



CLOVER

รายงาน
ความยั่งยืน

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บริษัท โคลเวอร์ เพาเวอร์ จำกัด (มหาชน)

green
tech

balanced



Clover Power Group and Its Sustainability

Driving Business towards Sustainability

Clover Power Group of company has been in business since 2013, with the registered capital of 640 million baht, and has been listed in the Stock Exchange of Thailand since September 2, 2021 by using "CV" as a symbol. CV's head office is located at 159 Soi Rama 9 57/1 (Wisetsuk 2), Phatthanakan, Suan Luang, Bangkok 10250.

The Company operates a comprehensive renewable energy business with 3 main businesses, namely, power producer business, fuel supply business, and valued EPC business.

This sustainable development report covers the activities for the year 2021 period from 1 January 2022 to 31 December 2022. This reporting guideline is consistent with the standard edition of the Global Reporting Initiative (GRI), which addresses issues in a variety of dimensions as follows: the economy, environment, society, and corporate governance.

CV Vision

“Being the leading organization that delivers the values from renewable energy to the global society with sustainability..”

CV Mission

- Invest in businesses and technologies in renewable energy, waste-to-energy, and other new technologies toward sustainable growth.
- Promote the use of energy crops, clean energy utilization and energy conservation practices.
- Enhance our workforce with culture of intellectual development and strengthen our competitiveness.
- Encourage share value of coexistence among stakeholders, communities and the environment with good governance for sustainable growth.

Goal

- Increase business security and build up sustainable growth.
- Secure long term fuel supply for the power producer business.
- Strengthen human competency with long term development strategy.
- Engage in communities and environmental sustainable development.



The Company adhere to the IG³ value in all company's operations by giving priority to good relationship with business partner, working team and society. Therefore, the company and its employees work together to create a sharing culture in every step of work's creation. The Company takes common interest into account. The Executives and employees stand on the right conduct, and take responsibility for their own duties. The leaders in all levels are in charge of supervising to ensure compliance and appropriated working procedure. On every stage of communication between the executives and employees, the executives always emphasize on the alliance-working-style, refraining from taking advantages and pursuing for short-term benefits. As well as operating the businesses by taking surrounding environment and communities in concern. Also, creating activities in community relations which allows employees to contribute to society.

For detailed information about Corporate Social Responsibility and Sustainability policy please refer to

<https://www.cloverpower.co.th/storage/download/corporate-governance/corporate-policy/20220419-cv-csr-policy-th.pdf>

For detailed information about Data Protection Policy please refer to

<https://www.cloverpower.co.th/storage/download/corporate-governance/corporate-policy/20220526-cv-data-protection-policy-th.pdf>

Clover Power's Sustainability Development



Sustainability Policy and Practice

The company is well aware that the sustainable business operation needs to be balance with the business stability, concerning business profits and long-term growth, along with taking care of the environment, society, and good corporate governance.

The Company has operated according to the vision and strategies complying with good corporate governance by holding to the principle that the Company's business operations must not create problems for the environment and society.

On the contrary, the business operations of the Company and the Company Group must be operated on the purpose of reducing social and environmental problems as well as reducing the world's greenhouse gas emissions, being supportive of communities and societies, along with continuously promoting public relations by being part of public hearing and collaboration in community development for communities and environment's long-term optimal benefits.

The Company's Main Business



ธุรกิจผลิตและจำหน่ายไฟฟ้า (Power Producer)

- Biomass Powerplant
- Waste-to-Energy Powerplant
- Cogeneration Powerplant



ธุรกิจเชื้อเพลิง (Fuel supply)

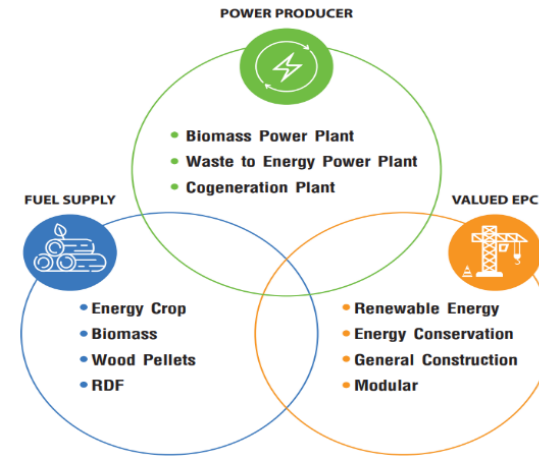
- Energy Crops Plantation
- Biomass Fuel
- Biomass Wood Pellets
- RDF Fuel



ธุรกิจดำเนินงานวิศวกรรม (Valued EPC)

- Renewable-Energy Power plant Construction
- Energy Conservation Project
- General Construction
- Modular Construction

