

TOWARDS GREEN ENERGY SOLUTIONS



Shanmei Group

www.shccig.com

Shanghai Shaanxi Coal High-Tech Research Institute Co., Ltd.

A legal unit of Shaanxi Coal & Chemical Industry Group Co, Ltd.

Shanmei Group

Sep 2025 A





Shanmei Group

www.shccig.com

- 01 Our Group**
- 02 Our Division**
- 03 Our Mission**
- 04 Our Portfolio**
- 05 Our Applications**

TOWARDS GREEN ENERGY SOLUTIONS



Shanmei Group

www.shccig.com

Our Group

01





Shanmei Group

www.shccig.com

Our Group

Shanmei Group, a **Fortune 500** company, was established in 2004, is a mega energy and chemical enterprise in Shaanxi Province. The Group has more than 60 wholly-owned, holding and participating enterprises, 4 listed companies and a total of **120,000** employees.

**Year
2004**

established

**70+
billion**

revenue
2024 in USD

**100+
billion**

assets
2024 in USD

**140+
thousand**

employees

**414+
million**

investments
in USD (group total)



TOWARDS GREEN ENERGY SOLUTIONS



Shanmei Group

www.shccig.com

Our Division

02





Shanmei Group

www.shccig.com

**SHANGHAI SHAANXI COAL HIGH-TECH
RESEARCH INSTITUTE CO., LTD.**



We are the Shanghai-based **Hydrogen-Carbon Green Energy “HCGE” Division**, a 100%-owned subsidiary of the Shanmei Group with its headquarter in Xi’an, **Shaanxi Province**, China.



GREEN FUTURE



> 100 SCIENTISTS



INNOVATION



IP PROTECTION



TRUSTWORTHY

TOWARDS GREEN ENERGY SOLUTIONS



Shanmei Group

www.shccig.com

Our Mission

03





Shanmei Group

www.shccig.com

TOWARDS GREEN ENERGY SOLUTIONS

For hundreds of years coal and the energy generated from coal was the foundation of an industrial era.

Today, decarbonation is the bridge into a new future around the globe – a green future with green energy solutions. We at Shanmei Group contributing to it.



Shanmei Group

www.shccig.com

Key Portfolio

04





1. Hydrogen (H₂) Electrolyzer Units (PEM)
2. Hydrogen (H₂) Electrolyzer Units (ALK)
3. Hydrogen (H₂) Purifier Units
4. Water (H₂O) Purifier Units
5. Methanol (MeOH) Generators
6. MeOH to H₂ Transformer Units



