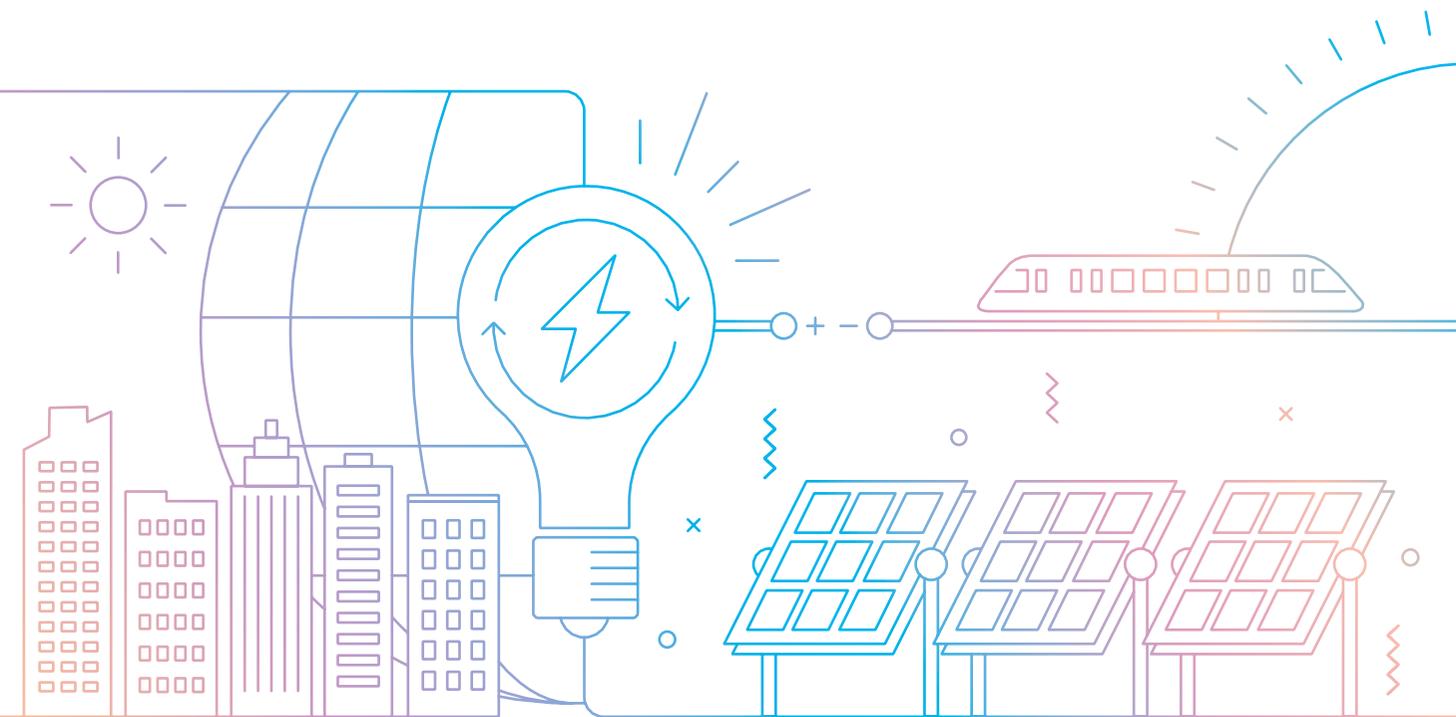


HYUNDAI ENERGY SOLUTIONS

INTEGRATED REPORT

2021



HYUNDAI ENERGY SOLUTIONS INTEGRATED REPORT 2021

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2020 HIGHLIGHT

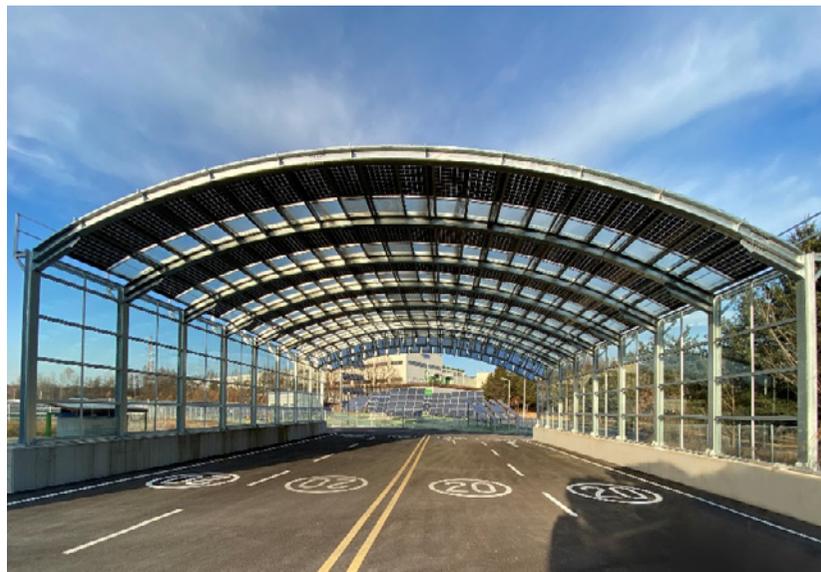
Completion of a 750MW PV Smart Factory

HYUNDAI Energy Solution built a new 750MW PV module factory in Eumseong, Chungbuk Province, leading to total 1.35GW production capacities of PV modules. The newly built factory is seen to increase its efficiency and further product quality by adopting cutting-edge smart systems and fully automated robots.



Taking Steps to Enter New Business Areas

HYUNDAI Energy Solutions is stepping up efforts to develop technologies and further, make inroads into new business areas aiming to diversify its business portfolio and exploring a future growth engine. While striving to increase its market share with a focus on the 'Aqua Power' of a floating PV system, the company is devoted to commercializing the bifacial generation PV module developed for soundproof tunnels for the first time in the world. Besides, having proved its growth potential on a demonstration site, the agro PV solution is waiting for the relevant legislation to be brought into force.



Winning Commendation from the Deputy Premier-Economy and Finance Minister on the 55th Taxpayers' Day

HYUNDAI Energy Solutions was cited by the deputy premier-economy and finance minister in recognition of its contribution to national and local economic development by boosting economy and creating jobs through active exports. The company is now committed to its social responsibilities in offering high school scholarships, supporting teenage family heads and low-income households and hosting community events for seniors.



01

BUSINESS OVERVIEW

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Greetings



CEO of HYUNDAI Energy Solutions
Jong-hwan Park

HYUNDAI Energy Solutions is committed to respecting management principles designed to keenly pursue social values as well as economic outcomes.

In the aftermath of the COVID-19 pandemic having emerged in 2020, the world is still faced with an extraordinary crisis. Under the novel circumstances of raising the value of sustainability, it is now essential for corporations to practice sustainable management for the purpose of considering the environment and generating social values rather than seeking for profits alone. Amid an adverse business climate and uncertainties, HYUNDAI Energy Solutions strives to turn this crisis into the opportunities for valuable and sustainable growth while aiming to adhere to the management principles designed to create social values as well as economic outcomes as an intrinsic business goal.

To this end, the company will place emphasis on the following:

First, we will ensure an unparalleled competitive edge by completely replacing aging production facilities to achieve an economic performance and building a smart factory capable of producing eco-friendly and highly efficient PV modules;

Second, we will engage in business in a righteous, fair, and legitimate manner in order to establish a sound corporate ecosystem leading to shared growth with the partner companies and further, local communities;

Third, we will promote corporate social responsibility activities including sharing initiatives and co-prosperity which will allow local communities to envision a better world and a better future;

Fourth, we will do our utmost to create new values including a reduction in GHG emissions and carbon neutrality while refining our business competitiveness through constant R&D activities.

Every single member of HYUNDAI Energy Solutions will make changes to all processes related to our environment, society and governance. The changes begin with information disclosure based on transparent communication and responsibilities. The Integrated Report of 2021 is intended to convey HYUNDAI Energy Solutions' determination and endeavors towards new value creation and changes to all stakeholders.

We look forward to your continuous interest and support. Thank you.

Mission

HYUNDAI Spirit

We firmly believe there is no challenge too great for us to meet with our dauntlessness and unwavering drive backed up by the infinite potential, no matter how impossible it may seem at the moment.



Creative Wisdom

Wisdom to seek novelty and innovation to meet the needs of customers and our society



Strong Determination

Attitude to take bold adventures with a strong sense of mastery



Unwavering Drive

Power to achieve goals with a strong spirit and indomitable will

Management Vision

Satisfy Customers with Advanced Technologies and High-quality Products

Build a **Rewarding Work Environment** by Supporting Personal Growth

Raise Corporate Value by Refining Core Businesses

Management Philosophy

We have five management philosophies in place that must be shared and practiced by all personnel to fulfill our corporate social responsibility.



1 Enhancing Corporate Value Through Continual Growth



2 Upholding Fair and Transparent Business Practices



3 Pursuing Safe and Environmentally Friendly Business Practices



4 Promoting Strong Labor-Management Relations Built on Mutual Respect and Trust



5 Demonstrating Our Commitment to Global Corporate Citizenship

Business Policy

- 1** Reaching a sales target of KRW 590 billion
- 2** Reducing manufacturing costs by 10 % through an improved cost competitiveness
- 3** Increasing profitability based on global partnerships

Business Overview

HYUNDAI Energy Solutions produces world-class solar cells and modules through constant R&D investment and the expansion of high-tech production facilities, and leads the solar energy industry by delivering various solutions such as floating PV (photovoltaics), agro PV, and a smart solar city.

PV Modules

We produce world-class and highly efficient solar modules through continuous technology development and rigorous product tests. The main products include bifacial, monofacial and floating modules.

PV Inverters

MPPT (Maximum Power Point Tracking) technology prevents reduction in the output of the PV system, and our unique monitoring system allows you to check the system status anytime, anywhere. The main products are non-transformer-type (indoor/outdoor) and transformer-type inverters.

PV Solutions

We provide PV solutions optimized for each installation condition and support all PV application projects.

- Ground PV : We provide the ground PV solution suitable for use conditions based on big data collected from nationwide PV plants
- Floating PV : We provide an optimized solution for water and marine environments through a floating system applied with the eco-friendly PV module of HYUNDAI Energy Solutions and the world-best marine technology of Hyundai Heavy Industries.
- Agro PV : We provide solutions that can generate income through PV power generation while cultivating crops by harnessing solar power that exceeds the light saturation point of plants.
- Smart solar city : Combining PV facilities, inverters, energy storage systems (ESS), and energy management systems (EMS) throughout the city, We provide a smart microgrid system, Solar City Solutions.

2020 Achievements

Total revenues in 2020 were KRW 394.4 billion on a consolidated basis, down about 12% from KRW 446.1 billion in 2019. The major reasons for such a decline are

- 1) The unit price of the module went down. Despite the sales quantity similar to that of last year, the revenue in the module business fell by more than 12% from a year earlier.
- 2) Due to the sharp drop in new installation work caused by the COVID-19, the sales of construction projects decreased by about 50% against a year ago.
- 3) However, the growing demand for inverters in the second half of 2020 increased sales in the inverter business by more than 80% from the previous year, partially compensating for sales losses in the module and project businesses.

The operating profit in 2020 is KRW 8.8 billion, 60% lower than KRW 22.1 billion in 2019

- 1) Due to the shrinking market stemming from the coronavirus and intensifying competition among companies, prices fell across the global PV market. Our operating profit also decreased because of a sharp drop in module business profits. There are internal factors. First, costs increased temporarily as we replaced the costs incurred during the shutdown period (from September 2020 onwards) with COGS (cost of goods sold) while investing in a cell plant to secure future competitiveness. Secondly, the profit reduced due to the increasing cost that came by inputting the existing low-efficiency cells into production to reduce the inventory burden and selling low-power modules at low prices.
- 2) However, we partially recovered profits by virtue of greater sales from the inverter business and more profits from cost improvement.

2021 Outlook and Targets

Our sales goal for 2021 is KRW 590.4 billion, up 50% from KRW 394.4 billion in 2020.

The market is seen to continue to grow due to stronger eco-friendly policies in the U.S. and Europe, along with the growing demand for high-power premium products. Considering the bright outlook for 2021, the company are taking steps to rapidly launch high-power, high-quality, and low-cost products with the aim to increase its market share and enlarge profit margins at the same time.

In addition, we will step up efforts to increase sales in the domestic market, our main market by enhancing module the sales activities, entering new floating PV markets (floaters, etc.), proactively joining big projects, and conducting project development programs.

Growth Strategy

In 2021, HYUNDAI Energy Solutions is set to operate its business aiming to position itself as a competitive, global leader in PV solutions

To enhance reliability fixated on the corporate brand

- Reinforcing the marketing capacities built with our strong brand power
- Pursuing global SCM strategies by leveraging the corporate brand

To raise cost competitiveness

- Securing cost competitiveness by expanding investment in the facilities of our manufacturing plants
- Increasing productivity in strategic partnership with top-tier manufacturers in China and Vietnam

To Strengthen technological competitiveness

- Solidifying the development capabilities for high-power solar modules
- Vigorously seeking to develop a wide variety of PV solutions

Financial Highlights

Category	Unit	2018	2019	2020
Total Revenue		3,476	4,461	3,944
Green Energy ¹		3,476	4,467	4,191
Operating Profit		143	221	88
Net Profit	KRW 100 mil.	190	235	62
Total Assets		2,764	4,812	4,582
To Liabilities		388	1,633	1,295
Total Equity		2,376	3,179	3,287
Debt Ratio		16.3	51.4	39.4
Net Debt-to-Equity Ratio ²		-	-	-
Operating Margin	%	4.1	5.0	2.2
Return on Assets		6.9	4.9	1.4
Credit rating ³	Grade	-	-	-

¹ Stand-alone basis: All domestic business areas of our company are green energy-related

² Unpresented as cash balances exceed loans

³ No rating history

Value Distribution to Stakeholders

Category	Unit	2018	2019	2020
Raw material procurement		2,504	3,529	2,722
Salary and benefits		127	148	137
Interest expense	KRW 100 mil.	0	3	8
Corporate tax (profit)		-50	-73	-181
Donations		0.2	0.2	0.6

Main Products

Photovoltaic (PV) Module

YI Series (Bifacial)

HiS-S430~450YI

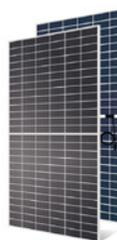
This is designed to have a bifacial structure capable of absorbing light even into its rear surface in order to maximize generation efficiency while it is designed to allow an additional generation according to the installation environment in order to be provided as the world best high efficiency photovoltaic module. The YI series improved the flow to the maximum of 25% of the current front surface power by using the half-cut technique and the 12-thin wiring technique, boasting excellent power production even at a low solar irradiation with high module efficiency of 20.7%.



PJ Series (Bifacial)

HiS-S425~450PJ

This is designed to have a bifacial structure capable of absorbing light even into its rear surface in order to maximize generation efficiency while it improved the current flow to the maximum of 20% of current front surface power by using the half-cut technique and a 9-thin wiring technique, boasting an excellent power production even at a low solar irradiation with high module efficiency at a maximum of 20%. PJ series cells and modules are manufactured only in Korea, and represent constant durability even under wild weather such as heavy snow and strong wind.



XI Series

HiS-S430~450XI

The innovative panel design applying the Shingle technology provides an actual power production, which is 17-67% higher compared to generation modules in a generation environment in which shade may occur. The series can further efficiently use a module installation space and, thus, maximize the actual power production by reducing electric resistance and increasing sunlight absorption through the Shingle technology.



SI Seires

HiD-S410~425SI

The SI series has passed all of the various performance tests under wild environments including ammonia, salt, etc., and acquired the highest level (Severity 8) of the salt mist test. In addition, the floating type PV module EI series (HiS-S425-450EI) with a storing moisture resistance and high efficiency of 20.5% are also provided together.



PV Inverter

The PV inverter of HYUNDAI Energy Solution prevents reduction in power production by applying the maximum power point tracking technique, and allows to conveniently check a generation state anytime and anywhere through our independent web monitoring system. The HYUNDAI inverter supplies a PV inverter at 50kW-2,000kW, and provides a wireless communication router, a monitoring RTU, and CCTV linking service HI SMART 2.0 monitoring at low prices and stable quality, providing the best quality and services.

PV Solution

HYUNDAI Energy Solution provides optimum PV solutions according to the various installation environments, and supports all application businesses in the PV generation field.

Land PV

We provide optimum land PV solutions which are appropriate for the use environments of customers based on big data collected from the PV plants across the country. The land PV of HYUNDAI Energy Solution establishes various customer references, and HYUNDAI modules are mounted at 4.4 MW in Wick Farm Orange and at 5 MW in Wick Farm Green, Lymsham, UK, in 2017 as well as at 2.6 MW, Gimje-si, Jeollabuk-do, 2017.

Floating PV

This is a floating system which applies eco-friendly modules of HYUNDAI Energy Solution and the world's best marine technologies of HYUNDAI Heavy Industries, and provides the solutions optimized to the floating and marine environment. AquaFloat™ is the world's best marine technology provided by HYUNDAI Energy Solution and a site customized system design, boasting a durability enduring 2m of wave height and 50m/s of wind speed. Another floating PV solution, AquaMax™, is an eco-friendly product appropriate for the marine environment, has an enhanced crack preventing technology and load-resistant performance, and boasts durability even under the threatening conditions of the external environment thanks to strong moisture resistance and anti-corrosion effects.

New Business Solution

HES promotes the commercialization of the bifacial PV solution for a soundproof tunnel which for the first time in the world, has been successfully developed, and is ably establishing the demonstration complex of the BIPV solution. In addition, HES fully invests in establishing the development infrastructure of a PV module for the EV and to develop a prototype, and that the PV solution for farming has already proven its potential through tests at the demonstration site.

Smart Solar City

HES provides the sola city of a smart microgrid system that combines the invertors and energy storages, and an energy control system with PV plants in a city. Such a diverse solution has been developed and commercialized so that it can contribute to the development of human society and lead to solving the issues of climate change by reducing greenhouse gases, and others through the development of eco-friendly products.

Global Network

HYUNDAI Energy Solutions' consolidated subsidiaries (1 entity) engages in the green energy business that meets every customer's needs by encompassing the production of high-efficient mono cells and modules, and the installation of inverters and ESSs as a total energy solution provider beyond a PV manufacturer.

Consolidated Entities

(Unit: KRW 1M)

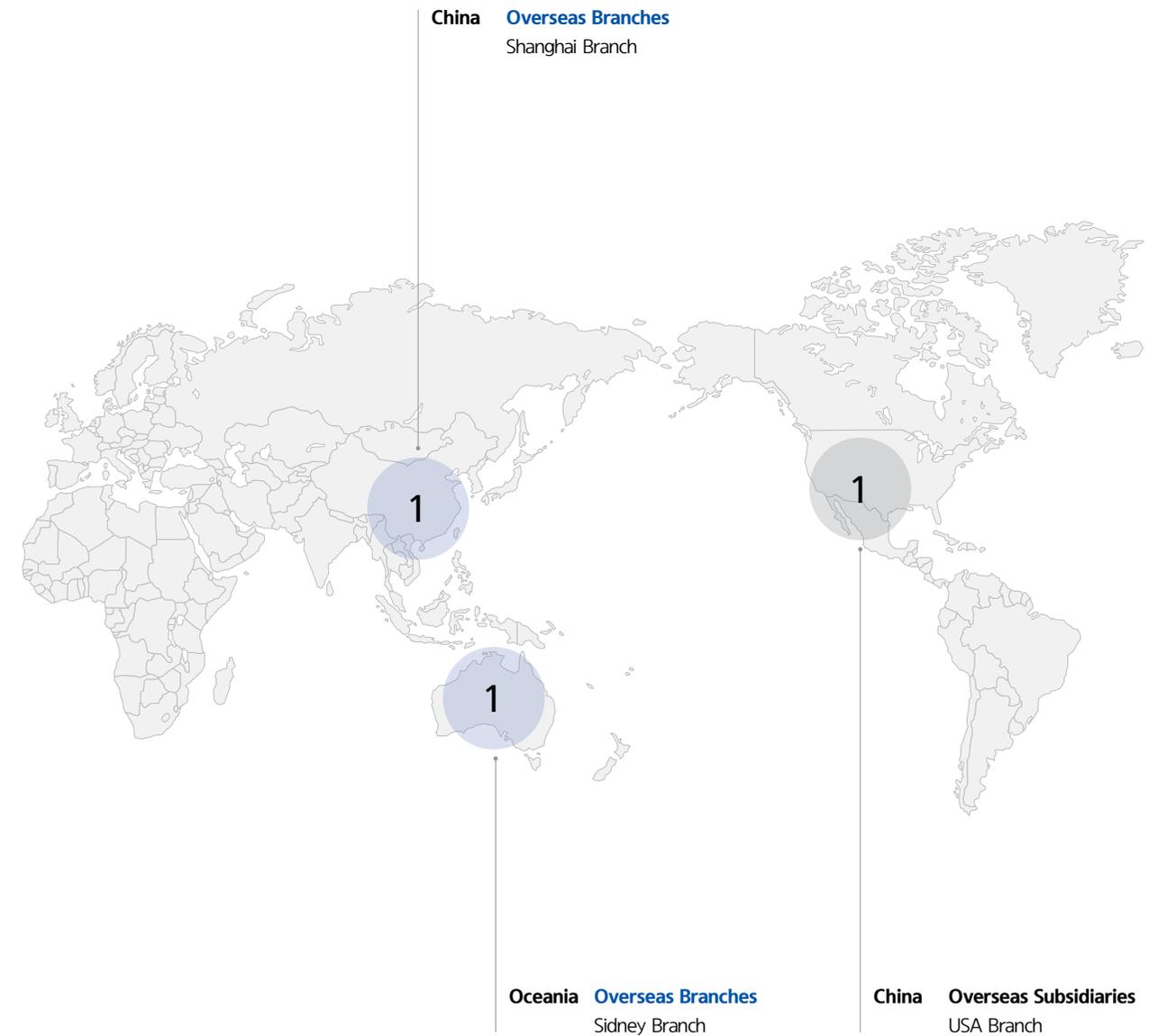
Entity Name	Foundation Date	Location	Main Business	2020 Total Assets
HYUNDAI ENERGY SOLUTIONS AMERICA INC.	2019.04.19	USA	Sale of photovoltaic (PV) modules	32,893

Overseas Branches and Entities

Branches & Offices	Foundation Date	Location	Main Functions
America Inc. (U.S.A)	2019.04.19	CA, USA	Sale of photovoltaic (PV) modules
China Representative Office (China)	2019.11.13	Shanghai, China	Global sale of photovoltaic modules & raw material procurement
Australia Office (Australia)	2019.02.18	Sydney, Australia	Responses to the requests for sales proposals & warranty claims

Overseas Branches and Subsidiaries

Overseas Branches	2
Coporation	1



Value Chain

HYUNDAI Energy Solutions generates values using its outstanding resources and expertise. Each of the six categories of capital invested in our business activities plays a key role in creating economic, environmental and social outputs, which we distribute to stakeholders via each business model built on our management philosophy and visions.

