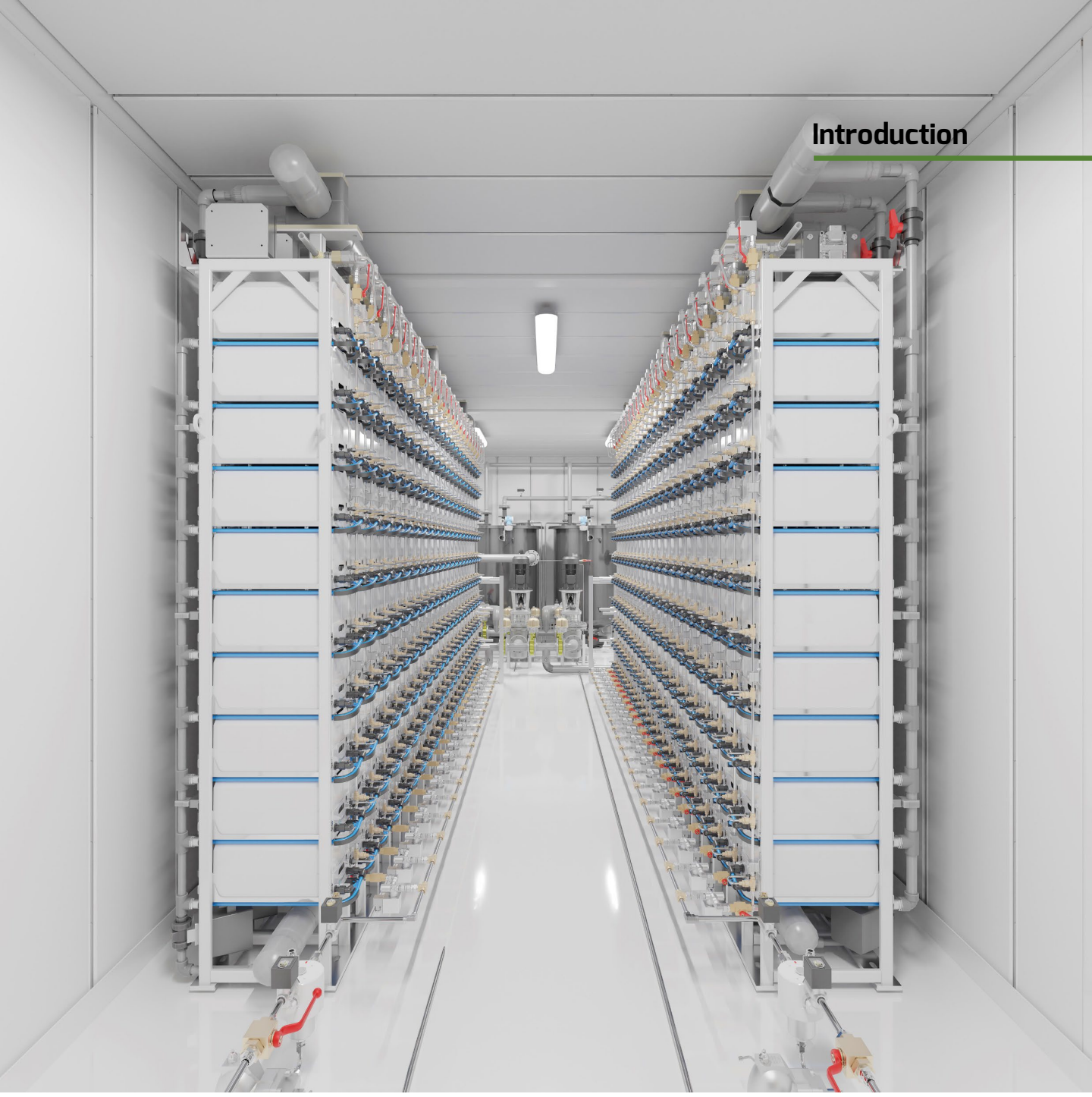
CORPORATE OVERVIEW

Powered By Nature

Elimination of all fuel logistic
Renewable Energy with Cost Savings & Reliability
Power as a Service (PaS)
Green Hydrogen as a Service (GHaS)



Introduction

POWERED BY NATURE

PT MBR Global Indonesia is a manufacturing integrator who builds hydrogen-based systems around the **Enapter AEM Electrolyser Module**. These are used for applications such as on-site H2 production for manufacturing, as load dumping applications for utilities, as hydrogen refueling stations and when used in combination with fuel cells, as power system for remote off-grid community applications.

