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The company dedicated to creating a bright and clean world through solar PV plants and alternative energy.



HAEOREUM ENERGY CO., LTD.

Greetings



Since its establishment in 2009, Haeoreum Energy Co., Ltd. has been dedicated to leading the future of sustainable energy as a specialized company in solar power generation. We have consistently strived to innovate and take on new challenges in the fields of solar thermal energy, photovoltaic systems, system boilers, and renewable energy.

With extensive experience accumulated in construction, equipment, and technology sectors, we offer specialized photovoltaic installation services through our highly skilled technical workforce. We are a total solutions provider offering one-stop services that include consulting, permitting, design, structural fabrication, installation, and maintenance (Warranty).

Through solar power generation projects, we aim to help our clients reduce energy costs and create long-term value. At the same time, we actively respond to the rapidly changing domestic and global environment, contributing to the creation of a bright, clean, and sustainable world for future generations. We are committed to promoting the use of renewable energy and taking the lead in protecting the environment.

We will continue to provide reliable and high-quality installation services that exceed customer expectations. Thank you.

Certifications

HAEOREUM ENERGY CO., LTD. CEO Sung Byung-yong



2009

2014

2017

2018

Company History

Establishment of Myung ENG: Solar thermal installation projects
- Installation of night-time electric boilers

Establishment of Daemyung Hi-Tech: Residential and industrial solar PV system installations

Establishment of Laos branch: 50MW solar PV plant under construction

Establishment of Mongolia branch: Contract signed for construction of two 50MW solar PV plants

Project References



SH Logistics Center (1,500 kW)



Ulsan Ulju Factory Rooftop (200 kW)



Distribution Complex with Curved Roof (200 kW)



Industrial Complex Rooftop and Parking Structure (1,000 kW)



Residential Self-Generation Systems



Residential Solar System (Parking Lot Type)



Parking Lot Solar Power Plant (100 kW)



Office Building (Curved Roof Type)



Sancheong Livestock Facility Rooftop (350 kW)



Sancheong Livestock Facility Rooftop (300 kW)



Geochang Livestock Facility Rooftop (200 kW)



Miryang Livestock Facility – Reinforced Slate Roof (100 kW)

Key Achievements

Busan City Hall construction, Changwon Labor Office rooftop, various public offices and over 180 public-sector solar PV installation projects

Over 4,800 residential solar PV system installations

Over 350 NGP-linked solar PV plant constructions

Over 135 government building support projects

Over 5,600 RPS general solar PV plant constructions

Over 1,200 lease-based solar PV plant constructions

Over 300 rooftop solar installations for new apartment complexes and large-scale residential communities nationwide

Numerous other renewable energy power plant installations

Overseas Division (Laos, Mongolia, Vietnam, Philippines)



Masan Metro City – 53rd floor rooftop installation



Ulju-gun Factory Rooftop – Phase 2 Project (500 kW)

2020

2022

2023

2024

Establishment of Sungkwang Hi-Tech: Specialized in solar PV, RPS projects, and large-scale construction