Input

Financial Capital

- No. of subsidiaries : 1(1 overseas)
- Market capitalization KRW : 446.3 billion (2020 closing price)
- Management information disclosure via the shareholders' meetings and IR news

Manufacture Capital

- Production capacity
 - 1) Module factory : 2,427,240 modules
 - 2) Cell factory : 97,760,000 cells
- PP&W : KRW 99.6 billion
- Investments in 2020 : KRW 25.3 billion

Intellectual Capital

- New technologies to further strengthen competitiveness in the market, reinforced R&D capacity, etc.
- 2020 R&D expenses (relative to revenue) : KRW 4.3 billion (0.99%)
- Key R&D organizations
 - 1) Module Solution Development Team
 - 2) Reliability Research Team
 - 3) Cell Development Team
 - 4) Solution Development Team
- No. of R&D personnel (relative to total personnel) : 15 (7.97%)

Human Capital

- Total headcount (male/female, inclusive of fixed-term contract workers) : 60/28

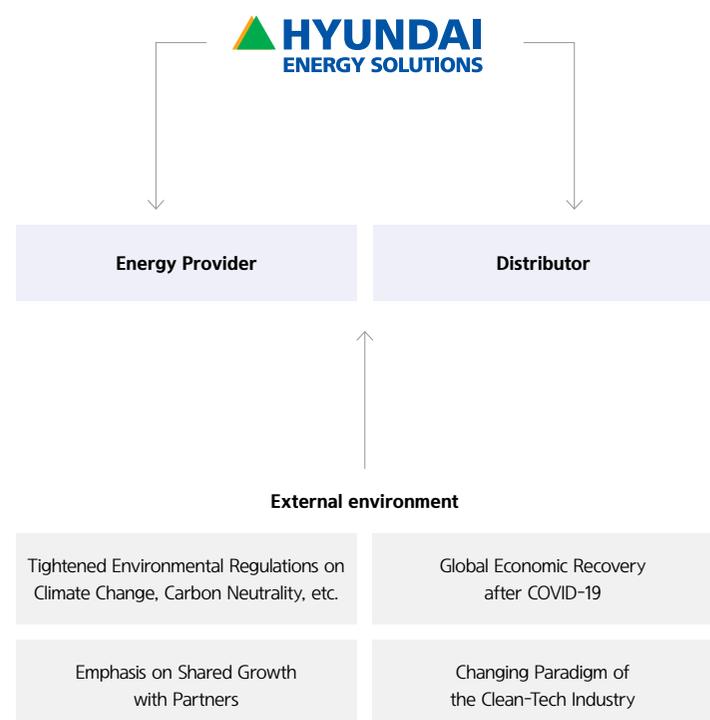
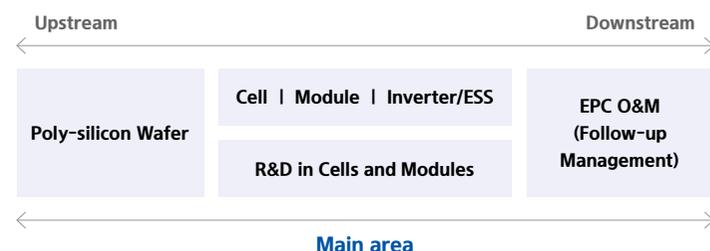
Social Relations Capital

- General shareholders' meeting for enhanced value of stakeholders and exercise of their rights
- After-sales service for customers
- Group Shared Development Committee, social contributions, etc.
- HHI Group 1% Nanum Foundation

Environmental Capital

- Certified to ISO 14001
- Environmentally friendly policies such as GHG reduction and green procurement
- Annual energy consumption : 529TJ

Business Activities



Output

Financial Capital

- Revenue : KRW 394.4 billion
- Operating profit : KRW 8.8 billion
- Credit rating : No history
- Return on Assets (ROA) : 1.35%

Manufacture Capital

- Output
 - 1) Modules : 850,748
 - 2) Cells : 48,285,700

Intellectual Capital

- No. of intellectual property rights held
 - patent (model utility right) (domestic/overseas) : 46 cases/2 cases
 - trademark right (domestic) : 9 cases
 - design right : 2 cases

Human Capital

- No. of personnel who completed training : 143
 - Attendees of the 'Nurturing Global Talent' program : 81

Social Relations Capital

- Market share
 - 1) Domestic (module, inverter) : 14.79%, 15.53%
 - 2) Overseas (module) : 0.32%
- Donations for local social contribution activities : KRW 6.872 million
- Salary donations : KRW 29.736 million

Environmental Capital

- GHG emissions : 26,397tCO₂e
- Waste discharge (general/designated) : 199 tons/31 tons
- Wastewater discharge : 327,738 tons
- No. of violations of environmental laws/regulations : 0

Outcome

Shareholders and Investors

Promoting shareholder value and protecting their rights

Customers

Delivering products and services that satisfy customer needs

Employees

Boosting job satisfaction and morale via programs for learning & development and improved benefits and working conditions

Local Communities

Facilitating the development of local communities through social contribution

Partner Companies

Helping our partner companies improve their financial soundness and competitiveness

Industries

Establishing an industrial ecosystem for fair competition

02

SUSTAINABILITY PERFORMANCE

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Sustainable Management Strategy

HYUNDAI Energy Solutions actively pursues corporate value enhancement through continual growth. The company creates shared values in a wide range of areas including but not limited to economy, environment and society based on its well-organized sustainable management activities. Under the three major operational policies as seen below, we plan and perform various activities for each category and continuously disclose key achievements to stakeholders.

Sustainable Management System

We operate an efficient and sustainable management system by assigning professionals and departments to each sustainability initiative. Relevant departments perform the comprehensive management for activities planning, execution, assessment and company-wide strategic planning. Collected information is utilized to plan and execute new sustainability initiatives and is also used for integrated reporting.

Mission

We create and share economic, environmental and social values through the systematic management of sustainability

Operational Policy

Transparent Disclosure	Systematic Performance Management	Continuous Improvement
<ul style="list-style-type: none"> Operating communication channels customized to stakeholders Disclosing sustainable management activities and achievements 	<ul style="list-style-type: none"> Following up on each area of sustainable management activities and performance under the five management philosophies 	<ul style="list-style-type: none"> Conducting a multidimensional analysis of sustainable management activities and performance Addressing shortcomings and enhancing strengths

Management Philosophy

Upgrading corporate value through continuous growth	Upholding Fair and Transparent Business Practices	Pursuing Safe and Environmentally Friendly Business Practices	Promoting Strong Labor-Management Relations Built on Mutual Respect and Trust	Demonstrating Our Commitment to Global Corporate Citizenship
Securing core capability to drive future growth Implementing flexible business management and global business system	Supporting open and fair competition in accordance with free market economy Promoting sound and transparent corporate governance structure	Creating a pleasant and safe work environment Environmentally friendly production activities and technology development	Fostering a vibrant organizational culture based on trust and participation Performing all duties and responsibilities to enhance corporate competitiveness	Contributing to mankind prosperity by creating social values Promoting the culture and welfare of local communities

Direction

Stakeholders

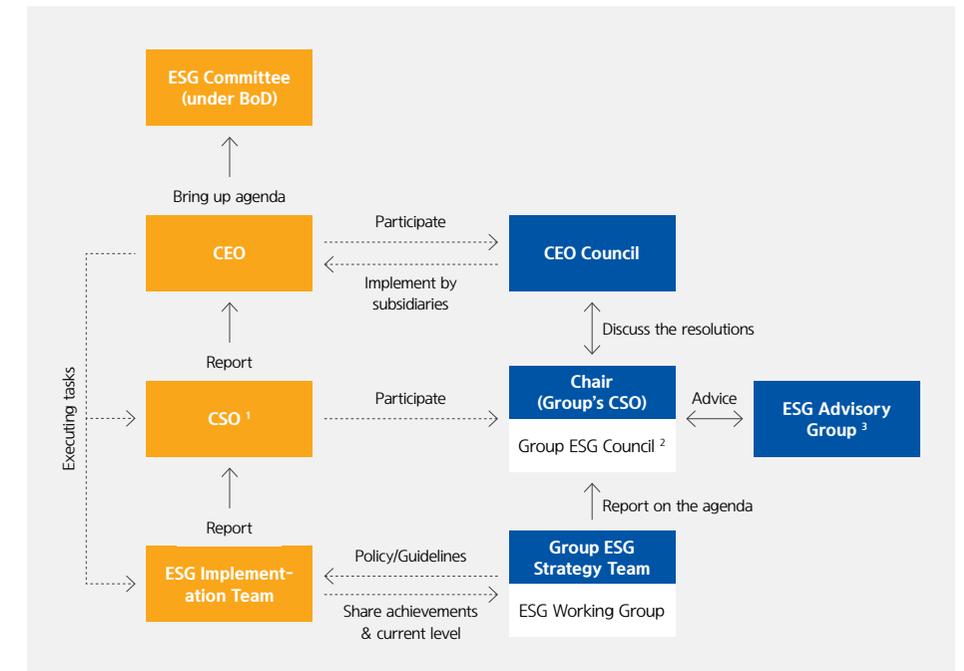
Customers, Employees, Partner companies, Shareholders	Customers, Employees, Partner companies, Industries	Employees, Local communities	Employees, Partner companies	Partner companies, Employees, Local communities
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ESG Promotion System

Establishment of a Group ESG Governance System

ESG Promotion System (Subsidiaries)

ESG Promotion System (Group)



- 1 CSO: Chief Sustainability Officer
- 2 Consists of CSOs of subsidiaries
- 3 Consists of outside experts for each ESG section

Group ESG Issue Sharing & Policy Decision-making System

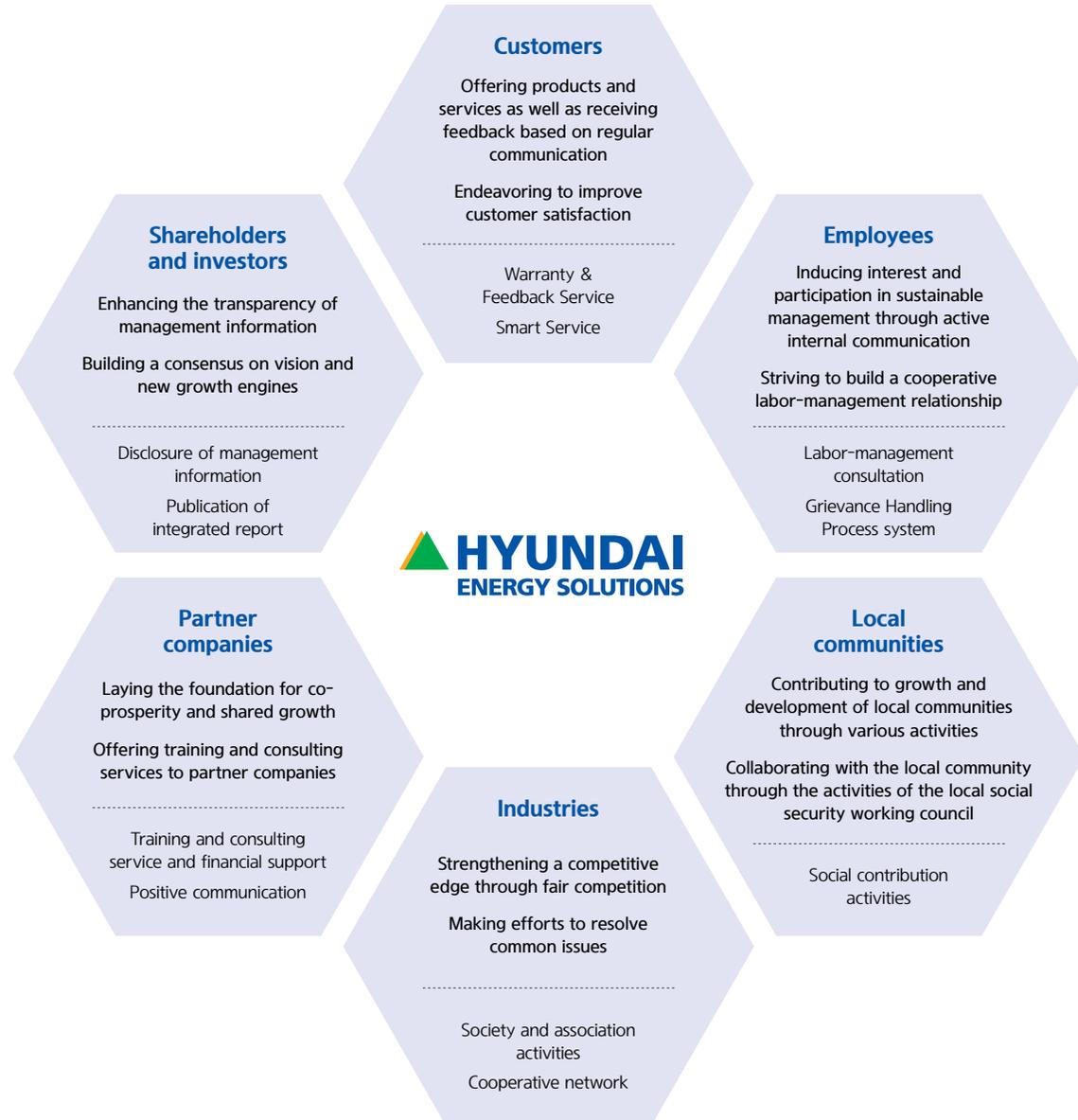
Process

Key Content

1 Report on the Agenda	Report ESG agenda and key issues for Group
2 Deliberation of the Agenda	Discuss on ESG agenda deliberation and counterplan for issues
3 Advise	Advise from outside expertise on the ESG agenda and other matters
4 CEO Council	Discuss on policy decisions and review on the implementation plan for subsidiaries
5 Execute Tasks	Execute tasks and manage achievements of ESG departments for subsidiaries

Communication with Stakeholders

Customers, shareholders and investors, partner companies, local communities, industries and our employees are the key stakeholders that influence and are influenced by HYUNDAI Energy Solutions across all management activities. HYUNDAI Energy Solutions operates various communication channels for these stakeholders' participation in sustainable management



UN SDGs

The UN Sustainable Development Goals (SDGs) set forth a universal call to action for the period from 2016 to 2030 to achieve sustainable development on a global scale. Achieving the goals requires efforts and cooperation throughout our society, and the role of a company in this context is to create a growth engine and Innovations for economic development and job creation.

By aligning its management direction with SDGs, a company can not only create a new business model but also evolve into a sustainable entity. HYUNDAI Energy Solutions works on strategies for the Group's mid/long-term growth by identifying key global trends through the UN SDGs. Of the 17 goals, our focus mainly lies with 9 goals (3, 4, 6-10, 12, and 16) and 23 targets, as we strive to contribute to implementing this blueprint to achieve a better and more sustainable future for all.

Key SDGs	Targets	HYUNDAI Energy Solutions' Contribution to Achieving SDGs
 <p>Ensure healthy lives and promote well-being for all ages</p>	<p>3.4 Prevent and treat non-communicable diseases and promote mental health and well-being.</p> <p>3.8 Achieve universal health coverage, access to quality essential healthcare services and access to safe, effective, quality and affordable essential medicines and vaccines for all.</p> <p>3.9 Reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.</p>	<ul style="list-style-type: none"> Supporting medical expenses and checkups for the healthy lives of personnel, supporting treatment costs of heart diseases/incurable diseases for employees and their families, Supporting medical expenses of occupational diseases Running an in-house oriental clinic to prevent musculoskeletal disorders and , rehabilitation exercise programs, operating health promotion centers on work sites and appointing health managers Financially supporting the preventive management of overseas endemics
 <p>Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all</p>	<p>4.4 Increase the number of youth and adults who have relevant skills including technical and vocational skills for employment, decent jobs and entrepreneurship.</p> <p>4.5 Eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, indigenous peoples and children in vulnerable situations</p>	<ul style="list-style-type: none"> Operating the Hi-e Campus program (learning management system) and a customized program to nurture global talents
 <p>Ensure access to water and sanitation for all</p>	<p>6.3 Reduce untreated wastewater and improve water quality by reducing pollution, minimizing the release of hazardous chemicals and increasing water recycling.</p>	<ul style="list-style-type: none"> Managing wastewater discharge in compliance with internal environmental regulations tightened more strongly than legal standards, Minimizing wastewater discharge through the preemptive management of wastewater sources, Regularly checking the quality of treated water
 <p>Ensure access to affordable, reliable, sustainable and modern energy</p>	<p>7.2 Increase the share of renewable energy in the global energy mix.</p> <p>7.3 Double the global rate of improvement in energy efficiency.</p>	<ul style="list-style-type: none"> Building an infrastructure to develop the PV module for electric cars and developing its prototype Developing an external-wall type of BIPV solution and a floating PV system
 <p>Promote inclusive and sustainable economic growth, employment and suitable work for all</p>	<p>8.2 Achieve higher levels of economic productivity through the diversification of industries including high-value-added ones, technological upgrading and innovation.</p> <p>8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation and encourage the formalization and growth of micro, small/mid-sized enterprises including through access to financial services.</p> <p>8.5 Achieve full and productive employment and decent work for all women and men, and equal pay for the work of equal value.</p> <p>8.6 Reduce the proportion of youth not in employment, education or training.</p> <p>8.7 Prohibit forced and child labor.</p>	<ul style="list-style-type: none"> Operating a global integrated information system, Boosting economic productivity and creating jobs by providing the building external wall type of BIPV solution and expanding the high value-added industry Creating quality jobs through employment Implementing a fair and objective performance evaluation & compensation system growth Providing educational and financial service for shared growth with partner companies Creating a roadmap for human rights management at a Group level
 <p>Build a resilient infrastructure, promote sustainable industrialization and foster innovation</p>	<p>9.4 Increase resource-use efficiency and adopt clean and environmentally sound technologies.</p>	<ul style="list-style-type: none"> Developing a ship powered by eco-friendly, highly efficient fuel Obtaining KS certification for an eco-friendly module with high resistance for the first time in the industry Developing bifacial generation PV cell/module technology
 <p>Reduce inequality within and among countries</p>	<p>10.4 Adopt policies, especially fiscal, wage and social protection policies and progressively achieve greater equality.</p>	<ul style="list-style-type: none"> Caring for the underprivileged, pursuing co-prosperity with local communities, and promoting independence for future generations

	Reduce inequality within and among countries	10.4 Adopt policies, especially fiscal, wage and social protection policies and progressively achieve greater equality.
	Ensure sustainable consumption and production patterns	<p>12.2 Achieve sustainable management and the efficient use of natural resources.</p> <p>Achieve the environmentally sound management of chemicals and all wastes throughout their life cycle and significantly reduce their release to air, water and soil</p> <p>12.4</p> <p>12.5 Reduce waste generation through prevention, reduction, recycling and reuse.</p> <p>12.6 Encourage companies to adopt sustainable practices and to integrate sustainability information into their reporting cycle.</p>
	Manage and protect marine and coastal ecosystems to avoid significant adverse impacts and take action for their restoration In order to achieve healthy and productive oceans.	<p>16.3 Promote the rule of law at the national and international levels and ensure equal access to justice for all.</p> <p>16.5 Reduce corruption and bribery in all their forms.</p> <p>16.6 Develop effective, accountable and transparent institutions at all levels.</p> <p>16.7 Ensure responsive, inclusive participatory and representative decision-making at all levels.</p>

<ul style="list-style-type: none"> • Caring for the underprivileged, pursuing co-prosperity with local communities, and promoting independence for future generations
<ul style="list-style-type: none"> • Acquiring international certification for an environmental management system • Installing prevention facilities, providing an education program for environmental managers, minimizing pollutant emissions by periodically checking emission concentrations • Making recycle bins for recyclables to reduce wastes • Replacing hazardous chemicals and regularly inspecting facilities
<ul style="list-style-type: none"> • Implementing transparent and responsible management by valuing compliance and business ethics • Implementing reasonable governance structure to maintain checks and balances • Pursuing inclusive management activities by engaging various stakeholders in management, including active communication with the labor union

Materiality Assessment

Each year, to select the core topics of the annual integrated report, HYUNDAI Energy Solutions conducts a materiality assessment regarding stakeholders' interests, improvements and business impact levels on corporate activities. The assessment of 2020 identified a pool of 29 topics in light of the global reporting standards such as the GRI Standards, the UN SDGs, various social issues and sustainable management information within the same industries. The identified issues are classified into core, top and general topics by levels of public attention and business impact.

The report discloses HYUNDAI Energy Solutions' management approach to and key performance relating to the core topics, and when deemed necessary for continuity with the past reports and/or complete disclosure of information regarding value creation, also discloses those relating to top and general topics.

Assessment Process

HYUNDAI Energy Solutions annually conduct a materiality assessment to select sustainability topics. Critical topics to us are determined in consideration of business impacts and stakeholders' interest.

Step 1 Identify Sustainable Management Topics	<p>Identified 29 sustainability issue pools by reviewing the external environment surrounding KSOE and its shipbuilding subsidiaries.</p> <ul style="list-style-type: none"> · ESG Disclosure and Assessment Initiative Requirements (GRI Standards, SASB, TCFD, MSCI, UNGC, SDGs, and ISO26000) · Sustainability issues addressed in the same industry · Sustainability issues covered in the media
Step 2 Assess Public Interest	<ul style="list-style-type: none"> · Analyzed global guidelines for sustainability (GRI Standards, UN SDGs) · Analyzed external media exposure on the economic, environmental and social issues of KSOE, HMD, HHI, and HSHI (6,663 cases) · Issues reported in the same industry · Conducted a survey on the interest level of the external stakeholders (March 2021)
Step 3 Assess Business Impact	<ul style="list-style-type: none"> · Analyzed the internal board agenda and CEO message · Surveyed stakeholders, including KSOE and its shipbuilding subsidiaries' employees, on business impact.(March 2021)
Step 4 Verify Effectiveness	<p>Selected 8 issues with a high level of business impact and stakeholder interest, and received the final approval from the ESG Committee, the highest decision-making body on sustainability issues, under the BOD.</p>

Assessment Results

As a result of the assessment, a total of 8 topics were selected. This report covers our reactive activities, performance, plans and future directions to facilitate stakeholders' understanding.