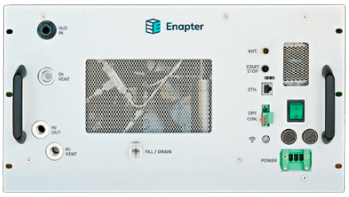
Our Systems

Hy-Power is a system that combines on-site hydrogen production, storage and fuel cell and this our solution for any applications that currently use a diesel generator.

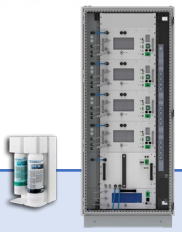
In terms of H2 production, we have a variety of options which would support initially starting with a small-scale project and further expanding this to larger systems in the future. Our building blocks are as follows:

Hy-Pro : On the H2 production side the systems we provide 2m cabinets (indoor or outdoor), which can range from 1kg/day to 5kg per day with an optional dryer to provide 99.99% purity).

Water tank



EL 2.1

Single Cabinet Packages			
Starter Kit	**Starter Kit Plus**	**Starter Impact Kit**	**Scale Up Kit**
			
1 kg/day Indoor Cab, 1 x EL 2.1 Water tank, Dryer	2 kg/day Indoor Cab, 2x EL 2.1 Water tank, Dryer	4 kg/day Indoor Cab, 4x EL 2.1 Water tank, Dryer	5 kg/day Indoor Cab, 5x EL 2.1 Water tank, Dryer

Single Cabinet Based Systems, 1kg/day - 5kg/day

Our Systems

These cabinets can be “parallel-ed” to provide whatever capacity is needed

Hy-Power Packages	50 kW	100 kW	200 kW	250 kW
Power Requirements	4x 400V 3-phase. 32A (EU)	8x 400V 3-phase. 32A (EU)	16x 400V 3-phase. 32A (EU)	20x 400V 3-phase. 32A (EU)
Production rate	10Nm^3/h à up to 20 kg H2 per day	20Nm^3/h à up to 40 kg H2 per day	40Nm^3/h à up to 80 kg H2 per day	50Nm^3/h à up to 100 kg H2 per day
Output pressure	Up to 35bar	Up to 35bar	Up to 35bar	Up to 35bar
H2 purity 3.0 (99.9%) Resilient water <1.000ppm				
Footprint	4m^2 or 36 ft^2	8m^2 or 72ft^2	16m^2 or 144ft^2	20m^2 or 180ft^2
Water consumption	<=8l/h of DI Water	<=16l/h of DI Water	<=32l/h of DI Water	<=40l/h of DI Water
Included Modbus/TCP API and Cloud-base EMS				
Optional dryer update H2 purity 5.0 (99.999%, Resilient water < 5ppm)				
Optional outdoor IP55 Upgrade for temp. zone - 20 to +40°C				
Normal lead time	4 weeks	8 weeks	12 weeks	14 weeks

Paralleling Hy-Power from 10 kg a Day to 250kg a Day

Our Systems

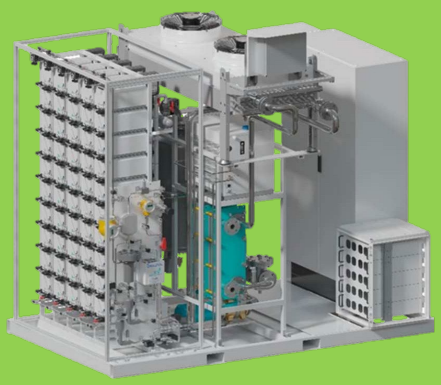
We have recently introduced the **AEM Flex 120**, a skid mounted 53kg per day system which is used for some integration projects such as manufacturing and heating applications.

AEM Flex 120 enables your streamlined launch of green hydrogen in pilots ranging from industrial process heat to refueling. Flexible configuration from 70kW to 480kW guarantees a match with your budget and hydrogen production requirements. The modular design ensures reactivity to intermittent renewable energy, built-in redundancy and freedom to scale when you need it.