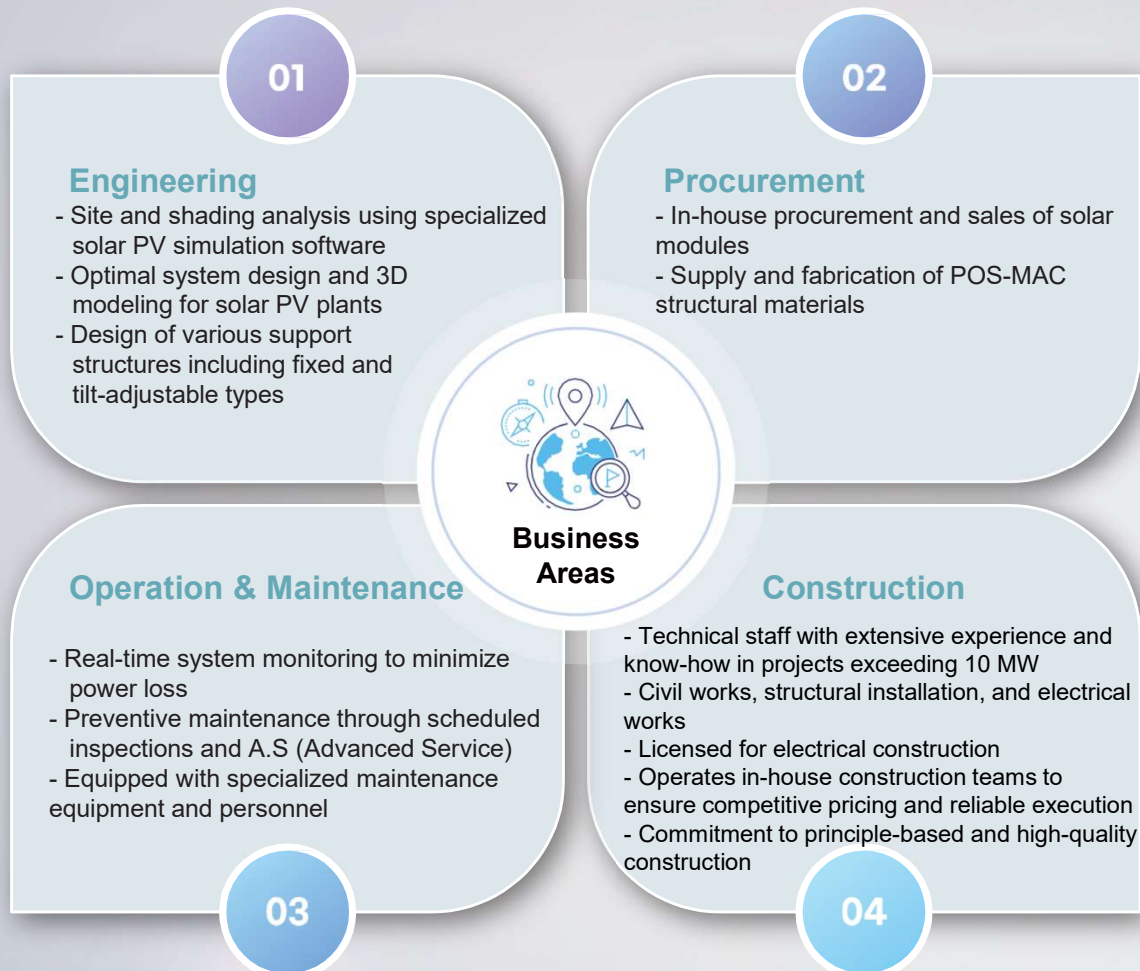
Establishment of Haeoreum Energy Co., Ltd.: Expansion of headquarters and factory in Gimhae

Completion of automated laser facility for anode production, wind power, underwater marine operations, and solar PV structure production

Establishment of R&D department
Acquired ISO 9001 Certification for Quality Management System
Acquired ISO 14001 Certification for Environmental Management System
Acquired ISO 45001 Certification for Occupational Health and Safety Management System

Business Areas

Haeoreum Energy has secured cost competitiveness through vertical integration of its solar power generation systems. Based on extensive construction experience and accumulated expertise, we are committed to being the optimal partner for maximizing the efficiency of solar PV systems with our team of skilled professionals.

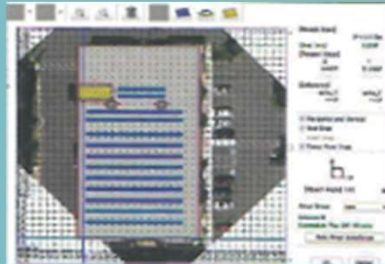


We are embarking on a bold journey to become a **Top-tier provider in solar PV systems.**

Engineering

01 Feasibility Study and Site Analysis

- Considering the expected lifespan of over 20 years for solar PV systems, we conduct feasibility studies with a long-term perspective
- Solar radiation and expected energy output are forecasted based on accurate meteorological data
- Advanced analysis software is used to minimize energy loss from shading and to calculate optimal spacing
- Optimal system design is provided to maximize efficiency of the solar PV system