Material Topics	Topic Boundary	GRI	Ranking by Category	
			by Public Interest	by Business Impact
1 Creating corporate value through changes and innovation	Internally: all companies Externally: local communities	GRI 201-1,3 GRI 202-1	1	4
2 Compliance management and business ethics (Transparent disclosure of management information)	Internally: R&D, procurement, production, sales, marketing	GRI 102-16,17 GRI 205-1~3	6	2
3 Diversifying business and exploring new opportunities	Internally: all companies	N/A	17	1
4 Reducing waste and pollutant emission	Internally: production Externally: local communities	GRI 305-5~7, GRI 306-1~5	2	15
5 Improving product/service quality and enhancing customer satisfaction	Internally: R&D, production Externally: customer, partner companies	GRI 416-1,2	15	5
6 Improving material and energy efficiency	Internally: R&D, production Externally: local communities	GRI 301-1~3, GRI 302-1~5	4	17
7 Pursuing environmental management by developing more environmentally friendly technologies	Internally: R&D, production Externally: local communities	GRI 302-5	5	13
8 Operating an integrated risk management system	Internally: all companies	GRI 201-2 GRI 102-15	22	3

Materiality Assessment Matrix

Core Topics

- 1 Creating corporate value through changes and innovation
- 2 Compliance management and business ethics (Transparent disclosure of management information)
- 3 Diversifying business and exploring new opportunities
- 4 Reducing waste and pollutant emissions
- 5 Improving product/service quality and enhancing customer satisfaction
- 6 Improving material and energy efficiency
- 7 Pursuing environmental management by developing more environmentally friendly technologies
- 8 Operating an integrated risk management system

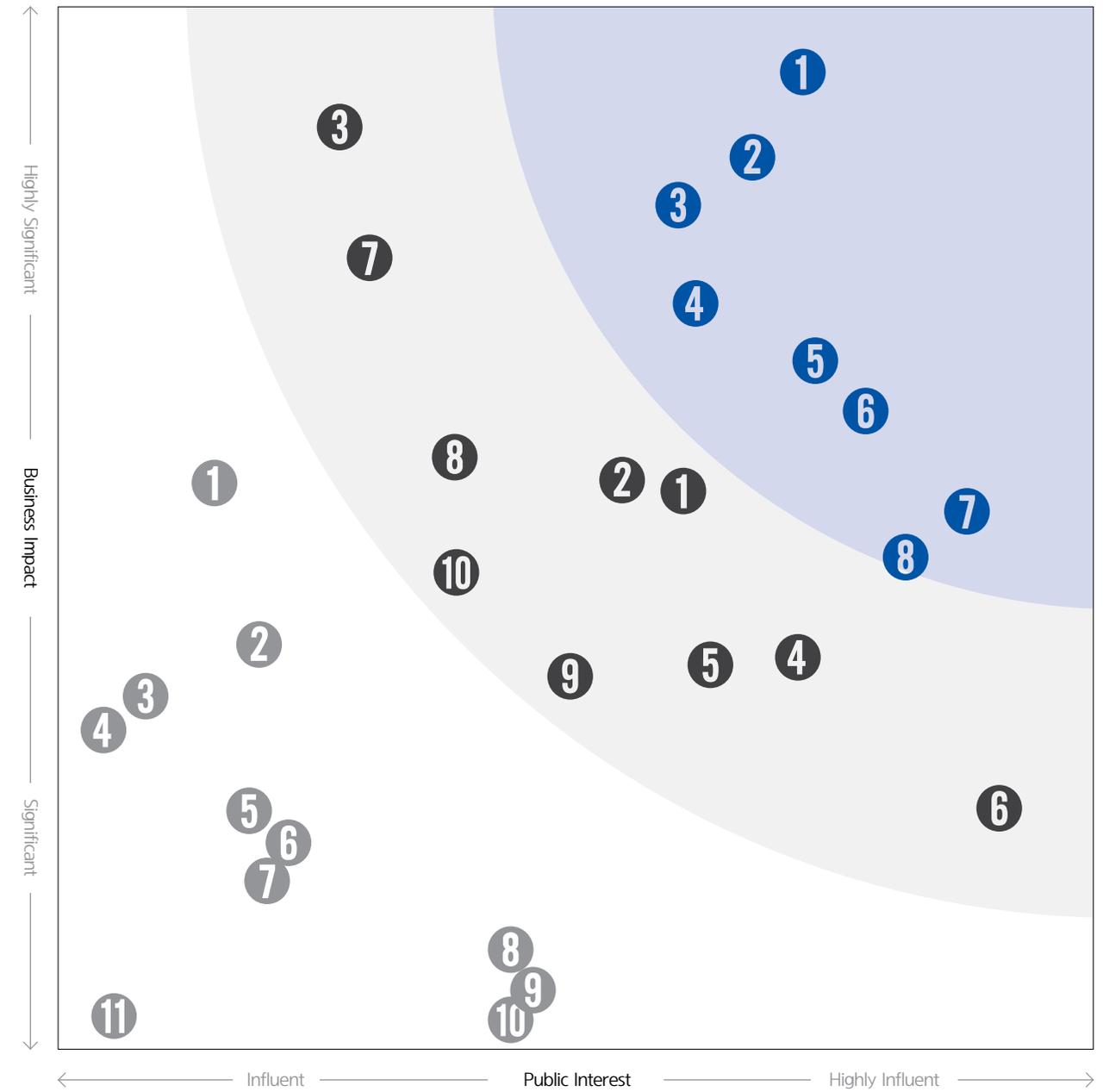
Top Topics

- 1 Expanding (R&D) and securing new technologies
- 2 Respecting the human rights of all personnel
- 3 Creating a safe workplace and raising safety awareness
- 4 Contributing to the co-prosperity of local communities
- 5 Addressing climate change issues including GHG emissions control
- 6 Enhancing job security and promoting sound labor-management relations
- 7 Building and operating resource circulation, reuse and recycling framework
- 8 Ensuring customer safety and health
- 9 Reinforcing the competencies of personnel (HRD)
- 10 Attracting and retaining talent

General Topics

- 1 Improving the quality of life for all personnel, including through a better welfare system
- 2 Promoting shared growth with partner companies
- 3 Social contribution activities
- 4 Reducing the adverse environmental impacts of partner companies
- 5 Ensuring diversity and inclusion
- 6 Ensuring sound governance
- 7 Respecting the human/labor rights of partner companies' personnel
- 8 Ensuring information security including
- 9 Enhancing a fair trade system
- 10 Communication with stakeholders
- 11 Ensuring the fair distribution of earnings

● Core Topics ● Top Topics ● General Topics



Enhancing Corporate Value Through Sustainable Growth

Creating new growth engines through continual change and innovation is crucial to sustainable growth in the fast-paced global business environment. HYUNDAI Energy Solutions will enhance corporate and shareholder value and deliver customer satisfaction by identifying quality and technology as top priorities.

35 R&D

38 Quality Management

R&D

With the aim of reinforcing the competitiveness of the main products, HYUNDAI Energy Solutions is performing the projects to enhance the efficiency of mass-produced cell products and develop & commercialize high-power half-cut bifacial generation and multi-busbar modules. The R&D activities focus on developing new application modules and building the 4 types of demonstration systems to enter new markets. Our further R&D focus includes creating the infrastructure to develop PV modules intended for electric vehicles, manufacturing the trial products and launching the development of a next-generation n-Type TOPCon cell technology in order to internalize future project technologies in addition to acquiring carbon certification in response to the policy to encourage the use of low-carbon products in domestic markets.

Operating System

Vision	Securing Global Technical Competitiveness in PV Cell/Module and New Application Business Areas		
Strategies and Directions	Developing high-efficiency cell and high-power module technologies to strengthen quality competitiveness reduce costs	Producing new application modules to create new business opportunities	Securing new product certification and improving a reliability assessment system
2020 Achievements	<ul style="list-style-type: none"> · Development of high-power cells/modules · Development and demonstration of a wide range of PV Applications 		<ul style="list-style-type: none"> · Establishment of a 750MW smart PV factory · Stepping up efforts to make inroads into new business areas
2021 Plans	To launch New Products <ul style="list-style-type: none"> · Launching a large-area (M6, M10) p-PERC cell product · Developing a new marine floating PV system in response to the Saemangeum floating PV project 	Technical Development and Product Improvement <ul style="list-style-type: none"> · Developing next-generation high-efficiency n-Type cell technologies · Mass producing M6 PERC cells with an area of 274.2cm² and a thickness of 160μm and raising cell efficiency to 22.5% · Developing and commercializing high-power modules by applying a high-power/high-efficiency M6 156 cell and an M10 (330.1cm²) cell · Developing an N-type TOPCon cell element technology and manufacturing its trial products (cell efficiency of 23.0% or greater) 	To secure Certification and Reliability <ul style="list-style-type: none"> · Creating solutions by applying a high-power agrophotovoltaics module, building a BIPV module demonstrating complex, and performing the groundwork for commercializing PV soundproof facilities (winning a national project intended for urban road demonstration) · Developing a high-power trial product (2500W or greater) of a solar roof, securing reliability, and reviewing & building a solar roof mass-production system · Reducing the carbon emissions of our PV module products in response to the tightened grade criteria of the domestic carbon certification system · Increasing bidding competitiveness for domestic floating PV projects by developing an economical-type freshwater floating PV system · Standardizing technical development by establishing the floating PV system development standards

R&D Governance

Executive in Charge	· Head of R&D Department (Senior Vice President)
Decision-Making Body	· Head of Division meeting, Team Leader meeting, business-Eumseong plant monthly meeting
Responsible Organization	· Module Solution Development Team: development of a high-power/high-power production module, development of new materials and material diversification, development of new application modules and solutions · Reliability Research Team: evaluation and improvement of cell/module reliability, acquisition of product certification

R&D Achievements

Launching New Structured Cell Products

We introduced a new selective emitter process, improved the structure through bifacial generation and a multi-busbar, and launched high-efficiency cell products through the development processes.

Acquiring Certification for New Half-Cut, Multi-Busbar Modules

We acquired the certification for 5 models tailored to a domestic market and 4 models meeting the requirements of the U.S. market regarding half-cut PV modules manufactured in newly invested module plants.

Quick Response to the Policy to Encourage the Use of Low-Carbon Products in Domestic Markets

We acquired total 53 carbon certifications including 8 first-grade carbon certifications by using domestic wafers and acquired a carbon certification for all mass-produced products a timely manner.

Creating the Infrastructure to Develop PV Modules for Electric Vehicles and Trial Products

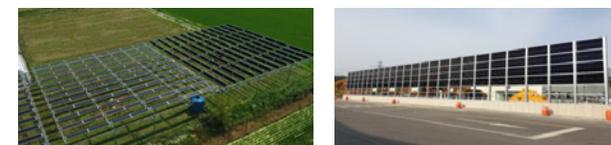
We completely built a core device (a curved surface-bonded laminator) needed to develop PV modules (solar roofs) for electric vehicles, and are taking steps to manufacture a 230W trial product with output improved by 15% or greater compared to that of the existing product, in addition to enhanced additional power and reliability.

Developing and Commercializing M6 Bifacial Generation PV Modules

With the aim of securing competitiveness and differentiating the company's module products, we developed high-power modules by applying a large-area cell (M6) and a bifacial generation technology. Powered by the investment in some of R&D facilities, we devised a high-power MBB HC bifacial generation module design/process and launched products with the output of 440W or greater. Through the process, we obtained process/material technologies required to increase the power of modules in the future and commercialized high-power module products for sales.

Developing Bifacial Generation-Based Application Modules

For the purpose of expanding product groups for our reinforced business competitiveness, we developed and demonstrated technologies for new application modules. The steps were conducted by utilizing resources and networks outside the company through the national project, 'Technical Development for Commercializing Bifacial Generation P-type PERC PV Modules,' won by the company in 2018. We completely established a demonstration complex with the full power of dozens of Kw in order to develop APV modules and the modules intended for soundproof walls and soundproof tunnels based on the bifacial generation module technology, to manufacture trial products and demonstrate the actual power capacity. Currently, the power production of the complex has been monitored. Through the processes, we could secure the demonstration cases for bifacial generation module-based new applications and our product groups are expected to expand.



Developing a Building's External Wall Type BIPV Solution

For the purpose of expanding product groups for our reinforced business competitiveness, we developed the technology intended for building's external wall type modules. The steps are conducted by utilizing resources and networks outside the company based on the national project, 'Development for Building's External Wall Type BIPV Integrated Solution System,' won by the company in 2018. After developing a high-power BIPV module with aesthetics and manufacturing trial products, we demonstrated their power and reliability. Currently, we have been building a demonstration complex with the full power of dozens of kW to demonstrate the actual power capacity. Through the processes, we secured BIPV module technologies and demonstration cases and our product groups are expected to expand.

Developing a Floating PV System for Freshwater

The existing floating PV system in Korea was designed by fulfilling the design criteria for fixed type land structures. However, in case of a floating system, we must consider fluidity caused by wave heights in order to secure safety in systems. In particular, the safety must be our top priority when considering the growing size of the floating PV system in domestic and overseas markets. In line with the trend, the company developed the floating PV system for a large-sized freshwater lake project by leveraging the HHI Group's ship-building and marine technologies.



Developing a Steel Floating PV System for Seawater

As the scale of floating PV projects increases to hundreds of MW, the scope of floating PV business sites is also expanding into large-sized reclaimed lakes including Saemangeum. Such large reclaimed lakes not only contain salt at a similar level to that of seawater but also provide harsher environmental conditions including high waves formed by its geographical feature bordered by the seawalls than freshwater lakes. With the aim of securing corrosion resistance and safety in such conditions, we jointly developed the floating PV system with seawater corrosion resistance steel in collaboration with POSCO E&C.



Quality Management

HYUNDAI Energy Solutions operates quality policies with the aim of meeting requirements from customers and regulations and further, raise stakeholders' satisfaction and confidence. After obtaining the ISO9001 certification, we have maintained it to insure the reliability of our Quality Management System (QMS). The company also runs a UL/VDE certified test laboratory on its Eumseong Campus, which brings global-level competitiveness to our long-term reliability test of modules and product quality.

Operating System

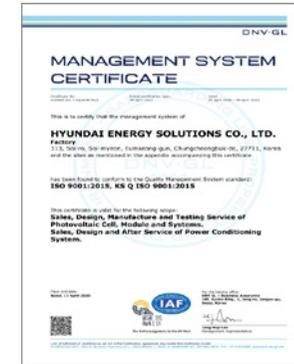
Vision	Securing global-level quality competitiveness		
Quality Policies	Establishing global-level quality competitiveness	Acquiring cost competitiveness by improving quality	Pursuing customer-oriented quality management activities
	Taking steps to enhance quality competitiveness	Securing long-term reliability by running a UL/VDE certified test laboratory	Strengthening quality management for customer satisfaction
2020 Achievements	<ul style="list-style-type: none"> · Upgrading product quality management and risk prevention through risk management plans made by business area · Achieving the quality consistency of partner companies by assessing the quality of new and existing companies · Examination and operation of a quality management system through quality audits carried out by internal auditors and external certification bodies 		
2021 Initiatives	To build a global-level quality management system To establish measures in order to advance the quality management of new products with high efficiency and power To upgrade a long-term reliability test system for modules	To pursue preemptive quality improvement activities To prevent quality incidents by tightening 4M (Man, Machine, Method, Material) criteria	To achieve customer satisfaction by raising the bar for risk management

Governance of Quality Management

Management system	· ISO9001 (Quality Management System) certification
Department in charge	· Quality Management Team: control tower of QM
Executive in charge	· Head of Production Dept.
Quality management indicators	<ul style="list-style-type: none"> · Quality assessment results, performance of quality risk management · Results of internal and external quality audits

Operation & Examination of a Quality Management System

In accordance with its quality policies, HYUNDAI Energy Solutions establishes quality goals by business area/department/team and their detailed plans. Also, the company checks the quality management system (QMS) by conducting the audits performed by internal auditors and external certification bodies. Based on the mechanisms, we have been enhancing the functionality of our QMS while practicing customer-oriented quality management. To ensure the efficacy of the QMS, the company maintains the ISO 9001 certification.



Establishment of Quality Targets and Risk Management Plans

HYUNDAI Energy Solutions sets up quality targets, the relevant plans and risk management plans by business area/department/team at the beginning of each year. In order to witness the effectiveness of the plans, we biannually examine their performance in the first half and the second half, respectively. The efforts help to strengthen our product quality management and prevent risks.

Quality Management of Partner Companies

HYUNDAI Energy Solutions conducts assessments to ensure the product quality of new partners. We secure the quality consistency of partner companies by regularly assessing the product quality of the existing companies.

Upholding Fair and Transparent Business Practices

HYUNDAI Energy Solutions aims to become the most transparent company, rather than the largest one. By upholding sound ethical practices and compliance, we will work to create market environments that contribute to the growth of all our stakeholders and the sustainability of our society.

- 41 Compliance Management
- 44 Business Ethics
- 50 Risk Management
- 52 Greater Management Transparency

Compliance Management

HYUNDAI Energy Solutions is committed to raising compliance awareness and overseeing the risk of violating legal requirements through audits and education. We are also conducting various support activities for the stable culture of compliance and sustainable growth.

Management System



Governance of Compliance Management

CEO/BoD	<ul style="list-style-type: none"> · Annually declaring the determination to conduct compliance management · Confirming compliance plans and setting the directions
Compliance Officer (Management Support Department)	<ul style="list-style-type: none"> · Operating a compliance system that oversees the group · Conducting an internal inspection on compliance controls · Running education programs on compliance systems, and the related laws & regulations

Activities and Achievements in Compliance Control and Fair Trade

Compliance Training

HYUNDAI Energy Solutions offers regular compliance education programs to newly appointed executives, department heads, team managers and new hires. In addition, we are making efforts to raise employees' compliance awareness by providing on and offline programs and consulting to those responsible for the tasks requiring an understanding of compliance requirements after identifying those task types based on the results of regular audits.

Compliance Newsletter

We timely select the relevant compliance issues on legal amendments and legal violation cases related to fair trading, anti-corruption, financial sanctions, etc. and then disseminate them in a newsletter to promote compliance awareness.



Issuance No.	Title
No. 66	Amendment to Guidelines For Inspection Of Request For And Misuse Of Technical Data
No. 67	Amendment to Industrial Technology Security Act
No. 68	Establishment and execution of the review guideline on the unfair advantage provided to affiliated persons
No. 69	Sanction cases for unfair advantage supports between AOO affiliates
No. 70	Cautions for Iran sanctions
No. 71	Enforcement Decree of Fair Trade Act
No. 72	Korean Fair Trade Commission(KFTC) sanction for exclusive dealing
No. 73	Sanction cases for SOO unfair advantage supports
No. 74	Violation cases of key laws related to agency agreements
No. 75	Announcement of US's economic sanction related to construction of military bases in South China sea
No. 76	Temporarily upper limit amount of agricultural, fishery, and livestock graft under Enforcement Decree Of Improper Solicitation and Graft Act
No. 77	Latest trends in US's economic sanction for Iran
No. 78	Sanction cases for HOO unfair advantage supports

Approval and Review Regarding Anti-Corruption and Financial Sanctions

HYUNDAI Energy Solutions runs a pre-approval system and conducts legal reviews based on the compliance guidelines on anti-corruption laws and regulations with the aim to cultivate a clean and fair management culture and prevent legal risks. Besides, we carry out inspection activities according to the guidelines on financial sanctions in order to prevent the related risks both at home and abroad.



Purpose	<ul style="list-style-type: none"> All employees of the affiliates and their partner companies are obliged to comply with the domestic and international anti-corruption/economic sanctions laws.
Scope	<ul style="list-style-type: none"> Entities and their domestic/foreign subsidiaries exercising corporate and management rights All employees Companies or individuals who provide goods and services and stakeholders who do business with the company and their employees
Implementation Period	<ul style="list-style-type: none"> Effective as of July 25, 2014 (Guidelines for Compliance with the Anti-Corruption Act) Effective May 14, 2018 (Guidelines for Compliance with the Economic Sanctions Act)

Appointment of the person in charge of compliance, and distribution of compliance handbooks, checklists, and manuals

We distribute handbooks, checklists, and manuals on compliance in order to guide employees in preventing the legal risks arising in the course of work while reviewing the materials whenever needed.

Subcontracting Compliance Program Inspection

The company inspects the departments with high chances of subcontracting violations in order to review their processes and systems of awarding contracts and issuing written requests for technical documents. Also, we provide an on-sight education program for the relevant departments and a senior managers' program to raise compliance awareness and the related capacity

Compliance Advisory System

The compliance advisory system is in operation to provide professional advice on the compliance issues arising at work.

