

EMPOWERING SUSTAINABILITY



Management Discussion and Analysis (MD&A)

2021


EXECUTIVE SUMMARY

Operating Highlight	YE20	YE21	Change +/-	Change %
Unit : THB million				
Operating Revenue*	650.9	779.7	128.8	20%
Gross Profit	236.2	278.6	42.4	18%
EBITDA	309.7	374.8	65.1	21%
Net Profit	166.9	202.1	35.2	21%
Gross Profit Margin (%)	36.3%	35.7%	-0.6%	-1.5%
EBITDA Margin (%)	47.6%	48.1%	0.5%	1.0%
Net Profit Margin (%)	25.6%	25.9%	0.3%	1.1%

* Excluded revenue from construction under a concession arrangement

- In 2021, the Group reported operating revenue (excluded revenue from construction under a concession agreement) of Baht 779.7 million, increased by Baht 128.8 million or 20%. The increase in operating revenue was mainly due to revenue recognition of TBP power plant, which has started its commercial operation in May 2021. In addition, there is revenue recognition from steam sales to the related parties since July 2021.
- In 2021, the Group reported the gross profit margin of 35.7%, slightly decreased from 36.5% in 2020. It is mainly due to the gross profit margin from steam sales is lower than gross profit margin from electricity sales.
- The net profit margin of the Group was Baht 202.1 million, increased by Baht 35.2 million, or 21%. It is mainly due to the revenue recognition of TBP power plant, whose production capacity is 9.9 MW.
- In 2021, the Group reported the EBITDA margin of 48.1%, slightly increased from 47.6% in 2020, and reported the net profit margin of 25.9%, slightly increased from 25.6% in 2020. It is mainly due to some administrative expense of TBP power plant, which is shared with TGE power plant, such as management compensation expense. Therefore, the shared administrative expenses within the Group does not increase along with the operation of TBP power plant.



2021 SIGNIFICANT EVENTS



Conversion to Public Limited Company to prepare for submit filing to be listed in the Stock Exchange of Thailand

- TGE has converted to public listed company to prepare for submit filing to be listed in the Stock Exchange of Thailand.
- TGE increased its registered share capital from Baht 800 million to Baht 1,100 million, and registered additional shares capital from 1,600 million shares to 2,200 million shares



Commercial operation of TBP power plant

- In May 2021, TBP power plant started its commercial operation and sales to the Provincial Electricity Authority.
- In July 2021, TBP power plant started selling its steam to the related parties to increase its Steam Boiler's effectiveness.



Community Waste power plant

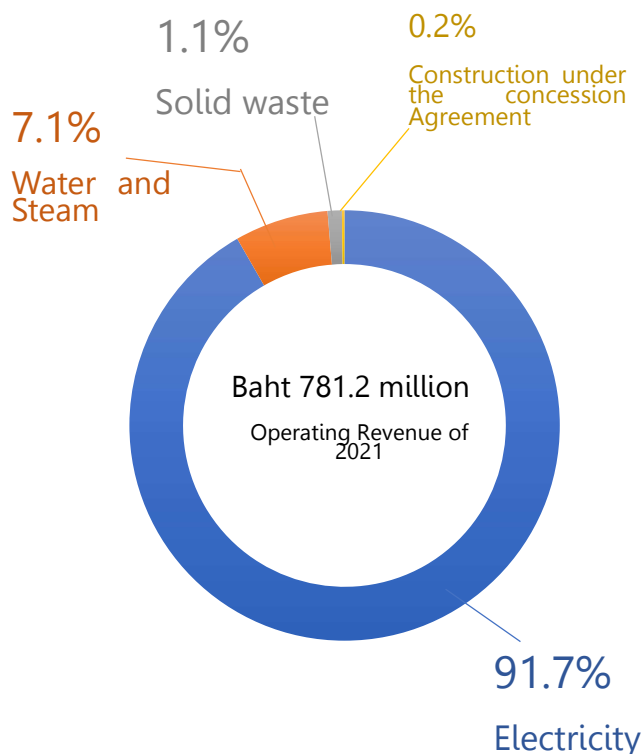
- Community Waste power plants are under development and already selected by the local government organization. It is in the process of waiting for power purchase announcement from the Office of the Energy Regulatory Commission (ERC). The three subsidiaries selected by the local government organization are TES SKW located in Wattana Nakhorn District in Sa Kaeo Province, TES RBR located in Mueang District in Ratchaburi Province, and TES CPN located in Mueang District in Chumphon Province. In total, these thress projects have a production capacity of 22 MW.
- In October 2021, TES RBR entered into Waste Disposal Agreement with Ratchaburitown Municipality.

