[Doosan Enerbility Supply Chain ESG Management Indicators]

Doosan Energy, together with its partners, has established the "Supply Chain ESG Management Index" to realize responsible value in all areas of environment (E), society (S), and governance (G). This index is designed to provide practical help to suppliers in strengthening their sustainability management capabilities.

In addition, Doosan Energy has a system in place to check the implementation level of suppliers through procedures such as ▲self-diagnosis, ▲precise due diligence evaluation, and ▲smart diagnosis based on these indicators when necessary, and supports improvement activities for areas that are lacking. Through this, we aim to raise the level of ESG together with our partners and build a sustainable supply chain.

This management index was updated on 2025-09-22 and will be updated periodically in accordance with changes in laws and international standards in the future.

1. Environment (E)

1.1 Environmental Management Policy

1.1.1 Environmental Management Strategy

The environmental management system consists of management vision→ environmental policy→ environmental goals→ environmental plan→ target monitoring, → feedback. You need to set goals for energy and resource savings, and have plans and monitoring metrics to implement them. After analyzing the results and effects of implementation, it is advisable to reflect them in the next business plan and disclose environmental management policies, goals, and achievements through the website.

1.1.2 Environmental Organizations

The environmental organization promotes eco-friendly projects, technology, andIt is desirable to operate as a department that oversees environment-related tasks such as product development, clean production, and eco-friendly investment. If a separate organization is difficult, you can assign tasks to an existing organization or clearly designate a person in charge. A dedicated organization should be formed according to the size and situation of the company, but it should be clearly stated in the organizational chart and responsibilities and authority should be clarified.

1.2 Promotion of Environmental Management

1.2.1 Environmental Investment

In order to reduce the environmental load such as energy, greenhouse gases, resources, waste, and pollutants, companies will reduce the amount of input compared to the existingWe need to develop technologies that produce lower emissions or higher outputs with the same resource input, and continue to invest in related equipment.

1.2.2 Environmental Education

Environmental education should be conducted on topics related to energy, greenhouse gases, waste, pollutants, recycling, accident prevention, environmental conservation, etc. This allows us to spread the importance of environmental management to our employees and support them in achieving their goals. Internal policy·Performance·It is desirable to share improvement plans and conduct company-wide training at least once a year, including pollutant management, environmental accident prevention, and legal amendments.

1.2.3 Environmental Certification

Environment-related certifications include ISO 14001 (Environmental Management System), ISO 50001 (Energy Management System), Green Biz, Green Management System (GMS), Green Technology, and Environmental Labeling. These certifications can have a positive effect in establishing environmental management processes and third-party assessments.

1.3 Environmental Verification and Laws

1.3.1 Environmental Management Verification

Regularly measure environmental management performance·Monitoring should be conducted to manage and improve, and internal audit procedures should be documented to review plans and operations and improve for non-conformities.

1.3.2 Environmental Laws and Regulations

Environmental accidents have a high cost of restoration and have a serious impact on the company's image. In case of violation of laws and regulations, criminal penalties (imprisonment,fines), administrative penalties (fines,fines), and administrative sanctions (business suspension, improvement orders, etc.), so companies must comply with relevant laws and regulations. In addition, it is important to have a response system and regular drills to minimize damage in the event of an accident.

1.4 Energy and Greenhouse Gas Management

1.4.1 Energy Management

Companies should establish reasonable energy management policies, measure and measure the consumption of energy by type in the workplace.It must be aggregated and managed.

1.4.2 Total Energy Consumption

Electricity is the largest source of energy, and fossil fuels are heavily used in the production process. Therefore, the use of electricity soon leads to greenhouse gas emissions. Companies manage the overall electricity consumption and gradually increase the number of buildings andIt should be subdivided into equipment units, and process improvement and facility investment should be promoted to reduce unnecessary consumption, utilize renewable energy, and improve efficiency.

1.4.3 Energy Usage Units

The unit of yuan is the standard amount of resources required per unit of product, which can be calculated by production, sales, cost, number of workers, etc. The lower the unit of element, the higher the resource efficiency.

1.4.4 Greenhouse Gas Management (Emission Calculation)

Greenhouse gas emissions are Scope I (direct emissions from fuel use), Scope II (electricity·Indirect emissions from heat use), Scope III (other indirect emissions such as logistics, business trips, and product use). Scope I and II must be managed, and it is desirable to start with the overall emissions calculation and gradually subdivide it.