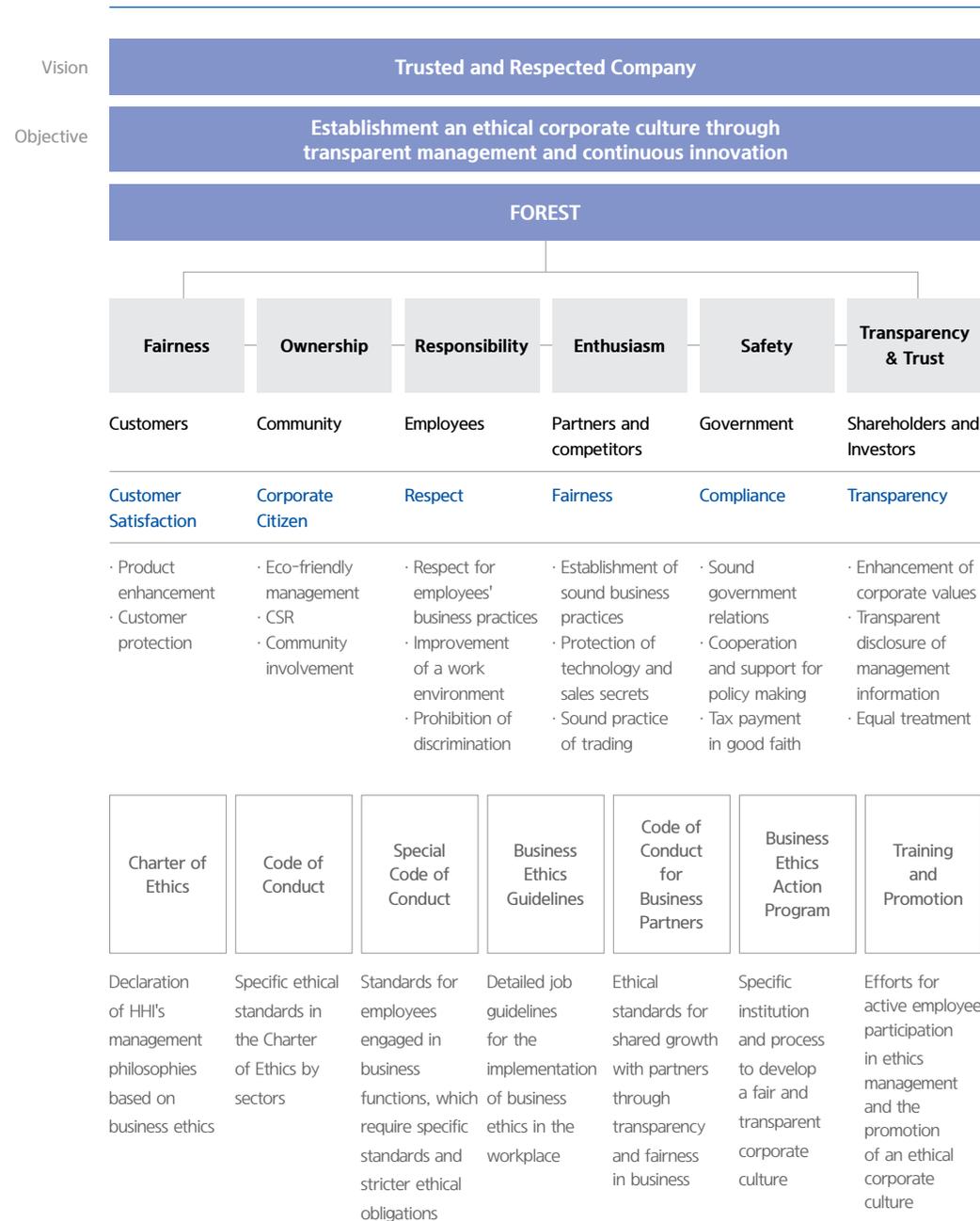
Online Channel for Contractor Corruption Complaints

We focus on settling a fair subcontracting culture by operating a cyber consulting system in which the partner companies can directly report and inquire about suspicious unfair trade practices. In the cyber consulting system, we prohibit the exposure of information on the informants, and do our best to protect the informants from disadvantages by guiding them in requesting the Business Ethics Team for protective actions or relief in case of experiencing disadvantages driven by identity exposure and discrimination.

Business Ethics

HHI Group spares no effort to solidify its position as a “trusted and respected company” in a rapidly changing environment by pursuing transparent management and continuous innovation. We will put forth our best efforts to become a corporate that customers and partner companies want to trade with, one that investors want to invest in, one that employees want to work at, and one that fulfills its responsibility for the nation and communities.

Management System



Category	2021 Initiatives
Clean Notice System	· Self-production of the campaign video, promotion of the mobile YouTube channel, in-house broadcasting, etc.
Business ethics homepage	· Application of the Chinese version, promotion of business ethics targeting local employees, and activation of reporting
Business ethics practice program	· Increasing convenience in self-check for employees business ethics compliance (new mobile version) · Encouraging online submission of the Business Ethics pledge and interest report
Online training content	· Developing/expanding non-face-to-face educational content due to COVID-19 · Provision of the business ethics training materials for overseas (local) recruits

Governance of Business Ethics

Function/Position	Responsibility
CEO	· Setting directions and plans of ethics management
Audit Committee	· Evaluating audit performance and following up on corrective actions: ensuring the auditor's expertise and independence
Business Ethics Team	· Operating ethical management systems: providing business ethics trainings and programs: inspecting ethics violations: monitoring and preventing ethics risks: monitoring business ethics practices constantly

Charter of Ethics

Since ethics regulations for procurement position were established in 1994, HHI Group has practiced and expanded its ethics program by amending the business ethics regulations and providing an online ethics violation reporting on the platform and training courses. In October 2005, we declared our Charter of Ethics which proclaims our ethical management philosophy, and have worked to make it fundamental to the way we do business.

Charter of Ethics of HHI Group

We pursue to be a respected and trusted company that positively contributes to its customers, shareholders and society with the Hyundai Spirit. To achieve this goal, we hereby establish this Charter of Ethics, which defines our standards of conduct to follow in accomplishing faithfully our original role and social responsibilities as a corporate entity and we declare that we shall comply with this Charter of Ethics.

- 1 We shall be an ethical company that abides by all domestic and international laws and regulations through fair and transparent management practices.
- 2 We shall achieve customer satisfaction by meeting their needs and expectations.
- 3 We shall pursue maximizing the shareholder's value through fair and efficient management.
- 4 We shall work to fulfill our social responsibilities and duties as a member of our community, and contribute to the development of our nation and society.
- 5 We shall work to create a transparent and clean corporate culture through fair competition and trading practices.
- 6 We shall pursue to be a company with the highest quality human resources that offers equal opportunities to our employees in a safe and comfortable working environment.

Materialization of Business Ethics

HHI Group has enacted the Code of Conduct, an elaboration of the Charter of Ethics by each job, and Business Ethics Guidelines, detailed job guidelines for the implementation of business ethics in the workplace. We are also regularly making revisions to reflect the changes of the environment such as related laws and regulations and social perception to enhance their effectiveness. We guide all the employees to comply with the business ethics regulations through promotional activities and internal audits.

Employees

Code of Conduct

- Enforced on October 4, 2005
- 2nd revision on July 1, 2019
- 3rd revision on April 1, 2020 (clause on human rights respect and protection added)
- Criterion for action and evaluation

Special Code of Conduct

- Enforced on May 2, 2007
- Additional duties of employees engaged in six jobs requiring higher integrity and morality (procurement, HR, sales, finance/accounting, engineering and IT)

Business Ethics Guidelines

- Enforced on January 1, 2002
- 8th revision on July 1, 2020 (clause on employee practice ethics to prevent workplace harassment)
- Business process standards for understanding and practicing business ethics policies

Partner companies

Code of Conduct for Partner Companies

- Enforced on October 4, 2005
- 3rd revision on December 1, 2019
- Duties applied to the personnel of HHI Group's partner companies

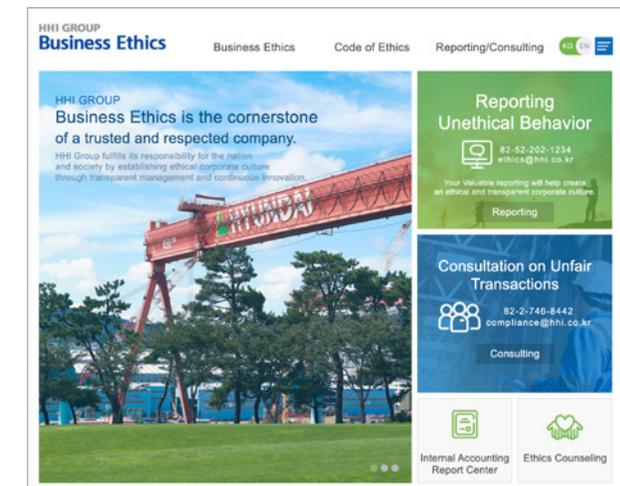
Major Activities & Achievements

Integrated Group Website

www.ethics.hhigroup.kr



In July 2018, the Group's integrated business ethics website opened to introduce the Group's business ethics practices and raise the ethics awareness of employees. Information on the Ethical Management System, Ethics Charter, Code of Ethics, and Guidelines for Practice of Work Ethics is available on the company website. The Guidelines for Practice of Work Ethics state that we comply with the laws and regulations related to fair trade and protection of SMEs, reject unfair and unlawful trade practices, and provide the standards for bans on bribery and anti-corruption. Through the Ethical Management System, it is easy to report on unethical behaviors and receive advice on unfair trade with vendors. The website provides a 'subcontractor hotline' through which partner companies can request consultation on subcontracting or unfair trades, a channel for filing complaints or reporting on corruption such as accounting fraud, and a channel for ethics counseling .



Annual Business Ethics Confirmation

HHI Group's employees and its partner companies are required to submit an annual Business Ethics Confirmation (according to the internal regulations), to pledge their commitment to understanding the relevant regulations and abiding by corporate policies and guidelines. The pledge requires compliance with ethics regulations and the anti- corruption law to avoid unfair trades, corruption, illegal solicitation and graft as prohibited by laws and regulations.

Major Activities & Achievements

Conflicts of Interest Reporting

When a possible conflict of interest is identified, the employee in question is obligated to report the issue in advance to prevent an unfair result and establish a transparent trade practice. All employees of HHI Group and its partner companies are obligated to submit this conflict-of-interest report every year.

Ethics Violation Reporting and Whistle Blower Protection

We are operating an online reporting window (integrated business ethics website) that allows 24/7 reports on the violations of the Code of Ethics and other laws such as illegally accepting gratuities or entertainment, obtaining unjust gains using their position or authority, and abusing authority. The reports can be submitted by phone, fax, e-mail, and/or mail. We aim to protect the whistleblower's identity and reward them in accordance with our reward guidelines.

We received a total of 66 reports in 2020, and 36 cases of them were investigated: 14 cases turned out to be violations of ethical management, and the personnel shift for those involved was made in accordance with the related regulations and procedures. In addition, 30 cases including civil complaints were transferred to other responsible departments; the results of the transferred cases were checked and confirmed.

Business Ethics Self-Monitoring and Risk Management

Every year, all employees conduct self-diagnosis in regards to compliance with ethical management to check the level of ethical management. This was to enhance their understanding of the related regulations and make improvements. Through constant monitoring of ethical management, an analysis on unethical behaviors and risks can be made in advance, and actions to improve the identified vulnerable processes are taken.

On-Site Hearings of Business Ethics

KSOE holds field sessions to hear from employees and partner companies and diagnose and improve the level of ethics compliance.

Business Ethics Training and Promotion

KSOE annually runs classroom training courses and online courses on business ethics. The materials are presented in formats such as animated movies, etc. to raise the understanding of employees and encourage their commitment. The training provides a case study of various unethical issues (e.g. anti-corruption and discrimination) and a Q&A session designed to induce a sense of sympathy. To embed business ethics throughout the Company, we mandate business ethics courses to all new hires and managers. New hires would understand the Charter of Ethics and the related policies of HHI while managers would be well equipped to base their business decision making on an ethical way of thinking. Moreover, we work to introduce our ethical management system at HHI Council, a consultative organization between HHI and its partner companies. The Ethics Management Team also works to spread ethics management over partner companies by visiting them to provide related training.

Clean Notice System

Prior to major national holidays every year, we send out letters to our partner companies asking not to provide any gift to our employees. We advise our partner companies to report any bribery demands, including attempts, to our Business Ethics Team. When an employee unavoidably receives gifts from stakeholders, we guide them to return the gifts via our designated courier or donate to charities.

Support for Ethics Management in Partner Companies

KSOE supports partner companies in their establishment of a business ethics culture. We have implemented the Code of Conduct for Business Partners since 2005 to embed a clean and transparent business practice. The Code of Conduct for Business Partners stipulates obligations such as transparent and fair business practices with partner companies and compliance with the related laws and regulations, placing a ban on providing monetary benefits, graft and treatment to employees. Other support to partner companies include support for the establishment of business ethics regulations and practice programs, the provision of classroom training for the introduction of ethics management, and the provision of promotional materials.

Risk Management

For sustainable growth, HYUNDAI Energy Solutions preemptively identifies and manages the external and internal risks that can arise from any business management. To this end, we have built a system to thoroughly manage financial and non-financial risks by reflecting the characteristics of each industry.

Risk Governance

For risk management, HYUNDAI Energy Solutions is focusing on or plans to focus on achieving the following three goals

Minimizing financial risk	In a way to enhance the current financial structure, we are working on the improvement of working capital. The ultimate goal is to minimize the lengths of its cash conversion cycle by appropriately managing trade receivables, inventories, and trade payables.
Minimizing service delivery risk for customers	HYUNDAI Energy Solutions has been building a global SCM to meet the contractual delivery date and is doing its best to manage the supply chain by establishing a separate branch office in Shanghai, China to enhance the monitoring of material supply.
Minimizing compliance risk	To reinforce the compliance management, HYUNDAI Energy Solutions is in a tight cooperation with the Compliance Team of its holding company regarding business ethics, compliance, fair trades, corporate disclosure, etc.

Financial Risk Management

Internal Accounting Control System

HYUNDAI Energy Solutions operates an internal accounting control system in order to raise accounting transparency and improve corporate governance. Starting from 2020, the system has been in the process of advancement to raise the "examination level" during an external audit and proactively increase the financial report risk control capabilities. And the upgrade of the "audit level" and the establishment of a computerized system will be completed in 2021.

Financial Risk

HYUNDAI Energy Solutions responds to financial risks by classifying them into foreign exchange risk, credit risk, and liquidity risk. In the financial sector, we establish and operate proper financial management policies under the management and supervision of the Audit Committee.

Foreign Exchange Risk

To minimize changes in management achievements according to foreign exchange fluctuations, Hyundai Energy Solutions manages foreign exchange risk by designating dedicated personnel for exchange transactions and risk management. Those in charge of foreign exchange risk flexibly manage and control foreign currency collection, holding, and short-term borrowing in response to exchange rate fluctuations.

Credit Risk

HYUNDAI Energy Solutions minimizes the possible credit risk during transactions by carrying out strict credit evaluations on external clients and making it mandatory for them to buy short-term export credit insurance and accounts receivable insurance plans. Also, a dedicated team for bond management is organized for systematic and efficient credit risk management.

Liquidity Risk

HYUNDAI Energy Solutions methodically manages working capital in preparation for internal and external liquidity risk. We hold working capital worth more than 2 months (for responding to operating, non-operating, and financial expenditure) all the time, allowing for a flexible cash flow.

Non-Financial Risk Management

Human Rights Risk

HYUNDAI Energy Solutions continues to carry out activities for the sustainable management of partner manufacturers and mutual growth and development with us. For example, we provide accommodation to the workers working for the factory in Eumseong. In order to improve the welfare of workers, we established a "Joint Workers' Welfare Fund" in 2020 after the split of the company, and will devise project plans for the fund in 2021 to promote a variety of business projects with the combined additional funds from the company and government subsidies

Supply Chain Risk

Aiming to build a sustainable management system, HYUNDAI Energy Solutions evaluates the quality, price, and date of delivery. Through an authorized external credit rating institution, we undergo a financial evaluation once a year, thereby adjusting the credit rating and the transaction weight of each partner company. In addition, HYUNDAI Energy Solutions is doing its utmost to build ethical management by requiring a Business Ethics Confirmation so that business ethics are enhanced and embedded in partner companies.

Greater Management Transparency

HYUNDAI Energy Solutions is committed to building an advanced corporate governance structure that ensures the Board of Directors' right to an independent and transparent decision-making process. Equipped with balances and checks by BoD committees such as the Audit Committee, our governance structure will enhance the value of stakeholders such as the corporate itself and shareholders.

Operation and Composition of BoD

Aiming to ensure sound corporate governance and transparent management, HYUNDAI Energy Solutions established the Articles of Incorporation stipulating that more than half of BoD members must consist of outside directors. As the ESG Committee was newly formed in May 11, 2021, the BoD now has 3 subcommittees: Outside Director Recommendation Committee, Audit Committee and ESG Committee. The BoD has the authority to vote on matters mandated from the shareholders' meeting, matters related to basic principles of corporate operation and other crucial resolutions. The BoD also has the rights to appoint the CEO and Chairman of the Board as well as the responsibilities to oversee the duties of executives.

(as of March 23, 2021)

Type	Name	Position	Gender	Current Occupation	Specialized Area	Subcommittee (listed as a member)	Appointment Date
Internal Director	Chul-Ho Kang	Chair	Male	CEO of HYUNDAI Energy Solutions	Overall Business Management	Outside Director Recommendation Committee	Mar, 23, 2021
	Yoonseok Lee	Director	Male	Executive charge of Management Support, HHI Holdings	Overall Business Management		Mar, 23, 2021
Outside Director	Jeong Ku Oh	Director	Male	Advisor at HYUNDAI Accounting Corporation	Financing/Accounting	Audit Committee, Outside Director Recommendation Committee	May 17, 2019
	Dong-Seok Oh	Director	Male	Lawyer at KL Partners	Laws, regulations	Audit Committee, Outside Director Recommendation Committee	May 17, 2019
	Seongmoon Kim	Director	Male	Professor of Business School, Yonsei University	Overall Business Management	Audit Committee, Outside Director Recommendation Committee	May 17, 2019

BoD Meetings

In 2020, HYUNDAI Energy Solutions held a total of 8 BoD meetings, where 19 agenda items were passed. Attendance rate of the outside directors is 100.

Sequencing	Date	Agenda Items
1st	Feb. 5, 2020	<ul style="list-style-type: none"> · Approving the 4th financial statements · Approving the 4th sales report · Report on the internal accounting management of 2019
2nd	Feb. 24, 2020	<ul style="list-style-type: none"> · Approving amendments to the 4th financial statements and sales report · Approving the calling of the 4th shareholders' meeting and meeting objectives · Reporting on the internal accounting management of 2019
3rd	Mar. 6, 2020	<ul style="list-style-type: none"> · Approving the change made to the 4th shareholders' meeting places
4th	Mar. 24, 2020	<ul style="list-style-type: none"> · Appointing the BoD chair and designating the sequencing of the candidates for an acting chair in case of a chair's absence or incapacity · Appointing the Outside Director Recommendation Committee member and enacting regulations
5th	Jun. 5, 2020	<ul style="list-style-type: none"> · Approving the ceiling of transaction between directors and the company · Reporting of the main management status
6th	Jul. 29, 2020	<ul style="list-style-type: none"> · Approving the investment in facilities · Reporting of the sales performance in the first half of 2020
7th	Oct. 29, 2020	<ul style="list-style-type: none"> · Reporting of the sales performance of the 3rd quarter in 2020
8th	Dec. 17, 2020	<ul style="list-style-type: none"> · Approving the amendments to the MOU with HHI holdings · Approving the amendments to the MOU with KSOE · Approving the conclusion of a service agreement on management advising and support with HHI holdings · Approving the ceiling of transaction between directors and the company · Reporting of the 2021 management plans

BoD Subcommittee

Audit Committee	· Oversight of executives' implementation of duties, access to material and information required for audits
Outside Director Recommendation Committee	· Recommendation of outside director candidates qualified to help to achieve business goals
ESG Committee	· Discussion on ESG strategic directions, plans and implementation-related issues · Discussion on developing ESG capacity · Discussion on corporate social responsibilities

Appointment and Assessment of Outside Directors

We comply with the Commercial Act's requirements for outside director appointment, and our outside directors are not a related party to the major shareholders, executives or affiliated companies. All BoD members comply with the Commercial Act, the Monopoly Regulation and Fair Trade Act, etc. to prevent a conflict of interests among companies. BoD members consist of professionals with expertise in each job function with the aim of pursuing the diversity and professionalism of directors. We allow for no limits based on age, gender, educational or regional backgrounds in appointing or evaluating BoD members.

Enhancement of BoD's Expertise

We provide training programs for the outside directors to fulfill their duties and responsibilities. In 2020, the company invited lecturers from Samil PWC, an accounting firm to give a training course covering the roles of the Audit Committee and the overall internal accounting management in the efforts to enhance the Audit Committee members' expertise. We will continue to offer professional specialized programs by inviting external professional organizations.

Remuneration of BoD Members

The ceiling of the remuneration of BoD members is decided by the resolution of the Annual General Shareholders' Meeting to ensure transparency and justification. The 2020 annual remuneration ceiling for directors approved by the General Shareholders' Meeting was KRW 1.9 billion. The payment statement discloses the total number of the paid directors and the total amount on the annual report .

Shareholders and Dividend Policy

The number of HYUNDAI Energy Solutions' outstanding shares as of the end of 2020 is 11,200,000 of which 53.57% is held by the largest shareholder, Korea Shipbuilding & Offshore Engineering (KSOE). The amount of a dividend is decided in overall consideration of a profit size, investment plans for future growth and a financial structure, etc. within the available portion of the company's earnings. The availability and amount of a dividend is decided in consideration of management conditions. To pay a dividend, the company determines its availability and amount and then announces the resolution on the dividend payments by sending a notice to the shareholders.

Category	Names of Shareholders	No. of Shares	Proportion (%)
Shareholder with over 5%	Korea Shipbuilding & Offshore Engineering	6,000,000	53.57%
	National Pension Service	590,733	5.27%
Minority shareholders		4,609,267	41.15%

Pursuing Safe and Environmentally Friendly Business Practices

HUYUNDAI Energy Solutions strives to reduce the risk of workplace accidents, improve worker safety and health, and further minimize the environmental impact of its business operations.

- 57 Safety Management
- 60 Health Management
- 62 Environmental Management

Safety Management

As the Occupational Safety and Health Act has been strengthened for the prevention of industrial accidents, HYUNDAI Energy Solutions is putting greater effort to prevent safety accidents by focusing on the basics and the principles of safety management such as building an autonomous safety management system centered on manufacturing sites and enhancing the autonomous safety management system of partner companies. Moreover, based on global standards, including ISO 45001, all employees are site-oriented participating in safety accident prevention activities.

Each month, the regular Safety and Health Meeting is held, and the relevant external cases are checked on a regular basis to set preventive measures and to apply to our company via case-by-case self-risk evaluation. Also, all employees and executives take part in activities to identify hidden risks and share improvements in an effort to minimize the occupational safety accidents rates.

