

2023



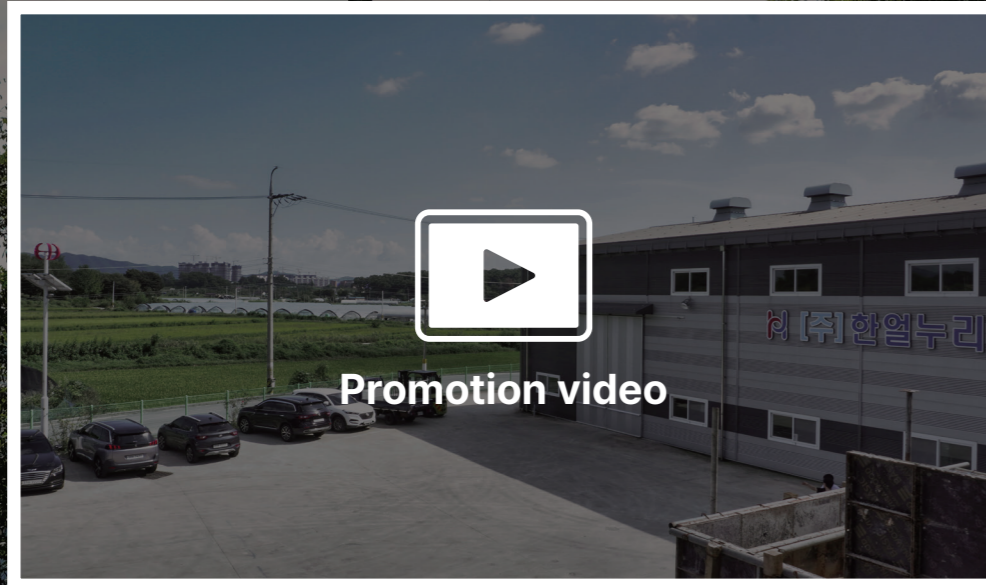
**PREPARE  
FOR TOMORROW**

**RENEWABLE ENERGY**

Renewable Energy  
Solutions

**Which Haneolnuri is making**





It's all about Haneolnuri, which depicts a future society where humans and nature live together with eco-friendly renewable energy technologies, making us dream of a better future.

# Renewable Energy Solutions which Haneolnuri is making



## Companies leading the future energy industry Companies dreaming of a green new deal

Haneolnuri Co., Ltd. is a leading company in the renewable energy (photovoltaic) industry, which manufactures and sells various products such as photovoltaic power generation systems, photovoltaic street lights, photovoltaic power controllers, LED dimming controllers, LED lights, monitoring and remote control systems, and operational electrical construction, information and communication construction, and fire protection construction.

Currently, we are focusing on the development of new technologies related to solar power and the development of new products using applied technologies based on our know-how, excellent technology, and ongoing research and development. In particular, we are focusing on the development of products that combine renewable energy and IoT, and we are doing our best in related businesses. We will continue to grow into a leading renewable energy solutions company.

