



## History

- 1994** Started to manufacture PV modules
- 2001** Established S-Energy
- 2002** Introduced first green village program in Korea
- 2006** Completed first MW PV power plant in Korea
- 2007** IPO. Listed KOSDAQ
- 2008** Started to export PV modules(EU)
- 2009** Established 2<sup>nd</sup> factory  
Marked USD 100M export
- 2010** Marked USD 200M export
- 2011** Established overseas subsidiary in the U.S.A.  
(S-Energy America)
- 2012** Completed Elk Grove PV Plant in the U.S.A.  
(4.8MW)  
Completed Kuala Perils Project in Malaysia  
(6.0MW)
- 2013** Achieved JET Certification  
Established overseas subsidiary in Japan  
(S-Energy Japan)
- 2014** Established O&M experts subsidiary  
company(S-Power)  
Established the fuelcell system subsidiary  
company(S-Fullcell)



Started as Samsung Electronics Solar Division in 1994 and subsequently spun-out as S-Energy, the Company is one of the industry's oldest and most experienced PV module manufacturers. Twenty years of field operating data support S-Energy's reputation as the best overall quality, performance and value for solar investors. S-Energy has further expanded functionally into specialized businesses; mainly in residential and plant PV lease, O&M, fuelcell systems. A global top tier company, S-Energy is listed in **Bloomberg New Energy Finance** (3<sup>rd</sup> quarter of 2014) as the world's second most bankable solar company.



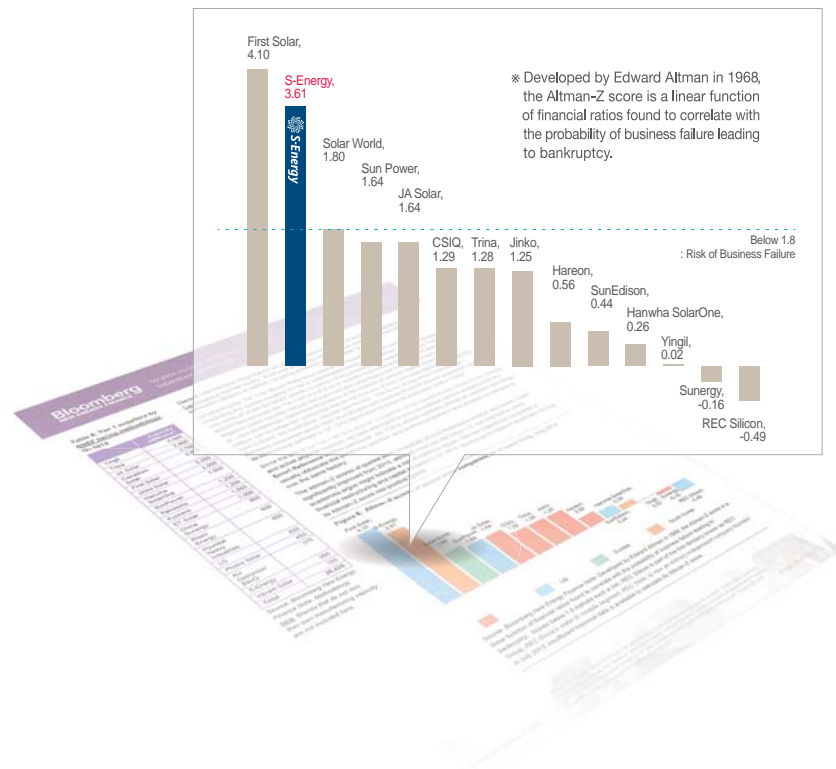


Name	S-Energy Co., Ltd.
Establishment	12 <sup>th</sup> of January 2001
No. of employees	423
Subsidiaries	S-Power / S-Fuelcell
Branches	[S-Energy America Inc.] Irvine, U.S.A. [S-Energy Japan Co., Ltd. ] Tokyo, Japan