2021 FINANCIAL PERFORMANCE

OVERALL OPERATING RESULTS

	YE20	YE21	Change +/-	Change %
Unit : THB million				
Operating Revenue	707.8	781.2	73.4	10%
Cost of Sales	-471.6	-502.6	-31.0	7%
Gross Profit	236.2	278.6	42.4	18%
Other income	5.7	26.3	20.7	365%
Administrative expenses	-30.9	-53.1	-22.2	72%
Gain (loss) on exchange rate	0.2	-1.8	-1.9	-1210%
Finance Cost	-44.9	-47.6	-2.7	6%
Profit before tax	166.3	202.5	36.2	22%
Income Tax	0.6	-0.4	-1.0	-155%
Net Profit	166.9	202.1	35.2	21%

Operating Revenue Structure



REVENUE FROM ELECTRICITY

Energy from Biomass consists of 3 projects: TGE, TPG, and TBP. The raw material used to produce electricity are chopped palm bunch, palm fibers, chopped root, chopped palm truck. It has a total capacity of 29.7 MW, mainly distributed to the PEA and other private companies not in the TGE Group.

REVENUE FROM WATER AND STEAM

Revenue from the sales of reverse osmosis (RO) water and steam to companies not in the TGE Group.

REVENUE FROM SOLID WASTE MANAGEMENT

Revenue generated from the waste power plant in Sa Kaeo province, which is the revenue generated from waste disposal service for local authorities and related municipalities in the province. The power plant projects in Ratchaburi and Chumphon province will begin service once the power plants construction complete and start their commercial operation.

REVENUE FROM CONSTRUCTION UNDER CONCESSION AGREEMENT

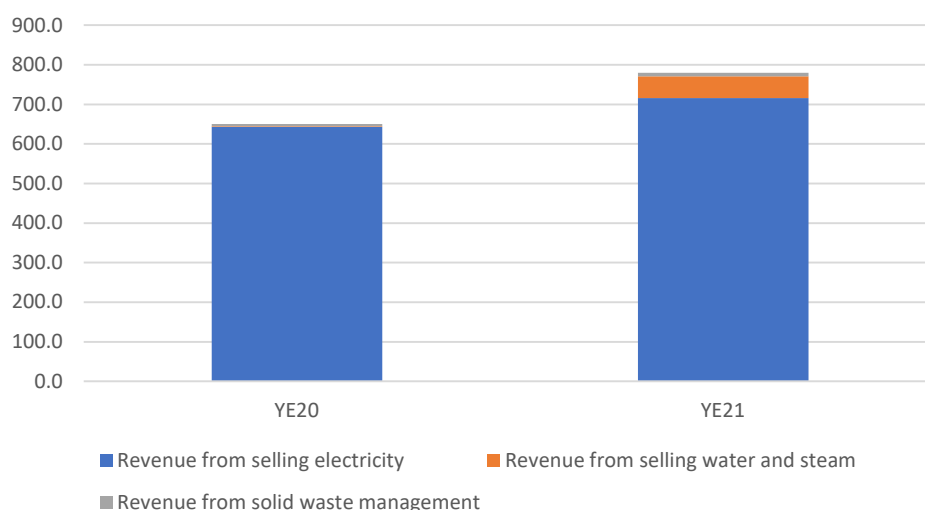
Revenue from construction of solid waste power plant, with an important condition that assets will be transferred to local government agencies upon the expiration of the Solid Waste Disposal Agreement, where income is recognized equal to the cost according to the accounting policies.

