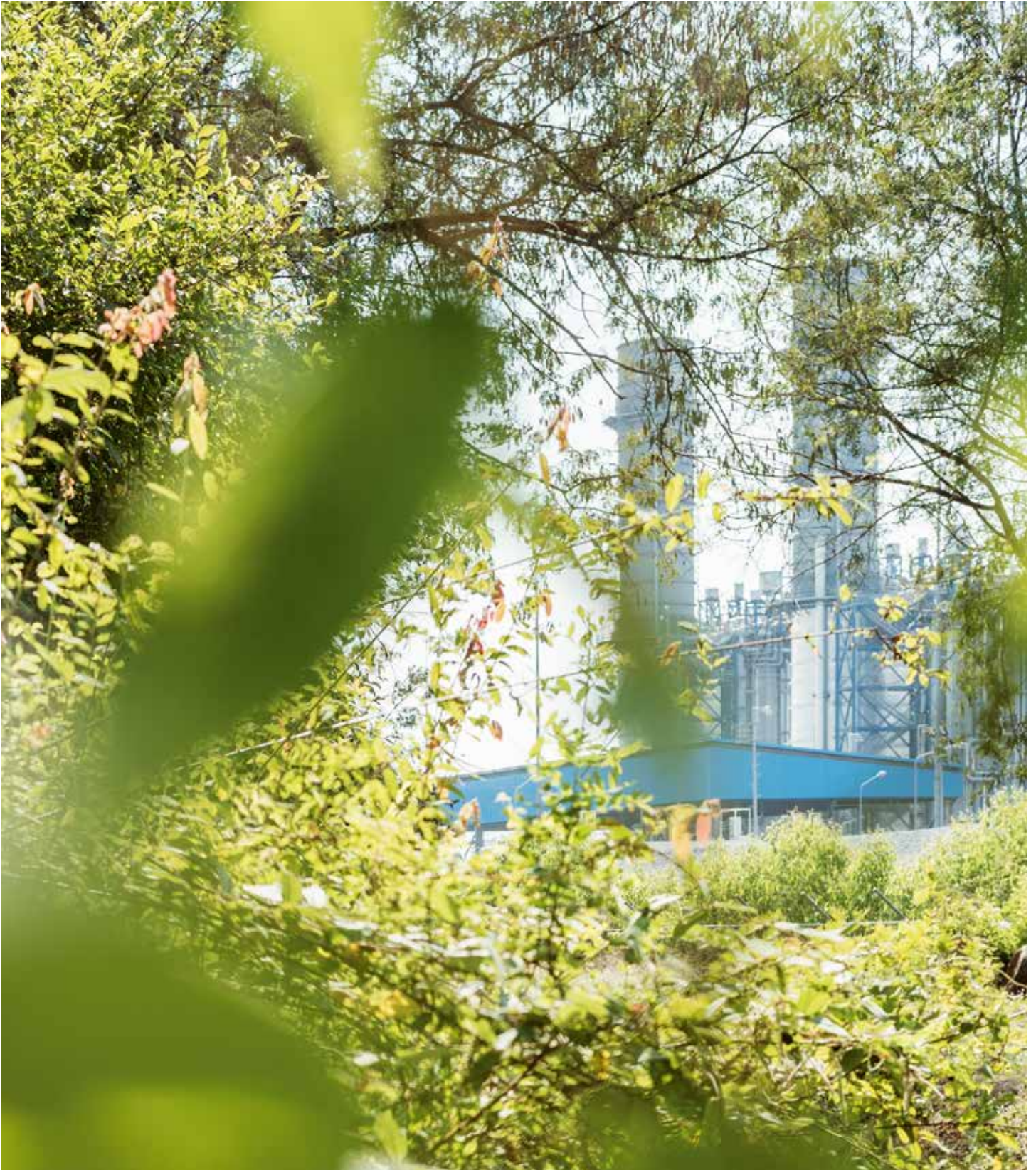


Sustainability Report 2018







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PERFORMANCE

Sustainable business growth and
creation of shared value



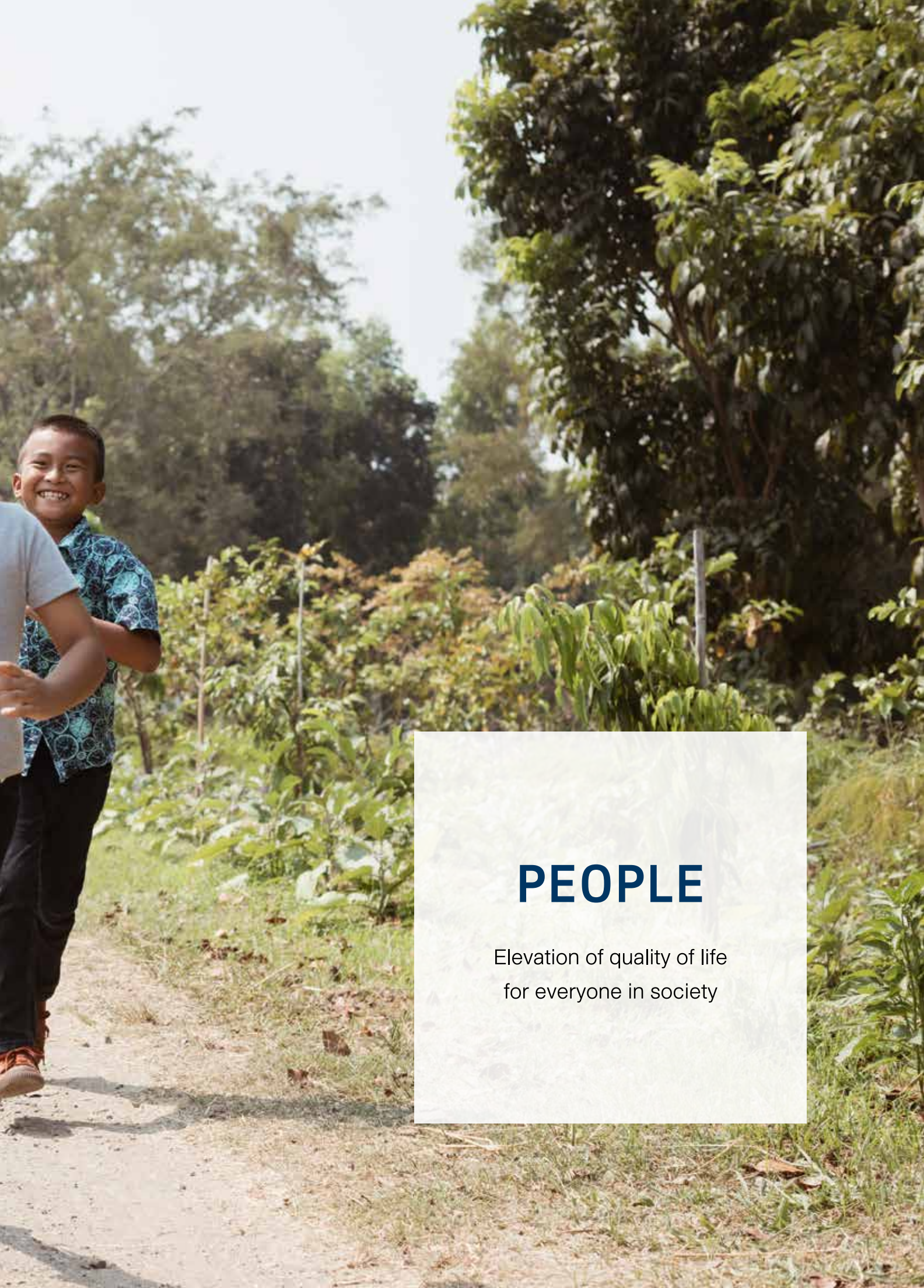
PLANET

Environmental protection and
conservation for the future









PEOPLE

Elevation of quality of life
for everyone in society



Sarath Ratanavadi

MR. SARATH RATANAVADI

Chief Executive Officer

MESSAGE FROM THE CHIEF EXECUTIVE OFFICER



This past year, the Company aimed to develop its operating practices to achieve greater sustainability in a more systematic manner. The Company has continued to give importance to conducting operations and social development programs in a responsible manner. At a time when the issue of sustainability is taking on greater importance, especially for the energy industry, I am confident that the Company is moving forward in the right direction and will be ready to face whatever challenges lay ahead.



Dear valued shareholders,

In 2018, Gulf Energy Development Public Company Limited took an important step forward in expanding its business overseas for the first time. With this move, the Company also significantly expanded its investment in renewable energy projects, in line with global energy trends. Of equal importance, the Company continued to move forward with its domestic success, with four new SPP power projects beginning commercial operation as planned. Aside from its business achievements, the Company has continued to prioritize its responsibility to the environment and society, ensuring the development of corporate sustainability alongside business growth. With this first Sustainability Report, we hope to communicate our commitment and dedication to contributing to the economic, environmental and social development of Thailand and the global society, creating shared value for all our stakeholders.

This past year, the Company aimed to develop its operating practices to achieve greater sustainability in a more systematic manner. Thus, a number of additions and adjustments were made to our operating procedures including: 1) the development of a sustainability policy and corporate social responsibility (CSR) framework to guide the Company's various units in the same direction, 2) the improvement of the Company's corporate governance practices to ensure greater benefit for all shareholders which resulted in the Company receiving a corporate governance rating of "Very Good" in 2018, 3) the initiation of a business continuity management program to strengthen the Company's ability to handle future threats and challenges, and 4) the introduction of various technologies and digital tools to modernize and future-proof the Company's operations.



With regards to environmental and social responsibility, a key element of the Company's philosophy, the Company has continued to give importance to conducting operations and social development programs in a responsible manner, driven by the efforts of employees from a number of different departments and units such as the Environmental Health and Safety department, the Environmental Impact Assessment unit, the Community Relations department, the Human Resources department, and the Corporate Social Responsibility unit. Through their work, the Company's sustainability activities in 2018 built upon the foundation laid in previous years. For example, all of Gulf's power projects are held to strict national and international environmental standards, with dedicated teams of engineers and technicians working around the clock to monitor operations and ensure all standards are met. As a result, the Company's power projects have the potential to do more than simply meet minimum legal standards. Thus, Gulf participates in several environmental programs including the Carbon Footprint for Organization program conducted by the Thailand Greenhouse Gas Management Organization (Public Organization), the Water Footprint program conducted by the Federation of Thai Industries, and the Green Industry program conducted by the Department of Industrial Works in order to serve as a model of environmental responsibility and support the government's environmental policies. In addition, the Company has ensured it provides a safe and healthy work environment for its employees, maintaining its perfect record of zero accidents, resulting in the Company receiving over 50 environmental health and safety awards in 2018.

Furthermore, Gulf continues to place the greatest importance on improving the well-being and quality of life for people in the society, with programs and activities that create tangible benefits, especially for the communities around the Company's power plants and for disadvantaged groups. The Company is able to develop its power projects to the highest quality

as a result of regular communication and engagement with community and state representatives during all stages of project development, thus ensuring that the construction and operation of Gulf power plants aligns with the needs of the community. It is the Company's aim to not only reduce any negative impact that may occur, but to increase the positive impacts that lead to greater public benefit and sustainable community development through measures such as the building and renovation of roads, job creation, and support for educational initiatives.

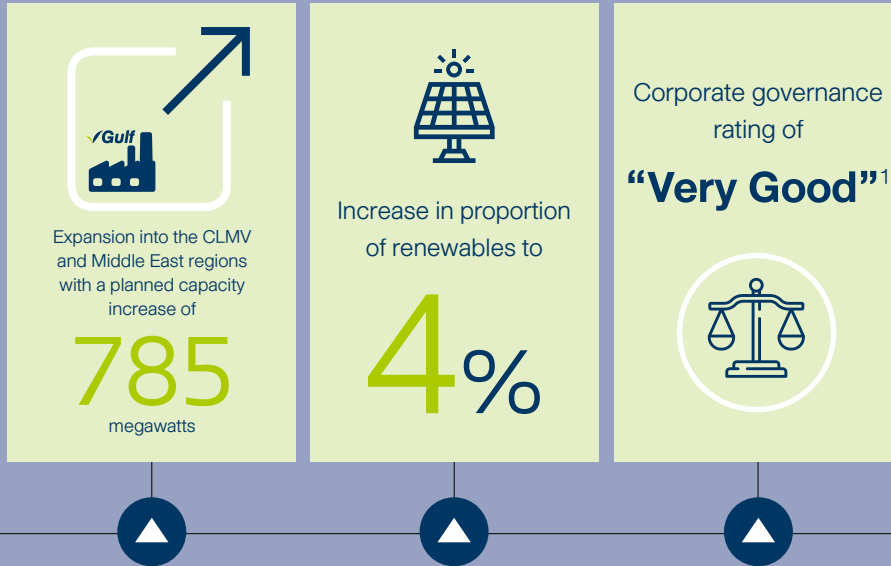
In addition to taking care of the communities around its power plants, Gulf has also engaged in several philanthropic activities, especially those focusing on health and education. In fact, in 2018, the Company supported and participated in over 100 community and social development programs including the construction and renovation of healthcare facilities and the purchase of medical equipment for hospitals across the country, providing support for youth programs all over Thailand, especially those focused on education and health promotion for disadvantaged children, the construction and renovation of school buildings and the purchase of educational supplies for schools across the country, and the development of the Company's demonstration farm next to the Gulf Nong Saeng power plant which helps bring in income for the local community, reduces environmental impacts, and supports local agriculture.

At a time when the issue of sustainability is taking on greater importance, especially for the energy industry, I am confident that the Company is moving forward in the right direction and will be ready to face whatever challenges lay ahead. On behalf of the management and employees of Gulf, I would like to thank you for the trust and support you have shown as we continue to grow the business in a sustainable manner, creating shared value for all our stakeholders in this year and all the years to come.