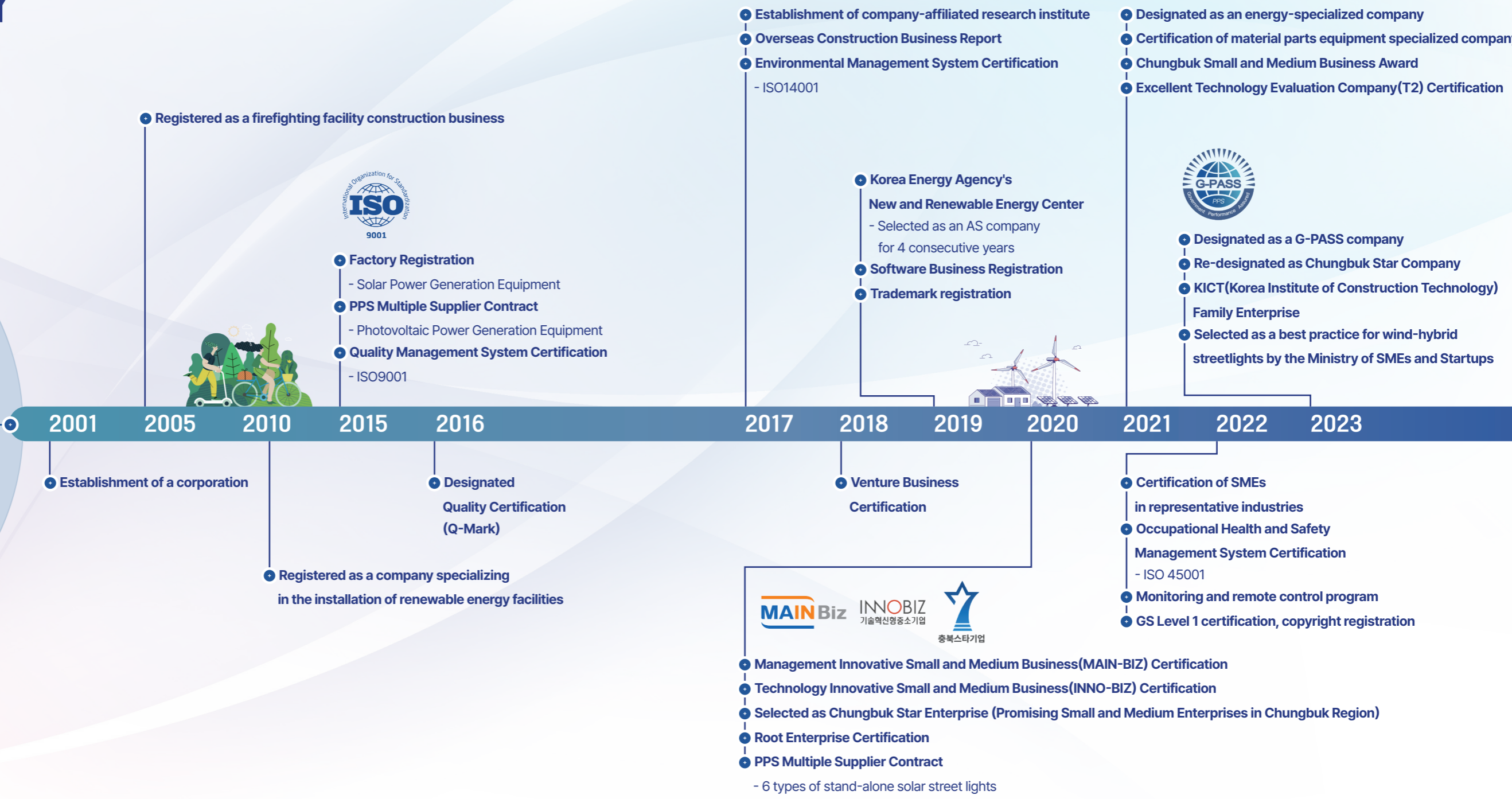
### Haneolnuri's Character, Hanuri

Hanuri, Haneolnuri's character that combines the words "Han" and "Nuri," has a righteous character and a lot of curiosity. It is powered by the solar panels on its head, making it stronger and giving people the convenience of green energy while preserving the environment.





# HISTORY





— with technology and a challenging spirit

# To open a new paradigm in the renewable energy market



**Passion for a comprehensive renewable energy solutions company that transcends spatial boundaries with the best in design and cutting-edge technology.**

Established in 2017, Haneolnuri's company-affiliated research institute promotes various research and development activities related to renewable energy based on technological innovation and patents through ongoing technology development.

At the time of its establishment, it played a major role in solving the problems of existing solar street lights and maximizing the solar street light operation system, registered its own technology patents, and achieved the number one ranking in solar power generation equipment. Currently, it is developing new technologies related to solar power, developing and researching new products by utilizing applied technologies, and researching IoT and ICT.

It plays an important role in crystallizing the technical core of the company and its vision for the future, and draws ongoing R&D and corporate growth based on outstanding technology and innovative ideas.



