Electrolysis
GH2 Master Class
UNAM School of Medicine
Namibia

Siemens Energy
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Siemens Energy is an integrated energy technology company

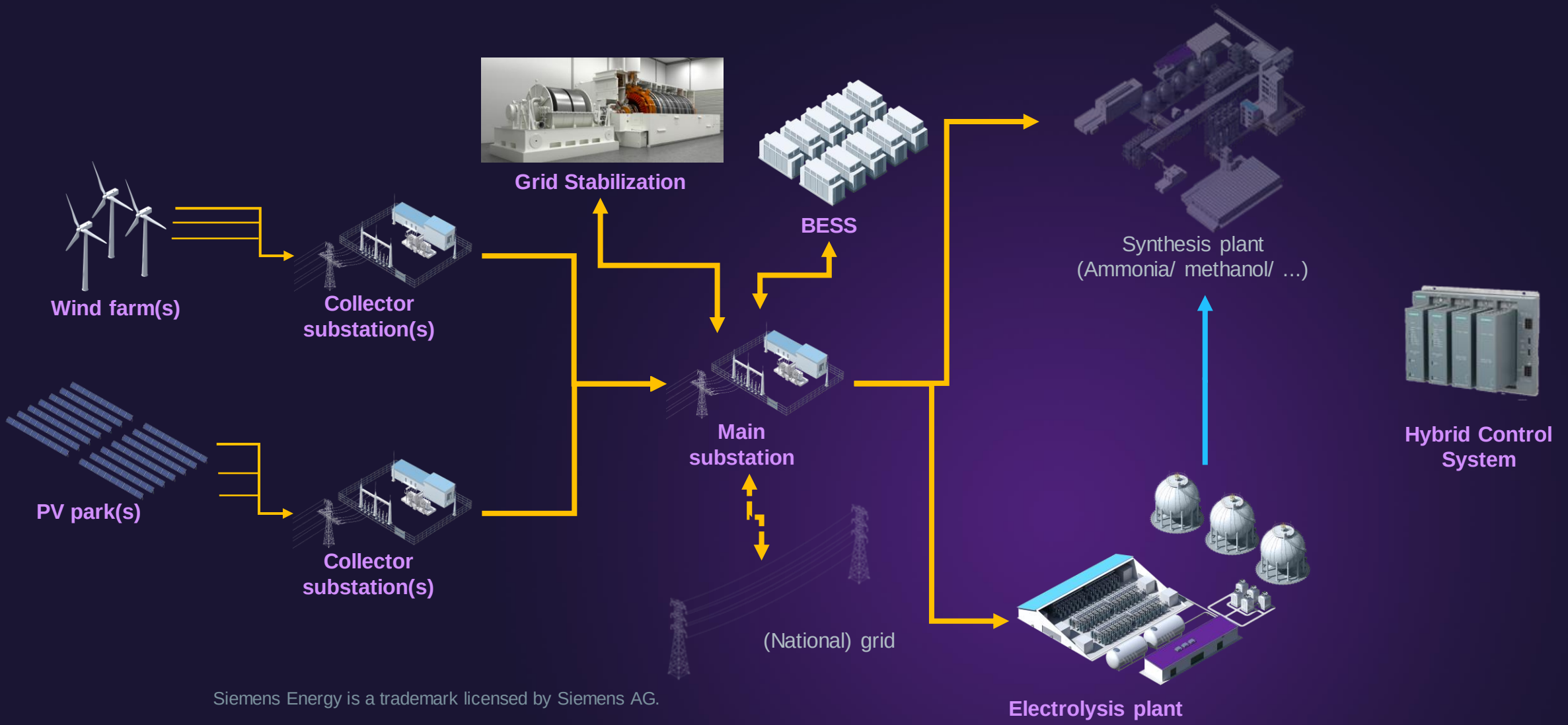
Low- or zero-emission power generation

Transport and storage of energy

Reducing CO_2 footprint and energy consumption in industrial processes

We provide many essential products, solutions and services along the entire PtX value chain