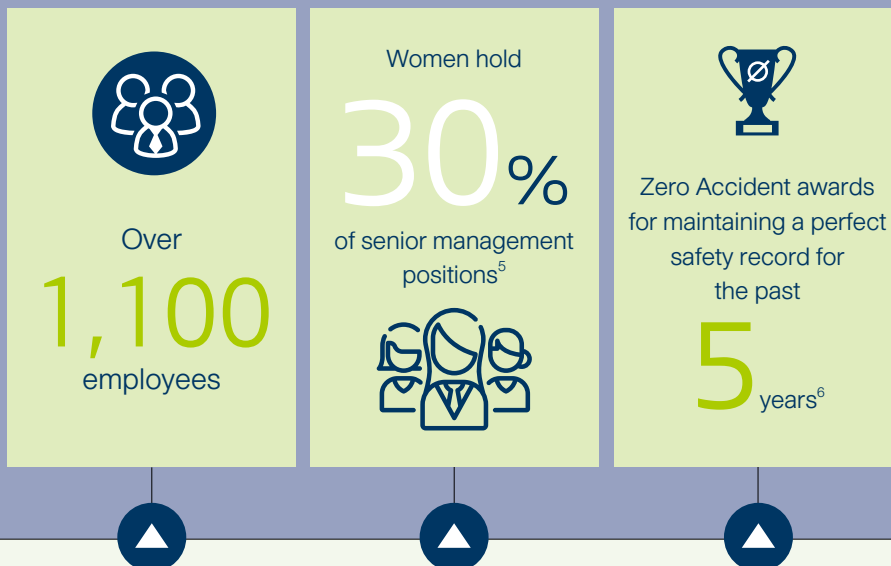
SUSTAINABILITY HIGHLIGHTS

2018

ECONOMIC/ GOVERNANCE DIMENSION



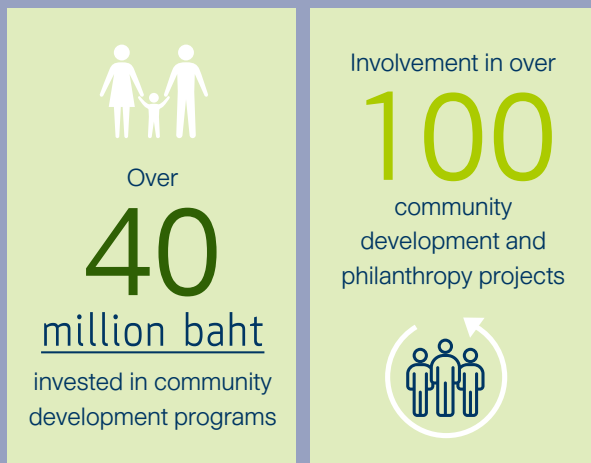
SOCIAL DIMENSION



Remarks

1. Rated by the Thai Institute of Directors Association
2. All power projects in operation for at least one year have been certified or are awaiting registration by the Thailand Greenhouse Gas Management Organization (Public Organization)
3. All power projects in operation for at least one year have been certified or are awaiting registration by the Federation of Thai Industries
4. • Green Industry Award by the Ministry of Industry awarded to GKP1, GKP2, GNLL, GCRN, GNK2, GUT, GVTP, GTS1, GTS2, GTS3 and GTS4
• Thailand Labour Management Excellence Award 2018 for the category of occupational health, safety and work environment from the Ministry of Labour and Social Welfare awarded to GNNK

ENVIRONMENTAL DIMENSION



- Award for Zero Accident Campaign by the Ministry of Labour awarded to GKP1, GKP2, GTLC, GNNK, GCRN, GNK2 and GNS
- Zero Accident Reward project 2018 from the Industrial Estate Authority of Thailand awarded to GVTP
- Eco Factory Award by the Water Institute for Sustainability, The Federation of Thai Industries, awarded to GKP1 and GKP2

- Green Office Award by the Department of Environmental Quality Promotion awarded to GCRN and GNK2
- 5. Senior Vice President or higher
- 6. Awarded by the Ministry of Labour and the Industrial Estate Authority of Thailand totaling 7 awards



SUSTAINABILITY AT GULF

Recognizing that sustainability is continuing to take on greater importance globally and domestically, Gulf has made it a priority to integrate sustainability into its operations in a more systematic manner. While sustainability has always been a key part of the Company's operations and decision-making process, this will be the first time the Company is publishing a Sustainability Report in conjunction with its Annual Report and Financial Statements. Through this report, the Company hopes to convey its intention to support and uphold the principles of sustainability and showcase its current and upcoming activities in all aspects of sustainability.

Gulf understands that as a leader in the energy industry in Thailand, it has a moral obligation to contribute to all aspects of sustainability: economic growth, environmental protection and social inclusion. It has long been the Company's core belief that its success must be achieved through sound business practice, ethical competitiveness, social and environmental responsibility, and creation of shared value for all its stakeholders.

POLICIES

In 2018, the Company took an important step forward in strengthening its sustainability functions with the creation and adoption of a Sustainability Policy and a Corporate Social Responsibility (CSR) Framework.

SUSTAINABILITY POLICY

Principle and Objective:


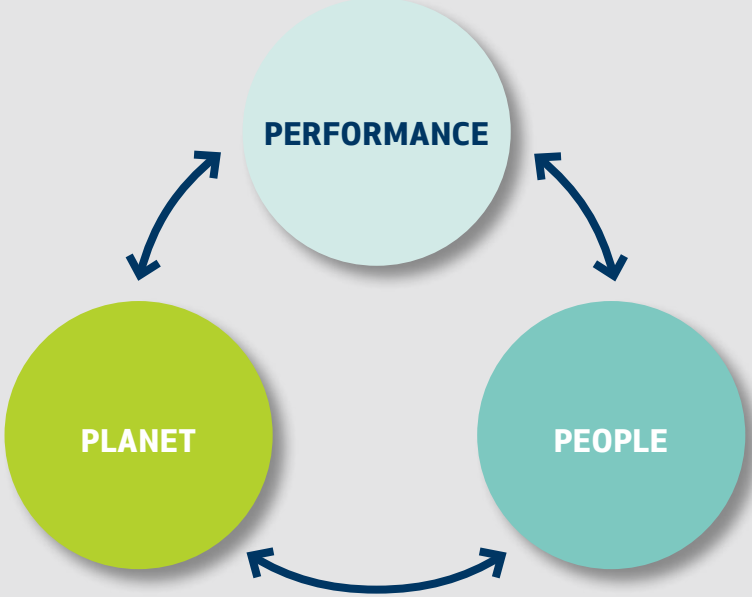


Sustainable success for the Company should be built on a foundation of good corporate governance, social and environmental responsibility, and sound business practices. With the United Nations Sustainable Development Goals as a guide, the Sustainability Policy sets out principles and guidelines to ensure the creation of shared value for all stakeholders.

FOCUS AREA	DETAILS
 Sustainability in operations	Achieve sustainability in the economic, environmental and social dimensions and promote sustainable practices among Gulf's employees and community members
 Legal compliance	Uphold commitments to mandatory and voluntary agreements, respect international standards of human rights and labor rights, act within the confines of the law
 Corporate governance	Adopt good corporate governance practices, ensure transparency, avoid corruption, encourage fair and ethical behavior
 Risk management	Assess and manage risks in a systematic manner, conduct regular performance monitoring and evaluation, conduct internal and external audits, maintain strong internal controls
 Stakeholder engagement	Establish clear communication channels, provide accurate and reliable information, manage complaints and request for consults, encourage dialogue and participation with all stakeholders
 Employee engagement	Provide a safe and healthy work environment, promote non-discrimination and gender equality, support personal development and well-being
 Environmental protection	Adopt technologies and practices which reduce negative impacts on the environment, commit to environmental protection in all stages of project development, promote environmental awareness and conservation

CORPORATE SOCIAL RESPONSIBILITY (CSR) FRAMEWORK

Principle and Objective:

The Company has a responsibility to create shared value for all stakeholders through the protection and promotion of the well-being of the local community, society and natural environment. The CSR Framework guides the Company's operational activities and philanthropic initiatives to reflect its commitment to sustainable growth.

FOCUS AREA	DETAILS
 <p>Operations</p>	<p>Ensure financial value is generated without causing environmental and social destruction, guided by the concept of the Triple Bottom Line</p> 
 <p>Philanthropy</p>	<p>Provide aid to the society and disadvantaged groups, especially in the local communities where the Company operates, under the theme of "Powering the Country, Empowering the People"</p> 

The Company also has a number of other related policies and guidelines which relate to sustainability and functions contributing to sustainability. These include:

CORPORATE GOVERNANCE POLICY

Principle and Objective:

The Company aims to conduct business in a responsible manner, providing stable and reliable energy for the country to support economic growth and increase value for shareholders while upholding the principles of good corporate governance and ethical business practice.

FOCUS AREA	DETAILS
 <p>Rights of the shareholder</p>	<p>Shareholders are entitled to fair and equal treatment at all times. Shareholders have the right to buy and sell shares, receive dividends, access information about the Company, participate in meetings involving decisions about appointment and dismissal of directors or auditors, as well as decisions about issues which may impact the Company or shareholders directly.</p>
 <p>Equal treatment of shareholders</p>	<p>All shareholders are entitled to fair and equal treatment. Minority shareholders are entitled to propose agenda items for Shareholder Meetings as well as nominate directors. Mechanism are in place to prevent insider trading and resolve conflicts of interest.</p>
 <p>Role of stakeholders</p>	<p>The Company will operate in a fair and transparent manner, and will consider and respond to the needs of all stakeholder groups in a respectful and appropriate manner. The Company supports sustainable business growth through constructive cooperation for social and environmental development.</p>
 <p>Disclosure and transparency</p>	<p>The Company will disclose important information accurately, adequately, reliably, and in a timely manner. All shareholders will have equal access to the information through multiple channels.</p>
 <p>Responsibilities of the Board of Directors</p>	<p>The Company's highest governing body comprises a Board of Directors as well as major committees including the Audit Committee. The Board of Directors is responsible for overseeing the Company's policies and governance, finances, internal control and auditing, human resource management, conflict resolution, and communications with shareholders.</p>

In 2018, the Company participated in the Corporate Governance Report (CGR) program conducted by the Thai Institute of Directors Association (IOD), which provides corporate governance ratings on Thai listed companies in the five major areas of corporate governance. The Company was rated "Good" or higher in every area, with especially high scores equivalent to a rating of "Excellent" in the areas of Shareholders' Rights and Disclosure and Transparency. The Company received an overall corporate governance rating of "Very Good" (4 stars). In addition, the Company was given a rating of 96 points by the Thai Investors Association for the organization of its 2018 Annual General Meeting of Shareholders.

CODE OF CONDUCT

Principle and Objective:

Gulf aims to achieve sustainable growth and generate greater value for all its stakeholders while contributing to social and environmental development. Such growth must be achieved through fair and honest means. The Code of Conduct thus lays out guidelines for appropriate action for all Gulf employees.

FOCUS AREA	DETAILS
 Shareholders	Shareholders will be treated equally and fairly, and will have all shareholder rights afforded to them by law. Gulf employees will not use company or shareholder information for personal gain.
 State entities	Gulf employees will strictly adhere to the law and will support the work of the government and other state entities.
 Customers	Gulf employees will protect customers' personal information and will behave towards customers in an honest and fair manner.
 Employees	Employees will be afforded a safe and healthy work environment, free from discrimination and prejudice. Employees will be supported in personal and career development and will be fairly assessed based on merit.
 Partners	Gulf will engage in fair and honest business transactions, strictly adhering to the law and principles of ethical business practice.
 Competitors	Gulf will adhere to principles of free and fair competition. Gulf employees will conduct themselves within the framework of honest and fair competition and will not violate competitors' intellectual property rights.
 General society	Gulf employees will dedicate themselves to achieving the goals set out by the Company, developing their personal skills and knowledge, upholding good morals and ethics, and creating sustainable prosperity and progress for the local community and society in general.

FOCUS AREA	DETAILS
 <p>The Company</p>	<p>Gulf employees will behave in a manner that reflects the good standing and values of the Company at all times. Gulf employees will behave with integrity, adhere to the law, respect Company property and information, and dedicate themselves fully to their work. Gulf employees will not use Company assets or information for personal or political gain.</p>
 <p>Conflicts of interest</p>	<p>Gulf employees will avoid conflicts of interest and behavior which may disadvantage the Company. Gulf employees will not engage in activities which violate the principles of anti-corruption and anti-bribery.</p>
 <p>Coworkers and colleagues</p>	<p>Gulf employees will treat all fellow employees with mutual respect and compassion and will work together in a supportive and unified manner.</p>
 <p>Safety</p>	<p>Gulf will provide a safe and healthy work environment for employees, developing safety systems which adhere to national and international safety standards with the goal of achieving a Zero Accident workplace.</p>

It is an annual requirement for Gulf employees to complete an online Code of Conduct e-learning course to ensure proper understanding and review important concepts covered by the Code.

ENVIRONMENTAL HEALTH AND SAFETY POLICY

Principle and Objective:

The Company aims to grow its business sustainably, taking into account economic, environmental and social risks and opportunities. The Company has adopted an Environmental and Social Management System to guide its operations in line with international standards.


FOCUS AREA	DETAILS
 <p>Environmental and social performance</p>	<p>The Company will implement and maintain an Environmental and Social Management System (ESMS) to continually develop its environmental and social operations. The Company regularly monitors and reports on its performance.</p>
 <p>Legal compliance</p>	<p>The Company will comply with environmental, social, health and safety laws, taking into account environmental and social protection guidelines, customer needs, and other relevant rules and regulations, using these laws as minimum operating standards.</p>
 <p>Social and environmental responsibility</p>	<p>The Company will conduct business in a socially and environmentally responsible manner, reducing its footprint from all activities along the value chain and balancing the needs of all stakeholders to ensure sustainable growth.</p>
 <p>Social and environmental culture and behavior</p>	<p>The Company will embed and foster social and environmental responsibility in the culture and behavior of the organization, emphasizing participation from executives and employees at all levels.</p>
 <p>Conduct towards contractors, suppliers and business partners</p>	<p>The Company will work with contractors, suppliers and business partners to manage and improve its social and environmental operations to ensure greater performance.</p>

As a result of the Company's efforts and emphasis on implementing an Environmental and Social Management System in line with international standards, the Company was recognized with over 50 Environmental Health and Safety awards and certifications in 2018.

