

PT BARITO PACIFIC TBK

BUSINESS, FINANCIAL AND INDUSTRY UPDATE

FINANCIAL UPDATE OF BARITO PACIFIC

Key factors affecting our results of operations and financial condition

Revenue from our petrochemical business through Chandra Asri

We generate most of our net revenues from our petrochemical business through our non-wholly owned subsidiary, Chandra Asri. As of December 31, 2017, we own 46.26% of total outstanding shares of Chandra Asri, and Chandra Asri's revenue for the respective periods is consolidated in our audited financial statements. See note 1 of our audited consolidated financial statements. For the years ended December 31, 2015, 2016 and 2017, our net revenue from our petrochemical business through Chandra Asri was US\$1,377.6 million, US\$1,930.3 million and US\$2,418.5 million, constituting 98.0%, 98.4% and 98.6% of our total net revenues. As a result, a number of the key factors affecting the results of operations and financial condition of Chandra Asri (as set forth below) also had a material impact on our business during 2015, 2016 and 2017.

Supply and demand dynamics in the petrochemical markets

The net sales, profit margins and operating performance of our key business, Chandra Asri, are sensitive to supply and demand dynamics in both the domestic and international petrochemical markets. Demand for Chandra Asri's products is generally linked to the level of economic activity or GDP growth. Supply is affected by production capacity available in the market. As demand for petrochemical products approaches available supply, industry capacity utilization rates rise, and prices and margins typically increase. Historically, this relationship has been highly cyclical due to fluctuations in supply resulting from the timing of new investments in capacity and general economic conditions affecting the relative strength or weakness of demand. Generally, capacity is more likely to be added in periods when prevailing or expected future demand is strong and margins are, or are expected to be, high. Investments in new capacity can result, and in the past frequently have resulted, in overcapacity, which typically leads to a decrease in industry capacity utilization rates and a reduction of margins. In response, petrochemical producers typically reduce capacity or limit further capacity additions, eventually causing the market to be relatively undersupplied and leading to a rise in industry capacity utilization and margin expansion. Although Chandra Asri is the sole domestic producer of some of its products and we believe it has significant advantages over both of its domestic and international competitors, the petrochemical industry has historically been characterized by periods of tight supply, leading to high utilization rates and margins, followed by periods of oversupply primarily resulting from significant capacity additions, leading to reduced utilization rates and margins. Oversupply results in reduction of the price of Chandra Asri's products, which leads to a reduction in its profit margins, whereas during periods of tight supply, Chandra Asri benefits from the increase in product prices which leads to enhanced profit margins. Chandra Asri's historical results reflect these supply and demand dynamics and the volatile nature of the petrochemical industry.

Prices of Chandra Asri's products are generally set by regional benchmark prices, amongst other factors. From 2015 to 2016, Chandra Asri experienced a decrease in the average sales price per ton of its products in tandem with lower crude oil prices, before increasing in 2017 in line with the recovery in oil prices. During the years ended December 31, 2015, 2016 and 2017, the average sales prices of olefins were US\$774.6/MT, US\$758.6/MT and US\$863.8/MT, respectively. During the years ended December 31, 2015, 2016 and 2017, the average sales prices per ton of polyolefins were US\$1,285.5/MT, US\$1,191.1/MT and US\$1,229.9/MT, respectively. During the years ended December 31, 2015, 2016 and 2017, the average sales prices of styrene monomer and by-products were US\$1,086.2/MT, US\$1,023.7/MT and US\$1,191.0/MT, respectively. During the years ended December 31, 2015, 2016 and 2017, the average sales prices of butadiene and by-products were US\$737.0/MT, US\$690.3/MT and US\$928.5/MT, respectively.

Cost of feedstock

In connection with our petrochemical business through Chandra Asri, Chandra Asri uses naphtha as its primary feedstock to produce its products and, accordingly, the cost of naphtha, all of which is purchased

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from independent third parties, represents by far the largest portion of Chandra Asri's cost of goods sold. During the years ended December 31, 2015, 2016 and 2017, the cost of naphtha accounted for 45.9%, 61.3% and 62.4% of our cost of revenues, respectively. The price of naphtha generally follows the price trend of crude oil, and varies with the market conditions for crude oil, which in recent times have been highly volatile and have generally decreased since 2014. Naphtha price movements have not always been of the same magnitude or direction as changes in the prices Chandra Asri historically received for its products. Accordingly, increases or decreases in naphtha prices may have a material effect on margins. During 2015, 2016, and 2017, approximately 69.6%, 76.1% and 57.5% of Chandra Asri's naphtha was supplied pursuant to one-year contracts at a formula price, respectively.

Meanwhile, the prices for Chandra Asri's products have also decreased, although at a slower rate than the decrease in the price of naphtha. As a result, operating margins have increased during the periods. However, the oil price recovered in the first half of 2017, which led naphtha prices to increase, pressuring our operating margins. The average price per ton of naphtha decreased from US\$550.6/MT in 2015 to US\$409.7/MT in 2016 before increasing to US\$500.4/MT in 2017. The average cost per ton of benzene, which is the primary raw material for styrene monomer, decreased by 14.8% to US\$614.5/MT in 2016 from US\$721.4/MT in 2015, before increasing to US\$834.3/MT in 2017. Gross product margins are calculated by gross profit per product divided by net revenue per product. Gross product margins for olefins during the years ended December 31, 2015, 2016 and 2017 were (0.9)%, 27.2% and 27.1%, respectively. Gross product margins for polyolefins during the years ended December 31, 2015, 2016 and 2017 were 15.8%, 32.0% and 26.4%, respectively. Gross product margins for styrene monomer and by-products during the years ended December 31, 2015, 2016 and 2017 were 5.0%, 8.7% and 9.9%, respectively. Gross product margins for butadiene and by-products during the years ended December 31, 2015, 2016 and 2017 were (5.1)%, 11.1% and 14.2%, respectively.

Chandra Asri uses propylene as feedstock to produce polypropylene. Chandra Asri generally uses all of its propylene production as feedstock for its own production of polypropylene. However, its propylene production is not sufficient for all of its polypropylene production and Chandra Asri typically imports propylene to use as feedstock. During 2015, 2016 and 2017, Chandra Asri produced 182 KT, 416 KT and 227 KT, respectively, of propylene and purchased 313 KT, 175 KT and 423 KT of propylene, respectively. During 2015, 2016 and 2017, the cost of propylene accounted for 2.3%, 7.0% and 7.4% of our cost of goods sold, respectively. The price of propylene is generally determined by supply and demand for propylene in the market. Propylene price movements have not always been of the same magnitude or direction as changes in the prices we received for Chandra Asri's products. Accordingly, increases or decreases in propylene prices have had a material effect on margins.

As a result, increases in feedstock prices may have a material adverse effect on margins and cash flows for our petrochemical business, to the extent that such increases are not passed through to the selling prices of Chandra Asri's products. Significant volatility in feedstock costs may also put pressure on margins, since sales price increases for Chandra Asri's products may lag behind feedstock price increases. There can be no assurance that increases in feedstock prices will not adversely affect Chandra Asri's business or results of operations and in turn, our business or results of operations in the future.

Economic conditions

Global and domestic macroeconomic conditions have historically had a significant impact on our operations and will continue to impact our operations, especially our petrochemical business through Chandra Asri. For example, the European debt crisis and China's economic slowdown in 2012 as well as high naphtha prices which resulted from the high oil prices triggered by heightened tensions in the Middle East stalled the growth of the petrochemical industry and have therefore resulted in significant decline in our profit margins and profitability from our petrochemical business in 2012. Moreover, in the second half of 2014, declining commodity prices, including the price of oil, led to a significant drop in the price of naphtha, which closely tracks oil prices, from which Chandra Asri's operations benefited due to reduced feedstock cost. The global financial crisis, which commenced during the second half of 2008, had a negative effect on Indonesia and had negatively impacted Chandra Asri's results of operations in 2008. According to the IMF, the global downturn adversely affected the economic performance of Indonesia, slowing real GDP growth rate from 5.0% in 2014 to 4.8% and 4.9% in 2015 and 2016 respectively, before strengthening to 5.1 % in 2017.

Maintenance programs (TAM) and unplanned outages

The results of operations of our petrochemical business are materially influenced by the degree to which Chandra Asri utilizes its assets in order to achieve maximum production volumes. Scheduled maintenance programs such as TAM and SDM, as well as unplanned shutdowns of its plants, may affect its utilization rate, which results in fluctuation in total production. In 2015, 2016 and 2017, the aggregate production of olefins, polyolefins, styrene monomer and by-products and butadiene and by-products was 1,763 KT, 2,919 KT and 3,241KT. Chandra Asri is scheduled to conduct TAM every five years at its naphtha cracker plant, which typically lasts for 45 days. In September to December 2015, Chandra Asri conducted a scheduled TAM and expansion tie-in works, which resulted in the shutdown of its cracker facility for 85 days and limited its production capacity for 2015. The shutdown period was longer than the average as the TAM was conducted in conjunction with its naphtha cracker expansion project. After the TAM and naphtha cracker expansion was complete, the name-plate capacity of Chandra Asri's naphtha cracker increased to 860 KT/A. The capacity utilization rate of its naphtha cracker during the year ended December 31, 2015 and the first quarter of 2016 was low at 56.5% and 64.7%, respectively, largely reflecting the impact of the naphtha cracker TAM and expansion tie-in works during 2015 and the ramp-up of new capacity additions in the first quarter of 2016.

Chandra Asri is scheduled to conduct the next TAM in 2020. After recent review of its TAM procedures, Chandra Asri expects the TAM will result in a shutdown of its production plants for a maximum of approximately 45 days.

Chandra Asri's two styrene monomer plants each require a once every two years SDM for a period of 26 days to 30 days. In December 2016, Chandra Asri conducted a scheduled SDM, which resulted in the stoppage of its styrene monomer plants for 30 days. Chandra Asri conduct SDM for its butadiene plant at the same time as a TAM for its naphtha cracker plant, during which it shut down production of butadiene for a period of up to 40 days.

Chandra Asri's operations are also subject to production and other factors beyond its control, which may subject it to unscheduled outages and shutdowns. In the past, Chandra Asri suffered from unplanned outages, including several unplanned shutdowns in 2015, due to it running several of its facilities for a longer time than usual to align them with the scheduled TAM and expansion tie-in works for its cracker expansion project towards the end of 2015. The unplanned shutdowns, as well as the scheduled TAM and expansion tie-in works resulted in a decrease in the utilization rate of its naphtha cracker from 93.5% in 2014 to 56.5% in 2015. In addition, there was a fire incident at a naphtha feed line to one of the furnaces at Chandra Asri's naphtha cracker plant on June 10, 2017, which resulted in a decrease in the utilization rate of its naphtha cracker plant to approximately 80% for a period of four days following the incident. Chandra Asri's naphtha cracker plant resumed to normal operating levels on June 20, 2017.

Debottlenecking and expansion plans

Our ability to increase petrochemical production and sales will depend on Chandra Asri's ability to improve the capacity of its assets through its debottlenecking and expansion plans. For example, the cracker expansion project, which Chandra Asri completed in December 2015, resulted in a 43% capacity increase for its products, namely ethylene (from 600 KT/A to 860 KT/A), propylene (from 320 KT/A to 470 KT/A), pygas (from 280 KT/A to 400 KT/A) and mixed C₄ (from 220 KT/A to 315 KT/A). Chandra Asri expects its debottlenecking and expansion plans to increase production capacity through the installation of new equipment and machinery in its existing production facilities.

Chandra Asri is currently undertaking a butadiene expansion project, the construction of a new polyethylene plant, and a naphtha cracker furnace revamp. SRI, Chandra Asri's joint venture company between its wholly owned subsidiary SMI and Michelin, commenced construction of a new synthetic rubber plant to produce synthetic butadiene rubber in Cilegon, Banten Province in November 2015. In addition, Chandra Asri has projects in the pipeline, namely a debottlenecking project for its polypropylene plant and the construction of a new MTBE and Butene-1 plant. We expect that the development and completion of new plants will enable Chandra Asri to produce new additional and higher value-added downstream products. See "*Capital Expenditures - Planned capital expenditures.*"

Tariffs

The results of operations in connection with our petrochemical business have historically been affected in certain respects by tariffs imposed on imports of petrochemical products into Indonesia. Since March 1, 2017, the import of naphtha, ethylene, propylene, styrene monomer and butadiene is not subject to tariffs. The import of polyethylene and polypropylene is subject to a tariff of 5% to 15% of the import price if imported from non-ASEAN countries and is not subject to tariff if imported from ASEAN countries.

Environmental legislation

Our results of operations are affected by environmental laws and regulations, including those relating to greenhouse gas emissions, and environmental risks and goals generally. We have invested, and will continue to invest, a significant amount of financial and technical resources in order to achieve and maintain compliance with environmental requirements. From time to time, Chandra Asri incurs remediation and decommissioning costs at its current and former production facilities, as well as at other locations. Environmental considerations can also impact the markets in which we operate, including our position with respect to our competitors.

Seasonality

Our petrochemical business historically experienced lower sales during festive seasons, particularly during Hari Raya Idul Fitri or Lebaran holidays in Indonesia, during which only food and passengers are generally allowed to be transported on public roads. Chandra Asri has historically been unable to deliver products to its domestic customers for approximately 14 days during this festive period. While the operating rates of the polyethylene and polypropylene plants are not necessarily reduced, inventory builds up for two weeks during this festive period. Approximately two weeks prior to this festive period, demand for its products builds up, while our petrochemical business experiences lower sales for approximately two weeks during the festive period. As Hari Raya Idul Fitri shifts every year, to the extent that Lebaran does not fall within the same quarter, the results of operations of our petrochemical business will show the effects of seasonality.

Description of key income statement line items

Net revenue. We derive most of the revenue from our petrochemical business through Chandra Asri, which constituted 98.0%, 98.4% and 98.6% of our revenue for 2015, 2016 and 2017, respectively. Our other businesses include plantation, forestry, tanks and jetty rent and rental income from property and hotels. Our net revenue consisted of sales revenue net of VAT. We recognized domestic sales when the goods were delivered to customers. Export sales were generally made on an FOB basis and were recognized when the goods were dispatched, except for styrene monomer which was generally made on a CFR basis. In 2015, 2016 and 2017, our net revenue amounted to US\$1,406.1 million, US\$1,961.3 million and US\$2,452.8 million, respectively.

The table below shows a breakdown of our net revenue for the periods indicated by business.

	For the year ended December 31,		
	2015	2016	2017
	<i>(US\$ in millions)</i>		
Petrochemical.....	1,377.6	1,930.3	2,418.5
Others ⁽¹⁾	28.5	31.0	34.3
Total	1,406.1	1,961.3	2,452.8

Note:

⁽¹⁾ Other businesses include plantation, forestry, tanks and jetty rent and rental income from property and hotels.

Cost of revenues and direct costs. We derive most of the cost of revenue and direct costs from our petrochemical business through Chandra Asri, including the cost of goods sold from the petrochemical business adjusted for the cost of other businesses. The total cost of goods sold of the petrochemical business comprised total manufacturing costs adjusted for work-in-process and finished goods. Our total manufacturing cost was primarily composed of the cost of naphtha and benzene, the principal raw materials

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used in Chandra Asri's production operations, as well as direct labor and factory overheads. In 2015, 2016 and 2017, our cost of revenues and direct cost was US\$1,267.0 million, US\$1,473.9 million and US\$1,913.2 million, respectively and Chandra Asri's cost of goods sold was US\$1,238.1 million, US\$1,442.1 million and US\$1,876.7 million, respectively.

The table below shows a breakdown of our total cost of revenues for the periods presented:

	For the year ended December 31,		
	2015	2016	2017
	<i>(US\$ in millions)</i>		
Petrochemical			
Materials used ⁽¹⁾	701.4	1,015.0	1,397.5
Direct labor	27.4	34.2	47.3
Factory overhead	224.5	281.1	298.5
Total Manufacturing Costs	953.3	1,330.3	1,743.2
Work in progress			
Beginning year	15.3	10.9	12.6
Ending year	(10.9)	(12.6)	(11.1)
Cost of Goods Manufactured	957.8	1,328.6	1,744.7
Finished goods			
Beginning year	66.7	58.0	70.2
Purchases of finished goods	271.7	125.8	149.5
Ending year	(58.0)	(70.2)	(87.7)
Cost of Goods Sold of Petrochemical	1,238.1	1,442.1	1,876.7
Cost of forestry business	5.4	5.4	4.8
Cost of sales of plantation business	18.4	20.3	25.4
Cost of service	2.1	2.3	2.5
Direct cost of property and hotel	3.1	3.8	3.7
Total	1,267.0	1,473.9	1,913.2

⁽¹⁾ Only includes costs of those raw materials that are used in Chandra Asri's production process. Under our accounting treatment, only naphtha and benzene are designated as "raw materials." Since Chandra Asri also produces ethylene, propylene and C₄, we designate them as "finished goods."

