



บริษัท ทีพีซี เพาเวอร์ โฮลดิ้ง จำกัด (มหาชน)
TPC POWER HOLDING PUBLIC COMPANY LIMITED



Management's Discussion and Analysis (MD&A)

For a Year Ended December 31, 2021

No. TPCH-SC-001-02/2565

18 February 2021

Subject: Management's Discussion and Analysis of a Year Ended December 31, 2021

**To: Managing Director and Manager
Stock Exchange of Thailand**

TPC Power Holding Public Company Limited and its subsidiaries are pleased to announce our performance regarding the financial statement for a year ended December 31, 2021.

TPC Power Holding Public Company Limited is a company that primarily invests in subsidiaries that operate renewable energy power plants. The company focuses on maximizing cost management by purchasing fuel from agricultural waste materials around power plant areas. We also promote the creation of local careers through the employment system by using personnel in the areas surrounding the power plants to ensure stability at levels appropriate to the electricity demand.

Events in 2021

▪ Dividends Payment of 2021

On February 17, 2022, the Board of Directors' meeting of the Company No. 1/2022, the Board of Directors resolved to propose to the Annual General Meeting of Shareholders to consider and approve the dividend payment for the year 2021 at 0.396 baht per share, amounting to 158.87 million baht. The dividend for the year included an interim dividend of 0.343 baht per share, amounting to 137.61 million baht, which the company had already paid on December 7, 2021. Therefore, an additional dividend of 0.053 baht per share is scheduled to be paid to shareholders on May 18, 2022, amounting to 21.26 million baht from net profits subject to corporate income tax. Individual shareholders can apply for tax credit in full. The company has allocated the reserve fund as required by law. The payment of such dividends is subject to approval from the Annual General Meeting of Shareholders of the Company on April 21, 2022.

▪ ESG100

The company was selected for the ESG100 (Environmental, Social and Governance) in 2021 for sixth consecutive year since 2016. THAIPAT selected 100 companies which have outstanding sustainability performance to construct the ESG100 list as a starting group of the 100 publicly listed companies addressing the growing demand on sustainable investments according to the GISR (Global Initiative for Sustainability Ratings).

▪ Affirmed the corporate rating at "BBB-" with the outlook for "stable" from Tris Rating

The company's stand-alone credit profile remains at "BBB" with a "stable" outlook, reflecting predictable cash flows from long-term power purchase agreements. Profit before interest expense, tax, depreciation, and amortization of the Company's power plants dropped to around 35-40% due to the business impact from the Covid-19 epidemic. TRIS Rating adjusted the company's rating to "BBB-" following the downgrade of Thai Polycons Public Company Limited.

▪ Thailand Energy Award on renewable energy

Satun Green Power Plant (SGP) received an outstanding award from the Thailand Energy Award 2021 for the on-grid renewable energy category. It is organized by the Department of

Alternative Energy Development and Efficiency (DEDE) to select entrepreneurs and agencies with outstanding sustainability in energy conservation according to the government policy.

■ **Acquisition of additional shares in subsidiaries**

On October 8, 2021, the Board of Directors has approved the Company to purchase ordinary shares of its subsidiaries as follows:

Acquired 10,662,500 shares of Pattani Green Company Limited, accounting for 26.36% of the registered capital, from Narapara Company Limited.

Acquired 2,990,000 shares of TPCH Power 1 Company Limited, accounting for 11.50% of the registered capital from Mr. Sombat Chairatmanokorn.

Acquired 2,860,000 shares of TPCH Power 2 Company Limited, accounting for 11.00% of the registered capital from Mr. Sombat Chairatmanokorn.

Acquired 2,000,000 shares of TPCH Power 5 Company Limited, accounting for 10.00% of the registered capital from Mr. Sombat Chairatmanokorn.

The company invested a total amount of 203,000,000 baht, with the megawatts offered for sale before and after the purchase of ordinary shares as shown in the table below.

Company	Megawatts offered on PPA (MW)	Before the purchase		Additional Megawatts acquired (MW)	After the purchase	
		Proportion	Equity MW		Proportion	Equity MW
PTG	21.00	68.54%	14.39	5.54	94.90%	19.93
TPCH 1	9.20	87.73%	8.07	1.06	99.23%	9.13
TPCH 2	9.20	88.23%	8.12	1.01	99.23%	9.13
TPCH 5	6.30	89.00%	5.61	0.63	99.00%	6.24
Total	45.70		36.19	8.24		44.43

■ **Interim Dividends Payment of 2021**

On November 8, 2021, the Board of Directors' meeting has approved the payment of interim dividend from the operating results of 9 months (accounting period Jan. 1, 2021 – Sept. 30, 2021) of net profit of the separate financial statements of 343.90 MTHB, dividend payment at the rate of 0.343 THB per share, totaling 137.61 MTHB or 40.02 percent. The dividend is paid from net

profit of the separate financial statements after deduction of legal reserves. Individual shareholders can apply for tax credit in full amount.

The date to determine the list of shareholders who are entitled to receive the interim dividend (Record Date) is on November 22, 2021, and the dividend payment date will be on December 7, 2021.

- **Total units of electricity produced in 2021**

In 2021, the Company has a total of 10 operating power plants generated and sold **672,384,007** units of electricity. The average capacity factor of the six main projects (CRB MWE MGP TSG PGP SGP) is **88.89%**, and the power plants that are tuning (PTG TPCH5 TPCH1 TPCH2) averaged **66.92%**

- **MWE project maintenance shutdown**

The generator of the project was malfunctioned on September 18, resulting in the inability to generate electricity for sale until December 18, 2021, for a total of 92 days of downtime. MWE is in the process of claiming insurance for machinery repair costs including lost revenue during the shutdown of the power plant.

- **Commercial operation of Waste Power Plants**

Siam Power Waste Power Plant (SP) with a sales capacity of 8.0 megawatts has generated electricity to the commercial system under the power purchase agreement with the Metropolitan Electricity Authority of Thailand (PEA) on December 30, 2021.

- **Issuance of corporate debentures**

On September 30, 2021, the Company received cash from the offering of long-term debentures No. 1/21 at a full value of 1,500 million baht; with a term of 2 years and 9 months, maturity in 2024, fixed interest rate 4.50% per annum, interest payment every 3 months throughout the debenture term. The objectives of the debenture are repaying the bills of exchange, investing in power plant projects for expansion, and as working capitals for the company.

- **Bidding for the community power plant project**

On September 23, 2021, the Energy Regulatory Commission announced the winners for the community power plant project (Pilot project) with 43 qualified candidates, a total of 149.5 megawatts at average selling price of biomass at 2.78 baht per unit (offering 36.11% - 84.00% discount) and of biogas at 3.30 baht per unit (offering 38.38% - 72.50% discount). However, the company was not selected to participate in the project.

Progress of Projects

Project under construction	
PBM (progress 55.93%), PBB (progress 62.19%)	5.7 MW*
Project under development	
SP 2, SP 3, SP 4, SP 5, SP 6	30.5 MW*

Offering capacity on Power Purchase Agreement (PPA)

Overview of Financial Performance of the Company

Unit : Million THB

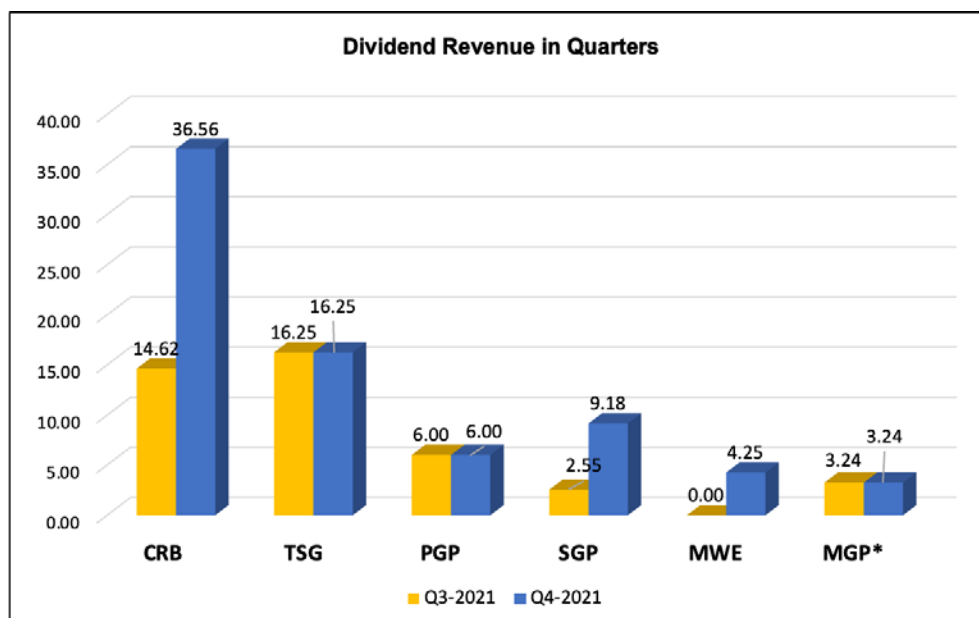
Separated Financial Statement	Q4-2021	Q3-2021	QoQ	2021	2020	YoY
Revenue						
Dividend Revenue	75.49	42.67	76.9%	480.30	281.71	70.5%
Other revenue	1.18	0.27	>100%	1.92	1.58	21.7%
Finance revenue	10.37	5.78	79.4%	23.58	11.71	>100%
Total Revenue	87.04	48.72	78.6%	505.80	295.00	71.5%
Expense						
Administrative Expense	(13.47)	(21.85)	(38.4%)	(79.33)	(83.56)	(5.1%)
Finance cost	(20.74)	(3.70)	>100.0%	(29.74)	(7.98)	>100.0%
Total Expense	(34.21)	(25.55)	33.9%	(109.07)	(91.54)	19.1%
Yearly Net profit (loss)	52.83	23.17	>100.0%	396.73	203.46	95.0%
Other net profit (loss)	0.00	0.00	-	0.00	(0.45)	(100.0%)
Net profit (loss)	52.83	23.17	>100.0%	396.73	203.01	95.4%
Earnings (loss) per share	0.13	0.06		0.99	0.51	

Separated Financial Statement

In Q4-2021, the company had a total net profit of 52.83 million THB, increased 29.66 million THB or more than 100% from previous quarter due to the following reasons:

■ Dividend Revenue

The company had a total dividend revenue of 75.49 million THB, increased 32.82 million THB or 76.9% from previous quarter, which is shown in the picture below.



■ Other Revenue

The company had other revenue of 1.18 million THB, increased by 0.91 million THB or more than 100% from previous quarter, which is an operating income in the subsidiaries and the improvement of Management system such as Accounting, Financing, Human resources, IT and business development.

■ Finance Revenue

The company had finance revenue of 10.37 million THB, increased by 4.59 million THB or 79.4% from previous quarter, which is from a short-term loan interest of subsidiaries and related parties with an interest rate less than 5% per annual following the rate of loan agreement the company has received with the bank.

