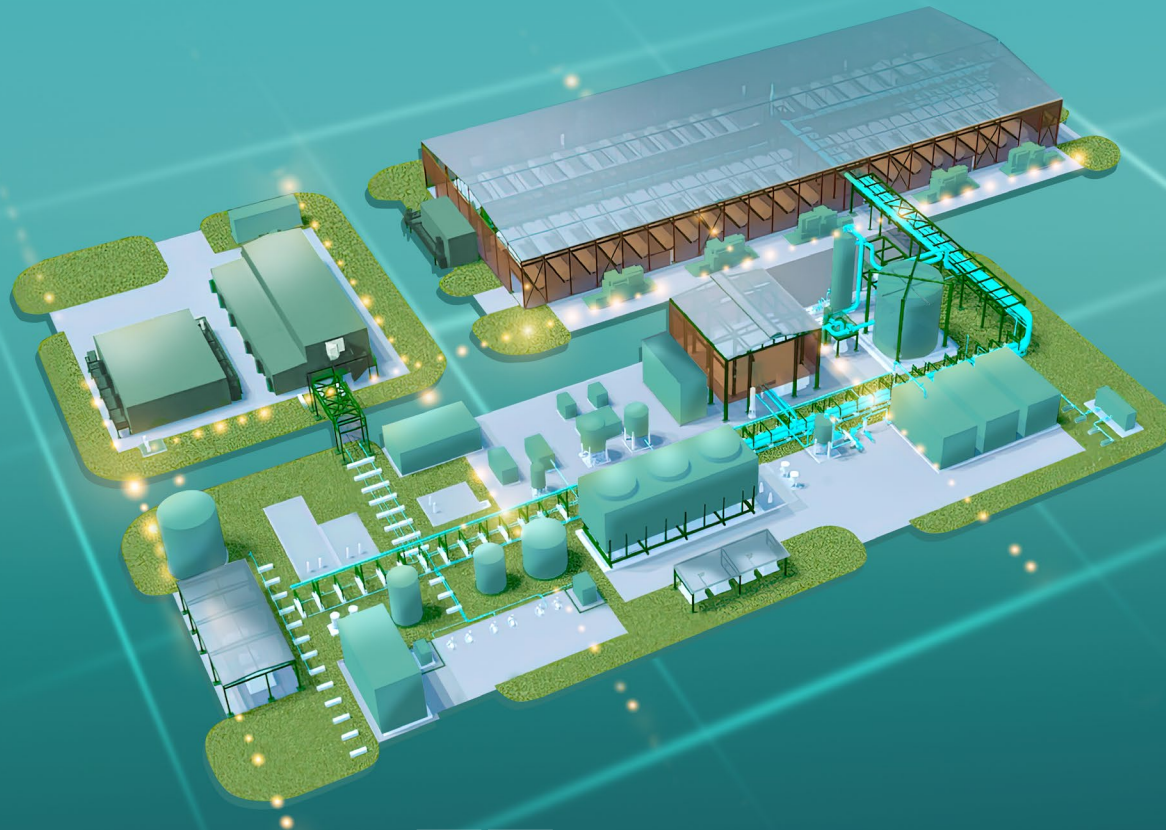


ANOTH<sub>2</sub>ER WAY TO THE FUTURE

# SAIPEM

# IVHY™ 100

FOR YOUR GREEN HYDROGEN PRODUCTION PLANT



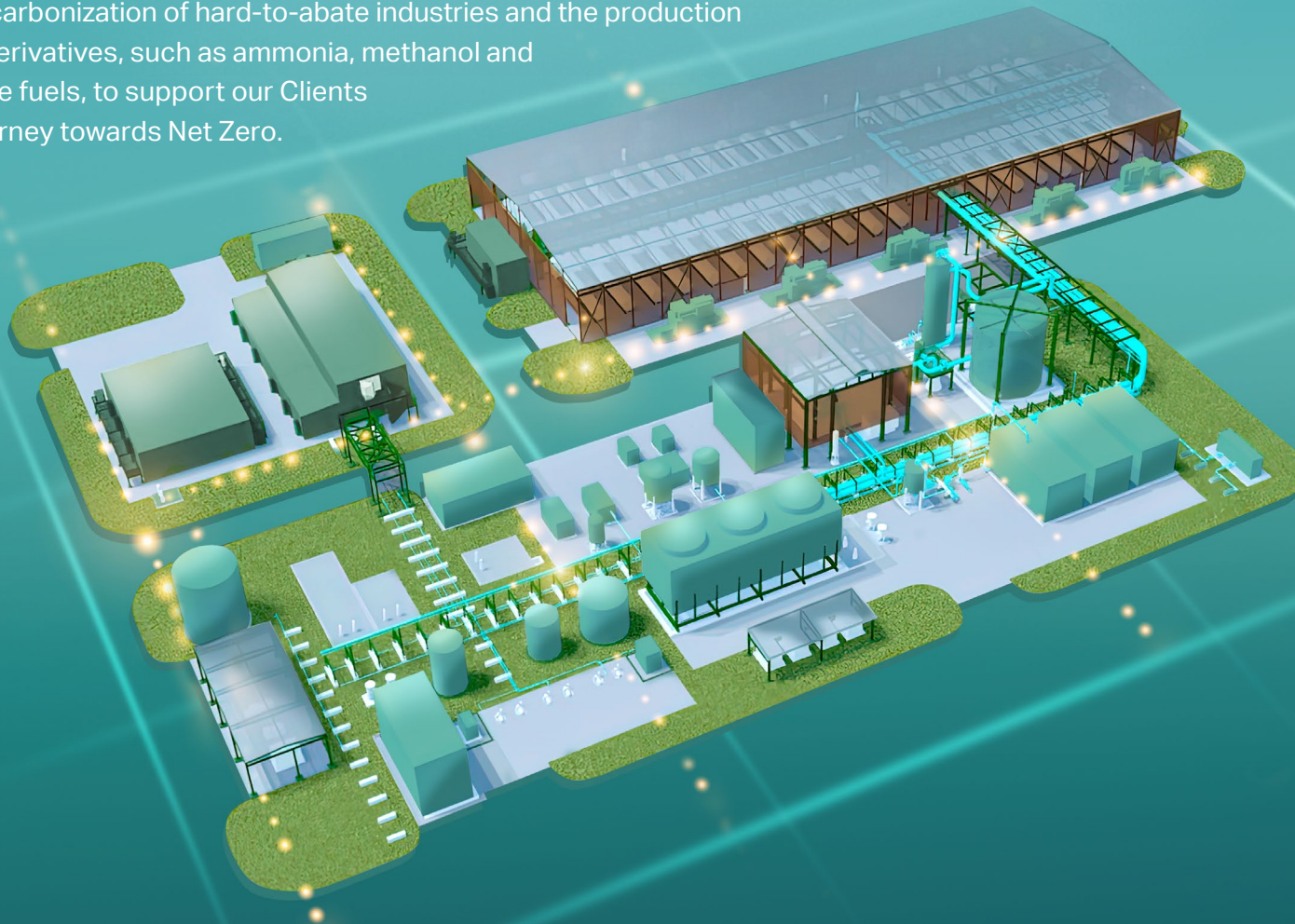
SAIPEM

# SAIPEM IVHY™ 100

GREEN HYDROGEN SOLUTION POWERED BY nel<sup>o</sup>

IVHY™ 100 is Saipem's **sustainable, reliable, industrialized, scalable and modular** solution for green hydrogen generation, based on Nel's alkaline technology.

IVHY™ 100 addresses the growing demand of green hydrogen for the decarbonization of hard-to-abate industries and the production of green derivatives, such as ammonia, methanol and sustainable fuels, to support our Clients in their journey towards Net Zero.



