

### Integrating Sustainable Development Goals (The SDGs Integration)

The company has integrated sustainable development goals (SDGs) into its business, focusing on the proceedings in response to the nine main goals related to its business operations and the competency of the company. It also realizes the circumstance of social problems and world's important sustainability trends and, as a result, operates the business through

	SDGs	2020 Targets	Strategies	Work Plans
CORE		<ul style="list-style-type: none"> <li>Refinery Energy Usage Index(EI) = 96.0</li> <li>Expand production capacity of the renewable energy business</li> </ul>	<ul style="list-style-type: none"> <li>Develop energy efficiency of the refinery business</li> <li>Expand production capacity of the renewable energy business</li> </ul>	<ul style="list-style-type: none"> <li>Carry out energy efficiency improvement projects (YES-R &amp; Rocket Projects)</li> <li>Proceed to expand electricity generating capacity from solar energy, wind power, geothermal energy and hydropower, including expansion of production capacity of biofuels from biodiesel and bio-ethanol</li> </ul>
		<ul style="list-style-type: none"> <li>Compensation for greenhouse gas emissions with carbon offset not less than 60%</li> </ul>	<ul style="list-style-type: none"> <li>Offset greenhouse gas emissions with carbon offset from the renewable energy business</li> <li>Prepare greenhouse gas emissions accounting</li> </ul>	<ul style="list-style-type: none"> <li>Compensate greenhouse gas emissions with carbon offset from the renewable energy business</li> </ul>
		<ul style="list-style-type: none"> <li>Reduce the use of distilled water by 15% (compared to base year 2015)</li> <li>Number of farmers participating in the sustainable water management project : 30 persons</li> </ul>	<ul style="list-style-type: none"> <li>Improve the efficiency of water consumption in the production process</li> <li>Improve quality of wastewater</li> </ul>	<ul style="list-style-type: none"> <li>Increase production capacity of the RO-Recycle Unit</li> <li>Change cooling Tower</li> <li>Conduct water footprint to find hotspots for improvement</li> </ul>
		<ul style="list-style-type: none"> <li>There is no waste to landfill (Zero Waste to Landfill ) in the company and companies in the group</li> <li>Promote the procurement of environmentally friendly products / services and there are a total of 20 environmentally friendly products / services.</li> </ul>	<ul style="list-style-type: none"> <li>Industrial waste management with 3Rs and Zero Waste to Landfill</li> </ul>	<ul style="list-style-type: none"> <li>Waste and industrial waste management with 3Rs principles</li> <li>Develop a prototype service station for innovation and the environment</li> <li>Use environmentally friendly materials / products</li> <li>Waste management using the Circular Economy Business Model</li> </ul>
ADDITIONAL		<ul style="list-style-type: none"> <li>Receive an "excellent" rating from the Corporate Governance Report of Thai Listed Companies (CGR).</li> <li>Ranked TOP 30 of the ASEAN Corporate Governance Scorecard (ACGS) project</li> </ul>	<ul style="list-style-type: none"> <li>Combat all forms of corruption and be a role model of corporate governance (CG) organization</li> </ul>	<ul style="list-style-type: none"> <li>Educate and support companies in the group and business partners to participate in the Anti-Corruption Program and receive CAC certification</li> </ul>
		<ul style="list-style-type: none"> <li>Hiring 13 disabled persons to work as employees of the company</li> </ul>	<ul style="list-style-type: none"> <li>Employment with value, equitable and covering all groups of people</li> </ul>	<ul style="list-style-type: none"> <li>Hire the disabled to work with the company</li> </ul>
SUPPLEMENTARY		<ul style="list-style-type: none"> <li>800 elementary school students participate in the Read and Write with Ease Project</li> </ul>	<ul style="list-style-type: none"> <li>Participate in improving the quality of education of Thai youth at the elementary level</li> </ul>	<ul style="list-style-type: none"> <li>Carry out the project to solve problems of illiteracy, can't read or write, of elementary school students</li> </ul>
		<ul style="list-style-type: none"> <li>Number of research : 12 topics</li> <li>Number of Intellectual Property : 3 IPs</li> </ul>	<ul style="list-style-type: none"> <li>Promote research and innovation to enhance the competitiveness of the industry</li> </ul>	<ul style="list-style-type: none"> <li>In-house R&amp;D</li> <li>Establish collaboration in research development with research institutes, universities, and external agencies</li> </ul>
		<ul style="list-style-type: none"> <li>Build 11 safe communities</li> <li>Establish 2 groups of community enterprises, extend network and initiate business model</li> </ul>	<ul style="list-style-type: none"> <li>Build strong, livable and safe communities.</li> </ul>	<ul style="list-style-type: none"> <li>Build a safe community from emergency drills and evacuation drills in case of emergencies / disasters</li> <li>Establish community enterprises to create jobs, generate income in communities around the workplace</li> </ul>

Note:

- SDG's goals are sorted according to the importance of the company's response operations.
- Core / Additional / Supplementary is the priority level of the SDGs target that the company focuses on Determined using business performance criteria Industry attention and national policy
- Power generation capacity from renewable energy is the power generation capacity under the Power Purchase Agreement (PPA)

sustainability management structure of the organization at each level. With a passion to achieve in sustainable development, the company has set goals, strategies and plans to react differently depending on the goal of the matter. Together with it, the company has prepared for progress monitoring on SDGs and reporting to the corporate Sustainability Policy Committee (SPC) every quarter. This is to ensure that the operations of the company are consistent and meet with the targets in response to SDGs.