Shanmei Group

www.shccig.com

1. Hydrogen (H₂) Electrolyzer Units (PEM)

H₂ production output: 50 Nm³/h – 500 Nm³/h





Shanmei Group

www.shccig.com

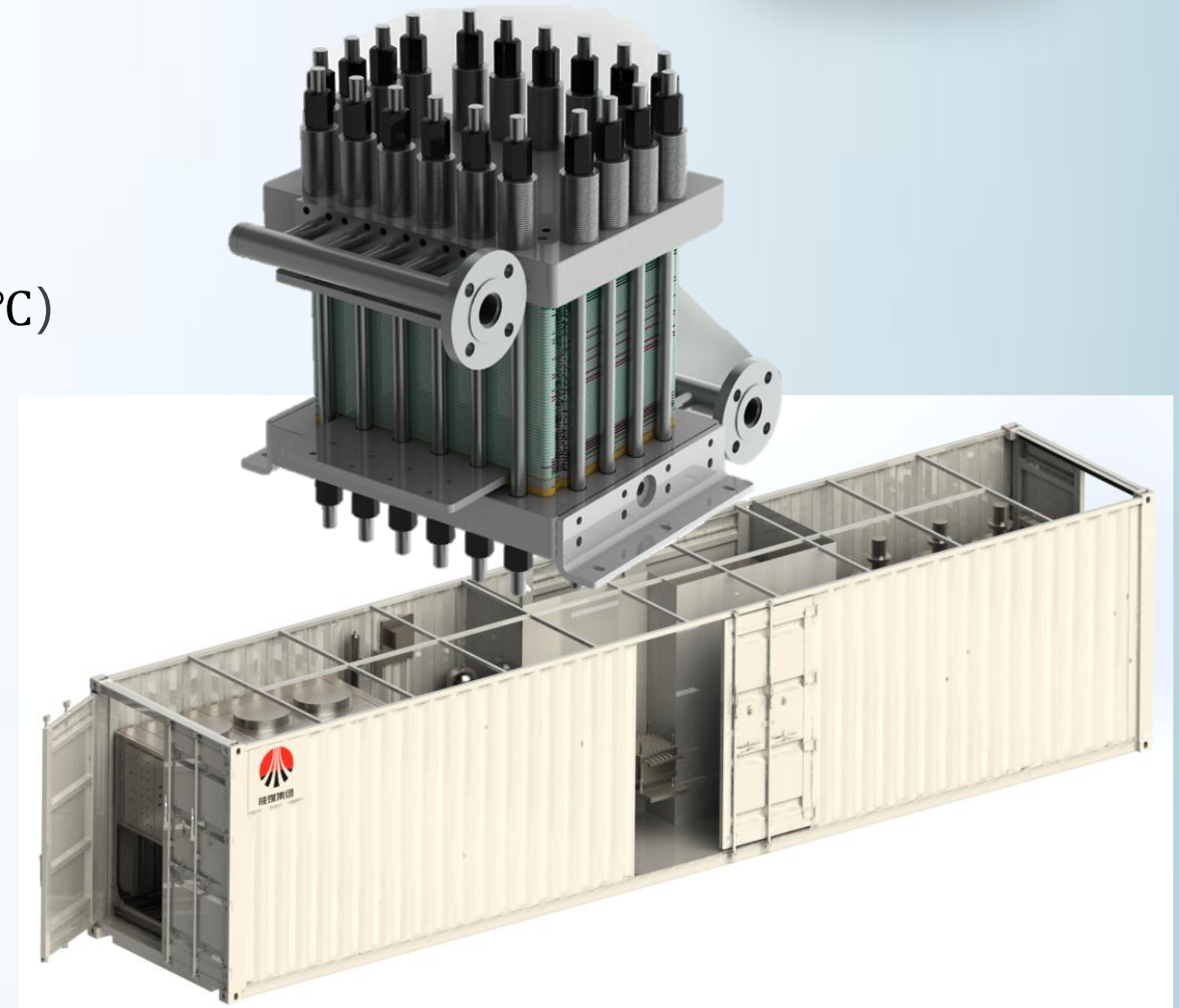
Our Portfolio



1. Hydrogen (H₂) Electrolyzer Units (PEM)

H₂ production output: 50 Nm³/h – 500 Nm³/h

- **Plug-In/Out-Easy-to-Move**
- Expandable & Stapable
- Fast Establishment & Installation
- **Standard 20" or 40" Sea Container Dimension**
- PEM water electrolysis hydrogen production
- Low operating temperature in production (< 50 °C)
- High purity production (up to 99.99%)
- Catalyst requirement (noble material)
- Inlet Media: DI Water (H₂O)
- Outlet Media: Hydrogen (H₂) & Oxygen (O₂)
- **20" H₂ System Unit Stackable**
- **40" H₂ System Unit Stackable**



Electrical efficiency	4.6 kWh/Nm ³
Hydrogen purity	≥99.999% (up to)
Hydrogen pressure	0-3.5 MPa
Warranty Lifetime (minimum)	≥ 80,000 h