**FAST AND  
SECURE DELIVERY**

**EFFECTIVE AND  
PREDICTABLE OPERATION**

**GUARANTEED  
DESIGN AT SCALE**

## PRODUCT PERFORMANCE

H<sub>2</sub> Flowrate about 19,000 Nm<sup>3</sup>/h

Capacity (scalable) 100 MW

H<sub>2</sub> Output P (adjustable) 30 barg

H<sub>2</sub> Output T 40°C

H<sub>2</sub> Purity > 99.99%

Plant Footprint Overall 23,000 m<sup>2</sup>  
Core 13,000 m<sup>2</sup>

# IVHY™100: SAIPEM AND NEL'S NEW TECHNOLOGY

## GUARANTEED SCALE DESIGN.

Combining Saipem's expertise in the field of development of "green grids," with that of Nel, a key electrolyser player in the market for nearly 100 years and an industry leader, means making **a reliable technology with guaranteed performance**.

Saipem's Green Hydrogen Industrialized **IVHY™100 solution is a pre-engineered, modular and scalable solution** that can produce hydrogen by using 5 electrolysis modules, each with a capacity of 20 MW.

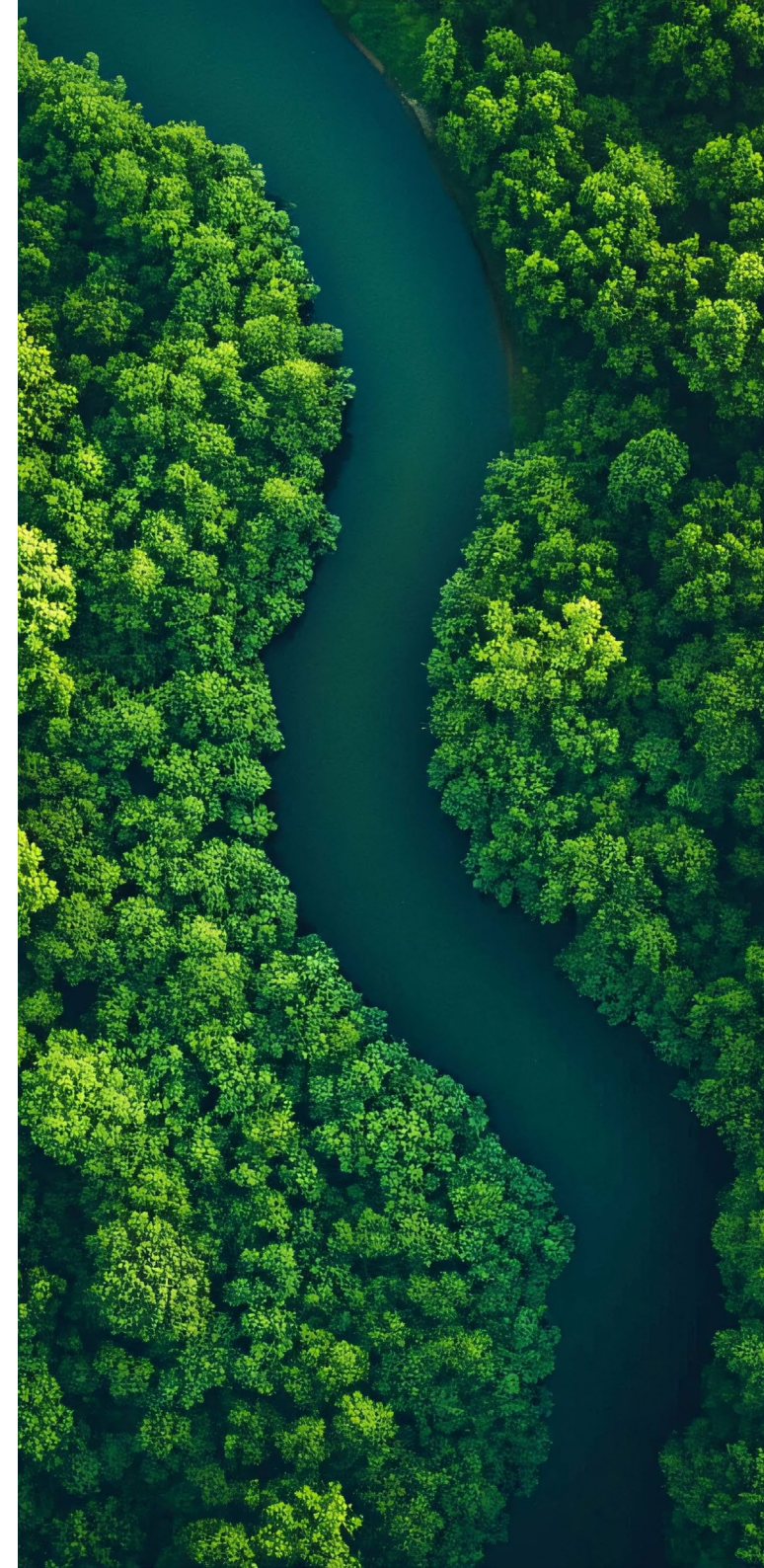
## EFFECTIVE AND PREDICTABLE OPERATION.