The Company's Main Business Diagram

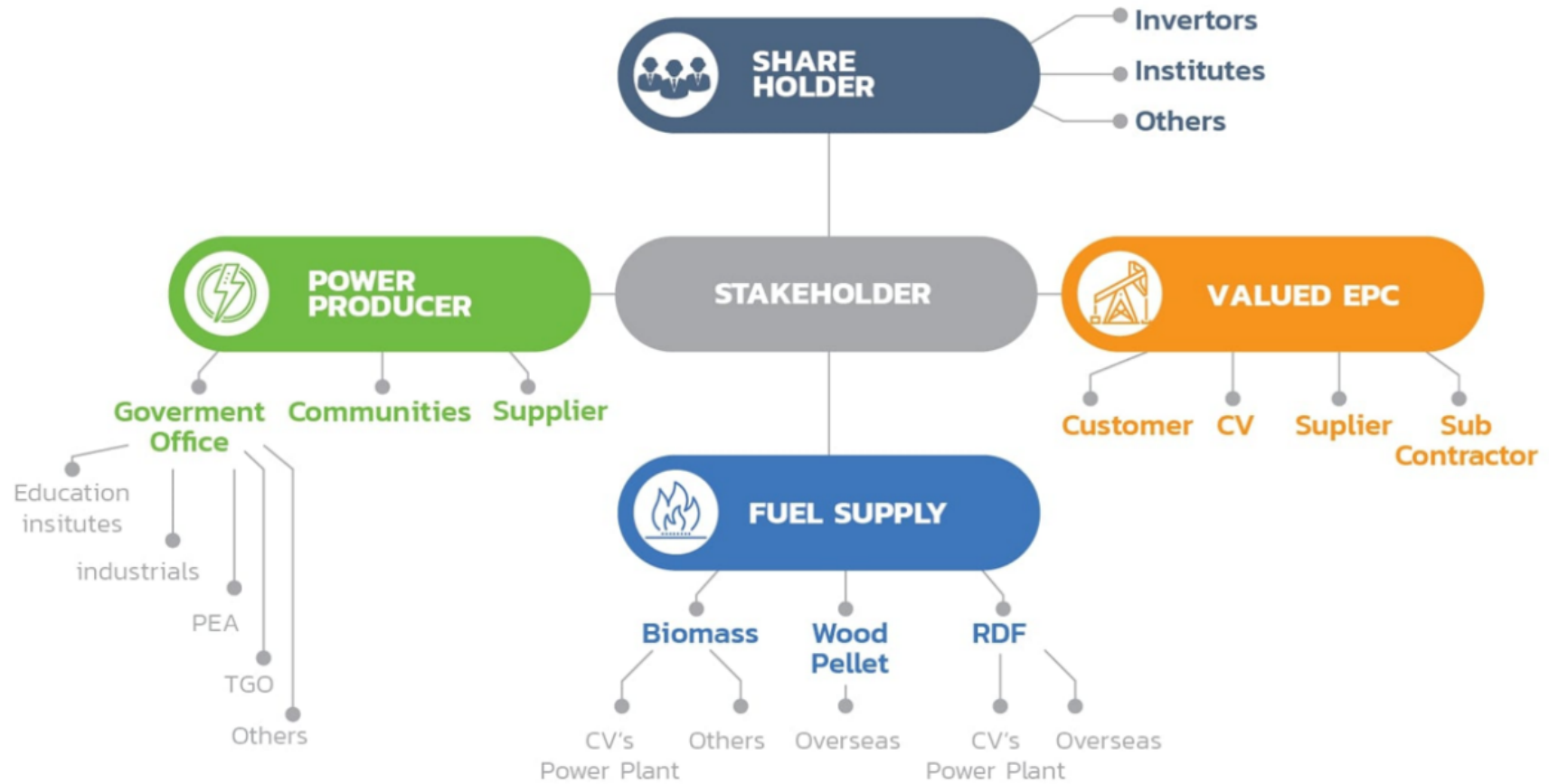


Reporting scopes

The information about sustainability in this report belonged to the company group which conducts the powerplant operation is as follows;

Power Plant	Location	Installed Capacity (Megawatts)
Biomass Powerplant Clover Power (CV)	Wang Chin, Phrae	9.40
Biomass Powerplant Clover Phitsanulok (CPL)	Phrom Phiram, Phitsanulok	4.90
Waste-to-Energy Powerplant Clover Phichit (CPX)	Industrial Estates (Lower Northern Region) Wachirabarami, Phichit	2.00
Cogeneration Powerplant Siam Pellet Power (SPP)	Nong Khae Industrial Estate, Nong Khae, Saraburi	7.36

Stakeholder Impact Management in Business Value Chain





Company Stakeholders Chart








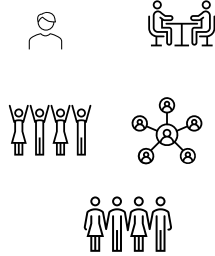




Stakeholder groups who are involved in company's operation are a part of identifying the key important issues which varies depending on each group's expectation as follows;






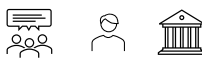

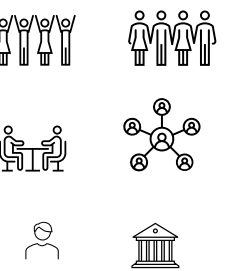
Key Important Issues from Stakeholders









	Shareholders	Trading Partners	Customer	Creditors	Employees	Communities and Society	Government Agencies
Stakeholder Groups	<ol style="list-style-type: none"> 1. Reasonable Returns 2. Company Growth 3. Transparency and Verifiability 4. Response and Participation in Reducing Greenhouse Gas Emissions 	<ol style="list-style-type: none"> 1. Fair and Transparent Procurement 2. On-Time Payment of Goods/Wages 	<ol style="list-style-type: none"> 1. Quality Products 2. . On-Time Product Delivery 3. Arrangement of Channels for Submitting Complaints 	<ol style="list-style-type: none"> 1. On-time payment of debt 2. Plan for debt repayment terms 	<ol style="list-style-type: none"> 1. Competitive Benefits and Compensation 2. Progress in Job Position 3. Potential Development 4. Participation in Creating Value for Societies 	<ol style="list-style-type: none"> 1. Manage And Maintain Environment Surrounding Powerplants 2. Setup A Powerplant's Fund for Provide Budget Support in Community Development. 3. Encourage Employment and Businesses in Communities 4. Being The Source of Sharing Knowledge About Renewable Energy to Young Generation and Communities 5. Being Part of Natural Resources Conservation in The Communities Such as Forest 	<ol style="list-style-type: none"> 1. Business is Being Operated According to The Law 2. Cooperation with Government Activities 3. Environmental Management 4. Being Part of Environmental Development in Communities and Society

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Communication Channels</p>	<ol style="list-style-type: none"> 1. Annual shareholders' meeting 2. Annual report 3. Disclosure of information to the Stock Exchange of Thailand 4. Quarterly analyst meetings 5. Meetings for investment advice 6. Communication in different channels such as telephone, e-mail, and website 7. Inquiries or complaints via the given channels 	<ol style="list-style-type: none"> 1. Hold a meeting on a certain occasion. 2. Communication in different channels such as telephone, e-mail, and website 3. Inquiries or complaints via the given channels 	<ol style="list-style-type: none"> 1. Meeting and visiting customers 2. Communication in different channels such as telephone, e-mail, and website 3. Inquiries or complaints via the given channels 	<ol style="list-style-type: none"> 1. Annual report 2. Financial statement 3. Disclosure for credit analysis 	<ol style="list-style-type: none"> 1. Internal Newsletter 2. Communication In Different Channels E-Mail, Intranet, Video Conference 3. Meeting/Seminar/ Training 4. Annual meeting field of works 	<ol style="list-style-type: none"> 1. Regular community meetings 2. Online channels such as Facebook, company websites, and local Government Websites 3. Participation in community's activity 	<ol style="list-style-type: none"> 1. Participation in Seminar and Meeting 2. Communication Via E-Mail 3. Coordination and Cooperation with Government Agency in Variety of Activities. 4. Reporting and permission request as required by Law
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Key Important Topics & the Scope of Inside and Outside Impact of the Organization

Sustainability Issues of the Company Group		SD GOALS related Issues	The Scope of Impact on the Organization		
			Impact within organization	Impact on External Stakeholders	External Stakeholders
1. Sustainable Business Operations	-Appropriate Strategies -Risk Management and Internal control	 	/	/	
2. Value Chain Management	- Raw material procurement			/	
3. Corporate Governance	- Corporate governance - Code of conduct - Anti-corruption measures	 	/	/	
4. Efficient Use of Energy	- Reduction of energy waste - Maximization of energy use		/	/	
5. Environmental Management	- Industrial waste management - Water from outside		/	/	

