Company Report: Power Assets (00006 HK)

公司报告：电能实业 (00006 HK)

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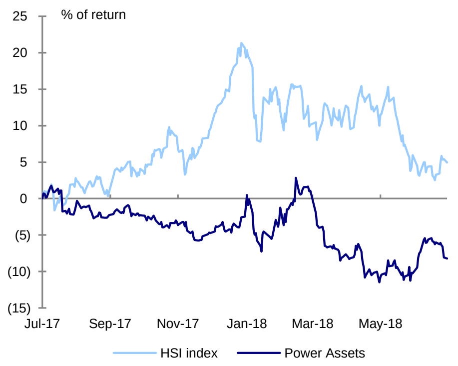
Stable Earnings and Dividends, Initiate with "Accumulate"

稳定的盈利和股息，首次覆盖为“收集”

- **Power Assets Holdings ("PAH" or the "Company") is a global investor primarily in utilities-related businesses.** The Company's assets focus on electricity and gas distribution in addition to some power generation capacity. The Company operates in 8 countries with the majority of profits generated in the UK.
- **We estimate shareholders' profit in 2018E-2020E to be HK$ 8,206 mn, HK$ 8,192 mn, and HK$ 8,309 mn, respectively.** Our forecast represents YoY growth of (1.4%)/(0.2%)/1.4%, respectively. Our forecast for profits from JV and associates during 2018E-2020E are HK$ 6,494 mn/HK$ 6,519 mn/HK$ 6,534 mn, respectively. Our forecast represents YoY growth of 5.5%/0.4%/0.2% over the same period, respectively, and also represents a 3-year CAGR of 2.0%. Regionally, we expect earnings to grow in Canada, Australia, and Europe, which will offset declines in Hong Kong and China. We expect earnings from the UK to remain relatively stable.
- **We initiate our coverage with a TP of HK$60.00 and investment rating "Accumulate".** The TP represents 15.6x/15.6x/15.4x 2018E-2020E PER and 1.5x/1.5x/1.4x 2018E-2020E PBR. The 2-year historical average PER and PBR of PAH are 16.2x and 1.1x, respectively. The Company is an attractive defensive investment that offers stable dividend payout. Our TP represents a 12.6% discount to our DCF valuation. We expect stability in dividend growth and contribution of earnings from PAH's various business segments.
- **电能实业（“PAH”或“公司”）是一家主要从事公用事业相关业务投资的全球性公司。**除一些发电装机外，该集团的资产专注于电力和天然气分销。公司在 8 个国家经营业务，其中大部分盈利来自英国。
- **我们预计 2018 年-2020 年的股东利润分别为 82.06 亿港元，81.92 亿港元，83.09 亿港元。**我们的预测分别相当于(1.4%)/(0.2%)/1.4%的同比增长。我们预计 2018 年-2020 年合营及联营公司利润为 64.94 亿港元，65.19 亿港元和 65.34 亿港元。我们的预测分别表明了 5.5%/ 0.4%/ 0.2%的同比增长和 2.0%的 3 年复合年增长率。从地区来看，我们认为加拿大，澳大利亚和欧洲的盈利将增长，而会抵消对香港和中国大陆盈利下滑的预期。我们预计英国的盈利保持相对稳定。
- **我们首次覆盖并给予投资评级为“收集”和目标价 60.00 港元。**目标价分别相当于 15.6 倍 / 15.6 倍 / 15.4 倍 2018 年-2020 年市盈率和 1.5 倍 / 1.5 倍 / 1.4 倍 2018 年-2020 年市净率。公司 2 年历史平均市盈率及市净率分别为 16.2 倍及 1.1 倍。公司可作为防御性投资，具有吸引力，可提供稳定的股息支付。我们的目标价对我们的 DCF 估值有 12.6%的折让。我们预计股息增长以及公司各业务板块的盈利贡献将具有稳定性。

Rating:	**Accumulate** Initial
评级：	**收集** (首次覆盖)
6-18m TP 目标价:	**HK$60.00**
Share price 股价:	HK$55.950

Stock performance
股价表现



Change in Share Price 股价变动	1 M 1 个月	3 M 3 个月	1 Y 1 年
Abs. % 绝对变动 %	2.0	(4.3)	(12.2)
Rel. % to HS Index 相对恒指变动 %	2.8	2.5	(18.7)
Avg. Share price(HK$) 平均股价（港元）	57.1	55.9	58.5

Source: Bloomberg, Guotai Junan International.

Year End 年结 12/31	Turnover 收入 (HK$ m)	Net Profit 股东净利 (HK$ m)	EPS 每股净利 (HK$)	EPS 每股净利变动 (△ %)	PER 市盈率 (x)	BPS 每股净资产 (HK$)	PBR 市净率 (x)	DPS 每股股息 (HK$)	Yield 股息率 (%)	ROE 净资产收益率 (%)
2016A	1,288	6,417	3.010	(16.9)	18.6	55.481	1.0	2.720	4.9	5.3
2017A	1,420	8,319	3.898	29.5	14.4	44.784	1.2	15.290	27.3	7.8
2018F	2,019	8,206	3.845	(1.4)	14.6	39.828	1.4	8.800	15.7	9.1
2019F	1,908	8,192	3.839	(0.2)	14.6	40.811	1.4	2.856	5.1	9.5
2020F	2,015	8,309	3.893	1.4	14.4	41.791	1.3	2.913	5.2	9.4

Shares in issue (m) 总股数 (m)	2,134.3	Major shareholder 大股东	Cheung Kong Infrastructure Holdings 38.9%
Market cap. (HK$ m) 市值 (HK$ m)	119,414.1	Free float (%) 自由流通比率 (%)	61.1
3 month average vol. 3 个月平均成交股数 ('000)	4,032.6	FY18 Net gearing (%) FY18 净负债/股东资金 (%)	net cash
52 Weeks high/low (HK$) 52 周高/低 (HK$)	67.607 / 54.000	FY18 Est. NAV (HK$) FY18 每股估值（港元）	68.7

Source: the Company, Guotai Junan International.