BUSINESS OVERVIEW BY CATEGORY

REVENUE BREAKDOWN	YE20	YE21	Change +/-	Change %
Unit : THB million				
Revenue from selling electricity	716.3	643.4	72.8	11%
Revenue from selling water and steam	55.1	1.5	53.6	3584%
Revenue from solid waste management	8.3	6.0	2.3	38%
Revenue from construction under concession agreement	1.5	56.9	-55.4	-97%
Total Operating Revenue	781.2	707.8	73.4	10%
Other Income	26.3	5.7	20.7	365%
Total Revenue	807.5	713.5	94.0	13%

1. Operating Revenue

Unit THB million



*Excluded revenue from construction under concession agreement

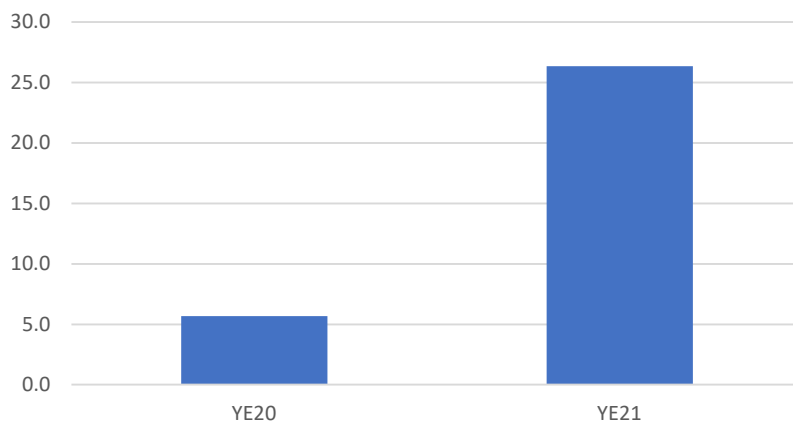
In 2021, the Group reported the operating revenue of Baht 807.5 million, increased from 2020 by Baht 94 million, or 13%, mainly due to:

- Revenue from selling electricity was Baht 716.3 million in 2021, increased by Baht 72.8 million, or 11%, mainly due to revenue recognition of TBP power plant which started its commercial operation in May 2021.
- Revenue from selling water and steam was Baht 55.1 million in 2021, increased by Baht 53.6 million, or 3,584%, mainly due to revenue recognition from selling steam of TBP power plant to related parties since July 2021.
- Revenue from solid waste management was Baht 8.3 million in 2021, increased by Baht 2.3 million, or 38%, mainly due to additional waste management services provided to private companies.
- Revenue from construction under concession agreement is the revenue recognition measured by the cost of power plant construction in each period. In 2020, there was construction of landfill, water treatment system, and other assets of TES SKW.

BUSINESS OVERVIEW BY CATEGORY

2. Other Income

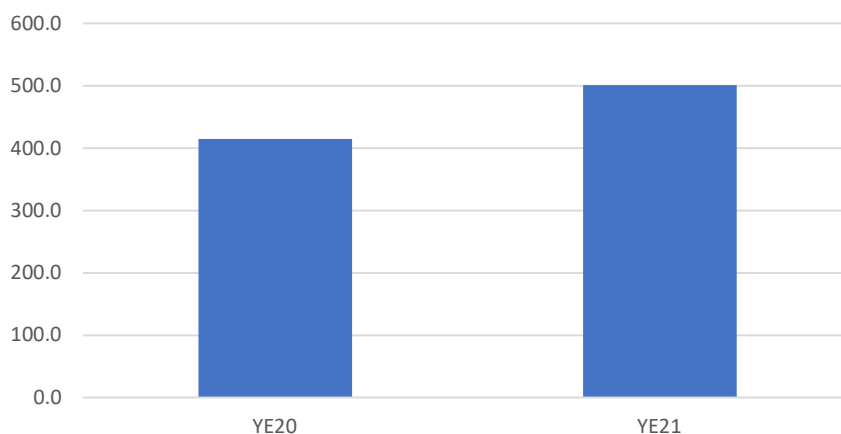
Unit THB million



In 2021, the other income was Baht 26.3 million, increased by Baht 20.7 million, or 365% mainly due to insurance compensation income according to machinery fire incident in 2021, while there was no such event in 2020.

