



# **Management's Discussion and Analysis (MD&A)**

**For the Financial Result of Quarter 1 Year 2018  
Ended March 31, 2018**

# EXECUTIVE SUMMARY



## SIGNIFICANT EVENTS

### Announcement on Corporate Rating and Progress on Corporate Bond Issuance

On April 5, 2018, TRIS Rating assigned the company rating of B. Grimm Power PLC (BGRIM) at "A" with "stable" outlook. The rating reflects the company's position as one of the leading private power producers in Thailand, its well-diversified portfolio of cogeneration power units under the Small Power Producer (SPP) scheme, and reliable cash flows from long-term power purchase agreements (PPAs) with the Electricity Generating Authority of Thailand (EGAT) and reputable clients. *(Please find full detail on [www.trisrating.com](http://www.trisrating.com))*

As regards to BGRIM's annual general meeting (AGM) held on 26 April 2018, BGRIM also granted shareholder approval on issuance of bond in the amount up to Baht 50,000 million for the next 5 years (2018-2022). BGRIM expects to issue the first rating corporate bond in October 2018 to mainly rollover the unrated bond amounting of Baht 5,500 million that the company issued in October 2016.

### Progress on Project Bond Issuance

On April 25, 2018, TRIS Rating assigned the company rating of B. Grimm BIP Power 1 Ltd. (BIP1) and B. Grimm BIP Power 2 Ltd. (BIP2) at "A-" with "stable" outlook and assigned the rating of "A-" to BIP1 and BIP2's proposed issues of up to Baht 6,700 million in senior unsecured debentures. *(Please find full detail on [www.trisrating.com](http://www.trisrating.com))*.

The proceeds from the proposed debentures will be used to refinance BIP 1 and BIP2's outstanding project loans. Preliminary structure is 1) tenor of 15 years amortization 2) Private Placement to Institutional and High Net Worth investors and 3) tentative issue date in May 2018

### Progress on development of solar projects in Vietnam

BGRIM has agreed to develop large-scale solar power plants with an installed capacity of 420 MW (contract capacity of 350 MW) with the well-known business partner in Vietnam, Xuan Cau group.

The project is pursuing the 20-year Power Purchase Agreement with Electricity of Vietnam (EVN) with tariff of USD 9.35 cent per KWh given the condition that the project must be able to achieve COD by June 2019. Our partner in Vietnam is in the process of securing all required permits and licenses to develop the projects, while BGRIM is in the process of planning the construction, selecting EPC and seeking for funding.

### Progress on development of solar rooftop in Thailand

BGRIM has commercially agreed with our partners to jointly develop solar rooftop projects in Thailand with the capacity up to 70 MW. The project will enter into a long-term private power purchase agreement with industrial users in the industrial estate. BGRIM would leverage our expertise in selecting EPC and managing construction and funding, while our partners who are facility service providers to those customers would be accountable for selecting potential customers and provide O&M service



# EXECUTIVE SUMMARY



## KEY FINANCIAL HIGHLIGHT

	Q1'2017	Q1'2018	% change	Q4'2017	Q1'2018	% change
	million Baht	million Baht	y-on-y	million Baht	million Baht	q-on-q
Sales and service income	7,651	8,156	6.6%	7,762	8,156	5.1%
EBITDA	2,133	2,218	4.0%	2,099	2,218	5.7%
Net profit	1,098	1,203	9.6%	771	1,203	56.0%
Normalized net profit (NNP)*	678	830	22.4%	571	830	45.4%
NNP - Owner of the parent	421	512	21.6%	334	512	53.3%
<b>EBITDA margin (%)</b>	<b>27.9%</b>	<b>27.2%</b>		<b>27.0%</b>	<b>27.2%</b>	
<b>NNP margin (%)</b>	<b>8.9%</b>	<b>10.2%</b>		<b>7.4%</b>	<b>10.2%</b>	
<b>% NNP - Owner of the parent</b>	<b>62.1%</b>	<b>61.7%</b>		<b>58.5%</b>	<b>61.7%</b>	

### Remark

\* Normalized net profit = Net profit – Unrealized gain / (loss) from FX – Non-recurring income / (expense)

### Sales and Service Income

- **Sales and service income increased 6.6% y-on-y and 5.1% q-on-q to Baht 8,156 million in Q1'2018** (Baht 7,651 million in Q1'2017 and Baht 7,762 million in Q4'2017), primarily due to an increase in revenue from the power plants that started COD on February 1, 2018, namely ABPR3, located in Amata City Industrial Estate and an increase in demand of industrial users in Amata Nakorn Industrial Estate and Hemraj Industrial Estate.

