High Energy Efficiency / ROI / Reliability

LONGi ALK Fi1 Series

Start the Era 1.0 of Electrolysis Energy Efficiency

Alkaline Electrolyzer

Energy consumption down to **4.0** kWh/Nm³

2018
- Proposed "Solar for Solar" development model
- Initiated strategic research on the hydrogen industry chain

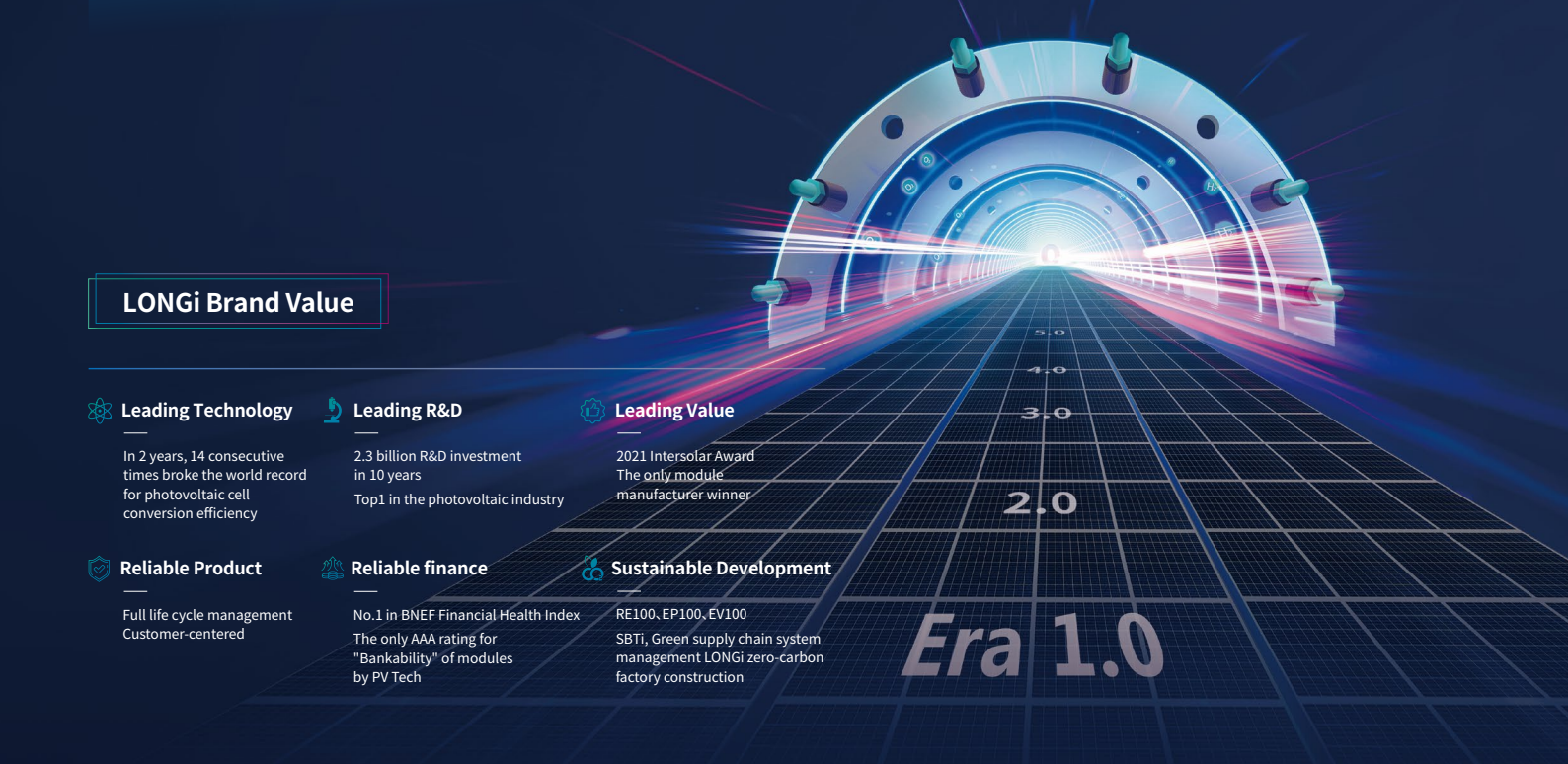
2021
- In March, LONGi Hydrogen was registered
- In April, Hydrogen production equipment plant locates in Wuxi, Jiangsu
- In October, 1st electrolyzer inauguration went offline
- In December, production capacity reached 500MW