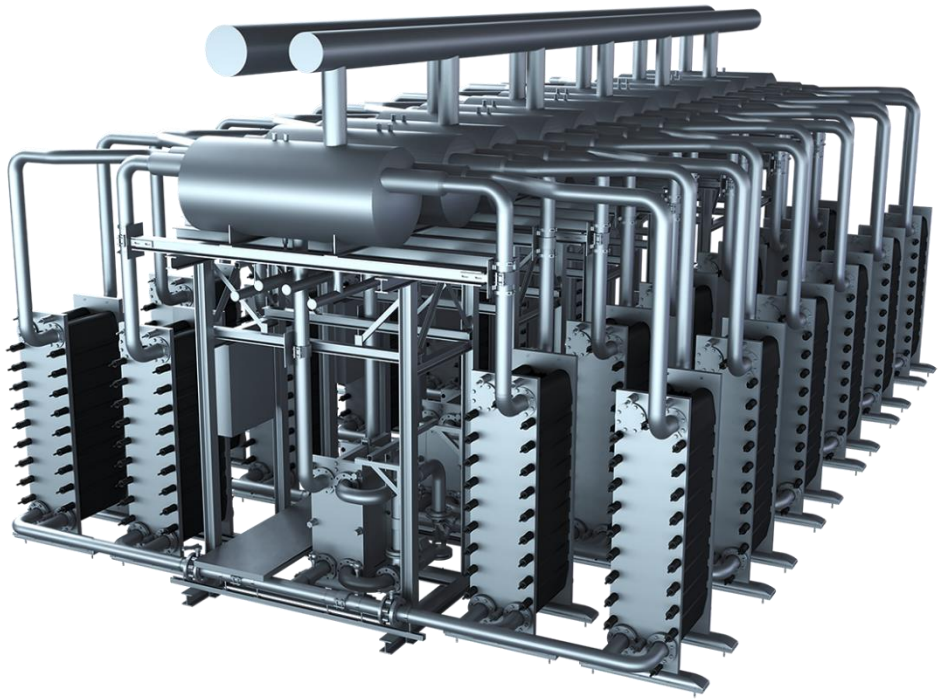
SIEMENS energy



Silyzer 300
Fact Sheet

Hydrogen production	335 kg/h
Plant efficiency (HHV[1])	>75.5%
Power demand	17.5 MW
Start-up time	<1 min, enabled for PFRS[2]
Dynamics in range	10%/s in 0 – 100%
Minimal load	40% single stack
Dimension full stack array	15.0 x 7.5 x 3.7 m
Dimension system plant	35.5 x 15.5 x 9.0 m
Stack design lifetime	Optimized for 80 kOH[4]
Plant availability	~95%
Demin water consumption	10 l/kg H_2
Dry gas quality[3]	99.9999%
Delivery pressure	Customized

1 Plant efficiency includes rectifier, transformer, transformer cooling and gas cooling
2 Primary Frequency Response Service | **3** With DeOxo | **4** Operating Hours



Silyzer 300 production concept

Electrolyzer reference plant

- Pre-engineered basic design
- Integrated solution with strong partner approach
- Turn-key possible

Electrolysis System

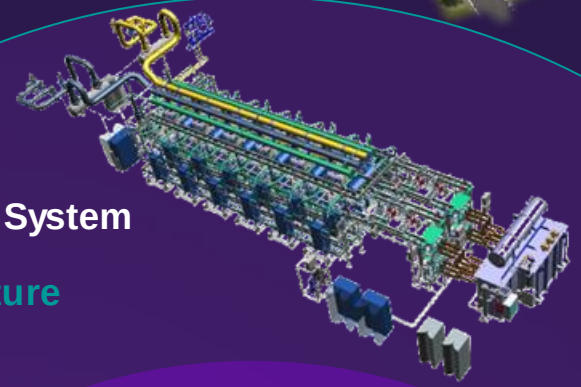
- Minimize on-site installation
- Maximum of standardization by defined interfaces
- Build to print pre-engineered

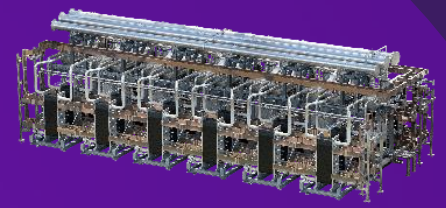
Localized decentral packaging

- High quality by pre-assembling
- Transportable units
- Strong local content

Cost efficient central stack factory

- High level of Automatization
- Large quantities and strong supply chain management
- Strong partner relation of key components