HUMAN RESOURCES POLICIES

Principle and Objective:

The Company works to develop its employees to support the continual growth of the business. Keeping in mind the importance of ensuring strict compliance with relevant laws and regulations and conducting itself in a fair and transparent manner, as well as demonstrating responsibility to the environment and society, the Company has thus developed a number of policies regarding its human resource management.

FOCUS AREA	DETAILS
 <p>Annual manpower planning</p>	<p>The human resources department conducts annual manpower planning, taking into account several factors, namely the Company's business direction, the organizational and unit structure, and other appropriate factors that would benefit the Company.</p>
 <p>Recruitment</p>	<p>The human resources department is tasked with recruiting and selecting candidates for the Company, based on their knowledge and ability, suitability for the position and the organization, in a manner free from discrimination and bias.</p>
 <p>Succession planning</p>	<p>The Company places great importance on supporting the creation of a succession plan to ensure the business can grow continuously and to protect against risks that may arise due to emergencies, resignations or retirement of senior management, as well as to ensure a solid career path is laid out for qualified employees.</p>
 <p>Performance evaluation</p>	<p>The Company conducts annual performance evaluations, with the employee's unit responsible for setting performance indicators and standards that align with the employee's duties and the Company's business growth.</p>
 <p>Management and employee compensation</p>	<p>The Company provides fair and competitive compensation, comparable to other companies in the same industry, and conducts regular surveys and reviews of compensation rates to ensure compensation reflects economic conditions and the Company's performance, as well as the employee's duties, abilities, performance.</p>
 <p>Employment deposit</p>	<p>The Company does not require an employment deposit from employees.</p>
 <p>Training and development</p>	<p>The Company supports the personal development of employees through internal and external training, with a dedicated learning and development unit tasked with developing an annual training plan, taking into account the benefits afforded to both the Company and the employee that would arise from such training.</p>

In 2018, the Company increased its workforce from 1,051 people to 1,143 people.

RISK MANAGEMENT POLICY

Principle and Objective:

As risk is an inherent part of doing business, effective risk management is vital for sustainable business growth. A good risk management system assures stakeholders that value generation will occur under the principles of good corporate governance.

In 2018, to increase its effectiveness at managing risks, Gulf initiated a business continuity management program in order to help the Company create more effective processes to prevent or handle potential threats in a systematic manner.

Risk Assessment

Regular and systematic risk management is an important part of securing sustainable operations and growth. The Company conducts annual risk assessment with inputs from all departments to identify and monitor issues with the highest degree of likelihood and highest potential impact to the organization. In addition to identifying risks, action or mitigation plans are also proposed and implemented in order to ensure said risks are managed effectively. As part of the risk management process, the Company's Executive Committee has tasked all units to study potential risks and present them to the Committee, which will then examine the status of various risk areas and discuss adjustments to mitigation plans when necessary, in line with Company operations and ongoing projects. Oversight for the risk management process is provided by the Audit Committee which reviews the risk management system on an ongoing basis and provides support to business functions responsible for managing risks.

The Company's key risks are analyzed and assessed in four categories:

1. Strategic Risks

- 1.1 Business readiness
- 1.2 Government policy regarding electricity and energy sectors
- 1.3 Overseas investment

2. Operational Risks

- 2.1 Reliance on offtakers
- 2.2 Reliance on procurement and delivery of natural gas
- 2.3 Delays in development or construction within the designated period
- 2.4 Plant inefficiency



3. Financial Risks


- 3.1 Substantial indebtedness at the Company and project levels
- 3.2 Risks arising from currency exchange rate volatility
- 3.3 Risks arising from interest rate volatility

4. Compliance and Reputational Risks

- 4.1 Risks from non-compliance of regulations and rules, including good corporate governance, social and environmental compliance

Using the Company's policies as a guide, Gulf identified a number of material topics related to sustainability addressing concerns identified during the risk assessment process and reflecting domestic and global sustainability-related trends. The Company's operations and initiatives which address the material topics listed below are described in greater detail in Part II of this report.

DIMENSION	TOPIC	DETAIL	RISK CATEGORY
Economic/ Governance 	Sustainable value creation	Increase investments in energy and energy infrastructure projects in Thailand and overseas to ensure continual growth in line with future trends in the domestic and global energy market	Strategic Operational Financial
	Technology and digitization	Utilize top-quality, modern, state-of-the-art technology and digital processes to ensure efficient and effective management and operations	Operational
	Local and national economic development	Support and actively contribute to local and national economic development in Thailand, especially in areas where Gulf operates	Strategic Compliance and reputational
Environmental 	Climate change	Monitoring and reduction of greenhouse gas emissions to reduce contribution to global warming and mitigate impacts from climate change	Operational Compliance and reputational
	Operational efficiency	Increase power plant efficiency to ensure reduced use of natural resources, especially fuel and water, and reduce waste from operations	Operational Compliance and reputational
	Environmental responsibility and promotion	Support environmental protection and conservation through programs focusing especially on increasing environmental awareness and reducing individual impacts on the environment	Compliance and reputational

DIMENSION	TOPIC	DETAIL	RISK CATEGORY
Social 	Human resource management and development	Improve employee engagement and human capital development to ensure sufficient workforce growth in line with Company expansion	Strategic
	Health and safety	Maintain the Company's record of zero accidents by ensuring the highest health and safety standards at all operational sites	Compliance and reputational
	Community engagement	Increase positive impacts to local community through community development programs responding to community needs	Compliance and reputational
	Social responsibility and philanthropy	Support social development and improved quality of life through programs focusing especially on education, health, local economy and environment	Compliance and reputational



SUSTAINABLE BUSINESS OPERATIONS

This part of the report explores the Company's approach to Corporate Social Responsibility (CSR) based on the principles of the Triple Bottom Line. This model was chosen for its close alignment with the three dimensions of sustainable development. The information is presented in three parts:

- ▶ **PERFORMANCE:**
Reflecting the economic dimension of sustainability
- ▶ **PLANET:**
Reflecting the environmental dimension of sustainability
- ▶ **PEOPLE:**
Reflecting the social dimension of sustainability

This section also focuses on the initiatives and operational activities Gulf has undertaken in its journey towards greater sustainability for the Company and for society.

PERFORMANCE

Sustainability at Gulf in the economic dimension refers to the Company's commitment to securing stable and continuous growth for the benefit of its shareholders and investors, as well as ensuring positive contributions to the development of the local and national economy.



Economic sustainability is not only about building a strong, stable business but also about how the business contributes to building a stronger economy. Gulf strives to be a leader in the energy industry not only to benefit its shareholders and investors, but because the Company believes its status as a leader will allow it to serve as a role model and influencer so that it can make greater contributions to society.

DIRECT ECONOMIC IMPACTS

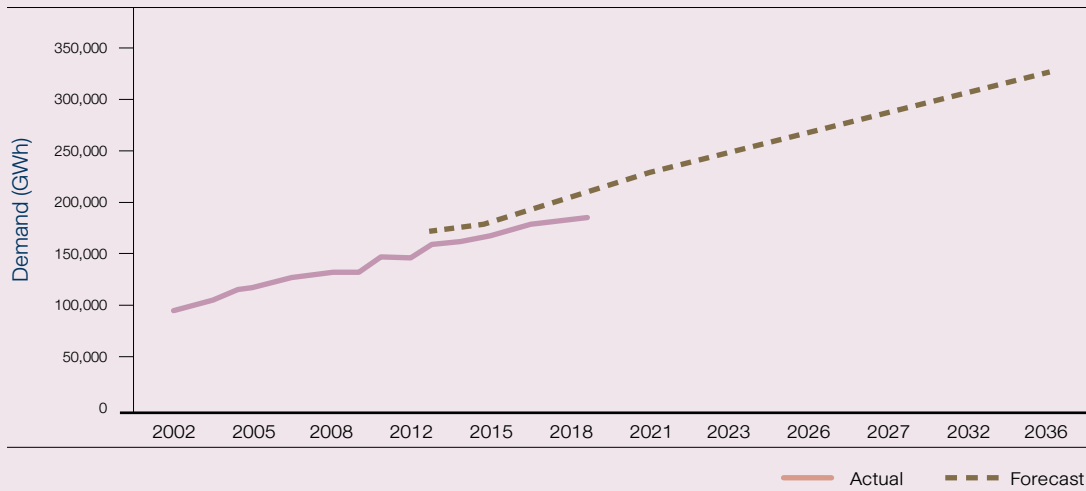
Power generation is inextricably linked to development and economic growth. As the world progresses towards greater digitization, automation and robotization, the demand for electricity will continue to increase in all sectors of the economy. Gulf recognizes that as a leading Thai power producer, the Company plays a major role in securing the country's development. To support economic sustainability for Thailand and the other markets Gulf operates in, the Company has a responsibility to ensure it provides reliable, high quality energy to provide benefits to all sectors that require electricity, including the government, the industrial and commercial sectors, the community and the general society.

This is especially important in Thailand, Gulf's main area of operation. The Thai economy is expected to grow approximately 3-4% per year over the next two decades, with a consequent rise in energy demand. The Thailand Power Development Plan 2015-2036 predicts that in the next five years, national electricity demand will increase 2.4% annually (CAGR) and is likely to increase 2.3% annually (CAGR) in the long term. Similarly, peak power demand is also likely to increase 2.3% annually in accordance with consumer demand.

In response to the continually increasing demand for electricity, Thailand has continued to increase its electricity production, with contracted capacity entering the Electricity Generating Authority of Thailand (EGAT)'s transmission grid and the industrial sector totaling 43,372 megawatts as of December 2018. Of this, 36% is generated by EGAT, with another 35% generated by IPPs and 20% generated by SPPs. From 2018 onwards, Thailand will see an additional 5,843 megawatts added by seven of the Company's projects.

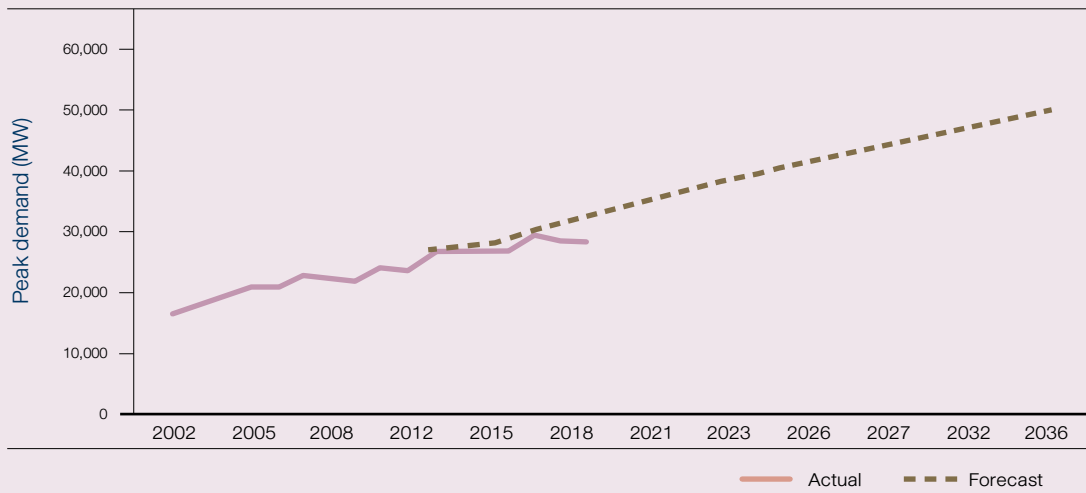
However, Gulf believes it has the power to do more than simply contribute to the maintenance of current industrial operations. Rather, the Company works to support economic growth, as sustainability can only be achieved through growth, not stagnation. The Thai government has recognized the need for economic progress and has created the Eastern Economic Corridor (EEC) to develop industrial expansion in the eastern seaboard area. Gulf's two largest power projects, currently under development, are strategically located within the EEC in order to support the planned expansion. Electricity generated by these projects - the Gulf Sriracha project in Chonburi province, which achieved financial closing in November 2018, and the Gulf Pluak Daeng project in Rayong province, which is currently in the project planning stage - will power industrial estates, transportation infrastructure and commercial projects that will contribute an estimated 2% to Thailand's GDP.