Occupational Safety and Health	<ul style="list-style-type: none"> - Employees safety - Machinery and equipment safety - Emergency management 		/	/	
7. Development and Supervision of Personnel	<ul style="list-style-type: none"> - Personnel development - Personnel retention and recruitment - Provision of benefits and welfare 		/		
8. Responsibility to the Community and Society	<ul style="list-style-type: none"> - Good relationship with the community - Problem solving with the community 		/	/	
9. Innovation and Development	<ul style="list-style-type: none"> -Implementation of modern and appropriate energy technology on the purpose of effectiveness and environmental friendly -Product Development from waste produced from production process - Implementation of Innovation and Technology to reduce energy consumption and effectively use of fuel 		/	/	

 = Partner,
  =Society,
  =
  Creditor,
  = Community,
  =Employee,
  =Governance Agency,
  = Customer



Sustainability Management in the Environmental Dimension

Environmental

Environmental Policy and Practice

The Company has a policy to manage efficiency in fuel cost management, promote and participate with the community in energy crops plantation by the year 2022

Environmental Practice can manipulate operations to strictly comply with the law, ranging from various system development to be in conformity with the Company's environmental management standards to participating with the community in taking care of the ecosystem around the power plant and Conserving the community's forest by following the below guidelines:

1. The Company has an environmental management policy for right and complete operations in accordance with legal requirements.
2. The Company performs safety tasks in occupational health and environment using legal standards as a guideline for practice.
3. Each powerplant has air pollution control systems using dust collection technology such as electrostatic precipitator technology (ESP) is being used in the biomass powerplant, bag filter technology is being used in the waste-to-energy powerplant. By using these technologies, dust, sulfur dioxide, nitrogen dioxide, and other gases produced will be eliminated before they are released into the air.
4. For water system, all wastewater from the production process is designed to be discharged to the evaporation pond within the power plant. to rest the water and allow the ashes to precipitate. When the amount of water exceeds the evaporation pond, the water will be flown to the raw wells and recirculated for use in the production

process without being released into public water sources. This system is called "Zero-Discharge System."

The Company discloses the results of the environmental quality measurement to the community and listens to any additional suggestions to maintain the quality of the environment surrounding the powerplants.

5. The Company has waste management measures by arranging waste segregation points and supporting any related activities to dispose the waste in a proper way. The employees are part of waste segregation in a correct way. Furthermore, The Weight of garbage in each category is recorded monthly throughout the whole year via application.

6. The company hold Environment Conservation Youth Camps called "Let's Grow Camp" for sharing knowledge about biomass powerplant, along with environment and natural resource from local community's forest to young people in elementary school located in the community nearby the powerplant.

With community forest classroom and onsite visiting and learning in power generation process at biomass powerplant allows young people, locals and teachers to acquire knowledge and aware of value in local community's forest resources which promotes understanding of maintaining the forest in a correct way and sustainable coexistence of powerplant and community.

Sustainability Management in the Environmental Dimension

Environmental Quality Measurement in The Company's Area and Nearby Communities



Arranging the place for garbage separation and supporting locals to separate waste in the right way



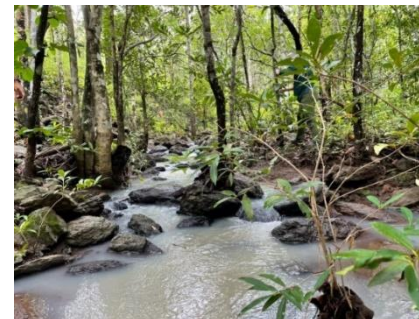
Promoting knowledge about making lime-lye-dishwashing liquid by using lye water made from ashes to teachers, students, and locals as a project work of utilizing biomass ashes in making household item. This activity promotes self-reliance according to the principle of sufficiency economy.



Separation in various categories at the office section and the powerplant sections



Being part of community's forest conservation surrounding the powerplants



Promoting learning about the environment and natural resources to young people who lives nearby the powerplant



Environmental Performance

Efficient Use of Energy

The Company group is using 4 types of fuel as follows.;

1. Biomass Fuel

The amount of biomass fuel consumption comes from agricultural waste, such as sugar cane leaves and rice straw, rice husks, corn cobs, sawdust, bamboo scraps etc.

2. Fuel Oil

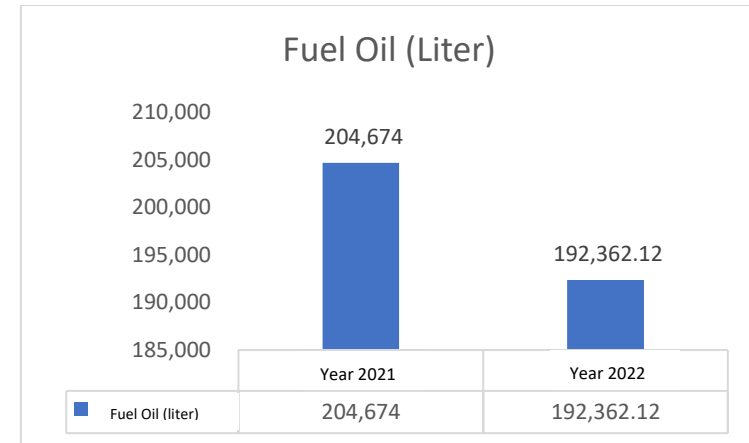
The consumption amount of fuel oil comes from the amount of fuel oil used for machinery during fuel preparation.

3. Natural Gas (for Co-generation powerplants) where the operation has started since the beginning of year 2022.

4. Industrial Waste Fuel (RDF) at “CPX” Waste-to-Energy Powerplant (non-dangerous type) which has started its operation since 2020, October 3rd