2022
- In May, won the bid for the world's largest green hydrogen project
- In November, participated in the compilation of "Guidelines for Performance Evaluation of 'Top Runner Program' of T/CAB 0166-2022 Water Electrolysis system"
- In December, production capacity reached 1.5GW, ranking No.1 worldwide

2025
- 5 to 10GW Scheduled capacity

5-10GW

LONGi Hydrogen is committed to becoming
the world's leading large-scale electrolyzer
and green hydrogen production solution provider.



LONGi Brand Value

Leading Technology
In 2 years, 14 consecutive times broke the world record for photovoltaic cell conversion efficiency

Leading R&D
2.3 billion R&D investment in 10 years
Top1 in the photovoltaic industry

Leading Value
2021 Intersolar Award
The only module manufacturer winner

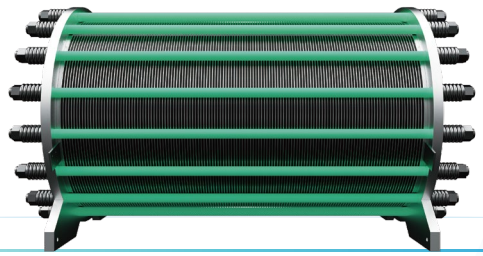
Reliable Product
Full life cycle management
Customer-centered

Reliable finance
No.1 in BNEF Financial Health Index
The only AAA rating for "Bankability" of modules by PV Tech

Sustainable Development
RE100、EP100、EV100
SBTi, Green supply chain system management LONGi zero-carbon factory construction

LONGi ALK Hi1 Series

Hi1 Series Electrolyzer Data	Hi1 1000	Hi1 Plus 1000
Production Flow rate (Nm^3/h)	1000	
Operating Pressure (MPa)	1.6	
DC power Consumption (kWh/Nm^3)	⩽4.3	⩽4.1
Load Range	30%-110%	
Hydrogen Purity (after purification)	99.999%	
O_2 Content in H_2 (ppmv)	1	
Operating Temperature (℃)	90±5	
Ambient Temperature (℃)	5-40	
Electrolyte	30% KOH	



Hydrogen Production System

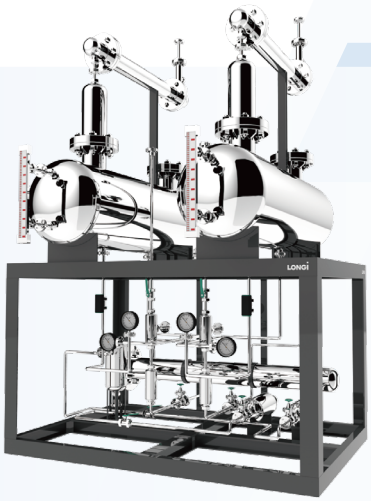
The industy's first 4000Nm^3/h bundled system (4 electrolyzers with 1 gas-liquid separation skid), saving 20% footprint.
Optional: Purfication, Rectifier, other auxiliary sysems.

Better performance
Improved DC power performance through overpotential and ohmic loss reduction by internal structure and material optimization.

Higher reliability
World leading automatic production line, ensure consistent and excellent performance.

Remote controllable
Automatic N_2 purging function, multiple protection interlocks for safe shutdown, redundant PLC design, independent safety instrumented system.

Online monitoring
Real-time process and utility parameters monitoring, ensure operation safety and data traceability.



Reliably and Steadily Invigorate by Science & Technology

Qualification
- ESA community responsibility
- System certification WCA
- ISO9001 / 14001 / 45001
- ASME certified factory
- Self-built reliability lab

Safety
- ATEX rates equipment
- Professional team dedicate to HAZPO analysis
- PLC control + Independent SIS
- Comply with CE-PED / ASME / IEC / AS / UL

Product
- Mature ALK technology
- 99.999% high purity hydrogen production
- 70+ patents to back the performance

System
- Fully automated production / welding line guarantee the consistency of system performance
- 100% remote controllable
- Online monitoring platform (available to client upon request)

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