RENEWABLE ENERGY



Starting as a latecomer with unique technology  
**Becoming a first-class company  
with cutting-edge technology**

**Haneolnuri's CEO, Mr. Kwon, Taek-jo**

*"We have developed a product that is different from existing solar street lamps, and our product goes beyond that by applying monitoring and remote control systems to solar street lamps."*





Through ongoing R&D

# Maintaining a unique technological edge

The head of the company - affiliate research institute,  
Mr. Lim, Myung-seob

## Leading the future energy industry through creative efforts and ongoing R&D



### Holds 18 patents

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In-house  
Design  
From

Direct  
Production  
To



## Aiming for 100% customer impression beyond customer satisfaction

Ensuring quality through flawless and safe construction to quickly  
respond to environmental changes and increase competitiveness in the  
renewable energy market!



With systematic manufacturing process

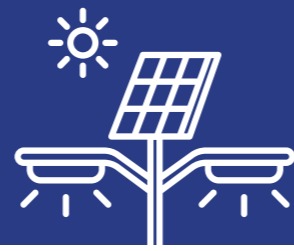
# Leading the core of Haneolnuri, Co., Ltd.

"We use Intelligent systems to operate production and quality efficiently,  
and ensure thorough quality management to satisfy customers."





# Innovating Solar Street lights!



## SOLAR POWERED STREETLIGHTS

### Blade(Top)

By placing the solar street light at the top, it minimizes the impact of buildings on the ground and allows the maximum amount of wind energy to be captured and used as supplemental energy.



### Blade(Middle)

The solar street light is installed at a height of about 2 meters from the ground and can be used as supplemental power by utilizing indirect wind from vehicles traveling on the road.



### LED Luminaires

There are DC LED street light, AC LED street light, AC LED tunnel light, dimming LED street light, and dimming LED tunnel light, which are low power and high power LED lights that do not require power conversion.



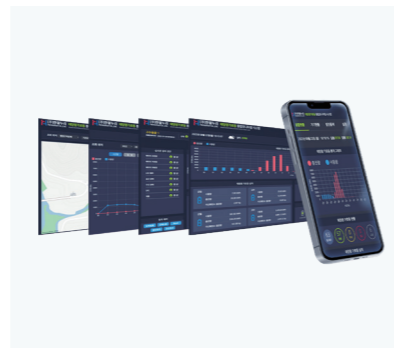
### Solar Street Light Power Controller(HSPC)

It is possible to turn on and off according to the input sunrise and sunset information, and it is possible to control lighting and manage energy efficiency using various IoT sensors. You can control forced off, forced on, reset, and stop charging by the wireless remote function.

