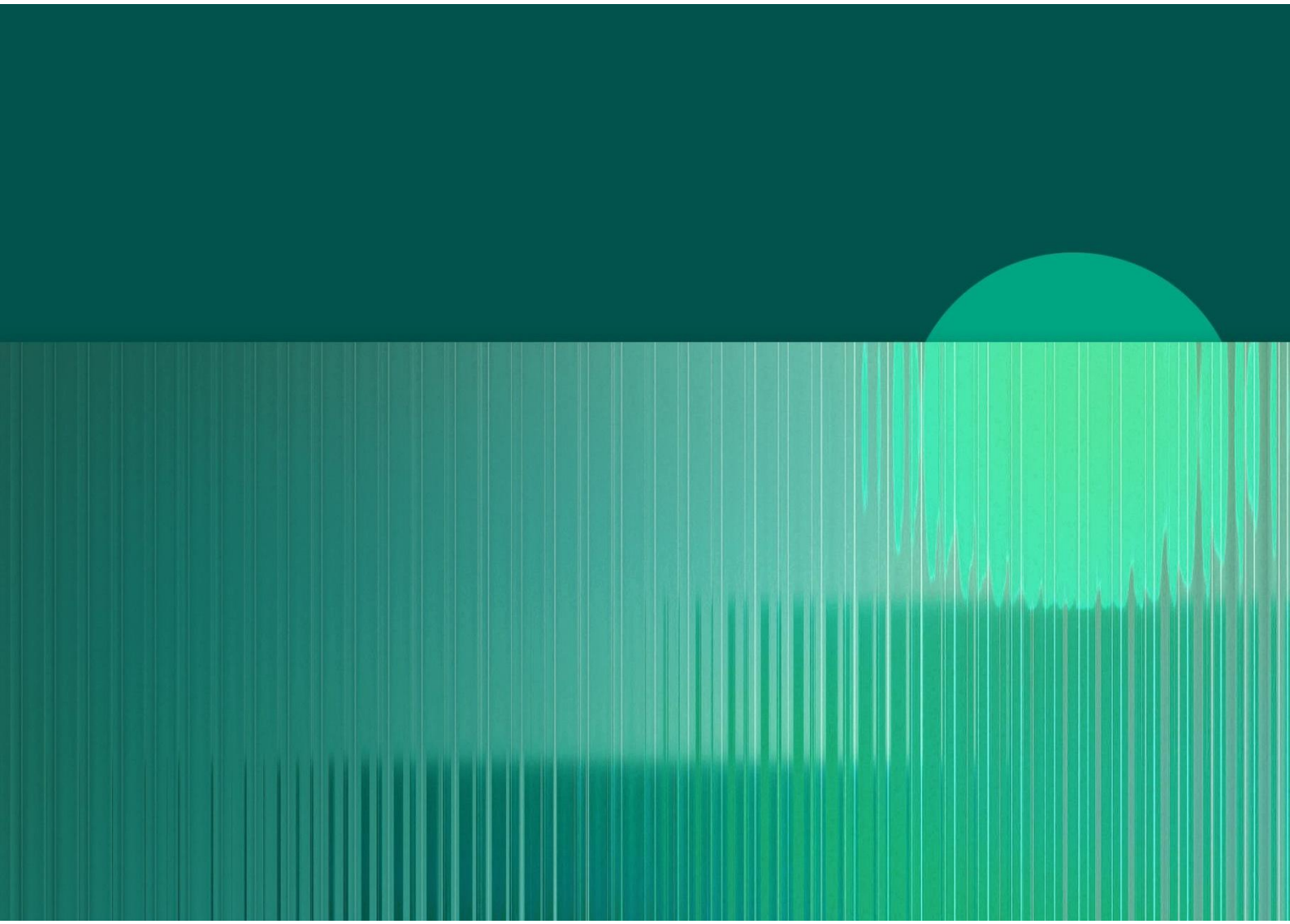

Inventory of research infrastructure (RI) for energy transition: hydrogen and lithium (D1.1)

Research infrastructures cooperation for energy transition between European and Latin American and the Caribbean countries.

This project has received funding from the European Union's Horizon research and innovation programme under grant agreement No. 101131725

Document Control Information

Settings	Value
Document Title:	Inventory of research infrastructure for energy transition: hydrogen and lithium
Project Title:	EULAC Energytran: Research infrastructures cooperation for energy transition between Europe and Latin-American and the Caribbean countries
Project Coordinator:	OEI
Deliverable leader:	EU Solaris
Number and type of deliverable:	D1.1 – R – Technical publications
Work Package number:	WP1
Doc. Version:	Final version
Description:	Inventory of research infrastructure (i.e., research groups and equipment) on green energy production and lithium valorization and supply chain for energy transition
Dissemination level:	Public
Date:	30/06/2025

Deliverable (webpage) Approver(s) and Reviewer(s)

All Approvers are required. Records of each approver must be maintained. All Reviewers in the list are considered required unless explicitly listed as Optional.

Name	Role	Action	Date
EU Solaris / TecNM	Work package leader / Project participant	Elaboration	30/05/2025
General Assembly of the project	Decision-making body of the consortium	Review	21/06/2025
Steering Committee	Executive body of the consortium	Approve	25/06/2025

Deliverable (monography) history

The Deliverable Author is authorized to make the following types of changes on the deliverable without requiring re-approving:

- Editorial, formatting, and spelling
- Clarification

To request a change, contact the Document Author or Owner.

Changes on the deliverable (inventory) are summarized in the following table in reverse chronological order (latest version first).