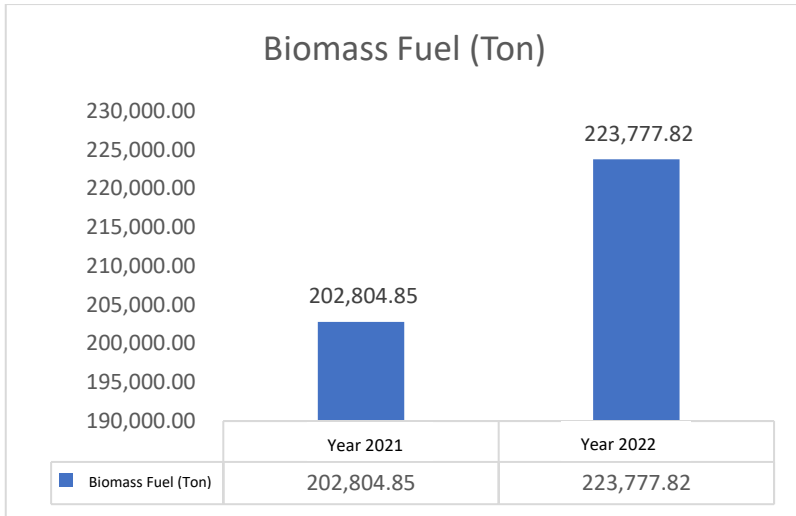
1.1 Fuel Consumption

The Amount of Fuel Consumption of the Company’s Group Powerplants



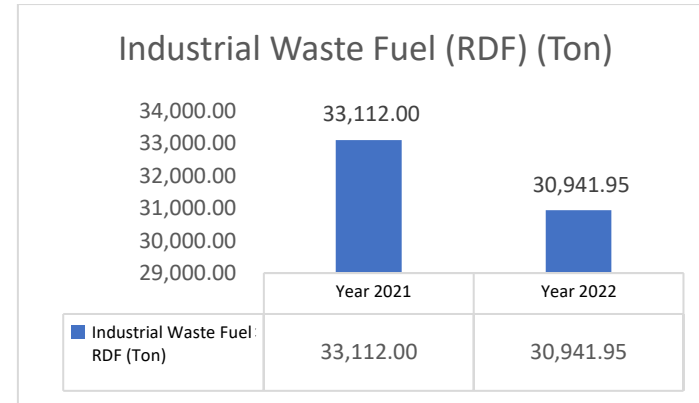
The graph shows the total amount of fuel oil consumption at all 3 sites of powerplants.

According to the graph shown the total amount of fuel oil consumption at all 3 sites of powerplants (which consist of biomass powerplants and waste-to-energy powerplant), in the year 2022 the amount of fuel oil consumption which mainly used in the fuel preparation operation has decreased from the year 2021 by 6%



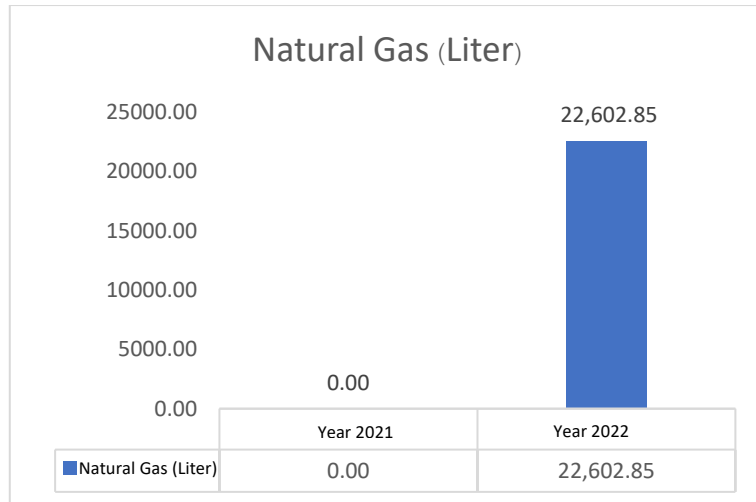
The graph shows the total amount of biomass fuel consumption.

According to the graph, the total amount of biomass fuel consumption in the year 2022 has increased from the year 2021 as in the year 2022, the biomass powerplants has continuously reached its full production capacity more than that of in the year 2021.



The graph shows the total amount of industrial waste fuel consumption of "CPX" Powerplant

According to the graph, the total amount of industrial waste fuel consumption in the year 2022 has decreased from the year 2021 as the frequency of suspension of operation due to maintenance in the year 2022 is more than that of in the year 2021.

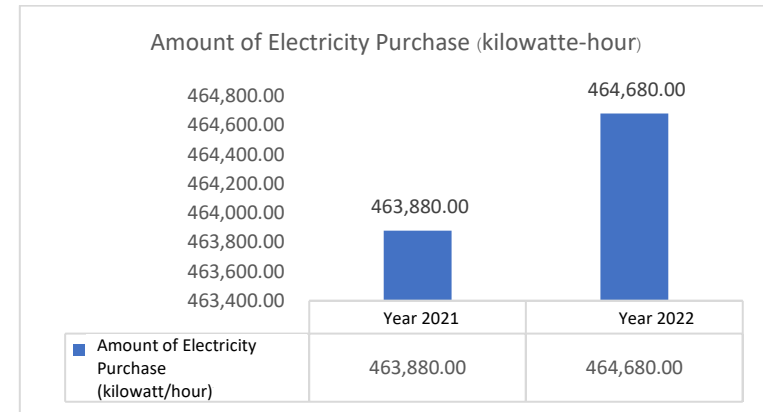


The graph shows the total amount of natural gas fuel consumption of “SPP” co-generation powerplant.

Remark: On 2021 November, the company acquired the co-generation powerplant which uses natural gas as a fuel in the company’s powerplant group. The powerplant started its operation later in the year 2022.

Thus, there is a report of the amount of natural gas fuel consumption in the year 2022 as the base year of using natural gas fuel for power generation in the powerplant group.

1.2 Electricity Consumption



The graph shows the total amount of electricity purchase of 4 sites of powerplants.

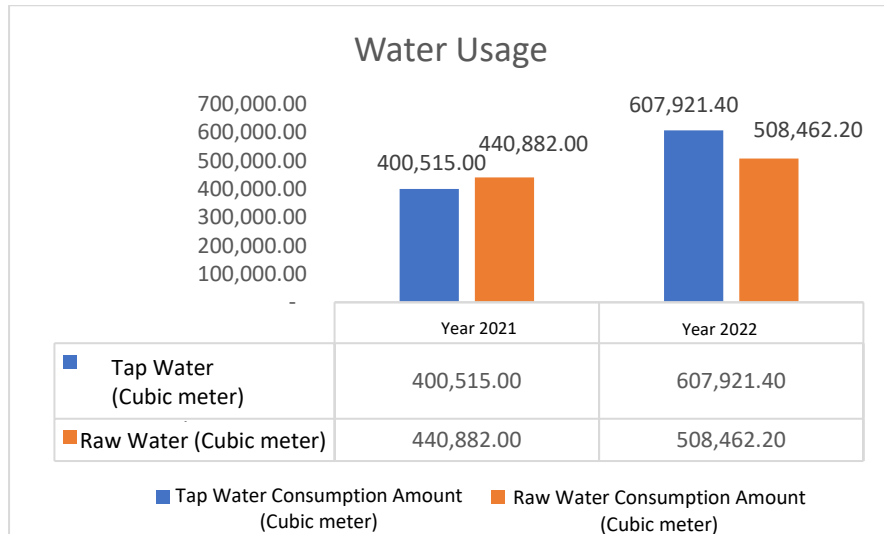
In terms of electricity purchased from PEA, the amount of electricity consumption is mainly from the office section and from that of the period of operation suspension due to maintenance. While during normal operation period, the power plant will use the generated electricity to operate the powerplant itself.