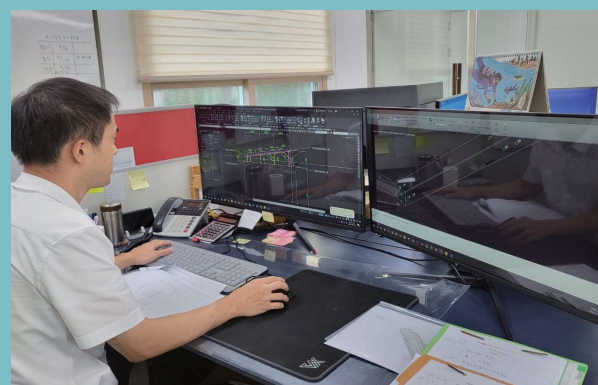
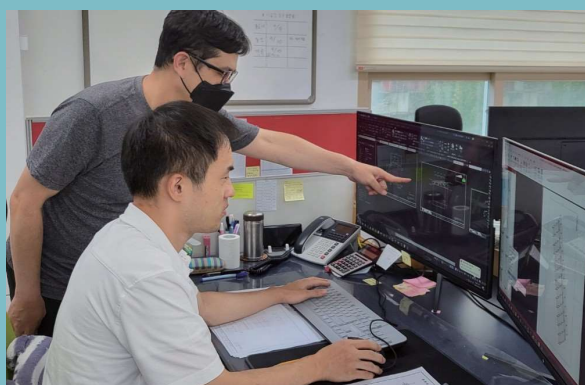
02 3D Modelling

- 3D modeling enhances customer convenience and understanding
- Supports application of various design options



03 Structural Design

- Staffed with certified structural design specialists
- Designs account for wind loads, snow loads, and other structural safety factors
- Capable of designing a variety of system types, including rooftop, flat slab, fixed, and tilt-adjustable structures



Automated Laser System for Structure Production

Structural Material Production

- Utilizes steel with over five times the corrosion resistance compared to conventional galvanized steel
- Equipped with production facilities for profiles and C-channels

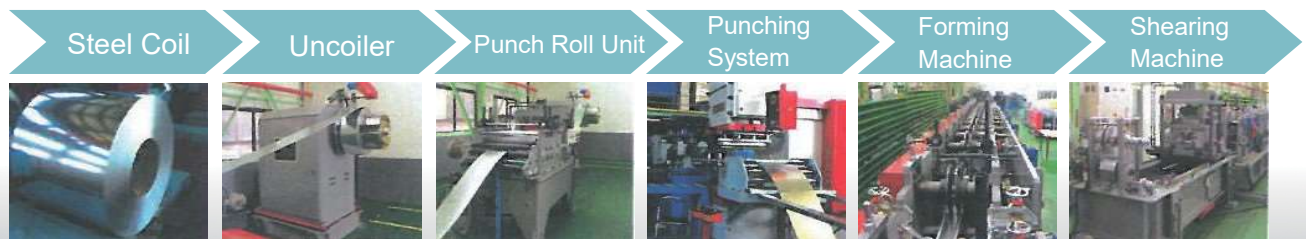


Structure Production

- Manufactures various solar PV mounting structures including C-channels, H-beams, profiles, and square pipes
- Supports hole punching and cutting processes



Production Process of Structural Materials



HAEOREUM ENERGY

Solar PV Installation Procedure



With extensive experience in constructing solar PV plants over 10MW and a wide range of installation cases, we operate and manage our own in-house construction team with outstanding capabilities. Every process is carried out with meticulous attention to detail to prevent poor workmanship and ensure long-term system reliability.