3. Cost of Sales

Unit THB million

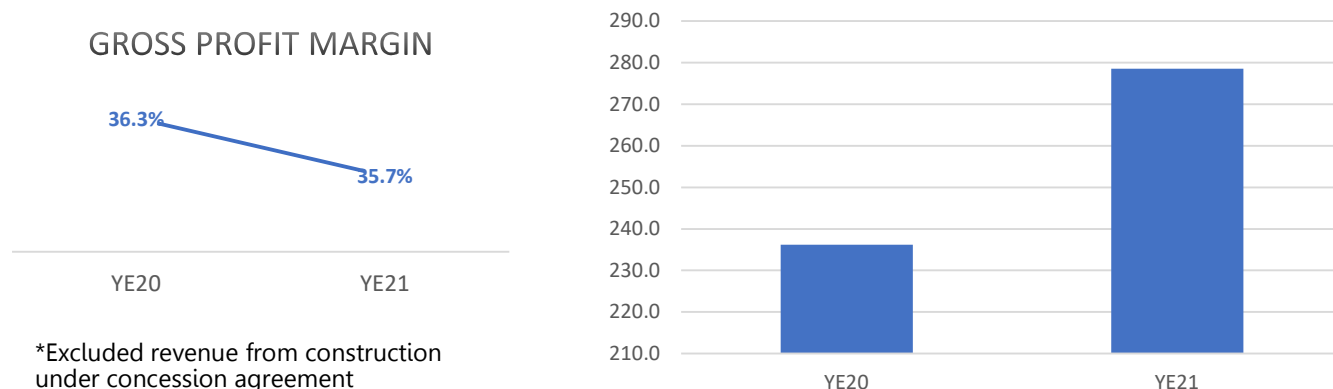


In 2021, the Group reported cost of sales of Baht 501.1 million, increased from 2020 by Baht 86.4 million, or 21%, which was in line with increased sales revenue of TBP power plant. The main cost of sales are cost of raw material, and depreciation of plants and equipment.

BUSINESS OVERVIEW BY CATEGORY

4. Gross Profit and Gross Profit Margin

Unit THB million, %



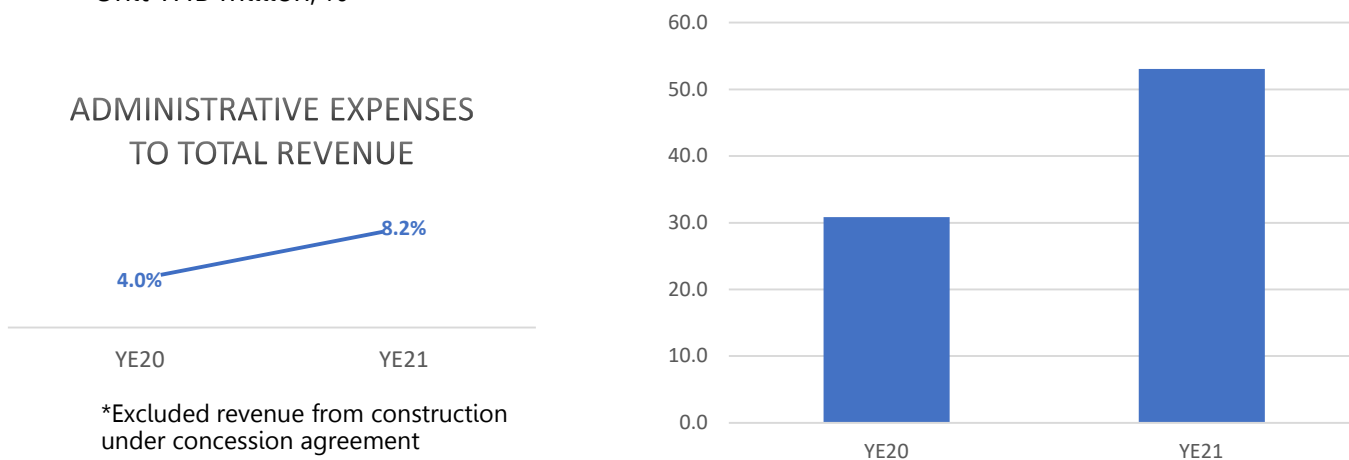
*Excluded revenue from construction under concession agreement

