streams, market size, cost-benefit analyses, process system and process units considered, if externalities costs were considered and if yes using which methodology was used, among other relevant.
- **Lifecycle Assessment (LCA):** Data related to the process system, process boundaries (e.g cradle to gate), assumptions (geographic, technology, specific product category rules or other used, other assumptions), approach used (attributive, consequential, dynamic) functional or declared unit, fluxes of materials and energy through the process boundaries, data sources (process primary data, process simulation, inventory life cycle databases used), allocation rules if considered, environmental impact categories (such as carbon footprint), and regulatory compliance.

2. **Presentations from industrial and academic partners**

Both industrial and academic partners will share their insights and experiences, offering valuable perspectives on the current state of CCUS technologies and research. Their presentations will facilitate a deeper understanding of how to align academic research with real-world industry needs and foster collaboration between these two sectors.

To make the workshop as productive as possible, participants are encouraged to prepare in advance by gathering relevant data from their respective universities and research groups. Focus areas should include process modeling, techno-economic

analysis, and life cycle assessment. This preparatory work will ensure that the discussions are comprehensive and that participants are well-equipped to contribute to the review of the submitted data.

Funding and Application Procedure

All interested must submit their applications not later than **15 July, 2025**. Applications should be sent via the google form available at [link] with a CV attached.

Applicants must be accepted TrANsMIT COST Action members. Registration to the e-COST system can be done by following steps:

1. Login to e-COST system: https://e-services.cost.eu/user/login
2. Application to working groups within TrANsMIT COST Action: https://e-services.cost.eu/action/CA21127/working-groups/applications

A scientific committee composed of the Grant Awarding Coordinator, the Action Chair and/or Vice-Chair and the Local Organizer will evaluate all the applications and define a seriation for the attribution of the grants. According to the COST Actions rules, geographical diversity, career stage and gender balance will also be considered.

Approximately 25 participants will be offered a fully covered spot at the Workshop. Priority will be given for those participants who are already involved in the CCUS database development. All applicants will be notified by the end of July, 2025.

Travel reimbursement

Travel reimbursement **must follow COST Actions Travel reimbursement rules** (see Annotated Rules for COST Actions document, Annex 1). Participants i**nvited to a COST Action event** can estimate the amount of **daily allowance** they could receive on e-COST by accepting the invitation and start completing the **reimbursement claim**. Any booking can only be made **after accepting an invitation** to a COST Action event.

The reimbursement of incurred expenses for **accommodation, meals, short distance travel** (defined as less or equal to 100 km one way) and other incidental costs is paid as one lump-sum amount known as **daily allowance**.

Long-distance travel is any travel equal to or above 101 km one way between a main transportation hub at the point of departure and the main transportation hub at the event venue and return to a main transportation hub at the point of arrival.

Eligible participants receive daily allowance and financial support for **travel directly related to the COST activity**. Extra travel costs linked to any non-standard travel options (such as adding extra days to one's trip or deviations from the normal itinerary, whether for personal or for professional reasons), **shall not be reimbursed**. Stopovers longer than 24 hours are not reimbursed, and if travel costs cannot be separated, 30% of the total ticket cost will be deducted.

The incurred long-distance travel expenses are reimbursed on face-value including VAT, up to a maximum of EUR 1500, cancellation insurance included. A complete **copy of the travel booking** or ticket is required (including full price paid; name of the passenger; travel dates, departure and arrival cities, departure and arrival times, an invoice only showing the amount will not suffice).

Long distance car travel (equal to or above 101 km one way) is limited to a maximum distance of 1000 km for the entire journey from any point of departure to the event venue and return to a point of arrival. Car travel shall be reimbursed at EUR 0.35 per km based on:

- the proof of distance in km from the point of departure and the event venue. An automatic distance calculator is included in e-COST;
- parking receipt which shall clearly detail the parking date(s). If parking is paid by sms, a print screen of the sms shall be uploaded in e-COST;
- other car travel costs are not eligible for reimbursement.

Participants may claim a contribution towards the required **visa** costs to travel to the meeting venue as follows:

- visa processing fees or exit visa fees relevant to attending approved COST event(s);
- attach supporting documents:
  - receipt from the embassy issuing the visa;
  - amount paid for the visa fee;
- costs related to travel to embassy are not eligible for reimbursement.

Contacts

Grant Awarding Coordinator	Action Chair	Database Coordinator
Daria Katla	Anna Skorek-Osikowska	Mohammad Reza Ghaani
daria.katla@polsl.pl	anna.skorek@polsl.pl	mohammad.ghaani@tcd.ie