Selling expenses. Our selling expenses primarily include freight and insurance, salaries, wages and employee benefits, and others. In 2015, 2016 and 2017, our selling expenses totaled US\$43.7 million, US\$44.5 million and US\$44.2 million, respectively. The table below shows a breakdown of selling expenses for the periods presented.

	For the year ended December 31,		
	2015	2016	2017
	<i>(US\$ in millions)</i>		
Selling Expenses			
Freight and insurance	41.1	40.5	39.0
Salaries, wages and employee benefits	1.3	1.8	2.8
Others	1.3	2.2	2.4
Total	43.7	44.5	44.2

General and administrative expenses. Our general and administrative expenses primarily included salaries, wages and employee benefits, depreciation, professional fees, transport and travelling and others. In 2015, 2016 and 2017, our general and administrative expenses totaled US\$30.8 million, US\$34.7 million and US\$50.4 million, respectively. The tables below show a breakdown of general and administrative expenses for the periods presented.

	For the year ended December 31,		
	2015	2016	2017
	<i>(US\$ in millions)</i>		
General and Administrative Expenses			
Salaries, wages and employee benefits	20.3	22.7	32.5

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	For the year ended December 31,		
	2015	2016	2017
	<i>(US\$ in millions)</i>		
Depreciation	1.8	1.7	3.6
Professional fees	1.7	1.5	2.6
Transportation and travelling	1.0	1.0	2.3
Others.....	6.0	8.0	9.5
Total	30.8	34.7	50.4

Finance costs. Finance costs primarily include interest expenses, bank charges and tax on interest expense. The table below shows a breakdown of finance costs for the periods presented.

	For the year ended December 31,		
	2015	2016	2017
	<i>(US\$ in millions)</i>		
Interest expenses on:			
Bank loans.....	18.0	31.0	45.5
Bonds	—	0.1	6.6
Loan from a related party	1.4	—	—
Finance lease	0.5	0.1	—
Others.....	1.4	0.9	0.0
Total interest on financial liabilities not classified as at Fair Value Through Profit or Loss ("FVTPL")...	21.4	32.1	52.1
Bank charges	5.6	4.3	6.5
Tax on interest expense	1.6	1.7	1.2
Total.....	28.5	38.2	59.7

Other gains and losses (net). Our other gains and losses (net) primarily includes gain on tax assessment under appeal, interest income, scrap sales, gain (loss) on derivative financial instruments, gain on sale of property, plant and equipment and other gains and losses (net). The table below shows a breakdown of our other income for the periods indicated.

	For the year ended December 31,		
	2015	2016	2017
	<i>(US\$ millions)</i>		
Gain on tax assessment under appeal	—	7.1	—
Interest income.....	0.9	2.1	3.7
Scrap sales.....	0.4	1.8	—
Gain (loss) on derivative financial instruments	(1.5)	0.6	(1.2)
Gain (loss) on sale of property, plant and equipment	12.3	0.0	(0.0)
Others - net.....	1.3	5.1	8.9
Total	13.5	16.7	11.3

Income tax benefit (expense). Our income tax benefit or expense comprised current tax and deferred tax. Current tax was calculated based on the taxable income for the year computed using prevailing tax rates. Deferred tax assets and liabilities were recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax liabilities were recognized for all taxable temporary differences and deferred tax assets were recognized for deductible temporary differences to the extent that it was probable that taxable income would be available in future periods against which the deductible temporary differences could be utilized. Deferred tax was calculated at the tax rates that had been enacted or substantively enacted as of the balance sheet date. The table below shows a breakdown of our income tax expense (benefit) and deferred tax expense (benefit) for the periods presented.

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	For the year ended December 31,		
	2015	2016	2017
	(US\$ millions)		
Subsidiaries			
Current tax.....	21.2	102.2	101.7
Deferred tax.....	8.5	(2.0)	3.8
Total income tax expense - net.....	29.7	100.2	105.5

Results of operations

2017 compared with 2016

Net revenues. Our net revenues increased by 25.1% to US\$2,452.8 million in 2017, compared with US\$1,961.3 million in 2016. Net revenues attributable to each of our main businesses are set forth below.

- *Petrochemical.* In 2017, our net revenues from our petrochemical business through Chandra Asri increased by 25.3% to US\$2,418.5 million, compared with US\$1,930.3 million in 2016, reflecting a growth in sales by an increase in the average sale price for Chandra Asri's products in 2017. The higher sales volume for 2017 was primarily due to higher levels of production due to a period of ramp-up in the first quarter of 2016 following successful completion of Chandra Asri's cracker expansion project in December 2015.
- *Others.* Our net revenues from other businesses increased by 10.9% to US\$34.3 million in 2017, compared with US\$31.0 million in 2016, due to increase in net revenues from our plantation business.

The net sales attributable to each of our main petrochemical products for the respective periods are set forth below.

- *Olefins (ethylene, propylene, pygas and mixed C₄).* Our net sales increased by 28.5% to US\$783.5 million in 2017 compared with US\$609.8 million in 2016, primarily attributable to the successful completion of Chandra Asri's cracker expansion project in December 2015 and lower production in the first quarter of 2016 due to a ramp-up period.
- *Polyolefin (polyethylene and polypropylene).* Our net polyolefin sales increased by 6.6% to US\$942.8 million in 2017 compared with US\$884.6 million in 2016, primarily reflecting an increase in sales volume.
- *Styrene monomer and by-products.* Our net sales of styrene monomer and by-products increased by 49.7% to US\$432.8 million in 2017 compared with US\$289.2 million in 2016. This was largely due to a 28.6% increase in sales volumes of styrene monomer and its by-products to 363.4 KT in 2017 compared with 282.5 KT in 2016 and a 16.4% increase in the average sales price per ton of styrene monomer to US\$1,201.2/MT in 2017 compared with US\$1,031.8/MT in 2016.
- *Butadiene and by-products.* Our net sales of butadiene and by-products increased by 80.9% to US\$252.0 million in 2017 compared with US\$139.3 million in 2016. This was largely due to a 34.5% increase in sales volumes of butadiene and its by-products to 271.4 KT in 2017 from 201.8 KT in 2016 and a 38.7% increase in the average sales price per ton of butadiene to US\$1,407.6/MT in 2017 compared with US\$1,015.2/MT in 2016.

Cost of revenues and direct costs. Our cost of revenues and direct costs increased by 29.8% in 2017 to US\$1,913.2 million, as compared with US\$1,473.9 million in 2016. A description of our cost of revenues by each of our main businesses is given below.

- *Petrochemical.* In 2017, our cost of revenues from our petrochemical business through Chandra Asri increased by 30.1% to US\$1,876.7 million, compared with US\$1,442.1 million in 2016, due to Chandra Asri's increased consumption of naphtha, which is its primary raw material, due to higher production as a result of. The average cost of naphtha per ton, which is linked to Brent crude prices, increased by 22.0% to US\$500/MT, compared with US\$410/MT in 2016.

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- *Others.* Our cost of other businesses increased by 14.8% to US\$36.5 million in 2017 compared with US\$31.8 million in 2016 due to the increase in our plantation assets' revenue by 13.1% in 2017.

The cost of revenues attributable to each of our main petrochemical products for the respective periods are set forth below.

- *Olefins (ethylene, propylene, pygas and mixed C₄).* Our cost of revenues of olefins increased by 28.6% to US\$570.9 million in 2017 compared with US\$443.9 million in 2016, primarily reflecting higher production levels compared with 2016, with the ramp-up period of Chandra Asri's naphtha cracker after completion of Chandra Asri's cracker expansion project in December 2015, as well as higher raw material costs, primarily naphtha, and a 12.8% increase in Chandra Asri's olefins sales volume to 907.0 KT in 2017 compared with 803.8 KT in 2016.
- *Polyolefins (polyethylene and polypropylene).* Our cost of revenues of polyolefins increased to US\$693.7 million in 2017 compared with US\$601.8 million in 2016, primarily reflecting an increase in the price of raw materials.
- *Styrene monomer and by-products.* Our cost of revenues of styrene monomer and its by-products increased by 48.2% to US\$394.4 million in 2017 compared with US\$266.1 million in 2016, primarily reflecting higher production from improving plant performance and market conditions as well as an increase in the price of benzene. Sales volumes increased by 28.6% to 363.4 KT in 2017 compared with 282.5 KT in 2016.
- *Butadiene and by-products.* Our cost of revenues of butadiene and its by-products increased by 74.5% to US\$216.2 million in 2017 compared with US\$123.9 million in 2016, primarily reflecting higher production, with more feedstock being available for use following the completion of Chandra Asri's cracker expansion project. Sales volumes increased by 34.5% to 271.4 KT in 2017 compared with 201.8 KT in 2016.

Gross profit. As a result of the foregoing factors, primarily due to higher volumes from increased production and higher product margins. Chandra Asri's gross profit increased by 10.7% in 2017 to US\$539.6 million, compared with US\$487.5 million in 2016.

Operating expenses. Our operating expenses primarily included selling expenses, general and administrative expenses, finance costs, and other income (expenses). Selling expenses remained stable at US\$44.2 million in 2017 compared with US\$44.5 million in 2016. General and administrative expenses increased by 45.2% to US\$50.4 million in 2017, compared with US\$27.9 million in 2016, primarily due to higher salaries, allowances and employee benefits. In 2017, other gain was US\$11.3 million compared with US\$16.7 million in 2016, primarily due to higher gain on foreign exchange and higher share in net loss of an associate.

Finance costs. Finance costs increased by 56.3% to US\$59.7 million in 2017 compared with US\$38.2 million in 2016, primarily as a result of an increase in interest expenses from bank loans and bonds and bank charges.

Income tax expense (net). Our income tax expense (net) as a percentage of profit before tax (effective tax rates) was 27.4% in 2017. Our income tax expense increased by 5.3% to US\$105.5 million in 2017, compared with US\$100.2 million in 2016, primarily due to higher profit before tax in 2017 as compared with 2016.

Profit (loss) for the year. For the foregoing reasons, net profit for the year amounted to US\$279.9 million in 2017 which remained stable compared with US\$279.8 million in 2016. Our profit for the year attributable to owners of the company amounted to US\$118.1 million in 2017, compared with US\$131.7 million in 2016. Our net profit for the year attributable to non-controlling interests of PT Redeco Petrolin Utama ("RPU"), a subsidiary of SMI, amounted to US\$161.8 million, compared with US\$148.1 million in 2016.

2016 compared with 2015

Net revenues. Our net revenues increased by 39.5% to US\$1,961.3 million in 2016, compared with US\$1,406.1 million in 2015. Net revenues attributable to each of our main businesses are set forth below.

- *Petrochemical.* In 2016, our net revenues from our petrochemical sales through Chandra Asri increased by 40.1% to US\$1,930.3 million in 2016, compared with US\$1,377.6 million in 2015. The increase in net revenues reflected a 64% growth in sales volume partially offset by a 14.7% decrease in the average sale price for Chandra Asri's products in 2016. The higher sales volume for 2016 was primarily due to higher levels of production following the successful completion of Chandra Asri's cracker expansion project, which Chandra Asri completed in December 2015.
- *Others.* Our net revenues from our other businesses increased by 8.8% to US\$31.0 million in 2016, compared with US\$28.5 million in 2015, due to partial completion of the Cikupa project through our subsidiary.

The net sales attributable to each of our main petrochemical products for the respective periods are set forth below.

- *Olefins (ethylene, propylene, pygas and mixed C₄).* In 2016, Chandra Asri's net olefin sales increased by 256.4% to US\$609.8 million compared with US\$171.1 million in 2015, primarily attributable to the successful completion of Chandra Asri's cracker expansion project in December 2015.
- *Polyolefin (polyethylene and polypropylene).* Chandra Asri's net polyolefin sales increased by 1.8% to US\$884.6 million in 2016 compared with US\$869.0 million in 2015, primarily reflecting the results of Chandra Asri's cracker expansion project, which we completed in December 2015.
- *Styrene monomer and by-products.* Chandra Asri's net sales of styrene monomer and by-products increased by 13.1% to US\$289.2 million in 2016 compared with US\$255.8 million in 2015. This was largely due to a 20.0% increase in sales volumes of styrene monomer and by-products to 282.5 KT in 2016 compared with 235.5 KT in 2015 mainly due to improved plant performance and market conditions. The average sales price per ton of styrene monomer decreased by 5.7% at US\$1,031.8/MT in 2016 compared with US\$1,094.7/MT in 2015, in part reflecting lower feedstock costs.
- *Butadiene and by-products.* Chandra Asri's net sales of butadiene and by-products increased by 78.8% to US\$139.3 million in 2016 compared with US\$77.9 million in 2015. This was largely due to a 90.9% increase in sales volumes of butadiene and by-products to 201.8 KT in 2016 from 105.7 KT in 2015 as a result of higher production, which was possibly due to more feedstock being available for use as a result of increased capacity after the 85-day shutdown for TAM and Chandra Asri cracker expansion project. The average sales price per ton of butadiene increased by 7.9% to US\$1,015.2/MT in 2016 compared with US\$941.2/MT in 2015.

Cost of revenues and direct costs. Our cost of revenues and direct costs increased by 16.3 % in 2016 to US\$1,473.9 million, as compared with US\$1,267.0 million in 2015. A description of our cost of revenues by each of our main businesses is given below.

- *Petrochemical.* In 2016, Chandra Asri's cost of revenues from our petrochemical business increased by 16.5% to US\$1,442.1 million, compared with US\$1,238.1 million in 2015, due to Chandra Asri's increased consumption of naphtha, which is Chandra Asri's primary raw material, due to higher production as a result of the expanded ethylene capacity after the completion of TAM and expansion tie-in works in December 2015. The average cost of naphtha per ton, which is linked to Brent crude prices, decreased by 25.6% to US\$410/MT, compared with US\$551/MT in 2015.
- *Others.* Our cost of other businesses increased by 10.0% to US\$31.8 million in 2016 compared with US\$28.9 million in 2015 due to partial completion of Cikupa project through our subsidiary.

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The cost of revenues attributable to each of our main petrochemical products for the respective periods are set forth below.

- *Olefins (ethylene, propylene, pygas and mixed C₄)*. In 2016, our cost of revenues of olefins increased by 157.0% to US\$443.9 million compared with US\$172.7 million in 2015, primarily reflecting higher production as a result of the increased name-plate capacity of Chandra Asri's naphtha cracker after the completion of Chandra Asri's cracker expansion project, which we completed in December 2015, as well as an increase in our olefins sales volume, which increased by 263.9% to 803.8 KT in 2016 compared with 220.9 KT in 2015.
- *Polyolefin (polyethylene and polypropylene)*. Our cost of revenues of polyolefin decreased by 17.8% to US\$601.8 million in 2016 compared with US\$732.1 million in 2015, primarily reflecting higher production as a result of Chandra Asri's cracker expansion project, which Chandra Asri completed in December 2015, despite an increase in our polyolefin sales volume, which increased by 9.9% at 742.7 KT in 2016 compared with 676.0 KT in 2015.
- *Styrene monomer and by-products*. Our cost of revenues of styrene monomer and by-products increased by 8.6% to US\$264.1 million in 2016 compared with US\$243.1 million in 2015, primarily reflecting higher production from the improvement of plant performance and market conditions. Sales volumes increased by 20.0% to 282.5 KT in 2016 compared with 235.5 KT in 2015.
- *Butadiene and by-products*. Our cost of revenues of butadiene and by-products increased by 51.3% to US\$123.9 million in 2016 compared with US\$81.9 million in 2015, primarily reflecting higher production, which was possible with more feedstock being available for use after the 85-day shutdown for TAM and Chandra Asri's cracker expansion project. Sales volumes increased by 90.9% to 201.8 KT in 2016 compared with 105.7 KT in 2015.

Gross profit. As a result of the foregoing factors, namely higher production as made possible with a 43% increase in Chandra Asri's increased production capacity, higher gross profit margins reflecting an upward trend in the industry and low crude oil prices, our gross profit increased by 250.5% in 2016 to US\$487.5 million, compared with US\$139.1 million in 2015.

Operating expenses. Our operating expenses increased by 2.9% to US\$107.4 million in 2016 compared with US\$104.4 million in 2015, primarily due to higher exchange loss, higher salaries expense and the completion of Chandra Asri's cracker expansion project.

Finance costs. Our finance cost increased by 34.0% to US\$38.2 million compared with US\$28.5 million for in 2016, primarily as a result of an increase interest expenses on bank loans.

Income tax expense (net). Our income tax expense (net) as a percentage of profit before tax (effective tax rates) was 26.4% in 2016. Our income tax expense increased to US\$100.2 million in 2016 compared with US\$29.7 million in 2015, primarily due to higher profit before tax in 2016, as compared with 2015.

Profit (loss) for the year. For the foregoing reasons, our profit for the year amounted to US\$279.8 million in 2016 as compared with US\$5.1 million in 2015. Our profit for the year attributable to owners of the company amounted to US\$131.7 million in 2016, compared with a loss of US\$5.4 million in 2015. Our profit for the year attributable to non-controlling interests of RPU amounted to US\$148.1 million in 2016, compared with US\$10.4 million in 2015.