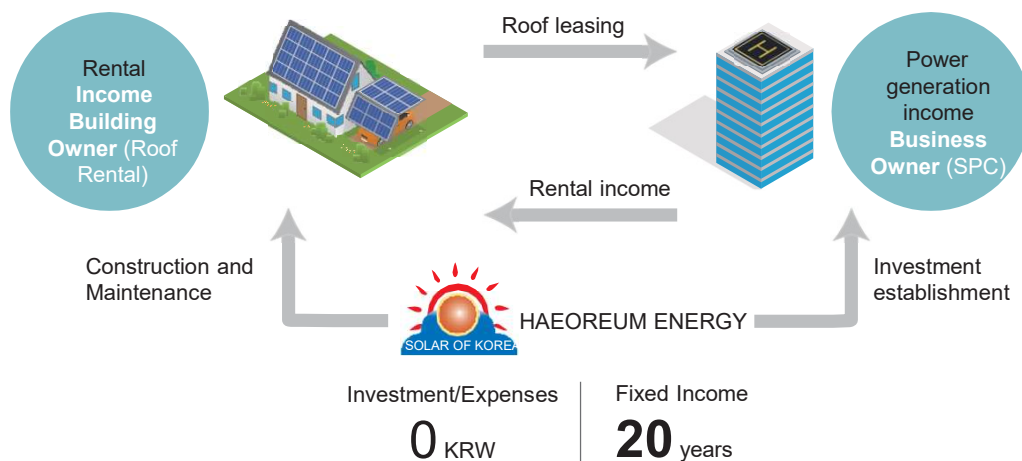
Construction**Procedures for Solar PV Plants**

Solar power generation is a business model that involves producing and selling electricity. The process generally follows four key stages: (1) Feasibility Study, (2) Licensing and Permits, (3) Notification, Inspection, and Power Purchase Agreement (PPA), (4) Operation and Management

(1) Feasibility Study	(2) Licensing and Permits	(3) Notification, Inspection, and Power Purchase Agreement (PPA)	(4) Operation and Management
(1) Review of site requirements - Evaluation of the possibility of obtaining development permits - Check if the land is subject to farmland or forest land conversion permits - Determine whether environmental impact assessments or other evaluations are required (2) Check available grid capacity with KEPCO (Korea Electric Power Corporation) - Confirm feasibility of connection to KEPCO transmission lines	Development Permit - Solar PV facilities are considered structures and typically require a development permit. - Requirements may vary depending on the local government. - May need to proceed simultaneously with farmland or forest land conversion permits depending on site conditions	(1) Completion Inspection (Development Permit) (2) Pre-use Inspection - Inspection of the construction plan and conformity with facility standards (3) Power Purchase Agreement - Conclude agreement with KEPCO or Korea Power Exchange	(1) RPS Eligibility Verification - Within 1 month after the pre-use inspection (2) REC (Renewable Energy Certificate) Issuance - Apply within 90 days from the end of the month in which electricity was supplied

Types of Solar PV Business Models

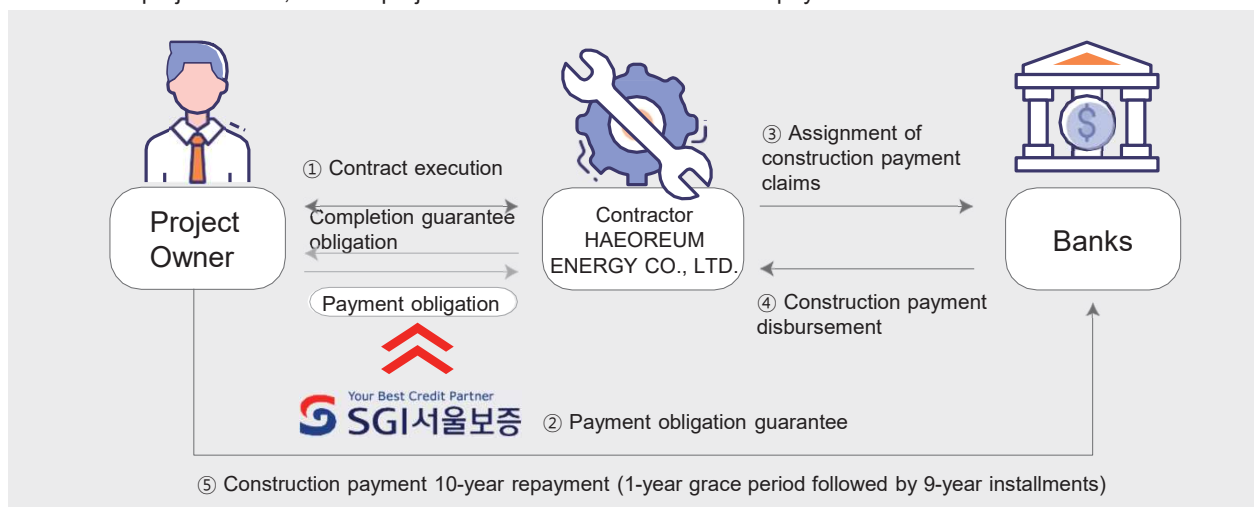
Solar PV Business Direct Capital Investment	A business model where the owner invests directly to construct a solar power plant and generates revenue by selling the electricity produced. Example: Expected monthly revenue of KRW 2.5 million to 3 million (based on a 100 kW system) - Direct Investment by Business Owner - High return on investment and stable income
Solar PV Leasing Business Factory Rooftop Leasing	A model in which the building owner earns rental income by leasing rooftop space, while the solar PV project operator gains revenue through solar energy production. Revenue Generation - No investment or maintenance costs required from the property owner - Fixed monthly rental payments - Industry-leading returns for lessees - Solar power plant transferred to the property owner after lease expiration
Factoring Zero Capital, Pre-construction	A financing model where a financial institution pays the construction cost upfront on behalf of the business owner. Business owner repays the cost in installments using revenue from power generation - No initial investment required - Solar power plant construction proceeds without capital - Generates stable net profit for over 20 years