Shanmei Group

www.shccig.com

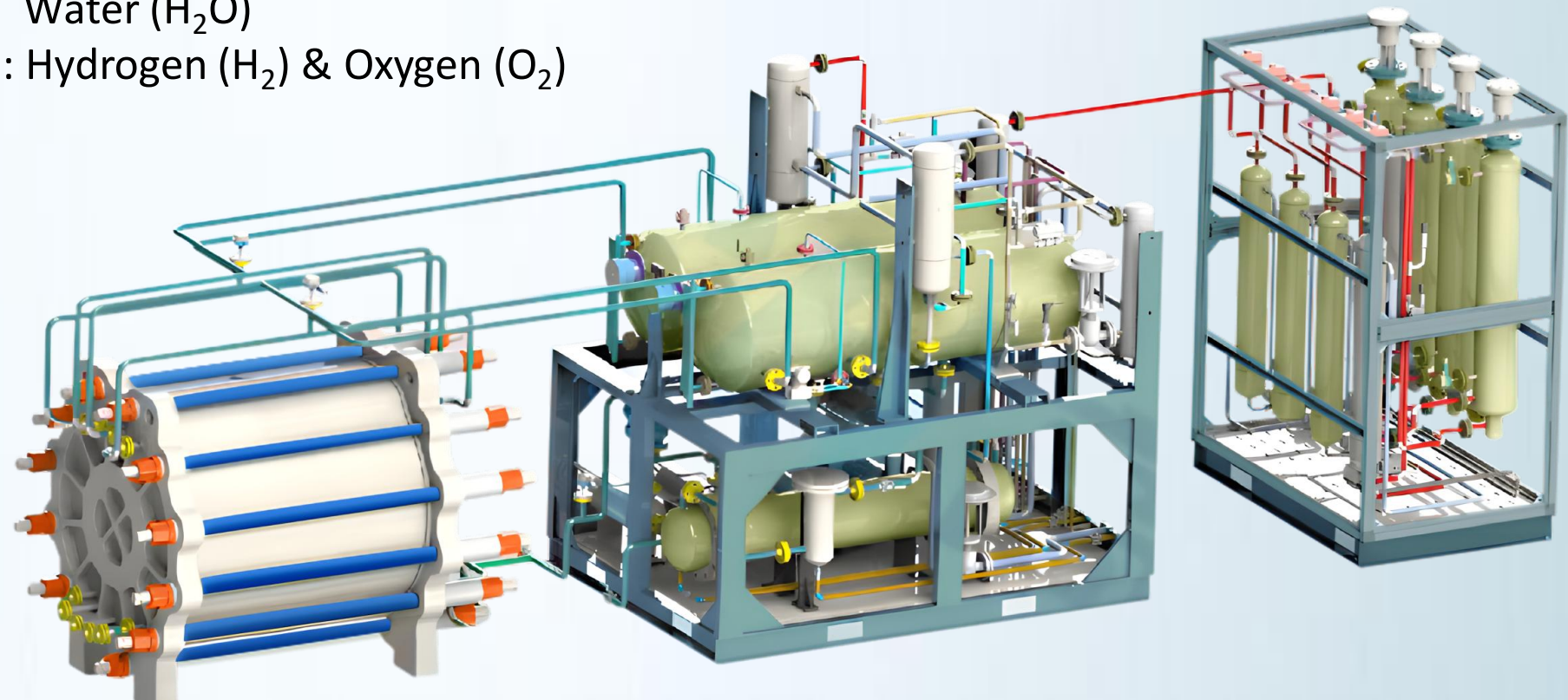
Our Portfolio



2. Hydrogen (H₂) Electrolyzer Units (ALK)

H₂ production output: 50 Nm³/h – 1,000 Nm³/h

- **Stationary installation (plant housing required)**
- Fast Establishment after site-preparation
- Dimensional standards to **20" or 40"**
- Alkaline electrolysis hydrogen production
- High purity production (up to 99.99%)
- Catalyst requirement (noble material)
- Inlet Media: Water (H₂O)
- Outlet Media: Hydrogen (H₂) & Oxygen (O₂)





Shanmei Group

www.shccig.com



3. Hydrogen (H₂) Purifier

As per client dimensions (tailor-made)