Total Electricity Consumption in Thailand, 2002-2036F



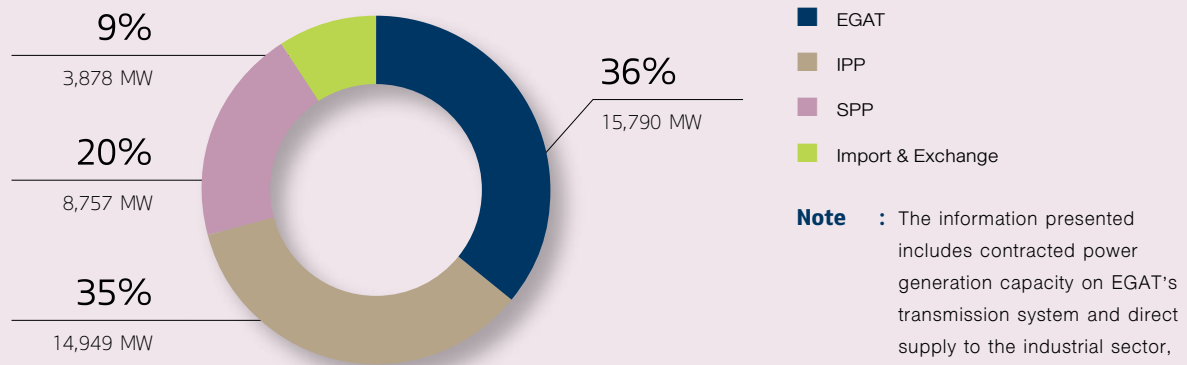
Note : Forecasted data are estimates from PDP2015
Sources : EPPO and PDP2015

Peak Power Demand in Thailand, 2002-2036F



Note : Forecasted data are estimates from PDP2015
Sources : EPPO and PDP2015

Total Contracted Power Generation Capacity in Thailand, by Types of Power Operators, 2018



Note : The information presented includes contracted power generation capacity on EGAT's transmission system and direct supply to the industrial sector, but excludes VSPPs.
Source : Energy statistics, EPPO

INDIRECT ECONOMIC IMPACTS

Aside from the major role Gulf plays in supporting the general economy of the country, the Company recognizes that it also has a responsibility on a smaller scale towards the local communities in which it operates. One channel through which the Company is able to contribute to community development is the Thailand Power Development Fund. The Thailand Power Development Fund was set up by the Office of the Energy Regulatory Commission and requires all power projects to contribute a sum of money to the fund. Amounts are set based on the project's installed power generation capacity. The money in the fund is used for community development projects and is managed by a committee comprising power project management, local government officials and community representatives. Although the Power Development Fund was set up in 2007, Gulf has consistently contributed to community development since the Company first started operating. Before the Power Development Fund was created, Gulf established its own community fund, co-managed by the Company and local community, through which Gulf provided financial support for community development projects aimed at repairing, improving and expanding the local infrastructure. Today, the Company continues to uphold this commitment to community development through regular contributions to the Thailand Power Development Fund, with over 175 million baht donated to the funds from both power plants under construction and power plants that have achieved commercial operation.

In addition to its contributions to the Power Development Fund, Gulf also contributes directly to projects to improve the local infrastructure necessary for development. The Company communicates directly with local community leaders to identify problems or areas for improvement and implement appropriate solutions. Community development projects are undertaken from the time construction of the power plant begins and continues through the project's operational lifespan. Consequently, the Company can also monitor its impacts on the community and prevent or repair any damage that may be caused by work related to the power plant. Examples of community development projects





undertaken by the Company include building and repairing roads, cleaning canals and waterways, and installing lights and water pumps. The Company also contributes to the building, renovation and upgrading of schools and hospitals that serve the local community. (See page 60 for details on social development initiatives.)

Another significant way Gulf works to support economic growth is through job creation and development of the workforce. From planning and construction to operation and maintenance, Gulf's power plants provide employment for thousands of people, both at the Company and for its suppliers, contractors and consultants. Wherever possible, Gulf hires employees from the local community, province or region to work in its power plants. This applies to all employees, whether they are engineers, administration officers or housekeeping staff. The Company believes that when employees are able to remain close to home, they are less likely to change jobs, allowing for smoother and more stable operations. More importantly, because the employees are personally invested in the local community, they contribute more strongly to corporate social responsibility (CSR) and also serve as another voice for the community, leading to strong ties between the Company and the community.

Gulf also works to increase the job opportunities for youth in its local communities by supporting educational and vocational initiatives. The Company provides opportunities for local school and university students to visit its power plants to learn about the power generation industry in the hopes that such visits will introduce the students to careers they may not have previously considered and inspire them to pursue further studies, especially in the STEM (science, technology, engineering and mathematics) field. In addition, Gulf also provides internship opportunities to university and vocational training college students so that they can gain real-life experience and develop the skills necessary for work. Qualified students who perform well during their internships may also be offered a full-time position with the Company upon graduation.

GULF APPROACH TO BUSINESS STRATEGY

As a publicly-listed company, Gulf recognizes that it has an obligation to ensure continually increasing returns for its shareholders and investors. At the same time, the Company has also set a long-term objective of becoming an internationally-recognized energy company, growing its portfolio in both power generation and other energy-related fields. It is important for the Company that such growth is achieved in a sustainable manner, with a focus on upholding its responsibility to the environment and society under the principles of good corporate governance and business ethics. As such, the Company has developed a number of strategies to guide its business growth and operations.



1. INCREASE INVESTMENT IN POWER PROJECTS AND ENERGY INFRASTRUCTURE-RELATED BUSINESSES

- Markets** : Thailand, Asia-Pacific (especially CLMV), Middle East
- Power projects** : Gas-fired and renewable power projects
- Energy infrastructure** : NGD



2. MANAGE PROJECTS IN THE PIPELINE TO ENSURE DEVELOPMENT TARGETS ARE MET, INCREASING INSTALLED CAPACITY FROM 5,282.1 MW TO 11,910.4 MW

- Thailand** : 2 gas-fired IPPS, 4 gas-fired SPPs, and 1 biomass project
- Oman** : 1 gas-fired power project
- Vietnam** : 3 solar power projects and 1 wind power project



3. UTILIZE MODERN, STATE-OF-THE-ART TECHNOLOGY

- ▶ High efficiency and high reliability
- ▶ Lower use of fuel and lower operating costs
- ▶ Increased benefits for the environment and society



4. IMPROVE EFFICIENCY AND INCREASE THE INDUSTRIAL USER CUSTOMER BASE FOR PROJECTS IN OPERATION

- 2 gas-fired IPPs : Electricity
- 15 gas-fired SPPs : Electricity, steam and chilled water
- 4 solar rooftop : Electricity



5. BUILD STRONG PARTNERSHIPS AND QUALIFIED EMPLOYEES

- Domestic and international business allies : Expertise and capability in energy, infrastructure and other related businesses
- Employees : Good experience, ability, innovation, and teamwork



6. UPHOLD PRINCIPLES OF GOOD CORPORATE GOVERNANCE AND RESPONSIBILITY TO THE ENVIRONMENT AND SOCIETY

- Board of Directors : Policy development, oversight, governance, ethical conduct, social and environmental responsibility
- Company : Participation in community development, social activities to strengthen local economy, society and culture, improve quality of life and general health



In addition to its strategy for business expansion, the Company is also aware of the need to prepare for the societal changes that will occur in the future, especially with regards to the important role technology and digital tools will have in business management and operations. Accordingly, the Company maintains a close watch on technological, scientific and engineering advancements that may have a significant impact on the energy industry. In 2018, the Company utilized a number of technological and digital tools in its operations, helping to improve performance in management, plant operations and other areas driving the business. These include:

▶ **TOP-QUALITY TURBINE TECHNOLOGY**

Gulf uses modern, state-of-the-art turbine technology from leading international suppliers with a good reputation for reliability and quality, ensuring the Company's power plants operate at high efficiency levels, reducing emissions and wastage and increasing operating revenue.

▶ **DIGITAL AND MOBILE OPERATIONS**

Gulf uses innovative digital and mobile technology in plant operations that allow engineers to monitor, record and access information regarding equipment history as well as conduct analytics and prediction to develop predictive maintenance plans.

▶ **OPERATIONS MONITORING DASHBOARD**

Gulf uses a business intelligence dashboard which provides up-to-date information on all plant operations, allowing management to monitor plant performance and analyze data, resulting in a more rapid and systematic decision-making or problem-solving process.

▶ **SECURE, SCALABLE DATA MANAGEMENT AND STORAGE**

Gulf uses cloud-based data transfer and storage systems to coordinate operations across a large workforce of over 1,100 employees spread over a number of different sites around the country. This move to cloud-based technology ensures Gulf's information processing and storage will grow with the Company.

▶ **SECURE, CENTRALIZED INTERNAL COMMUNICATIONS**

Gulf uses centralized communications platforms that allow for secure internal communications while in and out of the office, resulting in more effective work and ensuring information is transferred and stored securely.

PLANET

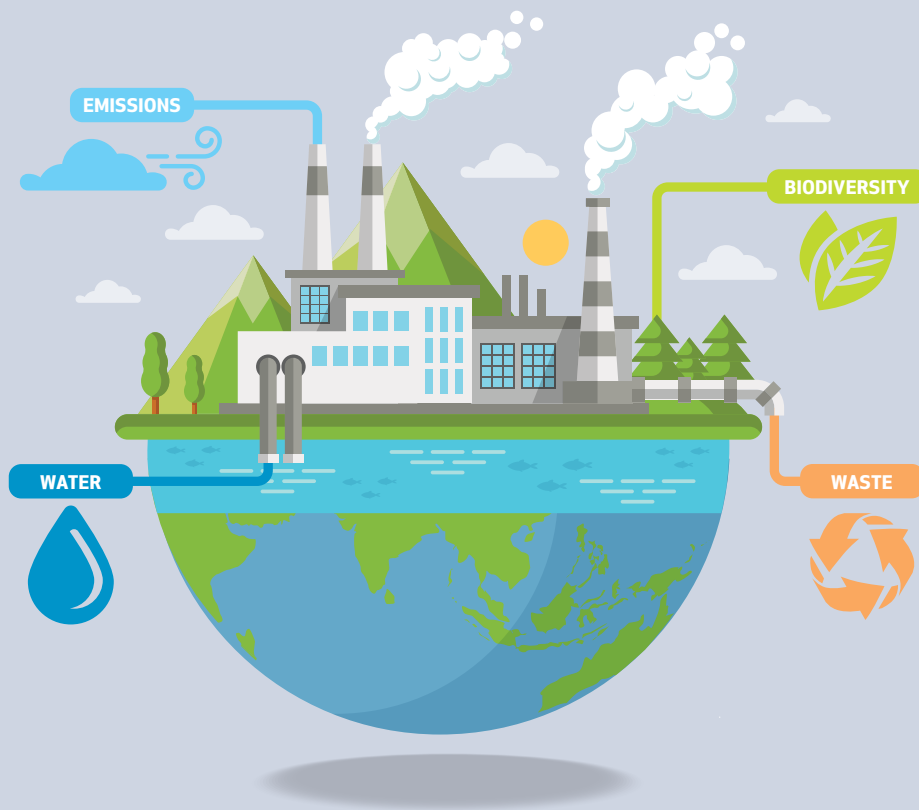
Sustainability at Gulf in the environmental dimension refers to the Company's commitment to reducing environmental impacts from its operations and promoting eco-friendly practices and responsible use of natural resources.



APPROACH TO ENVIRONMENTAL MANAGEMENT

As with any Company that relies on natural resources for its business operations, Gulf is acutely aware of the need to conserve those resources and maintain the quality of the natural environment for the current and future generations. Gulf focuses especially on the local environment in the areas where it operates, recognizing that each area has its own specific concerns. The Company works to ensure its environmental program also aligns with national and international efforts to respond to major global concerns which have emerged over the past few decades.

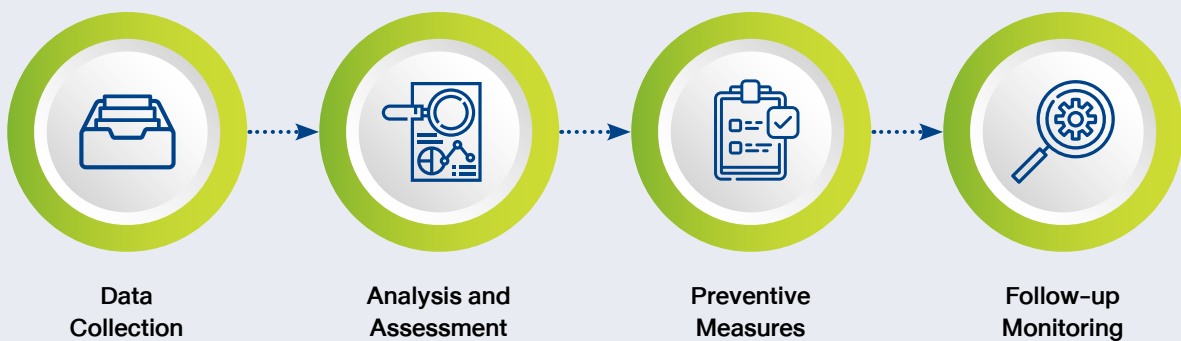
For the power generation industry in Thailand, environmental management of operations is concerned with four major areas: 1) maintaining good air quality and minimizing emissions, 2) limiting water usage and maintaining good water quality, 3) minimizing operational waste and use of landfills, and 4) preserving local biodiversity. These focus areas correspond to major global environmental concerns: carbon emissions and climate change, access to freshwater and water quality, waste management and elimination of landfills, and biodiversity. Gulf therefore works to ensure that its environmental management approach not only minimizes any negative environmental impacts that may result from the Company's operations, but also positively contributes to reducing global problems.



Gulf contributes to environmental sustainability both through responsible operating practices and through environment protection and conservation programs at all stages of project development. An Environmental Impact Assessment (EIA) is conducted for all Company projects to ensure that the power plant's design, construction process and operation create as little impact on the surrounding area as possible. The EIA process involves gathering information about the environment in the area under study for analysis to scientifically assess the potential impacts which may occur at any stage of the project development process and design appropriate preventive measures. Follow-up assessments are conducted regularly to ensure the project is creating the least impact possible, both to the environment and the surrounding community. A dedicated environmental and social responsibility team monitors the Company's activities from construction through to commercial operation to ensure the project meets the requirements set out in the EIA at all times.