Management System

Vision

"Realizing Industrial Accident-Zero Company" by Building a Safety Culture that Conforms to the Basics and Principles of Safety

Safety Policy

Building an autonomous safety management system centered on the manufacturing sites and helping partner companies build the autonomous safety management system

Continuing efforts to improve the working environment and pursuing a prevention-oriented health management system

Managing GHGs for low Co2 emissions, preventing environmental pollution, and enhancing improvement efforts

2020 Achievements

- Continuously carried out preventive activities including the operation of Process Safety Management (PSM)
- Offered monthly safety training for all employees
- Conducted frequent on-site inspections and implemented a mobile-based safety management system

2021 Initiatives

- To realize major accident-zero workplace and achieve accident rate of lower than 0.25% (1 case) with safety culture that emphasizes basics and principles of safety
- Identifying risk factors during on-site inspections (conduct more than once a month)
- Supporting partner companies with an autonomous safety management system
- Carrying out safety accident preventive activities (such as discovering hidden risk factors and making improvements)
- Strengthening safety training
- Performing quantitative risk analysis and preparing a safety operation standard when changing process and work procedure
- Checking compliance with safety rules and regulations

Process Management

Pursuant to Article 44 of the Occupational Safety and Health Act, HYUNDAI Energy Solutions implements the Process Safety Management (PSM) in large business establishments which have a high possibility of serious industrial accidents with hazardous and dangerous facilities. PSM is a system to prevent serious industrial accidents by requiring companies to prepare a report on accident preventive activities that include data on process safety, process risk evaluation, plans for safe operation and emergency action plan, and submit it to the government so that they can continue its preventive efforts through the examination and confirmation from the government. With periodic examinations and evaluations, HYUNDAI Energy Solutions continues its efforts to supplement its process and maintain safe working places.

Safety Training

HYUNDAI Energy Solutions offers monthly safety training to all employees and makes efforts to provide realistic and practical training sessions focusing on recent external accident cases with photos. When handling short-term construction, we also carry out safety training for external workers. We listen to safety-related opinions of partner companies and come up with improvement plans through regular safety and health meetings, in an effort not to allow even a single safety accident in our workplaces.

Site-Oriented Responsible Safety

Under the supervision of the Safety & Environment Team, HYUNDAI Energy Solutions identifies risk factors through ad-hoc site inspections, and any identified risk factors are shared on mobile SNS to everyone so that the person in charge can implement an immediate measure for it.

Safety Management Governance

Management system	· ISO45001/14001 (HISEs)
Decision-making body	· Industrial Health & Safety Committee (6 representatives from the management and the labor union) (quarterly) · Partner Safety and Health Council (monthly)
Executive in charge	· Head of Cell Division (Senior Vice President)
Dedicated organization	· Safety & Environment Team · Initial response to the accidents and tasks related to safety, health, and environment · Designating supervisions for each sector and carrying out a shared-growth cooperation program
Company-wide safety performance indicator	· Accident rate (target achievement)

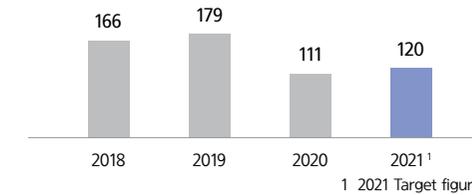
Major Activities and Achievements

Risk Factor Management

HYUNDAI Energy Solutions visits sites more than once a month to conduct on-site inspections to identify risk factors. In the case of Cell manufacturing sites, we examine relevant chemicals, protective gears, the manufacturing devices that handle hazardous substances, and we also carry out inspections for power units, including conveyor belts, and forklift trucks in the Module manufacturing factories. When it comes to Utility manufacturing sites, CCSS, CGSS, TMA labs are inspected, and in offices, the capacity of monitors and chairs are also examined and a test to prevent things from falling is also conducted. From a company-wide perspective, we check and manage firefighting/fire detectors as risk factors. In addition, we prevent industrial accidents by continuously conducting safety-related inspections, including hazardous danger prevention plans, pressure vessel inspections, gas facility safety inspections, lift inspections, chemical supply tank safety inspections, conveyor and robot safety inspections, fire inspections, etc.

Accident Prevention Activities

By finding the hidden risk factors by unit division and carrying out improvement activities, HYUNDAI Energy Solutions voluntarily realizes safe workplaces and raise safety awareness as we share our achievements and details with employees. Also, we regularly check external safety accident cases (on a monthly basis) and conduct self-risk evaluations for each case in order to devise preventive measures and apply them to our company.



Safety Management of Partner Companies

In an effort to secure expertise in safety management and autonomous safety management capability of partner companies, HYUNDAI Energy Solutions runs a system by which partner companies appoint a safety manager, and a manufacturing site-oriented autonomous safety management system is established to find and improve unreasonable factors in workplaces. To enhance the safety management capability of partner companies, we support various kinds of educational materials and safety activities.

Reinforcement of Safety Training

HYUNDAI Energy Solutions holds safety and health meetings and carries out regular safety training and short-term construction safety training to minimize safety risks. Through regular safety and health meetings and safety training, we raise the safety awareness of employees and provide compulsory regular safety courses to supervisors, employees whose job has recently changed, and new employees. Moreover, when there are external workers on sites, the Safety & Environment team offers safety education sessions and manages the processes in workplaces, thoroughly preventing safety accidents.

Disaster and Emergency Responses

HYUNDAI Energy Solutions established a company-wide emergency response manual in order to protect the employees and company assets from natural disasters such as typhoons and earthquakes. We also conduct regular fire drills in cooperation with the fire station in a way to minimize damages to human injuries and economic damage through a prompt response when accidents occur.

Clean Room Worker Health Risk Monitoring

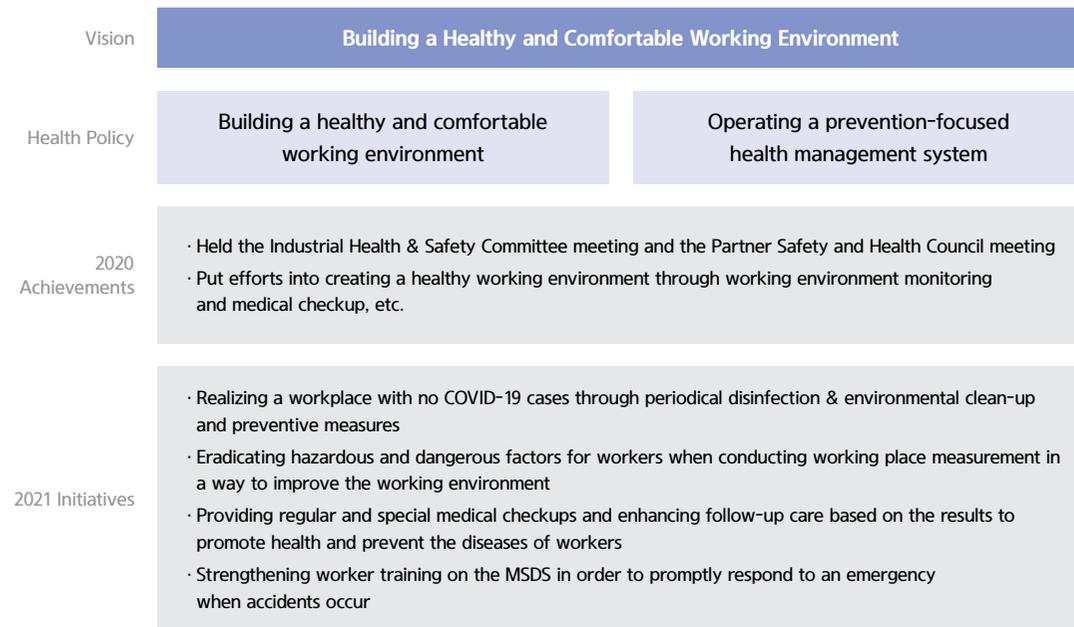
Through the regular measurement of the work environment, HYUNDAI Energy Solutions monitors whether any workers are exposed to the hazardous environment, and takes measures accordingly. And with 3 types of periodic checkups (general, special, comprehensive), we prepare for the workers' change of health caused by the work environment of the clean rooms. We also place the Material Safety Data Sheet (MSDS) on manufacturing sites, putting every efforts into helping workers frequently check and be cautious to chemical hazard risk.

In the short-term, we'll provide two-piece dust-proof clothing that helps increase air permeability and lower work stresses, and comfortable dust-free shoes will be also provided, unless they affect the processes, reducing fatigue from working long hours. In the mid-to long-term, HYUNDAI Energy Solutions will listen to the difficulties by continuously having interviews with workers and identify the possible health risk factors to take the necessary measures.

Health Management

With the aim of building a healthy and comfortable working environment, HYUNDAI Energy Solutions continues its efforts to improve the working environment and operates a prevention-focused health management system. We support regular medical checkups and special examinations and, based on checkup results, follow-up care is provided such as adjustment of working hours, proper exercise, and counseling on nutrition and health. And we monitor and make improvements in the work environment on a regular basis, thereby creating healthy and comfortable workplaces for employees. Especially, HYUNDAI Energy Solutions is doing its best to make sure workers work in a safe environment by providing periodic information on COVID-19 and taking preventive measures for working and relaxing spaces.

Management System



Industrial Health & Safety Committee / Partner Safety and Health Council

We appoint representatives from the management and the labor union and hold the Industrial Health & Safety Committee meeting on a quarterly basis and the Partner Safety and Health Council once a month. We devise the agenda required to improve an employees' health and working environment and carry out the improvement activities whose results are shared. Based on the trust of the management and the labor union earned from sharing results, we promote the health of employees and create a healthy and comfortable working environment.

Create Healthy Working Environment

To prevent occupational diseases and build a healthy and comfortable workplace, we measure the working environment on a regular basis, conduct regular and special medical checkups, carry out comprehensive examinations, manage MSDS, and conduct the quarantine and prevention activities against infectious diseases.

Governance of Health Management

Management system	· HSEs (ISO 45001/14001)
Decision-making body	· Industrial Health & Safety Committee (6 representatives from the management and the labor union) (quarterly) · Partner Safety and Health Council (monthly)
Executive in charge	· Head of the cell business divisions (managing director)
Dedicated organization	· Safety & Environment Team
Company-wide health performance indicator	· Occupational Illness Frequency (OIFR)

International Certification for the Safety and Health Management System



Key Support and Facilities

Health Management

We annually provide medical checkups (general, special) to our employees and their families in an efforts to improve healthcare. Also, long-serving employees and their families can benefit from comprehensive medical examinations for their healthy lives.

Improvement of Working Environments

The company biannually measures the working environments for employees exposed to hazardous substances and dangerous equipment. Depending on the measurement results, we take the necessary actions to improve the working environments. In addition, protective equipment is arranged on the work sites to protect workers from safety risks

Hygiene Management

In the efforts to prevent infectious diseases and promote healthcare, the company is taking measures to minimize the spread of those disease by vaccinating employees against the flu. Furthermore, we have been periodically disinfecting the work sites to take preventive actions for infectious disease including the COVID 19.

Health Education

We are thoroughly managing the Material Safety Data Sheet (MSDS) designed to provide information on the materials involved with work processes, hazards, emergency response actions taken upon contact with or exposure to hazardous chemicals. Workers exposed to those risks at work are required to follow the guidance of MSDS through safety education.

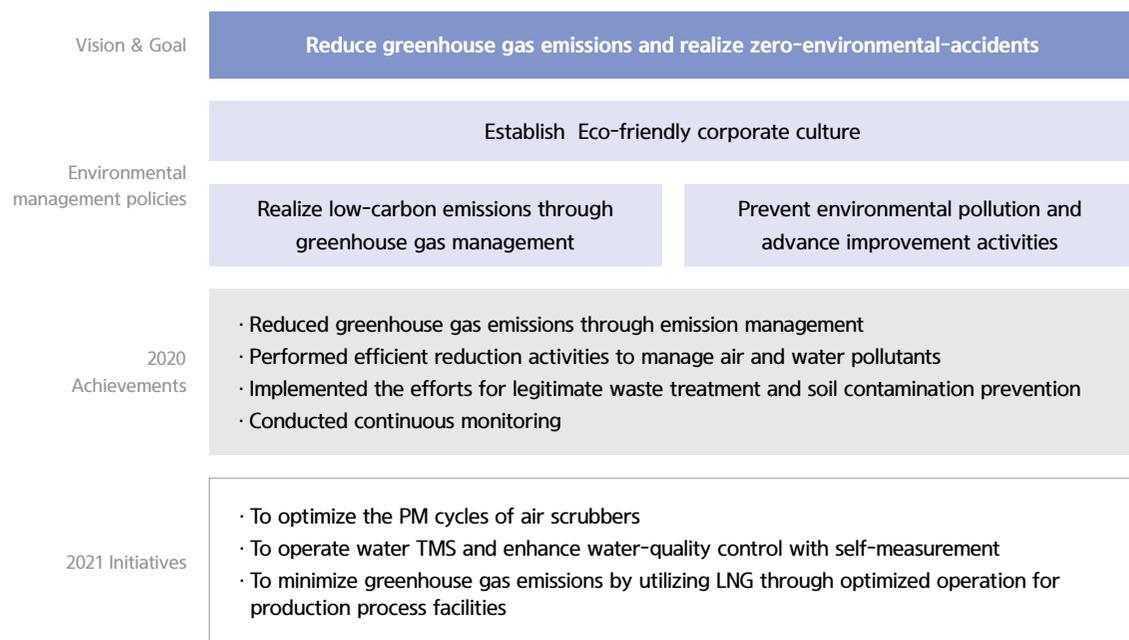
Environmental Management

HYUNDAI Energy Solutions is actively responding to the government's Green New Deal policy that includes environmental protection and a transition to renewable energy by implementing efforts such as facility investment. The company is also equipped with an eco-friendly corporate culture that seeks low-carbon emissions by reducing greenhouse gases and conducts preventive activities against environmental pollutions or accidents. As a provider of total PV solutions, we are contributing to building an infrastructure for pro-environmental future society by developing a variety of eco-friendly products and solutions. We try to reduce power consumption and continue to lessen greenhouse gas emissions by operating high-productive smart factories. We continue to improve and make an investment in the facilities of the wastewater and air emission treatment system to minimize harmful emissions, and also strengthen monitoring the efforts for accident prevention. We are trying to reduce hazardous wastewater and waste emissions through process improvement.

Operation System

Based on the Environment Management Systems(ISO 14001), we operate an environmental management system that helps to identify internal and external environmental issues and prevent environmental accidents in accordance with the requirements of the concerned parties. With our efficient management and emission-reduction activities, we try to reduce air and water pollutants from work sites and make a continuous effort for legitimate waste treatment and soil contamination prevention.

We are also striving to prevent environmental accidents that may be caused by chemical substances through our strengthened chemical management and reduce the amount of greenhouse gas emissions through energy-saving activities.



Energy Management and Tackling Climate Change

Energy Management

Our entire staff is engaged in energy-saving activities to reduce energy consumption. If required, we invest in high-efficiency facilities and equipment and try to cut down greenhouse gas emissions through our efficient operation. In order to advance the energy efficiency of utility facilities and reduce energy consumption, we are investing in supplementing the facilities.

Minimizing Work sites' Environmental Impact

Activities & Achievements of Air Pollutant Management

We have an efficient emission treatment system that controls air pollutants emitted during the production process by measuring and managing the air pollutant concentration on a regular basis. We are planning to install an air-TMS system to monitor air pollutant concentration in real time and to prevent any leakage accidents. In response to the environmental regulations on air pollution, we invested in replacing our heating system with low-NOx equipment.

Activities & Achievements of Wastewater and Water Pollutant Management

We operate a wastewater treatment plant (capacity of 1,800 tons/day) and streamline its management to efficiently treat the wastewater generated from production processes and work sites. We also control the wastewater pollutant concentration on a real-time basis by monitoring the final discharge water and conducting the TMS inspection to rigorously prevent any leakages in case the concentration of hazardous substances and pollutants is above the standard level.

Activities & Achievements of Waste Reduction

We separate recyclables from wastes and perform complete waste management with a legitimate system implemented to prevent soil contamination.

Activities & Achievements of Chemical Substances Management

To prevent environmental accidents caused by chemicals, we are operating the chemical leakage detectors, safety valves, rupture discs, and bund walls(110% of tank capacity) and conducting real-time monitoring in the situation room. We have informed the local community about chemical use and the accident prevention system with an emergency contact system. We are also conducting the analysis of a per fluorinated compound on chemicals used in the production process to detect harmful ingredients.

Minimizing Work sites' Environmental Impact

Environmental Accident Prevention Training

We have established emergency procedures manuals to promptly respond to chemical leakages. In order to make a prompt and safe response to any accident that may arise, we provide training including alerting, evacuating, recovering and rescuing procedures, and the usage of protective equipment.

Greenhouse Gas Reduction of the Eumseong Plant

The Eumseong plant reduced 2,503 tons of the direct greenhouse gas emissions (Scope1) through greenhouse gas reduction activities in 2020. In 2021, we are planning to reduce the amount of direct emissions through efforts such as easing temperature and humidity conditions, introducing high-efficiency heating systems, and minimizing the operation of the company vehicles. By investing in new facilities with high productivity and improving the processes, we are trying to practically reduce the reference value of emission units along with the total amount of greenhouse gas emissions.

The greenhouse gas reduction activities of the Eumseong plant will help limit the total level of emissions when an emission trading system is in place in the future and also facilitate the establishment of reduction targets through historical data analysis. We will continue to perform reduction activities actively responding to climate change by continuously monitoring and analyzing activities on greenhouse gas emissions.

Eco-Friendly Technology Development

Solar cells and modules are the very renewable energy sources that employ eco-friendly technologies, and we continue to develop such technologies that lead to an increase in production and efficiency and launch new products. In particular, we have developed MBB half-cut high-output modules based on M6 and larger wafer formats, greatly increasing the output power from 380W to 450W per module, and developed double-sided solar cell/module technology with more than a 5% improvement.

In order to reduce carbon emissions from the materials used in manufacturing solar modules, we have acquired 8 types of first-class carbon-certified modules and 45 types of second-class products by utilizing domestic wafers.

For solar module products applied to water environments, we have developed eco-friendly high-durability modules with minimal lead (Pb) content and obtained a KS certification for the first time in the industry.

Activities & Achievements of Environmental Management Investment

HYUNDAI Energy Solutions has invested in atmospheric TMS(telemonitoring system) facilities for complete management and the transparent operation for the atmospheric environment and also made an investment in replacing the entire water TMS facilities in line with the revised communication standards of the Water Contamination Process Test Method. We are also actively responding to the revision of the Water Environment Conservation Act by preemptively investing in TOC analysis equipment to be installed in 2023. We have replaced the sulfuric acid tank to improve the operation of the wastewater treatment plant.

Categories	Contents	Amount (KRW)	Notes
Year 2020	Installing Atmospheric TMS	219,933,000	In progress
Year 2020	Improving hazardous chemical tanks	24,750,000	Completed
Year 2021	Water-quality TMS	91,800,000	In progress

Promoting Strong Labor-Management Relations Built on Mutual Respect and Trust

HYUNDAI Energy Solutions establishes a high-trust corporate culture through continuous communication. It aims to build a cooperative labor-management relationship based on respect for all stakeholders including employees.

- 67 Human Rights Management
- 71 Labor-Management Relations
- 72 Learning & Development
- 76 Evaluation & Compensation
- 78 Employees' Quality of Life

Human Rights Management

HYUNDAI Energy Solutions respects the dignity and human rights of all stakeholders in direct and indirect relationships and aims to implement human rights management based on such efforts.

Management System

Vision

Realizing a society that embraces diversity and respects all stakeholders

Objective

Establishing of the human rights management system and spread a culture of respecting human rights

Strategy

Protecting the human rights of employees

Respect for diversity and non-discrimination

Supply chain human rights protection policy

Conflict minerals Non-use Policy

Policies and Progress

Grievance Handling System

Running the Grievance Handling Program is mandatory in KSOE and its shipbuilding subsidiaries: each affiliate should appoint at least two responsible committee members (from management and labor). The appointed members check and review the details and facts in relation to the grievances they received, regardless of the sector or field. Based on the review result(s), a disciplinary action is taken and necessary assistance is provided to the victim.

STEP 1

Receipt of a grievance

- Receive all grievances related to the company from employees or external stakeholders
- Grievance reception desk: Employee representative body, intranet, hotline, offline, etc.
- Meetings for each position held at least once a quarter: Managers, production managers, production team leaders, personnel without titles, etc.

STEP 2

Check/review the grievance

- Receipt and Review by Grievance Handling Committee
 - Check details and facts
 - Listen to the victim's wishes
 - Review the action plan according to the checked details

STEP 3

Notify the review result

- Notify the review results and listen to the victim's opinions
- * Re-examine the measures to be taken when the victim is dissatisfied with the review result.

STEP 4

End of grievance handling

- Training, disciplinary action against violators, provision of necessary help, infrastructure improvement, and policy/procedural improvement related to grievance handling, as needed
- Establish and reflect the improvement measures to prevent the recurrence of the same issue

Grievance Handling Process

HYUNDAI Energy Solutions receives grievances from employees through various online/offline channels to remedy any violation of human rights. If the risk of violation is identified, the company pursues an improvement in the related areas to protect the employees' human rights. In 2019, there was no case of discrimination based on nationality, age, gender, academic background, etc. reported through the four channels including the employee representative body.

Channels	Type of grievance	Grievance handling rate (no. of cases handled/received)
Employee representative body	Wage/benefits, institution/system, organizational culture, work hours, infrastructure, environmental safety, etc.	No case
Intranet	HR/compensation/education, general affairs/welfare, business, safety-health, IT, etc.	No case
Hotline	Workplace bullying, etc.	No case
Offline	Grievance	Grievances reported through dialogue with the management at each department or personal counseling are not tallied as they are immediately processed upon reporting or delivered to the department in charge.

Supply Chain Human Rights Protection Policy

HYUNDAI Energy Solutions has complied with the Code of Conduct it enacted for suppliers to ensure that its suppliers protect the human rights of every worker and treat their workers with dignity and respect.