The above graph shown the overall electricity consumption in all 4 sites of powerplants indicates that the amount of electricity purchase in the year 2022 has slightly decreased compared to the year 2021 as a result of the less frequency in machine suspension due to the maintenance. However, In the year 2022, there was a purchase of electricity from “SPP” co-generation powerplant which resulted in a slight increase of overall electricity consumption amount in all 4 sites of powerplant.



2. Water Management

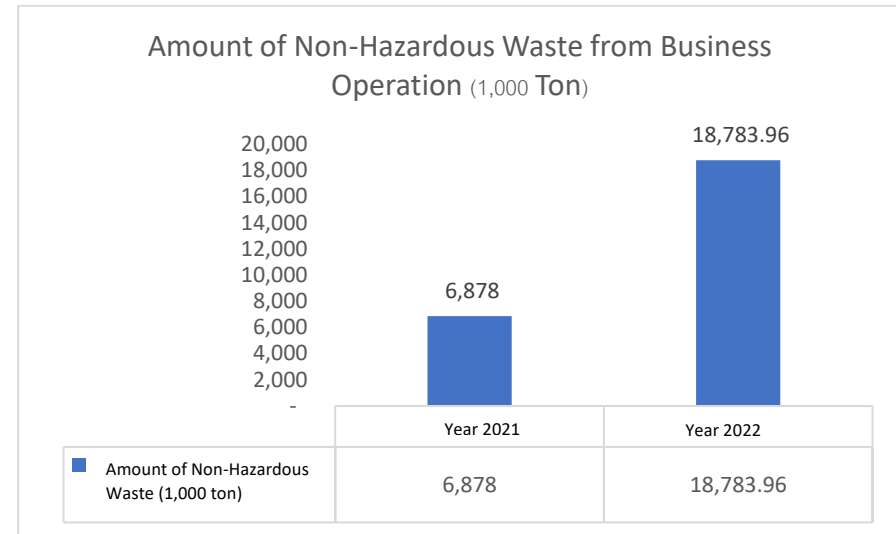
2.1 Water Usage



Graph shown the consumption amount of tap water and raw water in all 3 sites of powerplant.

The amount of water consumption within powerplants consists of 2 parts which are tap water and raw water. In the biomass powerplants “CVP” and “CPL”, the raw water is used for supply the cooling water distillation tower. Where as, the waste-to-energy powerplant “CPX” is located in the industrial estate area, so the source of tap water used in the production process is from the industrial estate. All powerplants recycled the water from the system to be reused as much as possible. With zero-discharge water management, treated water will not be discharged to natural water source.

3. Waste Management

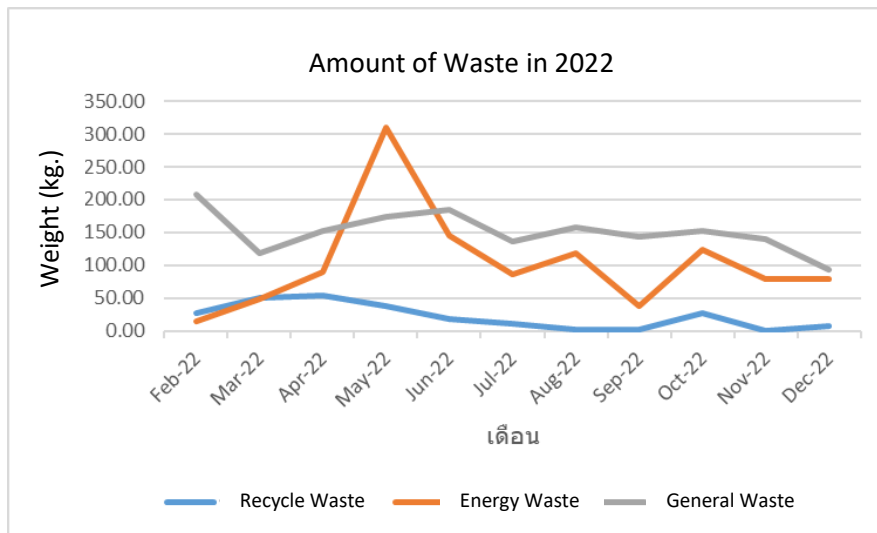


The graph shows the total amount of non-hazardous waste from business operation from all 3 sites of powerplant.

The report shows that the company’s waste only consists of non-hazardous waste and ashes from the power generation process in all 3 sites of the powerplant. The amount of garbage waste and biomass ashes has increased from the year 2021 due to the increase in the amount of biomass fuel consumption from 2 sites of powerplant which are “CPL” and “CVP”. Both biomass powerplants has disposed ashes by delivering to farmers to utilize the ashes to improve the soil quality.

CV and “Waste-to-Energy Project” Campaign for Waste Segregation in Organizations

In the year 2022, the company has launched the campaign of 7 type-waste segregation which are general waste, organic waste, energy waste, recycle waste, infectious waste, electronic waste and hazardous waste by using the online application to monthly record the amount of waste in each category at head office and all powerplant’s office sections. The company also has managed the waste in each category for further suitable management system. The recorded data shows that after waste segregation campaign, the amount of general waste has decreased, while the energy waste and recycle waste has been reused.



Graph shows the amount of waste trend after segregate the general waste from recycle waste.

in the year 2022

CV and management for Reducing Greenhouse Gas

The company group’s electricity production and distribution business mainly consists of renewable energy powerplants which uses agricultural residues as a fuel instead of fossil fuel to generate electricity. This is regarded as a way to help reduce the amount of greenhouse gas. In addition, “CPX” Powerplant uses energy waste which has been filtered only the part that can provide energy for power generation. (RDF Fuel). This help solve the excessive amount of waste problem occurred at landfills and make optimum use of the waste which is a large burden for community to find a large area for landfill.



In the year 2020, the company has calculated the amount of greenhouse gas emission (Carbon Footprint Organization) which has been verified by the external assessor at 53,333 tons of carbon dioxide.

Furthermore, the company also has assessed the carbon footprint product (CFP) in all 3 sites of renewable energy powerplant which consists of the biomass powerplants (CV and CPL) and the waste-to-energy powerplant (CPX) for the first year. Later, the result of the

assessment has been regarded to formulate the strategy of carbon footprint within organization in the year 2023.

Response to Global Greenhouse Gas Reduction Policy

1.TVERs Project

Currently, the Group’s power plant has complied with the criteria and has been certified for the Voluntary Greenhouse Gas Emission Reduction Project (TVERs), namely the Clover Phitsanulok Power Plant (CPL).

The amount of greenhouse gas reduction as registered on the TGO is **146,321** tons of carbon dioxide throughout 7 years of the credit period.

Previously in the year 2022, the amount of greenhouse gas reduction at the “CPL” powerplant which has been requested and verified was **68,114** tons of carbon dioxide from the COD date until 2021 December 31st with the period valid for carbon credit calculation until 2025 August 8th.