1.4.5 Total Greenhouse Gas Emissions

We need to reduce emissions in the long term to achieve carbon neutrality goals. SMEs can secure a leading position through a process that leads to overall emissions measurement → segmentation→ third-party verification→ emissions disclosure, → annual reductions.

1.4.6 Greenhouse Gas Emissions in Units

Measure the total greenhouse gas emissions, and gradually increase the number of buildings andIt must be managed in subdivision by facility. After that, the data should be analyzed, and reduction technologies should be applied to processes with high reduction potential or energy-consuming processes, and emissions should be reduced through process efficiency and the introduction of renewable energy.

1.5 Resource Management

1.5.1 Water Management

Korea is exposed to water stress due to heavy rains in summer. If the deviation of precipitation increases due to climate change, water shortages may occur, so it is necessary to prepare savings measures such as rainwater storage, reuse, and self-treatment and implement them through systematic reduction plans and analysis of results.

1.5.2 Water Consumption Units

In the case of the manufacturing industry, the production standard is applied in principle, but if the production standard is difficult due to the nature of the product, it can be applied based on sales or cost of sales. In principle, the cumulative improvement of water consumption per unit is carried out over a period of 3 years, but if there is only 2 years of data, the cumulative improvement may not be calculated.

1.5.3 Raw and Subsidiary Material Management

Raw and subsidiary materials are essential materials for product production, so there is a limit to reducing usage. However, a management system must be in place to reduce unnecessary waste through efficient resource use and recycling. If you build a system that can systematically manage the amount of incoming goods, usage, inventory, and shipments for each material, and manage and share them in real time, you can be evaluated as a higher level of management system.

1.5.4 Raw and subsidiary material usage per unit

In the manufacturing industry, the production standard is applied in principle, but if the production standard is difficult due to the nature of the product, it can be applied based on sales or cost of sales. In principle, the cumulative improvement in raw material usage per unit is 3 years, but if there is only 2 years of data, the cumulative improvement may not be calculated.

1.5.5 Waste Management

Companies should suppress waste generation as much as possible by improving production methods, etc., and minimize emissions through recycling. When discharging, appropriate measures must be taken in advance to prevent harm to the surrounding environment or the health of residents.

1.5.6 Waste Generated Units

Waste must be managed using the 'Correct System' operated by the Ministry of Environment and the waste management register at the workplace. Waste is divided into types, properties, andIt is necessary to manage each condition by distinguishing whether it is recyclable or non-flammable, and establish a reduction plan and analyze the results accordingly.

1.5.7 Resource Recycling

Manufacturing·Import·Businesses that sell must use resources in a circular manner, such as curbing waste generation and promoting recycling in their business activities. Resource circulation must be considered from the perspective of the entire product process (LCA) so that it can be reused, recycled, and up-cycled.

1.6Clean Production

1.6.1 Green Products

Companies can reduce resources and costs from the design phase to environmental considerations, from manufacturing, → use→, disposal, → recovery. It is desirable to derive at least one eco-friendly design element from the perspective of product life cycle (LCA), prepare a procedure with a checklist and implementation methods, etc., and reflect it in the actual product design.

1.6.2 Green Purchasing

Energy·Resource input and greenhouse gas·Establish a green product purchase goal that minimizes the generation of pollutants, and It is recommended to increase the level by expanding green purchases in auxiliary and consumable materials.

1.6.3 Green Processes

When developing products and services, eco-friendly elements must be derived, and procedures including checklists and implementation methods must be prepared and reflected in the design and process.

1.6.4 Renewable Energy

Renewable energy is energy generated from hydrogen, fuel cells, solar, wind, hydropower, etc., and needs to be reviewed in terms of introduction cost and efficiency. You need to choose the type that suits your internal situation, review the introduction cost and payback period, and manage the ratio of use to total energy consumption.

1.7 Contaminant Management

1.7.1 Air Pollutants

Processes for managing air pollutants generated within the boundaries of business sites must be established and managed to ensure that emission concentrations are below legal standards. When operating emission facilities, the measurement results must be submitted to the relevant agencies, and the level of emissions by pollutant must be analyzed to determine the level compared to legal standards, and reduction plans such as installation of prevention facilities, process improvement, and replacement of old equipment must be established and monitored regularly.

1.7.2 Water pollutants

Processes for managing water pollutants generated within the boundaries of business sites must be established and managed to ensure that discharge concentrations are below the legal standard. When operating emission facilities, the measurement results must be submitted to the relevant agencies, the emission amount of each pollutant must be analyzed to determine the level compared to the standard, and a reduction plan must be established and monitored regularly.