■ Administrative Expense

The company had the expense of 13.47 million THB increased by 8.39 million THB or 38.4%, from the same quarter of 2020, which most of the expenses goes to employees' wages/salaries,

Board, Manager, Utilities, other administrative expense and managing expense, consultant, public relations.

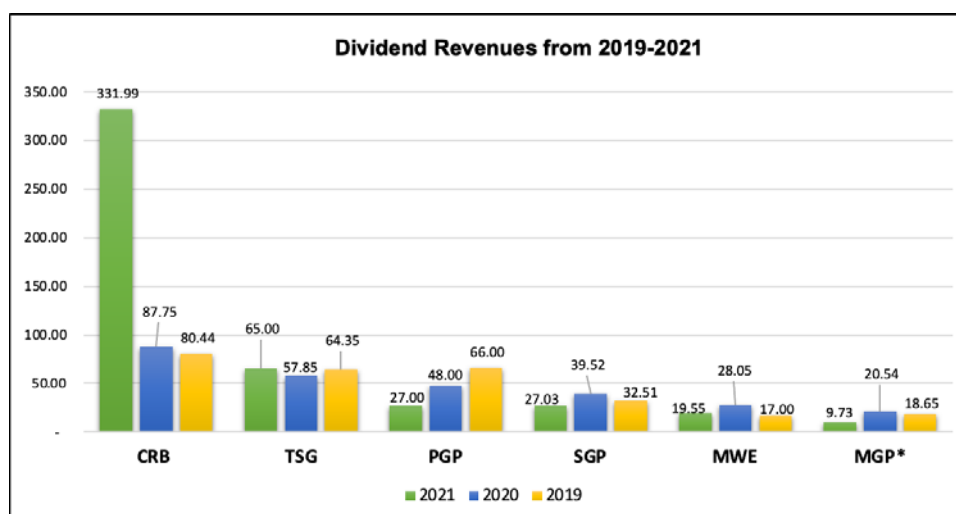
■ **Financial Cost**

The Company had a finance cost of 20.74 million THB, increased by 17.04 million THB or more than 100% from previous quarter which is from interest of the debenture received on September 30, 2020 at 4.5% interest rate and interest from 100 million THB corporate bills of exchange at 3.5% interest rate.

For year 2021 compared to 2020 The company had net profit (loss) of 396.73 million THB, increased 193.27 million THB or 95% from year 2020 due to the following reasons:

■ **Dividend income**

The company had a dividend income of 480.30 million THB, increased 198.58 million THB or 70.5% from the previous year due to receiving an unusual dividend from CRB as shown below



■ **Other income**

The company had 1.92 million THB of other income, increased 0.34 million THB or 21.7% from previous year which is from managing its subsidiaries and from return on investment.

■ **Finance income**

The company had finance income of 23.58 million THB, increased 11.88 million THB or more than 100% from previous year which is interest income from short-term loans in subsidiaries and

related parties as working capitals. The short-term loan for projects under construction during the reviewing period for the credit line at an interest rate less than 5 percent per annual.

■ **Administrative expense**

The company had administrative expense of 79.33 million THB, decreased 4.22 million THB or 5.1% from previous year due to the decrease in salary and employee payroll expenses.

■ **Finance cost**

The company had finance cost of 29.74 million THB, increased 21.76 million THB or more than 100% from previous year which were from a short-term loan interest of bill of exchange which brought to subsidiaries, loan interest from financial institutes, and interest expense of 1,500 million THB debenture which must be paid every 3 months.

Consolidated Company Performance

Consolidated Financial Statement	Q4-2021	Q3-2021	QoQ	2021	2020	YoY
Revenue from electricity sales	600.02	660.51	(9.2%)	2,470.39	1,777.37	39.0%
Cost of electricity sales	(493.72)	(490.36)	0.7%	(1,886.30)	(1,159.25)	62.7%
Gross profit	106.30	170.15	(37.5%)	584.09	618.13	(5.5%)
Other revenue	1.09	0.51	>100.0%	1.94	1.58	22.5%
Profit before expense	107.39	170.67	(37.1%)	586.03	619.71	(5.4%)
Administrative expense	(30.19)	(33.61)	(10.2%)	(132.95)	(121.95)	9.0%
Profit (loss) from operation	77.20	137.05	(43.7%)	453.08	497.76	(9.0%)
Finance revenue	3.10	0.42	>100.0%	5.55	10.33	(46.3%)
Financial cost	(54.14)	(37.71)	43.6%	(162.25)	(87.70)	85.0%
Profit (loss) from investment in associates	(5.34)	0.71	(>100.0%)	1.47	5.83	(74.7%)
total	(56.38)	(36.57)	54.2%	(155.23)	(71.54)	>100.0%
Profit (loss) before tax	20.88	100.48	(79.3%)	297.84	426.22	(30.1%)
Income tax expense	(3.03)	(3.53)	(14.4%)	(10.72)	(0.74)	>100.0%
Net profit (loss)	17.80	96.95	(81.6%)	285.12	425.48	(32.5%)
Other net profit (loss)	0.00	0.00	-	0.00	0.64	(100.0%)
Total net profit (loss)	17.80	96.95	(81.6%)	285.12	426.12	(32.6%)
Profit (loss) per standard share	(0.03)	0.13		0.34	0.63	

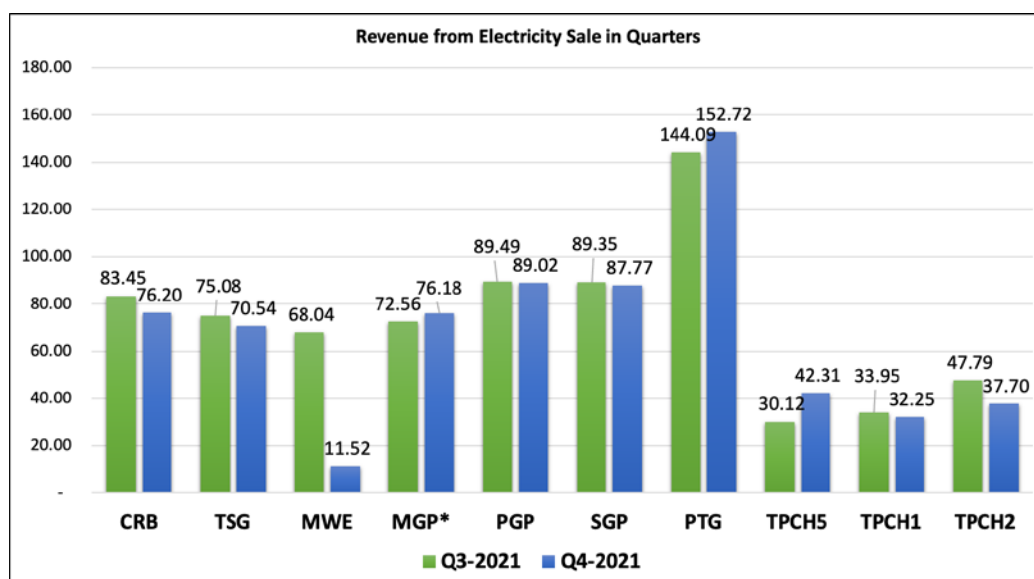
Profit attribution						
Owner of the company	(12.22)	51.75	(>100.0%)	135.40	250.95	(46.0%)
Non-controlling interests	30.02	45.20	(33.6%)	151.72	174.53	(13.1%)
Total net profit (loss)	17.80	96.95	(81.6%)	287.12	425.48	(32.5%)

Profit attributable to						
Company's owner	(12.22)	51.75	(>100.0%)	135.40	251.51	(46.2%)
Non-controlling interests	30.02	45.20	(33.6%)	151.72	174.61	(13.1%)
Total net profit (loss)	17.80	96.95	(81.6%)	287.12	426.12	(32.6%)

Consolidated Financial Statement

Revenue from Electricity Sale

In Q4-2021, The company had a total revenue of 600.02 million THB, decreased by 60.49 million THB or 9.2% from previous quarter due to unplanned shutdown of MWE from the Generator malfunctioned of 92 days from 18 September – 18 December 2021. Details as followed:



MGP* is a joint venture business. It shows only the income from current shareholding.

Cost of Electricity Sales

The cost of electricity Sales was 493.72 million THB, increased by 3.36 million THB or 0.7% from the previous quarter. The cost consists of operation management fees, fuel costs, electricity

costs, insurance premiums, ash handling costs, and equipment costs to strengthen the power plants, details as followed:

Cost of Electricity Sales (MTHB)	Q4-2021										
	CRB	TSG	MWE	PGP	SGP	PTG	TPCH1	TPCH2	TPCH5	Total	%
Operation and Fuel cost	38.15	30.26	8.09	47.63	55.10	91.26	27.29	38.81	28.77	365.37	74.00
Depreciation and Amortization	7.23	7.16	7.30	8.40	8.76	21.39	8.88	8.71	7.30	85.14	17.24
Maintenance Cost	3.27	4.81	7.82	1.09	0.78	3.56	2.29	2.09	1.34	27.03	5.48
Electricity Cost	0.07	0.80	0.84	0.86	1.12	0.63	0.83	0.90	0.85	6.90	1.40
Others (Insurance and ash handling)	1.02	0.73	0.52	1.16	0.72	3.12	0.75	0.72	0.55	9.29	1.88
Total Cost	49.74	43.75	24.57	59.13	66.48	119.96	40.04	51.23	38.81	493.72	100.00
Margin of COGS											82.28

Cost of Electricity Sales (MTHB)	Q3-2021										
	CRB	TSG	MWE	PGP	SGP	PTG	TPCH1	TPCH2	TPCH5	Total	%
Operation and Fuel cost	36.27	28.11	35.42	53.69	53.81	77.77	34.88	32.62	21.44	373.99	76.19
Depreciation and Amortization	7.23	7.41	7.04	8.35	8.11	21.46	8.88	8.68	7.24	84.40	17.19
Maintenance Cost	-	2.95	2.88	0.36	0.23	3.31	1.63	1.89	1.79	15.03	3.06
Electricity Cost	0.34	0.77	0.74	0.78	0.95	1.49	1.01	0.70	1.22	8.02	1.63
Others (Insurance and ash handling)	1.26	0.85	0.52	0.76	0.48	3.50	0.75	0.75	0.57	9.44	1.92
Total Cost	45.10	40.09	46.59	63.95	63.59	107.53	47.14	44.63	32.26	490.88	100.00
Margin of COGS											74.32

In Q4-2021, CRB and TSG had an additional maintenance cost due to wood chopper machine adjustment for a better performance.

PTG had a higher fuel cost in this quarter due to a temporary shut down for check-up which caused the increase of fuel usage to start the combustion and it also generated electricity more than its previous quarter.

TPCH 5 had a higher fuel cost due to a better electricity generation than its previous quarter.

TPCH 2 had 27 days and 5 hours of maintenance shut down which caused a higher fuel cost from its previous quarter in order to start a combustion.

- **Other revenue**

The company had other revenue of 1.09 million THB, increased 0.57 million THB or more than 100% from the previous quarter which were from a refund of contributions to the fund around PTG, the metal scrap sales of the projects, and COVID impact subsidies for SME business projects.

