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H₂Uppp E-Learning Scholarship Programme

Green Hydrogen Economics and Project Development

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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.

PROGRAMME SUMMARY

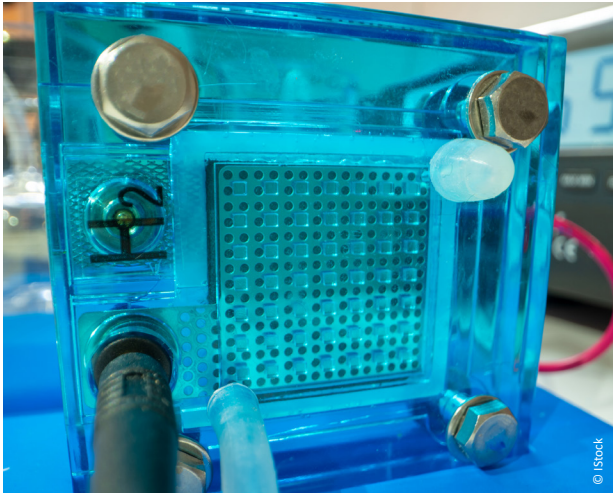
Building a green hydrogen economy

Global demand for green hydrogen and its derivatives has grown rapidly. Completing the e-learning programme, *Green Hydrogen Economics and Project Development*, will enable participants to understand the complex economic and project development aspects of this key element in the transition to a low-carbon future. They will gain basic knowledge of hydrogen electrolysis, ammonia production, fuel cell power plants, transport options, and green hydrogen markets. This training programme provides a useful basis for setting up initial green hydrogen projects around the world, thus supporting the market ramp-up. Furthermore, it prepares participants to lead economic and political discussions on green hydrogen market development. They will be able to formulate the right questions about expanding the green hydrogen market and project-specific parameters, such as approval procedures. Professionals in this e-learning programme will also learn essential facts about proven technological developments in green hydrogen. They can incorporate this information into their project development plans and present technological options that make their projects more competitive and profitable.

Is this programme for you?

This training programme is designed specifically for key players for project development and implementation, such as project developers and financiers. Project developers require the ability to plan financially viable projects, while financial institutions need comprehensive knowledge to evaluate these plans and identify potential risks. This is especially important as green hydrogen projects involve various risks, and thorough risk assessment is crucial to attract potential investors and ensure financial stability.

A unique feature of this three-month online programme is the opportunity to network with other professionals and experts. Thus, fostering potential collaborations or career opportunities.



WHAT IS THE H2UPPP PROGRAMME?

This programme is implemented as part of the International Hydrogen Ramp-up Programme (H2Uppp) of the German Federal Ministry for Economic Affairs and Climate Action (BMWK) that promotes projects and market development for green hydrogen in selected developing and emerging countries as part of the National Hydrogen Strategy. The programme is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. GIZ and RENAC have joined forces to support the private sector in identifying, preparing and implementing pilot projects for the production and use of green hydrogen. In this way, economic production and utilisation paths can be identified together with partner countries, project opportunities along the value chain can be identified, and business models can be developed. H2Uppp is active internationally.

TARGET GROUPS

This training suits you if you are:

- An employee of a company that develops projects involving cutting-edge technologies, such as production of hydrogen using electrolyzers.
- An employee of a bank, insurance company, or financial institution seeking to evaluate the financial aspects of green hydrogen, green ammonia, and fuel cell power stations.
- An employee of a company that makes informed decisions regarding opportunities for:
 - production of green hydrogen using electrolyzers
 - production of ammonia from green hydrogen
 - transport of hydrogen and ammonia
 - production of energy from green hydrogen via fuel cells
- Citizen of an eligible countries: [ODA-country list](#):

Whether you are part of a company looking to venture into these exciting areas of project development or a financial institution seeking to assess the viability of financing such projects, this programme is designed to provide you with fundamental knowledge. You will be prepared to make informed decisions regarding project development and financing opportunities.

LEARNING OUTCOMES

Programme learning objectives

By the end of this three-month online training programme, participants will have a good understanding of green hydrogen economics and project development. They will be equipped with the knowledge and skills to identify opportunities in the rapidly evolving green hydrogen sector. Whether you are a project developer or a finance institution looking to enter the green hydrogen market, this programme will provide you with the tools and insights needed to succeed in this promising industry.