1.7.3 Chemical Management

Processes must be established to manage the handling, storage, and discharge of chemicals generated within the boundaries of business sites, and relevant legal standards must be complied with. The status of chemical use and emissions should be regularly checked, and mitigation measures should be implemented for non-conformities, such as process improvement, installation of prevention facilities, and replacement of old equipment.

1.7.4 Chemical Substance Usage Units

It is necessary to systematically measure and manage the amount of chemical substances, calculate the original unit by product and process, and establish improvement goals. It is necessary to establish a reduction plan and manage the improvement performance through regular monitoring.

2. Society(S)

2.1 Human Rights Management

2.1.1 Guarantee of human rights

Companies must respect the human rights of their employees and all stakeholders, and must proactively prevent factors that negatively affect human rights. In particular, it is responsible for preventing human rights violations and responding promptly when they occur. It is advisable to support and comply with international and domestic human rights norms, and to establish and publicly declare the Charter of Human Rights, including the guarantee of human rights.

2.1.2 Parental leave system

Parental leave should be available to everyone, regardless of gender. The percentage of men on parental leave increased significantly from 5.6% in 2015 to 24.5% in 2020. Parenting experiences enhance creativity, improve work efficiency, and also contribute to reduced stress and increased satisfaction. Companies should encourage employees to accept and actively use parental leave.

2.1.3 Benefits

We must operate a welfare system to improve employee satisfaction, retain and retain talent, and improve performance. The operation of an in-house cafeteria, fitness center, daycare center, break room, and dormitory provides the same benefits to all employees and can be a means of enhancing the company's image.

2.1.4 Flexible Work System

The flexible work system is a system that supports work-life balance and improves the efficiency of manpower utilization by adjusting working hours and locations. With the activation of telecommuting after COVID-19, the number of companies adopting it is increasing. It is advisable for companies to introduce flexible work systems in stages to enhance productivity and competitiveness.

2.2 Recruitment Management

2.2.1 Recruitment System

Companies should regularly hire new employees and have a system in place to convert contract workers to full-time jobs. Workers who demonstrate their work ability during the contract period can be more efficient than new hires by ensuring work continuity when they switch to full-time employment.

2.2.2 Employed Workforce

Through new hires and job retention, companies accumulate the human resources necessary for growth and contribute to the creation of jobs in the community. It is preferable to maintain stable employment based on management performance rather than unconditionally expanding new hires.

2.2.3 Human Resource Certification

It is a system that certifies small and medium-sized companies, family-friendly companies, age-friendly companies, job-oriented companies, and human rights management systems approved by the Ministry of Employment and Labor as good companies to work for. Relevant certifications help attract top talent and enhance the company's image.

2.3 Employee status

2.3.1 Male and female composition ratios

Gender discrimination is prohibited in hiring, and women must not be unfairly discriminated against in employment, wages, and working conditions. In addition, opportunities for women's professional skills development should be guaranteed, and equal opportunities should be provided in view of the increasing trend of female managers.

2.3.2 Contract Workers

Non-regular workers can lead to job insecurity and social issues. Companies should contribute to stable employment and protection of rights and interests by expanding the transition to full-time jobs and improving working conditions. If a non-regular worker who has been engaged in permanent and continuous work has worked overtime for two years, he or she must be converted to an indefinite contract worker.

2.3.3 Workers with Disabilities

Companies with 50 or more full-time employees are required to employ at least 3.1% of their workers (as of 2022) as disabled in accordance with the Act on Promotion of Employment and Vocational Rehabilitation of Persons with Disabilities. Employment plans and performance must be reported annually, and levies must be paid if workplaces with more than 100 employees fail to fulfill their obligations. This is a system to realize social value through the expansion of employment of people with disabilities.

2.3.4 Foreign Workers

Employment of foreign workers must meet the employment permit system under the Act on the Employment of Foreign Workers. This is a system that allows companies that have difficulty securing manpower in Korea to legally hire foreign workers if they meet certain requirements, and is operated by the Ministry of Employment and Labor. The amount of employment is assigned to each industry, and it is used in the manufacturing industry (less than 300 full-time workers or less than 8 billion won in capital, but the standard is not required when submitting a small and medium-sized enterprise certificate), construction industry (excluding industrial environmental equipment licenses), service industry, fisheries, and livestock industry. Companies can alleviate the labor shortage through this and at the same time strive to improve the treatment of foreign workers.