- **Administrative Expenses**

The company and its subsidiaries had a total of administrative expenses of 30.19 million THB, decreased by 3.42 million THB or 10.2% from previous quarter. The main cost are employees' wages and salaries, Board, Utilities, Power plant Capital contribution, depreciation, and interest.

- **Finance Revenue**

The company had finance revenue of 3.10 million THB, increased by 2.68 million THB or more than 100% from previous quarter due to a short-term loan for subsidiaries and related parties with an interest rate less than 5% per annual following the rate of loan agreement the company has received with the bank.

- **Finance Cost**

The company has finance cost of 54.14 million THB, increased by 16.43 million THB or 43.6% from the previous quarter which were from a short-term loan interest of bill of exchange which brought to subsidiaries, loan interest from financial institutes, and interest expense of 1,500 million THB debenture which must be paid every 3 months.

- **Profit (loss) from investments in joint ventures**

A total loss from investments in joint ventures was 5.34 million THB, decreased by 6.05 million THB or more than 100% from the previous quarter. Details as follows:

- The share of profit from 46 percent in **MGP** was 7.98 million THB, decreased 0.42 million THB from previous quarter with 1 day and 18 hours of maintenance shut down.
- The share of loss from 33 percent in **PA Waste and Energy Company Limited (PA)** from this period was 0.06 million THB, decreased by 0.08 million THB from its previous quarter.

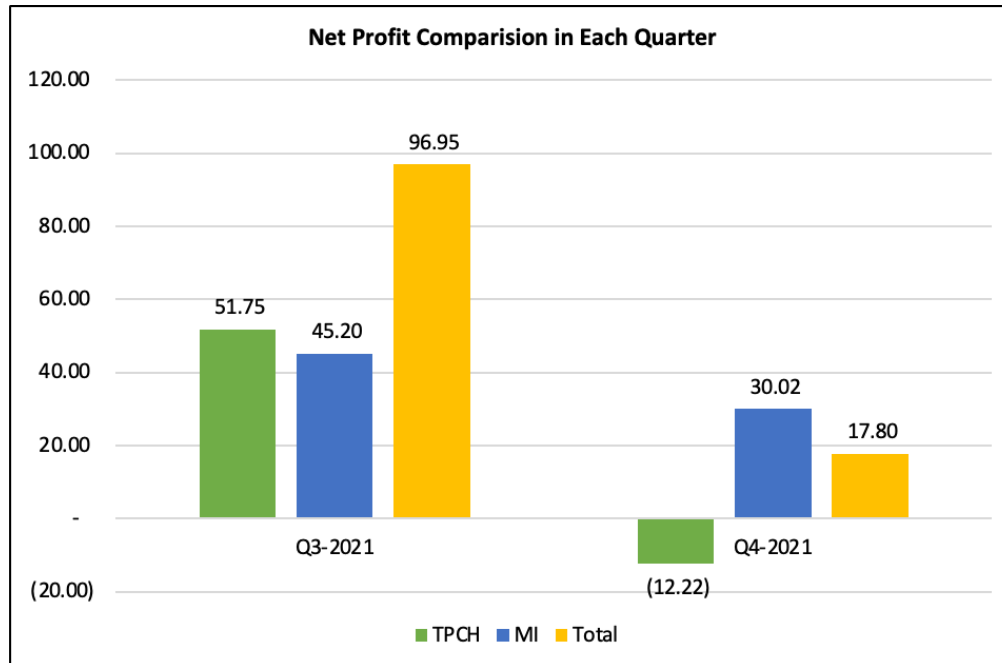
- The share of loss from 50 percent in **SP** was 13.26 million THB increased by 5.56 million THB from the previous quarter, due to the project has started commercial operations on December 30, 2021 which generated 165,000 units of electricity in December. During COD and fine-tuning, alternative fuels were purchased for system testing which cost higher fuel consumption than normal. Other costs consist of employee salaries, depreciation, insurance premiums, electricity, the cost of materials and equipment.

- **Total Net Profit (Loss)**

The Company had total net profit of 17.80 million THB, decreased by 79.15 million THB or 81.6% from the previous quarter, which attributed to the company of 8.99 million THB net loss due to following reason.

- **5 Projects (CRB, TSG, MWE, PGP, SGP) Stable Performance** The overall stable in profits was due to a higher maintenance shutdown and fluctuation of fuel price, which the company has continually managed the fuel costs utmost.
 - CRB has a lower profit because of the generation was not fully operated due to wood choppers malfunctioned and the issues has been resolved.
 - MWE had a maintenance shutdown due to the generator malfunctioned which caused the loss of income with a stable fixed cost, leading to a loss of the project. It is in the process of claiming insurance for machinery repair costs including lost revenue during the shutdown of the power plant.
- **3 border provinces (PTG, TPCH5, TPCH1, TPCH2)**
 - PTG had 10 days and 1 hours planned maintenance shutdown for a boiler annual check up making its profit in Q4 decreased by 3.80million THB from its previous quarter.
 - TPCH1, TPCH2, TPCH5 had lower generation performance from previous quarter and many maintenance shutdowns. TPCH1 has an average capacity factor of 50%%, TPCH2 of 79%, and TPCH5 of 88%

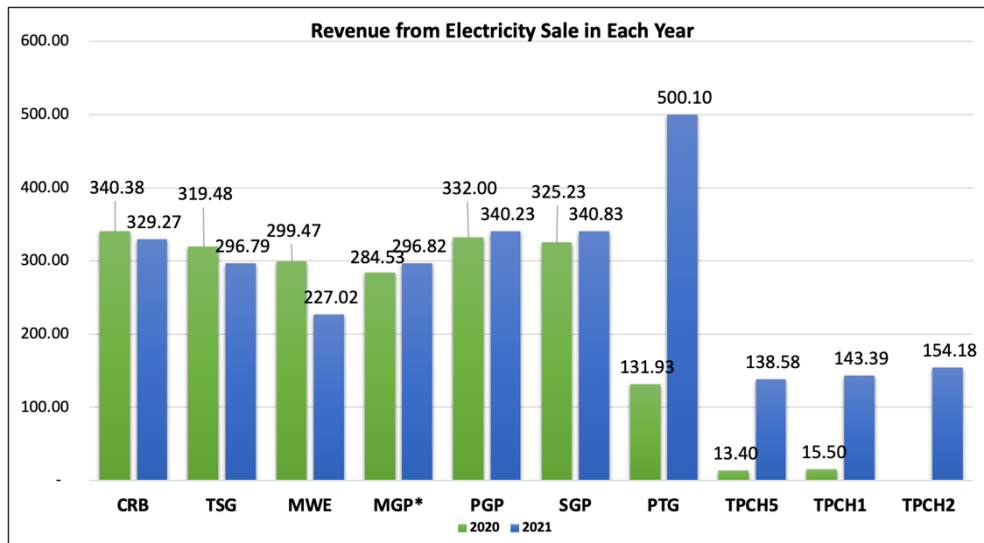
- **ECO (PBM, PBB)** The loss is recognized according to the shareholding proportion because the projects are under construction. PBM has reached 55.93% and PBB of 62.19% of construction.
- **Joint Ventures (MGP, SP, PA)** SP had a higher loss than its previous quarter due to costs occurring during COD and fine-tune process.



For year 2021 compared to 2020, The company had net profit(loss) of 287.12 million THB, decreased 138.36 million THB or 32.5% from 2020 with reasons below:

- **Electricity sales income**

The company had an electricity sales income of 2,470.39 million THB, increased 639.02 million THB or 39% from last year due to PTG TPCH5 TPCH1 have a full year operation, TPCH 2 has started COD in the 1st quarter of 2021 and CRB PTG SGP have better operation than in 2020.



■ **Cost from sales of electricity**

The cost from sales of electricity was 1,886.30 million THB, increased by 727.05 million THB or 62.7% from the previous year due to 10 projects operation with higher electricity generations. The cost consists of operation management fees, fuel costs, electricity costs, insurance premiums, ash handling costs, and equipment costs in order to strengthen the power plants.

Cost of Electricity Sales (MTHB)	2021										
	CRB	TSG	MWE	PGP	SGP	PTG	TPCH1	TPCH2	TPCH5	Total	%
Operation and Fuel cost	145.93	115.15	121.72	191.50	198.10	287.34	126.61	123.17	96.70	1,406.21	74.55
Depreciation and Amortization	28.69	29.57	28.21	32.93	34.06	83.61	34.77	29.91	28.38	330.13	17.50
Maintenance Cost	4.87	7.78	20.12	9.38	9.43	14.70	7.49	5.92	5.81	85.49	4.53
Electricity Cost	0.61	3.11	3.03	3.80	4.35	6.07	3.78	3.24	4.77	32.75	1.74
Others (Insurance and ash handling)	4.19	3.40	1.86	3.64	2.66	11.34	1.62	1.61	1.41	31.72	1.68
Total Cost	184.29	159.00	174.94	241.25	248.60	403.05	174.27	163.85	137.06	1,886.30	100.00
Margin of COGS											76.36

Cost of Electricity Sales (MTHB)	2020									
	CRB	TSG	MWE	PGP	SGP	PTG	TPCH5	TPCH1	Total	%
Operation and Fuel cost	137.44	121.46	143.71	157.96	149.58	79.69	10.90	14.33	815.06	70.31
Depreciation and Amortization	28.48	29.95	29.71	34.06	36.76	46.36	3.51	3.42	212.25	18.31
Maintenance Cost	24.63	9.73	17.03	9.95	14.21	5.44	1.13	0.45	82.58	7.12
Electricity Cost	0.91	3.00	13.93	3.80	4.84	4.27	0.83	0.27	31.85	2.75
Others (Insurance and ash handling)	4.07	3.96	1.25	3.85	2.34	2.04	0.00	0.00	17.51	1.51
Total Cost	195.53	168.10	205.63	209.63	207.73	137.80	16.36	18.47	1159.25	100.00
Margin of COGS										65.22

CRB had a decrease in cost of electricity sales of 11.24 million THB from the previous year due to lower maintenance shutdown, and TSG has a lower cost of electricity sales of 9.10 million THB due to lower operation which caused the operation cost to decrease.

PGP and SGP had an increase in cost of electricity sales by 31.62 million baht and an increase of 40.87 million baht respectively from the previous year due to the change in the operating contract by allowing the company to fully manage the fuel.

PTG had an increase in cost of electricity sales by 265.26 million baht from the previous year since it has a full year of operation which produced more electricity, thus increasing fuel consumption and operating costs.

TPCH1 TPCH2 and TPCH5 had cost of electricity sales increased from the previous year due to a full year of operation and increased maintenance costs due to periodic shutdowns during fine-tune.

- **Other income**

The company has other income of 1.94 million THB, increased by 0.36 million THB or more than 22.5% from the previous year due to a refund of contributions to the fund around PTG, the metal-scrap sales of the projects, and COVID impact subsidies for SME business projects.