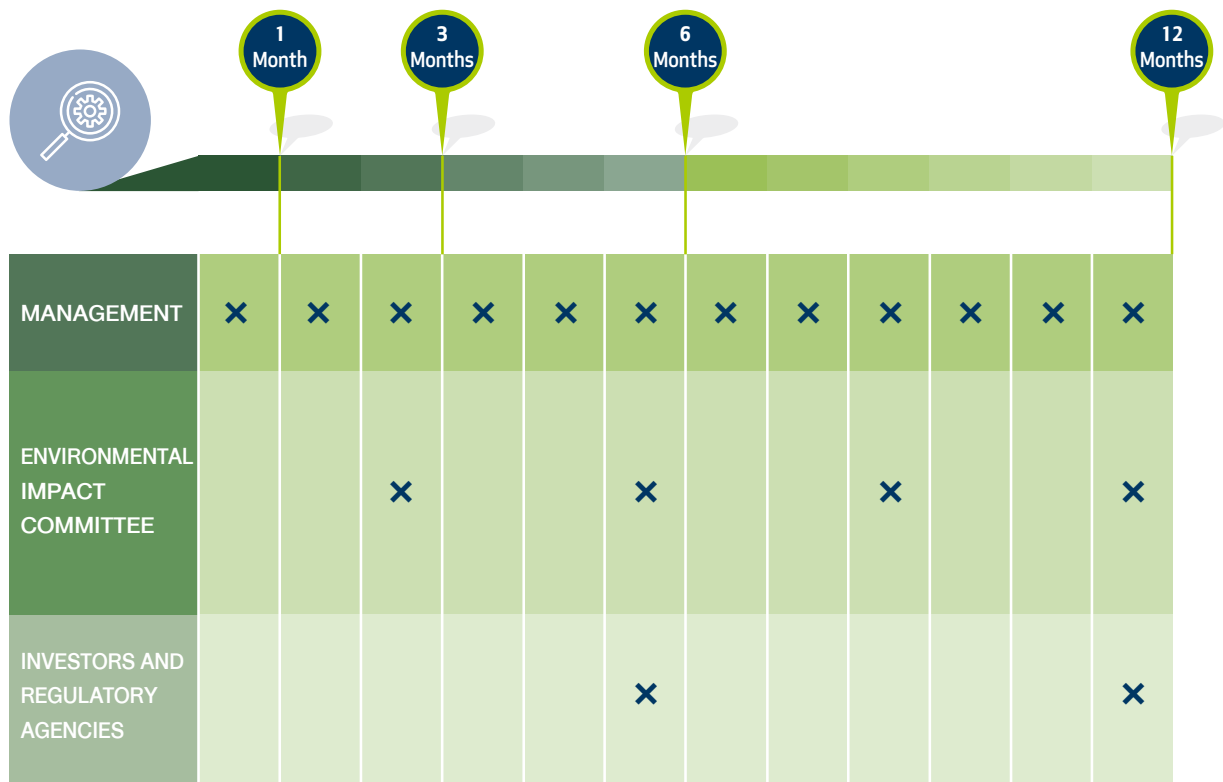
Since 2017, Gulf has shifted from a pure environmental management system (EMS) to an environmental and social management system (ESMS). Under this approach, the Company views environmental issues through a social lens, taking into consideration the interaction and interrelation between humans and the environment, thus ensuring measures taken to protect the environment do not come at the cost of social development or vice versa. Rather, the Company's environmental management measures are developed with input from the local community and related stakeholders to direct focus towards the most relevant environmental issues and seek an outcome that benefits both the society and the environment. As a result, Gulf's power plants are held to a higher standard than the limits set by laws and regulations.

EIA PROCESS



ENVIRONMENTAL REPORTING

The Company has dedicated environmental and corporate social responsibility (CSR) teams who work closely with the engineers and technicians at its power plants to measure and monitor environmental indicators. In addition to indicators for the major focus areas - emissions composition and levels, water quality and usage, waste composition and disposal, and biodiversity - the Company also communicates regularly with the local community and relevant state agencies to track local environmental conditions. (See page 59 for details.) These teams submit monthly reports to management as well as quarterly reports to the Environmental Impact Committees. Furthermore, the Company also submits environmental reports to investors and regulatory agencies every six months as part of its Environmental and Social Management System (ESMS) requirement.



CORPORATE SOCIAL RESPONSIBILITY (CSR) IN OPERATIONS

EMISSIONS

Any activity involving the combustion of fossil fuels, be it driving a car or flying an airplane, operating a manufacturing plant or turning on the air conditioner at home, releases compounds known collectively as carbon emissions. These emissions are a major global concern due to their role in accelerating global warming and climate change. However, until a new technology becomes available which can safely and reliably produce the massive amounts of power required to drive nearly every aspect of daily life around the world, humans will have to continue to rely on fossil fuels as a major source of energy.

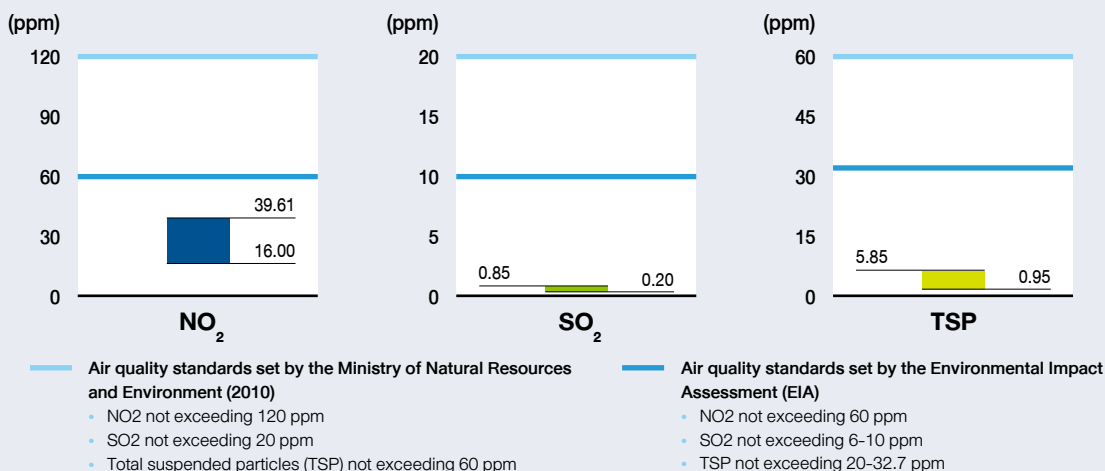
While it is not yet possible to achieve full decarbonization of the power grid, natural gas is seen as an important stepping stone towards carbon-free power generation. As a fuel source, natural gas can reliably generate large amounts of power any time it is needed, regardless of the seasons or the time. At the same time, it releases significantly lower emissions than coal or oil. Added to this is the fact that power plant technology is improving all the time, allowing for more efficient power generation and less waste, thus leading to fewer impacts on the environment.

When developing its projects, Gulf always uses the best turbine technology available. With top quality technology, the Company's power plants are able to operate at higher levels of efficiency, generating economic benefits (see page 29 for details) as well as environmental benefits. Higher efficiency means the power plant is able to convert the same amount of fuel into larger amounts of electricity compared to a similar-sized power plant operating at lower efficiency. As less fuel is wasted in the combustion process, fewer emissions are created.

In addition to increasing efficiency, the Company also utilizes top-of-the-line technology to reduce the formation of compounds, such as nitrous oxides (NOx), that may be created and to monitor emissions to ensure these compound levels remain far below the limit set by environmental regulations. As heavy fuels or other chemicals are not used in the combustion process, Gulf's power plants release very little to no particulate matter and acid-forming compounds. Air quality is monitored not just at the point of release at the power plant, but also at various checkpoints in the area



Average measurement of air quality indicators from Gulf power plants, 2018 (ppm)





Gulf power plant carbon emissions

Carbon emissions calculated from Gulf power plants which have been in operation for at least one year total 6,681,366.58 kgCO₂e



- **Scope 1** carbon footprint calculated from direct emissions from activities such as fuel combustion
- **Scope 2** carbon footprint calculated from indirect emissions from activities such as the purchase of electricity
- **Scope 3** carbon footprint calculated from other indirect emissions

around the power plant. This is done to assure the local community that the Company is not causing any negative impact to the air quality in the area.

Aside from providing electricity, Gulf's power projects which are located in industrial development areas, such as industrial estates and industrial parks, also generate and sell steam and chilled water to industrial users in the area. This provides commercial benefits to the industrial users and is an additional source of revenue for the Company. More importantly though, providing these services helps the environment. Industrial users need relatively small amounts of steam and/or chilled water for their operations. Many users invested in a small boiler to produce their own steam or use a lot of electricity to produce chilled water. However, these small boilers, which in many cases are older models purchased for their lower cost, often run on diesel or fuel oil and are much less efficient than the more modern, large-scale turbines used in Gulf power plants. This means that industrial users would generate a lot of carbon emissions in order to produce the steam or chilled water needed for their plants. Thus, by using top quality technology to produce

steam and chilled water on a large scale as part of its electricity generation process, Gulf is able to provide these products to industrial users at a lower cost, thus eliminating the need to run the older, inefficient boilers or use extra electricity. Therefore, Gulf is able to contribute to reducing carbon emissions from industrial users as well as from its own plants.

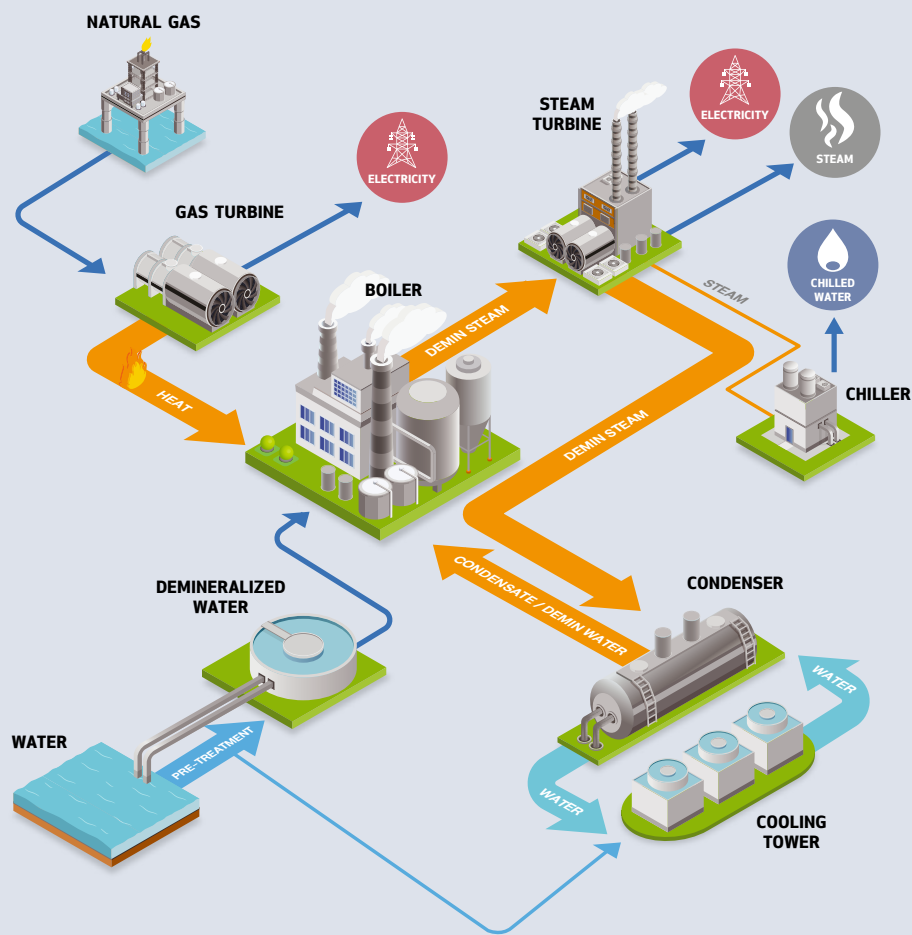
In addition to performing above national environmental standards, Gulf has also taken steps to further improve its performance. In 2014, the Company initiated a program to measure the carbon footprint of its power plants, starting with four of its power plants. In 2018, the Company expanded the program to measure greenhouse gas emissions under the Carbon Footprint for Organizations (CFO) program at all of its plants that have been in commercial operation for at least one year. The carbon footprint program provides measurements which Gulf will use as a base for future emissions targets. The Company challenges each operating power plant to improve its own performance and expects to see the Company's overall emissions performance continue to improve year on year.



WATER

Gulf's gas-fired power plants run on a co-generation or combined-cycle system. Energy from the combustion of fuel is used to drive gas turbines to generate electricity. The residual heat from this process is used to generate steam which drives steam turbines to generate a second round of electricity. Large cooling towers cycle water through a heat exchanger to remove heat from the steam which has passed through the turbines. The cooled steam is cycled back into the boilers. All water used in Gulf's power plants must go

through a pre-treatment process to remove sediments and other suspended solids as well as to check for possible contaminants before entering the electricity generation cycle. Part of the water is then sent to the demineralization process for use in the boilers which generate steam. The remaining water is sent to the cooling towers. Water can be cycled through the plant several times before being discharged.



As the electricity generation process requires large amounts of water, both for the cooling towers and the boilers, efficient water usage is a major priority for power generation companies. The power plants must have access to a stable water source which can supply enough water for the plant

without affecting local residential and commercial activities. In addition, it is also important to monitor the quality of the water entering and leaving the plant, as poor water quality can result in damage to both the plant's equipment and the environment.

Gulf has developed procedures to manage these issues at all of its power plants. All of the Company's projects adhere strictly to national and international water usage and quality standards. Water sources and local demand are carefully studied so that the Company can plan its water usage at each power plant. Water quality is continuously monitored throughout the electricity generation process to check for sediments and contaminants.

Several water quality indicators are used to monitor water quality at Gulf's power plants, with the most important ones being measures of suspended solids (SS), acidity (pH), biochemical oxygen demand (BOD), and total dissolved solids (TDS). Water quality monitoring is especially important for the Company's power plants which are not located in industrial development areas as the water is pumped from

and discharged directly back to natural waterways. On industrial estates, water use and discharge is controlled and managed by the estate itself. While there are laws and regulations governing water usage and quality on industrial estates, free-standing power plants are held to even stricter environmental standards set by the Royal Irrigation Department because they are not part of the estate system and are therefore directly responsible for managing the potential impacts to the community and environment. The limit for total dissolved solids, for example, is less than half that of industrial estates. Despite this, the Company's water treatment and monitoring process ensures that the quality of the water discharged from its power plants not only meets environmental standards but is in fact better than the quality of the water in the rivers where the water is discharged.