The Amount of Green House Gas Reduction From CPL Powerplant

(GHG reduction amount from TVER project-CPL)

	GHG Reduction (TonCO2)*	Note
The amount assessed throughout the powerplant project life period as registered the TVER certificate with TGO	146,321	20,903 TonCO2/year (7 year in total)
The amount verified and certified by TGO	68,114	2018 Aug 9 – 2021 Dec 31
2022 Jan 1 - Dec	18,555	GHG Reduction Assessment in the Year 2022

*Unit: ton carbon dioxide equivalent



2. Participation in Cooperation Networks for Reducing Greenhouse Gas in Private Sector

The company and affiliated company's group has a strong commitment to be a part of reducing global greenhouse gas emission by collaborating with government agencies, academic institution and experts for potential assessment and cooperating in the related process of reducing global greenhouse gas emission as followings.;

2.1 Participation in Thailand Carbon Neutral Network

Clover Power PLC has participated as a member of the network on the purpose of promoting cooperation among government, private and local/community sector to advance the greenhouse gas reduction, to build the sustainable growth on the climate-friendly-society, and aim to zero-net-greenhouse gas emission complying with the global community's intention which was indicated in the Paris agreement's goal concerning in climate change as well as connected in the Race To Zero campaign with UNFCCC.

2.2 Clover Power Powerplant at Pichit (CPX) has participated as member of Industrial Factory Network to Reduce Greenhouse Gas by Industrial Estate Authority of Thailand (IEAT) The powerplant has been selected for participating in this project in which Chiangmai University, as a project advisor, will conduct the survey and greenhouse-gas-reduction-potential assessment of the company which is planned to be in the year 2024 to continue reducing greenhouse gas emission in the future.



2.3 Project for Development of energy performance benchmark, safety and environment on very small biomass powerplants in the year 2022 by the Department of Industrial Works and The Energy Conservation Promotion Fund. The Clover Power's powerplant at Phitsanulok is one of the 20 powerplants that has been selected to participate in this project which will result in energy saving as a whole.



Activities and The Implemented Management Methods

The company has implemented and controlled the operation for strictly and consistently compliance with the environmental protection related law as well as procured and installed environmental protection systems aiming to maintain and avoid damaging environment in which the company has acted in accordance with the following guidelines.

- The company has a policy for pollution management within the powerplants as required by the law and perform inspection to prevent the pollution caused by the business operation spreading out to environment or outside of the powerplant's without any treatment.
- The company has operated the business by concerning environmental conservation and safety management standard. The company also comply with the legal requirements and regulations relevant to the environment, namely, Code of Practice: CoP by Office of The Energy Regulatory

Commission and report the environmental inspection result to the Department of Industrial Works.

- Air pollution is treated with electrostatic dust trap technology (ESP), and/or bag filter to eliminate the dust containing sulfur dioxide, nitrogen dioxide, and other gases produced before releasing through ventilation tunnel.
- All drainage water in all sites of powerplant was designed to discharge into the evaporation pond located in the powerplants. When the amount of drainage water accumulated until it overflowed, the water will flow back to the raw water pond and will be reused in the powerplants later. In other words, the drainage water systems with in the powerplant is zero-discharge -type in which the water will not be drained to the outside.
- The company discloses and inform the communities to acknowledge about pollution's type, category, concentration, harmfulness, analysis results, and effect as well as pollution management and control method.
- The company inform the communities to acknowledge about activities occurred within the powerplants, along with occurred problems and problem that might occur from the business operation.
- The company has guidelines to use natural resource, materials and equipment efficiently and effectively.
- The Company has a measure for natural resource conservation, namely, 3R Policy (Reduce, Reuse, Recycle) and promote a campaign for utilizing resources to its optimum benefits in both production process and in the office

Sustainability Management in Social Dimensions

Social Policy and Practice

The CV's core resolution is to have sustainable and balance coexistence of environment and communities. The company has a Corporate Social Responsibility: CSR policy on the basis of building business sustainability in order to create benefits for all group of stakeholders as well as to conduct the good corporate governance to develop the organization's sustainability. The company also committed to advance the community, and local economy's development and develop long-term social and environmental sustainability in which the company has operated according to the following policy and guidelines.

Overall Operation

Community

The company has been a part of providing social care services to the society and community nearby the powerplants, namely, temple, school, and community surrounding by the powerplants for their further sustainable development and better well-beings as following;

1. **The Company promotes the operation of community enterprises nearby the powerplants** by being a part of community's well-being development. For example, establishing a community surrounding powerplant development fund aiming for 3 main area development which are villages, schools, and temples. Also, establishing funds for internal protection within the lower northern part industrial estates (Phichit), solving the environmental impact, and community's participation in power generation and distribution project in the lower northern

part industrial estates (Phichit), This fund will promote in terms of social, education, and environment. In addition, the company provided support to community enterprises and community product 's activities as a channel to promote local products become well-known. For example, brown rice by Ban Thung Sai Community's Rice Center in Phitsanulok, dried dragon fruit products by Kaew Mungkorn Community Enterprise in Ban Thin sub-district, Local Mauhom Cloth from Phrae, a natural indigo-dyed fabric with local pattern design which is used for gift wrap and all-purpose cloth. Furthermore, the company provided support to held vocation training for community.



2. CV's Community Activities Promotion and Development

Promotion of Education

CV has an intention to enhance all aspects involving in local's education development and to be part of promoting activities nearby the powerplants as we recognized the importance of education which help develop knowledges, life quality and widen opportunities for young people. The activities are as follows;

Provide support for gift and reward in New-year celebration day, sports day, and children day to the school nearby the powerplants. For example, a group of school in Dong Prakhom sub-district, Phrom Phiram District, Phitsanulok province. Wachirabarami Kindergarten School (Ton Pradu) and Wat Nong Lum School, Nong Lum Subdistrict, Wachirabarami District Phichit Province. Ban Pao Pom Dong Yang School (Mittraphap 155 Road) ,Wang Chin District, Phrae Province.





Provided support in school budgets. such as providing budget support for food to Wat Khao Noi School in sport competition activity held by the group of school in Dong Prakhom sub-district, as well as sports day at Wat Wang Ngiv Ngam School, Dong Prakhom Subdistrict, Phrom Phiram, Phitsanulok. scholarship for music rehearsal and sport training to Wang Mok Pittayakom School and facility and conference room renovation to Wat Khao Noi School.



Provided support in Buddhism’s robe- offering for education to Wat Klang Wong Manee School, Nong Lum Subdistrict, Wachirabaramee District, Phichit.



Promotion of Community Development

Provided support in making survival kit for people who are quarantined and infected by coronavirus 2019 and house building project for impoverished persons in Dong Prakhom sub-district under Dong Prakhom Administrative Organization, Phrom Phiram District Phitsanulok.



Conducted satisfaction survey questionnaire for Fast-growing tree plantation activities in the project's demonstration area and fast-growing plantation's land development activities with Ban Khao Noi community enterprise, Phrom Phiram District, Phitsanulok.