- **Administrative expense**

The company had administrative expense of 132.95 million THB, increased by 11.01 million THB or 8.9% from previous year due to having many COD project (PTG TPCH1 TPCH2 TPCH5), costing higher operating expenses such as salary for employees, utility expenses, contribution to the

fund around the power plant, depreciation, other operating expenses, administrative expenses, and expenses related to the issuance of debenture.

▪ **Finance income**

The company had finance income of 5.55 million THB, decreased 4.78 million THB or 46.3% from previous quarter due to the decrease in borrowings due to the projects under construction have received loans from banks.

▪ **Financial cost**

The company had financial cost of 162.25 million THB, increased 74.55 million THB or 85% from previous year due to the financial cost of bank loans from new COD projects (TPCH1, TPCH2, TPCH5) and projects under construction (SP PBB PBM), interest expenses from short-term borrowings in the form of bills of exchange, and interest payments on finance leases.

▪ **Profit (loss) from joint ventures investment**

The company has profit (loss) from joint venture investment of 1.47 million THB, decreased by 4.36 million THB, or 74.7% from previous year, details as follows:

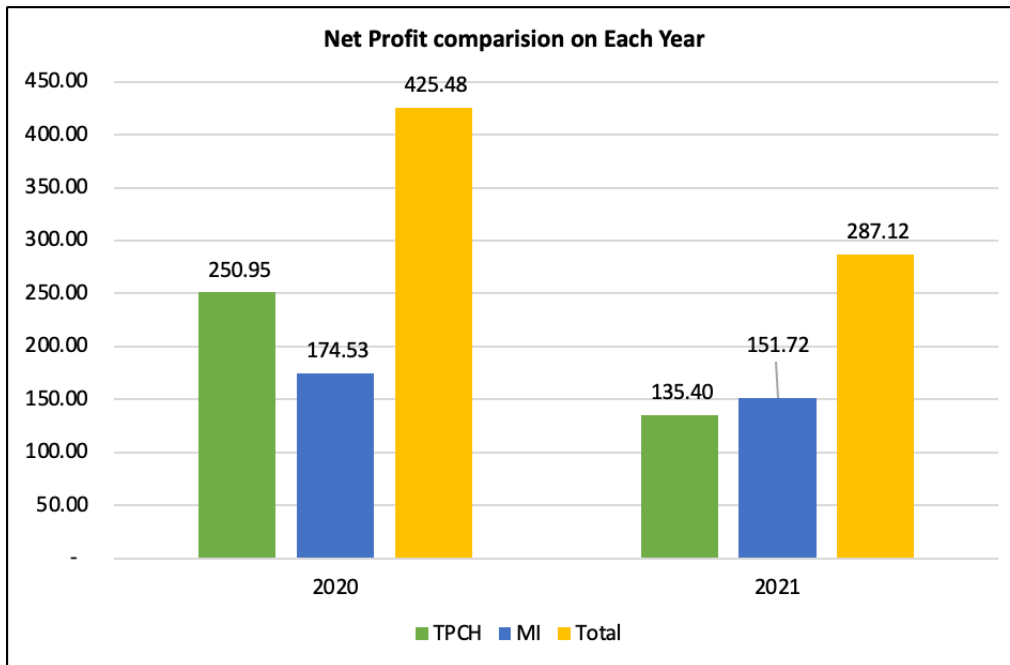
- MGP with 46% shareholding has profit of 34.55 million THB, increased by 6.76 million THB from the previous year due to higher electricity generation with lower maintenance shutdown and financial cost.
- PA waste and Energy (SP) with 33% shareholding has loss of 0.03 million THB decreased by 0.11 million THB from the previous year due to the machine renting income.
- Siam Power (SP) with 50% of shareholding has loss of 33.05 million THB, increased by 11.23 million THB from the previous year due to SP project was under construction. After COD on December 30. 2021, the operation of the electricity generating machine was low, not covering fixed costs and the cost of electricity sold. SP is now in the process of fine-tuning the machine in order to operate at its full capacity and also has many projects under development, resulting in unprofitable operating results.

■ Net profit(loss)

The company has net profit of 287.12 million THB decreased by 138.36 million THB or 32.5% with profit attributed to the company of 135.40 million THB decreased by 115.55 million THB or 46.0% from last year, details as follows:

- **CRB TSG MWE PGP SGP**, these projects have stable operation the loss of profit is from annual maintenance shutdown and an increase on fuel cost.
- **CRB** had generated more electricity in 2021 than 2020 with a slightly lower generation due to the repair of the wood chopper in Q4-2021. However, the profit has decreased due to electricity price FiT Premium 0.3 baht per unit ending on March 15, 2021, causing the net purchase price of electricity to be 4.19 baht per unit sold. The operating efficiency of the power generator is still more than 95% (Q1 - Q3). Since March 15, 2020, the rights and obligations to receive BOI tax incentives have been reduced to corporate income tax on net profits at the rate of 50% of the normal rate is for a period of 5 years.
- **MWE** has maintenance shutdown of 102 days and 9 hours for this year due to the generator malfunctioned which caused the loss of income. It is in the process of claiming insurance for machinery repair costs including lost revenue during the shutdown of the power plant.
- **PTG** has been operating for a full year and has more production units making the 2021 turnover from a loss to a profit. The average yearly operation of 68% is due to machine downtime and improvement of defective components.
- **TPCH1 TPCH 2 TPCH5** a full year of electricity generating capacity with an average of TPCH1 at 57% and TPCH5 at 72%. TPCH2 just started selling electricity in February 2021, with an average of 66% capacity. Fine-tuning process for machine improvement increases the cost of fuel, thereby improving the performance of both 3 projects still not profitable
- **ECO group (PBM PBB)** The loss is recognized according to the shareholding proportion because the projects are under construction. PBM has reached 55.93% and PBB of 62.19% of constructions

- **MGP SP PA** MGP has better generation which increased revenue this year However, SP had a higher loss that its previous quarter due to costs occurring during COD and fine-tune process.



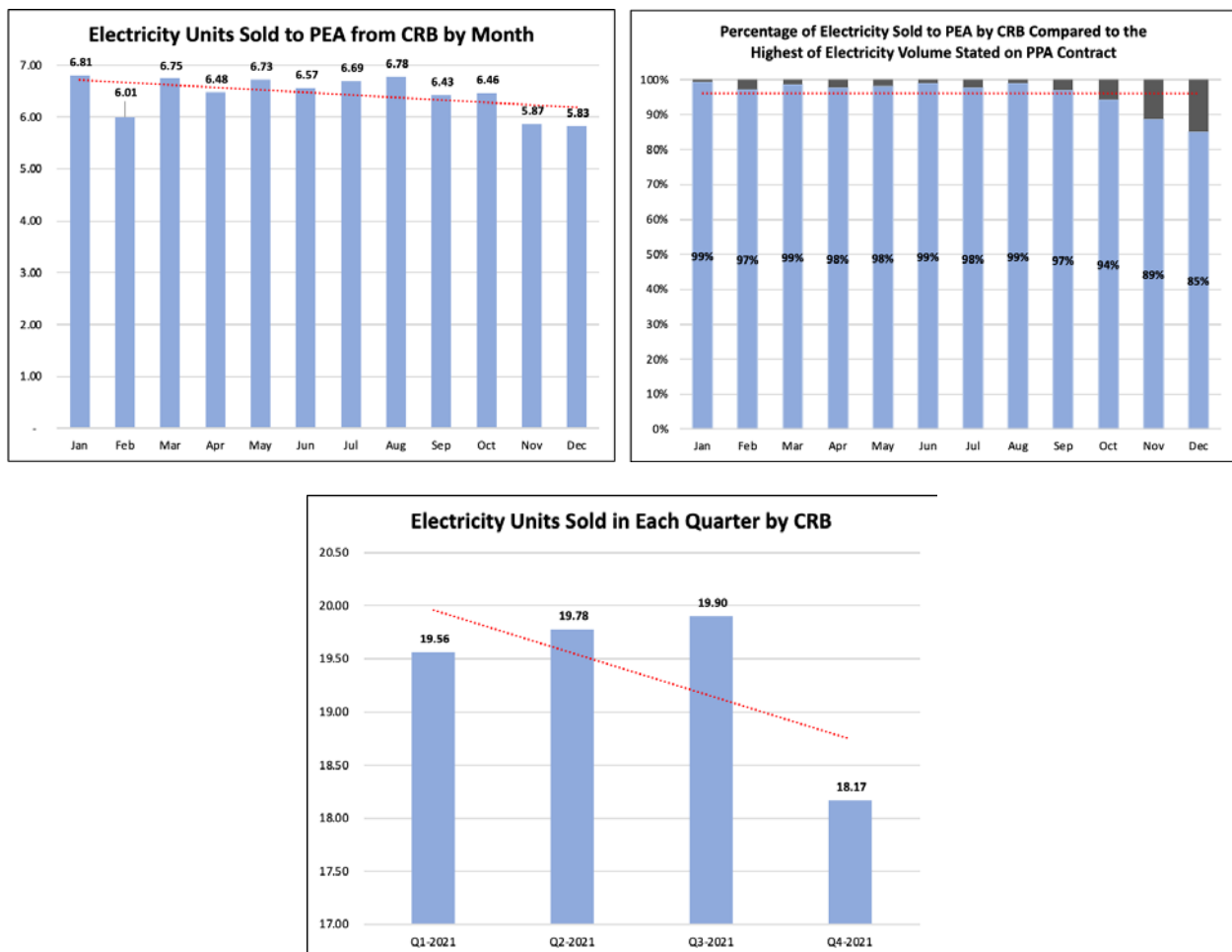
Performance of Power plants under operations (10 plants in total)

CRB power plant has electricity sales volume under the Feed-in Tariff (FiT) system power purchase agreement of 9.2 megawatts with a net selling price of 4.19 baht per unit.

In Q4-2021, CRB generated and sold 18,171,519 units with 18 hours of unplanned shutdown.

In 2021, CRB has generated 77,413,309 units with 3 days 3 hours of unplanned shutdown.