Voluntary employment	<ul style="list-style-type: none"> · Maintain reasonable employment according to the labor contract · Prohibit use of unethical or exploitative labor
Children and young workers	<ul style="list-style-type: none"> · No child labor is allowed · There is a need to establish a procedure to verify the age of workers
Working hours management	<ul style="list-style-type: none"> · Control the maximum working hours based on local laws · Allow at least one paid day off every 7 days
Wages and benefits	<ul style="list-style-type: none"> · Pay the minimum wage, overtime pay and statutory allowances according to the local laws · Run the welfare benefits system to provide a pleasant work environment and improve the quality of life
Humane treatment	<ul style="list-style-type: none"> · Prohibit any harsh and inhumane treatment or threat · Respect workers' privacy and provide appropriate confidentiality measures to protect personal information
Prohibition of discrimination and harassment	<ul style="list-style-type: none"> · Ban harassment in the workplace (take appropriate measures upon request of the victim) · Prohibit discrimination/harassment based on race, color, gender, gender identity, disability, etc.
Endorsement of freedom of association	<ul style="list-style-type: none"> · Endorse the right to form and join a labor union · Create an environment for communication with the management and sharing of concerns

Conflict Minerals Non-use Policy

HYUNDAI Energy Solutions strives to fulfill its corporate responsibility and control over the no-use of conflict minerals. The company has recently conducted surveys among its partner companies on the use of responsible minerals, and now is in the stage of preparing a declaration on the non-use of conflict minerals. Trade in minerals or raw materials that may cause environmental or human rights issues in conflict (high-risk) countries such as Indonesia and Africa is strictly prohibited. As we respect the recommendations made by the international organizations to prevent social and environmental problems caused by mineral mining, we actively participate in responsible mineral procurement activities as well.

<OECD Due Diligence, Five-Step Framework for Risk-Based Due Diligence in the Mineral Supply Chain>

Step 1	Establish a policy for the use of responsible minerals, and structure internal management to support the supply chain due diligence.
Step 2	Identify the scope of risk assessment in the supply chain, and assess the risks in the supply chain by creating a supply chain diagram.
Step 3	Re-evaluate the identified risks, and establish and implement the measures for improvement and risk reduction.
Step 4	Carry out the independent third-party audit of the supply chain due diligence at the identified points in the supply chain.
Step 5	Monitor the results of due diligence within the supply chain and disclose the status of responsible mineral purchases, including the integrated reports.

Collective Agreements for Implementation of Human Rights Management

Article 59. Parental leave

1. In accordance with the Equal Employment Opportunity and Work-Family Balance Assistance Act, the company allows parental leave if requested, and the parental leave period shall be included in the number of years of service.
2. The company shall not give any disadvantages to or unfairly treat union members in terms of the wages or promotions on the grounds of parental leave.
3. The wages during parental leave shall be in accordance with the relevant laws and regulations.
4. An eligible union member may apply for a reduction in working hours instead of parental leave.
5. Other details shall be governed by the relevant laws.

Article 60. Prevention of sexual harassment in the workplace and prohibition of violence

1. In accordance with Article 12 of the Equal Employment Opportunity and Work-Family Balance Assistance Act, any form of sexual harassment by employers, superiors, and/or workers is prohibited in the workplace. In the event of sexual harassment or sexual assault, the company shall investigate the case, if requested by the victim or the union that has obtained the consent of the victim. The offender shall be referred to the disciplinary committee.
2. In order to prevent sexual harassment and sexual violence in the workplace, the company shall provide training on prevention of sexual harassment in accordance with Article 13 of the Equal Employment Opportunity and Work-Family Balance Assistance Act.

Article 61. Honorary Employment Equality Supervisor

1. In accordance with Article 24 of the Equal Employment Opportunity and Work-Family Balance Assistance Act, an Honorary Employment Equality Supervisor shall be appointed.
2. A person recommended by both the company and the labor union shall be requested to be appointed as the Honorary Employment Equality Supervisor.
3. A separate counseling room shall be set up for the activities of the Honorary Employment Equality Supervisor. The hours required to complete the necessary education or training or the hours required for counseling shall be paid for.

Code of Conduct
(Protection of human rights of employees; respect for diversity; prohibition of discrimination, etc.)

Article 6.
Responsibility
Towards Employees

- **Respect for Employees**
 - We shall recognize all Employees' inherent value and respect their individual rights and dignity.
 - We shall create a work environment where all Employees feel dignity and pride in their work performance.
 - To prevent sexual harassment and bullying within the workplace, we shall provide appropriate educational training for all Employees.
- **Equal Treatment**
 - We shall provide all Employees with an equal opportunity to develop their talents and allocate tasks impartially based on their capability.
 - We shall not discriminate all Employees based on gender, nationality, religion, academic background, hometown, age and/or any other factors that are not related to their duty.
- **Human Resources Development**
 - We shall respect our Employees' autonomy and creativity and support their self-development.
 - We shall establish a system necessary to carry all our Employees' duty and personal development and also provide an environment where it can be executed.
- **Safe Working Environment**
 - We shall make our best endeavors to prevent accidents at work and shall ensure all Employees work in a clean and safe working environment.
 - We shall hold regular health and safety inspection of our facilities and provide regular safety training to all Employees in order to secure all Employees' safety at work.

Article 7.
Employees' Basic Ethics

- **Prevention of Sexual Harassment and Bullying in the Workplace**
 - All Employees shall recognize the illegality of sexual harassment and bullying at work, which discouraging the victims' working motivation and lower their productivity. All Employees shall not commit any acts which are bullied and sexually harassed in nature.
 - All Employees shall put in the effort to prevent infringing on human rights. All Employees shall actively participate in prevention activities to eradicate sexual harassment and workplace bullying.

Article 8.
Respect and Protection of Human Rights

- **Respect for Human Rights**
 - Company and employees shall respect the dignity and human rights of its members as well as its suppliers, business partners, and all the interested parties in the community, and shall practice human rights management based on this principle.
- **Duties to Protect and Respect the Human Rights**
 - We set up the strategies and policies of human rights management in order to respect the human rights of all the interested parties and to prevent any infringement, and share this with all the relevant parties. In particular, we try to protect the general principles of human rights including the following cases.
 - We support and observe the basic principles of protection and respect of human rights implemented by the relevant labor laws in each county, the United Nations Universal Human Rights Declaration and its substantive guidelines, and the Fundamental Rights and Principles of the International Labor Organization Declarations.
 - We prohibit any form of child labor and forced labor based on our support for the United Nations Universal Human Rights Declaration.
 - We give everyone a fair and equal chances not to be discriminated on the grounds of race, nationality, gender, educational background, religion, age, disability status, birth place, marital status, gender identity, and so on.
 - We protect and observe motherhood and children and provide healthy and safe working conditions.
 - We observe all the relevant labor laws, respect the autonomy in the management of our suppliers and business partners, and try to spread human rights management to them.

- **Human Rights Due Diligence**
 - We take the appropriate measures to establish the strategies and policies of human rights management including but not limited to the following.
 - We evaluate the effect and risk on human rights.
 - We perform necessary due diligence to implement human rights management.
 - We establish the appropriate plans to listen to the opinions of our members and all the interested parties.
 - We take corrective measures and announce the result.

Labor-Management Relations

HYUNDAI Energy Solutions strives to establish fair labor-management relations based on mutual trust and collaboration, and further, pursue not only sound corporate growth, but also enhanced social/financial status of employees by creating shared benefits.

Labor-Management Council, Collective Bargaining and Labor Dispute Regulations

Since a spin-off, the company has been holding a quarterly labor-management council meeting to advance employees' working conditions and benefit plans. The Council consisting of three employers and three employees continue with regular consultations in an egalitarian and liberal atmosphere to enhance working conditions and a welfare system.

2021 Initiative	<ul style="list-style-type: none"> · To implement 'selective working hours' in phases, improve the way retirement pension programs are operated · To explore optimal benefit plans through discussions
------------------------	--

Major Activities and Achievements

Management Status Briefing We are regularly hosting briefing sessions to give employees a presentation on how the company has improved its business fundamentals in the efforts to overcome a managerial crisis after a spin-off and pursue continual growth. In particular, the management endeavors to take a lead in raising the awareness of a competitive edge

Support for a Weekend Farm and Planting The company enables employees to build a weekend farm by distributing unused lands (approximately 66 m² per person) around the Eumseong campus in order to enjoy family lives. Also, we are seeking to support the retired employees who wish to plant landscape trees for a rural life

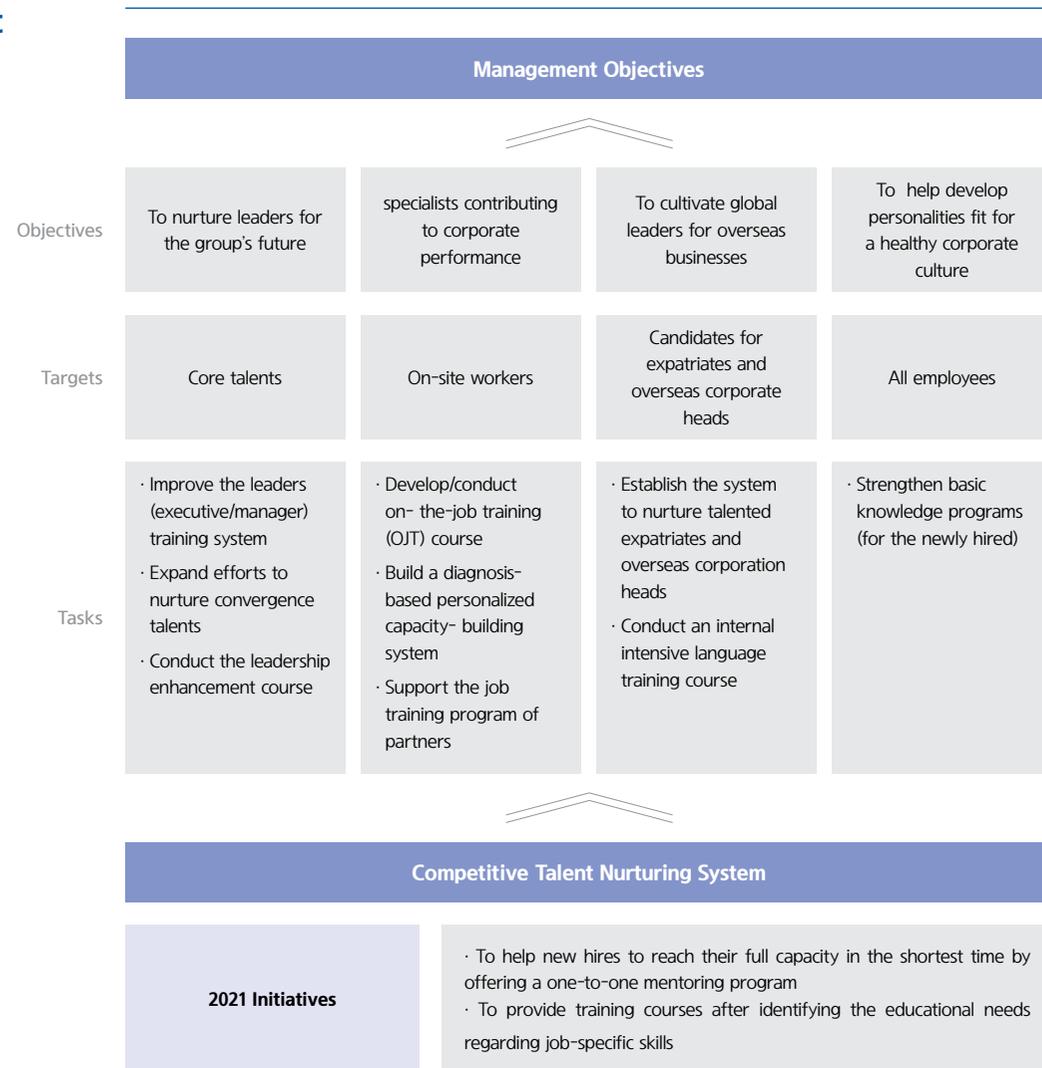
Support for Creating Ideas HYUNDAI Energy Solutions is preparing a communication channel to collect creative ideas for improving the facilities of work sites, cafeterias, lodgings and other personal or public spaces of the company. We encourage broader participation by awarding graded rewards for outstanding proposals

Visiting Exhibitions We are encouraging employees to visit international expos in order to promote an understanding of the changing eco-friendly economic climate that focuses on PV, our core business, the 'Green New Deal' initiative, etc.by providing transportation. An increasing number of employees are expected to participate in the events, which will facilitate the interaction among sales, design and manufacturing areas.

Learning & Development

HYUNDAI Energy Solutions aims to achieve a competitive edge and management goals by enhancing employees' competency. To this end, we focus on nurturing next-generation leaders, job-specific specialists and global talents. Emphasizing the importance of continuous self-development, the company offers the opportunities to increase work capacity through systematic support.

Management System



Looking for People Who



Training Programs

HYUNDAI Energy Solutions has developed training programs to help all employees in various positions harness their full capabilities at their job based on the characteristics and roles by position. They focus on expanding training courses based on the actual needs of departments and business issues to strengthen employees' job expertise, while systemizing training procedures for executives and encouraging voluntary learning.

A Roadmap to Foster Leadership

The role of leaders is becoming more important to flexibly respond to rapidly-changing business conditions and efficiently manage the organization. As such, we provide the HHI group Leader Course (HLC) in five stages and action learning, a process focused on selecting actual challenges by business and finding solutions to nurture next-generation leaders.

Nurturing Talents Trained for DT

HYUNDAI Energy Solutions operates a training program to raise employees' awareness about the DT culture at a fast pace, and foster talents equipped with DT technologies. We are stepping up our efforts to cultivate an efficient and agile organizational culture through the two-tracked program.

DT Training Programs		Trainees	Training Goal/Content
Spreading DT Culture	All employees	DT Mind-Set	All office workers, researchers, and production managers Introduction to DT technology and its use cases Raising awareness of DT among all employees to induce transformation
	Leading group	DT Expert Lecture	Common leadership DT Trend Insight
		DT Leadership Training	Newly-appointed position DT Leadership Development
Nurturing the DT Technical Talent	Business Implementation	DT Beginner Training	4th Grade/Assistant Manager Understanding DT/Introduction to Big Data Analysis
		DT Agent	Business practitioner Developing DT task implementation ability
	Tech Development	DT Planner	Business manager Deriving DT tasks and cultivating planning skills
		Intermediate Developer	Researcher/Developer Acquiring the latest DT/AI technologies
	Advanced Developer		Intensive AI, Deep Learning, Voice Recognition, etc.

Nurturing Job-Specific Specialists

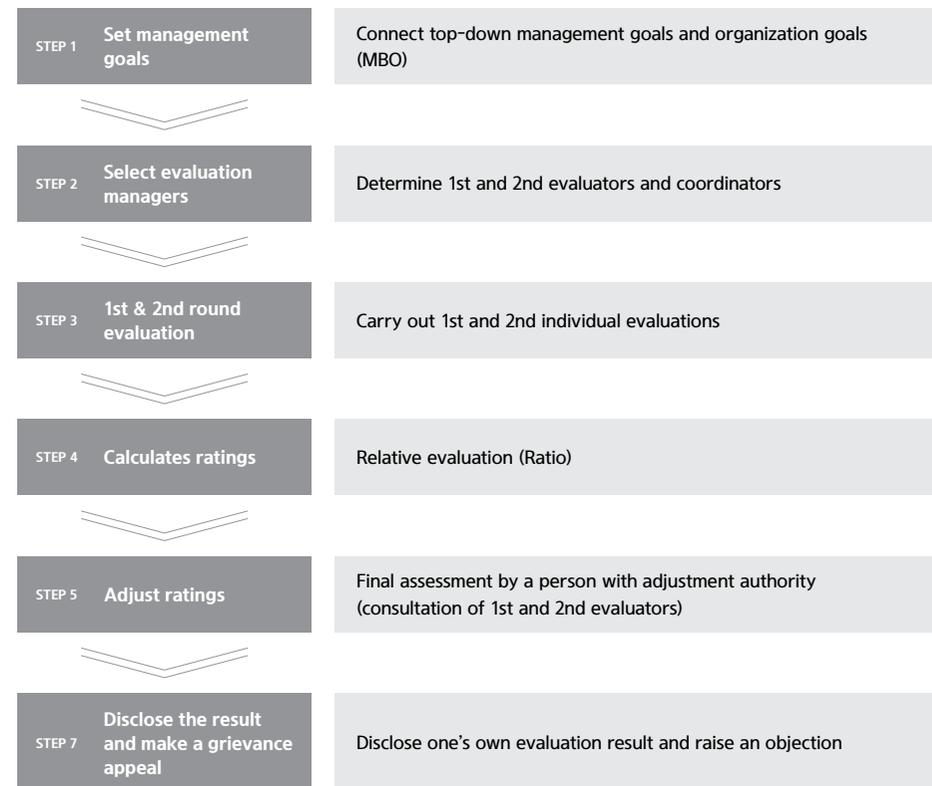
We provide various types of online/offline training courses to strengthen job competency. Online courses on languages, common competencies and on-the-job training are offered on the Hi-e Campus (learning management system). We have focused on strengthening the competitiveness of human resources by developing customized training courses based on the actual needs of departments to enhance job performance and nurturing in-house instructors.

Evaluation & Compensation

HYUNDAI Energy Solutions continues to enhance its compensation (wage) system and welfare after the corporate split (2017) so that the executives and employees can enjoy a better quality of life. To this end, we have established clear goals in the top-down method according to Key Performance Indicators (KPIs) and provided reasonable compensation through various systems such as wage increase, year-end bonuses, promotion, etc. according to KPI-based performance. We assist with those who transfer to another place without their family (two years) and offer even breakfast apart from lunch. We operate commuter buses in Yongin/Eumseong area.

Management System

Since HYUNDAI Energy Solutions conducts compensation, promotion, fostering, and low-performer management based on personnel evaluation, it has been trying to establish a system to ensure fairness and transparency in evaluation. We determine evaluation ratings based on the goals and achievements of the employees themselves through management by objects (MBO) and KPIs and operate the ratings as the base of multiple personnel systems. All executives and employees receive personnel evaluation twice a year, and the system is in operation to reinforce transparency and fairness through stages such as the first and second evaluations, adjustment evaluation, result disclosure, and objection.



2021 Initiatives

- To select key tasks of members according to CEO-department head-team leader KPIs
- To push for detailed management following the reform of the wage system newly introduced in January 2021

Compensation System

To stabilize the livelihood of the executives and employees, HYUNDAI Energy Solutions reflects the inflation rate in the increased wage. Amid low inflation rates due to the recent downturn caused by COVID-19, we guarantee a wage increase rate to be higher than the minimum inflation rate so that our employees can maintain the standard of living. We also apply the same wage system to all, from low men on the totem pole to those in management positions, and try to establish a fair compensation system by methodically strengthening incentives based on individual contributions to the company's growth.

Reward System

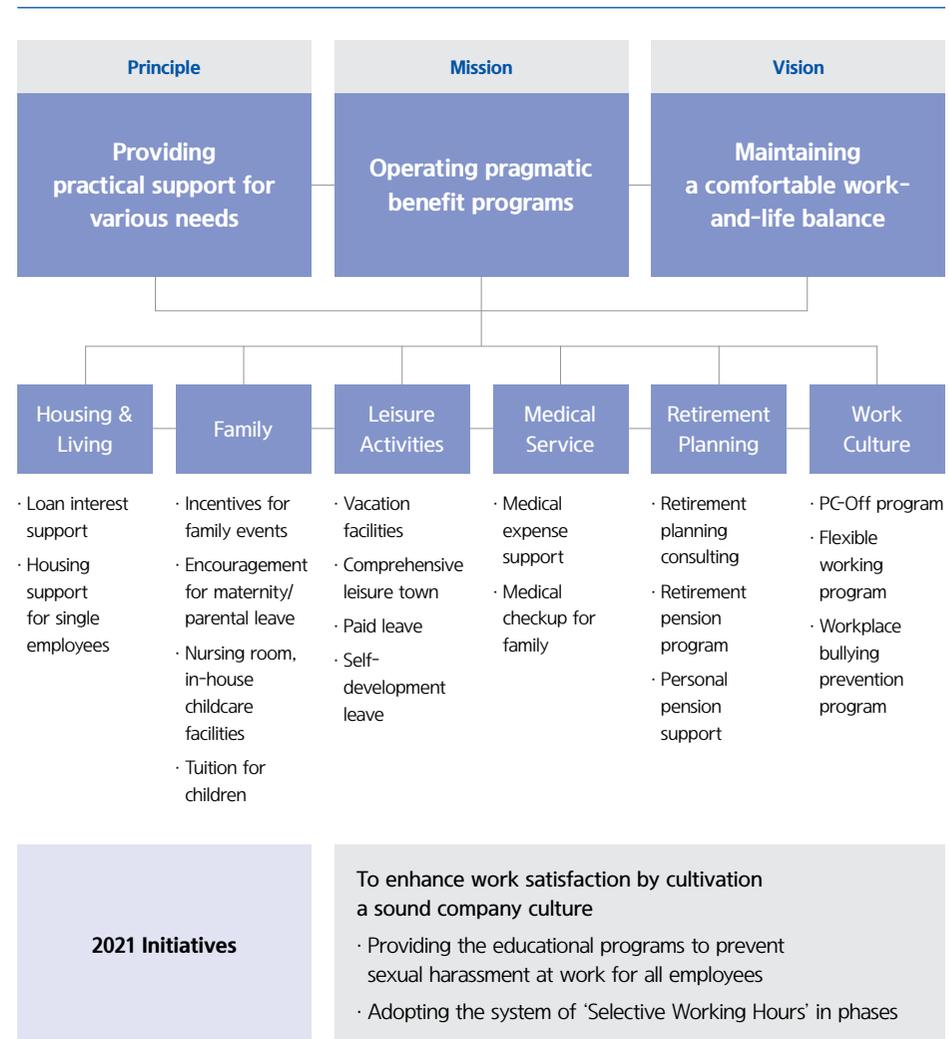
HYUNDAI Energy Solutions operates a reward system by handing out rewards in a timely manner through immediate rewards on excellence, in order to reduce costs through the improvement of work and enhance the company's image. Further, we give comprehensive rewards based on the annual contribution using the Award for the Person of HYUNDAI Energy Solutions (citation with the Grand Prize and Excellence Award by sector) to help the members be proud of their hard work.

From 2021, we plan to actively operate the reward system for praise points and ideas for an improvement to lead the creation of a vibrant organizational culture.