Liquidity and capital resources

As our liquidity and capital requirements are affected by many factors, some of which are beyond our control, our funding requirements may change over time. If we require additional funds to support our working capital or capital requirements, we may seek to raise such additional funds through public or private financing or other sources. We maintain our cash and cash equivalents in accounts with certain financial institutions and other temporary cash investments. We also maintain revolving credit facilities for working capital purposes with banks in Indonesia, Singapore and Thailand with a total aggregate principal amount of approximately US\$749 million, including a revolving loan facility of US\$115 million, comprising both secured and unsecured facilities.

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The table below sets forth our cash flows for the time periods indicated.

	For the year ended December 31,		
	2015	2016	2017
	<i>(US\$ in millions)</i>		
Net cash provided by operating activities	80.5	436.5	337.9
Net cash used in investing activities	(244.9)	(135.3)	(426.1)
Net cash provided by/(used in) financing activities	50.6	(100.0)	662.8
Net increase/(decrease) in cash and cash equivalents	(113.7)	201.2	574.6

Net cash provided by operating activities

Cash inflow from operating activities includes cash receipts from customers and tax restitution received. Cash outflows from operating activities include cash paid to suppliers, directors and employees and payment of corporate income taxes.

Our net cash provided by operating activities decreased to US\$337.9 million in 2017 compared with US\$436.5 million primarily as a result of increase in payment of income taxes. Our net cash provided by operating activities increased to US\$436.5 million in 2016 compared with US\$80.5 million in 2015, primarily as a result of a significant increase in cash receipts from customers.

Net cash used in investing activities

Cash outflows from investing activities include acquisitions of property, plant and equipment. Cash inflows from investing activities include proceeds from the sales of property, plant and equipment and interest received.

Our net cash used in investing activities increased to US\$426.1 million in 2017 compared with US\$135.3 million in 2016, primarily as a result of several debottlenecking and downstream expansion projects and plant improvements undertaken by Chandra Asri.

Our net cash used in investing activities decreased by 44.8% to US\$135.3 million in 2016 compared with US\$244.9 million in 2015, primarily as a result of the completion of Chandra Asri's cracker expansion project in December 2015.

Net cash used in financing activities

Cash outflows from financing activities include payment of long-term and short-term bank loans, and payment of transaction costs. Cash inflows from financing activities include proceeds from long-term and short-term bank loans and proceeds from bonds payable.

Our net cash provided by financing activities amounted to US\$662.8 million in 2017 from net cash used in financing activities of US\$100.0 million in 2016, primarily as a result of proceeds from a rights issue and the issuance of US dollar-denominated bonds by Chandra Asri in 2017.

Our net cash used in financing activities amounted to US\$100.0 million in 2016 compared with the net cash provided by financing activities of US\$50.6 million in 2015, primarily as a result of net payments we made for long-term bank loans and short-term bank loans of US\$106.7 million.

Capital expenditures

Historical capital expenditures

Substantially all of our capital expenditures relate to our petrochemical operation through Chandra Asri and, in particular for 2017, the expenditure in connection with our proposed acquisition of Star Energy (the "**Star Energy Acquisition**"). For the year ended December 31, 2017, we spent US\$214.5 million in capital expenditures, including for Chandra Asri's various debottlenecking and downstream expansion projects and plant improvements, and our deposit payments in connection with the Star Energy Acquisition.

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The table below shows our actual capital expenditures for the periods indicated:

	For the year ended December 31,		
	2015	2016	2017
	<i>(US\$ millions)</i>		
<i>Petrochemical Business</i>			
Debottlenecking and expansion projects.....	124.9	22.2	187.4
Plant improvement and others.....	53.0	43.2	36.1
TAM.....	45.9	7.9	-
<i>Star Energy Acquisition</i>			
First deposit payment.....	-	58.6	-
Second deposit payment	-	-	175.7
Total capital expenditures	223.8	131.9	399.2

Planned capital expenditures

In the near future, we expect to continue incurring most of our capital expenditure in relation to our petrochemical business through Chandra Asri. As of the date of this announcement, during 2018, 2019 and 2020, we plan to incur capital expenditures in connection with our petrochemical business through Chandra Asri of approximately US\$567 million, US\$536 million, US\$114 million, respectively, as broken down by projects in the table below. These amounts are subject to change depending on a number of factors, including the results of our feasibility studies and the completion of projects in a timely manner.

	For the year ended December 31,		
	2018	2019	2020
	<i>(US\$ millions)</i>		
Planned Capital Expenditures			
Butadiene expansion	17.5	-	-
New polyethylene plant.....	165.4	69.9	26.7
Naphtha cracker furnace revamp.....	26.0	8.0	2.1
Polypropylene debottlenecking project	17.2	21.9	-
MTBE and Butene-1 plant	30.0	68.4	15.2
Second petrochemical complex (initial spend).....	207.2	333.1	-
Others (including TAM).....	104.3	35.0	70.0
TOTAL	567.6	536.3	114.0

⁽¹⁾ Chandra Asri has three committed projects, namely the butadiene expansion project, the construction of a new polyethylene plant and the naphtha cracker furnace revamp. Chandra Asri has two projects in the pipeline, namely the polypropylene debottlenecking project, and the construction of a new MTBE and Butene-1 plant. Chandra Asri is also planning to conduct a feasibility study to construct and operate a second petrochemical complex.

Trade receivables and credit assessment

The average credit period on our sales of goods is between seven to 30 days. Export sales are usually supported by letter of credit. No interest is charged for receivables not yet due. Allowance for impairment losses is recognized against trade receivables, based on the estimated irrecoverable amounts determined by reference to past default experience of the counterparty and an analysis of the counterparty's current financial position.

Before accepting a new customer, we assess whether the potential customer meets our required conditions. Before approving any credit sales, we check the remaining credit limit for the customer. Customers are required to settle their outstanding receivables before the new credit sales are approved. Approval by the senior management is required for credit sales above the credit limit.

As of December 31, 2017, our net trade accounts receivable from our petrochemical business through Chandra Asri was US\$203.3 million, or 98.7% of total net trade accounts receivables of US\$206.0 million, out of which US\$185.9 million was the trade receivables not yet due, which accounted for 90.2% of our net trade accounts receivable. Past trade receivables due between one and 30 days were US\$19.3 million,

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which accounted for 9.4 % of our net trade accounts receivable. Trade receivables past due between 31 days and 60 days was US\$0.8 million, which accounted for 0.4 % of our net trade accounts receivable.

Contractual obligations

The table below summarizes our contractual obligations as of December 31, 2017.

	Payment Due by Period End			
	Total	Less than 1 year	1 year to 5 years	5 years and longer
	(US\$ in millions)			
Non-interest bearing				
Trade accounts Payable	483.0	483.0	-	-
Other accounts payable				
Related party.....	-	-	-	-
Third parties	1.2	1.2	-	-
Accrued expenses	15.5	15.5	-	-
Variable interest rate instruments				
Bank loans	398.1	299.7	79.0	19.4
Fixed interest rate instruments				
Bank loans	259.5	64.0	173.6	21.9
Bonds payable	467.3	18.0	123.0	326.3
Total	1,624.6	881.4	375.6	367.6

In addition, as of December 31, 2017, we were party to several supply contracts that contained purchase obligations with variable pricing terms. See Note 40 of our audited consolidated financial statements included elsewhere in this announcement.

Contingent liabilities

As of the date of this announcement, we did not have any contingent liabilities.

Off-balance sheet items

As of the date of this announcement, we did not have any off-balance sheet arrangements.

BUSINESS

Our company was established in 1979 as an integrated timber company in South Kalimantan. Following our acquisition of PT Chandra Asri in 2007 and PT Tri Polyta Indonesia Tbk in 2008, who merged in 2011 which resulted in PT Chandra Petrochemical Tbk as it currently exists ("**Chandra Asri**"), our investments have been focused on the petrochemicals, power, property, plantation and forestry industries. Upon completion of the Star Energy Acquisition, we will be a leading Indonesian integrated energy player with a strong portfolio of geothermal power assets, in addition to our controlling investment in Chandra Asri, Indonesia's largest integrated petrochemical producer.

Our core businesses will be power generation, with industrial assets in sectors that are renewable and resource-oriented and which have significant growth potential through business diversification and integration and which provide a strong basis for revenue growth and development. It is our intention, among other things, to broaden our power generation business through the development of two coal-fired power stations. See "*Our Power Generation Business*."

During the years ended December 31, 2015, 2016 and 2017, we generated net revenues of US\$1,406.1 million, US\$1,961.3 million and US\$2,452.8 million, respectively. Our petrochemical business generated net revenues of US\$1,377.6 million, US\$1,930.3 million and US\$2,418.5 million, respectively, and our other businesses generated net revenues of US\$28.5 million, US\$31.0 million and US\$34.3 million, respectively. During the years ended December 31, 2015, 2016 and 2017, Star Energy generated revenues of US\$68.9 million, US\$165.1 million, and US\$422.9 million, respectively.

During the years ended December 31, 2015, 2016 and 2017, the Adjusted EBITDA of Barito Pacific was US\$155.8 million, US\$513.0 million and US\$550.0 million, respectively, of which the Adjusted EBITDA of Chandra Asri for the respective periods, US\$154.8 million, US\$509.5 million and US\$550.3 million, constituted 99.3%, 99.3% and 99.9% of the Adjusted EBITDA of Barito Pacific, and the Adjusted EBITDA margin of Barito Pacific was 11.1%, 26.2% and 22.4%, respectively. During the years ended December 31, 2015, 2016 and 2017, the EBITDA of Star Energy was US\$48.8 million, US\$141.0 million and US\$349.6 million, respectively and the EBITDA margin of Star Energy was 70.8%, 85.4% and 82.7%, respectively.

Our Petrochemical Business

Chandra Asri is the largest integrated petrochemical producer in Indonesia and operates the country's only naphtha cracker, styrene monomer and butadiene plants. As such, Chandra Asri is the only domestic producer of ethylene, styrene monomer and butadiene, is one of only two domestic producers of propylene and polyethylene, and is the largest polypropylene producer in Indonesia. According to Nexant, Chandra Asri accounted for approximately 58% of the total market share of ethylene, 24% of the total market share of polyethylene and 29% of the total market share of polypropylene in Indonesia in 2016. Chandra Asri operates an integrated petrochemicals complex located in Banten Province of Indonesia, approximately 120 km from Jakarta, consisting of (i) a main petrochemicals complex in Ciwandan, Cilegon, and (ii) a styrene monomer complex approximately 40 km from the main petrochemical complex. Chandra Asri's petrochemical complex has integrated support facilities including pipelines, power generators, boilers, water treatment plants, storage tanks and jetty facilities.

Our Power Generation Business (subject to completion of the Star Energy Acquisition)

Star Energy operates three geothermal operations, namely the Wayang Windu Geothermal Operations, the Salak Geothermal Operations and the Darajat Geothermal Operations, with a total gross capacity of 875MW. The Wayang Windu Geothermal Operations include two units with a combined gross installed generation capacity of 227MW, owned and operated by Star Energy. In April 2017, Star Energy acquired the Salak and Darajat Assets, which have a gross installed generation capacity of 197MW and 216MW, respectively, and steam sales capacity of 180MW and 55MW, respectively. As at the date of this announcement, Star Energy has also completed preliminary surveys in the Hamiding and Sekincau prospects.

Coal-fired Projects

We also jointly own, together with PT Indonesia Power, a subsidiary of PLN, PT Indo Raya Tenaga, a project company that is developing the two 1,000MW coal-fired projects, Java 9 and 10 in Banten Province,

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Indonesia. As at the date of this announcement, site preparation works have started and the EPC contract is in the tender phase. We expect to commence the commercial operations of Java 9 and 10 by 2023.

Other Businesses

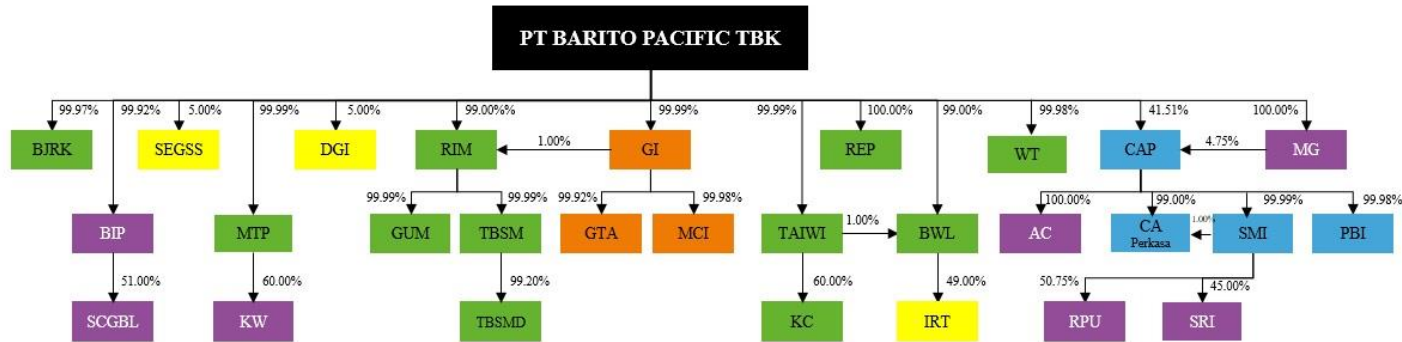
Supplementing our core petrochemical and power generation businesses are three non-core business lines, comprising our property, plantation and forestry businesses.

Our property business, which is operated through PT Griya Idola ("**GI**") and its subsidiaries, is engaged in the investment and development of commercial and industrial properties that support our petrochemical and power assets, given the relative difficulty in securing plots of land in Indonesia. We seek to make opportunistic land and property acquisitions in the vicinity of where our assets are located and may acquire properties from our affiliates from time to time.

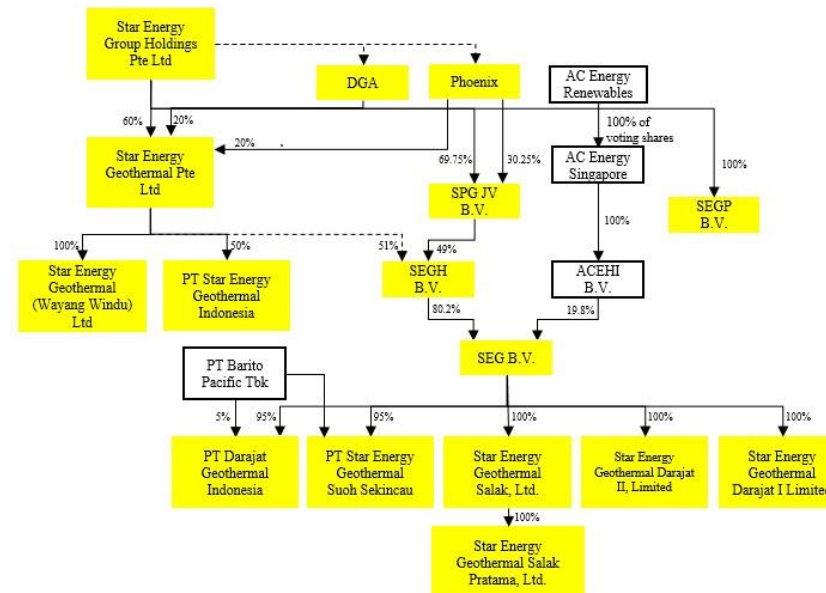
Our plantation business, which is operated through PT Royal Indo Mandiri ("**PT RIM**") and its subsidiaries, primarily develops our palm oil assets. PT RIM operates a total of 10,865 hectares of planted palm oil plantations, substantially all of which are mature, and has concessions for a further 17,722 hectares, all of which are located in West Kalimantan. We currently operate two CPO mills, with an aggregate capacity of 60 tons Fresh Fruit Bunches ("**FFB**") per hour.

We also continue to maintain forestry concession rights in North Maluku and West Kalimantan of over approximately 150,000 hectares.

The chart below sets forth the corporate structure of each Barito and Star Energy as of the date of this announcement:



- Petrochemical**
 - CAP = PT Chandra Asri Petrochemical Tbk
 - PB = PT Petrokimia Butadiene Indonesia
 - SMI = PT Styrimo Mono Indonesia
 - CAPerakasa = PT Chandra Asri Perakasa
- Energy**
 - DGI = Darajat Geothermal Indonesia
 - IRT = PT Indo Raya Tenaga
 - SEGSS = Star Energy Geothermal Suoh Sekincau
- Forestry and Plantation**
 - BJRK = PT Binajaya Rodakarya
 - BWL = PT Barito Wahana Lestari
 - GUM = PT Grand Utama MANDIRI
 - IRT = PT Indo Raya Tenaga
 - KC = PT Kirana Cakrawala
 - MTP = PT Mangole Timber Producers
 - REP = PT Rimba Equator Permai
 - RIM = PT Royal Indo Mandiri
 - TAIWI = PT Tunggal Agathis Indah Wood Industries
 - TBSM = PT Tintin Boyok Sawit Makmur
 - TBSMD = PT Tintin Boyok Sawit Makmur Dua
 - MTP = PT Mangole Timber Producers
 - WT = PT Wiranusa Trisatrya
- Property**
 - GI = PT Griya Idola
 - GTA = PT Griya Tirta Asri
 - MCI = PT Mambruk Cikoneng Indonesia
- Others**
 - AC = Altus Capital Pte. Ltd.
 - BIP = PT Barito Investa Prima
 - KW = PT Kalpika Wanatama
 - MG = Marigold Resources Pte Ltd
 - RPU = PT Redeco Petrolin Utama
 - SCGBL = SCG Barito Logistics
 - SRI = PT Synthetic Rubber Indonesia



Business Operations

Our Petrochemical Business

We run our petrochemical business through our subsidiary, Chandra Asri, and its consolidated subsidiaries. As of the date of this announcement, we have a 46.26% controlling interest in Chandra Asri.

