



**EXPERT SESSION**

# **From test to GW scale**

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# TOPSOE AT A GLANCE: OVER 80 YEARS OF INNOVATION AND LEADERSHIP

For more than 80 years, we have been guided by our purpose, 'Perfecting chemistry for a better world'. We work to deliver solutions that will leave the world in better shape for future generations.

Today, it is our ambition to lead the global transition of hard-to-abate sectors to a net zero future.

Thanks to decades of exceptional R&D, Topsoe is in a **unique position** to accelerate the transition to sustainable technologies.

#1  
In renewable fuels

#1  
In low carbon hydrogen

+2,400  
Employees

\$1B  
In revenue  
(USD)

8.6%  
Of revenues  
invested in R&D

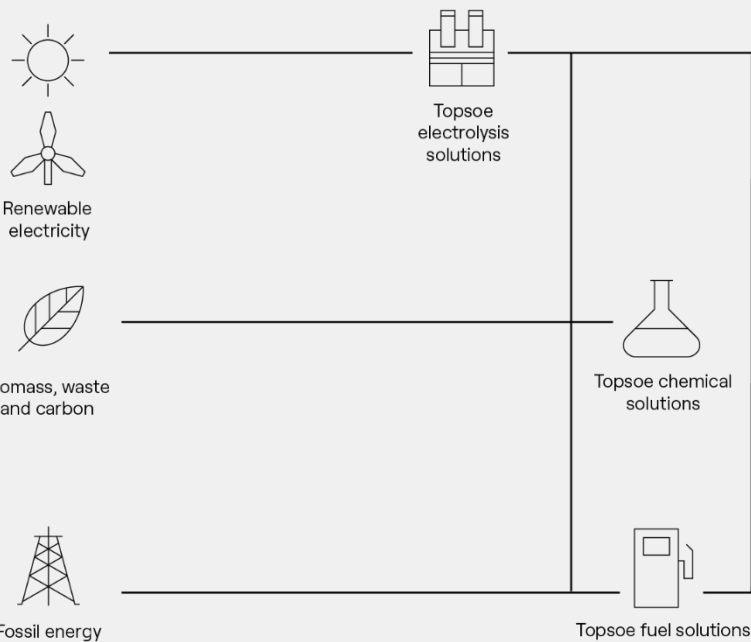
+500  
Patent families



# OUR EXPERTISE AND TECHNOLOGIES POWER A SUSTAINABLE FUTURE

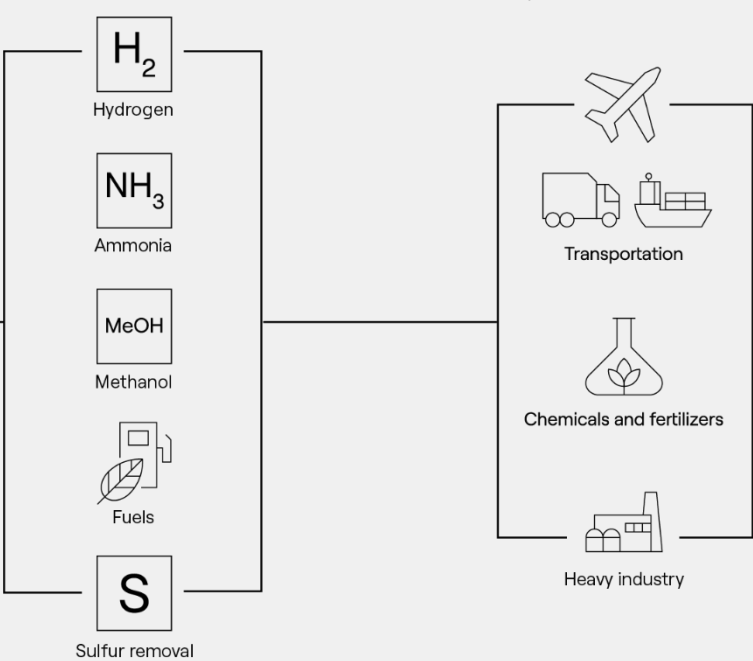
## ENERGY SOURCES

Fuels and chemicals can be produced from various ways of both renewable and fossil feedstocks.



## CHEMICALS AND FUELS

For our customers, the output is more efficient processes or renewable feedstocks, that significantly can lower the carbon footprint, and thereby supporting them in their energy transition.



## UTILIZATION

The societal benefits of these end-products come, among other things, in the shape of a cleaner transportation sector and hard-to-abate sectors such as steel, cement, and mining, who can reduce their carbon footprint.

## VALUE CREATION

We create value for customers, employees, shareholders, and society. We contribute directly to the United Nation's Sustainable Development Goals (SDGs) nos. 13, 7, 3, 12, and 8.





# THE DEVELOPMENT PATH OF TOPSOE'S SOEC TECHNOLOGY

## → 80s Solid Oxide Fuel Cell (SOFC) developed

- SOFC cell and stack can also be used as SOEC
- Electrolysis of both water and CO<sub>2</sub>

## → 2015 Focus shifts to SOEC

- Demonstration and industrial SOEC units since 2015
- Continuous optimization & innovation
- Market leading efficiencies

## → 2022 Worlds largest SOEC stack manufacturing facility

- Construction started in 2022
- Stack production expected to begin in Q1 2025
- Initial manufacturing capacity of 500 MW annual capacity with ability to expand to 5 GW