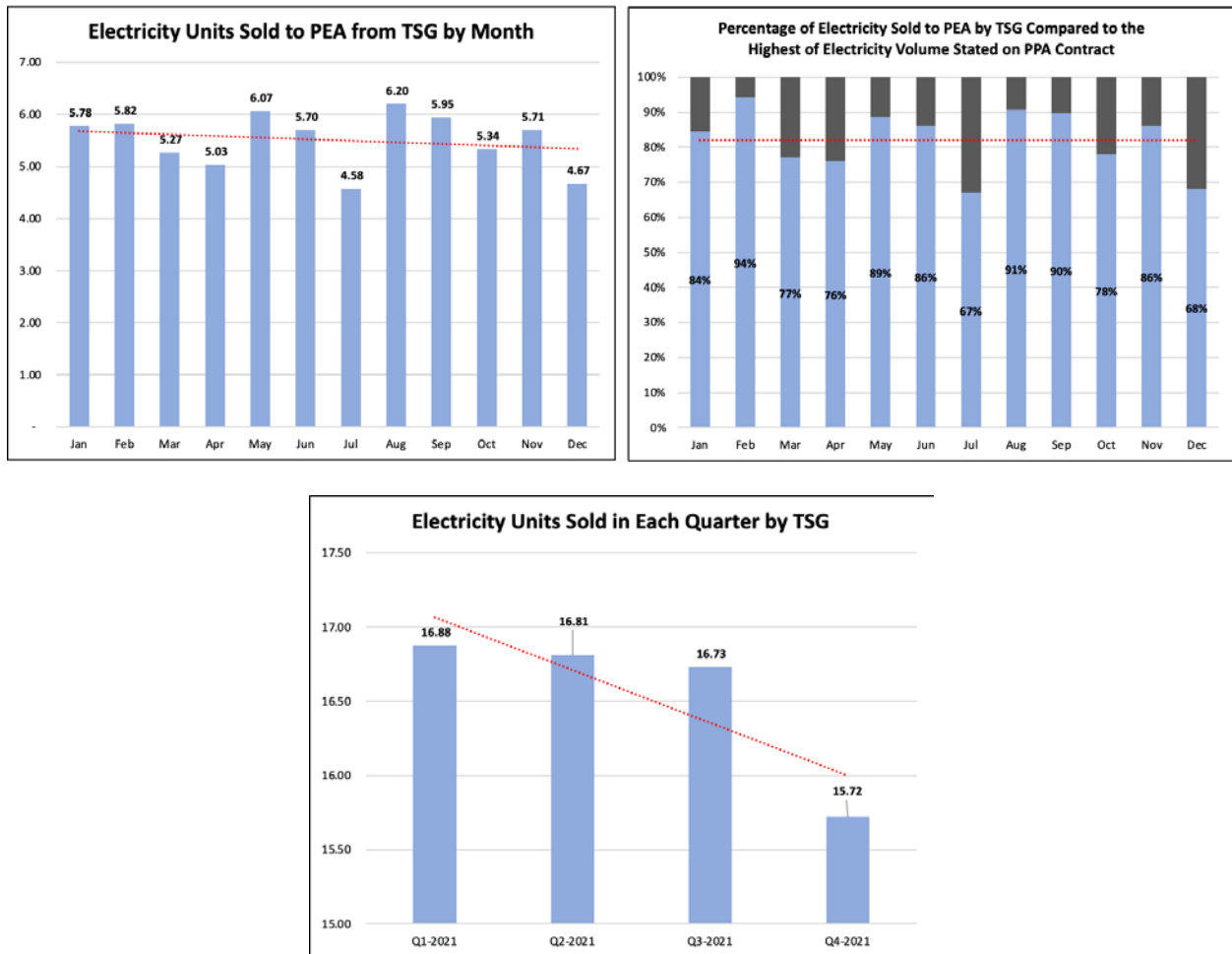
Details as follows:



TSG power plant has electricity sales volume under the Feed-in Tariff (FiT) system power purchase agreement of 9.2 megawatts with a net selling price of 4.49 baht per unit.

In Q4-2021, TSG generated and sold 15,720,071 units with 4 days 21 hours of unplanned shutdown.

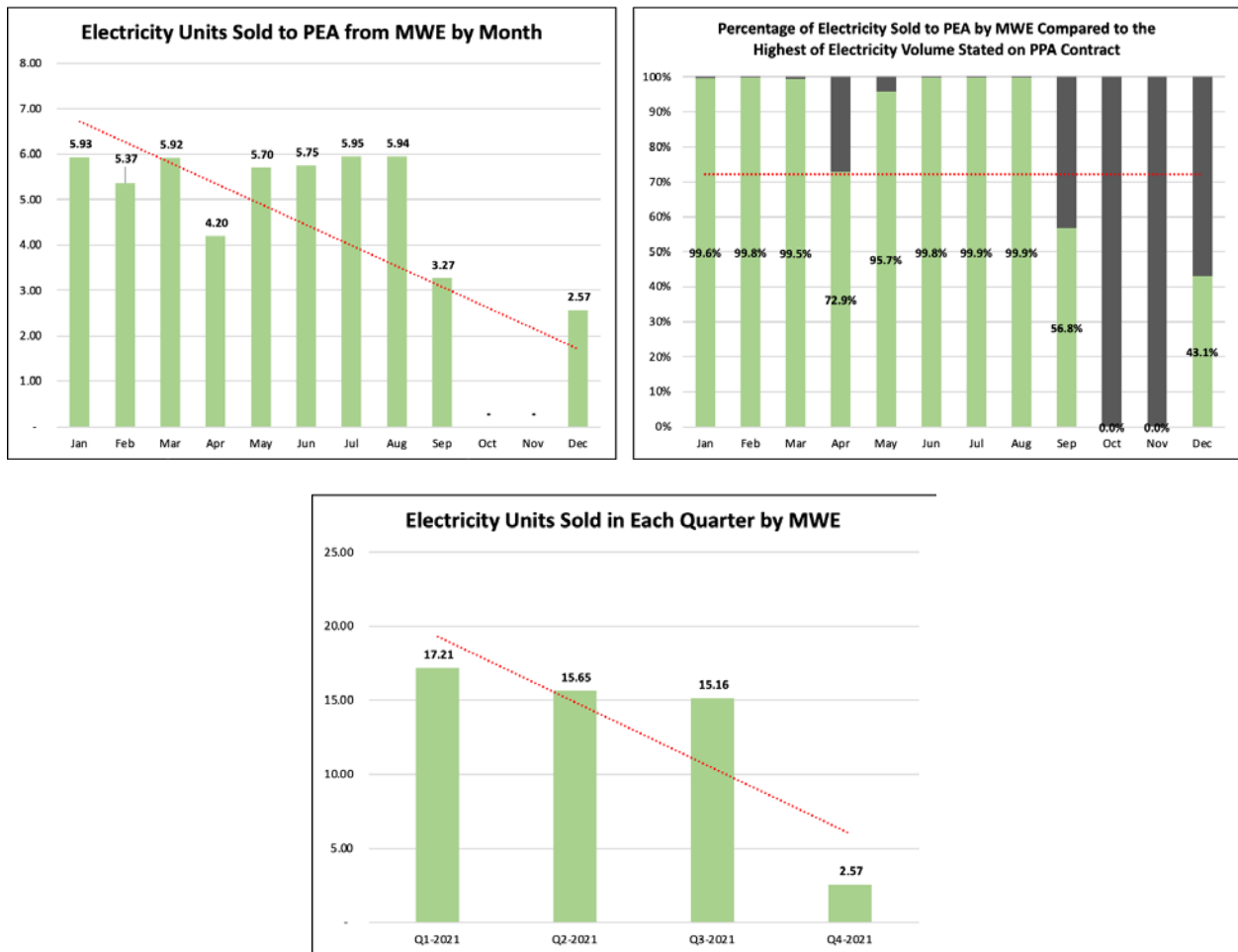
In 2021, TSG has generated 66,139,511 units with 2 days of planned shutdown and 9 days 12 hours of unplanned shutdown. Details as follows:



MWE power plant has electricity sales volume under the Feed-in Tariff (FiT) system power purchase agreement of 8.0 megawatts with a net selling price of 4.49 baht per unit.

In Q4-2021, MWE generated and sold 2,565,475 units with 79 days of planned shutdown and 1 hour of unplanned shutdown.

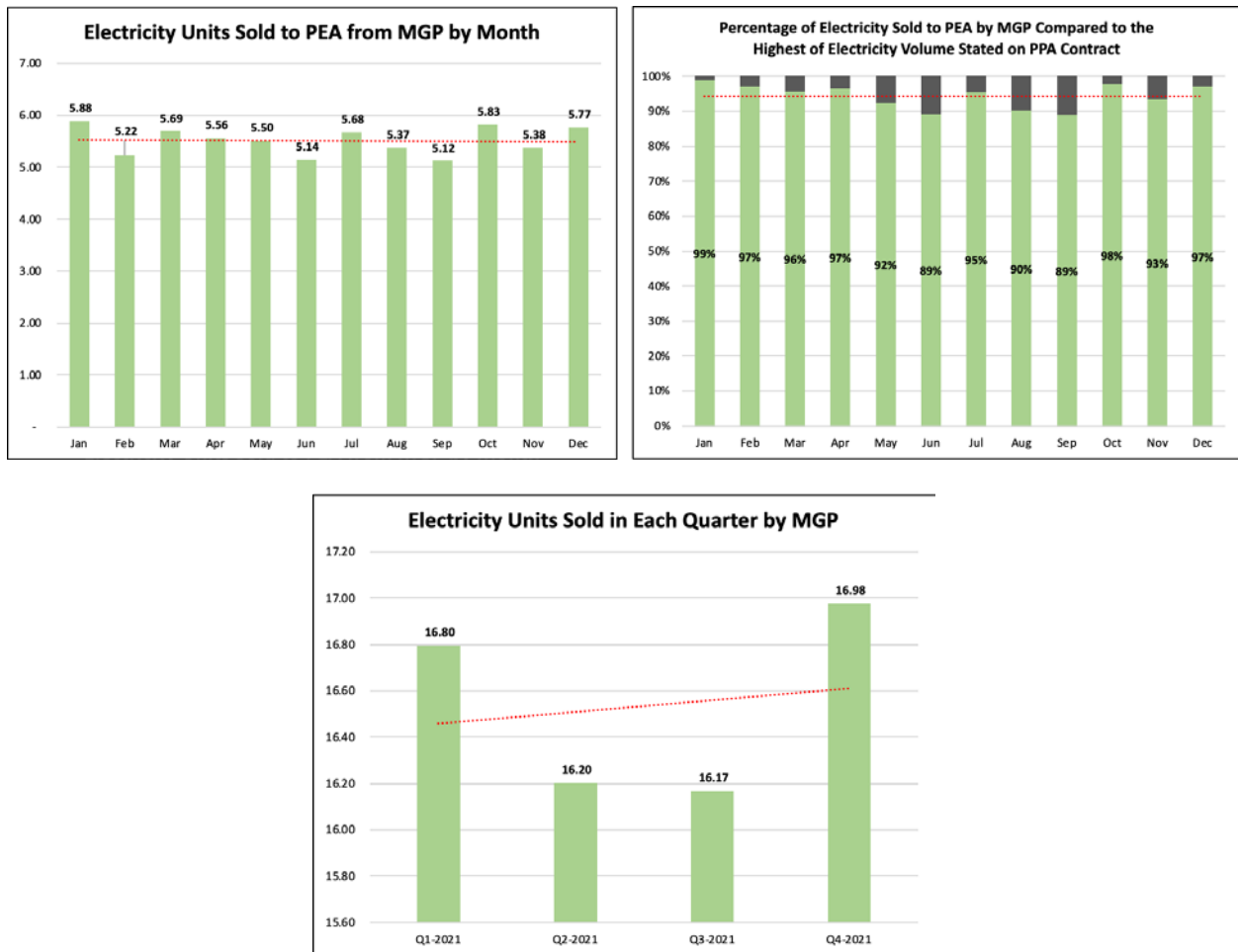
In 2021, MWE has generated 50,589,802 units with 101 days of planned shutdown and 1 days 9 hours of unplanned shutdown. Details as follows:



MGP power plant has electricity sales volume under the Feed-in Tariff (FiT) system power purchase agreement of 8.0 megawatts with a net selling price of 4.49 baht per unit.

