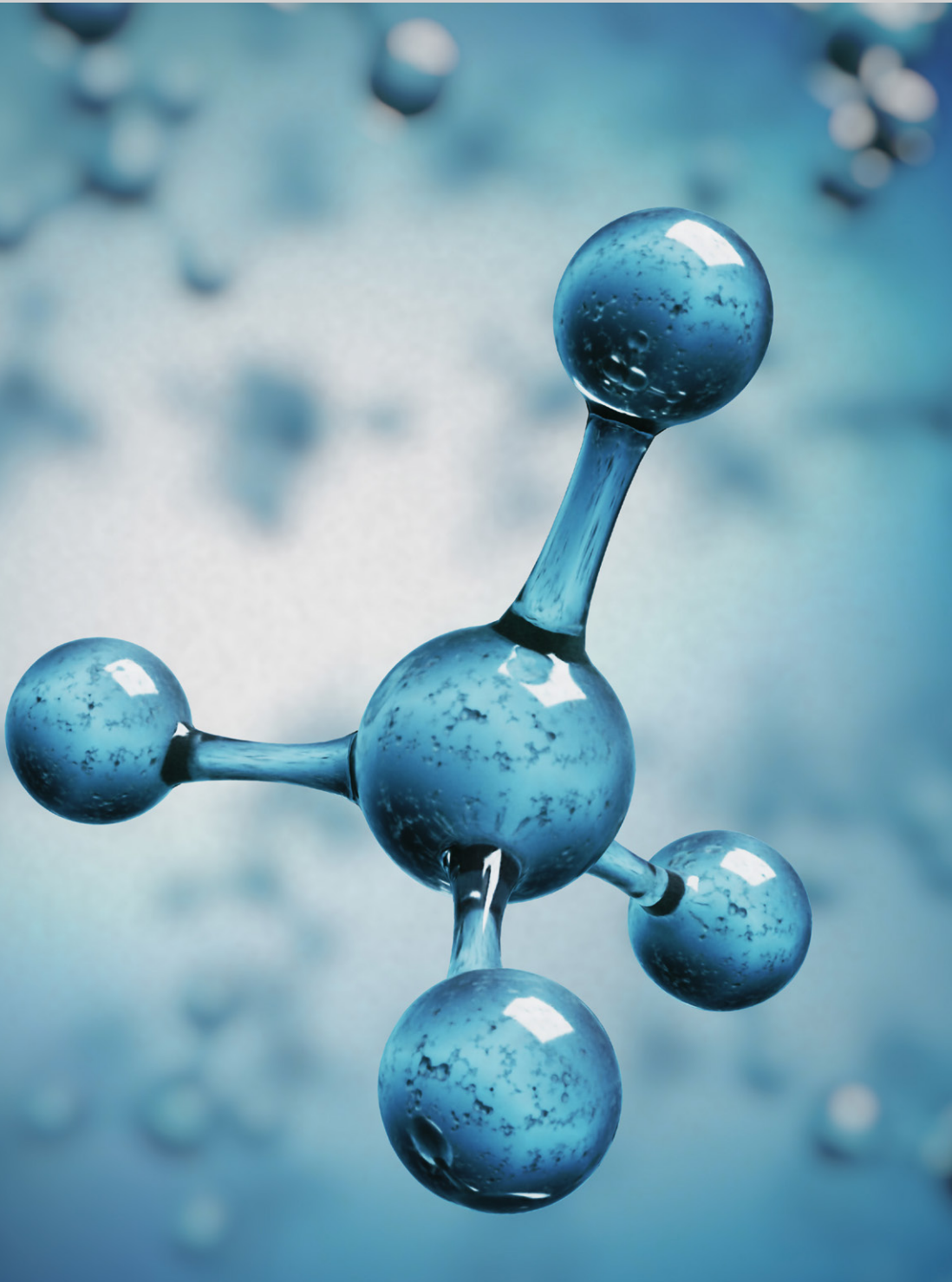


A working group within



## Power-to-X for Applications





## Power-to-X ...

### ... is central to climate protection and system transformation

In addition to battery technologies, Power-to-X offers the most promising approach for converting renewable electricity into other forms of energy and hence turning its back on fossil fuels in the long term.

Power-to-X converts „green electricity“ into hydrogen and methane („power-to-gas“), liquid fuels („power-to-liquid“) and chemical raw materials („power-to-chemicals“). Therefore, making Power-to-X a future topic for those industries that are currently using fossil fuels and raw materials for their production. It also has strategic importance for those industries which are being confronted with the „disruption“ of the combustion engine.

In the future, Power-to-X can become a decisive building block of the energy transition and make an important contribution to sector coupling. Also, due to the significant potential of Power-to-X both politics and the media are becoming increasingly involved with the technologies.