Products

Chandra Asri's products are fundamental to the production of a diverse range of consumer and industrial products, including packaging, containers, construction materials and automotive parts.

Chandra Asri produces the following products:

- olefins, comprising ethylene and propylene as well as their by-products, such as pygas and mixed C₄;
- polyolefins, comprising polyethylene and polypropylene;
- styrene monomer as well as its by-products, including ethyl benzene, toluene and benzene toluene mixture; and
- butadiene as well as its by-products, such as raffinate.

Chandra Asri sells its products to customers in both the Indonesian and regional markets. Chandra Asri is the only domestic producer of ethylene, styrene monomer and butadiene, one of only two domestic producers of propylene and polyethylene and the largest polypropylene producer in Indonesia. According to Nexant, Chandra Asri accounted for approximately 58% of the total market share of ethylene in 2016 in Indonesia. In addition, Chandra Asri had a market share in Indonesia of approximately 24% for polyethylene and 29% for polypropylene.

The table below sets forth the name-plate capacity, production volumes, and proportion of such volumes to total production volume, for Chandra Asri's products for the time periods indicated:

Name-plate Capacity ⁽¹⁾ (KT/A)	For the year ended December 31,						
	2015		2016		2017		
	KT	%	KT	%	KT	%	
Olefins and by-products							
Ethylene	860	339	19.2	771	26.4	855	26.4
Propylene	470	182	10.3	416	14.3	460	14.2
Pygas.....	400	118	6.7	237	8.1	248	7.7
Mixed C ₄	315	108	6.1	248	8.5	274	8.5
Polyolefins.....							
Polyethylene	336	224	12.7	329	11.3	320	9.9
Polypropylene.....	480	444	25.2	428	14.7	451	13.9
Styrene monomer and by-products							
Styrene monomer.....	340	234	13.3	276	9.5	356	11.0
By-products		5	0.3	6	0.2	8	0.2
Butadiene and by-products .							
Butadiene	100	47	2.7	88	3.0	117	3.6
By-products		61	3.5	120	4.1	152	4.7

⁽¹⁾ As of December 31, 2017

Olefins and by-products

The key products produced by Chandra Asri's naphtha cracker are ethylene and propylene, also known as olefins. During the course of olefin production, Chandra Asri's naphtha cracker creates by-products, including pygas and mixed C₄.

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Chandra Asri is connected via pipelines to all of its ethylene and propylene customers. A majority of its domestic ethylene and propylene sales during the years ended December 31, 2015, 2016 and 2017, were delivered by pipeline. Chandra Asri's supply agreements with its key customers are renewable on an annual basis.

For the years ended December 31, 2015, 2016 and 2017, Chandra Asri sold 221 KT, 804 KT and 907 KT, respectively, of olefins and by-products. For the years ended December 31, 2015, 2016 and 2017, 48.9%, 58.1% and 61.2%, respectively, of Chandra Asri's olefins and olefin by-products sales were derived from sales to customers in Indonesia and the remainder was derived from export sales.

Ethylene

Chandra Asri consumes most of its production of ethylene in its two polyethylene plants and a smaller percentage in its styrene monomer plants. In the event of a shutdown of Chandra Asri's naphtha cracker and a resulting shortfall in its ethylene production, Chandra Asri has the capability to continue operation of its polyethylene plants through the use of imported ethylene.

The remaining balance of Chandra Asri's ethylene production is sold primarily to domestic industrial customers. At times, Chandra Asri also exports ethylene products to countries including Singapore, Japan, Korea and Thailand. Chandra Asri has supply agreements for ethylene with key customers, including mostly domestic customers. Chandra Asri's supply agreements with these key customers are renewable on an annual basis. For the years ended December 31, 2015, 2016 and 2017, Chandra Asri sold 64.7%, 73.5% and 79.9% of its ethylene sales pursuant to supply agreements with these key domestic customers. The supply agreements stipulate a pricing formula based on cost plus spot price.

For the years ended December 31, 2015, 2016 and 2017, Chandra Asri sold 82 KT, 381 KT and 450 KT, respectively, of ethylene.

Propylene

Chandra Asri generally uses all of its propylene production as feedstock for its production of polypropylene and may occasionally sell propylene to domestic industrial customers on an opportunistic basis. However, Chandra Asri's propylene production is not sufficient for its polypropylene production and Chandra Asri typically imports propylene to use as feedstock. Propylene is delivered from its propylene plants to its polypropylene trains via pipelines. In the event of a shutdown of Chandra Asri's propylene plant, and a resulting shortfall in propylene production, Chandra Asri has the capability to continue operations of its polypropylene trains through the use of imported propylene.

Chandra Asri's supply agreements with its key customers are renewable on an annual basis. For the years ended December 31, 2015, 2016 and 2017, Chandra Asri sold 32 KT, 153 KT and 187 KT of propylene, respectively.

Pygas

Chandra Asri sells the pygas that it produces primarily to SCG Chemicals pursuant to a supply agreement valid for three years, most recently from July 2016, and sells the remainder to traders and end-users. For the years ended December 31, 2015, 2016 and 2017, 93.8%, 65.9% and 90.5% of pygas sales (by volume) was sold to SCG Chemicals. At times, Chandra Asri also exports pygas to other countries, including Korea, Singapore, Japan and Malaysia. Sales of pygas are generally made on a monthly basis. Prices are benchmarked against the relevant global benchmark, are quoted in U.S. dollars and are generally adjusted on a monthly basis.

For the years ended December 31, 2015, 2016 and 2017, Chandra Asri sold 107 KT, 236 KT and 260 KT of pygas, respectively.

Mixed C₄

Chandra Asri uses substantially all of its mixed C₄ production as feedstock for its production of butadiene and sells some of the mixed C₄ that it produces to customers in Thailand, Japan and Korea pursuant to supply agreements and also on a spot sale basis. Chandra Asri's supply agreements with its key customers have typically been renewable on an annual basis and stipulate a pricing formula linked to butadiene prices and MOPJ (CFR Japan naphtha quoted in Platts) plus alpha or premium.

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For the years ended December 31, 2015, 2016 and 2017, Chandra Asri sold 0 KT, 34 KT and 11 KT of mixed C₄, respectively.

Polyolefins

Chandra Asri's polyolefin products consist of polyethylene and polypropylene. For the years ended December 31, 2015, 2016 and 2017, Chandra Asri sold 676 KT, 743 KT and 767 KT, respectively, of polyolefins.

Polyethylene

Chandra Asri sells substantially all of its polyethylene domestically through direct sales and through local distributors. Chandra Asri's supply agreements with its key customers are renewable on an annual basis. In the years ended December 31, 2015, 2016 and 2017, 98.7%, 90.9% and 97.1%, respectively, of Chandra Asri's polyethylene was sold in Indonesia. Chandra Asri prices polyethylene with regard to the CFR SEA polyethylene prices published by ICIS plus a premium. For the years ended December 31, 2015, 2016 and 2017, Chandra Asri sold 227 KT, 316 KT and 327 KT, respectively, of polyethylene, under various grades.

Polypropylene

Chandra Asri currently sells substantially all of its polypropylene products domestically due to robust domestic demand in Indonesia, which continues to be a net importer of polypropylene. Chandra Asri's supply agreements with its key customers are renewable on an annual basis. For the years ended December 31, 2015, 2016 and 2017, Chandra Asri sold 98.3%, 99.7% and 100.0%, respectively, of its polypropylene to domestic customers. Pricing is based on CFR SEA polypropylene prices published by ICIS plus a premium.

For the years ended December 31, 2015, 2016 and 2017, Chandra Asri sold 449 KT, 427 KT and 439 KT, respectively, of polypropylene, under various grades.

Styrene monomer and by-products

Chandra Asri sells styrene monomer in both the domestic and export markets, with its major customers being domestic end-users. Chandra Asri sells styrene monomer by-products in the domestic market. For the years ended December 31, 2015, 2016 and 2017, Chandra Asri sold 74.2%, 68.8% and 52.3%, respectively, of styrene monomer and its by-products to domestic customers. Domestic sales are made mainly through contract supply agreements lasting for one year. Pricing is based on the average of the mean for CFR SEA and CFR China spot prices published by ICIS LOR, plus a premium, for the whole month of delivery.

For its export business, Chandra Asri uses a combination of contract and spot transactions. Its export customers include customers located in Thailand, Singapore, Japan, Hong Kong and China. For contract sales, pricing is based on the average of the mean for CFR China spot prices published by ICIS LOR and Platts for the whole month of delivery. For spot sales, pricing is determined through negotiations with the customers. Chandra Asri's supply agreements with its key customers are renewable on an annual basis.

For the years ended December 31, 2015, 2016 and 2017, Chandra Asri sold 236 KT, 283 KT and 363 KT, respectively, of styrene monomer and by-products.

Butadiene and by-products

Chandra Asri sells butadiene in both the domestic and export markets and sells butadiene by-products in the export market. Chandra Asri exports butadiene to customers located in Malaysia, China and Korea. For the years ended December 31, 2015, 2016 and 2017, Chandra Asri sold 18.3%, 19.8% and 11.6%, respectively, of its butadiene and butadiene by-products to domestic customers and the remaining to export customers. Chandra Asri uses a combination of contract and spot transactions, with pricing based on formula prices based on the relevant global benchmark of ICIS CFR NEA and ICIS CFR SEA, as appropriate. Chandra Asri's supply agreements with its key customers are renewable on an annual basis.

For the years ended December 31, 2015, 2016 and 2017, Chandra Asri sold 106 KT, 202 KT and 271 KT, respectively, of butadiene and by-products.

Feedstock and Raw Materials

The primary feedstock used in Chandra Asri's petrochemical production processes are (i) naphtha, used as feedstock in its naphtha cracker, (ii) ethylene, used as feedstock in its two polyethylene plants and two styrene monomer plants, (iii) propylene, used as feedstock in its three polypropylene trains, (iv) benzene, used as feedstock in its two styrene monomer plants and (v) C₄, used as feedstock in its butadiene plant. Chandra Asri regularly reviews its supplier portfolio to ensure that it is able to secure supply of its principal raw materials at competitive prices. As such, Chandra Asri tries to avoid dependence on any single supplier. In 2017, all of the naphtha, condensate and benzene that Chandra Asri used was purchased from third parties, and all of the ethylene, mixed C₄ and propylene that Chandra Asri used was sourced internally.

Under Chandra Asri's accounting treatment, only naphtha and benzene are designated as "**raw materials**." Since Chandra Asri also produces ethylene, propylene and C₄, these are designated as "**finished goods**."

The table below shows a breakdown of the raw materials consumed for the time periods indicated:

	For the year ended December 31,		
	2015	2016	2017
	<i>Volume (KT)</i>		
Naphtha	974	2,120	2,334
Benzene	182	219	262
Total	1,156	2,339	2,596

Naphtha

Naphtha is Chandra Asri's principal raw material. At full production capacity, Chandra Asri's naphtha cracker will consume approximately 2,450 KT/A of naphtha.

Chandra Asri externally sources all of the naphtha, condensate and LPG that it uses as feedstock in its naphtha cracker. As condensate undergoes a cracking process similar to naphtha, Chandra Asri uses condensate as an interchangeable alternative feedstock source to naphtha. During the year ended December 31, 2015, 2016 and 2017, Chandra Asri consumed 974 KT, 2,120 KT and 2,334 KT of naphtha as feedstock. Chandra Asri has not used LPG as feedstock in its naphtha cracker for the last three years.

Chandra Asri's supply of naphtha is provided through a combination of naphtha purchase agreements and purchases on the spot market. It currently purchases naphtha from local and international sources, mostly through naphtha purchase agreements with periods that range from nine months to one year, typically renewable upon agreement of both parties. For the years ended December 31, 2015, 2016 and 2017, Chandra Asri purchased 69.6%, 76.1% and 57.5%, respectively, of its naphtha pursuant to naphtha purchase agreements with major oil trading companies and the remaining requirements on the spot market. For most contract sales, pricing is based on the average of the mean of Platts Japan for five consecutive days. Pricing can also be determined by Mean of Platts Arab Gulf or Mean of Platts Singapore. Pricing for spot market purchases is determined through negotiations and is typically on a CFR basis.

The table below sets forth Chandra Asri's naphtha suppliers and the naphtha Chandra Asri purchased for the time periods indicated.

Supplier Name	For the year ended December 31, 2017	
	<i>US\$ '000</i>	<i>(%)</i>
Vitol Asia Pte Ltd	268,684.9	23.1
Shell International Eastern Trading	248,594.4	21.4
Marubeni Petroleum Co Ltd	206,327.3	17.8
Total Trading Asia Pte Ltd	121,352.6	10.5
Chevron U.S.A. Inc (Singapore Branch)	114,409.0	9.9
Konsorsium PT. Titis Sampurna	35,534.2	3.1

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Supplier Name	For the year ended December 31, 2017	
	<i>US\$ '000</i>	(%)
Shall MDS (Malaysia)	34,550.5	3.0
SCG Chemicals	33,629.2	2.9
Aramco	30,501.2	2.6
PT Surya Mandala Sakti	13,231.8	1.1
Other	54,397.8	4.7
Total	1,161,212.9	100.0

Benzene

Benzene, the raw material used in Chandra Asri's styrene monomer plants, constitutes the principal raw material in the production of styrene monomer. Chandra Asri purchases all of the benzene that it consumes from third parties, and obtains a significant amount from SCG Chemicals. During the years ended December 31, 2015, 2016 and 2017, Chandra Asri consumed 182 KT, 219 KT and 262 KT, respectively, of benzene, out of which it purchased 52 KT, 90 KT and 106 KT, respectively, from SCG Chemicals. Chandra Asri sources the remainder of the benzene from other third-party suppliers.

Other raw materials, consumable chemicals and supplies

Other raw materials, chemicals and supplies consumed in Chandra Asri's production operations include nitrogen, hydrogen, water, water treatment chemicals, butene-1, hexane, polyethylene film for bagging and high activity special catalysts and additives for the polyethylene and polypropylene production process. In addition, as is described below under "*Support Facilities - Power utilities*," Chandra Asri's production plants also require the use of significant quantities of electricity.

Sales, Marketing and Customers

Chandra Asri's products are sold as key raw materials for the production of a wide variety of consumer and industrial products. See "*Our Petrochemical Business - Products*." Chandra Asri sells olefins and by-products, polyethylene, styrene monomer and butadiene in both the domestic and export markets, and polypropylene in the domestic market. For the years ended December 31, 2015, 2016 and 2017, 83.0%, 74.0% and 68.9% of our total net revenue was derived from domestic sales and the remainder was derived from export sales.

Chandra Asri has appointed PT Sarana Kimindo Intiplas ("**SKI**") and PT Akino Wahanamulia ("**AW**") as sales agents for some of its products to be sold in Indonesia. The agreements are typically valid for a period of one year and are renewable annually.

Major customers

The majority of Chandra Asri's customers are located in Indonesia. Chandra Asri sells its products to a wide range of customers. By generating sales from a variety of customers, reliance on any single customer is limited.