Participated and provide support in community leader's sport activity and Subdistrict Headman day at Dong Prakhom Subdistrict, Phrom Phiram, Phitsanulok.



Supported procurement of fire extinguisher to Thung Ta Piao Temple, Dong Prakhom Subdistrict, Phrom Phiram District, Phitsanulok.



Supported sports activities for strengthening the relationship at Ban-Khok-Samo, Ban-Klong-Ai-Kai, Phrom Phiram District, Phitsanulok.



Visited and took care of bedridden elderly people nearby the powerplant's area in Phrom Phiram District, Phitsanulok.



Provided support in Community Service Standard Development Project's budgeting according to guideline of Government Easy Contact Center (GECC) in Wachirabarami District, Phichit.



Participated in Good Morning Governor Activity and meet with Phichit provincial governor.



Be part of holding the campaign exhibition and activity promoting new direction of living by minimizing the dust, prohibition of garbage burning, and segregating the waste for further utilization in Ban Khlong Subdistrict, Mueang District, Phitsanulok.



Provided budgeting support to install lighting appliance at the sport courts for local young people living in Wang Mokkh provincial administrative organization's area, Wachirabarami District, Phichit.



Participated in conference of elderly people who live in Nong Lum sub-district, Wachirabarami District, Phichit. The conference was held at Ban Bua Yang subdistrict Health Promoting Hospital as a guideline for taking care of elderly people living nearby the powerplants.



The company cooperated with Nong Lum Administrative Organization, Elderly Association, and HPH. Ban Bua Yang, firms in the industrial estate area, as well as, communities' leaders to visit the elderly and bedridden patients in total 24 people in all 12 villages at Nong Lum sub-district, Wachirabarami District, Phichit



Participated in village leader's civil service retirement party in Nong-Lum subdistrict, Wachirabarami District, Phichit.



Participated in Community Health Check Project in Nong-Lum subdistrict, Wachirabarami District, Phichit.



Provided support to exercise machine installation budgeting for Ban-Nong-Lum community, at Moo 12, Nong-Lum Sub-district, Wachirabarami District, Phichit.



Participated in activity of releasing fish into the community's water source Wachirabarami District, Phichit.



Participated in activity and provided reward support in To-be-Number-One project's activity to the schools in Nong-Lum subdistrict, Phichit.





Environmental Conservation Youth Camp “Let’s Grow Camp” for the elementary school students from Wat-Ban-Khao-Noi school in Phrom Phiram District, Phitsanulok and Ban Pao Pom Dong Yang School in (Mittraphap no. 155), Wangchin, Phrae

The environmental conservation youth camp was held on 2022 November 3rd-4th for the elementary school students from 1-6 grade of Wat Khao Noi School, Phrom Phiram District, Phitsanulok and Ban Pao Pom Dong Yang School in (Mittraphap no. 155).

The camp provided students outdoor education thorough trekking and station activity in the community forest along with visiting Clover Power powerplant in Phitsanulok and Phrae province. Also, the students experimented on the biomass energy and made nature-style art pieces.

The school and the community’s representatives are part of designing activities with CV and participating in all activities. The Let’s Grow camp has promoted the understanding about renewable energy and observing and maintaining the fertility of the community’s natural environment. The teachers also acquired knowledge about organizing Integrative learning’s activities for the children. Furthermore, the camp activity has built trust within the community regarding the powerplant management and sustainable co-existence of the powerplant and the community.



Religious and cultural promotion

The company provided support in Energy-efficient light bulb’s project to Wat Ton Pradu School, Nong Lum, Wachirabaramee District. Phichit.



The company provided support in flag parade tradition at Wat Khao Noi, Dong Prakham, Phrom Phiram District Phitsanulok.



The company provided support in sport event held during the end of Buddhist lent day and fire extinguisher procurement to Thung Ta Prew Temple, Dong Prakham, Phrom Phiram District, Phitsanulok.



The company participated in ceremony of presenting the Kathina robe to the monks at Wat Bua Yang Temple (Wat Sukkharam and Wat Klang Wong Mani Temple), Nong Lum Wachirabarami District, Phichit.



The company provided support in cultural inheritance of Loykratong traditions in Ban Khao Noi Community, Dong Prakham, Phrom Phiram District, Phitsanulok.



The company provided support in building the community's crematorium in Na Phun, Wang Chin District, Phrae.



The company provided support in local tradition, worshipping villager's shrine in Na Phun, Wang Chin District.



The company provided support in renovation and reparation of the underprivilege's house in Na Phun, Wang Chin District.



The company provided support in community's transportation route's development in Na Phun, Wang Chin District.



The company provided support in folk tradition of mother's day commemoration to the ethnic groups' villagers in Na Phun, Wang Chin District.



CV and The Organization’s Human Resource Development

In the year 2022, the company has a policy to develop the employee’s the competency and efficiency in accordance with the company’s direction and strategy along with being considerate of employees in various dimension with **IG³ Organization Culture**



Grit: Fight with Difficult Challenges Life that consistently thrives by overcoming “difficult challenges” is a screening test for going forward. Those **who are determined to strive and fight through difficulties and challenges until the end** have tenacity to reach the goal.

Passion in self-development if we stay in the same place for a long period of time and do nothing, it can mean we eventually “slip backwards” Those who have passion in self-development will always find opportunities to learn, be inquisitive and **look for the opportunity in crisis or problems** which is a core essence of people who tend to be successful in their career.

Goodness: Benevolence The world in the next generation will be advanced in both materialism and **technology. However, the society relies on both technology and virtue development.** Moral and Ethics fulfill “Human Beings” To have moral and ethics and good conduct is **important for living in the present and future world** for the sake of individual, society and world’s peace.

Innovative: Develop innovation learning, recognition and expansion with changes and promotion of technology development by implementing innovation. Those who are passion in doing something different from others aiming to create works more valuable by leaps and bounds will be distinguished and will receive recognition.

The number of employees in the CV powerplant’s in the year 2022



Employee’s Compensation

As mentioned in the Corporate Governance Structure topic under The Determination of Executives and Employee Compensation subject

The company's personnel training and development is as following;

1. Total Training and Seminar Expense in the year 2022: 2,651,994 THB
2. Total average training hour per person in the year 2022: 13.3 hours.



The company has set the goal to each employees to attend training in accordance with company's direction and strategy in order to create ability and efficiency for employees in their operations and career development. The company has held both internal and external training in various topics related to business operation and ethics.

In additions, the company consistently creates training plan and provide support in budget as well as encouraging the communication aiming to share and manage knowledges (Knowledge Management) among all employees within the organization.

Building curriculums that are important for employees is part of personnel management and development which consists of compulsory courses and competency development courses.

Compulsory Courses are the courses that all employees must attend. The course is designed especially for employees who are specialists.