Revision	Date	Created by	Short Description of Changes
Version 1	30/06/2025	EU Solaris/TecNM	Final version included on the EU Portal and https://energytran.oei.int https://aguascalientes.tecnm.mx/energytran/

Executive Summary

Within the framework of the ENERGYTRAN project, for the Work package 1, led by the EU Solaris, the deliverable D1.1 – Inventory of RI for energy transition, with special emphasis on hydrogen and lithium, has been prepared. The Energytran inventory is a mapping of scientific infrastructure across the European Union, Latin America, and the Caribbean (EULAC) focusing on research groups and specialized equipment associated, directly or indirectly, with the lithium and hydrogen value chains for energy transition. It compiles statistics on research teams, their institutional affiliations, and the description of major equipment that can be used to support the agenda of research and innovation in energy transition. This inventory offers an overview of EULAC's capabilities for material synthesis, manufacturing, characterization, process design, and performance testing in the areas of lithium processing and valorization, fabrication of lithium-ion batteries, fuel cells, electrolyzers, and novel materials for the production, storage, and valorization of green hydrogen, among other topics of interest in energy transition.

Lithium and green hydrogen play pivotal roles in the worldwide energy transition. The EULAC scientific community has complementary capabilities and resources to contribute to the resolution of the current technological challenges associated with their supply chains to achieve decarbonization goals.

By identifying and collecting statistics and basic information of actors and resources, this inventory aims to foster cooperation and collaboration, enhance knowledge exchange, identify options for training technical staff, establish national and international networks, generate synergies, and support the development of EULAC scientific ecosystem in energy transition. It also serves as a source of information for policymakers, industry stakeholders, and academic institutions seeking to align research efforts and identify opportunities for cooperation with other partners at national and international levels.

General information included on the EULAC inventory of RI for energy transition (lithium and hydrogen)

The inventory was integrated with public information obtained from open scientific databases and sources of institutes/facilities of affiliations of EULAC researchers. It includes:

- Statistics of more than 1800 researchers from 575 affiliations of 39 EULAC countries (see Figure 1 and Table 1) categorized by topic (hydrogen or lithium).
- Summary of specialized scientific equipment categorized by institution/facility.

The Energytran inventory contains examples of the equipment available in the institutes/facilities of researchers' affiliation; consequently, it is not an exhaustive compilation of the scientific infrastructure available in all affiliations.

The content of this inventory provides a picture of EULAC's strengths and capabilities in energy transition. This inventory is a deliverable of the project Energytran - EULAC for energy transition: Research infrastructures cooperation for energy transition between EU and LAC countries, which is an international scientific cooperation initiative funded by the Horizon Europe program.

The Energytran EULAC inventory on energy transition is intended to support strategic planning, promote international partnerships, and contribute to the advancement of sustainable energy technologies through informed decision-making and resource optimization.

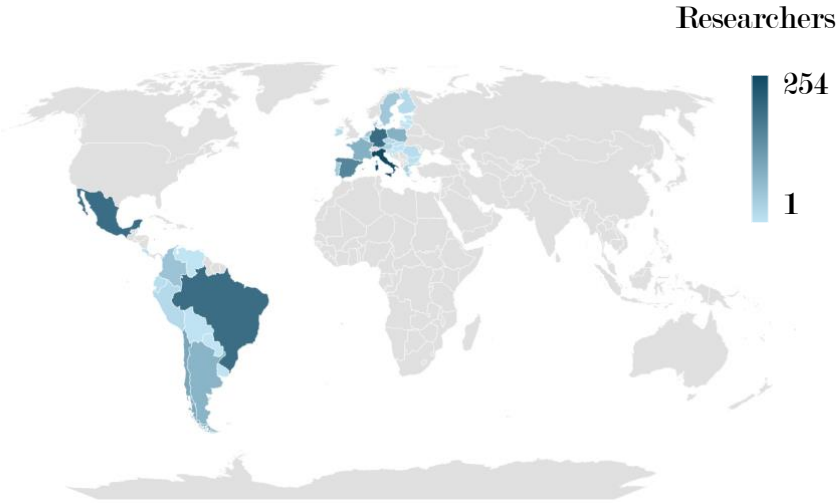

Figure 1. EULAC researchers reported in the Energytran inventory of research infrastructure for energy transition (lithium and green hydrogen).

Table 1. Statistics of EULAC researchers and institutes/facilities reported in the Energytran inventory of research infrastructure for energy transition (lithium and green hydrogen).

Country	Researchers	Affiliations	Country	Researchers	Affiliations
Argentina	80	27	Ireland	16	8
Austria	33	9	Italy	254	51
Belgium	32	9	Latvia	3	2
Bolivia	4	2	Lithuania	3	2
Brazil	194	66	Luxembourg	8	2
Bulgaria	9	4	Malta	6	2
Chile	101	23	Mexico	193	54
Colombia	54	22	Netherlands	54	11
Costa Rica	11	5	Paraguay	1	1
Croatia	10	5	Peru	18	11
Cyprus	6	2	Poland	84	22
Czechia	23	12	Portugal	43	13
Denmark	36	6	Romania	14	8
Ecuador	12	8	Slovakia	10	4
Estonia	4	2	Slovenia	10	3
Finland	18	6	Spain	157	45
France	85	39	Sweden	48	8
Germany	192	63	Uruguay	2	1
Greece	35	12	Venezuela	1	1
Hungary	5	4			

Process followed to create the EULAC inventory of RI for energy transition (lithium and hydrogen)

This technical publication has been elaborated using open scientific databases and sources of the institutes/facilities of EULAC researchers. A literature review was performed to identify EULAC researchers working on hydrogen and lithium with at least one scientific publication on these topics during the last five years. The data collection of equipment was performed using the open sources and public information available for the institutes/facilities of EULAC researchers' affiliation.

Energytran

www.energytran.oei.int

energytran@oei.int

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.