### EBITDA

- **EBITDA increased 4.0% y-on-y and 5.7% q-on-q to Baht 2,218 million in Q1'2018** (Baht 2,133 million in Q1'2017 and Baht 2,099 million in Q4'2017) which is in line with an increase in revenue and maintaining on EBITDA margin.
- **EBITDA margin maintained at 27.2%** in Q1'2018, primarily due to high efficiency of our new power plants became commercial operation in recent years.

### Normalized net profit (NNP)

- **NNP increased 22.4% y-on-y** from Baht 678 million in Q1'2017 to Baht 830 million in Q1'2018, primarily due to an increase in revenue and an improvement on financing cost mainly attributable to a refinancing of project bond in April 2017 and a repayment of corporate loan in September 2017.
- **NNP increased 45.4% q-on-q** from Baht 571 million in Q4'2017 to Baht 830 million in Q1'2018, primarily due to an increase in revenue and an improvement on financing cost mainly attributable to a reduction on interest expense from ABPIF compared to previous quarter.
- **NNP margin improved to 10.2%** in Q1'2018, primarily due to improvement of our financing cost.
- **NNP attributable to owner of the parent is Baht 512 million** in Q1'2018 or accounted for 61.7% of NNP.

# FINANCIAL PERFORMANCE



## REVENUE STRUCTURE

	Q1'2017	Q1'2018	% change	Q4'2017	Q1'2018	% change
	million Baht	million Baht	y-on-y	million Baht	million Baht	q-on-q
<b>Electricity sales</b>						
Sales to EGAT	4,740	5,032	6.2%	4,713	5,032	6.8%
Sales to IUs - Thailand	2,275	2,450	7.7%	2,388	2,450	2.6%
Sales to IUs - Vietnam	277	262	-5.4%	300	262	-12.7%
Sales to PEA	18	18	0.0%	15	18	20.0%
Sales to EDL	0	8	n/a	48	8	-83.3%
<b>Electricity sales</b>	<b>7,311</b>	<b>7,769</b>	<b>6.3%</b>	<b>7,465</b>	<b>7,769</b>	<b>4.1%</b>
Steam sales	126	137	8.7%	132	137	3.8%
Others	214	249	16.4%	165	249	50.9%
<b>Sales and services income</b>	<b>7,651</b>	<b>8,156</b>	<b>6.6%</b>	<b>7,762</b>	<b>8,156</b>	<b>5.1%</b>

### Electricity Sales to EGAT

- **Electricity sales to EGAT increased 6.2% y-on-y and 6.8% q-on-q to Baht 5,032 million for in Q1'2018** (Baht 4,740 million in Q1'2017 and Baht 4,713 million in Q4'2017).
  - **The volume of electricity sold to EGAT increased 5.8% y-on-y and 5.8% q-on-q to 1,749 GWh in Q1'2018** (1,653 GWh in Q1'2017 and 1,654 GWh in Q4'2017), primarily due to the inclusion of the power plants which became commercially operational during the period, namely ABPR3.
  - **Electricity price sales to EGAT increased 0.3% y-on-y and 1.1% q-on-q to 2.88 Baht/KWh in Q1'2018** (2.87 Baht/KWh in Q1'2017 and 2.85 Baht/KWh in Q4'2017) because the energy payment is indexed to the price of natural gas for which slightly increased to 237.21 Baht/mmBtu in Q1'2018 (232.68 Baht/mmBtu in Q1'2017 and 231.23 Baht/mmBtu in Q4'2017), despite partly offset by a reduction of capacity payment due to Baht appreciation during the period