The table below sets forth the breakdown of our net revenue from Chandra Asri's top 10 customers, which represented 48% of our total net revenues for December 31, 2017:

Customer	Products	Percentage of Net Revenue (%)	Customer Since	Location
Customer 1	Polyethylene and polypropylene	8	1995	Indonesia
Customer 2	Mixed C ₄	6	2011	Thailand
Customer 3	Ethylene, propylene, styrene monomer	6	2010	Singapore
Customer 4	Propylene, styrene monomer, Butadiene and raffinate	5	2002	Japan
Customer 5	Butadiene and styrene monomer	5	2004	Indonesia
Customer 6	Ethylene	5	1995	Indonesia
Customer 7	Propylene	4	2011	Indonesia
Customer 8	Ethylene	4	2007	Indonesia
Customer 9	Polyethylene and polypropylene	3	1995	Indonesia

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<u>Customer</u>	<u>Products</u>	<u>Percentage of Net Revenue (%)</u>	<u>Customer Since</u>	<u>Location</u>
Customer 10	Raffinate	3	2013	Indonesia
Top 10 Customers % of Net Revenue		48		

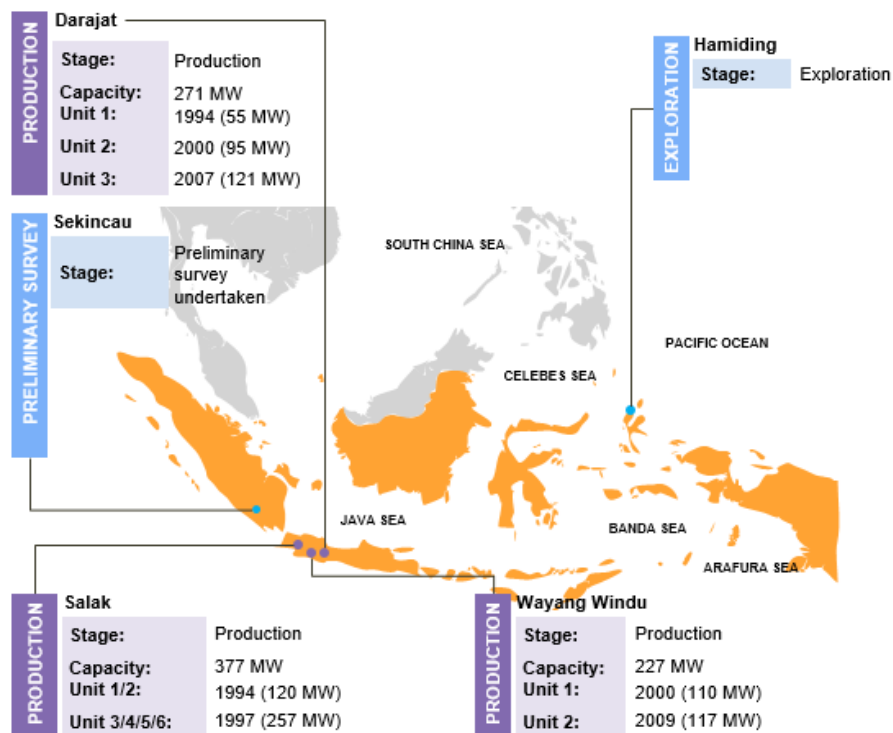
Our Power Generation Business

Star Energy, which we are proposing to acquire pursuant to the Star Energy Acquisition, operates geothermal energy business through its Wayang Windu, Salak and Darajat Geothermal Operations. We also have coal-fired power plants under development.

Our Geothermal Energy Business (subject to completion of the Star Energy Acquisition)

Upon completion of the Star Energy Acquisition, we will acquire Star Energy's geothermal energy operations. Star Energy manages and operates three geothermal operations, the Wayang Windu Geothermal Operations, the Salak Geothermal Operations and the Darajat Geothermal Operations, and has also completed preliminary surveys in the Hamiding and Sekincau prospects. Star Energy acquired the Salak Geothermal Operations from subsidiaries and affiliates of Chevron on March 31, 2017, and the Darajat Geothermal Operations on March 31, 2017 from subsidiaries and affiliates of Chevron and on September 27, 2017 from PT Austindo Nusantara Jaya. The total amount of this acquisition is US\$2.0 billion. The Salak Geothermal Operations and the Darajat Geothermal Operations are referred to in this announcement as the "**Salak and Darajat Assets.**"

The map below shows the location of Star Energy's geothermal fields as of the date of this announcement:



The table below sets forth certain financial information with respect to each of the Wayang Windu Geothermal Operations, Salak Geothermal Operations and Darajat Geothermal Operations:

	For the years ended December 31,		
	2015	2016	2017
	<i>(US\$ in millions, unless otherwise stated)</i>		
Wayang Windu Geothermal Operations⁽¹⁾			
Revenue.....	68.9	165.1	181.8
Operating cost.....	44.4	50.2	57.2
Capital expenditure.....	34.1	56.6	0.6
EBITDA	50.1	142.3	152.4
Salak Geothermal Operations⁽¹⁾			
Revenue.....	198.5	189.0	145.3
Operating cost.....	82.2	67.8	38.3
Capital expenditure.....	12.3	1.7	7.9
EBITDA	138.1	137.1	115.6
Darajat Geothermal Operations⁽¹⁾			
Revenue.....	130.7	133.2	97.4
Operating cost.....	64.1	53.4	28.7
Capital expenditure.....	6.3	7.5	7.6
EBITDA	74.5	89.6	76.0

⁽¹⁾ While the financial information of Wayang Windu Geothermal Operations above have been prepared on the basis of IFRS, the financial information of Salak Geothermal Operations and Darajat Geothermal Operations for the respective periods above have been prepared on the basis of accounting principles promulgated under the Salak JOC and Darajat JOC, respectively and may not be directly comparable.

Wayang Windu Geothermal Operations

The Wayang Windu Geothermal Operations are located in Bandung Regency in West Java, Indonesia. As of the date of this announcement, the Wayang Windu Geothermal Operations consist of two units owned and operated by Star Energy, which are capable of producing 110MW and 117MW, respectively, from heated steam drawn

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from geothermal wells drilled in the Wayang Windu contract area. The Wayang Windu Geothermal Operations were acquired by Star Energy in 2004.

Assets Overview

The following table sets forth the key facility metrics for the Wayang Windu Geothermal Operations:

	<u>Unit 1</u>	<u>Unit 2</u>
Installed Capacity (MW)	110	117
Commercial Operation Date ("COD").....	June 2000	March 2009
Ownership	Star Energy	
Type of operation by Star Energy	Integrated geothermal power generation	

The following table describes the wells that form the Wayang Windu Geothermal Operations as of the date of this announcement:

<u>Type</u>	<u>Total Number of Wells</u>	<u>Description</u>
Active production well	27	Supplies steam for Unit 1 and Unit 2
Injection wells	5	Services Unit 1 and Unit 2
Abandoned wells	6	Non-commercial wells with no further use
Monitoring wells	13	Monitoring wells for Unit 1 and Unit 2
Slimhole wells	5	Exploration well

Star Energy, through SEGWWL, operates Wayang Windu field facilities and electricity generation facilities, including Units 1 and 2, with a total electricity generation capacity of 110MW and 117MW, respectively. Unit 1 and Unit 2 of the Wayang Windu Geothermal Operations are located adjacent to each other and utilize the same portion of the nine-hectare contract area. Each of Unit 1 and Unit 2 of the Wayang Windu Geothermal Operations has its own steam turbine, power generation facilities, geothermal wells, wellheads, pipelines and related steam field above ground system ("SAGS") within the contract area of 12,950 hectares, but share common facilities, such as the power plant building and control room. Star Energy generally uses the same technology for both Unit 1 and Unit 2 of the Wayang Windu Geothermal Operations. Unit 1 commenced commercial operations in June 2000, while Unit 2 commenced commercial operations in March 2009.

Following a series of geoscience studies that commenced in early 2012, Star Energy is currently considering the development of an additional unit in Wayang Windu, Unit 3. If developed, Unit 3 is expected to increase Star Energy's gross installed generation capacity of Wayang Windu Geothermal Operations by up to 60MW, from 227MW to up to 287MW.

Geothermal resource for Wayang Windu Geothermal Operations is a liquid-dominated reservoir with temperatures of up to 310°C. As of December 31, 2017, 27 active production wells supplied steam for Unit 1 and Unit 2 of the Wayang Windu Geothermal Operations and five injection wells were used to dispose of separated brine and condensed steam.

Operational and Financial Performance

The operational performance of the Wayang Windu Geothermal Operations for the time periods indicated is shown below:

	<u>For the year ended December 31,</u>		
	<u>2015</u>	<u>2016</u>	<u>2017</u>
Wayang Windu Geothermal Operations			
Net dispatch (GWh) ⁽¹⁾	555.0	962.3	955.0
Availability Factor ⁽²⁾	65.2	99.8	100.0
Net Capacity Factor ⁽³⁾	57.3	98.3	98.4

⁽¹⁾ Net dispatch means the net electricity sent out of the relevant geothermal turbine-generator unit to PLN (after the deduction of the electricity used to run the Wayang Windu Geothermal Operations).

⁽²⁾ Availability Factor means the number of hours during a period when the relevant geothermal turbine-generator is available for service divided by the total number of hours in the relevant period, expressed as a percentage.

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⁽³⁾ Net capacity factor means the ratio of the actual output of the relevant geothermal turbine-generator to the theoretical output assuming the full capacity usage (excluding planned maintenance).

In 2015, Star Energy experienced lower net dispatch and average availability factor as the Wayang Windu Geothermal Operations were out of service for five months due to a landslide that occurred in May 2015. The 2015 landslide was deemed a "*force majeure* event" under each of the Wayang Windu JOC and Wayang Windu ESC. See "- 2015 Landslide" below.

2015 Landslide

On May 5, 2015, a large-scale landslide occurred in Cibitung village, Pangalengan following heavy rainfall. The landslide was approximately 1.5 km in length and approximately 10 meters deep in certain areas. The landslide damaged an approximately 600 meter span of our pipelines. The landslide also destroyed Cibitung village, resulting in nine fatalities. We believe that the landslide was as a result of heavy rainfall that occurred in April and May 2015, coupled with the effects of underground springs and deforestation undertaken by local inhabitants in the Wayang Windu area. Restoration work with respect to the landslide remains ongoing. As a result of the damage caused to our pipelines and the unavailability of replacement parts in a timely manner, Wayang Windu Unit 1 and Unit 2 experienced a forced shutdown for approximately four months. 80% of steam production was subsequently reinstated after 18 weeks while the remaining 20% was reinstated within the following 16 weeks. During the course of this forced shutdown Star Energy undertook a major overhaul and preservation of Unit 1 and Unit 2. This major overhaul and preservation was accelerated to take advantage of the downtime resulting from the forced shutdown. By September 9, 2015, production capacity for Wayang Windu Unit 1 and Unit 2 was partially restored to an aggregate of 180MW. On December 6, 2015, production capacity for Wayang Windu Unit 1 and Unit 2 was fully restored to 227MW. This 2015 landslide was deemed to be a "*force majeure* event" under each of the JOC and the ESC, which excused Star Energy from its obligations under each of the JOC and the ESC for the period during which Star Energy was affected by such event, and no penalty was payable to PLN. To the extent to which the operation of Wayang Windu Unit 1 or Unit 2 was affected by such *force majeure* event, the availability of such Unit was reduced for the purpose of receiving tariff payments from PLN under the ESC. However, Star Energy received insurance proceeds under our insurance program in respect of this event. Star Energy's total losses with respect to this landslide were approximately US\$19.5 million, of which it received insurance proceeds of US\$13.8 million (consisting of US\$6.6 million for property damage and US\$7.2 million for business interruption).

The following table sets forth the electricity tariff applicable for Wayang Windu Geothermal Operations for the periods indicated:

	For the year ended December 31,		
	2015	2016	2017
	<i>(US\$)</i>		
For the electricity generated by Units 1 and 2 of the Wayang Windu Geothermal Operations	0.06212	0.08598	0.09514

The electricity tariff for Wayang Windu Geothermal Operations increased by 5.8% in 2016 as Star Energy entered into an amendment to increase the energy sale price of Unit 1 and Unit 2 by an additional fixed tariff of US\$0.031105, effective April 2016.

Contractual Framework

Wayang Windu Geothermal Operations are based on a framework of two main contracts, namely a joint operation contract and an energy sales contract. Both these contracts benefit from letters of support issued by the Indonesian Government.

On December 2, 1994, Mandala Magma Nusantara B.V. ("**MMNBV**"), which subsequently changed its name to Mandala Nusantara B.V. ("**MNBV**") and Pertamina entered into the Original Wayang Windu JOC which gave Mandala Nusantara B.V. the exclusive right to the exploration, exploitation, development and utilization of geothermal resources in the Wayang Windu contract area. On August 29, 1995, MNBV's rights and obligations under the Original Wayang Windu JOC were assigned to SEGWWL pursuant to the terms of the Original Wayang Windu JOC. On November 21, 2006, the First Amended Wayang Windu JOC was approved by the MME (now MMER), and novated by law to PGE, a subsidiary of Pertamina, effective as of January 1, 2007. On June 26, 2016, the Second Amended Wayang Windu JOC was approved by the MEMR.

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Under the JOC, PGE, as the holder of the authority issued by the Government to undertake the exploration and exploitation of geothermal resources in the contract area, appointed SEGWWL as its exclusive contractor for and gave SEGWWL the sole and exclusive rights to the exploration, development, production, delivery and use of geothermal resources in the Wayang Windu contract area.

As PGE's exclusive contractor, SEGWWL undertakes the exploration and development of geothermal resources in the Wayang Windu contract area, as well as, designs, constructs, operates and maintains the SAGS and the power plant, finance the development of geothermal generation units, appraise PGE of SEGWWL operations, make information relating to our operations available to PGE and comply with all relevant regulations.

PGE has no equity stake in the development of the Wayang Windu contract area. However, as a resource holder, SEGWWL is required to pay PGE a quarterly production allowance or royalty fee of 4% of the net taxable income of each operating geothermal generation unit. In calculating our corporate taxes, SEGWWL is allowed to deduct any production allowance/royalty fee paid to PGE from our annual profits.

On December 2, 1994, MNBV (originally MMNBV which subsequently change its name to MNBV), Pertamina and PLN entered into an ESC setting forth the rights and obligations of MNBV, Pertamina and PLN relating to the sale by Pertamina of energy and capacity delivered or made available by MNBV up to a maximum 400 MW and the purchase of such energy and capacity by PLN (the "**Original Wayang Windu ESC**"). In 1996, MNBV assigned its rights and obligations under the Original Wayang Windu ESC to SEGWWL pursuant to the terms of the Original Wayang Windu ESC. On November 21, 2006, the Original Wayang Windu ESC was amended and approved by the MEMR. Similar to the Wayang Windu JOC, Pertamina's rights and obligations under the agreement were novated to PGE. On June 27, 2016, the First Amended Wayang Windu ESC was amended and approved by the MEMR.

The electricity generated by SEGWWL's power plant is sold to PLN on a "take-or-pay" basis under the Wayang Windu ESC. Under the terms of the Wayang Windu ESC, SEGWWL is required to deliver to PLN on behalf of PGE the capacity of each geothermal turbine-generator unit after the commencement of commercial operations of that geothermal generation unit. On the other hand, PLN is obligated under the Wayang Windu ESC to make payments to SEGWWL for net electrical output or, if PLN does not dispatch from SEGWWL's generators, 95% of unit rated capacity of each of SEGWWL's geothermal turbine-generator units.

Both the Wayang Windu JOC and the Wayang Windu ESC expire in 2039.

Salak Geothermal Operations

The Salak Geothermal Operations are located in Sukabumi Regency and Bogor Regency in West Java, Indonesia. As of the date of this announcement, the Salak Geothermal Operations consist of field facilities and electricity generating facilities comprising (i) three units owned and operated by Star Energy, each unit of which has an installed capacity of 65.6MW of each unit, and (ii) three units owned and operated by PLN, with a gross installed generation capacity of 55MW of each unit. The Salak Geothermal Operations have a total gross installed capacity of 377MW.

Power development projects for the Salak Geothermal Operations include (i) the Salak binary power plant, which is expected to have a capacity of 15MW capacity and (ii) Salak Unit 7, which is expected to have a gross installed generation capacity of 55MW. As of the date of this announcement, Star Energy is conducting feasibility studies for both projects. We intend for the Salak binary power plant and Salak Unit 7 to commence operations in 2021 and 2023, respectively.

The Salak Geothermal Operations were the first Indonesian private geothermal contract and was awarded to Union Geothermal of Indonesia, Ltd. in 1982. Chevron acquired UNOCAL and, in turn, Salak Geothermal Operations, in 2005, and Star Energy later acquired the Salak Geothermal Operations from Chevron on March 31, 2017.

Assets Overview

The following table sets forth the key facility metrics for the Salak Geothermal Operations.

	<u>Unit 1</u>	<u>Unit 2</u>	<u>Unit 3</u>	<u>Unit 4</u>	<u>Unit 5</u>	<u>Unit 6</u>
Installed Capacity (MW)	60 ⁽¹⁾	60 ⁽¹⁾	60 ⁽¹⁾	65.6	65.6	65.6
COD	March 1994	June 1994	July 1997	October 1997	November 1997	November 1997

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	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Ownership	PLN	PLN	PLN	Star Energy	Star Energy	Star Energy
Type of operation by Star Energy		Steam supply		Integrated geothermal power generation		

⁽¹⁾ While contractual capacity is 55MW, Star Energy generally provides steam flow up to 60MW.