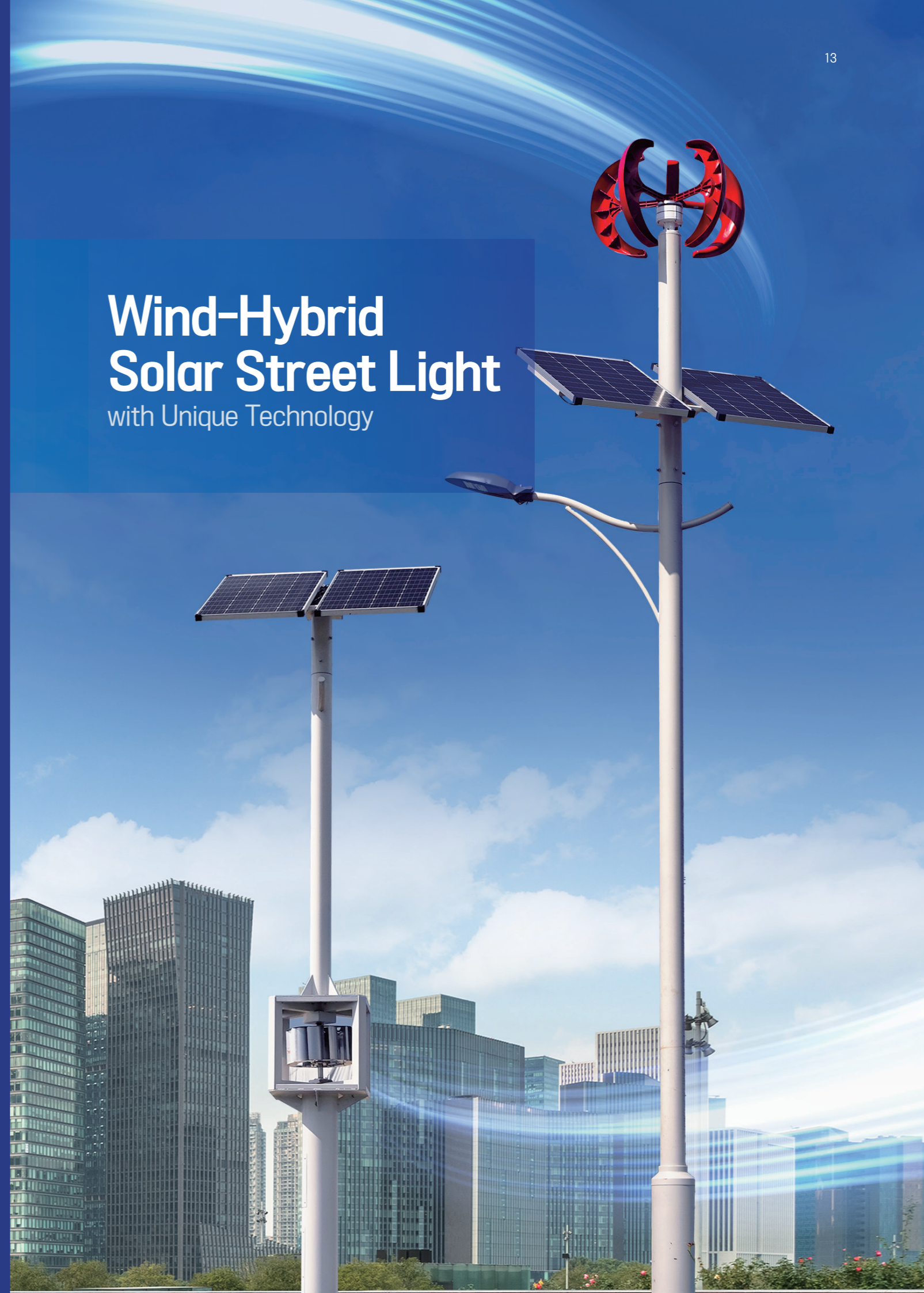


### Monitoring and Remote Control System

Equipped with IoT technology, it can transmit all the status of solar street lights in real time, and it is wireless data utilizing SKT LoRa or Cat.M1, which is low maintenance and highly reliable. PC, mobile access, and remote control are possible, making it easy to monitor and respond to all situations and risks such as fire without going to the site.



## Wind-Hybrid Solar Street Light with Unique Technology





# Haneolnuri Co. Ltd.'s Foundation of solar technology

Haneolnuri Co., Ltd. started with power supply construction.

Since then, we have expanded into the renewable energy business by installing solar power systems.

Based on these technologies, we have become a leader in the solar street light market.



01

## Electrical Work

Building construction  
Electrical interior



02

## Information and Communication Work

Power supply(DC)  
Power supply(Generator)



03

## Fire Protection Facilities Work

Detector  
Basic sprinkler



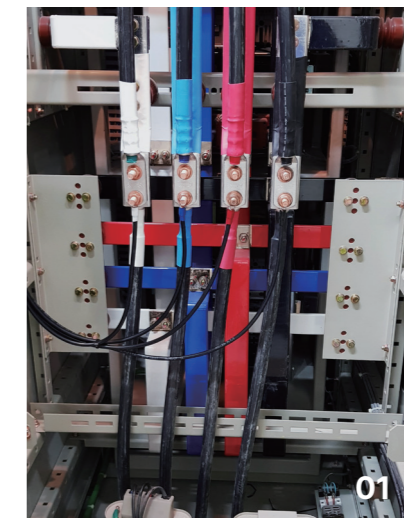
04

## Solar Power Generation System

Solar power plant



Haneolnuri, which took its first steps in 2001 under the name Daeha Electric Firefighting Co., Ltd, originally specialized in electrical construction. In 2004, the company was certified by KEPCO to perform uninterruptible power supply construction, and in 2012, it was certified as a company specializing in underground power distribution. Photovoltaic is also a branch of electrical work, but not many solar companies started in electrical work. About 60% of them started in general construction or window and structure work. Only 40% of them started as electrical contractors and then went into solar, so we pride ourselves on the quality of our workmanship. One of the biggest concerns for our customers is how energy efficient we can make them. We're able to satisfy that.