2.4 Human Resource Management

2.4.1 Wages

The average salary per employee is the most direct indicator of the level of employee treatment. Wages must increase by a certain level or more every year, taking into account the rate of inflation and the increase in the minimum wage. Maintaining wages similar to industry averages can contribute to attracting top talent and enhancing employee satisfaction. The minimum wage has been increased to 8,590 won in 2020, 8,720 won in 2021, 9,160 won in 2022, 9,620 won in 2023, 9,860 won in 2024, and 10,030 won in 2025.

2.4.2 Benefits

Benefits are a typical non-wage compensation and are an important criterion for job seekers. Companies should calculate the benefit cost per employee at the average level of the industry and operate to maximize the cost effect by reflecting employee preferences.

2.4.3 Education and Training Expenses

Education and training are key to securing the long-term competitiveness of enterprises. Annual training hours and job training programs per employee are also required in the ESG Information Disclosure Standard Standards. We need to invest in education to strengthen human resource capabilities and promote organizational development.

2.5 Industrial Safety

2.5.1 Industrial Accident Rate

In January 2022, the Serious Accident Punishment Act came into effect, strengthening the punishment for those responsible in the event of a serious accident (for workplaces with fewer than 50 employees, it will be applied from 2024). Companies should strive to prevent disasters by strengthening safety management, safety and health education, risk assessment, and providing safety protection equipment.

2.5.2 Safety Management Certification

Industrial accidents can lead to injury, illness, and death of workers, and legal liability is strengthened in the event of a serious accident. In the event of a major accident, companies must immediately stop work, evacuate workers, and report to the relevant agencies. In addition, regular occupational safety and health training must be conducted, and penalties will be imposed for failure to do so. Serious industrial accidents and serious civil accidents are defined by law, and companies must have a management system in place to prevent them.

2.5.3 Product Safety

If a product goes wrong during use, it may require measures such as recall, which can incur a large cost. To prevent this, it is necessary to prepare a full inspection before delivery, risk management, and establishment of a service manual. It is necessary to secure procedures and test reports for quality and safety inspections.

2.5.4 Quality and Safety Certification

ISO 45001 is an international standard for occupational safety and health management systems, replacing the existing OHSAS 18001 and KOSHA 18001. Risk assessment is the process of analyzing harmful and risk factors in the workplace and preparing countermeasures, and industries with a high risk of industrial accidents must strengthen their safety systems through relevant certifications.

2.6 Data protection

2.6.1 Privacy

Companies must protect the information of stakeholders (executives, employees, customers, etc.) in accordance with the Personal Information Protection Act. When collecting, storing, processing, transmitting, and sharing information, it is necessary to comply with relevant laws and regulations, and prevent leakage by establishing security systems, establishing internal regulations, designating personnel, and training employees.

2.6.2 Technical Protection

Companies must implement security systems and obtain certifications to protect assets such as core technologies and personal information. It is necessary to prepare a proactive response system such as establishing information protection regulations, designating a person in charge, and strengthening training.

2.7 Social Contribution

2.7.1 Donation Status

Donations are an indicator of the level of social contribution. Businesses should start donating to give back to society and gradually develop it into a program with a specific purpose and direction, encouraging regular and strategic social contributions.

2.7.2 Social Contribution Activities

Companies must establish and implement a social contribution mission and vision, key areas to be promoted, and a roadmap for activities. Through volunteer activities, donations, and support for the underprivileged, we must increase social value and contribute to creating a sustainable society.

2.7.3 Regional Economy

We must contribute to the revitalization of the local economy through industry-academia cooperation, preferential treatment of local manpower and suppliers, and support for start-ups, and strive to resolve regional imbalances and achieve balanced development.

2.7.4 Compliance with social laws and regulations

Companies should check the level of compliance with laws and regulations by identifying the number of violations of social laws and regulations, the level of administrative sanctions, and media reports in the past two years.

2.8 Suppliers

2.8.1 Supplier Management

The most basic thing that small and medium-sized enterprises can do to achieve mutual growth with their partners is to shorten the payment period and help the circulation of funds. Furthermore, we need to diagnose the ESG risks faced by our partners and support them to improve them to prevent risk transfer. It is necessary to prepare strategies and specific plans to strengthen the ESG capabilities of suppliers in the long term.