Gross Profit: In 2021, the Group reported gross profit of Baht 278.6 million, increased from 2020 by Baht 42.4 million, or 15%, mainly due to commercial operation of TBP power plant in May 2021.

Gross Profit Margin: In 2021, the gross profit margin was 35.7%, slightly decreased from 2020, which the gross profit margin was 36.3%. It is because the gross profit of steam sales is lower than electricity sales.

5. Administrative expenses

Unit THB million, %



*Excluded revenue from construction under concession agreement

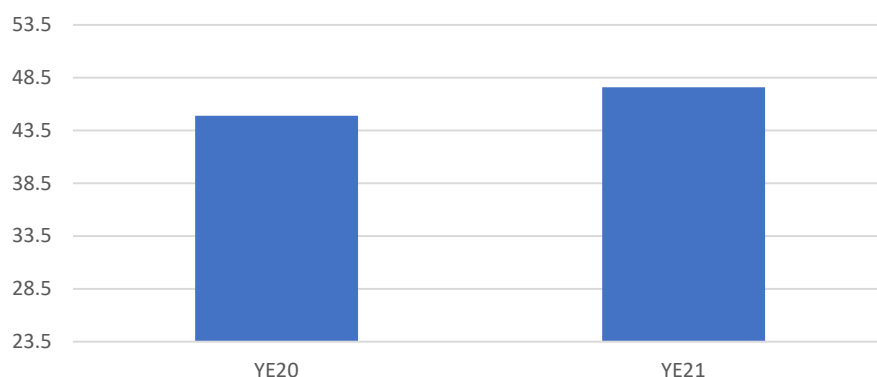
Administrative expenses: In 2021, the administrative expenses was Baht 53.1 million, increased by Baht 22.2 million, or 72%, mainly due to loss from machinery written-off from fire accident in 2021, amounting to Baht 21.3 million.

Administrative expenses to total revenues: The administrative expenses to total revenues was 8.2% in 2021, increased from 4.0% in 2020, mainly due to loss from machinery written-off from fire accident in 2021, which there was no such accident in 2020. However, the Company received the insurance compensation from the same case, which was presented under other income in 2021.

BUSINESS OVERVIEW BY CATEGORY

6. Finance Costs

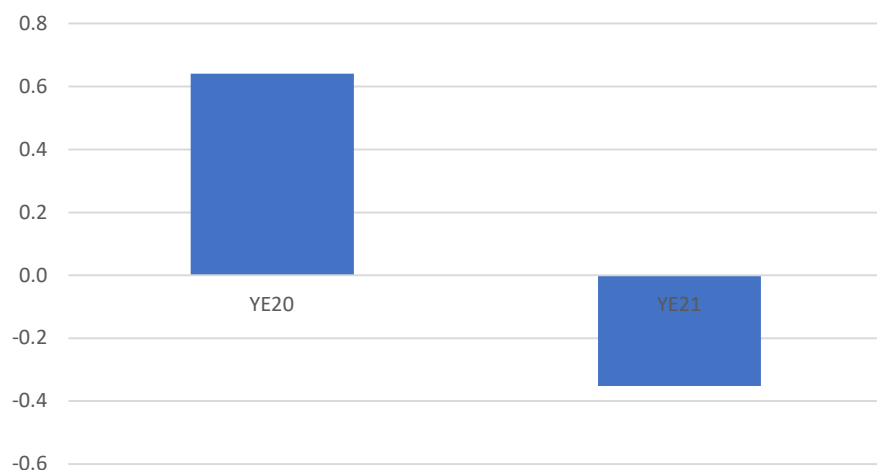
Unit THB million



The Group reported finance costs of Baht 47.6 million, slightly increased from 2020 by Baht 2.7 million, or 6.1%. It is because in 2020, TBP power plant was under construction, so the finance costs were capitalized as borrowing costs, which was a part of assets under construction. After the commercial operation in May 2021, the finance costs were recognized as expenses of the Group.