What is a Rooftop Leasing Business?

What is factoring?

No capital - why preconstruction is possible

Factoring refers to a financial arrangement where a financial institution makes a lump-sum payment to the contractor on behalf of the project owner, and the project owner then makes installment payments to the financial institution.

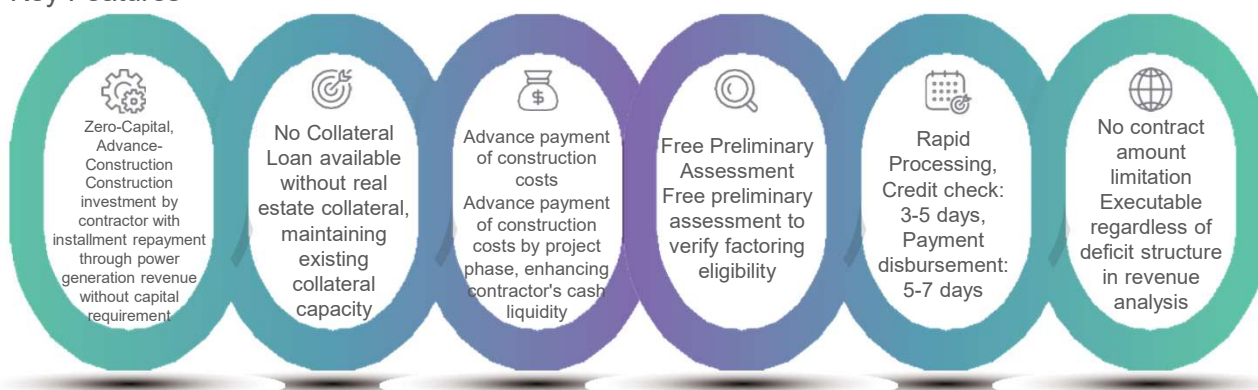


Required documents for preliminary assessment

[Essential Documents] ① Installation location, amount, capacity, ② Personal information consent
③ Local tax type-specific taxation certificate, ④ Income amount certificate or withholding receipt

Individual Business Owners	Corporate Business Owners	Agriculture / Fishery / Livestock Industry
① Copy of business registration certificate ② Value-added tax base certificate (recent 3 years) ③ Consent for individual business credit evaluation	① Copy of business registration certificate ② Current shareholder registry ③ Financial statements for the recent 3 years ④ Corporate local tax type-specific taxation certificate (by taxation area) ⑤ Consent for corporate business credit evaluation	① Farmland register ② Agricultural business entity registration certificate