### ... is a topic for mechanical engineering

Mechanical and plant engineering is both a manufacturer and user of efficient and emission-reducing technologies making it a key industry driver for a successful energy transition. Many of the components necessary for the successful use of Power-to-X technologies are supplied by the machine manufacturer and plant construction:

- ‚Power‘ (e.g. wind energy)
- ‚to X‘ (process engineering)
- ‚for A‘ (application, for example, in mobile machinery or marine engines)

As a solution provider, it is important for mechanical and plant engineering companies to understand where and how a possible shift towards CO<sub>2</sub>-neutral raw materials and fuels will affect their industry:

- How can Power-to-X be successfully established in the market?
- What can business models look like today?
- What policies would advance and promote Power-to-X to further the energy system transition?

These and other questions will be answered by the VDMA in the newly founded **working group** **“Power-to-X for Applications.”**

# The Power-to-X for Applications Working Group (WG P2X4A)

With more than **3,200 members**, the Mechanical Engineering Industry Association (VDMA) is the **largest network organization for mechanical engineering in Europe**. The association represents the common economic, technological and scientific interests of the diverse industry. VDMA was **founded in November 1892** and is the most important advocate for the mechanical engineering industry today. At VDMA, we represent the mechanical and plant engineering sector on issues that it faces in Germany and across Europe. We have also been successful in helping our members promote and lobby for policy changes on an international level. VDMA's technical expertise, industry knowledge and straightforward positioning make it a recognized and valued point of contact for companies as well as the general public, science, administration and policy makers.

VDMA was successful in internally consolidating several topics with the Power-to-X theme into one centralized working group called WG Power-to-X for Applications (WG P2X4A).

Power-to-X for Applications also integrates all other important stakeholders, such as the automotive industry and the petroleum industry, and offers this heterogeneous community an overarching platform for cooperation. The main players in a Power-to-X value-added chain are already organized in VDMA: ranging from the production of renewable energy and plant constructors to the customers of synthetic fuels.

With the activities of our WG P2X4A, we are sharpening the public's awareness of the alternatives to direct electrification. We are helping to promote a holistic and technology open approach to the energy system transition. The goal for Power-to-X for Application is to consistently develop various ideas and concepts that will benefit the energy transition.





## Cross-industry network

The scope of the topic is reflected in the number of VDMA organizations involved:

### **Mechanical Engineering**

- Large Industrial Plant Manufacturing
- Process Plant and Equipment
- Power Generation
- Power Systems

### **User**

- Construction – Equipment and Plant Engineering
- Materials Handling and Intralogistics
- Agricultural Machinery
- Marine Equipment and Systems

### **Supply Industry**

- Power Transmission Engineering
- Compressors, Compressed Air and Vacuum Technology
- Engines and Systems

### **Research**

- Association for the Promotion of Mobile Machines
- Research Association Power Transmission Engineering
- Research Association Construction Equipment and Building Material Machinery
- Research Association for Combustion Engines eV

In addition, key players from the following industries are also represented:

- Automobile Industry
- Petroleum and Energy Industry
- Chemical Industry

### **Interested in working with us?**

As a VDMA member, your company can participate in the new WG Power-to-X for Applications without further membership fees.

They may also participate as associate members:

- Universities
- Colleges
- Research Facilities

Even companies that are not VDMA members but have a justified interest in the further development of the Power-to-X topic, such as companies in the petroleum industry or the automotive industry can become members of the WG.

### **Are you interested, or do you need further information?**

**Then talk to us:**

**E-Mail** [p2x4a@vdma.org](mailto:p2x4a@vdma.org)

**Phone** +49 69 6603-1378

# 5 good reasons to join the VDMA Working Group Power-to-X for Applications

## Network

- We are a strong network of all relevant stakeholders (mechanical engineering, automotive industry, petroleum industry etc.).
- We map the entire value chain
  - ‚Power‘ (e.g. wind energy)
  - ‚to X‘ (process engineering)
  - ‚for A‘ (used for example in vehicles, mobile machinery or marine engines)
- We offer the platform for the exchange of information regarding
  - Research projects, R&D
  - legislative initiatives and legal framework
  - potential partners

## Lobby

- We position the topic in politics and media (Berlin & Brussels)
- We combine the opinions of the affected industry without representing particular interests.

## Public Relations

- We place the topic in selected media as an important contribution to a comprehensive energy transition.
- We organize events in Berlin and Brussels (in cooperation with partner associations) and participate in trade fairs and international congresses worldwide.

## Research

- We cooperate with important research associations
- If required, we support the necessary research transfer
- We work out roadmaps and application concepts
- We are committed to funding research

## Standardization

- For example, we set standards for future fuels (eFuels) in the relevant standardization committees (DIN, CEN and ISO).
- We establish short-term instruments (e.g. VDMA standard sheets) to accelerate standardization processes.

**VDMA**

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