The following table describes the wells that form the Salak Geothermal Operations as of the date of this announcement:

Type	Total Number of Wells	Description
Active Production wells.....	51	Supplies steam for Units 1 through 6
Inactive Production wells.....	16	Subject to reactivation
Abandoned wells	14	Non-commercial wells with no further use
Monitoring wells	3	Monitoring wells for Units 1 through 6
Injection wells	19	Service Units 1 through 6

The Salak Geothermal Operations are situated within a contract area of 10,000 hectares, with a current utilization of approximately 236 hectares. The Salak Geothermal Operations contract area includes land in a national park and private land. With respect to the national park, PGE and Star Energy obtained a Geothermal Environmental Services Utilization Permit (*Izin Pemanfaatan Jasa Lingkungan Panas Bumi* or "**IPJLPB**") on August 12, 2016, which is valid until November 30, 2040. This permit covers an area of 228.69 hectares. With respect to the private land, Star Energy obtained the right to lease such land from PTPN VIII on October 11, 2016, pursuant to an agreement for the utilization of land under HGU title between PTPN VIII, PGE and SEGSL dated October 26, 2016. The HGU land title and rights belong to PTPN VIII. This land right covers 5.22 hectares. Star Energy is also in the process of applying to convert certain land areas with HGU title currently registered under the name of PT Perkebunan Teh Assam Jayanegara ("**Jayanegara**") to PGE's name. This land covers an area of 2.57 hectares. Various facilities have been built in the aforementioned area, including an access road, production and injection well pads, pipeline, power plant, offices, housing and warehouse.

Star Energy, through SEGSL, operates the Salak field facilities that supply steam to Units 1, 2 and 3 of the Salak Geothermal Operations, each unit of which is owned and operated by PLN and has a gross installed capacity of 60MW (55MW pursuant to the Salak ESC). Star Energy, through SEGSP, operates Units 4, 5 and 6 of the Salak Geothermal Operations, which is an integrated geothermal power generation plant, each unit of which has an installed capacity of 65.6MW.

The Salak geothermal resource is a liquid-dominated reservoir with temperatures of up to 320°C. As of December 31, 2017, 51 active production wells supplied steam for Units 1 to 6 of the Salak Geothermal Operations and 19 injection wells were used to dispose of separated brine and condensed steam.

Operational and Financial Performance

The average operational performance of the units of the Salak Geothermal Operations for the time periods indicated is shown below:

	For the year ended December 31,		
	2015	2016	2017
Salak Geothermal Operations			
Net dispatch (GWh) ⁽¹⁾	3,001	2,925	2,905
Availability Factor ⁽²⁾	98%	96%	95%
Net Capacity Factor ⁽³⁾	91%	88%	88%

⁽¹⁾ Net dispatch means the net electricity sent out of the relevant geothermal turbine-generator unit to PLN (after the deduction of the electricity used to run the Salak Geothermal Operations).

⁽²⁾ Availability Factor means the number of hours during a period when the relevant geothermal turbine-generator is available for service divided by the total number of hours in the relevant period, expressed as a percentage.

⁽³⁾ Net capacity factor means the ratio of the actual output of the relevant geothermal turbine-generator to the theoretical output assuming the full capacity usage (excluding planned maintenance).

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The following table sets forth the average electricity tariff of the Salak Geothermal Operations for the periods indicated:

	For the year ended December 31,		
	2015	2016	2017
		US\$	
For the geothermal energy generated by Units 1, 2 and 3 of the Salak Geothermal Operations.....	0.06138	0.06024	0.06165
For the electricity generated by Units 4, 5 and 6 of the Salak Geothermal Operations.....	0.07140	0.07013	0.07136

Contractual Framework

The Salak Geothermal Operations are based on the Salak JOC and the Salak ESC.

PGE and SEGSL entered into a JOC on February 11, 1982, last amended on July 22, 2002 when SEGSPPL became a party. Under the JOC, SEGSL is responsible for the delivery of steam to PLN for the operation of Units 1, 2 and 3 of the Salak Geothermal Operations and SEGSPPL for the delivery of electricity to PLN from the operation of Units 4, 5 and 6 of the Salak Geothermal Operations. Under the Salak JOC, Star Energy may produce up to 495MW as geothermal energy, compared with the currently installed capacity of 377MW. Accordingly, Star Energy may from time to time seek opportunities to increase installed capacity to further benefit from the JOC arrangement.

PGE, SEGSL and SEGSPPL entered into an ESC with PLN on February 11, 1982, last amended on July 22, 2002 when SEGSPPL became a party. Under the ESC, PGE has an obligation to procure (i) the delivery of steam by SEGSL to PLN for the operation of Units 1, 2 and 3 of the Salak Geothermal Operations and (ii) the delivery of electricity by SEGSPPL to PLN through SEGSPPL's operation of Units 4, 5 and 6 of the Salak Geothermal Operations on a "take-or-pay" basis. The "take-or-pay" minimum threshold is (i) in respect of Units 1, 2 and 3 of the Salak Geothermal Operations, 95.06% of the unit rated capacity of each unit, which is 55MW per unit and (ii) in respect of Units 4, 5 and 6 of the Salak Geothermal Operations, 90.14% of the unit rated capacity of each unit, which is 65.6MW per unit.

SEGSPPL acquired interest to the operation of Unit 4, 5, and 6 of the Salak Geothermal Operations as of August 28, 1996.

Both the Salak JOC and the Salak ESC expire on November 30, 2040, pursuant to an extension notice dated July 22, 2002.

Darajat Geothermal Operations

The Darajat Geothermal Operations are located in Garut Regency and Bandung Regency in West Java, Indonesia. As of the date of this announcement, the Darajat Geothermal Operations include field facilities and electricity generating facilities comprising (i) one unit owned and operated by PLN, with a gross installed capacity of 55MW, and (ii) two units owned and operated by Star Energy, with gross installed capacities of 95MW and 121MW, respectively. The Darajat Geothermal Operations have a total gross installed capacity of 271MW.

Chevron owned the Darajat Geothermal Operations and Star Energy later acquired it from Chevron on March 31, 2017.

Assets Overview

The following table sets forth the key facility metrics for the Darajat Geothermal Operations.

	Unit 1	Unit 2	Unit 3
Installed Capacity (MW)	55	95	121
COD	October 1994	June 2000	May 2007
Ownership	PLN	Star Energy	
Type of operation by Star Energy	Steam supply	Integrated geothermal power generation	

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The following table describes the wells that form part of the Darajat Geothermal Operations as at the date of this Announcement:

Type	Total Number of Wells	Description
Active Production wells.....	30	Supplies steam for Units 1, 2 and 3
Abandoned wells.....	10	Non-commercial wells with no further use
Observation wells.....	5	Monitoring wells for Units 1, 2 and 3
Injection wells.....	4	Services for Units 1, 2 and 3

The Darajat Geothermal Operations are situated within a contract area of 5,000 hectares with a current utilization of 118.7 hectares. The Darajat Geothermal Operations include private land, protected forest and nature preserve forest. The private land has a total area of 9.90 hectares, (i) for 85.68% of which the land rights certificates are valid (which are in the form of a Right to Use ("*Hak Pakai*" or "*HP*") or a Right to Build (*Hak Guna Bangunan* or "*HGB*")), (ii) for 1.99% of which the application for the land rights certificate is expected to be completed by the second quarter of 2018, and (iii) for 12.33% of which no land rights certificate has been issued and the application for such land rights certificate is underway. Various facilities have been built in the aforementioned area, including wells, access roads, offices, warehouse facilities, and pipelines.

Star Energy, through its subsidiaries, SEGDI and SEGDI, operates the field facilities that supply steam to Unit 1 of the Darajat Geothermal Operations, the unit which is owned and operated by PLN and has a total steam generation capacity of 55MW. Star Energy, through its subsidiaries, SEGDI, SEGDI and DGI, owns and operates Units 2 and 3 of the Darajat Geothermal Operations, an integrated geothermal power generation facility, with a total electricity generation capacity of 95MW and 121MW, respectively.

Darajat geothermal resource is a vapor-dominated reservoir with temperatures of up to 250°C with wells that produce dry steam rather than a mixture of water and steam at the wellhead. As of December 31, 2017, 30 active production wells supplied steam for Units 1 to 3 of the Darajat Geothermal Operations and four injection wells were used to dispose of condensed steam.

Operational and Financial Performance

The average operational performance of the Darajat Geothermal Operations for the time periods indicated is shown below:

	For the year ended December 31,		
	2015	2016	2017
Darajat Geothermal Operations			
Net dispatch (GWh) ⁽¹⁾	2,145	2,083	2,099
Availability Factor ⁽²⁾	94%	92%	95%
Net Capacity Factor ⁽³⁾	90%	88%	88%

⁽¹⁾ Net dispatch means the net electricity sent out of the relevant geothermal turbine-generator unit to PLN (after the deduction of the electricity used to run the Darajat Geothermal Operations).

⁽²⁾ Availability Factor means the number of hours during a period when the relevant geothermal turbine-generator is available for service divided by the total number of hours in the relevant period, expressed as a percentage.

⁽³⁾ Net capacity factor means the ratio of the actual output of the relevant geothermal turbine-generator to the theoretical output assuming the full capacity usage (excluding planned maintenance).

The following table sets forth the average electricity tariff of the Darajat Geothermal Operations for the periods indicated:

	For the year ended December 31,		
	2015	2016	2017
	(US\$)		
For the geothermal energy generated by Unit 1 of the Darajat Geothermal Operations.....	0.04810	0.04901	0.04664
For the electricity generated by Units 2 and 3 of the Darajat Geothermal Operations.....	0.06619	0.06750	0.06956

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Contractual Framework

The Darajat Geothermal Operations are based on the Darajat JOC and the Darajat ESC.

PGE, SEGDI and SEGDI entered into a JOC on November 16, 1984, last amended on February 7, 2003, under which each of SEGDI and SEGDI is responsible for the delivery of steam to PLN for the operation of Unit 1 of the Darajat Geothermal Operations and each of SEGDI, SEGDI and DGI (who became a party to the Darajat JOC in 1997) for the delivery of electricity to PLN from the operation of Units 2 and 3 of the Darajat Geothermal Operations.

PGE, SEGDI and SEGDI entered into an ESC with PLN on December 16, 1984, last amended on August 10, 2004. DGI became a party to the Darajat ESC in 2000. Pursuant to the Darajat ESC, PGE has an obligation to procure the delivery of steam to PLN by SEGDI and SEGDI for the operation of Unit 1 of the Darajat Geothermal Operations and the delivery of electricity to PLN through SEGDI, SEGDI and DGI's operation of Units 2 and 3 of the Darajat Geothermal Operations. The "take-or-pay" minimum threshold is 80.0% of the combined unit rated capacity of 55MW in connection with Unit 1 of the Darajat Geothermal Operations, and 95.0% of the combined unit rated capacity of 216MW in connection with Units 2 and 3.

The Darajat JOC and the Darajat ESC are valid until November 15, 2031 and may be extended to November 15, 2041. Subject to the extension of production period of Unit 3 of the Darajat Geothermal Operations under the Darajat ESC, the Darajat JOC term will be automatically extended until May 11, 2047 for Unit 3 only.

Ownership of facilities

Star Energy owns and operates the electricity generation facilities, including the power plant in the Wayang Windu, Salak and Darajat contract areas while PGE owns all field facilities required to produce, process, transport and deliver the geothermal energy to the electricity generation facilities. Pursuant to the respective JOCs, Star Energy has the exclusive and irrevocable right to use the contract areas and all field facilities during the term of the JOCs without any disturbance from the Government. To the extent that Star Energy's electricity generation facilities are required to be transferred to PGE under the terms of Wayang Windu JOC or the ESC, such assets shall, upon termination of the JOC, and upon payment of any amounts owed under the JOC or the ESC, and subject to any liens of lenders, be transferred to PGE or PGE's designee on an "as is" basis. We believe that such a transfer to PGE will not arise as there are no express contractual provisions in the JOCs, as amended, or the ESCs, as amended, that require Star Energy to effect such transfers of its electricity generation facilities to PGE. Under the Salak ESC, upon expiration of the ESC, PGE shall transfer, free and clear of all liens and encumbrances, each electricity generation facilities to PLN at no cost to PLN, with each party bearing any taxes required to be paid under applicable Indonesian law. While under Darajat JOC, the electricity generation facilities shall become the property of PGE on an "as is, where is" basis.

The SAGS, other field facilities, including materials and equipment purchased by Star Energy and incorporated into the field facilities, are owned by PGE and operated by Star Energy.

Steam Reserves

Star Energy has formulated immediate and long-term reservoir management strategies for the sustainability of the geothermal resource by carefully monitoring the steamfield's behavior before and during its production. These reservoir management strategies are modified during the production stage to adapt to the steamfield's behavior and to optimize production at the steamfield.

Star Energy considers reserve estimation to be one of the most important activities in the planning stage of geothermal power development. Any geothermal power development requires some assurance that the steamfield has a reserve capacity to produce over the projected life of the project. Reserve estimation also determines the facilities and infrastructure and investment requirements of our projects. Star Energy employs the numerical reservoir simulation model, which is the most common and reliable reserve estimation method for the assessment of brown geothermal reservoirs. A numerical reservoir simulation model is a discretized network of blocks, in which each block covers a portion of the geothermal reservoir parameters. Each of the parameters (thermodynamic, geologic, petrophysical, chemical, etc.) within the volume represented by a grid block has a single, averaged value in the model. Thus, for a given volume, subdivision into more grid blocks enables a more detailed representation of the actual reservoir to be achieved. In principle, the model captures three states of reservoir conditions: (i) the natural state or initial state of the reservoir indicating the overall fluid and heat patterns of the geothermal system

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in its natural state; (ii) the history matching which is matching the historical data from the field; and (iii) the forecasts or projections of the field performance through its project life.

Wayang Windu

The most recent Wayang Windu geothermal reservoir modeling (performed in December 2016 by an independent geothermal resources consultant, GeothermEx, and confirmed by GeothermEx in February 2018) indicates that Wayang Windu energy reserves going forward are sufficient to support generation of Unit 1 and Unit 2 at or near 227MW gross, with sufficient geothermal energy reserves to support output at 280MW for 30 years and 390MW for 20 years. This estimate takes into account the results of the most recent drilling campaign of 2015 to 2016, as well as field performance through the end of November 2017. GeothermEx has further confirmed that Star Energy's estimates of operating costs and capital expenditures for the operation of Units 1 and 2 through 2036 are reasonable. The potential for exploiting the geothermal energy reserves beyond the output of Units 1 and 2 is subject to future well drilling results.

The performance of the wells supplying Unit 1 since the start of commercial operation in June 2000, and also supplying Unit 2 since it commenced commercial operation in March 2009, have been stable with a predictable decline rate. Some of Star Energy's wells have started to display some increased decline to their production due to formation of scale on the wells. With respect to such wells, Star Energy cleaned these wells using acid to dissolve, and mechanical reaming to remove, scale which had formed, as a result of which the wells returned to their previous levels of production. This is a relatively common practice in commercially operated geothermal reservoirs, and will be an element of Star Energy's ongoing budgeted maintenance program.

Salak

The most recent independent evaluation of the Salak geothermal resource and well field, and their expected performance, undertaken by the senior technical staff of geothermal resources consultant GeothermEx in 2016, concluded that the Salak project can be maintained at its current level of generation through 2040 and for some time thereafter, with an appropriate program of drilling make-up wells to offset well productivity decline. Three potential performance improvement projects for Salak have also been identified. The most technically attractive is the addition of a binary plant, exploiting brine that is already produced as a byproduct of steam production. Other potential improvement projects are the addition of an additional flash-cycle plant and the addition of wellhead plants to generate power from wells that are not produced to the existing plants.

The steam supply for the Salak project has been sufficient to operate all units at essentially full capacity up to the present time. In addition, there is some spare capacity available in the form of wells not currently on line. The responses of Salak wells to exploitation, including productivity decline due to scale formation and changing concentrations of non-condensable gases, are common in geothermal projects and are typically managed through proper monitoring, analysis and mitigation. GeothermEx has noted that Star Energy's technical team has the expertise and experience to undertake the appropriate monitoring, analysis and management. GeothermEx has further noted that Star Energy's projection of operating costs and capital expenditures is within the range that is typical for geothermal projects, and is appropriate considering the economies of scale expected for a project the size of Salak.

Darajat

The most recent independent evaluation of the Darajat geothermal resource and well field, and their expected performance, undertaken by the senior technical staff of geothermal resources consultant GeothermEx in 2016 concluded that the Darajat project can be maintained at its current level of generation through 2041 (the term of the energy sales contract for Unit 1 and Unit 2), with an appropriate program of drilling make-up wells to offset well productivity decline. After 2041 it is projected that steam supply will be adequate to maintain the current generation level of Unit 3 through 2047 (the term of the energy sales contract for Unit 3).

The steam supply for the Darajat project has been sufficient to operate all units at essentially full capacity up to the present time. In addition, there is some spare capacity available in the form of wells not currently on line and wells operating in a throttled condition. The responses of Darajat production wells to exploitation, including productivity decline due to scale formation associated with superheated reservoir conditions, are common in geothermal projects and are typically managed through proper monitoring, analysis and mitigation. GeothermEx has noted that Star Energy's technical team has the expertise and experience to undertake the appropriate monitoring, analysis and management. GeothermEx has further noted that Star Energy's projection of operating

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costs and capital expenditures is within the range that is typical for geothermal projects, and is appropriate for a project the size of Darajat.