With a **simple and robust design**, Saipem **IVHY™100** can be built with **fixed and competitive time and cost**, to create a Power to Gas Hydrogen plant that uses alkaline technology, follows a replicable production approach to achieve capex/opex reduction, and is constantly improving technology, ensuring LCOH reduction.

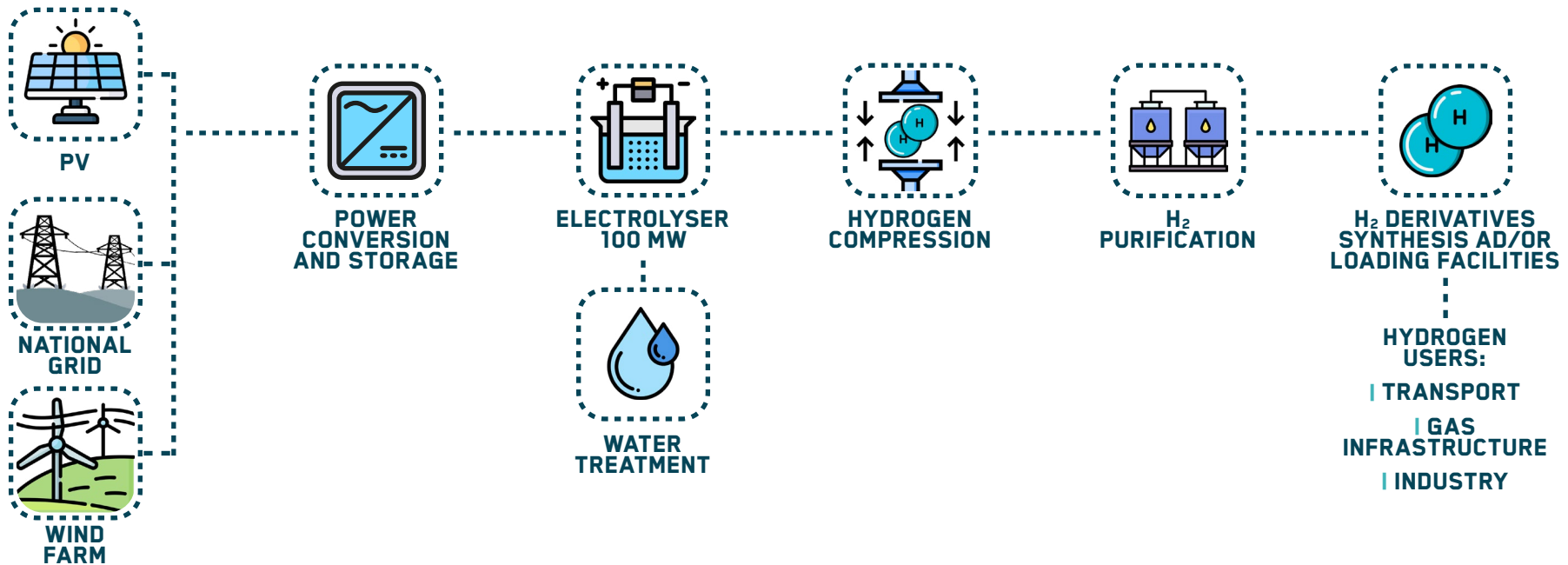
## FAST AND SECURE DELIVERY.