In Q4-2021, MGP generated and sold 16,976,853 units 1 day 4 hours of planned shutdown and 14 hours of unplanned shutdown

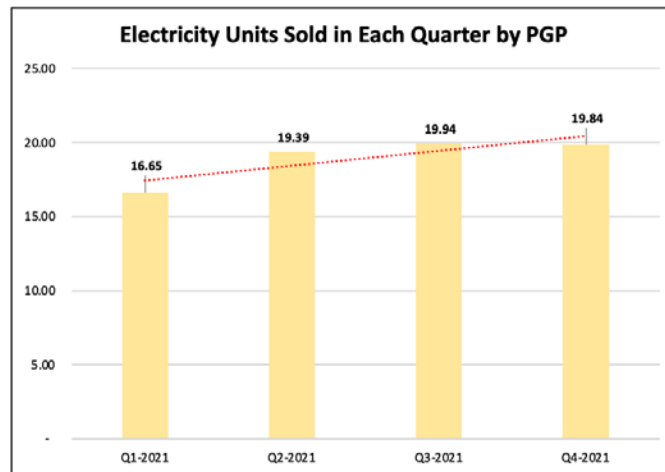
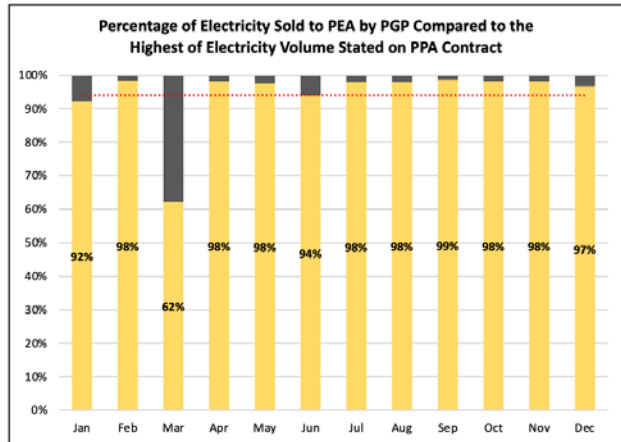
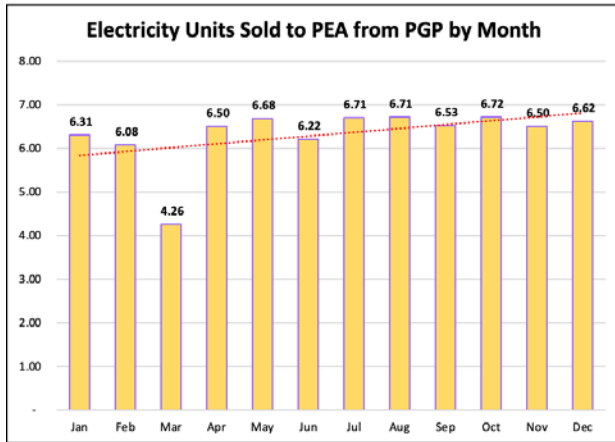
In 2021, MGP has generated 66,143,666 units with 5 days 23 hours of planned shutdown and 7 days of unplanned shutdown. Details as follows:



PGP power plant has electricity sales volume under the Feed-in Tariff (FiT) system power purchase agreement of 9.2 megawatts with a net selling price of 4.49 baht per unit.

In Q4-2021, PGP generated and sold 19,838,242 units with 13 hours of unplanned shutdown

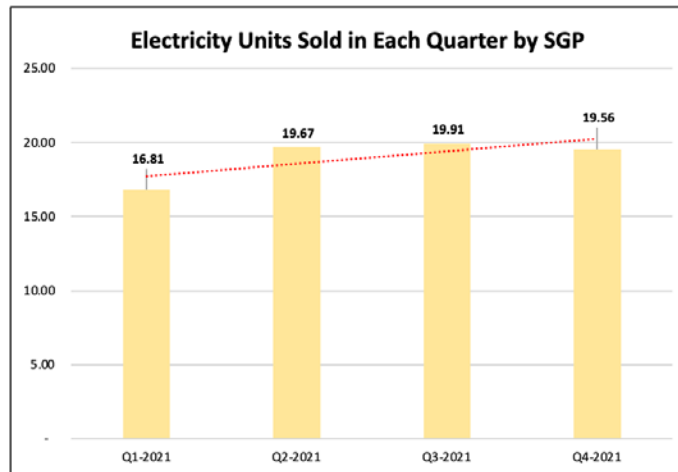
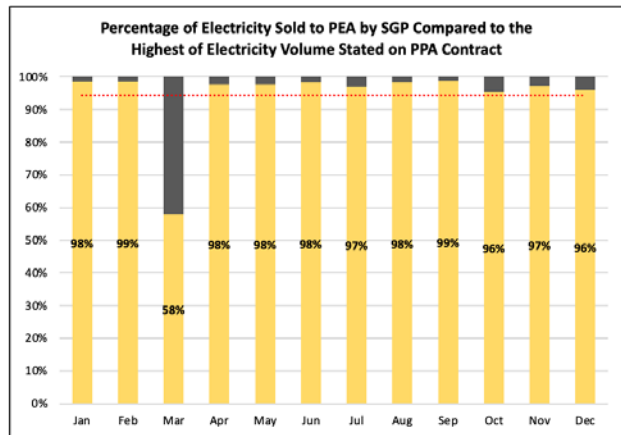
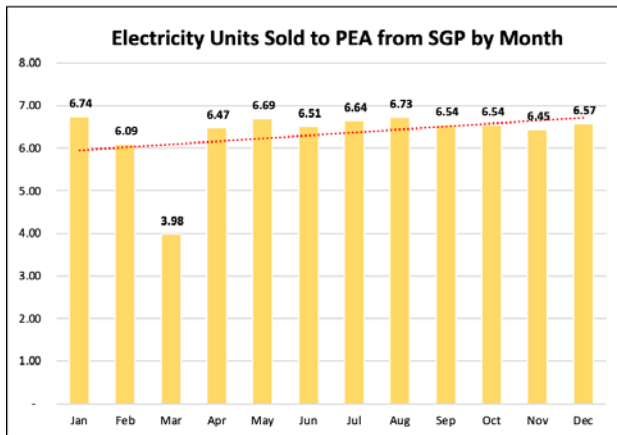
In 2021, PGP has generated 75,820,472 units with 10 days of planned shutdown and 3 days 17 hours of unplanned shutdown. Details as follows:



SGP power plant has electricity sales volume under the Feed-in Tariff (FiT) system power purchase agreement of 9.2 megawatts with a net selling price of 4.49 baht per unit.

In Q4-2021, SGP generated and sold 19,560,409 units with 2 days 11 hours of unplanned shutdown.

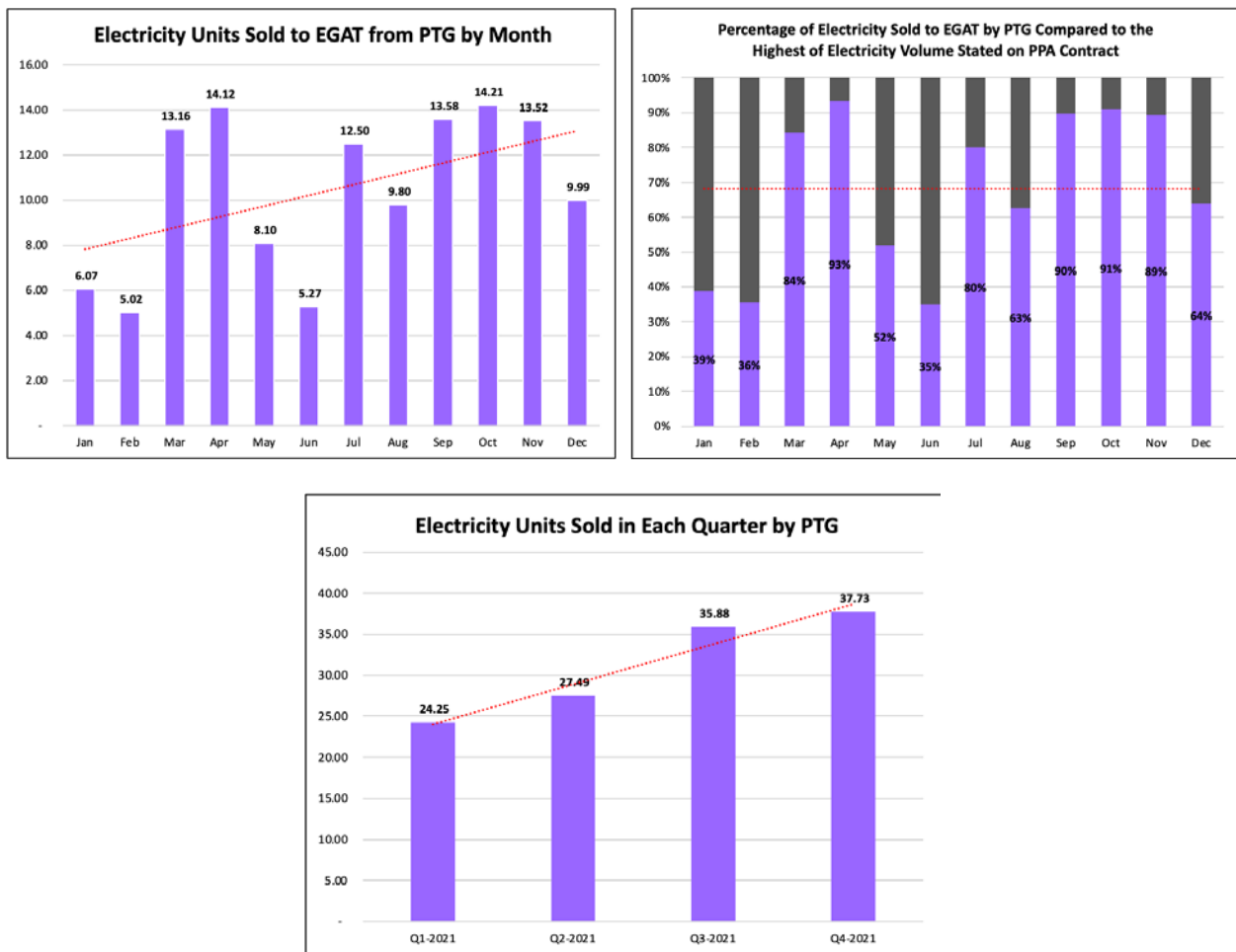
In 2021, SGP has generated 75,953,337 units with 12 days of planned shutdown and 4 days 13 hours of unplanned shutdown. Details as follows:



PTG power plant has started selling electricity commercially on 19 May 2020 with an electricity sales volume under the Adder system power purchase agreement of 21.0 megawatts with a net selling price of 3.99 baht per unit.