Geothermal Growth Prospects

Star Energy has completed preliminary surveys in the undeveloped Hamiding and Sekincau prospects. Star Energy has submitted proposals to conduct exploration activities in Hamiding and Sekincau, including exploration drilling, and has a right to match the winning bid if a tender offer is made for licenses to develop the resources in Hamiding and Sekincau. If exploration and appraisal drilling is successful in confirming geothermal potential, and Star Energy obtains the necessary financing and government approvals for development, as well as an attractive tariff rate under the ESC with PLN, Star Energy would expect to commence development activities in 2023.

Resource Management

Star Energy implements a rigorous resource management, production and maintenance strategy.

In relation to steam supply management, Star Energy aims to optimize existing surface facilities to ensure efficient and reliable steam delivery to its power plants. It also aims to maintain a prioritized portfolio of steam supply projects to economically sustain plateau life at current exploitation rates. To achieve the same, Star Energy implements a make-up well drilling program to offset natural steam decline. Moreover, Star Energy maintains an integrated well intervention program, which includes well washing, broaching, reaming and acidizing, to reduce the decline of steam. Star Energy also repairs or replaces subsurface casing and surface wellhead equipment as needed in order to maintain the mechanical integrity of its wells.

In relation to injection management, Star Energy maintains and optimizes the injection well capacity and pumping facilities for condensate disposal of its power plants. Star Energy manages the turbine inlet pressures and wellhead pressures to maintain generation while minimizing make-up well requirements.

Plant Operations and Maintenance

Star Energy carries out major and minor maintenance activities on a regular basis to ensure its power plants' operability and reliability.

With respect to the Wayang Windu Geothermal Operations, Star Energy carries out major scheduled maintenance procedures for approximately two weeks every three to four years. Star Energy carries out minor maintenance activities and conducts a two-day turbine inspection on a yearly basis, although Star Energy does not perform the two-day inspection if all of the key performance indicators of the plant show good performance. The most recent major maintenance inspection for Unit 1 and Unit 2 commenced in 2015, each of which took place during the four-month forced shutdown that occurred due to a landslide in 2015. Star Energy expects the next major maintenance inspection of Unit 1 and Unit 2 to be carried out in 2019 and 2020, respectively, depending on the conditions of the plant as indicated by the performance criteria that Star Energy monitors.

With respect to the Salak Geothermal Operations, Star Energy carries out major scheduled maintenance procedures for approximately two weeks every four years. Star Energy carried out maintenance procedures for Unit 4 of the Salak Geothermal Operations in November 2017, which lasted for 15.5 days. Star Energy expects the next major maintenance inspection for the Salak Geothermal Operations to be carried out in 2018 for Unit 6, depending on the conditions of the plant as indicated by the performance criteria which it monitors.

With respect to the Darajat Geothermal Operations, Star Energy carries out major scheduled maintenance procedures for approximately 25 days every four years, which is longer than that of the Salak Geothermal Operations, due to its larger electricity generation capacity. Star Energy carried out maintenance procedures for Unit 3 of the Darajat Geothermal Operations in 2017, which lasted for 19 days. Star Energy expects the next major maintenance inspection for the Darajat Geothermal Operations to be carried out in 2018 for Unit 2, depending on the conditions of the plant as indicated by the performance criteria which it monitors.

During a typical major scheduled maintenance, a turbine inspection is completed. The rotating and stationary blades are sand blasted clean, bearings checked and cleaned, the turbine lube oil pump, control valves, and critical equipment disassembled and inspected, the condenser inspected and cleaned, and major steam valves opened and repaired. The generator is inspected by boroscope. The transformers are also inspected and transformer oil is

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filtered and samples tested. Steamfield equipment is also inspected and repairs made on items requiring maintenance from time to time. During minor scheduled maintenance, specific attention is placed on condenser inspection and cleaning, as well as inspection of the last stage and first stage steam turbine blades.

Regular plant preventive maintenance programs are also carried out throughout the year. Star Energy has a number of operations and maintenance programs and procedures in place, including operating procedures, preventive, corrective and predictive maintenance plans, administrative and human resources procedures and policies, emergency action plans, health and safety procedures, and warehouse storage procedures. In addition, Star Energy has developed a formal training program for operations and maintenance personnel. Operators and technicians are trained in proper equipment, systems and integrated project operations.

Star Energy's computer-based maintenance management system handles maintenance data, inventory needs, and scheduling of activities. It is run as part of the SAP suite of programs, which also provide financial management systems. Preventive maintenance work orders are loaded, scheduled, and issued automatically. The operators generate corrective work orders, which are put into the system for tracking.

In conjunction with a performance monitoring program that monitors equipment performance and trends, Star Energy also uses a computer-based plant information system which collects, archives, displays, and disseminates process and performance data and process variables obtained from its power plants' various computers and programmable logic controllers. The information system accommodates real-time and historic databases and is used to develop reports and track equipment performance.

United Nations Framework Convention on Climate Change

In 2011, Star Energy entered into a Clean Development Mechanism Project Agreement with Standard Chartered Bank and Sindicatum Carbon Capital Limited ("**Sindicatum Carbon**") and a Pre-Registration Verified Carbon Unit Services Agreement with PT Sindicatum Carbon Capital Indonesia ("**SCCI**"), to register Wayang Windu Unit 2 as a Clean Development Mechanism ("**CDM**") project with the United Nations Framework Convention on Climate Change. Star Energy's agreements with Standard Chartered Bank and Sindicatum Carbon expired in 2012.

In 2013, Star Energy entered into a new Clean Development Mechanism Project Agreement with Sindicatum Carbon. This new agreement with Sindicatum Carbon will expire in 2020. On December 2, 2010, Unit 2 was registered by the UNFCCC as a Clean Development Mechanism project, which allows Star Energy to monetize CER from Wayang Windu Unit 2. The CDM, which is provided for under the Kyoto Protocol, an international agreement linked to the UNFCCC which commits its parties by setting internationally binding emission reduction targets, allows emission reductions projects to be developed in developing countries. Such projects can earn saleable certified emission reduction credits, each equivalent to one ton of CO₂, which can be counted towards meeting Kyoto Protocol targets. A CDM project must provide emission reductions that are additional to what would otherwise have occurred and must qualify through a public registration and issuance process. Approval of the project is given by the designated national authorities granted responsibility to authorize and approve participation in CDM projects. Emission reductions from CDM projects are monitored and the monitoring results are audited every six months.

As a result of Unit 2's certification, Star Energy is able to sell certified emission reduction credits on the open market. The registration of Unit 2 as a CDM project expired on December 1, 2017 following an extension of the original term ending on May 30, 2017. Star Energy is currently seeking to extend the registration of Unit 2 as a CDM project for a further period of seven years with UNFCCC approval. Such extension is expected to be obtained by July 2018.

Unit 2 has been fully operational since March 2009. From 2009 until 2017, Star Energy has sold 115,000 tons of CO₂ VCU credits and 1,750,700 tons of CO₂ CER credits. Star Energy sells VCU credits and CER credits to third parties with Sindicatum Carbon as the selling agent.

On December 11, 2006, Darajat Unit 3 was registered with the UNFCCC as a CDM project. Similar to Wayang Windu Unit 2 being registered as a CDM project, the registration of Darajat Unit 3 with the UNFCCC as a CDM project allows Star Energy to monetize CER from Darajat Unit 3 as well. The estimated amount of emission reductions of the Darajat Unit 3 CDM project is 753,136 tons of CO₂ equivalent per annum. During the most recent monitoring period verified by UNFCCC, from July 1, 2015 to June 30, 2016, the Darajat Unit 3 CDM project produced CER of 801,111 tons of CO₂ equivalent. As of the date of this announcement, the project has

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produced CER of 6,918,642 tons of CO₂ equivalent. Star Energy has requested for renewal for the next crediting period of June 14, 2014 to October 5, 2019.

Coal-fired Projects

We jointly own, together with PT Indonesia Power, a subsidiary of PLN, PT Indo Raya Tenaga, a project company that is developing 2 x 1,000MW ultra supercritical coal-fired projects, Java 9 and 10, in Suralaya, Banten Province, Indonesia, close to Chandra Asri's integrated petrochemical complex in Cilegon (the "**Java 9 and 10 Power Project**"). As of the date of this announcement, we have secured the land for the proposed project and commenced initial site preparation works. We signed a conditional PPA with PLN in June 2017 (the "**Java 9 and 10 PPA**"), whereby the project is contracted to PLN for 25 years and whereby PLN will purchase the project power capacity on a "take-or-pay" basis. The EPC contract is in the tender phase. The projected cost for the Java 9 and 10 Power Project is US\$3.5 billion and we intend to finance the Java 9 and 10 Power Project by a long-term limited recourse project financing on a 70:30 debt-to-equity ratio basis. We expect to start commercial operations of the Java 9 and 10 Power Project by 2023.

Our Other Businesses

Property Business

Our property business is engaged in the investment and development of commercial and industrial properties to support our power assets given the relative difficulty in securing plots of land in Indonesia. To do so, we make opportunistic land acquisitions in the vicinity of where our assets are located and may acquire properties from our affiliates from time to time. Our property business gives us access to land held by our affiliates. We operate our property business through GI and its subsidiaries.

The table below sets forth certain information about our property assets:

<u>Property</u>	<u>Use</u>	<u>Location</u>	<u>Area</u>	<u>Year Opened/ Estimated Commencement Date</u>
Hotel Mambruk Anyer	Hotel	Cikoneng	Land: 68,800 sq. m GFA: 13,208 sq. m	1989
Wisma Barito Pacific	Office tower	West Jakarta	Land: 8,674 sq. m GFA: 38,251 sq. m NLA: 21,690 sq. m	1990
Griya Idola Industrial Park ⁽¹⁾	Mixed-use commercial and office complex, industrial estate	Cikupa	60 hectares	May 2015
Wisma Barito Pacific 2 ⁽²⁾	Office tower	West Jakarta	Land: 5,290 sq. m GFA: 46,530 sq. m NLA: 26,365 sq. m	Q2 2018

⁽¹⁾ PT Jabar Utama Wood Industry gave its land as capital contribution to the joint venture for Griya Idola Industrial Park.

⁽²⁾ We expect construction of Wisma Barito Pacific 2 to commence in the second quarter of 2018 with a total construction cost of US\$39.8 million.

For the years ended December 31, 2015, 2016 and 2017, our property business contributed US\$3.2 million or 0.2%, US\$4.0 million or 0.2% and US\$5.0 million or 0.2% of our net revenues, respectively.

Plantation Business

Our Crude Palm Oil ("**CPO**") and Palm Kernel ("**PK**") plantation business is operated through PT RIM and its subsidiaries, which we acquired in 2010. PT RIM operates a total of 10,865 hectares of planted palm oil plantations

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and has concessions for a further 17,722 hectares, all of which are located in West Kalimantan. We currently operate two CPO mills, with an aggregate total capacity of 60 tonnes FFB per hour.

For the year ended December 31, 2017, our key CPO customers were Astra Group, Salim Group, LDC Indonesia and Minamas Group (representing 52.6%, 26.3%, 15.8% and 5.3% of CPO contracted volume respectively). For the same period, our major PK customers were Sinar Mas Group, Djarum Group, Wilmar Group and PT Mitra Karya Usaha Persaka (making up 82.8%, 8.6%, 6.9% and 1.7% of PK contracted volume respectively).

For the years ended December 31, 2015, 2016 and 2017, our plantation business contributed US\$18.8 million or 1.3%, US\$19.6 million or 1.0% and US\$22.5 million or 0.9% of our net revenues, respectively. For the years ended December 31, 2015, 2016 and 2017, we produced 37,864 tonnes, 32,239 tonnes and 34,159 tonnes of CPO respectively (generating sales of US\$16.8 million, US\$17.1 million and US\$19.5 million respectively), and 7,400 tonnes, 5,476 tonnes and 6,322 tonnes of PK respectively (generating sales of US\$2.0 million, US\$2.5 million and US\$3.0 million respectively).

Forestry Business

We own approximately 149,000 hectares of industrial forest estates and maintain concession rights amounting to 76,206 hectares as of December 31, 2017, as set forth in the table below:

Location	Area (hectares)	Period (years)	Expiration
West Kalimantan	17,068	45	2045
North Maluku	14,851	45	2043
North Maluku	21,265	45	2037
North Maluku	11,242	45	2037
North Maluku	11,780	60	2069

Our forestry business did not have any major activities relating to our timber operations during the years ended December 31, 2015, 2016 and 2017 and we do not expect to have any major activities in the next year.

In addition to our industrial forest estates, we own and operate a particle board production plant in Banjarmasin, South Kalimantan, with a production capacity of 60,000m³ per annum.

For the years ended December 31, 2015, 2016 and 2017, our forestry business contributed US\$6.6 million or 0.5%, US\$7.3 million or 0.4% and US\$6.8 million or 0.3% of our net revenues, respectively.

Partnership

We enjoy strong support from strategic partners, customers and suppliers in relation to our petrochemical and power businesses.

In connection with our petrochemical business, we receive support from SCG Chemicals, which owns a 30.57% stake in CAP, with which we share technical and operational expertise and gain access to Thai financial institutions. We have also entered into partnership with Michelin to expand our product expansion, with which we connected construction of a new synthetic rubber plant to produce synthetic butadiene rubber in Cilegon, Banten Province in November 2015 and we are planning to construct a new plant to produce methyl tert-butyl ether ("MTBE") and butene-1 products to complete our integration of the mixed C₄ and raffinate product chain. We also benefit from reputable suppliers and customers, such as Vitol, Marubeni, Lotte Chemical, ASC, Polychem, Nippon Shokubai and AWM.

In connection with our power business, Star Energy receives support from various shareholders, BCPG, Mitsubishi and EGCO. BCPG owns a 33.33% stake in Star Energy, which it acquired in July 2017 for US\$357 million. It was established in 2015 and its current portfolio includes operating solar assets with an aggregate capacity of 182MW in Thailand and 236MW in Japan. Mitsubishi and EGCO each indirectly owns a 20.0% stake in SEGWWL, which they acquired in October 2012 and July 2014 for US\$210m and US\$215 million respectively. We believe that each of Mitsubishi and EGCO is committed to Star Energy's success as part of their objective to enter the Indonesian power industry and to develop multiple geothermal power plants in Indonesia. With Mitsubishi's involvement, Star Energy benefits from an enhanced ability to buy equipment such as turbines from

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Mitsubishi Heavy Industries, Ltd., which is one of the largest turbine manufacturers in the world and which has a very close relationship with Mitsubishi, and is able to obtain support in project funding for feasible renewable energy projects. Star Energy can benefit from EGCO's extensive experience in the power plant industry, and operation and maintenance services, to improve and support its operations and business performance. Star Energy has also entered into a partnership with AC Energy in connection with the acquisition of Salak and Darajat Assets. Barito Pacific has developed a partnership with Indonesia Power in connection with its coal-fired power project. See "*-Coal-fired Power Project.*"

Competition

Our Petrochemical Business

Chandra Asri competes with other petrochemical producers on the basis of price, service, product quality, timely deliveries and overall customer service. Its competitors include some of the world's largest chemical companies and major integrated oil companies, many of whom have greater financial resources and also are more vertically integrated with their own raw material resources. Chandra Asri believes that some of the key factor for competing in our industry include, among other things, customer relations, market position, the scale of facilities, low-cost feedstock, geographical proximity to our customers and differentiated products and process technologies.

The price of petrochemical products is determined by market factors, such as supply/demand balances and feedstock costs that are beyond Chandra Asri's control. Chandra Asri generally sells these products at prevailing market prices, like its competitors, but, on occasion, it negotiates prices.

Chandra Asri expects competition to come from companies in countries in the Middle East and Southeast Asia. These companies may be Japanese traders such as Marubeni Corporation, Mitsui & Co. and other more integrated oil and petrochemical companies such as ExxonMobil, Petroleum Authority of Thailand and SABIC.

Our Power Business

Under the terms of the respective ESCs, PLN (or PGE, as applicable) is obliged to purchase net electrical output or, if PLN (or PGE, as applicable) does not dispatch from Star generators, a set percentage of the total unit rated capacity of each of Star Energy's geothermal energy's turbine-generator units, up to a designated maximum for the life of the ESC. As a result, we believe that Star Energy does not face any material competition from other geothermal energy producers or IPPs in its business.

Environmental Compliance

Our Petrochemical Business

For our petrochemical business, Chandra Asri is subject to the laws and regulations of Indonesia and the Regional Governments of Cilegon City governing the use, storage, transportation and disposal of toxic and hazardous materials, including the discharge of effluents and emissions into the environment and otherwise relating to the protection of the environment. Chandra Asri's operations are supervised by several governmental entities, such as the Ministry of Industry, the Ministry of Environment and Forestry, the Ministry of Agriculture, the Environmental Impact Management Agency, the Directorate General of Sea Transportation of the Department of Transportation and the Regional Government of Cilegon City, which are responsible for implementing and monitoring Indonesia's pollution control regulations and policies in the petrochemical industry.