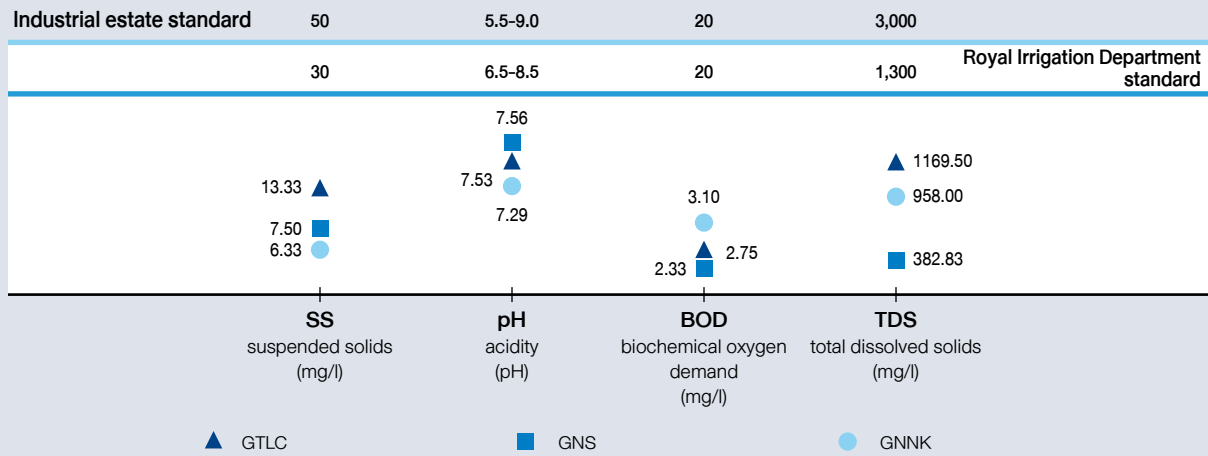
Discharge water quality standards can be compared in the table below.

KEY INDICATOR	INDUSTRIAL ESTATE STANDARD	ROYAL IRRIGATION DEPARTMENT STANDARD
▶ SS (mg/l)	50	30
▶ pH	5.5-9.0	6.5-8.5
▶ BOD (mg/l)	20	20
▶ TDS	3000	1300

For its free-standing power plants, Gulf also takes further precautions to ensure that the project's water usage does not affect the local environment or community. Prior to construction, Gulf works with local state agencies and community leaders to discuss water-sharing schemes. The schemes are individually tailored to each location and plant. For example, in an area with high levels of agricultural activity, the power plant might limit the amount of water it pumps from the river or even avoid using local water sources completely during the dry season. This ensures that the Company's water usage does not affect local agricultural and residential water requirements.



Average measurement of discharge water quality from Company projects located outside industrial estates, 2018



In 2018, Gulf also began a program to further improve its water usage. The Company conducted a Water Footprint (WF) assessment on all of its power plants which have operated for at least one year to track how efficiently each plant uses water at various stages of the production cycle. This measurement will be used as a base for future water usage and water quality targets. As with emissions, the Company challenges each power plant to consistently improve its water treatment abilities and water usage efficiency so that less water will be needed for each unit of electricity generated.

WASTE

On the whole, the electricity generation process does not produce a lot of waste as it does not require a lot of materials or chemicals. The majority of any material waste generated comes from the water treatment process where sediments, contaminants and other solids are filtered out of the water. As this sedimentary waste is composed of natural compounds and is non-toxic, it does not require a specialized waste management process and is therefore disposed of like other municipal waste - in a landfill.

Gulf recognizes the fact that landfills are one of the least ideal methods of waste disposal. While Gulf's sedimentary waste does not create toxic gases or leachate, the Company does want to avoid contributing to the need for more space for landfills.

For this reason, the Company has set itself a target of completely eliminating industrial waste requiring landfill disposal under its Zero Waste to Landfill program. To achieve this, Gulf has begun researching and implementing several plans to manage the waste resulting from the water treatment process and other aspects of project operation and maintenance. This includes finding ways to recycle objects like light bulbs and chemical containers, paying specialist companies to remove things like oil or air filters and convert them into alternative materials or alternative fuels, and developing innovative ways to repurpose the filtrate from the water treatment process into useful products. Currently, the Company uses the sediment to create fertilizer blocks and bricks. It is also developing biodegradable flower and tree pots which can be used for the Company's tree-planting activities.

In addition to eliminating industrial waste disposed of in landfills, Gulf also continually implements programs to reduce general waste produced by employees as part of office work or in their daily life. These include office-wide measures to limit paper usage through increased use of digital aids such as an electronic human resources management platform and communications platform, plastic waste reduction campaigns encouraging employees to pack reusable lunchboxes and use reusable cloth bags, and environmental awareness training such as environmental technical training, sustainability workshops and beach clean-up activities.



BIODIVERSITY



Another environmental issue which is often discussed in conjunction with concerns about climate change and land use is biodiversity, or rather, the urgent need to preserve the Earth's ecosystems in light of the alarmingly high rate at which plant and animal species are going extinct. Gulf is aware of this problem and takes steps at every stage of project development to ensure the Company's operations do not impact the biodiversity in the local areas where its power plants are located.

Most of Gulf's power plants are located in industrial development areas, large areas which have been approved for industrial development due to their location away from environmentally vulnerable areas. Thus for these power plants, the Company is not concerned that its operations will impact biodiversity in the area. That is not to say the

Company's free-standing power projects negatively impact biodiversity. Although they are not located on industrial estates, Gulf's standalone power plants are located on land designated by the government for industrial use. This land tends to be located away from areas with high biodiversity or environmental vulnerability. The Company does not engage in forest-clearing for project space.

Furthermore, as part of its Environmental Impact Assessment process, Gulf conducts a biodiversity survey of the local ecosystem around all its power plants to record not only the type but also the number of different plants and animals inhabiting the area. Survey results are compared with IUCN (International Union for the Conservation of Nature) guidelines to determine whether any plants or animals in the area appear on the IUCN Red List. This is done prior to construction of any project to ensure the Company does not build its power plants in areas where vulnerable or threatened plant or animal species are located. Follow-up surveys are conducted every two to three years, depending on the plant's location.

Because Gulf's power plants are located on industrial land away from environmentally vulnerable areas, the Company can be confident that the plants have minimal or no impact on biodiversity. However, while protection of biodiversity is not a major priority in Gulf's environmental management, the Company has not ignored the issue and continues to work to ensure it does not cause harm to the plant and animal species surrounding its power plants. In addition to its biodiversity surveys, in 2018, Gulf initiated a program to develop a Biodiversity Action Plan for any power projects where biodiversity may be a concern, with measures to minimize and mitigate any problems related to biodiversity that may occur in the future.

ENVIRONMENTAL PROMOTION PROGRAMS

While maintaining responsible operations is an important contribution to environmental sustainability, the Company recognizes it has the power to do more than simply minimize negative impacts. Thus, Gulf has also implemented programs to promote environmental protection beyond its operations in order to create more positive impacts on the local ecosystems and communities around its power plants.

WIND AND WATER DETECTIVES PROGRAM

A safe and healthy environment is part of a strong foundation for sustainable communities. Gulf believes the community should be actively involved in the protection and conservation of the local environment and natural resources. Good leaders and role models can help educate community members about the importance of taking care of the environment and guide them towards appropriate behaviors and actions. Such calls for action may seem more credible when made by someone from the local area who is personally invested in the well-being of the community and its people. Thus, rather than simply sending experts into an area to explain environmental issues, Gulf has developed a program to teach local youth about environmental issues and develop them into role models who will take on the task of leading the community towards sustainability.

In 2011, Gulf established the Wind and Water Detectives youth environment program to teach children about environmental issues and how to monitor air and water quality through observation of the environment. Students learn about significant local environmental issues such as the impact of industrial water pollution on the food chain as well as the impact the environment has on personal health. The students also examine how human activity affects the quality of the environment and are challenged to think of ways to change people's behavior to reduce negative impacts on the environment. The program, which was piloted at the Koke Yae power plant, has now been expanded to all of the Company's power plants. To date, over 1000 students have participated in the Wind and Water Detectives program with Gulf.





DEMONSTRATION FARM

At the Gulf Nong Saeng (GNS) power plant, an Independent Power Producer with a total installed power generation capacity of approximately 1600 megawatts located in Nong Saeng district, Saraburi province, the Company maintains a small demonstration farm which was originally developed as part of the project's Environmental Impact Assessment requirements. Due to the power plant's location near agricultural areas, the Company was required to dedicate 10 rai (approximately 4 acres) to greenspace to study the potential impact the plant's operations may have on agriculture.

Having determined from the very beginning that Gulf's power generation practices have no detrimental impact on agriculture, over the past few years, the Company has developed the demonstration farm into an environmental project whose benefits extend far beyond its original purpose. Today, the greenspace covers an area more than four times the EIA requirement and serves as a demonstration farm, agricultural learning center and local recreational area. A dedicated team maintains the farm, growing rice, fruit, vegetables and herbs throughout the year. The farm has a large fish pond as well as a fertilizer production area where organic fertilizer is made. In 2018, the team also started producing earthworm fertilizer using leaf cuttings and other organic waste from the farm. Products from the farm are sold at local markets and the income is used for maintenance and further development of the farm.

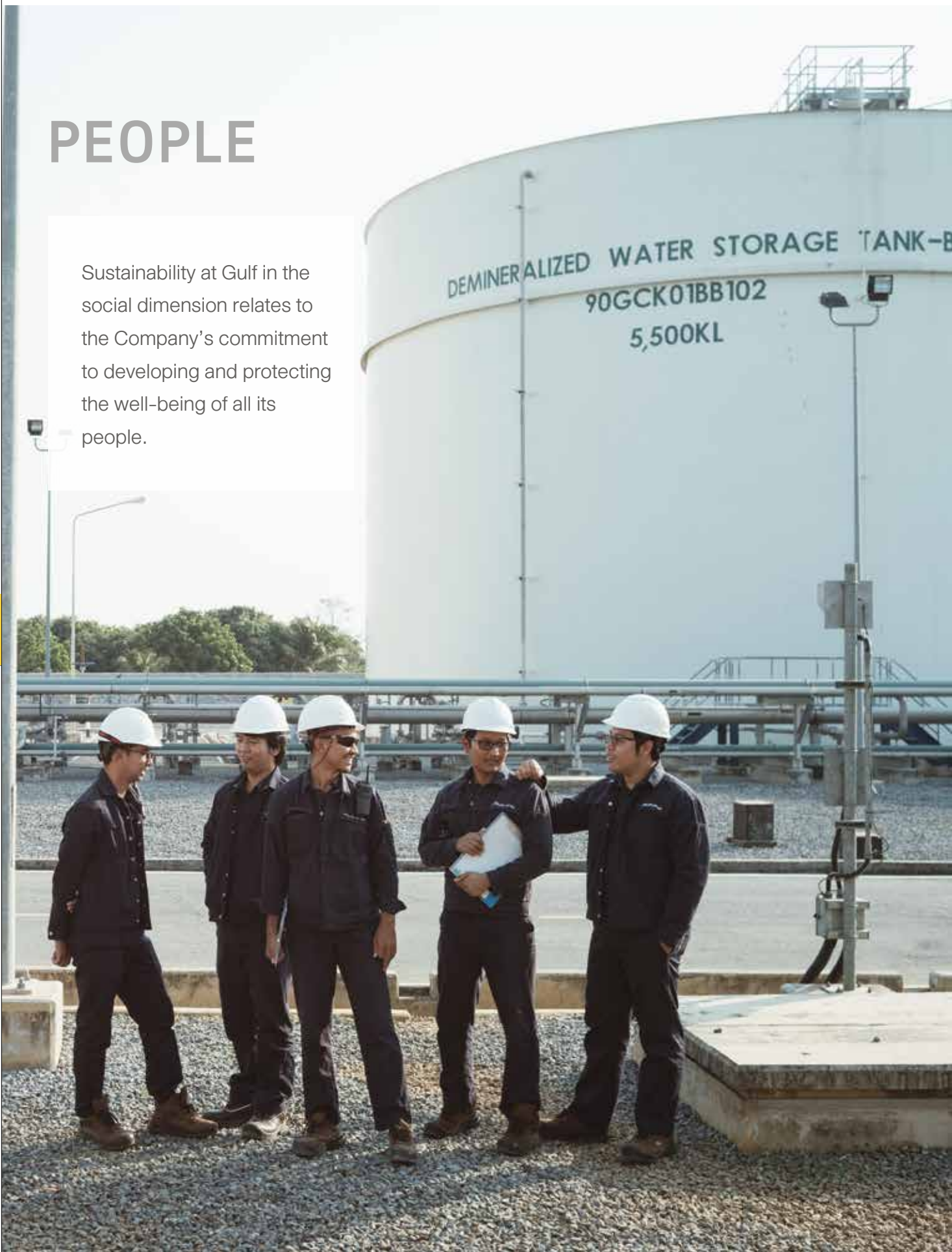
As a demonstration farm, the project is open to visitors. Signage is provided to explain the different products and parts of the farm. In addition, staff are on hand to guide visitors, answer questions and provide recommendations on growing techniques and farming practices. In 2018, the team improved walking paths and added raised walkways through the rice paddy so that visitors could easily access all parts of the farm, creating a pleasant environment which has turned the farm into a recreational space where local people from the surrounding community go to relax.