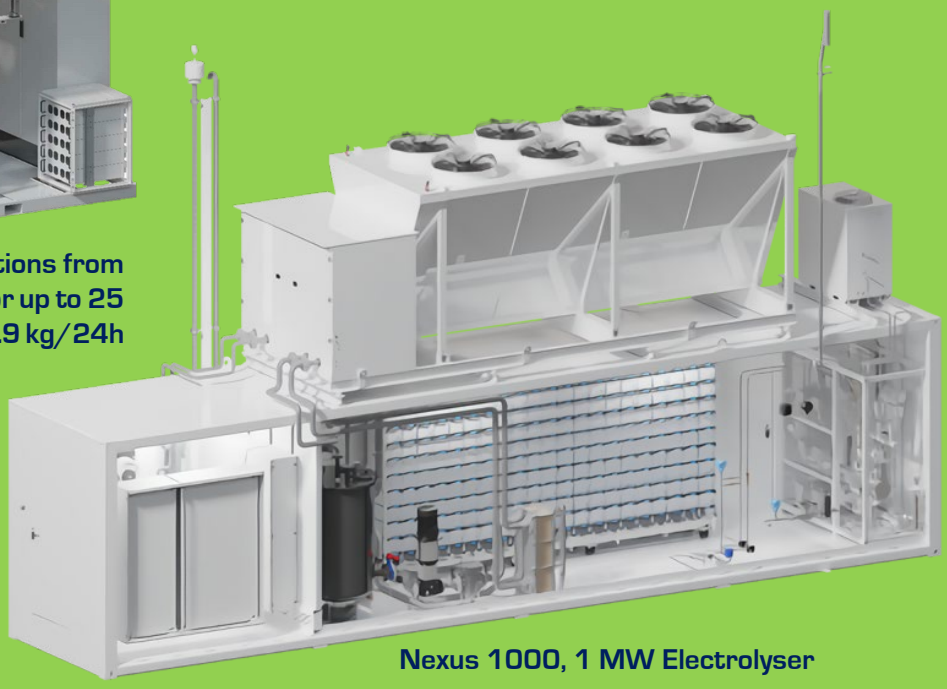
For systems in the MW capacity:

AEM Nexus 1000: This is a well-known 1MW system, producing 450 kg of H2 daily, offering high-performance and reliability for green hydrogen projects.

AEM Nexus 500: This smaller variant offers the same cutting-edge technology and reliability with a capacity of 500 kW and produces 225 kg H2/day.



Flex120 configurations from 70kW to 480kW, or up to 25 Nm^3/h | 53.9 kg/24h



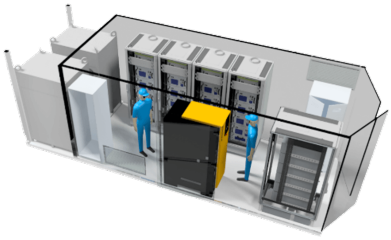
Nexus 1000, 1 MW Electrolyser

Our Systems

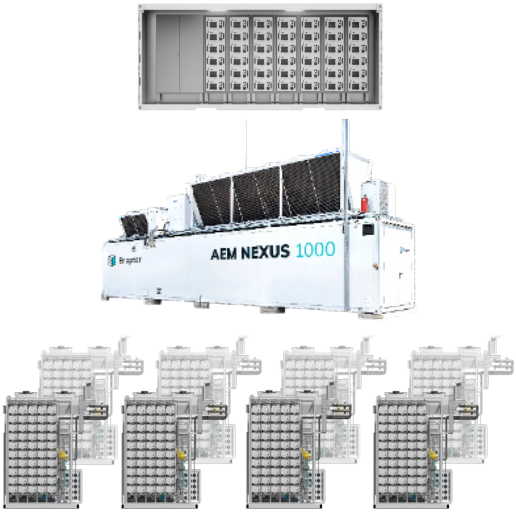
Integrator of Hydrogen based Partner Systems : MBR manufactures complete tailored system solutions for partners by combining additional technologies such as renewables, hydrogen storage and fuel cells.

Hy-Pro/Hy-Power
Combined Fuel Cell
H2 Production

Fuel Cell & H2 Production
with HP Storage &
Fuel Dispenser



Multi Container
Large Scale H2 Production
with Fuel Cell & Dispenser



MW Scale
H2 Production

These are assembled by our manufacturing partner **H2Core Systems GmbH** in Heide, Germany under TUV standards and processes and are fully CE compliant .

Our Customers

Since the establishment of the Hy-Pro and Hy-Power design 3 years ago, we have shipped >200 Hydrogen in over 40 countries.

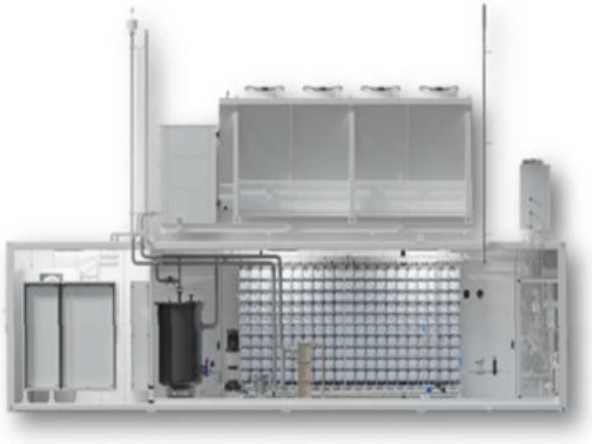
These systems are used for end user applications ranging from off-grid microgrids, trailer based nano grids, refueling applications, load dumping for utilities and telecom BTS backup systems, hydrogen for feed stock, gas blending and heating applications.