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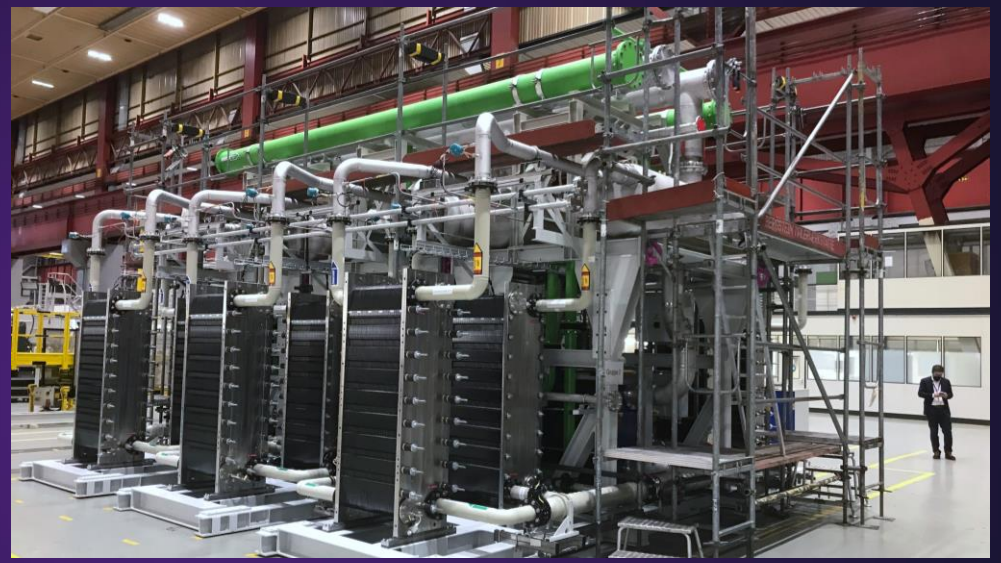
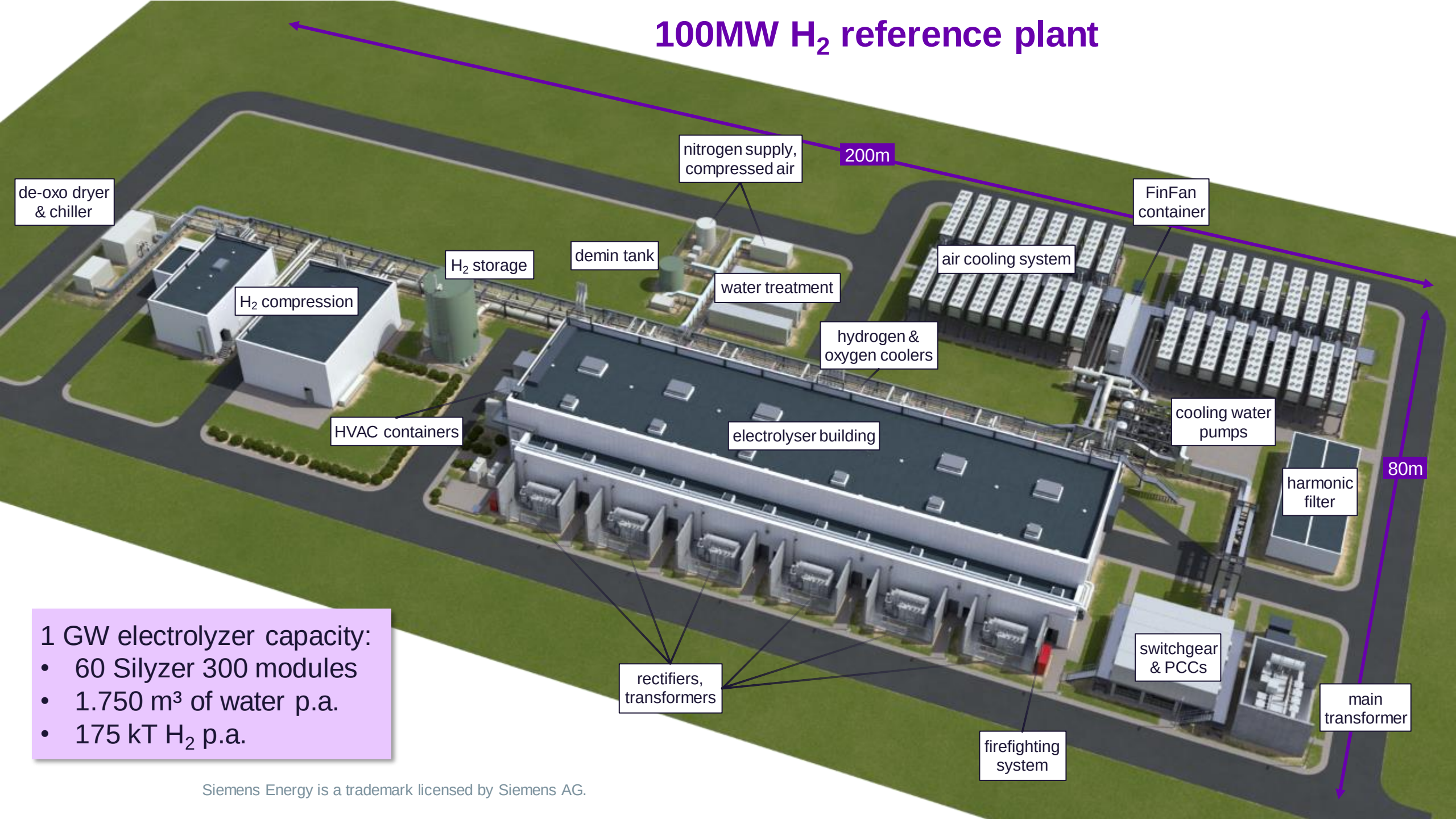
- Manufacture Electrolyzer Modules
- Ship modules, Gas separator, Heat Exchanger to Local Assembly Center

Local Assembly Center

- Source remaining components locally : Steel Structure, Valves, Piping, Couplings, Paints…
- Assemble it in group composed by 4 modules
- Assemble module groups in full array incl. header pipes



100MW H_2 reference plant



1 GW electrolyzer capacity:

- 60 Silyzer 300 modules
- 1.750 m³ of water p.a.
- 175 kT H_2 p.a.

Explore the potential of green hydrogen

Green Hydrogen Production Website
www.siemens-energy.com/electrolyzer

Haru Oni App
www.haruoni.com

Haru Oni Project Website
Haru Oni hydrogen plant | 2021 | Siemens Energy Global (siemens-energy.com)

ESD Website
Energy System Design | Power plant solutions | Siemens Energy Global

Hybrid Power Solutions Website
Hybrid power solutions | Power plant solutions | Siemens Energy Global

Hydrogen Website
Hydrogen | Future Technologies | Siemens Energy Global