Indonesian law requires those companies, including manufacturers, whose business activities are expected to have a potentially significant impact on the environment, to prepare an environmental impact assessment (*analisis dampak lingkungan*), environmental monitoring plan (*rencana pemantauan lingkungan*) and environmental management plan (*rencana pengelolaan lingkungan*) in connection with certain operations that are considered likely to have an impact on the environment. The environmental impact assessment (*analisis dampak lingkungan*) report must be submitted to a commission consisting of representatives of various national and local government agencies and non-governmental organizations before the construction of a facility. Once the commission approves the environmental impact assessment (*analisis dampak lingkungan*) report, which sets out various compliance standards and other obligations, amendments to the environmental impact assessment (*analisis dampak lingkungan*) report must be provided to a similar commission in connection with the commencement of the subject company's operations. For the original facilities, all appropriate environmental requirements were completed. As Chandra Asri debottlenecks its facility, it is proceeding with the necessary environmental applications. Chandra

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Asri is using a third-party contractor to prepare the required documentation for submission to both national and local governments and non-governmental organizations.

Chandra Asri has received certifications and awards for our efforts to ensure product quality and environmentally friendly production processes. Chandra Asri holds an ISO 9001 quality management system certificate and an ISO 14001 environmental compliance certificate from SGS S.A. (formerly Société Générale de Surveillance), an internationally recognized auditing body. The ISO 9001 and ISO 14001 certificates are valid until October 2019 and February 2020, respectively. In addition, Chandra Asri obtained an ISO 50001 certificate from Lloyd's Register Quality Assurance in December 2017, for its energy management systems relating to the production of polypropylene. This certificate is valid until December 2020. Chandra Asri also holds SMK3 certification, which is valid until August 2018 and OHSAS certification, which is valid until February 2018. In addition, SMI also received a "Category A" Total Productive Maintenance ("TPM") excellence award from the Japan Institute of Plant Maintenance in January 2017 and a "Level 5" Green Industry Award from the Ministry of Industry in December 2017.

We believe that Chandra Asri's operations are in compliance in all material respects with applicable environmental laws and regulations currently in effect. Chandra Asri has had no environmental violation/incident that caused damage and/or claims. All of its environmental licenses and permits are in full force and effect.

Our Power Business (subject to completion of the Star Energy Acquisition)

Star Energy's operations are subject to various environmental and health and safety laws and regulations relating to water, air and noise pollution, the management of hazardous and toxic chemicals, materials and waste and workplace conditions and employee exposure to hazardous substances. The Director General of EBTKE has also issued several decrees concerning occupational health and safety that apply to Star Energy's operations.

Star Energy submits quarterly monitoring and compliance reports to the appropriate local authorities in compliance with AMDAL's requirements and monitors the air and liquid waste and noise emissions resulting from its operations on an ongoing basis.

Due to the issuance of Law No. 32 of 2009, all of Star Energy's environmental-related permits will be integrated into one environmental permit (the "**Environmental Permit**"), at the latest, one year after the effective date of the new environmental law. Law No. 32 of 2009 provides that any business required to comply with AMDAL requirements must also obtain an Environmental Permit. The mechanism and procedures relating to the Environmental Permit will be further regulated under government regulations. In 2012, the Government issued Regulation No. 27/2012 stating that any AMDAL which was approved before the enactment of Government Regulation No. 27/2012 shall remain valid and will be treated the same as an Environmental Permit. Because Star Energy's AMDAL was approved before the enactment of Government Regulation No. 27/2012, Star Energy does not need to obtain the Environmental Permit for its current operation in Unit 1 and Unit 2. In addition, Star Energy has also obtained the Environmental Permit for an additional geothermal turbine-generator unit in 2012.

Star Energy has been issued an ISO 14001 certification in relation to its environmental management system in January 2007 and an OHSAS 18001 certification in relation to its safety and occupational health management system in relation to its Wayang Windu Geothermal Operations in January 2008 and in August 2008 and has subsequently maintained these certificates with regular audits by Lloyds Register, an accredited auditing body. In 2008, Star Energy received the first gold award to be issued for environmental and corporate social responsibility management in Indonesia, the highest award that can be granted under the PROPER Rating Program that is administered by the Indonesian State Ministry of Environment. In 2009, 2010 and 2011, Star Energy received the green award, and in 2012 Star Energy once again was awarded with the gold award. Star Energy has also been awarded various recognitions in each year by the MME (now the MEMR) for excellence in environmental safety.

Star Energy is also subject to international environmental standards, including those set in the Kyoto Protocol, an international agreement between countries, including Indonesia, to limit emissions of greenhouse gases as a major cause of global warming.

We believe that Star Energy is in compliance in all material respects with applicable environmental and health and safety laws and regulations.

Health and Safety

Our Petrochemical Business

Chandra Asri maintains compliance with health, safety and environmental regulations promulgated by local and national governing bodies. Chandra Asri believes that it is in compliance with all relevant Indonesian safety regulations, including, amongst others, Labor Law, Law No. 1 of 1970 on Safety of Work and its implementing regulations and Government Regulation No. 50 of 2012 on Implementation of Management System of Work Health and Safety.

Chandra Asri's health and safety policies are based on the guiding principle that each employee is responsible not only for his or her own safety, but also for the safety of fellow workers. Chandra Asri has ongoing training programs for all phases of its safety system from plant site equipment and its usage, to safety permitting and material safety data. All levels of the plant organization are included in a monthly safety awareness meeting. It also conducts walk-through inspections to verify safety conditions, employee activities and housekeeping. Pursuant to applicable regulation, Chandra Asri submits a monthly plant safety meeting report to the Office of Social and Manpower, a local governing body.

Chandra Asri also has various qualified inspectors to maintain plant integrity at its plants. It conducts routine inspections of static equipment by various methods. Its inspection teams help ensure that the plant is kept in a safe condition.

Our Power Generation Business (subject to completion of the Star Energy Acquisition)

Star Energy maintains compliance with health, safety and environmental regulations promulgated by local and national governing bodies. We believe that Star Energy is in compliance with all relevant Indonesian safety regulations.

Star Energy has a number of programs in place to ensure the health and safety of its workers in the work place, as well as to ensure the health and safety of the local community where it operates. These programs include plans, procedures and policies regarding health and safety, administration, human resources and emergency action issues. As of December 31, 2017, the Wayang Windu Geothermal Operations had operated for a period of 2,083 days (8,495,864 man-hours) with no material accident or injury. As of the same date, the Salak Geothermal Operations and Darajat Geothermal Operations had operated for a period of 1,993 days and 2,878 days (13,552,593 man-hours and 11,342,554 man-hours) with no material accident or injury, respectively.

Insurance

Our Petrochemical Business

Chandra Asri carries insurance for its operations against property damage and consequent business interruption through "all risks" policies with a declared value of approximately US\$3.9 billion, representing the combined value at risk for property damage and business interruption. This coverage has a cap on liability of US\$1.8 billion per occurrence for combined property damage and business interruption, and a cap of US\$1.5 billion per occurrence and in an annual aggregate in respect of national catastrophes, including fire. Chandra Asri's insurance is underwritten by Indonesian insurance companies and is, in turn, reinsured by major international insurance companies. Chandra Asri's existing "all risks" policies are in force until June 20, 2019.

Chandra Asri's insurance providers have created exclusions from its "all risks" insurance policies for losses resulting from terrorism, war and certain other events.

Chandra Asri also has a third-party liability policy, which covers losses caused to third parties as a result of its operations, including sudden environmental pollution, up to a limit of US\$100 million per loss or occurrence. In addition to these policies, Chandra Asri maintains other insurance policies for specified risks, including marine cargo and transport insurance and other kinds of coverage that are not included in its "all risks" policies.

Our Power Generation Business (subject to completion of the Star Energy Acquisition)

Star Energy maintains an insurance program including (i) property all risks insurance covering property damage and business interruption, (ii) control of well insurance covering physical damage to the well and costs of well

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control and (iii) general liability insurance. Star Energy intends to renew certain of the insurance policies upon their expiration on February 28, 2018. Star Energy's insurance policies are provided by Indonesian insurance companies with a minimum of 91% reinsured offshore with insurance companies with a minimum Standard & Poor's rating of "A-" or higher or a minimum Moody's rating of "A3" or higher if rated by one of the respective rating agencies (and a minimum of both "A-" and "A3" if rated by both Standard & Poor's and Moody's). We believe that the types and amounts of insurance coverage Star Energy maintains as of the date of this announcement are in line with standard market practice for the industry and are adequate for the conduct of its business. However, there is no assurance that all risks are covered or are adequately insured against.

Human Resources

Our Petrochemical Business and Other Businesses

As of December 31, 2017, we had approximately 2,912 full-time employees and 191 contractual employees across our Company and our consolidated subsidiaries.

The table below sets forth the number of our full-time and contractual employees by business operations as of December 31, 2017.

Employees by Activity	Number of Employees
Petrochemical	1,926
Others	1,177
Total	3,103

As of December 31, 2017, approximately 65% of our employees are members of labor unions. Our collective labor agreements with the respective labor unions generally regulate our employees' welfare mechanism, work incentives, overtime wages, pension fund, health allowance, annual performance and holiday bonus. We typically negotiate the collective labor agreements every two years and signed the most recent collective labor agreement in 2017. Our relations with our employees have generally been good and there have not been any instances of collective union action, strikes and labor disruptions in the past three years.

Our employees receive compensation packages, which include basic salaries that comply with applicable minimum salary wage regulations, fixed allowance (housing and utility allowances) and other allowance (transportation and meal allowances), and annual bonuses distributed to eligible employees based on factors including individual and company performance. We also provide all of our permanent employees with a contributory pension fund program which is managed by Dana Pensiun Lembaga Keuangan Manulife Indonesia and a life insurance program.

Our Power Business (subject to completion of the Star Energy Acquisition)

As of December 31, 2017, Star Energy employed 681 employees for Wayang Windu, Salak and Darajat, of which 668 are on permanent contracts and 13 are employed on a one-year trial contract basis. Employees who perform adequately during their one-year trial contract are thereafter permanently employed by Star Energy. Star Energy does not employ part-time workers but does outsource some routine functions, such as catering and housekeeping, to third parties.

The table below sets forth the number of Star Energy's employees as of December 31, 2017 by job function and location.

	As of December 31,		
	2015	2016	2017
Employees by Activity			
Management	2	6	9
Staff	222	255	672
Total	224	261	681
Employees by Geographic Region			
Jakarta, Indonesia	42	75	322

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	As of December 31,		
	2015	2016	2017
West Java, Indonesia	182	186	359
Total	224	261	681

The number of Star Energy employees was significantly increased in 2017 compared with 2016 due to the acquisition of Salak and Darajat Assets on March 31, 2017, which was partially offset by transfer of 77 employees from Wayang Windu Field Security Department to a professional security company, which it has engaged to secure its Geothermal Operations.

While all critical tasks are undertaken by Star Energy's permanent employees, Star Energy outsources certain of its activities to contractors. These contractors are either individuals, engaged through a third-party contract labor-company, or specialist contracting companies who are engaged under specific limited-scope contracts. Tasks which are outsourced include catering and housekeeping, landscape maintenance, non-skilled operation and maintenance ("O&M") activities, certain skilled mechanical and electrical activities and some low-priority administration duties. In all cases, contractors are actively supervised by permanent staff who take responsibility for the activity concerned. All activities related to O&M are guided by standard operating procedures which form part of the management system.

As of the date of this announcement, Star Energy's employees are part of labor unions, namely Wayang Windu Union in Wayang Windu, Serikat Pekerja Panas Bumi Salak (SPPABUM) in Salak, and Serikat Pekerja Panas Bumi Indonesia (SPPBI) in Darajat. Star Energy holds bipartite meetings on a quarterly basis to discuss employee-related issues with each union. Each union enters into collective labor agreements with Star Energy in relation to compensation, employee benefits and other employee entitlements. Star Energy negotiates employee allowances every two years. The next negotiation with the unions is expected to take place in April 2018.

Star Energy has not experienced any strikes or material labor disputes or actions in the last three years (2015, 2016 and 2017), and considers its relations with the unions and its employees to be good.

Star Energy provides various benefits to its employees, including medical benefits, mandatory Lebaran allowance, vacation allowance and pension payments. Its employees are members of a defined contribution pension plan.

Star Energy believes that it is in compliance with the Labor Law and all of its implementing regulations.

Legal Proceedings

We are not a party to any legal proceedings which would, individually or taken as a whole, have a material adverse effect on our business, financial condition or results of operations.

RISK FACTORS

The following list provides a brief summary of risks that could affect the Company's business, financial condition, results of operations and future prospects, including the proposed Star Energy Acquisition. The list is not exhaustive and there may be other risks that are unknown to the Company and other risks, currently believed to be immaterial, that could turn out to be material.

Risks Relating to the Existing Business and Operations of Barito Pacific

- Cyclicalities in the petrochemical industry may materially and adversely affect our profitability.
- The volatility of the international market prices for petrochemical products may adversely affect our operating results.
- Fluctuations in the cost of feedstock may result in increased operating expenses and adversely affect our results of operations, cash flows and margins in our petrochemicals business.
- Chandra Asri may be adversely affected by the loss of any large customers that could have a negative impact on our results of operations.
- We may not be able to complete our capacity and product expansion plans for our existing and new petrochemical products.
- Loss of our competitiveness and market share in the Indonesian markets or increased global competition could materially and adversely affect our future growth, profitability and results of operations.
- Our petrochemical operations are subject to factors beyond our control, which may subject us to unscheduled outages and shutdowns and which could have a material and adverse effect on our results of operations.
- Our actual results may vary significantly from the industry forecasts, projections and estimates set forth herein.
- We depend on third-party providers for various aspects of our business and such providers could fail to meet their obligations, which may have a material adverse effect on our business, results of operations and financial condition.
- Our petrochemical production plants are located in a single geographic area. Any disruption in our operations due to accidents or natural disasters in this area could have a material adverse effect on our operations.

Risks Relating to the Star Energy Acquisition

- We may not be able to successfully integrate Star Energy following the Star Energy Acquisition or further acquisitions of companies and businesses we may make in the petrochemical and energy industry that we may make from time to time.
- Star Energy is subject to risks associated with reliance on PLN and PGE.
- Star Energy's geothermal business is fully dependent on two main types of contracts.
- The obligations of the Government under the Wayang Windu ESC Support Letter and the Wayang Windu JOC Support Letter are only limited to the Wayang Windu Geothermal Operations and may not be legally binding.
- Star Energy's financial performance depends on the quantity and quality of geothermal resources in the Wayang Windu, Darajat and Salak contract areas.

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- Star Energy's financial performance depends on the successful operation of the Star Energy Geothermal Operations, which are subject to various operational risks.
- The exploration, development and production of geothermal energy resources is subject to geological risks and uncertainties.
- Star Energy's current and future operations depend on maintaining good relations with the local communities where the Star Energy Geothermal Operations are located.
- Star Energy's operations are subject to legal and regulatory risks including uncertainty as to the implementation of certain legislation.
- Disclosure of geothermal data is subject to legal and regulatory risks.
- Growing regional autonomy creates an uncertain business environment for Star Energy and may increase its costs of doing business.
- Star Energy's operations are dependent on its ability to obtain, maintain and renew land use rights.
- In the future, any expansion plans of Star Energy may not be successful, additional facilities may not commence operation as planned and we may have difficulty securing necessary financing or financing on terms favorable to us for our facility expansion plans.
- Star Energy outsources some of its employees from a related party.

Other risks relating to the business and operations of Barito Pacific and Star Energy

- If we are unable to obtain, renew or maintain our permits, approvals and technology licenses required to operate our business, this may have a material adverse effect on our business.
- Our operations involve risks that may not be covered by insurance or may have a material adverse effect on our business.
- Continued compliance with, and any changes in, environmental and health and safety laws and regulations may adversely affect our operating costs.
- Our ability to compete effectively depends in part on our ability to attract and retain key personnel with relevant industry knowledge.
- The use of derivative contracts could result in financial losses that could negatively impact our business and financial results.
- We are subject to uncertainties as to the interpretation and application of certain Indonesian tax laws.
- We are subject to uncertainties as to the interpretation and application of certain Indonesian tax laws relating to the payment of Production Bonuses.
- Star Energy is subject to uncertainties as to the determination of the deductible and non-deductible expenses by BPKP and DJA, which may impact our cash flow.
- Star Energy is subject to uncertainties as to the whether the Production Allowance under the Darajat JOC and Salak JOC is tax deductible.

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Certain statements in this announcement constitute "forward-looking statements", including statements regarding the Company's expectations and projections for future operating performance and business prospects. Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the Company's actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Such forward-looking statements are based on numerous assumptions regarding the Company's present and future business strategies and the environment in which it will operate in the future. You are cautioned that actual results may differ materially from those set forth in the forward-looking statements contained herein, and particular attention should be paid to the risks described herein.