The Company hopes that through its Wind and Water Detectives program and other environmental education programs conducted at its Demonstration Farm, Gulf will be able to reach communities all over Thailand. As people in the local communities begin to develop a better understanding of the importance of environmental protection, the Company expects it will be able to implement more environmental programs with greater participation from community members and thus contribute significantly to the overall sustainability of the country.

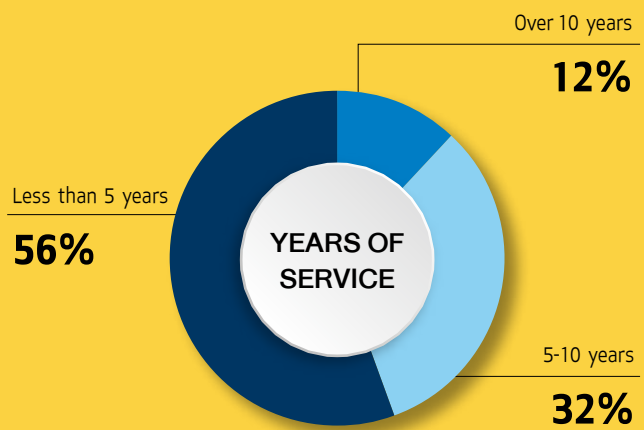
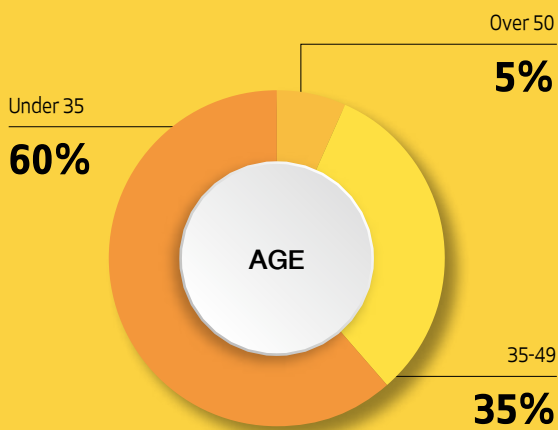
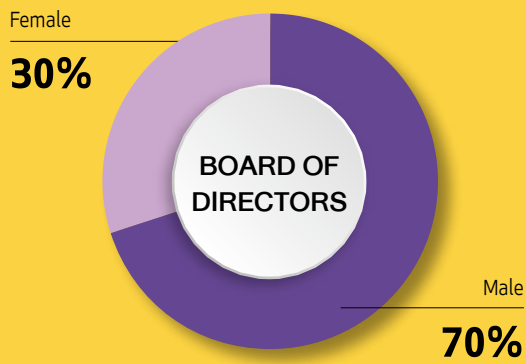


PEOPLE

Sustainability at Gulf in the social dimension relates to the Company's commitment to developing and protecting the well-being of all its people.



GULF FAMILY



Gulf's employees are the heart of the Company. As the business expands, so too does the workforce. Gulf has therefore developed a set of guidelines which reflect the Company's core values to aid new employees in their transition into the company.

G: Goal-oriented

The Company sets clear goals and provides employees with the means and support to achieve those goals, working together to overcome obstacles. With a strong support system, employees can confidently push their personal limits and achieve greater personal development.

U: Unity

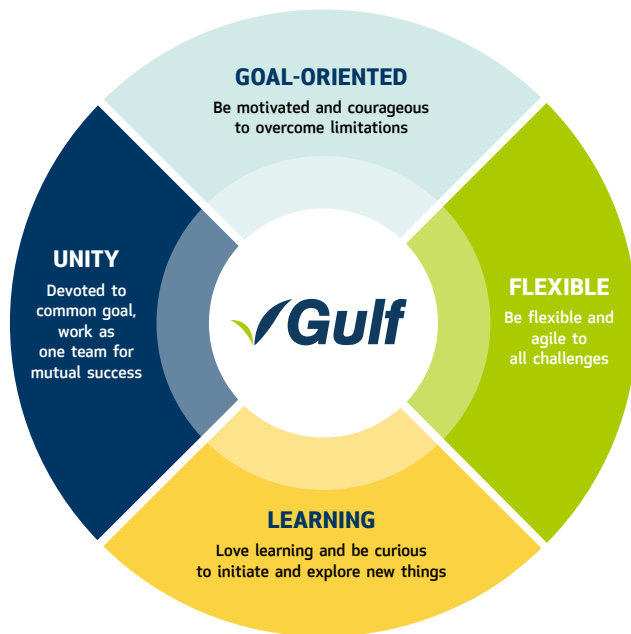
Gulf's success is built on teamwork. Gulf knows that the Company can go further when it moves as a team. Thus, the Company works to ensure it provides opportunities for team building and creates a work environment that facilitates knowledge-sharing and interaction among employees.

L: Learning

Gulf employees are encouraged to seek personal development through numerous training opportunities provided throughout the year. The Company challenges its employees to think outside the box and look for new ideas all the time.

F: Flexible

In this digital age, it is important that the Company adapts to the ever-changing environment. Gulf utilizes the latest technology in its power plants as well as its head office so that its employees can perform their duties effectively and efficiently.



To ensure the size of the workforce matches the Company's growth rate, Gulf has developed a human resources plan to recruit new employees through multiple channels and aid all employees in developing the skills and knowledge necessary for career advancement.

Gulf is committed to upholding human rights and labor rights. The Company's Code of Conduct emphasizes fair and non-discriminatory treatment for all applicants and employees. This means that all hiring and career development decisions are made based on the candidate's knowledge, skills, ability, work ethic and suitability for the position. Age, gender, ethnicity, financial status and other non-merit-based factors are not considered or applied against the candidate's application.

EMPLOYEE ENGAGEMENT

Employee engagement at Gulf refers to all aspects of employee care including compensation and benefits, learning and development, assessment and evaluation, health and safety, communication and participation, and work environment.

COMPENSATION AND BENEFITS

Compensation and benefits for all employees are determined in a fair and equitable manner based on ability and experience. The Company has a policy against any form of discrimination based on sex, gender, age, ethnicity or other non-merit-based factors. To ensure fair and competitive compensation and benefits for Gulf employees, the Company conducts annual surveys of compensation and benefits provided by other businesses in the same industry and ensures entry-level compensation complies with the minimum standards set by law. Employees are considered for promotion and annual adjustment of compensation based on fair and transparent performance reviews.

In addition to compensation, all Gulf employees are afforded employee benefits which include:

- ▶ Provident fund
- ▶ Life, accident and health insurance with partial support for spouses and children
- ▶ Dental coverage
- ▶ Employee uniforms
- ▶ Emergency personal loans
- ▶ Newborn allowance
- ▶ Monetary contributions for funeral services for employees and immediate family

ASSESSMENT AND EVALUATION

Gulf has set key performance indicators (KPIs) at the corporate, department and individual level covering areas including competency and behavior. Employees actively participate in the process of creating an individual development plan by working with their supervisors to set personal development goals and performance indicators which align with the corporate KPIs. Employees and their supervisors are responsible for conducting regular self and joint performance evaluations. In addition, the individual development plan is reviewed annually to support development of skills relevant to the employee's position and responsibilities.



LEARNING AND DEVELOPMENT

Human resource development is an important component in driving growth and supporting the Company's mission and vision. Gulf is therefore committed to supporting employees' personal development throughout all stages of employment.

New Employees:

- ▶ Orientation and training to introduce Gulf core values
- ▶ Onboarding program, assign buddy for first six months to facilitate smooth transition into Gulf organizational culture

Current employees:

- ▶ Creation of Individual Development Plan to guide appropriate and effective personal development
- ▶ Skills and knowledge training provided to all employees throughout the year under four major programs:

- 1) leadership training: for employees at the management level to improve their work and people management skills
- 2) functional competency training: for employees at all levels to develop specific skills related to their work, such as effective communication and negotiation skills
- 3) technical training: for technical and engineering employees at all levels to develop skills specific to power plant operation and maintenance
- 4) e-learning for Code of Conduct: for all employees to ensure proper understanding of appropriate and ethical business practices and personal conduct

HEALTH AND SAFETY

As part of its commitment to corporate social responsibility (CSR) within the organization, Gulf ensures that its employees are provided with a safe and healthy work environment. Gulf workplaces include the head office, power plants, and construction sites as well as transportation and accommodation required for work. The Company has an Occupational Health and Safety Committee (OHSC), comprising plant managers, operations managers, administrative managers and employee representatives from each department who oversee the health and safety of all

employees and contractors at its power plants and construction sites. The committee is responsible for developing policies and procedures related to employee health and safety, implementing and monitoring health and safety activities, and evaluating and improving all aspects of health and safety in the workplace. Gulf has achieved its target of zero accidents in the workplace for the past five years and expects to continue this accomplishment as its health and safety procedures continue to improve every year.



COMMUNICATION AND PARTICIPATION

Clear and effective communication is key for any organization, especially one such as Gulf where there are over 1,100 employees spread across dozens of sites. Gulf has a dedicated communications team and utilizes various channels for internal and external communication including secure email and messaging systems, a central connectivity platform, and an official website and social media account. In addition, dedicated teams are tasked with responding to requests and complaints from different groups such as employees, shareholders and members of the local community.

Employees are able to report harassment and file complaints with the human resources department via their supervisor. All reports are investigated, and the rights and privacy of the reporting individual are protected throughout the process. This helps to ensure complaints are handled effectively and completely while protecting individuals' human rights. Lessons learned from complaints are used to improve the complaints handling process to facilitate more efficient and prompt resolution of issues.

Gulf is proud to report that as a result of its strong emphasis on creating a positive organizational culture coupled with regular conduct-related training and inclusive intra-Company activities, there have been zero incidents of harassment or discrimination reported at the Company.

An additional positive consequence of good internal communications and a strong emphasis on employees' rights is that employee satisfaction and morale, as well as organizational loyalty, is high. Thus, Gulf employees actively participate in Company initiatives and work in unity to achieve the Company's strategic and operational targets. Crucially, the Company's employee turnover rate decreases every year.

WORK ENVIRONMENT

Gulf understands that a good work-life balance and positive work environment are key factors in supporting enjoyment and happiness at work. The Company therefore conducts numerous activities both inside and outside of the workplace to support employees' physical and mental well-being. These activities include:

- ▶ Office-wide celebrations and activities for important festivals, holidays and traditions such as Songkran (Thai New Year), Valentine's Day and Chinese New Year
- ▶ Annual overnight holiday party including team building and CSR activities
- ▶ Company-sponsored sports clubs such as yoga, football and running as well as regular internal sports events such as badminton, golf and darts competitions and a biennial company-wide sports day





To facilitate all the human resource functions, Gulf utilizes international-standard management platforms such as Humatrix. In addition, the Company adopted the SAP SuccessFactors Human Capital Management solutions in 2018. This has allowed the Company to streamline its recruiting process, improve performance management, effectively organize and track learning and development, better analyze human resources data, and improve human resources planning.



The Company received a **Best HR Digital Transformation Award** from SAP AG

GULF COMMUNITY

It is the Company's core belief that sustainable business growth must occur in conjunction with social development. Gulf places great importance on participation and engagement to improve the well-being of the local community, general population and the Company's stakeholders, all of whom contribute to strength of the Thai society. Gulf has a dedicated Community Relations department tasked with communicating with the local community and other stakeholders to develop a common understanding of the Company's business and to provide financial support for development initiatives to benefit the community and local agencies in the areas in which the Company operates.

The Community Relations department is focused on engagement with various stakeholders – including local community leaders and representatives, local and provincial state agencies, educational institutions, non-governmental organizations and charities, and the media – with the aim of building knowledge and understanding of the Company's operations in the area, developing positive relations, reducing conflicts and seeking resolutions to potential problems which may occur as a result of the Company's activities for the mutual benefit of all parties. The Company stations a Community Relations representative in the field at every site from project conception to completion and operation to ensure that the community's needs are considered at every stage of project development.

BUILDING COMMUNITY RELATIONS

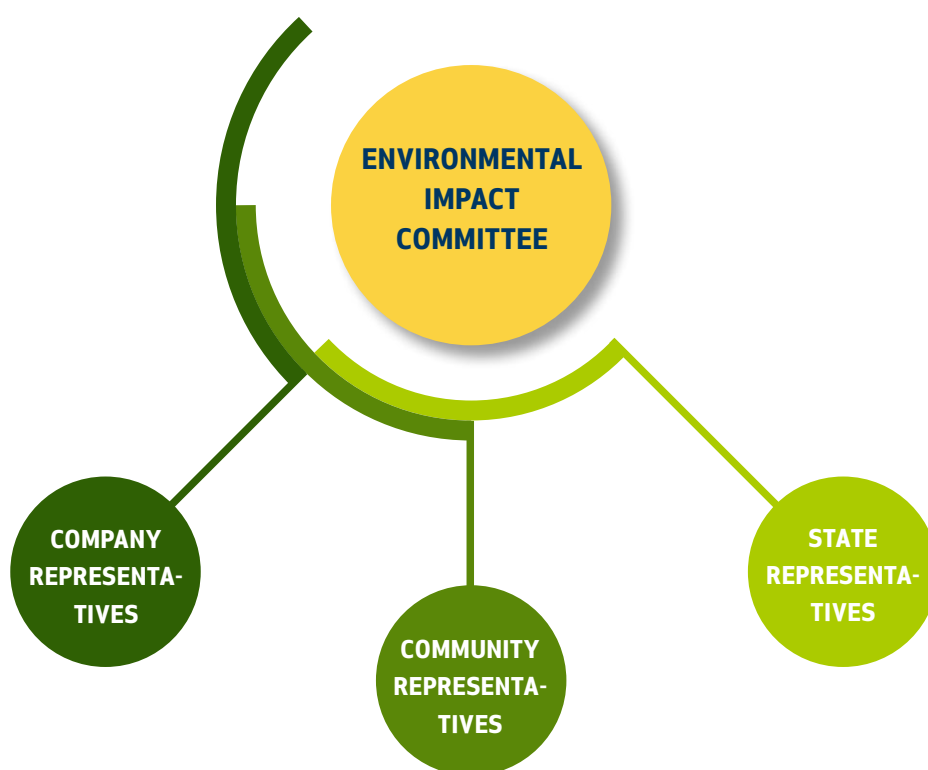


COMMUNITY PARTICIPATION AND ACTIVITIES

Gulf encourages local community participation with three main objectives: 1) building good relations with the community, 2) monitoring business operations to prevent negative impacts to the local environment, and 3) supporting community development and increasing the Company's positive impact on community sustainability. This is accomplished through several initiatives.