7. Income Tax

Unit THB million



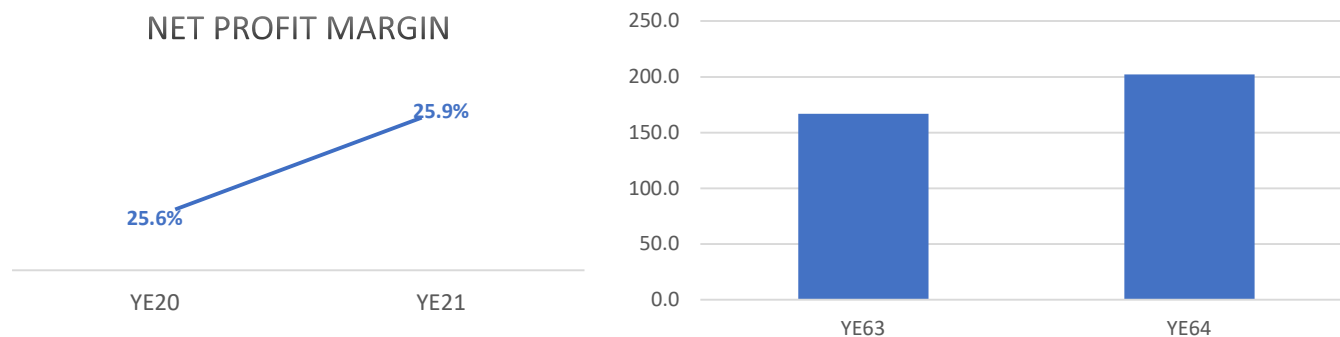
In 2020, the Group recognized deferred tax assets arising from provision, which resulted in income tax income. However, there was a reversal of the provision in 2021 according to the accounting standard, resulted in decreased deferred tax assets.

For income tax expense, the Company and two subsidiaries, who are the biomass power plants, received the right and privilege from the Board of Investment (BOI), by receiving corporate income tax exemption from the promoted operations, with the amount of not exceeding 100% of investment amount for the period of 8 years, commencing on the first date that the company generates revenue from the promoted operation.