2.8.2 Conflict Minerals

Conflict minerals refer to minerals mined in conflict areas or areas with significant environmental damage. The U.S. government has designated tin, tantalum, tungsten, and gold produced in nine neighboring countries, including the Democratic Republic of the Congo, as representative conflict minerals. These minerals cause problems such as human rights violations, environmental degradation, and the influx of funds from conflict groups during the mining process. As a result, overseas regulations are being strengthened to disclose the use of conflict minerals and the status of management to companies, and companies must check the risk of conflict minerals throughout the supply chain and have an improvement system in place.

3. Governance (G)

3.1 Compliance Management

3.1.1 Fair Trade and Anti-Corruption

The Ethical Management Declaration is an act that informs internal and external stakeholders of the company's philosophy and norms. It should include fair competition, human dignity, law-abiding, and civic consciousness. It is necessary to not only hold the Charter of Ethics, but also to disclose it to the outside world so that it can be viewed by stakeholders, and to faithfully comply with the contents of the declaration. In addition, companies must maintain the highest level of integrity by establishing specific codes of ethics and guidelines related to bribery, corruption, extortion, embezzlement, etc. in their business areas.

3.1.2 Litigation and Infringement of Rights

Illegal and unfair transactions that occur in the management process of a company are the main indicators of the level of compliance. Companies should check whether illegal acts have occurred intentionally or negligently, and raise awareness of compliance management.

3.2 Management

3.2.1 Business owners

Business owners can be evaluated based on their financial reliability. Transparent and accountable financial operations are essential for corporate sustainability and ensuring stakeholder trust.

3.2.2 Management

The Commercial Act divides directors into in-house directors, independent directors, and other non-executive directors. In-house directors are in charge of management practices full-time and have positions. In order to ensure the professionalism and transparency of management, it is desirable for companies to have at least two executives and divide roles in each field such as management support, planning, marketing, and technology.

3.3 Ownership structure and shareholder management

3.3.1 Equity Structure

It is necessary to diversify the composition of shareholders to increase the stability of governance and the level of management checks. It is preferable to diversify shares so that they include at least 10% of the external shares rather than 100% of the composition of the person and his relatives.

3.3.2 Affiliates (Loans, Contributions)

Affiliated company loans fall under the category of loans to special related parties. These transactions affect the company's financial position and performance and may differ from the general trading terms. If the recovery is not smooth, it may have a negative impact on cash flow, so it is best not to operate it as much as possible. If it is unavoidable, you need to prepare for it.
The investment of affiliated companies corresponds to special relationship free securities and equity method investment stocks. If investment is necessary, it must be managed at a level that does not burden the management of the company.

3.3.3 Dividends

Dividends are a means of increasing corporate value through shareholder returns. Listed companies are aware of the need for dividends, but small and medium-sized enterprises often see the need for dividends low because the majority of the shares are held by business owners and special parties. However, as ESG management demands expand, small and medium-sized enterprises should also make efforts to return to shareholders by using systems such as differential dividends and reduced dividends.

3.4 Board of Directors and Audit

3.4.1 Board of Directors and Audit Body

Boards of directors and audit bodies are devices that increase the transparency of corporate decision-making. The introduction of full-time audits and external audit systems enhances accounting transparency. In addition, it is desirable to strengthen management checks and balances through the appointment of outside directors and to include female executives to ensure diversity.

3.5 Information Disclosure

3.5.1 Information Disclosure Level

ESG information disclosure is an important material for the decision-making of stakeholders such as investors. Companies must disclose ESG-related activities in the form of reports on their websites or disclosure channels. Even in the case of small and medium-sized enterprises, it is desirable to disclose at least some activity details.

3.5.2 Information Disclosure Cycle

Sustainability reports and ESG assessments require a large amount of information in conjunction with global standards, but it is difficult for all companies to publish them. Therefore, it is advisable for small and medium-sized enterprises to investigate their activities and disclose even a part of them periodically. The ESG evaluation will vary depending on whether it has been disclosed for three consecutive years, two consecutive years, or the last year.

3.5.3 Stakeholder Communication

Companies must operate online and offline communication channels where stakeholders, such as internal employees, customers, local residents, business partners, and government agencies, can freely report unethical behavior or issues. For example, anonymous bulletin boards, suggestion boxes, hotlines, and third-party reporting lines. It is necessary to designate a dedicated department and person in charge, prepare a response manual, and respond systematically, and this communication also contributes to improving the corporate image.