Key Features



Recommended

- Those seeking zero-capital construction
- Those with difficulty securing self-payment funds
- Those unable to establish collateral
- Those who wish to proceed with construction in their child's name on top of their own building
- Those who own buildings
- Those operating livestock facilities, factories, or farms
- Those seeking stable retirement products
- When outstanding payments occur at completed sites (within 6 months)

Rental Product Business Proposal Revenue Table (Example)

Classification (Capacity)	Without Securities Issuance	With Securities Issuance	
	300kW or more	95~300kW	300kW or more
Rent (Choose 1)	KRW 40,000 / yearly or KRW 35,000 / 5-year advance payment	KRW 40,000 / yearly or KRW 35,000 / 5-year advance payment	KRW 40,000 / yearly or KRW 35,000 / 5-year advance payment
Conditions	1. Corporate evaluation grade B or higher 2. Profit for 3 consecutive years on financial statements 3. Debt ratio 500% or less	When payment performance guarantee bond (lessor debt security) is issued	When payment performance guarantee bond (lessor debt security) is issued
Notes	Possible if 2 or more of the above conditions	Additional documentation guidance provided after review	Advance payment of 1-year rent considered upon PPA application submission, with additional documentation guidance after review

Rent	Yearly	5-year advance payment
Revenue	KRW 13,200,000 / year(s) x 20 times (KRW 40,000 / year(s) kW x 330 kW)	KRW 57,750,000 / 5 years x 4 times (KRW 35,000 / year(s) kW x 330 kW x 5 years)
Total Revenue	KRW 264,000,000 / 20 years	KRW 231,000,000 / 20 years



Estimated Return on Equity Investment (Example)

[Estimate Calculation]

53 ft² = 1kW (Example) 100kW x 1.5 = 5337 ft² (roof/rooftop)

[Power Generation Calculation]

Daily: 100kW x 3.6 hours = 360kW

Monthly: 100kW x 3.6 hours x 30 days = 10,800kW

[Current Sale Price Calculation]

When SMP: KRW 157, REC: KRW 81.5 (example), refer to current market rate

KRW 157 (SMP) + KRW 81.5 (REC) X 1.5 (weighting factor) = KRW 279.25

[Monthly Estimated Revenue Calculation]

10,800kW x KRW 279.25 = KRW 3,015,900



For inquiries regarding power generation revenue, contact: **1588-4696**
(We are committed to providing thorough consultation.)

Branches and Factories

Central Branch



Factory 1 Blast furnace, producing anodes by melting aluminum materials (production of wind and solar PV structures)

Daegu Branch

Busan Branch

Gyeongnam Branch

Haeoreum Energy HQ
Factory 1
Factory 2

Factory 3 Producing solar PV structures and accessories

Haeoreum HQ

7-16 Inje-ro 611beon-gil, Saengnim-myeon, Gimhae-si, Gyeongsangnam-do

Factory 1

7-16 Inje-ro 611beon-gil, Saengnim-myeon, Gimhae-si, Gyeongsangnam-do

Factory 2

7-14 Inje-ro 611beon-gil, Saengnim-myeon, Gimhae-si, Gyeongsangnam-do

Factory 3

535-15 Yongdam-ro, Hyeongok-myeon, Gyeongju-si, Gyeongsangbuk-do

Busan Branch

#301, Haekwang Bldg., 38 Ujangchun-ro 4beon-gil, Dongnae-gu, Busan

Daegu Branch

8 Songhyeondong-gil, Dalseo-gu, Daegu

Central Branch

#408 Crystal Plaza, 733 Buldang-dong, Cheonan-si, Chungcheongnam-do

Gyeongnam Branch

8 Seobu-ro 1499beon-gil, Juchon-myeon, Gimhae-si, Gyeongsangnam-do



Factory 2 Solar PV Structure Production



(주)해오름에너지
HAEOREUM ENERGY CO., LTD.

We are continuously researching and developing to discover customer-oriented new businesses that adapt to rapidly changing markets and to secure future competitiveness in the global era.



Laos: 8,895,800 ft², 240MW capacity (under construction in phases)