### Electricity sales to Industrial Users (IUs) – Thailand

- **Electricity sales to industrial users in Thailand increased 7.7% y-on-y and 2.6% q-on-q to Baht 2,450 million in Q1'2018** (Baht 2,275 million in Q1'2017 and Baht 2,388 million in Q4'2017)
  - **The volume of electricity sold to industrial users in Thailand increased 4.0% y-on-y and 2.6% q-on-q to 749 GWh in Q1'2018** (720 GWh in Q1'2017 and 730 GWh in Q4'2017), primarily due to an increase in demand from existing customers in Amata Nakorn Industrial Estate and Hemraj Industrial Estate
  - **Electricity price sales to IU in Thailand increased 3.5% y-on-y and remained unchanged q-on-q to 3.27 Baht/KWh in Q1'2018** (3.16 Baht/KWh in Q1'2017 and 3.27 Baht/KWh in Q4'2017) which is in line with the change in Ft – the tariff announced by ERC



# FINANCIAL PERFORMANCE



## REVENUE STRUCTURE

### Electricity Sales to Industrial Users (IUs) – Vietnam

- **Electricity sales to industrial users in Vietnam decreased 5.4% y-on-y and 12.7% q-on-q to THB 262 million in Q1'2018** (Baht 277 million in Q1'2017 and Baht 300 million in Q4'2017).
  - **The volume of electricity on-sold to industrial users in Vietnam increased 1.3% y-on-y** from 110 GWh in Q1'2017 to 112 GWh in Q1'2018, primarily due to an increase in demand load from existing customers.
  - **The volume of electricity on-sold to industrial users in Vietnam decreased 10.6% q-on-q** from 125 GWh in Q4'2017 to 112 GWh in Q1'2018, primarily due to a long holiday in the first quarter of year 2018 in Vietnam.
  - **Electricity price sales to IU in Vietnam decreased 6.8% y-on-y and 2.5% q-on-q to 2.34 Baht/KWh in Q1'2018** (2.51 Baht/KWh in Q1'2017 and 2.40 Baht/KWh in Q4'2017), primarily due to a decrease in the prevailing retail tariff charged by the subsidiary of EVN which our power selling prices are set at a premium to.

### Steam Sales to Industrial Users (IUs)

- **Steam sales to industrial users in Thailand increased 8.7% y-on-y and 3.8% q-on-q to Baht 137 million in Q1'2018** (Baht 126 million in Q1'2017 and Baht 132 million in Q4'2017).
  - **The volume of steam sold to industrial users in Thailand increased 7.2% y-on-y** from 123,241 tons in Q1'2017 to 132,087 tons in Q1'2018, primarily due to an increase in demand of industrial users in Amata Nakorn, Amata City and Laemchabang Industrial Estate.
  - **The volume of steam sold to industrial users in Thailand increased 3.0% q-on-q** from 128,259 tons in Q4'2017 to 132,087 tons in Q1'2018, primarily due to an increase in demand of industrial users in Amata Nakorn, and Laemchabang Industrial Estate, despite partly offset by a decrease in demand of industrial users in Amata City Industrial Estate.

- **Steam price sales to IU in Thailand increased 1.5% y-on-y and 0.6% q-on-q to 1,035.55 Baht/ton in Q1'2018** (1,020.43 Baht/ton in Q1'2017 and 1,029.17 Baht/ton in Q4'2017), primarily due to an increase in natural gas price as our steam price is generally adjusted to reflect changes in natural gas price.

### Electricity Sales to EDL

- **Electricity sales to EDL in Laos was recorded at Baht 8 million in Q1'2018** during the dry season in Laos.

### Other Sales and Service income

- **Other sales and service income increased 16.4% y-on-y and 50.9% q-on-q to Baht 249 million in Q1'2018** (Baht 214 million in Q1'2017 and Baht 165 million in Q4'2017), primarily due to a record of construction revenue which is recognized based on the percentage of completion of our hydro power projects in Lao PDR, namely Nam Che.