In Q4-2021, PGT generated and sold 37,725,210 units with 9 days 17 hours of planned shutdown and 8 hours of unplanned shutdown.

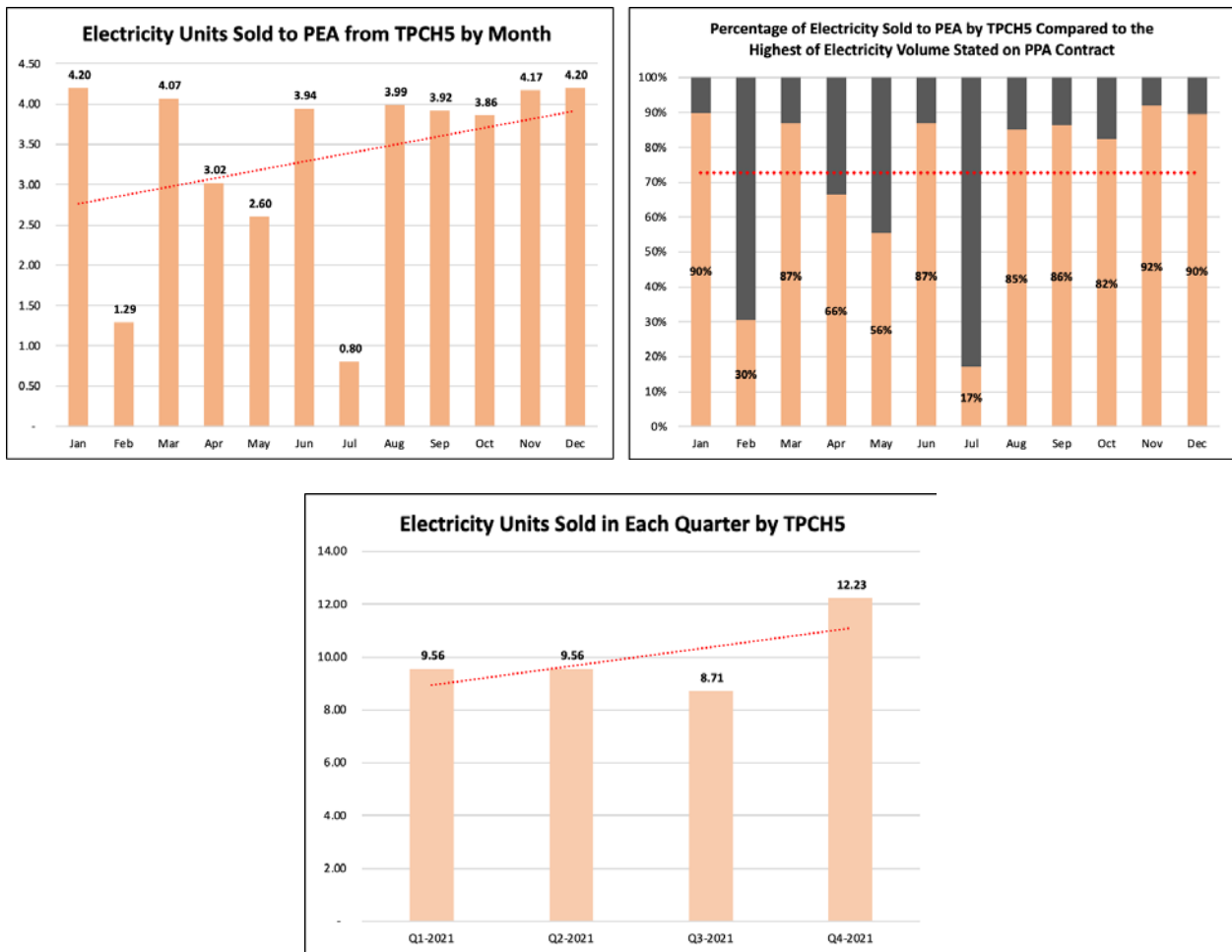
In 2021, PGT has generated 125,355,240 units with 64 days 17 hours of planned shutdown and 7 days 22 hours of unplanned shutdown. Details as follows:



TPCH5 power plant has started selling electricity commercially on 17 November 2020 with an electricity sales volume under the bidding system power purchase agreement of 6.3 megawatts with a net selling price of 3.46 baht per unit.

In Q4-2021, TPCH5 generated and sold 12,232,943 units with 4 days 14 hours of planned shutdown and 2 days 6 hours of unplanned shutdown.

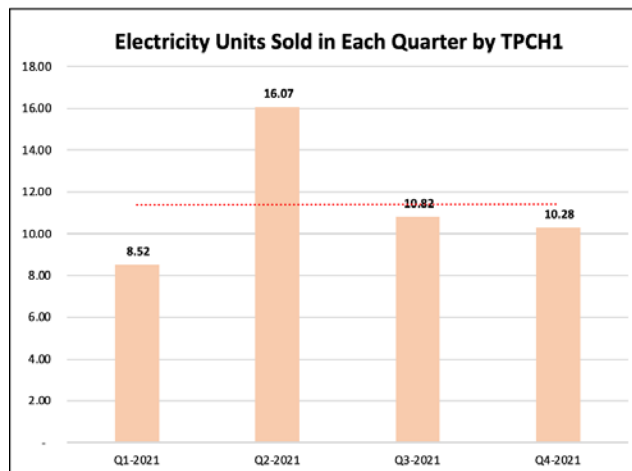
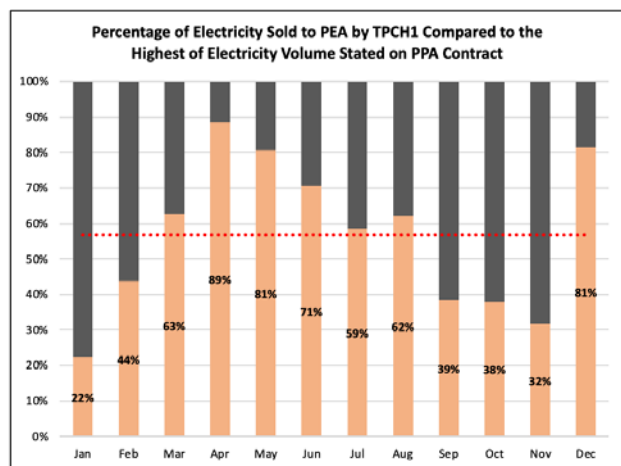
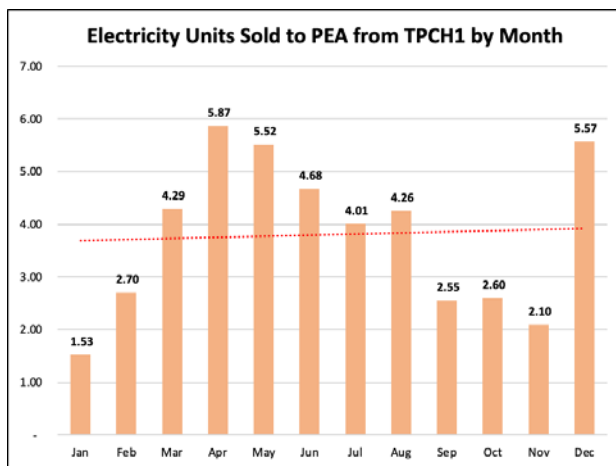
In 2021, TPCH5 has generated 40,064,952 units with 57 days 8 hours of planned shutdown and 25 days 12 hours of unplanned shutdown. Details as follows:



TPCH1 power plant has started selling electricity commercially on 27 November 2020 with an electricity sales volume under the bidding system power purchase agreement of 9.2 megawatts with a net selling price of 3.14 baht per unit.

In Q4-2021, TPCH1 generated and sold 10,275,297 units with 27 days of planned shutdown and 14 days 8 hours of unplanned shutdown.

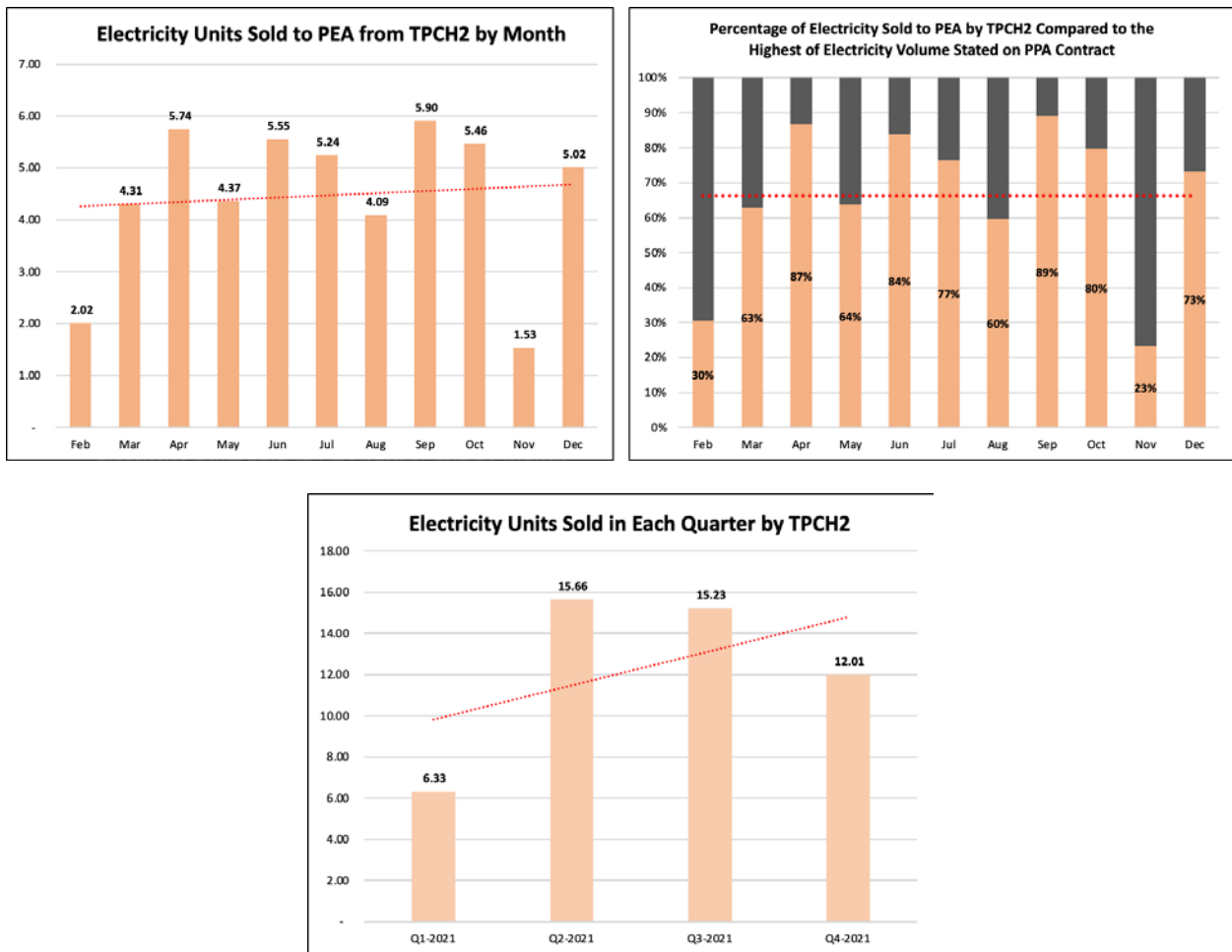
In 2021, TPCH1 has generated 45,683,429 units with 78 days of planned shutdown and 39 days 12 hours of unplanned shutdown. Details as follows



TPCH2 power plant has started selling electricity commercially on 17 February 2021 with an electricity sales volume under the bidding system power purchase agreement of 9.2 megawatts with a net selling price of 3.14 baht per unit.