BUSINESS OVERVIEW BY CATEGORY

8. Net Profit and Net Profit Margin

Unit THB million, %

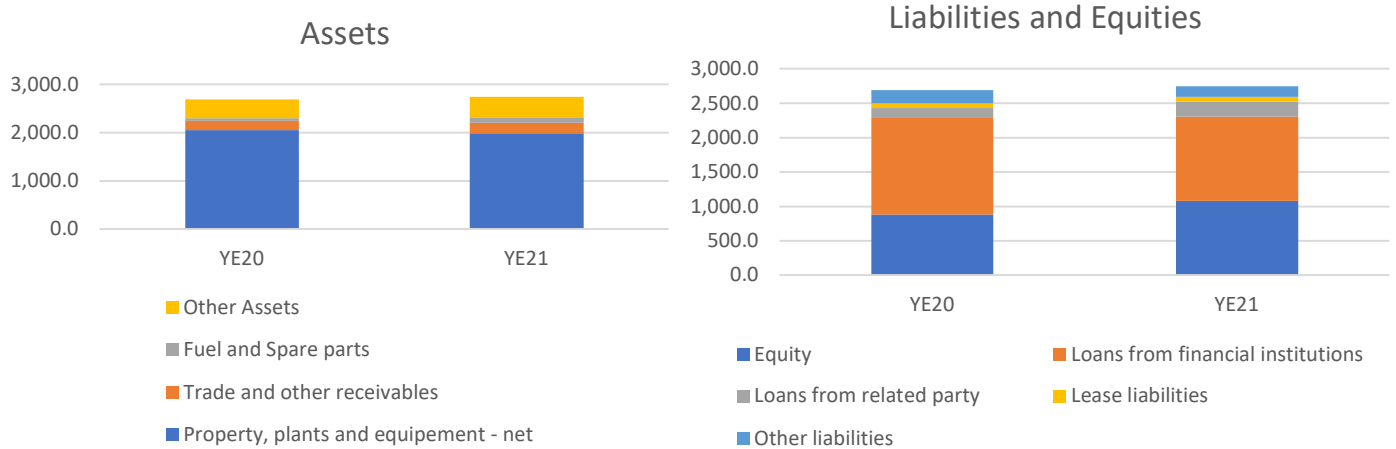


Net Profit: The Group reported net profit in 2021 of Baht 201.1 million, increased from 2020 by Baht 35.2 million, or 21%, due to commercial operation of TBP power plant in May 2021.

Net Profit Margin: The net profit margin in 2021 was 25.9, increased from 2020, which had the net profit margin of 25.6%. This represents the Group’s capability in maintaining the profit margin.

The Statement of Financial Positions

Unit THB million



Assets

As at December 31, 2021, the Group reported the total assets of Baht 2,748.1 million, increased from 2020 by Baht 57.7 million, or 2.1%. The main changes were from:

- Increase in fuel and spare parts of Baht 61.1 million, because the Group reserved the raw material to be used in electricity production of TBP power plant, while there was no reserve for TBP in 2020.
- Increase in trade and other receivables of Baht 28.7 million, because the Group had receivable balance from insurance compensation in 2021.
- Decrease in plants and equipment of Baht 68.6 million, because of assets written-off from fire incident, and depreciation for the period.

Liabilities

As at December 31, 2021, the Group reported total liabilities of Baht 1,664.9 million, decreased from 2020 by Baht 145.6 million, or 8%. The main changes were from:

- Decrease in loans from financial institutions of Baht 186.3 million because of loan repayments according to the loan agreements.
- Increase in loans from related party of Baht 76.8 million because it was used for investment in three solid waste power plants, which are TES SKW, TES CPN, and TES RBR.

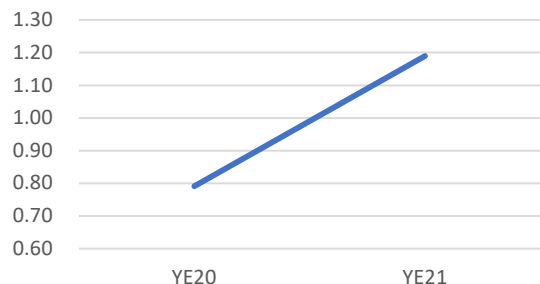
Equity

As at December 31, 2021, the Group reported the equity of Baht 1,083.2 million, increased by Baht 203.3 million, or 23.1, mainly due to the Group's operating result for the year.

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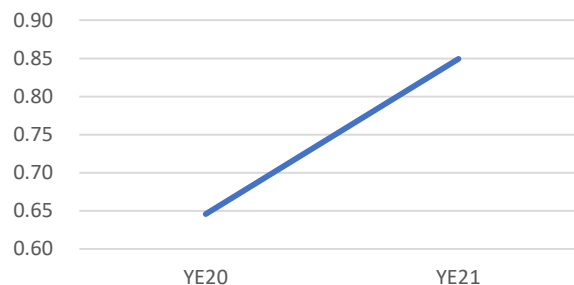
Current Ratio