# Haneolnuri Co. Ltd.

## Shining a bright light on the world wherever the sun rises.

"The primary goal is to increase our market share in the domestic market, and the secondary goal is to target the overseas market."

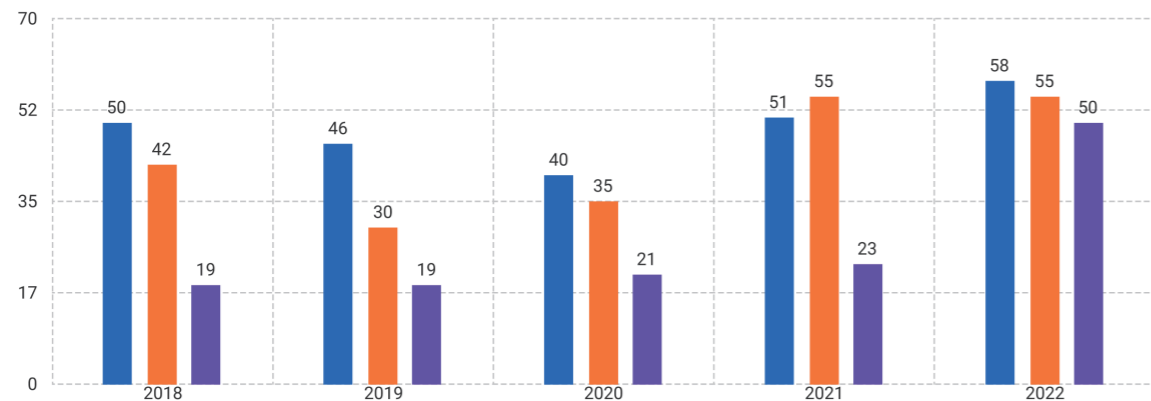


2023

Exported solar power system to Uzbekistan & established a branch office

### Sales

Electricity (Unit : 100 million KRW)  
Solar Energy(street light, power generation system)  
Others (firefighting, information and communication)



2018(111)	2019(95)	2020(92)	2021(129)	2022(153)
50	46	40	51	58
42	30	35	55	62
19	19	21	23	33