In Q4-2021, TPCH2 generated and sold 12,009,600 units with 22 days of planned shutdown and 28 days 16 hours of unplanned shutdown.

In 2021, TPCH2 has generated 49,220,289 units with 36 days of planned shutdown and 28 days 16 hours of unplanned shutdown. Details as follows:



Balance Sheet

	31 December 2021	31 December 2020	% Change
Current Assets	1,592.16	822.54	93.6%
Non-Current Assets	7,934.52	7,865.72	0.9%
Total Assets	9,526.68	8,688.26	9.7%
Current Liabilities	1,313.96	1,592.28	(17.5%)
Non-Current Liabilities	4,464.17	3,045.37	46.6%
Total Liabilities	5,778.13	4,637.65	24.6%
Shareholders' Equity	3,748.56	4,050.61	(7.5%)
Total Liabilities and Equity	9,526.68	8,688.26	9.7%

■ Assets

At the end of 2021 and 2020, the Company had total assets of 9,526.68 million THB and 8,688.26 million THB, respectively, divided into current assets of 1,592.16 million THB and 822.54 million THB, non-current assets of 7,934.52 million THB and 7,865.72 million THB. Details of significant changes on the assets of the two years are as follows:

Changes on Assets between on 31 December 2021 and on 31 December 2020

Current Assets

- Cash and cash equivalents increased by 448.99 million THB due to the remaining amount of the debentures and the income from the sale of electricity of the subsidiaries.
- Accounts receivable increased by 61.94 million THB, which were accounts receivable from the sale of electricity in November and December of 2021 of 5 projects (CRB, TSG, MWE, PGP, SGP) and 3 southern provinces (PTG, TPCH5, TPCH1, TPCH2) which are in process of adjusting various systems and fine-tuning the machine, resulting in less revenue recognition than production capacity.
- Note receivable to related parties increased by 111.00 million THB because SP has many projects under development and indeed working capital within the business.

- Inventories increased by 42.03 million THB as fuel stored in reserve for power generation and spare parts for equipment repairs of the 3 southern-province power plants.

Non-Current Assets

- Deposits pledged as collateral increased by 99.03 million THB due to the project that has recently started commercial operation (PTG TPCH1 TPCH2 TPCH5) had to make provisions for loan repayment and pledged deposits as collateral which the bank issued a letter of guarantee.
- Investment in joint ventures increased by 59.24 million THB due to the capital increase of SP for business expansion on waste power plant projects.
- Property, plant, and equipment decreased by 62.36 million THB due to the accumulated depreciation of assets of the power plant project. On the other hand, there is also an increase in PP&E from the construction of the PBB PBM project and the additional construction of the group of 3 southern-province power plants.
- Advance payment for management fee decreased by 16.39 million THB due to a new operating contract of PGP and SGP.

Liabilities

At the end of 2021 and 2020, the Company had total liabilities of 5,778.13 million THB and 4,637.65 million THB, respectively, divided into current liabilities of 1,313.96 million THB and 1,592.28 million THB and non-current liabilities of 4,464.17 million THB and 3,045.337 million THB. Details of significant changes on the liabilities of the two years are as follows:

Changes on Liabilities between on 31 December 2021 and on 31 December 2020

Current Liabilities

- Overdraft and short-term loan from financial institutions decreased by 93.80 million THB due to the return of bills of exchange on the due date.
- Current accounts payable decreased by 229.23 million THB due to a decrease in creditors purchasing assets and accrued expenses.
- The portion of long-term loans from financial institutions due within one year increased by 116.10 million baht from loans of 3 southern-province power plants that COD in late 2020 -

early 2021 and the CRB power plant project that has been refinanced with financial institutions in early 2021.

- The portion of retention payables due within one year decreased by 141.76 million THB due to the completion of the construction work.

Non-Current Liabilities

- Long-term loans decreased by 77.30 million THB due to the classification of long-term loans from financial institutions that are due within one year of the TPCH1 TPCH2 TPCH5 project.
- Debentures increased by 1,490.23 million THB from the issuance of debentures of 1,500 million baht on 30 September 2021 for the return of bills of exchange for investment in power plants and as working capital within the business with 4.5% interest rate and payable every 3 months.

▪ **Equity**

Equity of the Company's shareholders and its subsidiaries at the end of 2021 and 2020 equal to 3,748.56 million THB and 4,050.61 million THB, respectively. Equity decreased by 302.05 million THB due to an increase in legal reserve of 15.38 million THB, profit (loss) for the period of 135.40 million THB, and dividend payment of 181.74 million THB.

Cash flow statement

	2021	2020
Cash from operating activities	127.93	874.38
Cash from investing activities	(745.67)	(862.13)
Cash from financing activities	1,066.74	(32.96)
Net Increase (decrease) in Cash and cash equivalents	448.99	(20.71)

Cash flow for 2021 and 2020

Cash flow from operating activities for the year 2021 amounted to 127.93 million baht, decreased by 746.45 million THB from 2020. Although the Group of 3 Southern Provinces Projects (PTG started commercial operations in May 2020, TPCH5 TPCH1 started commercial operations in November 2020, TPCH2 started commercial operations in February 2021) were fully operated in 2021, making 10 power plants with a total electricity sold of 672,384,007, but there are some periods in which the machines are down for fine-tuning and maintenance. As a result, the fuel consumption rate is higher than that of normal operations and the fuel price was in the high price range. In addition, MWE was unable to produce electricity for 92 days due to a generator malfunctioned. The Company had paid for the construction in full and some of performance guarantees on several projects. The company has been managing fuel of 7 projects (PGP SGP PTG TPCH1 TPCH2 TPCH5 MWE) resulting in a decrease in cash flow from operating activities due to the need to reserve more fuel for electricity generation.

The Company and its subsidiaries had cash flow used in investing activities of 745.67 million baht. It consists of deposits pledged as collateral increased by 144.48 million THB, reserves for repayment of loans from financial institutions, investments in subsidiaries from the existing shareholders of the project PTG TPCH1 TPCH2 TPCH5 in the amount of 203.00 million THB, a deposit of 15.00 million baht for the acquisition, investment in SP in the amount of 67.50 million baht to support the expansion of waste power plant projects, investment in the purchase of land, buildings and equipment in the amount of 256.03 million THB, and construction of the PBB PBM project and additional construction of the Group of 3 Southern Provinces and has loans to related parties for use in the business in the amount of 263.00 million THB.

For the year 2021, the Company and its subsidiaries had net cash flows from financing activities of 1,066.74 million THB, paid loans from financial institutions in the amount of 56.20 million THB, received payments from debentures of 1,500.00 million THB with maturity of 2 years and 9 months at 4.5% interest per annum, cost of issuing debentures amounting to 10.67 million THB. At the same time, there was a dividend payment of 181.74 million THB and dividends of non-controlling stakeholders of the subsidiary in the amount of 204.43 million THB.

Industry Overview in 2022

The Ministry of Energy has disclosed a power purchase plan that may occur in 2022 of 1,000 megawatts, in line with the country's long-term power development plan 2018-2037, or PDP 2018 revised 1. It is expected that the purchase of solar power and wind power projects will be launched in the first half of the year along with the power purchase project from the first phase of municipal waste power plants of 200 MW. In the second half of the year, it is expected that the government will launch a plan to purchase 400 megawatts mainly in the biomass type of community power plant project (phase 2) and second phase of municipal waste power plants of 200 MW. The reason for the increase in renewable energy purchase plans is because the PDP plan has been adjusted to be in line with the direction of global energy that aims to reduce global warming as discussed at the 26th session of the United Nations Framework Convention on Climate Change (COP 26). During the convention, Thailand has released its plan to reduce Thailand's net greenhouse gas emissions to zero by 2050. The company is aware of the global warming problem and has always been a part of the green energy development of Thailand since day one. TPCH is ready to participate in bidding quotas that will be release for purchase in 2022, both in the field of biomass/biogas and municipal waste with more than 10 projects under development in various parts of Thailand.

Lately, the Company has given importance to and is studying the government's BCG (Bio-Circular-Green Economy) policy that has been identified as a national agenda. It consists of Bioeconomy that focuses on the utilization of biological resources cost-effectively by using technology to increase efficiency for maximum value, Circular Economy that emphasizes on the use of resources for the most cost-effectiveness (Reuse, Recycle, Zero-waste), and Green Economy that focuses on reducing the impact on the world in a sustainable way. The Company has studied with research institutes and has invested in the business that generates revenues that extend from the power plant project. Aiming to expand the business in other fields besides the distribution of electricity in order to have more business opportunities which also supports government policies that go in the same direction as global business trends.

For your information,

TPC Power Holding Public Company Limited

(Mr. Cherdsak Wattanavijitkul)

President

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TPCH	: TPC Power Holding Public Company Limited
CRB	: Chang Rak Biopower Company Limited
MWE	: Maewong Energy Company Limited
MGP	: Mahachai Green Power Company Limited
TSG	: Thungsung Green Company Limited
PGP	: Phatthalung Green Power Company Limited
SGP	: Satun Green Power Company Limited
PTG	: Pattani Green Company Limited
TPCH1	: TPCH Power 1 Company Limited
TPCH2	: TPCH Power 2 Company Limited
TPCH5	: TPCH Power 5 Company Limited
PA	: PA Waste and Energy Company Limited
SP	: Siam Power Company Limited
ECO	: ECO Energy Group Corporation Company Limited
PBM	: Pracharat Biomass Mae Lan Company Limited
PBB	: Pracharat Biomass Bannang Sata Company Limited
TPCH9	: TPCH Power 9 Company Limited
TPCH10	: TPCH Power 10 Company Limited
TPCH11	: TPCH Power 11 Company Limited
TPCH14	: TPCH Power 14 Company Limited
TPCH15	: TPCH Power 15 Company Limited
TPCH17	: TPCH Power 17 Company Limited
TPCH18	: TPCH Power 18 Company Limited
TPCH19	: TPCH Power 19 Company Limited
PEA	: Provincial Electricity Authority
MEA	: Metropolitan Electricity Authority
COD	: Commercial Operation Date
SCOD	: Scheduled Commercial Operation Date
RDF	: Refuse Derived Fuel which is the product of processing municipal solid waste to separate the noncombustible from the combustible portion, and preparing the combustible portion into a form that can be effectively fired in an existing or new boiler.