MBR will start local production of these systems in Indonesia in Q4 2025 to provide solutions for the following applications and industries.

Micro-Grid Applications
Off Grid / Bad Grid

Gas Blending
H2 + NG -> H2

Feed Stock
Ammonia, Methanol



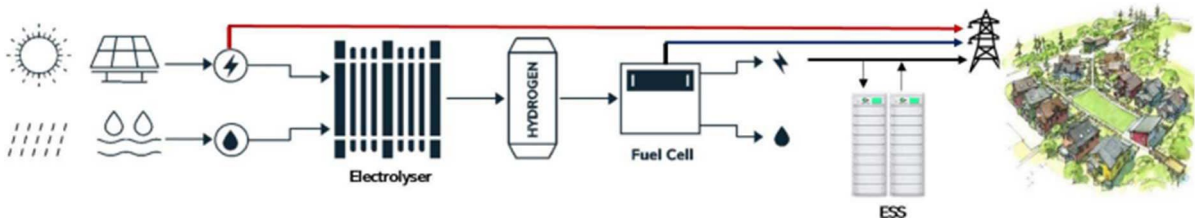
Long Term Energy Storage
- Curteilment solutions

MBR in Asia

MBR has been involved in designing and building Hydrogen based renewable energy systems since 2014 when the we deployed The world's first 24 hour solar-powered hydrogen storage multi-building residence, called the Phi Suea House in Chang Mai Thailand.

This was followed by early deployments of systems for remote telecoms BTS sites for Telstra in Australia and MCMC in Malaysia, in addition to both Telco's in The Philippines.

Other off-grid microgrids include a small village installation in Tapah, Perak for a community of 30 households, in Sarawak Malaysia for a medical clinic in Long Loyang and also a long house community in Rh Bagu. A similar microgrid design was also deployed in Papua New Guinea. More recent installations are in Thailand with EGAT, which is used as learning center, Singapore in Semake island. Further installations are underway in both Malaysia for an EV charging application and in Singapore for a 100% green building power system.



There are 5,258 diesel generators in 2,370 locations, which are not, and never will be connected to the grid. These diesel generators and the need of constant fuel delivery only source of energy for the community. By replacing these with green hydrogen storage systems, powered by renewables we can save 67,000 kg of diesel and reduce emissions by 0,3 million metric tons of CO2.

Renewable energy is 'variable' as a primary source of power, with no power when you need it, or too much at the wrong time. As a result, Solar PV systems are typically sized for the worst season of the year. Batteries may be efficient at storing energy, but the real issue is the cost and efficiency of charging these, while at the same time providing the autonomy needed.

At MBR, we alleviate these common issues faced by microgrids by providing **Hydrogen based Renewable Energy Storage systems (SRFC)** that operate on renewables, such as PV solar + control electronics + hydrogen storage.

Overall, the main design objectives are to:

- Produce Hydrogen during periods when the available energy from renewables is more than the needs of the load.
- Use Hydrogen to produce electricity during periods in which the available energy from renewables is available in quantities less than the needs of the load.
- Use the SFRC's ability to operate and collect Hydrogen even during times of the day when the energy production is low, thus maximizing renewable efficiency.

We believe existing diesel generator fuel and maintenance costs will cover the capital costs of deploying these green solutions.

Our Vision

To be a pioneering leader in the green hydrogen industry within Southeast Asia, driving sustainable energy solutions for a brighter future.

Our Mission

Develop cutting-edge green hydrogen technologies to support the transition to clean energy in Indonesia and the broader Southeast Asian region.

Collaborate with local and regional partners to establish a robust green hydrogen ecosystem that promotes innovation and environmental sustainability.

Provide reliable and cost-effective green hydrogen solutions that meet the energy needs of various sectors, contributing to a greener and more sustainable future.

Educate and raise awareness about the benefits of green hydrogen as a clean energy source, advocating for its widespread adoption in the region.

Strive for operational excellence and continuous improvement in all aspects of our business to deliver value to our customers, stakeholders, and the environment.

So you think you need a Battery?
The world's biggest battery is Powered By Nature

MBR's Social Contribution

A total of 1% of the value of any orders received are donated to **ISCO**. MBR and its team devote their time and resources to ISCO (Indonesian Street Children Organization), a non-government organization, dedicated to improving the quality of life for street children through education. Formed in 1999, and based on

the pure wish to facilitate the best life prospects for children who suffer from the worst of poverty in crowded slums in Indonesian cities. Being otherwise extremely vulnerable, the education and life skills that ISCO helps provide, gives them a sustainable and realistic opportunity. Over 5815 children have been supported by ISCO since 1999

equal chance for every child

ISCO

FOUNDATION

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