

INTERNATIONAL POWER-TO-X-HUB

Catalysing defossilisation globally

PtX.Shipping Training



Defossilising shipping with e- fuels

The global shipping industry is a major emitter of greenhouse gases, responsible for nearly 3% of global CO₂ emissions. As regulatory frameworks tighten, the industry is under increasing pressure to reduce emissions and transition away from fossil fuels. While multiple pathways to defossilisation exist - including efficiency improvements, electrification for short-haul shipping, and wind-assisted propulsion - the sector is increasingly focusing on scalable e-fuels such as green hydrogen, ammonia and methanol.

The International Power-to-X Hub supports policy makers with trainings, stakeholder dialogues and support for developing enabling policy and regulatory frameworks.

Discover the potential of PtX-fuels like e-methanol and e-ammonia in transforming the maritime sector!

The PtX.Shipping Training starts from the global context, in which maritime activities must be seen, and focuses on the potential of e-fuels for the transformation of the shipping sector. The training outlines the challenges - such as high costs and complexity of e-fuel value chains - and the responses given through international policies, e.g. by the International Maritime Organisation (IMO) or the European Union.

Regarding technological solutions, some efficiency measures are explained, while the training focuses particularly on the PtX-fuels production and its technological advancements. Participants learn relevant parameters for the comparison of fuel types.

Recognising that the maritime sector's transition extends beyond shipowners and operators, the programme takes a multi-actor approach. It explores the

critical role of ports, infrastructure requirements, and the current state of Green Shipping Corridors—including practical guidance on how to establish corridor initiatives.

The training is designed to be adaptable to national contexts, allowing for country-specific modifications or expansions to address regional needs and policy frameworks.

PtX. Shipping Training outline

Training content

1. Introduction and Global Context
2. Shipping and Climate Change
3. Technologies and Fuels
4. Ports and Infrastructure
5. Green Shipping Corridors
6. Transfer into national context

Duration and format:

2 hours – 4 days | on site, hybrid or virtual

Training sessions can be tailored with a focus on specific interests of the target groups.

Target audience

- Decision-makers in e.g. transport, infrastructure, energy, environment, ministries
- Experts from regulatory authorities and other relevant administrations
- Experts in public and private research institutes, energy associations and renewable energy agencies
- Private sector professionals

What is Power-to-X?

To reach climate neutrality by 2050, we must transform our economies to operate emission-free fast. While 100 % renewable energy is key for this transformation, some industries and transport sectors cannot yet directly use renewable electricity to become climate neutral. Until they can, Power-to-X (PtX) is the missing link.

PtX enables us to produce anything historically dependent on fossil feedstocks, now using renewable electricity. These sustainable, climate neutral e-fuels and chemicals can defossilise high-emission industries, including the chemical, fertiliser, steel, and cement industry, as well as aviation and maritime transport.

PtX offers a tremendous potential for many countries all over the world. Due to their favorable conditions for renewable energy production, they can leverage new business opportunities with PtX and become frontrunners in emerging global PtX markets.

What does the International Power-to-X Hub offer?



Access to cutting-edge research and insights on PtX



Training on PtX for key decision makers



Exchange platforms for PtX experts & enthusiasts



Advisory on regulatory frameworks, partnerships, and financing for PtX projects



Access to 120 GIZ cooperation countries

The training offer consists of our standardised **Renewable Power-to-X Basic Training**, add-on modules for several topics, 3 e-learning courses and a Train-of-Trainers programme, which has already certified 100 trainers. The PtX.Community connects the training alumni and enables an international exchange of experts around the globe.

The on-site trainings are organised at the request of GIZ projects and political partner institutions in selected countries. If you are interested in individual training, please check out our e-learning courses.

Add-on modules:

- Sustainability
- Aviation
- **Shipping**
- Sustainable Chemistry and Power-to-Chemicals
- Certification of PtX products
- PtX project finance
- Carbon Border Adjustment Mechanism (CBAM)
- Coming soon: Green steel, green fertiliser, safety

Free e-learnings (self-paced):

- Renewable PtX Basic Training
- PtX.Sustainability & EESG Framework
- Green Hydrogen & PtX Certification



More information on the training offers:
<https://ptx-hub.org/academy/>

Contact

Email: info@ptx-hub.org

 [LinkedIn @ International Power-to-X Hub](#)

Learn more about the project activities on the website:
www.ptx-hub.org

The PtX.Academy

Since 2019, the International PtX Hub offers trainings and workshops for decision-makers on green hydrogen and PtX. The goal is to train and connect a critical mass of people who are enthusiastic about renewable PtX and can accelerate the uptake of PtX production, usage, and trade in their countries.

To date, the PtX Hub has delivered more than 100 trainings in 27 countries to more than 1,800 learners.