# FINANCIAL PERFORMANCE



## REVENUE STRUCTURE

**Table 1) Revenue Drivers: Sales volume**

	Q1'2017 GWh	Q1'2018 GWh	% change y-on-y	Q4'2017 GWh	Q1'2018 GWh	% change q-on-q
<b>Electricity sales to EGAT</b>	<b>1,653</b>	<b>1,749</b>	<b>5.8%</b>	<b>1,654</b>	<b>1,749</b>	<b>5.8%</b>
<b>Electricity sales to IU - Thailand</b>						
Amata Nakorn Industrial Estate	379	393	3.8%	383	393	2.7%
Amata City Industrial Estate	84	85	1.1%	86	85	-0.4%
Laemchabang Industrial Estate	169	175	3.7%	172	175	1.9%
Hemraj Industrial Estate	51	58	14.7%	55	58	5.1%
Bangkadi Industrial Park	37	37	0.4%	34	37	8.8%
<b>Electricity sales to IU - Thailand</b>	<b>720</b>	<b>749</b>	<b>4.0%</b>	<b>730</b>	<b>749</b>	<b>2.6%</b>
<b>Electricity sales to IU - Vietnam</b>	<b>110</b>	<b>112</b>	<b>1.3%</b>	<b>125</b>	<b>112</b>	<b>-10.6%</b>

	Q1'2017 ton	Q1'2018 ton	% change y-on-y	Q4'2017 ton	Q1'2018 ton	% change q-on-q
<b>Steam sales to IU - Thailand</b>						
Amata Nakorn Industrial Estate	32,700	34,717	6.2%	33,288	34,717	4.3%
Amata City Industrial Estate	37,269	38,918	4.4%	41,746	38,918	-6.8%
Laemchabang Industrial Estate	53,272	58,453	9.7%	53,225	58,453	9.8%
<b>Steam sales to IU - Thailand</b>	<b>123,241</b>	<b>132,087</b>	<b>7.2%</b>	<b>128,259</b>	<b>132,087</b>	<b>3.0%</b>

**Table 2) Revenue Drivers: Price per Unit**

Price per unit	Units	Q1'2017	Q1'2018	% change y-on-y	Q4'2017	Q1'2018	% change q-on-q
Electricity to EGAT	Baht/KWh	2.87	2.88	0.3%	2.85	2.88	1.1%
Electricity to IU - Thailand	Baht/KWh	3.16	3.27	3.5%	3.27	3.27	0.0%
Electricity to IU - Vietnam	Baht/KWh	2.51	2.34	-6.8%	2.40	2.34	-2.5%
Steam to IU - Thailand	Baht/Ton	1,020.43	1,035.55	1.5%	1,029.17	1,035.55	0.6%
Effective gas cost	Baht/mmBtu	232.68	237.21	1.9%	231.23	237.21	2.6%

# FINANCIAL PERFORMANCE



## COST STRUCTURE

	Q1'2017	Q1'2018	% change	Q4'2017	Q1'2018	% change
	million Baht	million Baht	y-on-y	million Baht	million Baht	q-on-q
<b>Cost of sales and services</b>						
Natural gas	4,410	4,728	7.2%	4,406	4,728	7.3%
Cost of electricity- Vietnam	247	235	-4.9%	269	235	-12.6%
O&M	411	440	7.1%	514	440	-14.4%
Others	290	350	20.7%	282	350	24.1%
<b>Cost of sales and services</b>	<b>5,358</b>	<b>5,754</b>	<b>7.4%</b>	<b>5,470</b>	<b>5,754</b>	<b>5.2%</b>
SG&A	249	268	7.6%	395	268	-32.2%
Depreciation	690	725	5.1%	658	725	10.2%
<b>Total expenses</b>	<b>6,297</b>	<b>6,747</b>	<b>7.1%</b>	<b>6,523</b>	<b>6,747</b>	<b>3.4%</b>

### Natural Gas

- **Natural gas costs increased 7.2% y-on-y and 7.3% q-on-q to Baht 4,728 million in Q1'2018** (Baht 4,410 million in Q1'2017 and Baht 4,406 million in Q4'2017), primarily due to an increase in gas consumption arising from an increase in electricity generation and an increase in the effective price of natural gas price which is tied to the weighted average price for the mass of natural gas from PTT's pool gas.