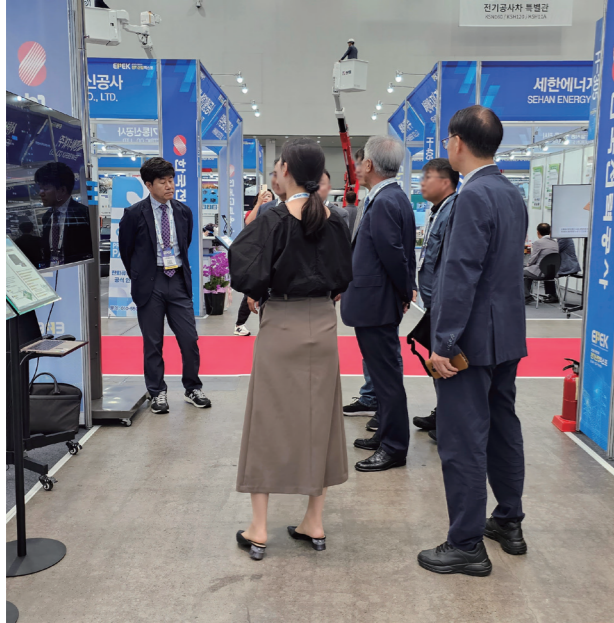


### Main Clients





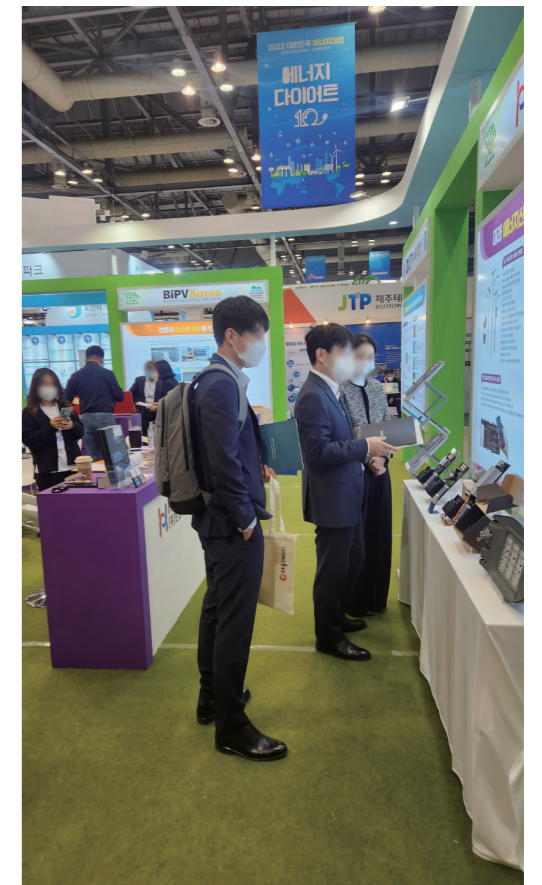
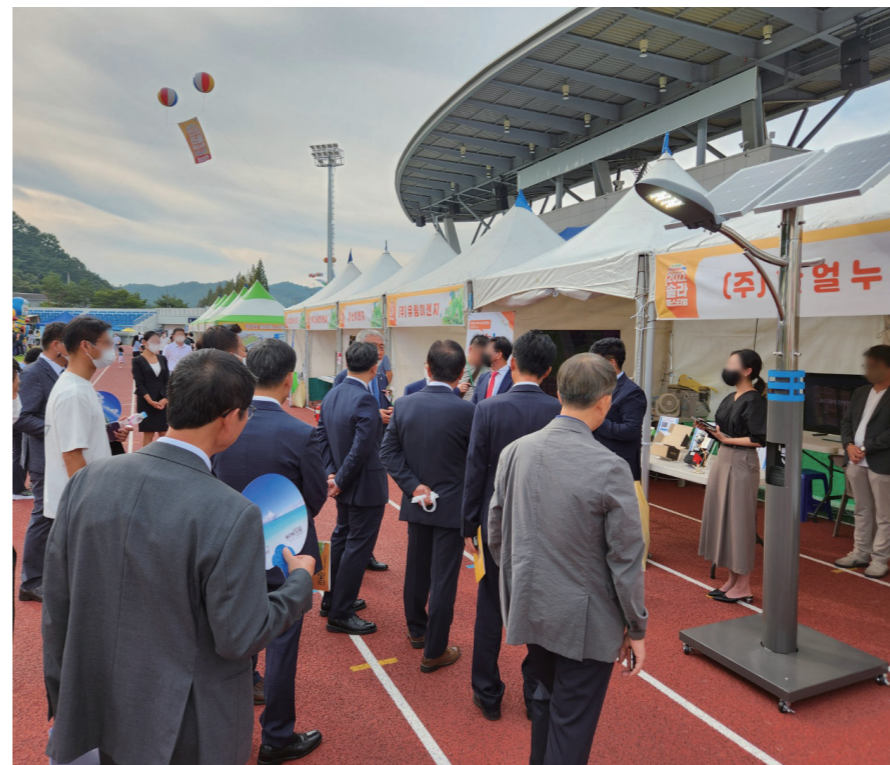
# Main events



International Electric Power Industry Expo Korea 2023 ▶  
Korea Energy Show 2023 ▼



Korea Energy Show 2022 ▶  
Solar Festival 2022 ▼





# Haneolnuri Co., Ltd. Shining a light on Korea







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