First orientation course for new employees

The course emphasizes on providing information and basic suggestion about company's businesses and other related businesses to make an understanding of organization structure management, company's history and organization culture as well as company's product and technology used in production in order to enable employees to aware and understand company's circumstances. This will enable them to adapt their behavior to get along with colleges and working society within the organization more smoothly and quickly.

Compulsory course safety and Occupational Health and Safety

The company provides employees education and training about Occupational Health and Safety. We recognize an importance of employee to have an understanding and Occupational Health and Safety skill. The course in the year 2022 is as followings.;

1. Safety with Chemicals and Dangerous Good Training
2. Fire Fighting and Evacuation Training in the year 2022
3. Chemicals and Dangerous Good Spill Respond Training in the year 2022

Competency development courses

The company group is aware of skill development and learning as well as consistently provide support in employee's competency development related to business operation by establishing the curriculum emphasizing on strengthening the management knowledge, leadership development and other skills related to the company's operation to all level of employees for the efficient competency development as followings;



Executive Group

The courses and subjects for this group emphasize on knowledge related to modern management and advance management skill. These courses enable them to set the directions and goals of the organization that are able to deliver the expected results as well as allow them to keep up with the rapid changes. The courses provided for top executives are as following;

1. Growth Mindset for Greater Performance
2. Action Learning
3. Mind map Thinking for Business

Courses for Staff Level

1. Basic Steam Turbine
2. Check sheet start up turbine CPL
3. Reduction Gear
4. Generator
5. Steam Ejector and Surface Condenser
6. Vibration and Balancing (Powerplant Equipment for operators)
7. Deferred Tax Documentation
8. Making Standard Financial Report

Courses For Powerplant Staff

1. Fundamental Physics for Powerplant
2. Self- Maintenance

Internal Competency Skill Development Courses For All Level Of Employees

1. Microsoft Office 365: Sway, Form, Basic Power BI
2. Convenient life with Excel Course

3. Happy Money Course

There are 16 courses that directly promote the vocational skills and also, 6 courses related to social skills.

Occupational Safety, Health and Environment

Powerplant Safety Statistic	Year 2021	Year 2022
Lost Time Injury Rate (Time)	0	0

The Company and Employee Bonding

The company consistently encourages local employment within the powerplant area.

In the year 2022, there were 46 people in local employment. The percentage of local employment in each powerplant area are as below;

Employee Bonding	Year 2021	Year 2022
Percentage of employee who voluntary resign (%)	20%	24%

Powerplant	Powerplant of Local Employment
CVP	47%
CPL	64%
CPX	15%

CV Promote and Provide Employee Welfare

1. The company establish the provident fund (PVD) for the employees as a channel to encourage saving and build security for employees. There are 69% of all employees participated in this fund.
2. In the year 2022. The company has consistently implemented measures and taken care of employees throughout the coronavirus-2019 outbreak period.

CV and Organization Culture Movement Activities in The Year 2022

1. Monthly CV Talk activity -to share the company's latest news, communicate and discuss between executives and employees along with various activities that allow employees at the headquarters and power plants join together.

2. Company Value Promotion Activity Regarding GRIT: Fight with Difficult Challenges In CV Run Challenge 2022 Project

The project is to collect total accumulated distance run aiming at 55,559 kilometers. (Project period: 1 Year). The project also includes small activities held throughout the project period such as the employees participated in Phrae Marathon Event at Phrae province, Bang Saen Marathon event, Doi Inthanon Trail Running event by UTMB, CV Plogging day 2022 activity where employees jogging with picking up litters around the company's office and powerplants and etc. Not only this project promotes the company's value called Fight with Difficult Challenges and unity but also, promotes the employee's health.

3. Company Value Promotion Activity Regarding "Good", Act of Kindness

The company held and allow employee to participate in activities that promote act of kindness in the society and develop their spiritual which are **Perennial Tree Growing activity** held around the co-generation Powerplant (SPP) in Saraburi Province, **Blood Donation activity, Water and Refreshment Stations at Phrae Marathon 2022 Event, Turn Clays Into A Star Activity** (it is a mindfulness activity by molding the clay and utilize biomass ashes, the residue from power production process, as part of clay molding and coating)

3.5 Let's Grow Camp Activity the company held 2 sites of environmental conservation youth camp for elementary students from level1-6 at the schools nearby the CPL and CVP powerplant. The CV employees, community representatives and groups of teacher participated in workshops to design the activities and to be student's mentor throughout the camp period.

3.6 CV Plogging Day 2022 Activity: jogging with picking up litter around the company office and powerplants which allows executives and employees to parts of the activity together. **Also, the company organized this activity to reflect on the role of being the environmentally conscious organization and a waste-to-energy powerplant firm who separate and utilize refuse as an energy waste.**





CV and Corporate Governance

Human Rights and Ethical Labor Practices

Employees are considered as important resources for the company and business operation. To promote quality of labor skill and technique and individual competency development will consistently and sustainably lead employees and the company to success together.

The company recognizes the importance of personnel. Therefore, we promote personnel development to be knowledgeable and skillful human resources and treat others or labors with justice. Furthermore, the company focuses on occupational Health and Safety of all employees and considers it as a company fundamental responsibility along with treating employees fairly based on good governance and ethics.

Labor Respect and Fair Treatment

The important principles regarding this subject includes;

- Treat all employees with equality by strictly complying to human rights. This principle is the foundation of human resource development which is considered as a part of company's operation that all executives, directors and employees must follow accordingly.
- Provide variety of benefits and welfare in which employee should receive from the company such as vacation leave, Overtime compensation, accommodation allowance, Risk-area allowance, uniform, group health insurance and other welfare related to health promotion and club activities, etc.
- The company recognize an importance of consistent competency development to all employees by promoting knowledge development and

career development to employees. Furthermore, the company also held various activities that connect relationship among employees and between employees and the company as well as external stakeholders.

In addition, the company encourage local employment in certain areas to build a warm society and family and to promote the economy within the communities.

- The company cultivates employees to have conscience and concern of safety and risk prevention in operation as well as responsibility to the environment by consistently attending the training provided by the specialist and internal activities. Also, the company complies by the law and regulations related to occupational safety, health and environment by determining prevention and reduction method of the pollution occurred in power production process along with utilizing the existing natural resources to its optimal uses.
- The company encourages and build the working environment that promotes employee productive co-working, safety and hygiene by creating preventive measure and provides protective equipment for employees during operation as well as consistently suggesting solutions to the problems occurred during operation.
- The company also equally and regularly hears the comments and suggestions from all levels of employees via two communication channels.
- Promote and build value in organization culture in which sexual harassment is not acceptable. The company also promotes equality among individuals and treats each other with respect by creating good working environment on the basis of problem prevention along with enhancing understanding of sexual behavior.

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