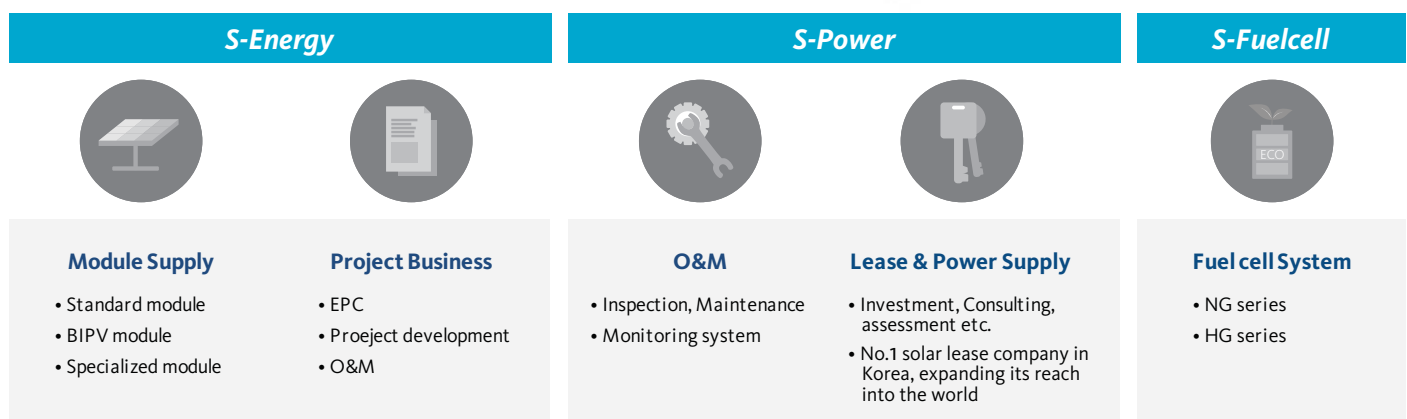


## Global Top Tier

S-Energy has ranked the world's second bankable solar company as being in the global top tier listed on **Bloomberg New Energy Finance** ('Who to trust', 3<sup>rd</sup> quarter of 2014).



## Business Models



## PV Module Supply

Based on our experience over the past 20 years, S-Energy's PV module has proven to be reliable and durable through production and supply of standard module, BIPV module and specialized module.

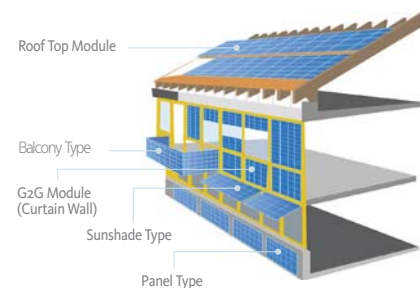
### Standard module

- Long-term reliability  
EL TEST, Enhanced PID, ARC Glass
- Durability  
Higher endurance than the IEC standard
- Sustainability  
Linear warranty/ Max. annual power decline up to 0.7%



### BIPV module

- 70% market share of BIPV in Korea
- 2009 building material certificate ('GUN' Mark)



### Specialized PV module

- Optimized desert PV module
- Lightest frameless type glass to glass PV module



## Project Business

S-Energy has the best team of experts in engineering, financial and legal services and they are ready to help you achieve the best outcome for your project.

01

EPC

### Procurement

#### Competitive components

- PV module
- Inverter
- Racking system
- SCADA
- Bankable sourcing

### Construction

#### Well-organized local partners

- Project engineering
- Civil engineering
- Electrical engineering
- Supervisory services

02

Project  
Development

### EPC

### Financing

### Consulting

- Financial modeling
- Incentive/Tax equity funding
- Project acquisition
- Project assessment
- Evaluating power system
- Environmental assessment
- Business analysis