### Cost of Electricity- Vietnam

- **Cost of electricity purchased from subsidiaries of EVN decreased 4.9% y-on-y and 12.6% q-on-q to Baht 235 million in Q1'2018** (Baht 247 million in Q1'2017 and Baht 269 million in Q4'2017) in line with change in electricity sales to industrial users in Vietnam.

### O&M

- **Operation and maintenance costs increased 7.1% y-on-y** from Baht 411 million in Q1'2017 to Baht 440 million in Q1'2018, primarily due to an increase in operation and maintenance costs arising from the new power plants described previously.

- **Operation and maintenance costs decreased 14.4% q-on-q** from Baht 514 million in Q4'2017 to Baht 440 million in Q1'2018, primarily due to a decrease in plant overhead expense which is higher in previous quarter due to regular maintenance occurred during the year end.

### Other Cost of Sales and Service

- **Other cost of sales and service income increased 20.7% y-on-y and 24.1% q-on-q to Baht 350 million in Q1'2018** (Baht 290 million in Q1'2017 and Baht 282 million in Q4'2017), primarily due to a record of construction cost based on our actual incurred construction costs of Nam Che project.

### Selling, General & Administrative Expense

- **SG&A increased 7.6% y-on-y** from Baht 249 million in Q1'2017 to Baht 268 million in Q1'2018, primarily due to an increase in SG&A arising from the COD of new power plants described previously.
- **SG&A decreased 32.2% q-on-q** from Baht 395 million in Q4'2017 to Baht 268 million in Q1'2018, primarily due to a decrease in SG&A expense which is higher during the year end.

# FINANCIAL PERFORMANCE



## NON-OPERATING ITEMS

	Q1'2017	Q1'2018	% change	Q4'2017	Q1'2018	% change
	million Baht	million Baht	y-on-y	million Baht	million Baht	q-on-q
Other revenues	11	22	100.0%	112	22	-80.4%
Share of profit (loss) of associates	65	50	-23.1%	82	50	-39.0%
Gain (Loss) on exchange rate	-13	-93	615.4%	-11	-93	745.5%

### Other Revenues

- **Other revenues was recorded at Baht 22 million in Q1'2018**, primarily attributable to an interest income

### Share of Profit (Loss) of Associates and Joint Ventures

- **Share of profit from associates was recorded at Baht 50 million in Q1'2018**, primarily attributable to profits at our associate and our joint ventures namely ABPIF, BGYSP and BGSENA

### Gain (Loss) on Exchange Rate

- **Loss on Exchange Rate was recorded at Baht 93 million in Q1'2018**, primarily attributable to a loss and/or an unrealized loss on exchange rate from trade payable and other assets.





# FINANCIAL PERFORMANCE



## FINANCE COST AND TAX

	Q1'2017	Q1'2018	% change	Q4'2017	Q1'2018	% change
	million Baht	million Baht	y-on-y	million Baht	million Baht	q-on-q
<b>Finance cost</b>						
Interest expense from borrowing	597	532	-10.9%	524	532	1.5%
Interest expense from ABPIF	111	68	-38.7%	283	68	-76.0%
Unrealized loss/(gain) from FX	-484	-466	-3.7%	-215	-466	116.7%
Other financing costs	19	12	-36.8%	29	12	-58.6%
<b>Finance cost</b>	<b>243</b>	<b>145</b>	<b>-40.3%</b>	<b>621</b>	<b>145</b>	<b>-76.7%</b>
<b>Tax expense (income)</b>						
Tax on profits for the period	64	88	37.5%	17	88	417.6%
Deferred tax	12	-49	-508.3%	14	-49	-450.0%
<b>Tax expense (income)</b>	<b>76</b>	<b>39</b>	<b>-48.7%</b>	<b>31</b>	<b>39</b>	<b>25.8%</b>