- **Plug-In/Start & Easy-to-Move**
- Expandable
- Fast Installation
- Customized scenarios
- Automatic process/duty
- Qualified control modules
- Up to 99.9999% H₂ purity*

Proposed application segments:

Semi-conductor manufacturing

Scientific laboratories

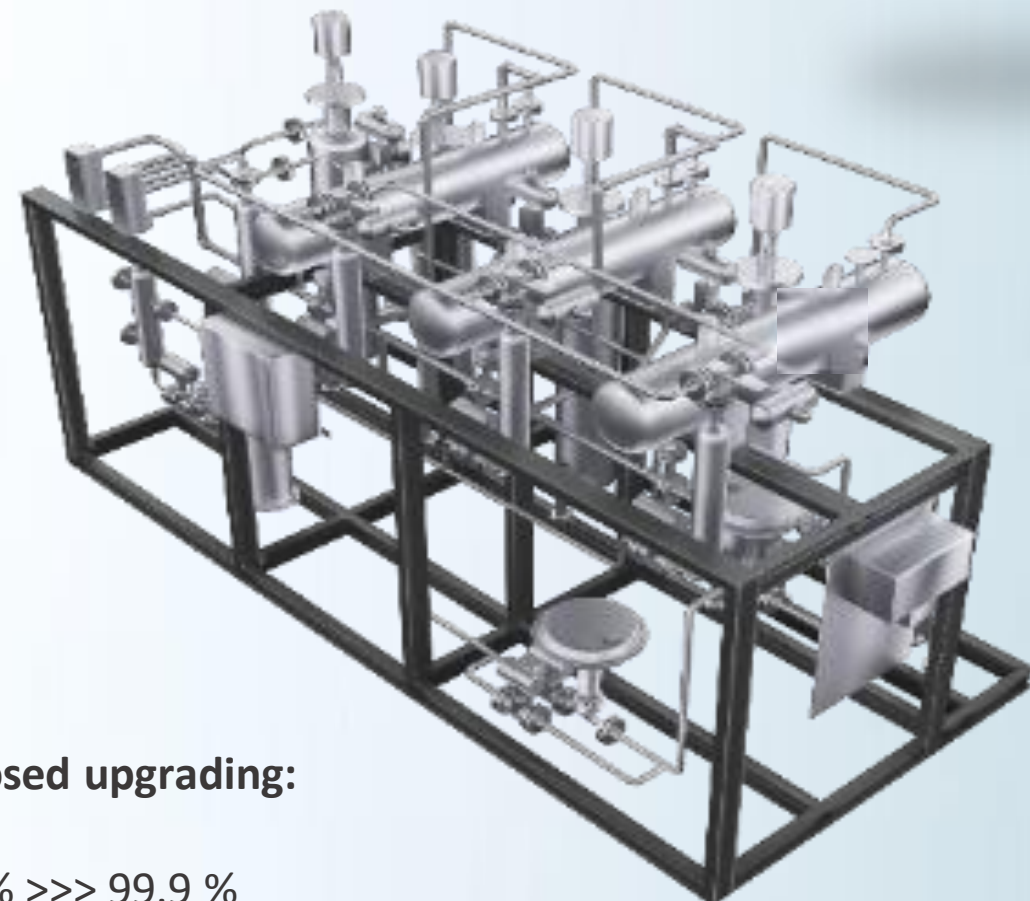
Fuel Cell consumption Aircrafts

Fuel Cell consumption Automotive

Fuel Cell consumption Stationary

Fuel Consumption in Spacecrafts

General upgrading of less quality H₂



Proposed upgrading:

99.0 % >>> 99.9 %

99.9 % >>> 99.99 %

99.99 % >>> 99.999 %

99.999 % >>> 99.9999 %

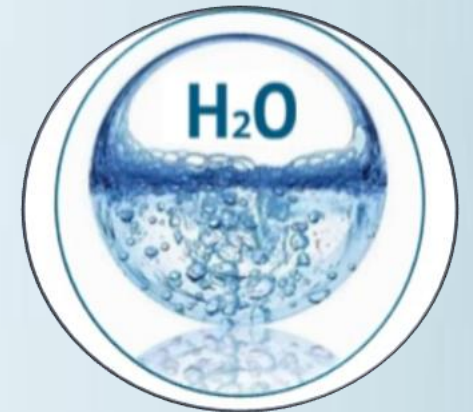
* Depending on quality level on the input-side