After completing these courses, participants should be able to:

- apply the basic principles of project development in the production of green hydrogen via electrolysis, green ammonia production, and for small fuel cell power plants,
- evaluate and implement sustainability aspects into project planning and operation,
- assess project economic viability and identify associated project risks,
- explain the various markets and transport options available for green hydrogen and ammonia,
- explain the fundamentals of hydrogen as an energy carrier and its potential in various applications and
- assess investment opportunities in the evolving green hydrogen economy.

PROGRAMME STRUCTURE

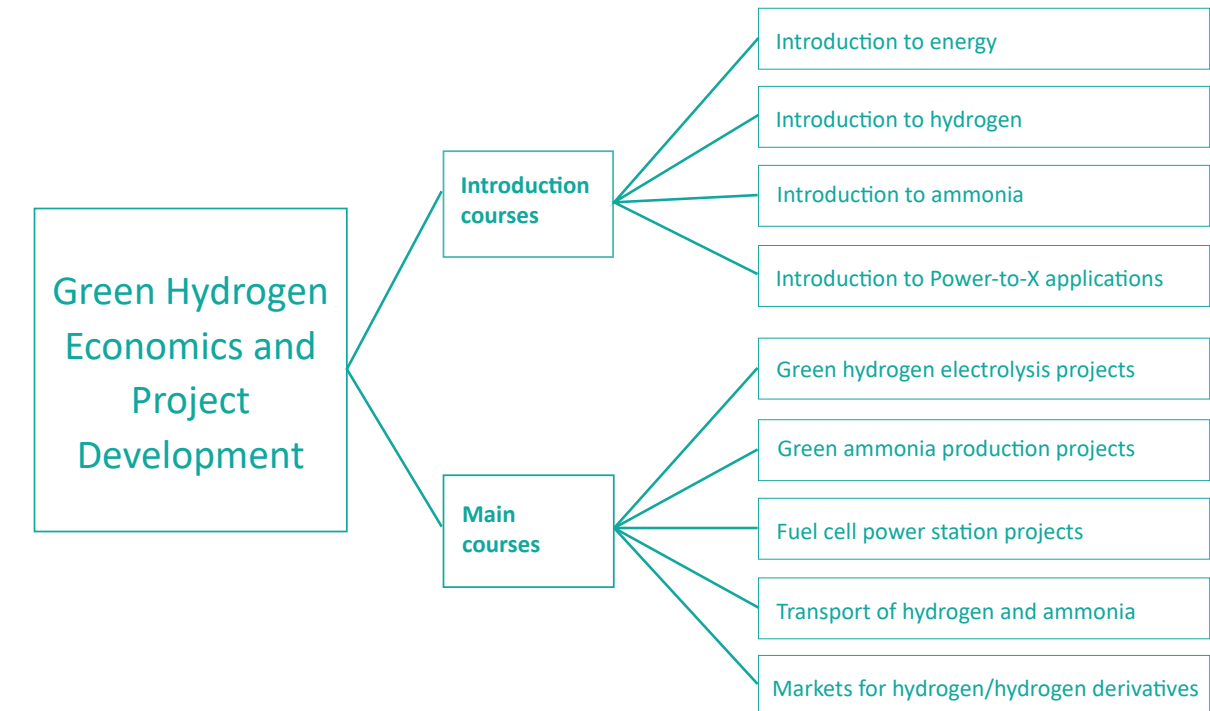


Fig. 1: “Green Hydrogen Economics and Project Development” for project developers and finance institutions