1) COMMUNITY COMMITTEES

At each power plant, representatives from the Company, relevant state agencies and the local community serve on an Environmental Impact Committee. The committee meets every three months to discuss how the Company's operations impact the local community and environment, provide reports on progress updates and environmental monitoring, and develop plans for cooperative action and activities to ensure the Company's operations proceed in line with requirements set out in the project's Environmental Impact Assessment (EIA) and relevant laws and regulations. The committee also serves as a channel through which members of the local community can voice their concerns through their community representatives and propose community development projects for consideration for financial support from the Company. In this way, Gulf and the relevant state agencies can receive up-to-date information from sources on the ground about the impact of the Company's operations and develop suitable plans to mitigate any potential issues before they become problems. In addition, the Company also organizes regular visits to its power plants for committee members and community representatives to provide knowledge and information about the power generation process, environmental issues, and environmental monitoring tools to support the committee members in performing their duties.



2) COMMUNITY ACTIVITIES

In addition to the direct and indirect economic benefits (see page 28) and positive environmental impacts (see page 36) for the local community that Gulf strives for, the Company also endeavors to contribute to social development through the following community activities.



CULTURAL AND RELIGIOUS ACTIVITIES

To promote a strong relationship between the Company and the community, as well to preserve local traditions and foster harmony, Gulf supports and actively participates in religious and cultural activities organized by the community and relevant groups. The Company sponsors and/or participates in local celebrations and observances for all religions, including festivals and traditions such as Songkran (Thai New Year), Loy Kratong (lantern/float festival), Boon Khao Lam (merit-making festival at the end of the rice harvest season), the Candle Festival, Kathina or Thod Kathin (the major merit-making period at the end of the rainy season), Ramadan (Islamic month of fasting), Eid al-Fitr (Hari Raya, or the end of Ramadan), and other local celebrations.



ENVIRONMENTAL PROTECTION

In addition to its major environmental protection programs, namely, the demonstration farm and the Wind and Water Detectives program (see pages 47 and 48 for details), Gulf also engages in numerous environmental protection and promotion programs which involve the local community and relevant state agencies. These include activities such as beach clean-ups, canal cleaning, tree-planting days, community landscaping activities, National Water Conservation Day activities, and vetiver grass planting for water and soil conservation. The activities are organized in collaboration with various local and state agencies including, for example, the Department of National Parks, the Subdistrict Administration Organization, the Provincial Administration Organization, the district authorities, the Royal Irrigation Department and the Department of Fisheries.





EDUCATIONAL FUNDING

Gulf places great importance on education. The Company therefore engages in a number of programs aimed at improving educational opportunities for Thai youth, such as providing need- and merit-based educational scholarships and tuition support to school children of all levels studying in local community schools. Gulf also provides monetary support to local schools and educational institutions which is used to renovate old buildings, construct new buildings, repair playgrounds, purchase teaching equipment and hire teachers. In addition, the Company conducts two educational programs, the Travelling Power Plant and the Power Plant Schools programs, which provide local youth groups with opportunities to visit the Company's power plants and learn about the power generation industry so they can develop a better understanding of the Company's business and share their knowledge with other members of the community.



SUPPORT FOR LOCAL BUSINESSES

Gulf has undertaken various initiatives with the aim of providing advice and funding to local community members to help develop and strengthen local businesses. These include providing funding for equipment to support community businesses, providing training on agriculture following the principles of Sufficiency Economy, providing seeds and cuttings of various agricultural products to local farmers, providing business skills training, and purchasing local products to use as official company gifts. In addition, the Company organizes study trips for local business owners to visit and observe successful enterprises in other areas to gather ideas to improve their own community businesses. These initiatives mainly focus on small business ventures run by individuals or cooperatives selling local agricultural or homemade products. Some groups the Company has worked with include local rice farmers and a local women's group selling homemade chili paste. With the support provided by Gulf, these local business owners have been able to increase production and improve quality to match other products available on the market.



Tien Kaew desserts made by the Baan Tha Toom women's career group

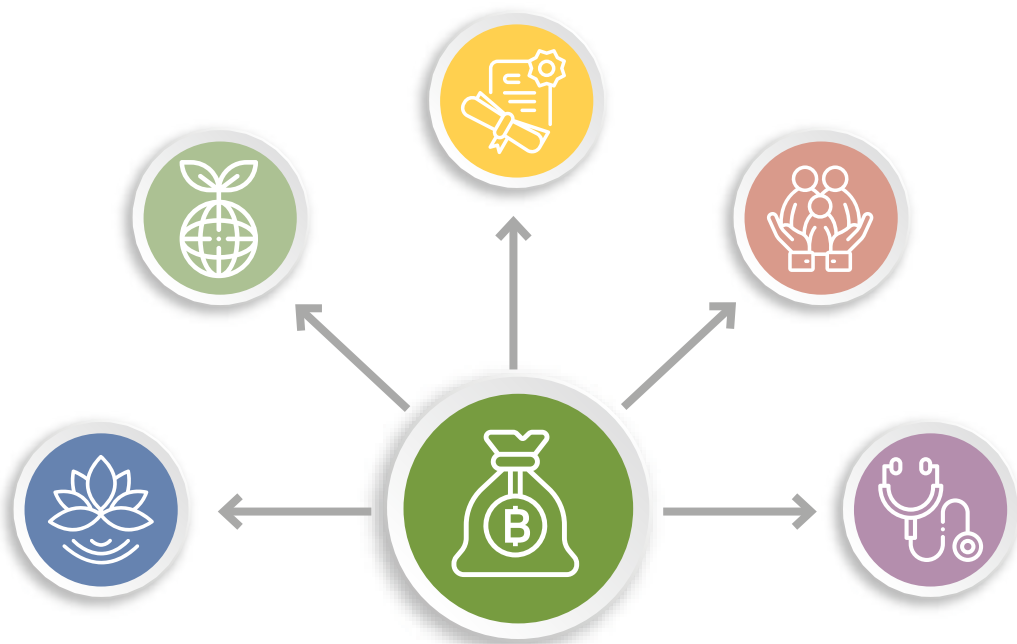


COMMUNITY HEALTH

Gulf recognizes that good health is an essential component for developing good quality of life. The Company is committed to improving the well-being of the local community through the promotion of health-related initiatives including increasing access to healthcare – a basic human right – and improving the quality of local healthcare facilities. Gulf regularly provides financial support to hospitals, local healthcare facilities, and medical charities for the purchase of medical equipment, medications and the renovation of medical facilities. The Company also works with public health authorities to organize training programs supporting improved knowledge about healthcare for the local community. In addition, Gulf regularly sponsors community sports events to increase awareness of the importance of good health and to encourage greater interest in personal health.



In 2018, Gulf invested over 40 million baht in approximately 100 community development programs.



GULF SOCIETY

Aside from its responsibility to Gulf employees and members of the local communities around Gulf power plants, the Company recognizes it also has a responsibility to the greater society. Thus, rather than focusing its social responsibility initiatives solely on people who are directly affected by the Company's operations, Gulf also works to create greater positive impacts on society as a whole through its philanthropic activities.

As a leading power provider, Gulf believes it can benefit the society in more ways than just providing electricity to meet consumer demand. At Gulf, the Company works to be a "power company" both literally – as a provider of the electricity which powers all aspects of life – and figuratively – as a supporter of initiatives that drive social progress. Gulf philanthropic activities are thus designed to reflect this endeavor under the theme, "Powering the Country, Empowering the People".

While it is undeniable that all aspects of social development can continue to improve, Gulf has chosen to focus its philanthropic work on five specific areas. The Company has developed the HELPS framework under which these activities are organized.



H Health

Gulf not only places great importance on supporting programs to improve healthcare facilities in the communities surrounding its power plants, but also contributes to initiatives that benefit the general society. In 2018, these initiatives included:

- ▶ Donations for the purchase of medical equipment for hospitals around the country including the Police General Hospital (Bangkok), Baan Khai Hospital (Rayong), Saraburi Hospital (Saraburi), and Tha Song Yang Hospital (Tak).
- ▶ Donations for the construction and renovation of medical buildings such as the construction of Chalong Hospital (Phuket), the multi-purpose building at Maap Yangporn Sub-district Health Promoting Hospital (Rayong), the stroke patients ward at the Siriraj Stroke Center, Sririraj Hospital (Bangkok), and the Chakri Naruebondindra Medical Institute, Mahidol University (Bangkok)
- ▶ Sponsorship of the Gulf Chana Green Cup 7-a-side youth tournament in Chana district, Songkhla province
- ▶ Sponsorship of a Youth Football Clinic, conducted by Buriram United players, for 400 children from various provinces to inspire a love of sports and encourage their dreams of becoming professional athletes
- ▶ Sponsorship of charity sports events for the general public such as the Chulalongkorn University Faculty of Engineering Intania Mini Marathon



E Enterprise

Gulf supports career and business development through job creation, personal development and enterprise expansion with various programs aimed at school and university students as well as adults. The Company's ongoing initiatives include:

- ▶ Sponsorship of networking and career advising events for engineering students preparing to work in the energy industry or other engineering-related industries, such as the Gulf Career Day program, the Intania Young Alumni Forum, and the Engineering Dinner Talk, an event organized under the topic of "Thailand's economic direction in the 2013 election year"
- ▶ Financial support for equipment and supplies for local enterprises and/or institutions or organizations working to develop local enterprise, as well as business or agricultural advising, such as supporting the production and sale of products made by local women's groups and supporting organic agriculture as an alternative career for the local community
- ▶ The Nong Saeng Demonstration Farm, which helps farmers and local community members increase their income and reduce their expenditure through various means, such as purchasing manure from local farmers to produce earthworm fertilizer, releasing fish into local waterways to create a more abundant food supply, and hiring local community members to work on the farm





L Learning

Education is the backbone of development. As such, one of Gulf's main priorities is supporting education and encouraging lifelong learning. The Company contributes to improving access to education for learners of all levels across the country through multiple channels including:

- ▶ Merit- and need-based scholarships for students studying at Chulalongkorn University
- ▶ The Travelling Power Plant and Power Plant Schools program, which invites students from various schools to visit the Company's power plants and participate in science-based learning activities
- ▶ Organic agriculture advising at the Nong Saeng Demonstration Farm located at Gulf Nong Saeng (GNS) power plant in Saraburi province
- ▶ Donations for the purchase of educational equipment and renovation or construction of school buildings such as the construction of the classrooms, infirmary, computer lab and multi-purpose building for the Baan Lad Rua Border Patrol Police School in Chart Trakarn district, Phitsanuloke province
- ▶ Internship programs, enabling university and vocational college students from the local community to intern at the Company's power plants, with the possibility of being offered full-time employment after graduation
- ▶ Cooperation with the University of Southern California to host interns and study trips to promote cultural exchange and provide students with insight into the business culture of Thai private organizations and their role in contributing to sustainability and social responsibility



P Planet

Gulf is committed to protecting the environment and natural resources that all humans rely on for survival. The Company recognizes that it is not enough to simply comply with the minimum standards set by Thai environmental laws. Thus, the Company is involved in a number of initiatives that expand beyond the regulatory requirements of the power generation business. These include:

- ▶ The Saku Forest field trip in which the Company organized in collaboration with the Faculty of Environmental Management, Prince of Songkla University for 150 students from various schools from Chana district, Songkhla province to participate in a two-day program to learn about the flora and fauna of southern Thailand, the threats to the local environment and the steps they could take to mitigate those threats
- ▶ Community environmental programs and plastic reduction programs conducted by the Company’s Rayong-based power plants, where Gulf employees participate in environmental activities with local communities and the general public, such as beach clean-up and tree-planting activities, as well as plastic waste reduction programs within the power plants through activities such as the “bring your own lunchbox” campaign
- ▶ Sponsorship of environmental promotion events such as the Chulalongkorn University Environmental Engineering Day event
- ▶ Environmental conservation and rehabilitation programs in the local community, such as the Vetiver Planting activity to prevent soil erosion and improve the landscape along local waterways and fish-releasing activities to create greater abundance in the ecosystem



S Sponsorship

Gulf also sponsors initiatives that provide general benefits to the population. The Company believes that contributing to the creation of happiness is valuable to promoting a peaceful, developed society. In 2018, Gulf sponsored several such initiatives including:

- ▶ Broadcasting of the 2018 FIFA World Cup in Thailand, making all matches available to view for free across the country
- ▶ Sponsorship of major Thailand League football teams including the SCG Muangthong United, Buriram United and Bangkok FC football clubs, as well as smaller teams in the Thai League 2, Thai League 3 and Thai League 4 divisions
- ▶ Construction of a rest pavilion at the Suvarnabhumi Skylane cycling path
- ▶ The Novice Training program, a supplement to the Phra Pariyatidhamma Schools program developed under the advice of HRH Princess Sirindhorn which develops novice monks into role models for the community through leadership and public speaking training as well as environmental and science-related classes and field trips



The Company aims to continue its contributions to these initiatives in 2019 and will also undertake new activities in order to expand the positive impact it has on the local and national economy, environment and society.

About this report

Preparation of this sustainability report was guided by the GRI Standards: Core Option and covers information from January 1, 2018 to December 31, 2018.



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