Shanmei Group

www.shccig.com

Our Portfolio



4. DI Water (H₂O) Purifier

As per client dimensions (tailor-made)

- **Plug-In/Start & Easy-to-Move**
- Expandable
- Fast Installation
- Customized scenarios
- Automatic process/duty
- Qualified control modules

Proposed application segments:

Scientific laboratory application

Semi-conductor industry

General upgrading of less quality H₂O

Improves quality of hydrogen (H₂) electrolysis

Industrial purification process for H₂O



* Depending on quality level on the input-side



Shanmei Group

www.shccig.com

Our Portfolio



5. Methanol (MeOH) Generators

Power outlet 5 kW or 10 kW



- Remote Telecom Tower Applications
- Remote Green Electricity Generation
- Green On-Board Electricity for Sea Vessels





Shanmei Group

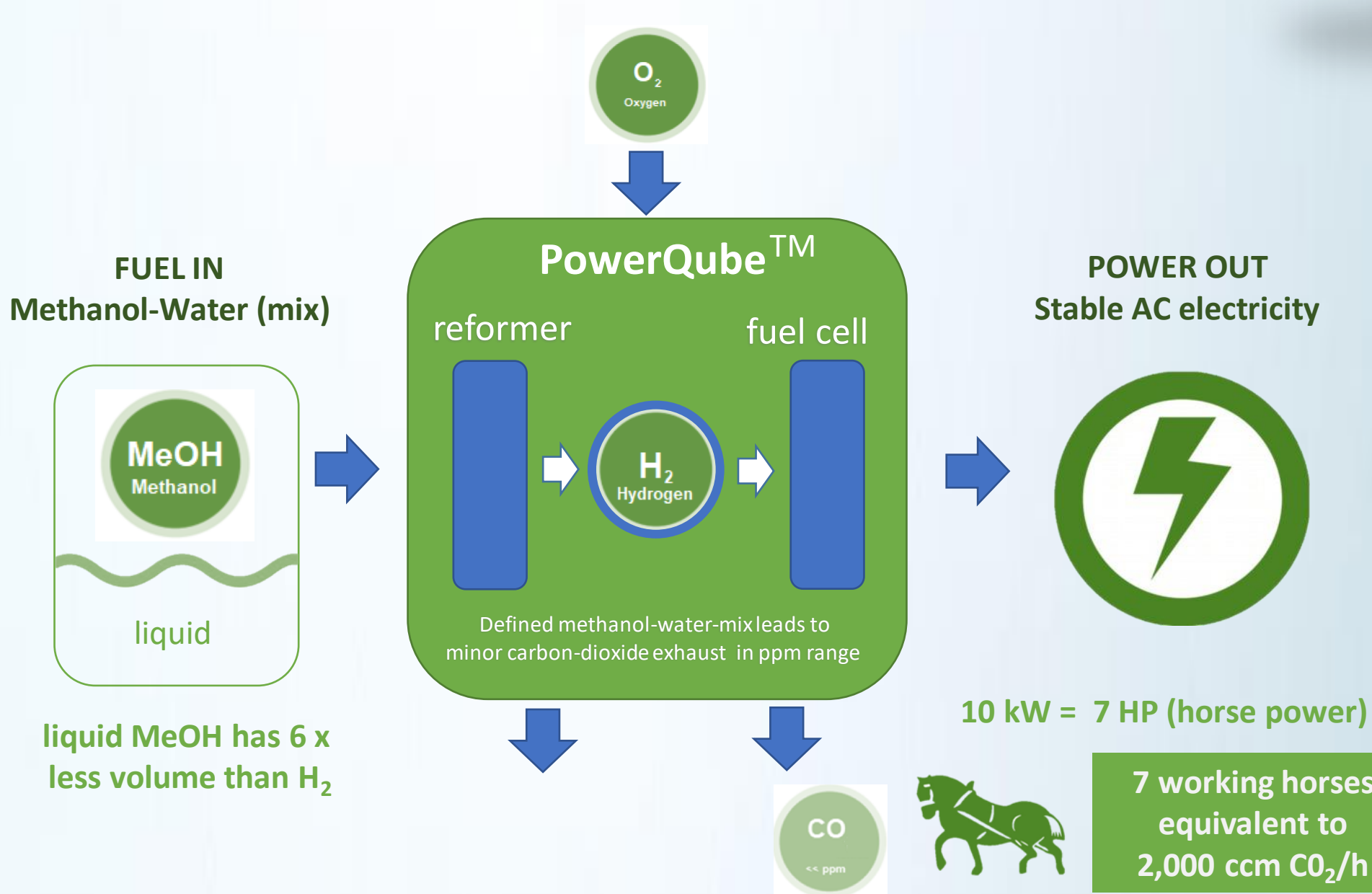
www.shccig.com

Our Portfolio



5. Methanol (MeOH) Generators

Power outlet 5 kW or 10 kW





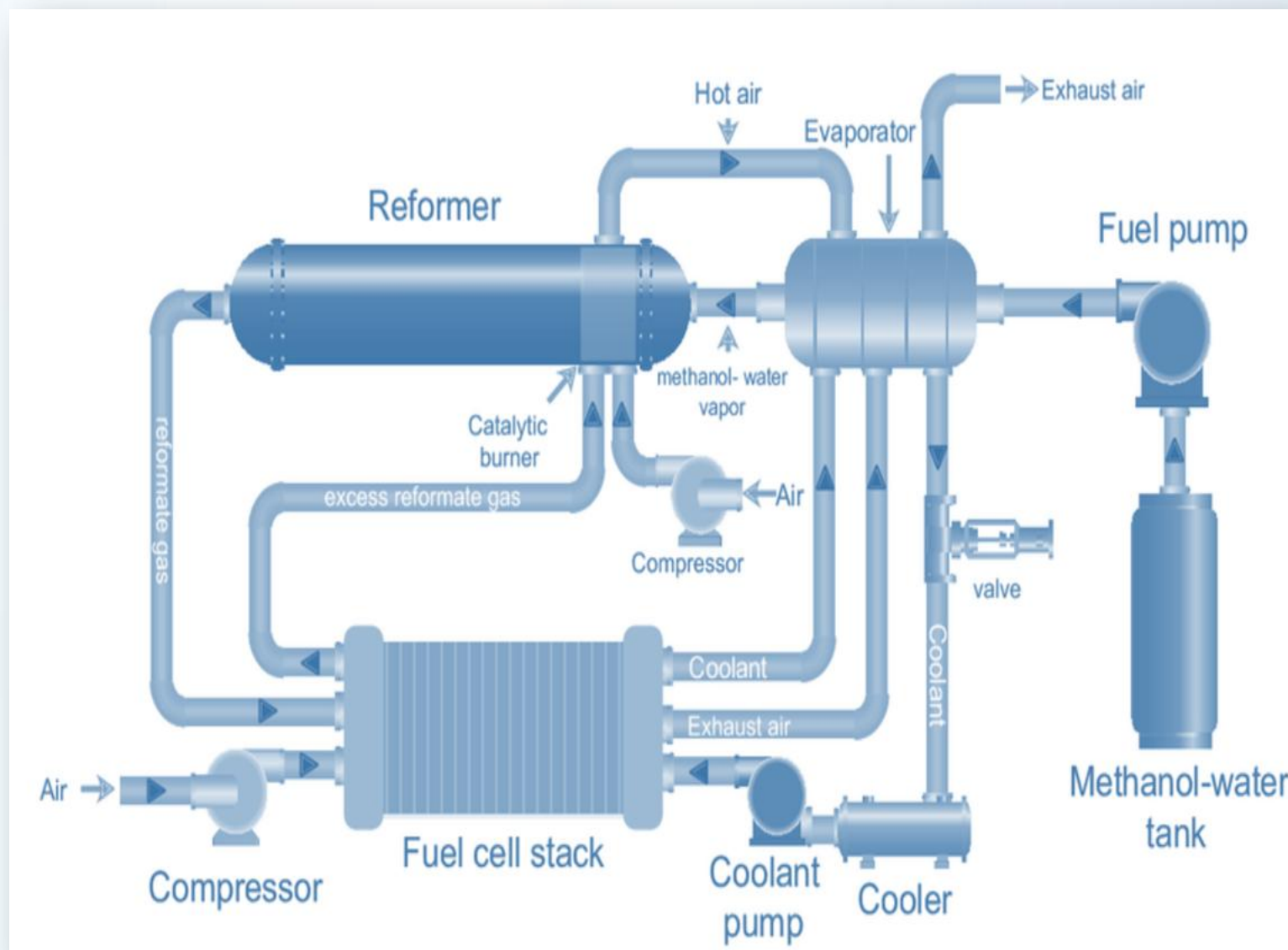