Employees' Quality of Life

HYUNDAI Energy Solutions is committed to compliance with the conventions of the International Labor Organization and domestic labor-related legal requirements. Accordingly, it is prohibited to discriminate employees based on gender, religious backgrounds, political stances, etc. We contribute to employees' wellbeing at work and home by offering various systematic support including the 52-hour maximum working week.

Key Programs



Major Activities and Achievements

Promoting Work-Life Balance

We are cultivating the culture that encourages female employees (inclusive of male employees) to feel free to take maternity and parental leaves. Female employees are encouraged to take leaves during pregnancy and the early parenting period in compliance with the laws and regulations related with the reduction of working hours.

Selective Working Hours

Beginning from this year, the company will adopt the selective working hours system to allow employees to flexibly adjust their own working hours (start time/end time) within the fixed limit of monthly hours. Based on this system, employees are seen to achieve efficiency in both their personal lives and work.

Retirement Pension Program

To financially support employees' life after retirement, HYUNDAI Energy Solutions operates a retirement pension system for which all become eligible after one year of service. Those aged 56 and older who are under the salary peak system will voluntarily participate in the Defined Contribution (DC) where benefits are annually accumulated to prevent the reduction of their retirement benefits.

Demonstrating Our Commitment to Global Corporate Citizenship

HYUNDAI Energy Solutions pursues a society of shared happiness under the core values of love, sharing and happiness. We will create a better future by creating shared values with strategic social contribution activities.

81 Supply Chain Management

85 Social Contribution

Supply Chain Management

HYUNDAI Energy Solutions promotes the growth and development of partner companies under the core value of 'Just, Fair and Legitimate Performance'. We will create a healthy corporate ecosystem where everyone can grow hand-in-hand by establishing fair trade practices and supporting partners in enhancing their competitiveness.

Management System

Vision

Just, Fair and Legitimate Performance

Key Policy

Continuous System Improvements

- Refrain from engaging in business in non-related fields
- Encourage the business of small and mid-sized companies
- Build support systems and practice the three shared growth strategies

Establishing Fair Trade Practices

- Introduce and comply with the four implementation areas as set forth by the Fair Trade Commission
- Establish reasonable trade practices
- Improve communication with partners

Enhancing Competitiveness of Partners

- Support the sales increase of partners
- Support training, recruitment, technology and financing
- Adjust the unit price of delivery considering the situation of the partner companies

Responsible Organization

Group Shared Growth Committee

Ensure a company-wide consistent policy, activity planning and consultation

Shared Growth Council

Develop policies for mutual growth and cooperation with primary and secondary subcontractors

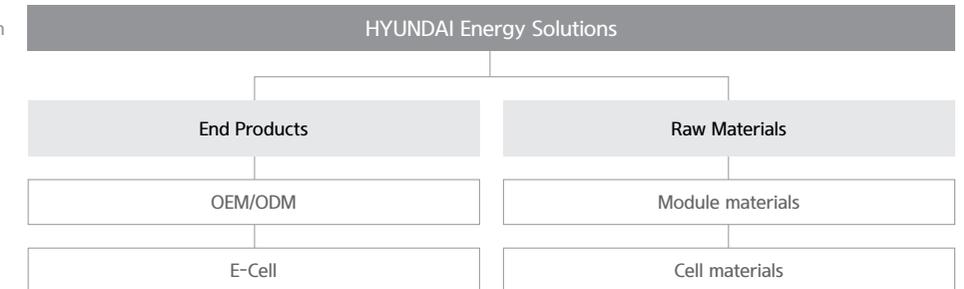
Shared Growth Support Organization

Implement shared growth policy and activities, and provide performance management and for shared growth feedback

2021 Initiatives

- To secure supply competitiveness by improving the capacity of partner companies
- To actively engage in the Council-related activities for partners' problem solving
- To advance the assessment system for partner companies aiming for fair and organized assessment
- To select excellent partners on a basis of assessment results
- To encourage partner companies to participate in the policy-making process for their growth

Major Supply Chain



Definition of Supply Chain

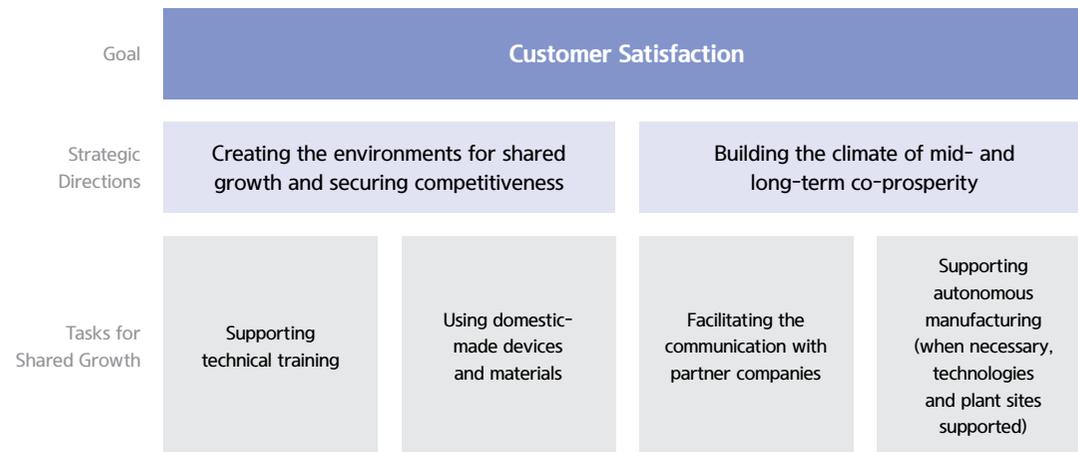
Category	Key Products	Usage	Procurement Amount (KRW 100M)
End product	OEM/ODM	Module, inverter, etc.	106,563
	E-Cell	PV module, etc.	146,434
Raw materials	Module materials	PV module, etc.	186,300
	Cell materials	PV module, etc.	26,404
	Others	Others	1,834
Total			467,536

Governance of Shared Growth

Decision-making body (meeting frequency)	· Business Partners Council (annually)
Dedicated organization (Executive in charge) - Major responsibilities	· Procurement Team (head of production departments) - Supervising meetings, collecting & implementing key decisions on support for partner companies
Regular communication channels with partner companies (meeting frequency)	· Business Partners Council's new year's meeting (annually), listening to the VOC of partners (ad hoc basis) · Offering information on the business status & outlook and policies for each sector, awarding prizes to the best performing partner companies

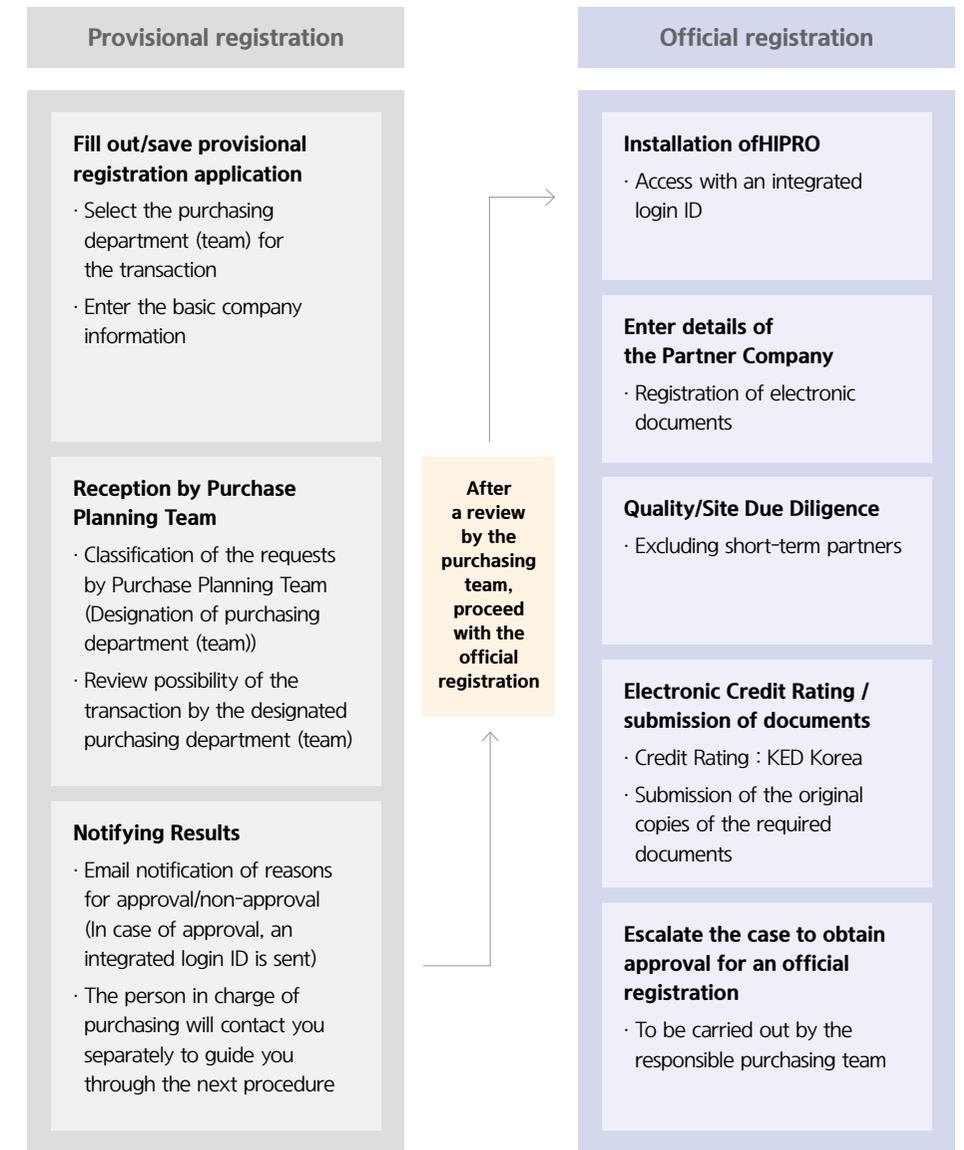
Operation Principles of Supply Chain

Considering the principle of 'Customer Satisfaction' as the foremost priority, HYUNDAI Energy Solutions also takes account of the satisfaction of employees and its business partners in order to practice the principle. We will promote sustainable development by building a partnership with our partner companies and contributing to enhancing their competitiveness towards co-prosperity.



Selection Process of a Partner Company

HYUNDAI Energy Solutions operates the Global Hyundai Integrated Procurement System (G-HIPRO) built to enhance the transparency and fairness of the contract process. Through the G-HIPRO's electronic bidding system, we transparently run the entire process of selecting a partner company ranging from our procurement in quotes, technical review, bidding to internal review while improving partner companies' efficiency across the entire contract process from contract signing, delivery, the issuance of the transaction statement to payment.



Achievements of Shared Growth

Facilitating the Communication Channels with Partner Companies

HYUNDAI Energy Solutions devises improvement measures together with our partner companies by actively identifying the obstacles to their business operations. Also, we periodically provide communication sessions for our main partner companies to share management targets and improve their quality control and delivery system.

Support for Our Partners' Financial Stability

HYUNDAI Energy Solutions bimonthly makes payments in cash for the products or service of small or mid-sized partner companies within 15 days after issuing a transaction statement and within 40 days in case of a secured loan of credit sales with the aim of facilitating their cash flow.

Deciding Material Costs in Line with International Indexes

HYUNDAI Energy Solutions decides the unit cost of key materials required to manufacture PV cells and modules on a monthly or quarterly basis in line with the international indexes of copper, silver, aluminum, resin, etc. and exchange rates. This can ease the burden of production costs arising from soaring raw material costs, which helps partner companies with material supplies and pricing.

Raw Material Sourcing

Management Risk of Main Materials

While seeking to diversify suppliers along with the use of domestic-made materials only, HYUNDAI Energy Solutions are making contracts with them in line with raw material price in the market or international indexes in order to stabilize supply mechanisms. Besides, we periodically analyze the global indexes and the market status of key materials to anticipate their price rise and take the actions for securing sufficient inventory in advance through the consultation with the related departments.

Social Contribution

Aiming to promote the activities of corporate social responsibility led by the Group, HYUNDAI Energy Solutions has been developing social contribution programs, and actively participate in the '1% Sharing of Salary' initiative in addition to local activities centering on the Eumseong area. We will continue to devise improvement plans through a working level subcommittee.

Management System



Activities and Achievements of Social Contribution Activities

Working Level Subcommittee 2 managers or the below position are selected by campus (total 6 persons from Bundang, Yongin and Eumseong) to annually set up basic plans, review the operation status and then propose or reflect various ideas.

Support for local PV power generation projects Funded by the Group's 1% Nanum Foundation, we are planning for the local solar PV power-generating project (households or power plants). This project is intended to function as a turning point towards co-prosperity with the local communities.

Activities and Achievements of Co-prosperity with Local Communities

Local Volunteering Activities Various volunteering activities have been conducted by the volunteering group of 10 employees which was formed in the Eumseong campus area in 2017. The group is taking the lead in the enhancement of local communities by providing rice to adolescent-headed families and low-income households, Parents' Day events, a scholarship program for local high schools, a renovation project for 'Hyang-ae-won', a welfare facility, an environmental cleaning activity for Soi-myeon, etc. Beginning from the '1% Sharing of Salary' initiative led by HHI Group in 2020, we will actively engage in local volunteering activities.

Group Blood Donation Event Our employees are voluntarily joining the blood donation event held in collaboration with local blood donation centers by Campus.

Support for the Senior Citizens Association in Soi-myeon Since a spin-off in 2017, HYUNDAI Energy Solutions has been visiting the Senior Citizens Association in Soi-myeon on New Year's Day, Thanksgiving Day and Parents' Day each year to offer the items essential for seniors including electric mattresses, electric rice cookers, etc. We will continue to join the sharing activities while identifying their needs.

National Clean-up Campaign The volunteering group of HYUNDAI Energy Solutions has been participating in the national clean-up campaign organized by Soi-myeon where our factory is located since 2019. The volunteers are making efforts to improve local environments by joining the activity with local seniors every month.

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Summary of Consolidated Statements of Financial Position

Unit: KRW 1M

Title of Account	5th	4th	3rd
	Reporting Period	Reporting Period	Reporting Period
Summary of Consolidated Statements of Financial Position	(As of late Dec. 2020)	(As of late Dec. 2019)	(As of late Dec. 2018)
Total assets	458,242	481,151	276,395
Current assets	311,596	358,737	177,420
Non-current assets	146,646	122,414	98,975
Total liabilities	129,498	163,297	38,804
Current liabilities	108,258	157,518	34,634
Non-current liabilities	21,240	5,779	4,170
Total equity	328,744	317,854	237,591
Capital stock	56,000	56,000	40,000
Capital surplus	105,855	105,855	64,929
Accumulated other comprehensive income	4,503	(20)	-
Retained earnings	162,386	156,019	132,662
Summary of Consolidated Statements of Comprehensive Income	Jan.1 –Dec. 31, 2020	Jan.1- Dec.31, 2019	Jan.01-Dec.31, 2018
Revenue	394,397	446,103	347,623
Cost of goods sold	341,476	380,974	304,028
Gross profit	52,921	65,129	43,595
Selling and administrative expenses	44,140	43,069	29,322
Operating profit	8,781	22,060	14,274
Income before income taxes (loss)	(11,907)	16,251	14,026
Net profit	6,224	23,547	18,985
Earnings Per Share (Unit: KRW)	556	2,788	2,373
Cash flows from operating activities	(9,669)	16,266	(40,528)

Independent Auditor's Report

Audit Opinion

We have audited the consolidated financial statements of HYUNDAI Energy Solutions Co., Ltd. and its subsidiaries (the "Group"), which comprise the consolidated statements of financial position as of December 31, 2020, the consolidated statements of comprehensive loss, changes in equity and cash flows for the year that ended, and notes comprising significant accounting policies and other explanatory information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2020 and its consolidated financial performance and its consolidated cash flows for the year that ended in accordance with the Korean International Finance Reporting Standard ("K-IFRS").

Basis for Audit Opinion

We conducted our audits in accordance with Korean Standards on Auditing (KSAs). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in the Republic of Korea, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriated to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those that, in our professional judgement, were of most significance in our audit of the consolidated financial statements as of and for the year ended December 31, 2020. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters

Imputed Period of Overseas Sales

The Group operates the solar module manufacturing and sales business as its core business and a considerable share of the solar modules is sold in the overseas market including the U.S. As described in Note 21, overseas sales in 2020 were ₩137,943 million, accounting for 35% of total revenue, which is of significance in the consolidated financial statements. In the case of overseas sales, as the shipping can take up to several months depending on the type of transportation and the timing when risk and benefits are transferred varies by contract terms and conditions, chances are high that there can be errors in the imputed period of revenue recognition. Accordingly, we identified the imputed time of the overseas sales as a key audit matter.

The following includes the main audit procedures we implemented regarding the above significant risk:

- Evaluating the consistency of the Group's accounting policies on the sales period imputation
- Testing the integrity of sales data
- Understanding and examining the amount of non-recurring sales cancellations after the reporting period
- Confirming the imputed time through Cut-off tests
- Analyzing the significant transactions that occurred near the end of the reporting period

Other Matters

The consolidated financial statements of the Group, which ended as of December 31, 2019, were audited by another auditor, and an unqualified opinion was expressed in this auditor's Audit Report dated March 6, 2020.

Responsibilities of Management and the Governing Body for Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with the Korean International Financial Reporting Standards and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Group's ability to continue as going concern, disclosing, as applicable, matters related to a going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or cease operations, or has no realistic alternative but to do so

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditor's Responsibilities for Auditing the Consolidated Financial Statements

Our objectives are to obtain reasonable assurances about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or errors, and to issue an auditors' report that includes our opinions. 'Reasonable assurance' is a high level of assurance, but is not a guarantee that an audit conducted in accordance with KSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or errors and are considered material if, individually or on aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with KSAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of the material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform an audit procedure responsive to those risks and obtain the audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control.
- Obtain an understanding of the internal control relevant to the audit in order to design the audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of the accounting policies used in the preparation of the consolidated financial statements and the reasonableness of the accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of the management's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to the events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we concluded that material uncertainty exists, then we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements including the disclosures and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves a fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We retain sole responsibility for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have compiled with the relevant ethical requirements regarding independence and communicate with them regarding all relationships and other matters that may reasonably be thought to bear on our independence and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements as of and for the year that ended December 31, 2020 are therefore the key audit matters. We describe these matters in our auditors' report unless the law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditors' report is Minsung Kim.

111, Yeouigongwon-ro, Yeongdeungpo-gu, Seoul
Ernst & Young Global Limited CEO Yong-geun Park

March 15, 2021



This report is effective as of March 16, 2021, the independent auditor's report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the independent auditor's report date to the time this report is used. Such events and circumstances could significantly affect the accompanying consolidated financial statements and may result in modification to this report.

Key Performance Indicators

Enhancing Corporate Value through Sustainable Growth

R&D

Category	Unit	2018	2019	2020
R&D expenses	KRW 100M	39	49	43
R&D expenses relative to revenue	%	1.12	0.95	0.99
R&D personnel	Headcount	14	15	15
No. of patent registrations ¹	Case count	2	0	0
No. of patent of eco-friendly technologies ²	Case count	0	0	0
No. of intellectual property right applications ³	Case count	8	4	0

1 No. of new registrations

2 No. of new registrations

3 No. of new registrations

Quality Management

Category	Unit	2018	2019	2020
Internal quality audit	Case count	1	1	1
Quality audit of in-house and external partner companies	Case count	9	3	2
Personnel who completed quality training course (inclusive of partner companies) ¹	Headcount	3	2	1

1 Completed the quality training course of HHI Group or an internal quality training course

Upholding Fair and Transparent Business Practices

Compliance Management

Category	Unit	2018	2019	2020
Compliance training sessions ¹	Case count	2	3	2
Compliance training participants ²	Headcount	13	60	2
Department in charge of subcontract risk audit	No.	0	0	0
Legal consulting related to fair trade	Case count	2	0	0
Legal consulting related to corruption prevention and financial sanctions	Case count	0	0	0
Other legal consulting	Case count	0	0	17
Violations of improper solicitation and graft act	Case count	0	0	0

1 Not provided in 2020

2 Not provided in 2020

Business Ethics

Category	Unit	2018	2019	2020	
Employees	Business ethics training (off-line)	Headcount	1	1	1
	Business ethics training (on-line)	Headcount	21	10	21
	On-site hearing on business ethics	Headcount	50	11	0
Partner companies	Business ethics training	Headcount	0	0	0
	On-site hearing on business ethics	Headcount	0	0	26

Greater Management Transparency

Category	Unit	2018	2019	2020
No. of directors equipped with expertise	Headcount	3	5	5
Ratio of female directors	%	0	0	0

Pursuing Safe and Environmentally Friendly Business Practices

Safe Management

Category	Unit	2018	2019	2020
Accident rate	%	0	0	0
Fatalities	Headcount	0	0	0
Frequency rate of accidents (per 1 million hours worked)	%	0	0	0
Lost Time Injury Frequency Rate (LTIFR)	%	0	0	0
Spot rewards cases for best safety practices	Case count	0	0	0
Reward amount	KRW 1,000	0	0	0
Safety Academy attendees	Headcount	0	0	0
Emergency drills	Case count	1	1	1
Safety training for partner companies	Case count	25	25	1

Health Management

Category	Unit	2018	2019	2020
Medical service users	Headcount	97	58	43
Smoking cessation clinic participants	Headcount	4	5	6
Obesity program participants	Headcount	0	0	0
Obesity program success rate	%	0	0	0
OIFR	%	0	0	0