2019 Results / Status	Value Creation	
	To the company	To environment and society
<ul style="list-style-type: none"> <li>• EII = 97.9 (as targeted)</li> <li>• Electricity generation from solar cells, total 153.7 MW</li> <li>• Electricity generation from wind energy, total 23.37 MW</li> <li>• Electricity generation business from geothermal energy 157.5 MW</li> <li>• Electricity generating business from water power 69 MW</li> <li>• Biodiesel business 1,000,000 liters per day</li> <li>• Bio-ethanol business, totaling 1,000,000 liters per day</li> </ul>	<ul style="list-style-type: none"> <li>• Energy efficiency</li> <li>• Reduce energy costs and expenses</li> <li>• Increase business income stability</li> <li>• Support government policies and increase the proportion of renewable energy usage</li> </ul>	<ul style="list-style-type: none"> <li>• Increase the proportion of renewable energy in the country</li> <li>• Reduce the impact of climate change from greenhouse gas emissions</li> </ul>
<ul style="list-style-type: none"> <li>• Carbon offset from renewable energy business : 75.5% of greenhouse gas emissions</li> </ul>	<ul style="list-style-type: none"> <li>• Prevent and reduce the impact of natural disasters that may affect the company's business operations</li> <li>• Expand renewable energy business</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce environmental impact and prevent global temperature not to rise above 2 °C</li> </ul>
<ul style="list-style-type: none"> <li>• Reducing the amount of water used in the refinery by 6.3% from the base year 2015 (including the cumulative volume of reducing water used in the refinery from 2016 - 2019 compared to the base year 2015 is 17.9%)</li> <li>• Number of farmers participating in the project : 18 farmers</li> </ul>	<ul style="list-style-type: none"> <li>• Use water in the production process efficiently</li> <li>• Sufficient water for using in the production process</li> <li>• Reduce costs and expenditure of water withdrawal and consumption</li> <li>• Purchase agricultural products from farmers to be recognized as products in the company's SPAR mini marts</li> <li>• Promote good image of the company</li> </ul>	<ul style="list-style-type: none"> <li>• Communities are not affected by water withdrawal and consumption of the company.</li> <li>• Solve flood problems, sustainable drought having sufficient water for agriculture, in Pasak Basin area</li> <li>• Increase agricultural areas, forest areas and the amount of water that can be stored in the Pasak River Basin</li> </ul>
<ul style="list-style-type: none"> <li>• Expand Zero Waste to Landfill operations to companies in the group</li> <li>• 55 environmentally friendly products and services</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce cost of resources and waste management</li> <li>• Create value to waste and increase utilization</li> <li>• Promote good image of the company</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce the occurrence of waste and greenhouse gases</li> <li>• Disseminate and create environmental sustainability for society</li> </ul>
<ul style="list-style-type: none"> <li>• CGR score: 98%</li> <li>• Awarded with TOP 60 ASEAN PLCs considered from the evaluation of Project (ACGS )</li> </ul>	<ul style="list-style-type: none"> <li>• Transparency in business operations and good relationship between anti-corruption networks</li> <li>• Promote good image and sustainability of the company</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce corruption issues in society</li> </ul>
<ul style="list-style-type: none"> <li>• Hired 13 disabled to work as employees of the company (as targeted since 2018)</li> </ul>	<ul style="list-style-type: none"> <li>• Support the government policy on employment of the disabled according to Article 33</li> </ul>	<ul style="list-style-type: none"> <li>• Promote professional equality for society</li> </ul>
<ul style="list-style-type: none"> <li>• 891 youths from 7 schools participated in the project (as targeted)</li> </ul>	<ul style="list-style-type: none"> <li>• Participate in social development according to the mission of the company</li> <li>• Promote good image of the company</li> </ul>	<ul style="list-style-type: none"> <li>• Elementary school students are solved of the literacy problems, inability to read or write</li> <li>• Improve the quality of education for Thai youth</li> </ul>
<ul style="list-style-type: none"> <li>• Number of research : 11 topics</li> <li>• Number of Intellectual Property : 2 IPs</li> </ul>	<ul style="list-style-type: none"> <li>• Create a culture of innovative thinking for employees</li> <li>• Innovation and / or new products to increase business opportunities</li> <li>• Create research partners</li> </ul>	<ul style="list-style-type: none"> <li>• Promote scientific and technological research for national development</li> </ul>
<ul style="list-style-type: none"> <li>• Built 10 safe communities.</li> <li>• Number of community enterprise : 1 group</li> </ul>	<ul style="list-style-type: none"> <li>• Strengthen good relationship and confidence in the operations of the company for the community</li> </ul>	<ul style="list-style-type: none"> <li>• Development of the well-being of the community in terms of occupation, environment and safety</li> </ul>