03

O&M

- 24hr monitoring
- Immediate and reliable response
- Full insurance coverage



05





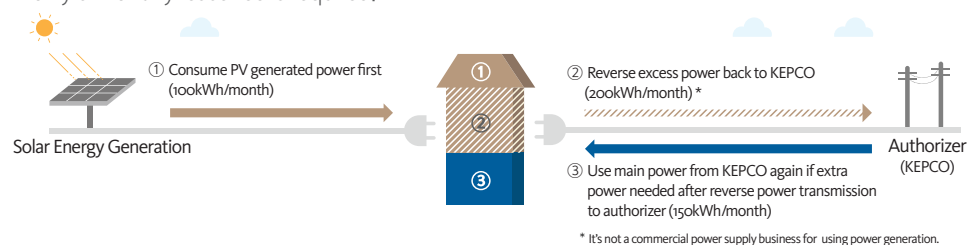
## Lease & Power Supply

Guarantee ROI through project financing and equity investment for small commercial power supply and residential solar leases.

### Solar lease

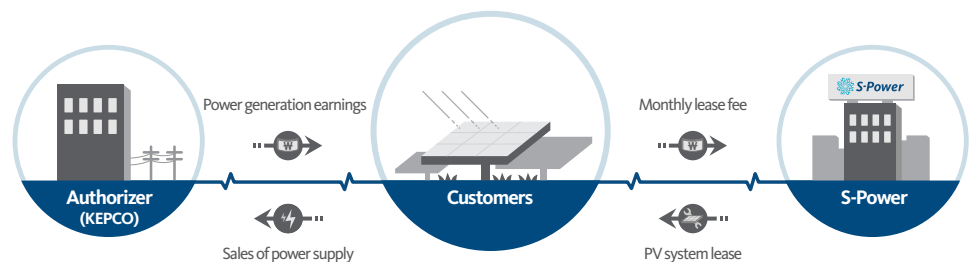
- Solar leasing for residential PV systems

Save over 20% on your utility bill without the initial investment by leasing home PV systems, only a monthly lease fee is required.



- Commercial solar lease (under 100kW)

No direct capital investment needed for PV systems by using commercial solar lease programs.



### Investment in PV power plants

- Improve the value of a PV power plant by buying the shares, operating the plant, and making a profit via resale.

### Financial advisory and consulting

- Advise business models with risk hedging for optimal ROI and coordinate investors for stable financial support.

### Project feasibility assessment

- Analyze and evaluate various factors affecting project cash flow for business feasibility.



## O&M (Operations & Maintenance)

The best experts in operations and maintenance, S-Power meets customer's needs through advanced SPMC(Solar Performance Management Center).



### Monitoring

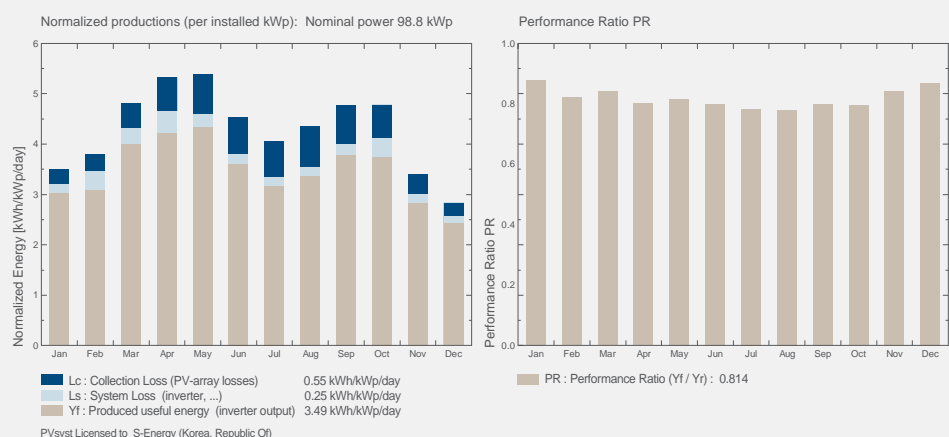
SPMC(Solar Performance Management Center) provides high quality advisory services and optimized maintenance services.