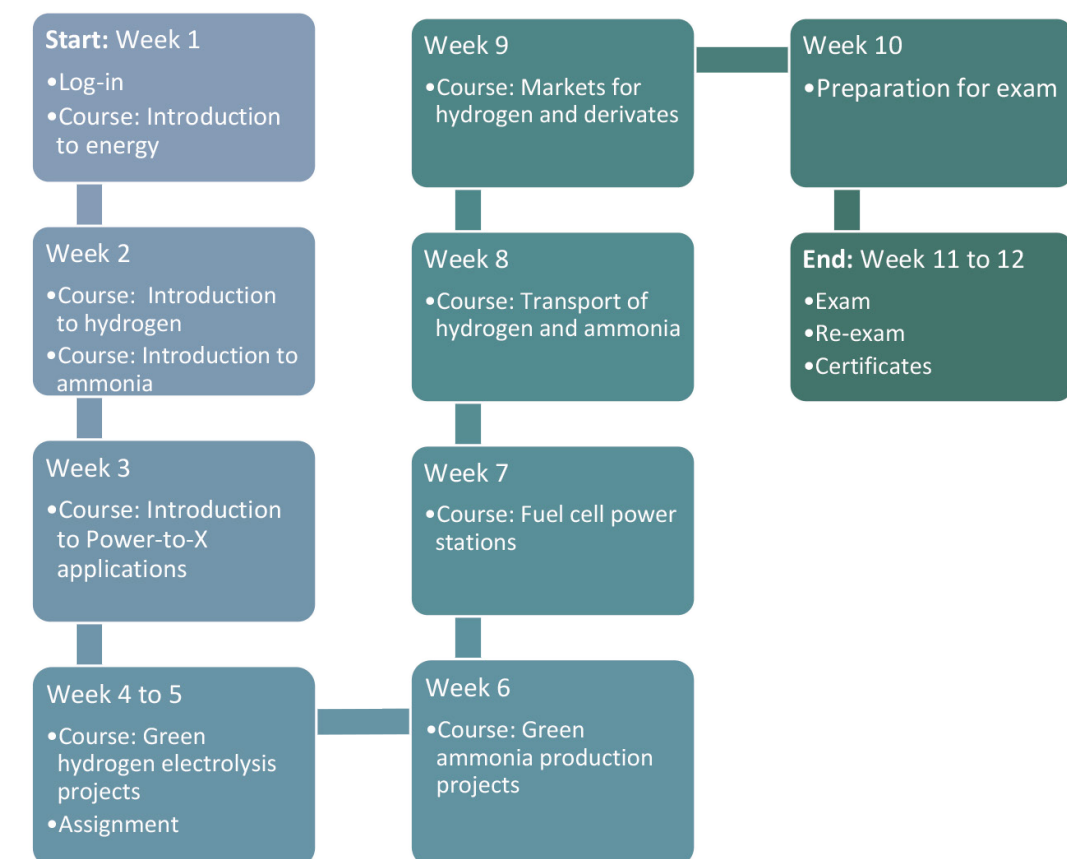


Fig. 2: Green Hydrogen Economics and Project Development training programme schedule of courses for H₂UPPP scholarship recipients

PROGRAMME BACKGROUND AND PARTICIPATION

This e-learning programme is offered by the Online Academy of Renewables Academy AG (RENAC), as part of the H2Uppp programme. Online Academy programmes and courses support professionals in achieving their career goals in the renewable energy sector. In doing so, it also meets the needs of the industry by providing education and training for professionals and experts that will lead to further expansion of the sector.

This programme is one of several Online Academy offers that cover hydrogen. The development of a green hydrogen market can help reduce dependence on imports, increase energy security, and create future-oriented jobs. Furthermore, it will make a significant contribution to limiting climate change caused by human activities.

1 Application process

You can complete this programme as a scholarship recipient or by booking your spot on RENAC's Online Academy website. Scholarships are available for eligible applicants. Applicants who are not eligible to receive scholarship aid can complete the programme by booking and paying for their spots in the RENAC web shop: www.renac.de/trainings-services/trainings/ready-made-trainings/product/green-hydrogen-specialist-project-development-and-economics.

As part of the public-private partnership (PPP) approach, RENAC and GIZ offer 180 scholarships to participants from Official Development Assistance (ODA) recipient countries. Individuals who wish to participate in the training programme must submit a completed application form, available on the RENAC website. (The H2Uppp programme office decides on the allocation of the 180 scholarships.

The programme takes into account a balanced gender selection of participants and promotion of career opportunities.

Criteria for the selection of participants are:

1. Citizen of an eligible country: ODA-country list
2. English language skills level B2
3. No enrolled students or staff of higher education institutions
4. Information in the application tool on "What are your job responsibilities?" (Please write a maximum of 250 words) and "How do you intend to apply the knowledge gained in this training programme in your work?" (Please write a maximum of 250 words)

The programme takes into account a balanced gender selection of participants and promotion of career opportunities.

The deadline for scholarship applications is **7 August 2023**.

RENAC will inform candidates via email as soon as possible if they have been selected for a scholarship for the online training. The applicant must confirm their acceptance of the scholarship offer by replying to the invitation from RENAC via email. H2Uppp programme scholarships pay for the online training programme.

NOTE: Scholarship recipients **must log into** the learning platform **no later than 1 week after the start** of the training programming. Failure to log in may result in losing the scholarship that will be used to pay for the programme.

2 Waiting list for scholarship places

If the number of eligible applicants exceeds the number of available scholarship places, RENAC will place eligible applicants on a waiting list. Should scholarship places become available, RENAC will inform eligible applicants on the waiting list and offer them a scholarship spot.