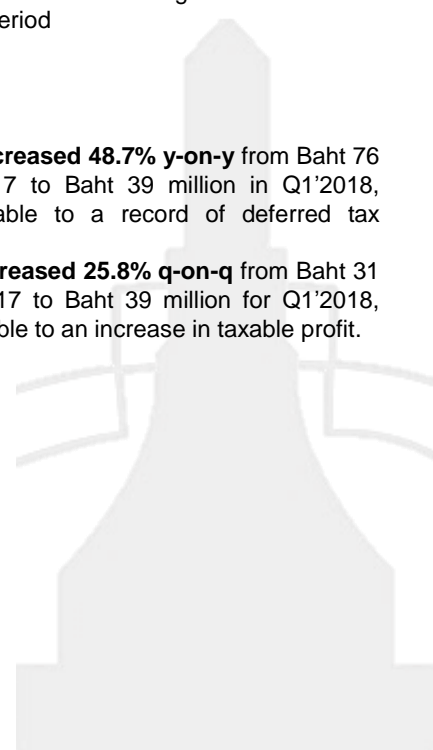
### Finance Cost

- **Finance costs decreased 40.3% y-on-y and 76.7% q-on-q to Baht 145 million in Q1'2018** (Baht 243 million in Q1'2017 and Baht 621 million in Q4'2017). The decrease was primarily attributable to:
  - Interest expenses from borrowings y-on-y: A 10.9% decrease y-on-y from Baht 597 million in Q1'2017 to Baht 532 million in Q1'2018, primarily due to an a refinancing of project bond in April 2017 and a repayment of corporate loan in September 2017
  - Interest expenses from borrowings q-on-q: A 1.5% increase q-on-q from Baht 524 million in Q4'2017 to Baht 532 million in Q1'2018, primarily due to a record of an interest used to fund the construction of ABPR3 after their commencement of commercial operation
  - Interest expense from ABPIF: A 38.7% decrease y-on-y and a 76.0% decrease q-on-q to Baht 68 million in Q1'2018 based on the benefits transferred from the business operation of ABP1 and ABP2; and

- Unrealized gain on exchange rate from financing activities: A 3.7% decrease y-on-y and a 116.7% increase q-on-q to Baht 466 million in Q1'2018 due to an appreciation (gain) and/or depreciation (loss) of the Baht against the U.S. dollar at the ending of each financial statement period

### Tax Expense

- **Tax expense decreased 48.7% y-on-y** from Baht 76 million in Q1'2017 to Baht 39 million in Q1'2018, primarily attributable to a record of deferred tax income
- **Tax expense increased 25.8% q-on-q** from Baht 31 million for Q4'2017 to Baht 39 million for Q1'2018, primarily attributable to an increase in taxable profit.



# FINANCIAL PERFORMANCE



## NORMALIZED NET PROFIT (NNP)

	Q1'2017	Q1'2018	% change	Q4'2017	Q1'2018	% change
	million Baht	million Baht	y-on-y	million Baht	million Baht	q-on-q
Net profit for the year	1,098	1,203	9.6%	771	1,203	56.0%
<u>Add</u> Unrealized (gain) on FX	-433	-400	-7.6%	-223	-400	79.4%
<u>Add</u> Non-recurring expenses	13	27	107.7%	23	27	17.4%
<b>Normalized net profit (NNP)</b>	<b>678</b>	<b>830</b>	<b>22.4%</b>	<b>571</b>	<b>830</b>	<b>45.4%</b>
<u>Less</u> Minority interest	-257	-318	23.7%	-238	-318	33.6%
<b>NNP - Owner of the parent</b>	<b>421</b>	<b>512</b>	<b>21.6%</b>	<b>333</b>	<b>512</b>	<b>53.8%</b>
<i>NNP per share (Baht per share)</i>	<i>0.2</i>	<i>0.2</i>	<i>21.6%</i>	<i>0.1</i>	<i>0.2</i>	<i>53.8%</i>
<i>No. of shares in calculation (million shares)</i>	<i>2,607</i>	<i>2,607</i>		<i>2,607</i>	<i>2,607</i>	