**IVHY™100** is a turnkey, **off-the-shelf solution** consisting of transformers, rectifiers, electrolysers and all the technology needed for hydrogen compression and purification.

**Installation is quick**, as is commissioning, thanks to Saipem's expertise as an EPC contractor and Saipem's pre-engineered package ready for EPC projects.



For many years, Saipem has been engaged in the design and construction of **several hydrogen generation plants** and more than **130,000 km of onshore and offshore pipelines** to transport liquids and gas. But, at the same time, Saipem is also developing studies for the transportation of H<sub>2</sub> and is implementing projects to change existing pipelines and compressor stations for hydrogen use.



**SAIPEM ACTS AS  
OVERALL PLANT INTEGRATOR  
AND SINGLE POINT RESPONSIBILITY**

# SAIPEM AND NEL A UNIQUE PARTNERSHIP

Choosing a partner like Nel, leader in alkaline electrolysers, means reliability, efficiency and safety.

## 1 ENERGY EFFICIENT ELECTROLYSERS

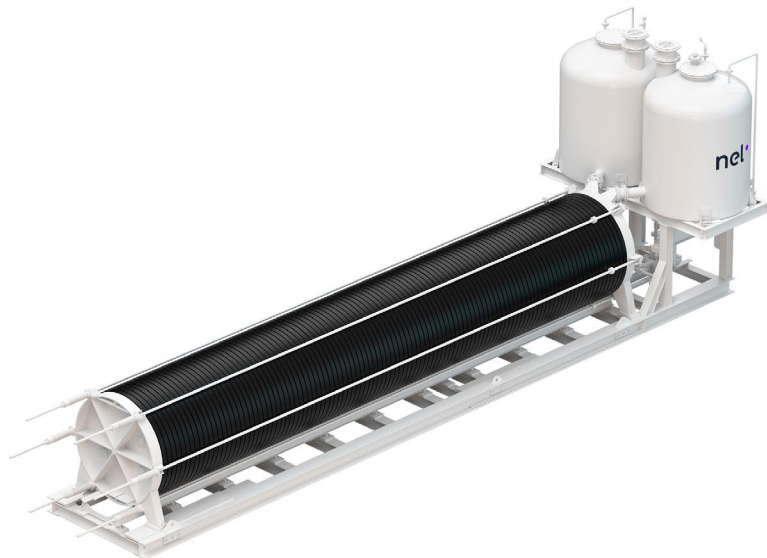
Nel's state-of-the art electrolyser technology demonstrates the **highest energy efficiency** figures in the market during the lifetime of the electrolyser, backed by **solid performance guarantees**.

## 2 TESTED AND PROVEN TECHNOLOGY

Nel has almost **a century of experience** developing electrolysers that are tested and proven by clients **across the world**.

## 3 RELIABLE FLEXIBILITY

Nel's **atmospheric pressure design** offers the flexibility to operate between 15-100%, this ensures a high level of plant availability, and **minimizes costs** related to shutdown and maintenance.





**ENGINEERING FOR A SUSTAINABLE FUTURE**

[WWW.SAIPEM.COM](http://WWW.SAIPEM.COM)