Shanmei Group

www.shccig.com



6. Methanol (MeOH) to Hydrogen (H₂) Reformer

Suitable to Generators up to 10 kW





Shanmei Group

www.shccig.com



6. Methanol (MeOH) to Hydrogen (H₂) Reformer 1st Methanol-to-Hydrogen & Hydrogen Refueling Station





Shanmei Group

www.shccig.com

Our Applications

05



TOWARDS GREEN ENERGY SOLUTIONS



Shanmei Group

www.shccig.com

Our Applications



Photovoltaic Energy Storage

TOWARDS GREEN ENERGY SOLUTIONS



Shanmei Group

www.shccig.com

Our Applications



Hydrogen (H₂) Production

TOWARDS GREEN ENERGY SOLUTIONS



Shanmei Group

www.shccig.com

Our Applications



Windfarm Energy Storage

TOWARDS GREEN ENERGY SOLUTIONS



Shanmei Group

www.shccig.com

**Please contact us
Thank you!**





Shanmei Group

www.shccig.com



Contact Us

Green Hydrogen Solutions
For Global Markets

International Business Development

URVALCO Suzhou Ltd.
Sales Channel Partner
2 Taishan Road (A - 1607)
CN-215129 Suzhou
+86 186 2629 3228

www.urvalco.com
info@urvalco.com

Engineering & Assembly CN

Shanghai Shaanxi Coal High-Tech
Research Institute Co., Ltd.
618 Dingyuan Road, Songjiang
CN-201620 Shanghai
+86 21 6785 1666

www.shccig.com
shsmyjy@shsmyjy.com



NewTech Engineering
Solutions for the People

Dirk Schneider

General Manager 总经理

URVALCO Suzhou Ltd.
2 Taishan Road, A-1607
CN-215129 Suzhou
+86 - 186 2629 3228
info@urvalco.com

苏州乌瓦尔科科技有限公司
苏州市虎丘区泰山路2号CN-
和枫科创园A座1607室
WeChat: 186 2629 3228
dirk.schneider@urvalco.com



陕煤集团
SHANMEI GROUP

Dr. Thomas Xiang

R&D Center

Hydrogen Carbon-Green Energy
(HCGE) Projects Department
Director/Project Leader

Shanghai Shaanxi Coal Hi-tech Research Institute Co., Ltd.

Address:
Building 10, Fashion Valley Creative Park, No.618, Dingyuan Road, Songjiang District, Shanghai
Building 1, No.689 Rongle East Road, Songjiang District, Shanghai
Tel: 180-1723-3455
E-mail: xiangdecheng@shsmyjy.com
Web: www.shccig.com