### Normalized Net Profit ("NNP")

- **NNP increased 22.4% y-on-y and 45.4% q-on-q to Baht 830 million in Q1'2018** (Baht 678 million in Q1'2017 and Baht 571 million in Q4'2017). The adjustment on NNP in Q1'2018 was primarily attributable to:
  - **An unrealized gain on exchange rate of Baht 400 million** due to the appreciation of the Baht against the U.S. dollar at the ending of each financial statement period; and
  - **Non-recurring expenses of Baht 27 million**, primarily due to a provision of inventory
- **NNP to owner was recorded at THB 512 million in Q1'2018** or accounted for 61.7% of NNP which is in line with an economic ownership of BGRIM in the projects.



# FINANCIAL POSITION



## STATEMENT OF FINANCIAL POSITION

	31-Dec-2017	31-Mar-2018	% change
	million Baht	million Baht	%
Cash	18,209	17,029	-6.5%
Total assets	89,241	89,016	-0.3%
Total interest-bearing debts	53,856	53,108	-1.4%
Total liabilities	63,497	62,071	-2.2%
Total equities	25,744	26,945	4.7%
Total equities attributable to Owner	18,653	19,279	3.4%
<b>Net-int debt to equity (times)</b>	<b>1.4</b>	<b>1.3</b>	

### Change in Capital Structure

- **Total assets decreased 0.3%** from Baht 89,241 million as of December 31, 2017 to Baht 89,016 million as of March 31, 2018, primarily due to an decrease in cash and cash equivalents.
- **Total interest-bearing debts decreased 1.4%** from 53,856 million as of December 31, 2017 to Baht 53,108 million as of March 31, 2018, primarily due to repayment of project loan during the period.
- **Total equities increased 4.7%** from Baht 25,744 million as of December 31, 2017 to Baht 26,945 million as of March 31, 2018, primarily due to an increase in retained earnings during the period.
- **As a result of the foregoing, net interest-bearing debt to equity ratio reduced** from 1.4 times as of December 31, 2017 to 1.3 times as of March 31, 2018



# PROGRESS OF PROJECTS UNDER CONSTRUCTION



AS OF 30 APRIL 2018

## Progress on track



### Amata B.Grimm Power (Rayong) 4

Type of Fuel	Combined Cycle Cogeneration
Installed Capacity	Electricity 133 MW / Steam 30 t/h
Economic Ownership	55.5%
SCOD	1 Jun 2018
EGAT PPA	90 MW / 25 years
% Progress	99.2%

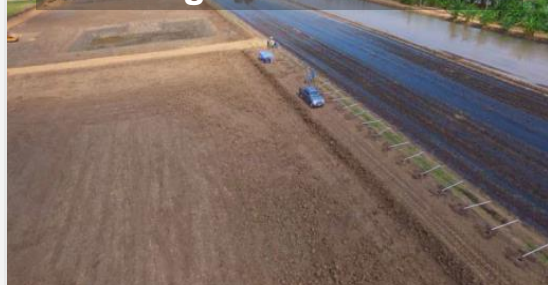
## Progress on track



### Amata B.Grimm Power (Rayong) 5

Type of Fuel	Combined Cycle Cogeneration
Installed Capacity	Electricity 133 MW / Steam 30 t/h
Economic Ownership	55.5%
SCOD	1 Oct 2018
EGAT PPA	90 MW / 25 years
% Progress	95.0%

## Progress on track



### Solar WVO-Cooperatives Projects

Type of Fuel	Solar PV
Installed Capacity	31 MW (combined 7 plants)
Economic Ownership	100.0%
SCOD	30 Dec 2018
PEA / MEA PPA	31 MW / 25 years
% Progress	21.8%

## Progress on track



### Nam Che 1 Hydro Power Project

Type of Fuel	Hydro (Run of the river)
Installed Capacity	15 MW
Economic Ownership	72.0%
SCOD	Q4'2018
EDL PPA	15.0 MW / 25 years
% Progress	74.3%