Unit Times



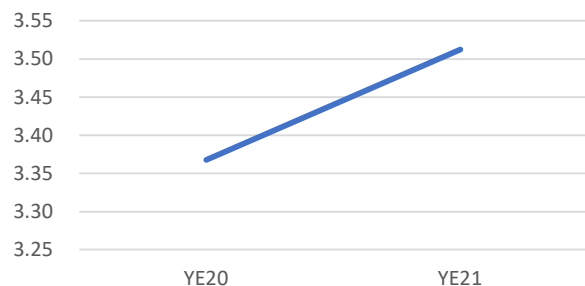
Quick Ratio

Unit Times



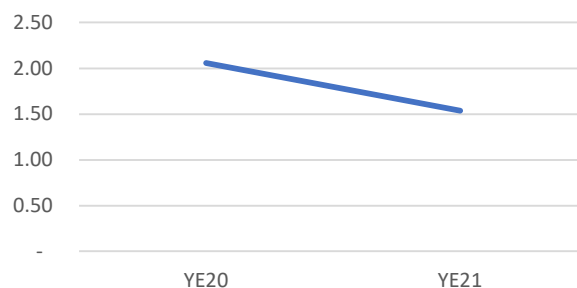
Account Receivable Turnover Ratio

Unit Times



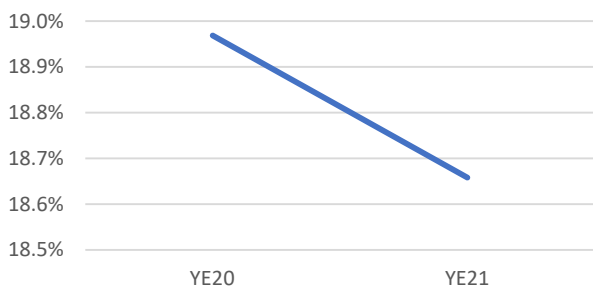
Debt to Equity Ratio

Unit Times



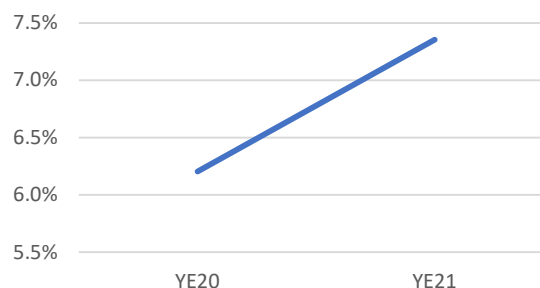
Return on Equity

Unit %



Return on Assets

Unit %



Appendix

The Group's power plant business, has 2 types of fuel in production

1. Biomass Power Plant Project, 3 plants have COD, shown in the table:

Power Plant /Location	Operated by	Type / Fuel	Capacity (MW)	Amount of electricity offered or long-term sales (MW)	COD date
TGE Biomass Power Plant Project (Tha Chang District, Surat Thani Province)	TGE	VSPP / biomass	9.9	7.2	8-May-14
TPG Biomass Power Plant Project (Tha Chang District, Surat Thani Province)	TPG	VSPP / biomass	9.9	9.7	7-Nov-19
TBP Biomass Power Plant Project (Tha Chang District, Surat Thani Province)	TBP	VSPP / biomass	9.9	3.4	25-May-21
Total			29.7	20.3	

2. Community Waste Power Plant Project

2.1 3 projects under development as shown in the table:

Power Plant / Location	Operated by	Type / Fuel	Capacity (MW)	Amount of electricity available for sale (MW) ¹	COD date
TES SKW Community Waste Power Plant Project (Wattana Nakhon District, Sa Kaeo Province)	TES SKW	VSPP / Community Waste	8.0	6.0	By 2024
TES RBR Community Waste Power Plant Project (Mueang District, Ratchaburi Province)	TES RBR	VSPP / Community Waste	8.0	6.0	By 2024
TES CPN Community Waste Power Plant Project (Mueng District, Chumphon Province)	TES CPN	VSPP / Community Waste	6.0	4.0	By 2024
Total			22.0	16.0	

2.2 4 projects the Group is in the process of bidding with the local government as shown in the table:

Power Plant / Location	Operated by	Type / Fuel
1. TES PRI Community Waste Power Plant (Prachinburi Province)	TES PRI	VSPP / Community Waste
2. TES CNT Community Waste Power Plant (Chainat Province)	TES CNT	VSPP / Community Waste
3. TES UBN Community Waste Power Plant (Ubon Ratchathani Province)	TES UBN	VSPP / Community Waste
4. TES TCN Community Waste Power Plant (Samut Sakhon Province)	TES TCN	VSPP / Community Waste