### Inspection & Maintenance

The service is to ensure the performance of client's PV assets by identifying potential issues before they directly impact on power production.

## Grid-Connected System: Main results



### Guarantee

S-Power acts on your behalf, providing you optional services such as the best power-performance guarantee, insurance, accounting and security services. All for your convenience.

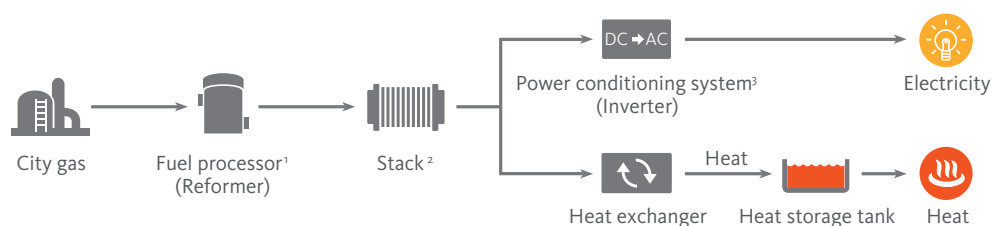


## Fuel cell system

S-Fuelcell provides core technology when it comes to fuel cell stacks, fuel processing, and the integral design of fuel cell systems.

### Configurations of fuel cell system

Fuel cell systems provide both electricity and thermal energy, with a total efficiency (electrical efficiency + thermal efficiency) of over 85%



1. A fuel processor is a reactor that transforms city gas into hydrogen-rich gas.
2. A stack generates energy (electricity and heat) through the reaction of hydrogen and oxygen (in the air).
3. A power conditioning system converts a direct current to an alternating current.



#### NG Series

Model ecogener NG series  
 Fuels LNG/LPG  
 Power 1~5kW (electricity)  
 1.5~7kW (heat)  
 Efficiency Over 85%



#### HG Series

Model ecogener HG series  
 Fuels H<sub>2</sub>  
 Power 1~10kW (electricity)  
 1.5~15kW (heat)  
 Efficiency Over 85%

## MW Installation Reference



**1** 2006 Dong-hae PV-Anlage    **2** 2007 Muan Solartopis    **3** 2008 Jin-do power plant of Samsung C&T "SolLuce"  
**4** 2009 Schlutterhall Project (Germany)    **5** 2010 EFICO Project (Belgium)    **6** 2010 Tomsan Project (Czech Republic)  
**7** 2011 T.E. Project (Czech Republic)    **8** 2012 Elk Grove Project (U.S.A.)    **9** 2013 Kuala Perlis Project (Malaysia)  
**10** 2014 Gamma Project (Romania)

Project Name	Country	Capacity	Year
Donghae Power Plant	Korea	1.0 MW	2006
Muan Solartopia	Korea	1.0 MW	2007
Jangsu Dong Hwa PV Power Plant	Korea	1.0 MW	2007
Buan IUSNB	Korea	1.3 MW	2008
Kimcheon PV Power Plant	Korea	2.5 MW	2008
Jindo Samsung Solluce	Korea	3.0 MW	2008
Imsil PV Power Plant	Korea	1.0 MW	2009
Tomsan Project	Czech Republic	0.9 MW	2010
Alps Project (Alps Winter Olympic Park)	Germany	1.5 MW	2010
Efco Project, Zeebrugge	Belgium	1.0 MW	2010
T.E. Project	Czech Republic	10.0 MW	2011
Juseong University	Korea	1.5 MW	2012
Elk Grove Project	U.S.A.	4.8 MW	2012
Kuala Perlis Project	Malaysia	6.0 MW	2012
Pajam Project	Malaysia	5.0 MW	2013
Kuala Sawah Project	Malaysia	7.0 MW	2014
Gamma Project	Romania	28.0 MW	2014
Minami Awaji Project	Japan	10.7 MW	2014 On-going PJT
Tojo Project	Japan	33.0 MW	2014 On-going PJT

## Head office



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