# ABBREVIATION & OUR PROJECTS



## ABBREVIATION

<b>COD</b>	Commercial Operation Date	<b>KWh / GWh</b>	Kilowatt-hour / Gigawatt-hour
<b>EBITDA</b>	Earnings before Interest, Taxes, Depreciation and Amortization	<b>MEA</b>	Metropolitan Electricity Authority
<b>EDL</b>	Electricite Du Laos	<b>mmBtu</b>	Million Btu (unit of gas consumption)
<b>EGAT</b>	Electricity Generating Authority of Thailand	<b>NNP</b>	Normalized net profit
<b>ERC</b>	Energy Regulatory Commission	<b>O&amp;M</b>	Operations and maintenance
<b>EPC</b>	Engineering, Procurement and Construction	<b>P.A.</b>	Per annum
<b>EVN</b>	Electricity of Vietnam	<b>PEA</b>	Provincial Electricity Authority (Thailand)
<b>Ft</b>	Fuel adjustment	<b>PPA</b>	Power purchase agreement
<b>FX</b>	Foreign exchange	<b>PTT</b>	PTT public Company Limited
<b>IPO</b>	Initial public offering	<b>Q-o-Q</b>	Quarter-on-Quarter
<b>IU</b>	Industrial user	<b>SG&amp;A</b>	Selling, general & administrative expense
<b>JV</b>	Joint venture	<b>WVO</b>	War Veteran Organization
		<b>Y-o-Y</b>	Year on year

## OUR PROJECTS

<b>ABPIF</b>	Amata B.Grimm Power Plant Infrastructure Fund	<b>BGPSK</b>	B.Grimm Solar Power (Sakaeo) 1
<b>ABP1</b>	Amata B.Grimm Power 1	<b>BGSENA</b>	B.Grimm Sena Solar Power Limited
<b>ABP2</b>	Amata B.Grimm Power 2	<b>BGYSP</b>	B.Grimm Yanhee Solar Power
<b>ABP3</b>	Amata B.Grimm Power 3	<b>BIP1</b>	B.Grimm BIP Power 1
<b>ABP4</b>	Amata B.Grimm Power 4	<b>BIP2</b>	B.Grimm BIP Power 2
<b>ABP5</b>	Amata B.Grimm Power 5	<b>BPLC1</b>	B.Grimm Power (Laem Chabang) 1
<b>ABPR1</b>	Amata B.Grimm Power (Rayong) 1	<b>BPLC2</b>	B.Grimm Power (Laem Chabang) 2
<b>ABPR2</b>	Amata B.Grimm Power (Rayong) 2	<b>BPWHA1</b>	B.Grimm Power (WHA) 1
<b>ABPR3</b>	Amata B.Grimm Power (Rayong) 3	<b>Nam Che</b>	Nam Che 1 Hydro Power Project
<b>ABPR4</b>	Amata B.Grimm Power (Rayong) 4	<b>XXHP</b>	Xenamnoy 2 and Xekatom 1 Hydro Power Project
<b>ABPR5</b>	Amata B.Grimm Power (Rayong) 5		



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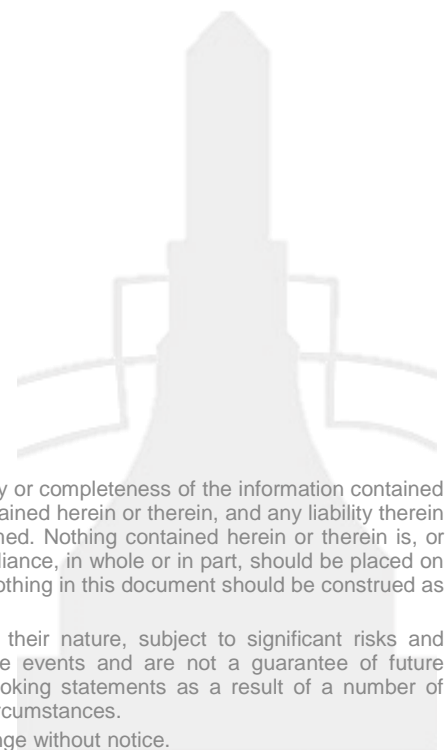
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