Applicants who are not eligible to receive scholarship aid can complete the e-learning programme by booking their spot and paying EUR 3,500 plus 19% VAT (gross: EUR 4462.5). Participants must book their spots and pay for the programme on the RENAC website before 1 October:

www.renac.de/projects/current-projects/h2uppp-e-learning-scholarship

3 Language

The programme language is English. All programme material (including course content, videos, pre-recorded lectures, assignments, and exams) is available in English.

4 E-learning training programme features

The Green Hydrogen Project Development and Economics programme 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.

Learning with RENAC Online is done asynchronously in two steps. First, participants work through each course's content, and then get the opportunity to apply the newly acquired knowledge and skills, consolidating them in their minds. In practice, both steps are accomplished in several ways. Programmes also contain written assignments with feedback from RENAC that not only further reinforce learning outcomes but may also complement their exam marks.

5 Final examination and certificate

Participants finish the programme by completing an online examination. Successful participants receive a certificate that they can use for their professional career.

6 Workload for participants

Depending on prior knowledge, participants should expect to spend about 150 hours to successfully complete the course. This includes: Reading and understanding the material, watching videos, answering self-test questions, participating in virtual classrooms, and joining the Q&A forum. It also includes submitting short assignments, completing administrative work (familiarising with the Moodle platform and creating profiles, etc.), and successfully preparing for and taking an online exam.

7 Assignments

During the training, trainees are given the task of answering a hydrogen-specific question (assignment). To do this, they will have to do some research to be able to answer the question. They have to upload their answer in the online forum of the course. The answer will be a text of about 250 words. RENAC will comment on the answer. The assignment will count for 10% of the final grade (the online exam will count for 90%).

8 Dates and programme schedule

The H2Uppp scholarship Green Hydrogen Economics and Project Development programme lasts 12 weeks and is scheduled to **start on 11 September 2023** and **end on 15 December 2023**.

DATE OF TRAINING

11 September - 15 December 2023

DEADLINE FOR SCHOLARSHIP APPLICATION

07 Aug 2023

RECOMMENDED STUDY TIME

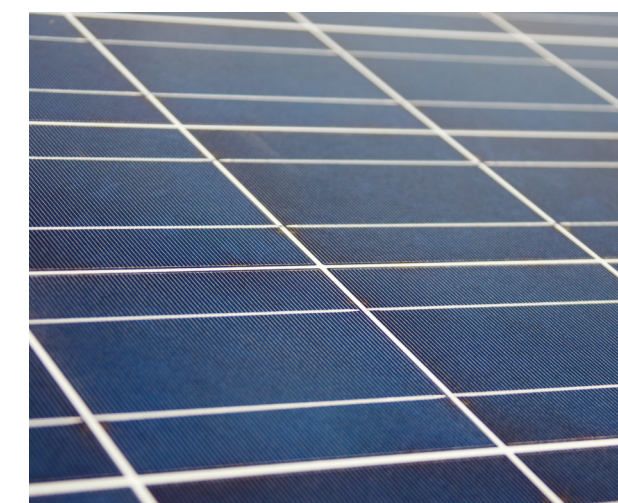
About 150 hours

DURATION

3 months (12 weeks)

REGISTRATION

www.renac.de/projects/current-projects/h2uppp-e-learning-scholarship



9 Content

The Green Hydrogen Project Development and Economics online programme provides project developers and representatives from finance institutions with the necessary knowledge and skills to navigate the emerging field of green hydrogen economics and project development. Through a combination of 9 courses, participants will gain a deep understanding of green hydrogen energy systems and hydrogen transport, hydrogen electrolyser technologies, ammonia production and transport, fuel cell power stations, Power-to-X applications, and fuel cell power station projects. This programme aims to equip participants with the expertise needed to capitalise on the growing opportunities in the green hydrogen market.



INTRODUCTION COURSES

- Introduction to Energy
- Introduction to Hydrogen
- Introduction to Ammonia
- Power-to-X Applications

MAIN COURSES

- Green Hydrogen Electrolysis Projects
- Green Ammonia Production Projects
- Fuel Cell Power Station Projects
- Transport of Hydrogen and Ammonia
- Markets for Hydrogen and Hydrogen Derivatives

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Green Hydrogen Economics and Project Development

www.renac.de/trainings-services/trainings/ready-made-trainings/product/green-hydrogen-specialist-project-development-and-economics