Environmental Management

Category	Unit	2018	2019	2020
Direct energy (fuel) consumption	TJ	47	46	22
Indirect energy (electricity) consumption	TJ	682	717	508
Total energy consumption	TJ	728	763	529
Energy savings	TJ	0	0	234
Energy consumption per revenue	TJ/revenue (KRW 100M)	0.210	0.171	0.134
Reduction in energy costs	KRW 1M	0	0	2,710
Direct (Scope1) emissions	tCO ₂ e	4,017	4,239	1,737
Indirect (Scope2) emissions	tCO ₂ e	33,117	34,836	24,661
Total GHG emissions	tCO ₂ e	37,134	39,075	26,397
GHG emission reduction	tCO ₂ e	0	0	12,678
GHG emissions per revenue	tCO ₂ e/revenue (KRW 100M)	11	9	7
Air pollutant dust	Kg	2,879	3,423	2,420
Water usage	Ton	495,848	559,345	362,607
Water usage per revenue of water pollutants	Ton/revenue (KRW 100M)	142.6	123.9	90.5
Wastewater ¹	Ton	512,754	486,910	327,738
Biochemical Oxygen Demand (BOD) of water pollutants	Kg	No data	3.0	4.0
Chemical Oxygen Demand (COD) of water pollutant	Kg	8.0	3.9	4.0
Suspended Solids (SS) of water pollutant	Kg	5.0	2.4	0.5
General waste (reclamation)	Ton	67	0	0
General waste (incineration)	Ton	301	266	199
Designated waste (reclamation)	Ton	0	0	0
Designated waste	Ton	15	32	31
Recycling	%	0	0	0
Violation of environmental laws/regulations	Case count	2	0	0

¹ Adjusted values obtained by treating joint wastewater

Promoting Strong Labor-Management Relations Built on Mutual Respect and Trust

Personnel Status

Category	Unit	2018	2019	2020
Total employees	Headcount	181	204	188
Non-fixed term workers (male)	Headcount	154	148	135
Non-fixed term workers (female)	Headcount	10	9	8
Fixed term workers (male)	Headcount	10	21	25
Fixed term workers (female)	Headcount	7	15	20
Average years of continuous service (male)	Year	8.5	9.3	11.0
Average years of continuous service (female)	Year	2.5	2.4	2.2
Average salary per person (male)	KRW 1,000	69,852	76,611	71,189
Average salary per person (female)	KRW 1,000	42,258	51,209	42,284
External workers (male)	Headcount	1	1	2
External workers (female)	Headcount	16	18	19

Labor-Management Relations

Category	Unit	2018	2019	2020
Rate of employees eligible for collective bargaining	%	0	0	0
Employees eligible for labor union membership ¹	Headcount	0	0	0
Union members	Headcount	0	0	0
Union Membership rate	%	0	0	0
Labor-management council sessions	Case count	4	4	4
Proposals submitted to the council	Case count	19	27	27
Management status briefing sessions	Case count	1	2	1
Labor-management relations training sessions	Case count	0	0	0
Training participants	Headcount	6	6	6

¹ No labor union

Learning & Development

Category	Unit	2018	2019	2020
Participants in training	Headcount	104	67	143
Training time per employee	hour	26	10	10
Investment in training	KRW 10M	0.6	0.4	0.4
Fostering leaders	Headcount	24	16	7
Nurturing convergency talents	Headcount	0	2	0
Nurturing job-specific specialists	Headcount	63	30	17
New hires training	Headcount	0	0	0
Nurturing global talents	Headcount	93	30	81
Other programs	Headcount	106	54	39

Evaluation & Compensation

Category	Unit	2018	2019	2020		
Percentage of employees evaluated for performance ¹	Total	%	97.7	94.5	93.1	
	Male	Knowledge workers	%	98.6	95.7	94.7
		Production workers	%	96.8	93.6	91.8
	Female	Knowledge workers	%	97.9	89.3	86.2
		Production workers ²	%	-	-	-
	Total wages	KRW 100M	149	172	156	

¹ Exclusive of employees newly hired, on leave, or scheduled to retire

² No female production workers to be evaluated

Promoting Strong Labor-Management Relations Built on Mutual Respect and Trust

Employees' Quality of Life

Category	Unit	2018	2019	2020
Loan interest support amount	KRW 100M	0	1	1
Employees on maternity leave	Male	Headcount	7	3
	Female	Headcount	1	0
Employees on parental leave	Eligible for parental leave ¹	Male	Headcount	60
		Female	Headcount	2
	Taking leave ²	Male	Headcount	0
		Female	Headcount	1
	Returning to work ³	Male	Headcount	0
		Female	Headcount	0
Serving 1+ year after return ⁴	Male	%	0	
	Female	%	0	
Retirement planning consulting attendees	Headcount	-	-	
Retirement pension system	DB	KRW 100M	14	
	DC ⁵	KRW 100M	-	
Personal pension support amount	KRW 100M	0	0	
In-house employee benefits fund ⁶	KRW 100M	0	0	

1 Money gift for a birth limited to those with children aged eight or younger, or with the 2nd graders or younger of an elementary school

2 Employees on parental leave as of 2020

3 Employees who have returned to work as of 2020

4 The percentage of workers staying at work at the end of the year after returning from parental leave in the previous year

5 DC plan not operated in accordance with the internal constitution

6 In-house employee benefits fund established in 2020

Demonstrating Our Commitment to Global Corporate Citizenship

Shared Growth

Category	Unit	2018	2019	2020
Cash payment	%	29.6	11.5	
Early payment	KRW 100M	87	59	
Trainees from partner companies ¹	Headcount	318	334	
Partner companies in total	No.	10	9	
Regular management of partner companies	%	0	0	

1 Training programs not operated in 2020

Social Contribution

Category	Unit	2018	2019	2020
Total contribution from sharing with local communities	KRW 1,000	19,924	19,874	
Total salary donation ²	KRW 1,000	0	0	
Salary donation participants ³	Headcount	0	0	

2 Implemented starting from 2020

3 Implemented starting from 2020

GRI Content Index

GRI Universal Standards

GRI 102: General Disclosures 2018

Classification	Disclosure	Content	Page
GRI 102: Organization Profile	102-1	Name of the organization	8
	102-2	Activities, brands, products and services	18, 19
	102-3	Location of headquarters	111
	102-4	Location of operations	16~17
	102-5	Ownership and legal form	52
	102-6	Markets served	16~17
	102-7	Scale of the organization	13, 18, 19
	102-8	Information on employees and other workers	98
	102-9	Supply chain	81
	102-10	Significant changes to the organization and its supply chain	8, 9
	102-11	Precautionary principles or approaches	62~65
	102-12	External initiatives	107
	102-13	Membership of associations	107
GRI 102: Strategy	102-14	Statement from senior decision-maker	8
	102-15	Key impacts, risks and opportunities	8, 9
GRI 102: Ethics and Integrate	102-16	Values, principles, standards and norms of behavior	44, 45
	102-17	Mechanisms for advice and concerns about ethics	46, 47
GRI 102: Governance	102-18	Governance structure	52~55
	102-19	Delegation of authorities	52~55
	102-20	Executives' responsibilities for economic, environmental and social topics	54, 55
	102-21	Consulting stakeholders on economic, environmental and social topics	52~55
	102-22	Composition of the organizations and committees under the Board of Directors	54, 55
	102-23	Chair of the Board of Directors	52, 53
	102-24	Nomination and selection of the Board of Directors	54, 55
	102-26	Roles of the highest governance body in setting purposes, values and strategies	54, 55
	102-27	Collective knowledge of the highest governance body	52~55
	102-28	Evaluation of the highest governance body's performance	52~55
	102-29	Understanding and managing the economic, environmental and social impacts of the Board of Directors	54, 55
	102-30	Effectiveness of risk management processes	50, 51
	102-31	Review of economic, environmental and social topics	54, 55
	102-32	Roles of the highest governance body in reporting sustainability	54, 55
	102-33	Communicating critical concerns	52~55
102-34	Nature and total number of critical concerns	52, 53	
102-35	Remuneration policies	54, 55	
102-38	Annual total compensation ratio	54, 55	

Classification	Disclosure	Content	Page
GRI 102: Stakeholder Engagement	102-40	List of stakeholder groups	24
	102-41	Collective bargaining agreements	98
	102-42	Identify and selecting stakeholders	24
	102-43	Approaches to stakeholder engagement	24
	102-44	Key topics and concerns raised through stakeholder engagement	24

GRI 102: General Disclosures 2018

Classification	Disclosure	Content	Page
GRI 102: Reporting Practice	102-45	Entities included in the consolidated financial statements	16
	102-46	Defining report content and topic boundaries	31~33
	102-47	List of material topics	31~33
	102-48	Restatements of information	None
	102-49	Changers in reporting	None
	102-50	Reporting period	111
	102-51	Date of most recent report	111
	102-52	Reporting cycle	111
	102-53	Contact point for questions regarding the report	111
	102-54	Claims of reporting in accordance with the GRI Standards	111
	102-55	GRI content index	102~106
	102-56	External assurance	107
GRI 103: Management Approach	103-1	Explanation of the material topic and its boundary	30~33
	103-2	The management approach and its components	8~12, 26~29, 44, 45, 62~65, 81, 85
	103-3	Evaluation of the management approach	

GRI Topic Specific Standards

Economic Performances (GRI 200)

Classification	Disclosure	Content	Page
GRI 103: Management Approach	103-1	Explanation of the material topic and its boundary	30~33
	103-2	The management approach and its components	8~13
	103-3	Evaluation of the management approach	8~13
GRI 201: Economic Performances	201-1	Direct economic value generated and distributed	16
	201-3	Defined benefit plan obligation and other retirement plans	100
GRI 103: Management Approach	103-1	Explanation of the material topic and its boundary	30~33
	103-2	The management approach and its components	81, 85
	103-3	Evaluation of the management approach	81, 85
GRI 205: Anti-corruption	205-1	Operations assessed for risks related to corruption	48
	205-2	Communication and training regarding anti-corruption policies and procedures	46~49
	205-3	Confirmed incidents of corruption and actions taken	None
GRI 206: Anti-competitive Behavior	206-1	Legal actions for anti-competitive behavior, antitrust practices and monopoly practices	None

Environmental Performances (GRI 300)

Classification	Disclosure	Content	Page
GRI 103: Management Approach	103-1	Explanation of the material topic and its boundary	30~33
	103-2	The management approach and its components	62~65
	103-3	Evaluation of the management approach	62~65
GRI 301 : Materials	301-3	Reclaimed products and their packaging materials	63, 64
GRI 103: Management Approach	103-1	Explanation of the material topic and its boundary	30~33
	103-2	The management approach and its components	62~65
	103-3	Evaluation of the management approach	62~65
GRI 302: Energy	302-1	Energy consumption within the organization	97
	302-2	Energy consumption outside of the organization	97
	302-4	Reduction of energy consumption	62~65
	302-5	Reductions in energy requirements of products and services	62~65
	302-5	Reductions in energy requirements of products and services	62~65
GRI 303: Water	303-4	Water discharge	97
	303-5	Water consumption	97
GRI 103: Management Approach	103-1	Explanation of the material topic and its boundary	30~33
	103-2	The management approach and its components	62~65
	103-3	Evaluation of the management approach	62~65
GRI 305: Emissions	305-1	Direct (scope 1) GHG emissions	97
	305-2	Energy indirect (scope 2) GHG emissions	97
	305-5	Reduction of GHG emissions	62~65, 97
	305-7	Nitrogen oxides (NOX), sulfur oxides (SOX) and other significant air emissions	97
GRI 103: Management Approach	103-1	Explanation of the material topic and its boundary	30~33
	103-2	The management approach and its components	62~65
	103-3	Evaluation of the management approach	62~65
GRI 306: Waste	306-2	Waste by type and disposal method	97
	306-3	Significant spills	None
GRI 307: Environmental Compliance	307-1	Non-compliance with environmental laws and regulations	None

Social Performances (GRI 400)

Classification	Disclosure	Content	Page
GRI 401: Employment	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	76, 77
	401-3	Parental leave	100
GRI 402: Labor Management Relations	402-1	Minimum notice periods regarding operational changes	71
GRI 403: Occupational Health and Safety	403-1	Workers representation in formal joint management-worker health and safety committee	60, 61
	403-2	Types of injury and rates of injury, occupational diseases, lost days and absenteeism and number of work-related fatalities	96
	403-3	Workers with high incidence or high risk of diseases related to their occupation	57~61
	403-4	Health and safety topics covered in formal agreements with trade unions	60, 61
	403-5	Staff training on occupational health and safety	96
	403-6	Improve staff health	60, 61
	403-7	Prevent or reduce direct impact on occupational health and health management system	60, 61
	403-8	Workers covered by an occupational health and safety management system	60, 61
	403-9	Work-related injuries	96
	403-10	Work-related illness	96
GRI 404: Training and Education	404-1	Average hours of training per year per employee	99
	404-2	Programs for upgrading employee skills and transition assistance programs	72~75
	404-3	Percentage of employees receiving regular performance and career development reviews	99
GRI 405: Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	52
	405-2	Female-male ratio of base salary and remuneration	99
GRI 406: Non Discrimination	406-1	Incidents of discrimination and corrective actions taken	68
GRI 413 : Local Communities	413-1	Operations with local community engagement, impact assessments, and development Program	85~87
GRI 415 : Public Policy	415-1	Political contributions	101
GRI 103: Management Approach	103-1	Explanation of the material topic and its boundary	30~33
	103-2	The management approach and its components	38~39
	103-3	Evaluation of the management approach	38~39
GRI 416 : Customer Health and Safety	416-2	incidents of non-compliance concerning the health and safety impacts of products	None
GRI 417 : Marketing and Labeling	417-2	Incidents of non-compliance concerning product and service information and labeling	None
	417-3	Incidents of non-compliance concerning marketing communications	None
GRI 418 : Customer Privacy	418-1	Substantiated complaints concerning breaches of customer privacy and loss of customer data	None
GRI 419 : Socioeconomic Compliance	419-1	Non-compliance with laws and regulations in the social and economic area	None

SASB Index

Category	SASB Code	Accounting Metric	Unit	2020
Greenhouse Gas Emissions	TC-SC-110a.1	Gross global Scope 1 emissions and (2) amount of total emissions from perfluorinated compounds	tCO ₂ e	1,737
	TC-SC-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	-	P:58
Energy Management	TC-SC-130a.1	Percentage grid electricity	%	100
Water Management	TC-SC-140a.1	Total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	m ³	356,970
Hazardous Waste Management	TC-SC-150a.1	Amount of hazardous waste generated, percentage recycled	Metric tons, Percentage (%)	n/a
	TC-SC-320a.1	Description of efforts to assess, monitor, and reduce exposure of employees to human health hazards	-	P:53
Employee Health & Safety	TC-SC-320a.2	Total amount of monetary losses as a result of legal proceedings associated with employee health and safety violation	KRW	None
	TC-SC-330a.1	(1)Percentage of employees that are foreign nationals (2)Percentage of employees located offshore	%	n/a
Product Lifecycle Management	TC-SC-410a.1	Percentage of products by revenue that contain IEC 62474 declarable substances ⁶	%	n/a
	TC-SC-410a.2	Processor energy efficiency at a system-level for: (1) servers, (2) desktops, and (3) laptops	-	n/a
Materials Sourcing	TC-SC-440a.1	Description of the management of risks associated with the use of critical materials	-	P:78
Intellectual Property Protection & Competitive Behavior	TC-SC-520a.1	Total amount of monetary losses as a result of legal proceedings associated with anticompetitive behavior regulation	-	None
	TC-SC-000.A	Number of units produced by product category	-	Cell : 48,285,700 units Module : 850,748 units
Activity Metrics	TC-SC-000.B	Percentage of production from owned facilities	-	Module : 850,748 units

Third-Party Assurance Statement

Introduction

Korea Management Registrar (KMR) was commissioned by HYUNDAI ENERGY SOLUTIONS to conduct an independent assurance of its INTEGRATED REPORT 2021 (the "Report"). The data and its presentation in the Report is the sole responsibility of the management of HYUNDAI ENERGY SOLUTIONS. KMR's responsibility is to perform an assurance engagement as agreed upon in our agreement with HYUNDAI ENERGY SOLUTIONS and issue an assurance statement.

Scope and Standards

HYUNDAI ENERGY SOLUTIONS described its sustainability performance and activities in the Report. Our Assurance Team carried out an assurance engagement in accordance with the AA1000AS v3 and KMR's assurance standard SRV1000. We are providing a Type 2, moderate level assurance. We evaluated the adherence to the AA1000AP (2018) principles of inclusivity, materiality, responsiveness and impact, and the reliability of the information and data provided using the Global Reporting Initiative (GRI) Index provided below. The opinion expressed in the Assurance Statement has been formed at the materiality of the professional judgment of our Assurance Team.

Confirmation that the Report was prepared in accordance with the Core Options of the GRI standards was included in the scope of the assurance. We have reviewed the topic-specific disclosures of standards which were identified in the materiality assessment process. We also confirmed that the report was prepared in accordance with the TCFD recommendations and SASB.

- GRI Sustainability Reporting Standards
- Universal standards
- Topic Specific Standards
 - Management approach
 - GRI 201: Economic Performance
 - GRI 205: Anti-Corruption
 - GRI 301: Materials
 - GRI 302: Energy
 - GRI 305: Emissions
 - GRI 306: Effluents and Waste
 - GRI 416: Customer Health and Safety
- SASB Sustainability Disclosure Topics & Accounting Metrics
- TCFD recommendations

As for the reporting boundary, the engagement excludes the data and information of HYUNDAI ENERGY SOLUTIONS' partners, suppliers and any third parties.

KMR's Approach

To perform an assurance engagement within an agreed scope of assessment using the standards outlined above, our Assurance Team undertook the following activities as part of the engagement:

- reviewed the overall Report:
- reviewed materiality assessment methodology and the assessment report:
- evaluated sustainability strategies, performance data management system, and processes:
- interviewed people in charge of preparing the Report:
- reviewed the reliability of the Report's performance data and conducted data sampling:
- assessed the reliability of information using independent external sources such as Financial Supervisory Service's DART and public databases.

Limitations and Recommendations

KMR's assurance engagement is based on the assumption that the data and information provided by HYUNDAI ENERGY SOLUTIONS to us as part of our review are provided in good faith. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied. To address this, we referred to independent external sources such as DART and National Greenhouse Gas Management System (NGMS) and public databases to challenge the quality and reliability of the information provided.

Conclusion and Opinion

Based on the document reviews and interviews, we had several discussions with HYUNDAI ENERGY SOLUTIONS on the revision of the Report. We reviewed the Report's final version in order to make sure that our recommendations for improvement and revision have been reflected. Based on the work performed, it is our opinion that the Report applied the Core Option of the GRI Standards. Nothing comes to our attention to suggest that the Report was not prepared in accordance with the AA1000AP (2018) principles.

Inclusivity

HYUNDAI ENERGY SOLUTIONS has developed and maintained different stakeholder communication channels at all levels to announce and fulfill its responsibilities to the stakeholders. Nothing comes to our attention to suggest that there is a key stakeholder group left out in the process. The organization makes efforts to properly reflect opinions and expectations into its strategies.

Materiality

HYUNDAI ENERGY SOLUTIONS has a unique materiality assessment process to decide the impact of issues identified on its sustainability performance. We have not found any material topics left out in the process.

Responsiveness

HYUNDAI ENERGY SOLUTIONS prioritized material issues to provide a comprehensive, balanced report of performance, responses, and future plans regarding them. We did not find anything to suggest that data and information disclosed in the Report do not give a fair representation of HYUNDAI ENERGY SOLUTIONS' actions.

Impact

HYUNDAI ENERGY SOLUTIONS identifies and monitors the direct and indirect impacts of material topics found through the materiality assessment, and quantifies such impacts as much as possible.

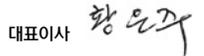
Reliability of Specific Sustainability Performance Information

In addition to the adherence to AA1000AP (2018) principles, we have assessed the reliability of economic, environmental, and social performance data related to sustainability performance. We interviewed the in-charge persons and reviewed information on a sampling basis and supporting documents as well as external sources and public databases to confirm that the disclosed data is reliable. Any intentional error or misstatement is not noted from the data and information disclosed in the Report.

Competence and Independence

KMR maintains a comprehensive system of quality control including documented policies and procedures in accordance with ISO/IEC 17021:2015 - Requirements for bodies providing audit and certification of management systems. This engagement was carried out by an independent team of sustainability assurance professionals. KMR has no other contract with HYUNDAI ENERGY SOLUTIONS and did not provide any services to HYUNDAI ENERGY SOLUTIONS that could compromise the independence of our work.

June 2021 Seoul, Korea



Membership Status & Information Disclosure Activities

Membership Status

- Korea Photovoltaic Industry Association
- Korea New Renewable Energy Association

Information Disclosure Activities

Disclosure Channels	Main Contents
HYUNDAI Energy Solutions Website https://www.hyundai-es.co.kr/index.do	Introduction of the company, IR, products & dealerships, customer service
HYUNDAI Energy Solutions Facebook https://www.facebook.com/hyundaisolar.eu	Information on HYUNDAI Energy Solutions' products and news
HYUNDAI Energy Solutions Blog https://blog.naver.com/hyundai-es-blog	Information on HYUNDAI Energy Solutions' products and news
HHI Group Business Ethics Website https://ethics.hhigroup.kr/html/main.html	Group ethics management direction, ethics regulations, online report/counselling
HHI Group Webzine 'Magazine H' http://www.hyundai-holdings.co.kr/magazine-h	HHI Group's general management status (monthly)
Financial Supervisory Service DART http://dart.fss.or.kr/	Various disclosures made either mandatorily as a listed company or voluntarily
Investor Relations https://www.hyundai-es.co.kr/investor/ir/index.do	Regular announcement of business performance and outlooks

HYUNDAI Energy Solutions Integrated Report introduces financial and non-financial performance of HYUNDAI Energy Solutions and its subsidiaries. To provide relevant information to stakeholders, core issues derived from our materiality assessment are reported on the basis of our Group's five management philosophies.

Reporting Principles and Framework	· Global Reporting Initiative (GRI) Standards (Core) · International Integrated Reporting Council's (IIRC) integrated reporting framework
Reporting Boundary	HYUNDAI Energy Solutions and its subsidiaries
Reporting Scope	Economic (under K-IFRS), social and environmental aspects (under domestic standards)
Reporting Period	For the year ended Dec. 31, 2020 (some of the achievements: 2018 to March 2021)
Reporting Frequency	Annual (first report issued in 2021)
Reporting Assurance	Third party's independent assurance (overall sustainability management, GHG emissions and energy consumption separately verified)
Those Credited with Helping Issue This Report	R&D Team, Safety & Environment Team, Financial Analysis Team, HR & General Affairs Team

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HES Integrated Report 2021 is available on our website (<https://www.hyundai-es.co.kr>) as an interactive PDF for more convenient user experience.

