

E-learning program on hydrogen projects for project developers and project financiers from developing and emerging countries.

The Challenge

Green hydrogen and its derivatives are considered to be a key element for decarbonising the economy around the world. However, the development of such a global green hydrogen economy and its generation capacities is still in its infancy.

In order to build such projects or facilities, key actors, especially project developers and project financiers, need to have the knowledge and skills relevant to their tasks and areas of work:

- Project developers need to understand the business opportunities associated with hydrogen and what is needed to realise them, and they should be able to develop bankable project proposals;
- Financial institutions need the knowledge to evaluate business proposals, mitigate technology-specific risks and reduce transaction costs.

Many developing and emerging countries offer excellent conditions for the production of green hydrogen based on renewable energies. So far, however, there are very few training concepts specifically tailored to project development and financial assessment in these countries to drive the construction of hydrogen production plants. This planned training program is intended to close this gap.

The Solution

The e-learning program has the following objectives:

- Describe markets for green hydrogen and their development.
- Explain the value chain for hydrogen and its derivatives in detail.
- Teach the basics of project development.
- Enable to assess and implement sustainability aspects when evaluating hydrogen projects.
- Be able to assess the economic viability of project proposals.



Our Services

As part of the PPP measure, the e-learning program “Green Hydrogen Project Development and Economics” is being offered free of charge to a certain number of participants from developing and emerging countries. The training program is planned to be available in the online academy of Renewables Academy AG (RENAC) towards the end of 2023. The program combines asynchronous and synchronous e-learning.

Participants will have access to texts, assignments and instructional videos, and they will have the opportunity to participate in virtual classrooms. The program concludes with an online examination. Successful participants will receive a certificate that they can use for their professional career.

The following topics will be addressed:

- Green hydrogen production via electrolysis with electricity from renewable energies
- Green hydrogen for ammonia production
- Green hydrogen for power generation in fuel cells
- Transporting hydrogen and ammonia
- Markets for green hydrogen and its derivatives

Impacts and Results

The course provides participants with essential expertise to actively shape the development of a green hydrogen economy in their country. The development of a green hydrogen market can help to reduce import dependency, increase energy security and at the same time create future-orientated jobs. Furthermore, a significant contribution is made to limiting human-made climate change.

The training program thus provides an essential foundation for setting up initial projects in the field of green hydrogen in the countries and thus supports the market ramp-up of the technology.

The individual design of the course content enables the development of hydrogen projects that are optimized for the use of the renewable energy potential as well as for the conservation of resources.

In addition, the program enables participants to conduct both economic and political discussions on green hydrogen market development with a profound knowledge base. They will be able to formulate the right questions about further hydrogen market development and project-specific parameters, such as approval procedures.

At a glance

Duration	October 2022 to December 2023
Country	ODA countries (Official Development Assistance)
Objective	Participants will be trained to identify economic opportunities for the production, transport and application of green hydrogen. Building know-how among local experts reinforces their capability to drive green hydrogen market development in their countries with their own resources.
Partners	GIZ and RENAC
Expected results	The countries will benefit from the transfer of know-how and the associated advantages of building a green hydrogen economy, i.e. the jobs and the climate and environmental benefits of renewable energies.

The International Hydrogen Ramp-up Programme (H2Uppp) of the German Federal Ministry for Economic Affairs and Climate Action (BMWK) promotes projects and market development for green hydrogen in selected developing and emerging countries as part of the National Hydrogen Strategy.

Published by:
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Registered offices
Bonn and Eschborn, Germany

Address
T +49 61 96 79-0
F +49 61 96 79-11 15
E info@giz.de
I www.giz.de

Author:
Regine Dietz

Layout:
peppermint werbung berlin GmbH, Germany

Photo credits/sources:
GIZ

URL links:
Responsibility for the content of external websites linked in this publication always lies with their respective publishers. GIZ expressly dissociates itself from such content.

GIZ is responsible for the content of this publication.

Contact:
GIZ
N Janka Clauder
E Janka.Clauder@giz.de
I www.giz.de