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INDUSTRY OVERVIEW

Global GDP is estimated to grow 3.9%/3.9%/3.8% in 2018/2019/2020. The International Monetary Fund's ("IMF") April 2018 World Economic Outlook reported 2017 global GDP growth as 3.8%, 0.6ppts higher YoY. The forecasts for growth in 2018-2020 remain largely unchanged from IMF estimates in January 2018. Asian countries are expected to grow most over the next few years, with China and India expected to lead the pack. Overall economic conditions are optimistic, with synchronized growth momentum in emerging economies and advanced nations expected to continue in the near term.

International Electricity Markets

Economic growth is a strong driver for electricity demand growth, with the IEA estimating 60% electricity demand growth as GDP is expected to grow by 124% by 2040. The IEA estimates for developing countries' GDP to grow 180% to 2040, while electricity demand is expected to increase by marginally less than 100%. Prior to the global financial crisis in 2008, a 1% rise in global economic growth required close to a 1% increase in global electricity demand. The relationship has weakened since then however, as a structural transition towards service-oriented economies takes place within the global economy, reducing industrial electricity use. Finally, as electrification continues in developing economies, efficiency improvements and technological progress on decreasing electricity intensity required to support economic growth will be important factors as well.

From 2016-2040, the International Energy Agency ("IEA") estimates electricity demand to increase at a CAGR of 2.0%, from 21,375 TWh to 34,470 TWh, and led by developing economies. Electricity demand in India, Africa, Southeast Asia, and China is expected to grow at CAGRs of 5.1%, 4.1%, 3.7%, and 2.3% over the same period, respectively. Despite lower overall growth in electricity demand projected for China, it will still account for the largest growth in demand by magnitude, rising by 3,910 TWh during 2016-2040. From 2000 through 2016, electricity consumption grew at a CAGR of 3.1% from 13,199 TWh to 21,375 TWh.

Table-1: Electricity Demand by Region ("Base Scenario"), 2000-2040

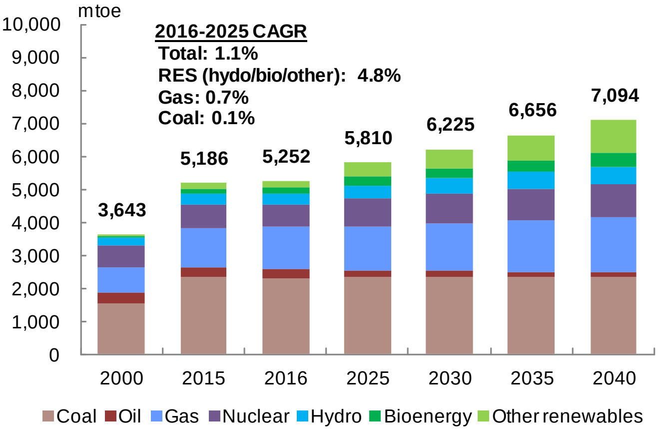
TWh	2000	2016	CAGR '00-'16	2020	2025	2030	2035	2040	CAGR '16-'40
North America	**4,261**	**4,694**	**0.6%**	**4,866**	**5,017**	**5,208**	**5,417**	**5,651**	**0.8%**
United States	3,590	3,886	0.5%	4,027	4,131	4,266	4,409	4,570	0.7%
C & S America	**660**	**163**	**3.0%**	**1,164**	**1,308**	**1,479**	**1,664**	**1,858**	**2.4%**
Brazil	327	512	2.8%	559	617	690	769	852	2.1%
Europe	**3,114**	**3,555**	**0.8%**	**3,698**	**3,790**	**3,902**	**441**	**4,194**	**0.7%**
European Union	2,605	2,857	0.6%	2,947	2,980	3,026	3,096	3,178	0.4%
Africa	**385**	**655**	**3.4%**	**736**	**885**	**199**	**1,371**	**1,707**	**4.1%**
South Africa	190	207	0.5%	221	240	267	299	335	2.0%
Middle East	**359**	**910**	**6.0%**	**974**	**1,118**	**1,337**	**1,576**	**1,798**	**2.9%**
Eurasia	**809**	**1,065**	**1.7%**	**1,120**	**1,193**	**1,273**	**1,354**	**1,432**	**1.2%**
Russia	677	865	1.5%	896	934	985	1,030	1,069	0.9%
Asia Pacific	**3,611**	**9,433**	**6.2%**	**10,738**	**12,551**	**14,434**	**16,199**	**17,827**	**2.7%**
China	1,174	5,320	9.9%	6,087	7,018	7,905	8,645	9,230	2.3%
India	376	1,102	6.9%	1,383	1,880	2,449	333	3,606	5.1%
Japan	1,005	969	(0.2%)	962	967	978	991	1,005	0.2%
Southeast Asia	322	837	6.2%	993	1,214	1,461	1,718	1,997	3.7%
World	**13,199**	**21,375**	**3.1%**	**23,295**	**25,861**	**28,733**	**31,622**	**34,467**	**2.0%**

Source: IEA World Energy Outlook 2017.

Growth in RES generation is expected to be driven by the energy policies of various economies as countries focus on reducing emissions. At the same time, growth in deployment of RES is expected to enjoy additional momentum in the form of efficiency improvements and reduced cost. With the recent exception of the U.S. repeal of its Clean Power Plan, most advanced and developing economies are committed to new energy policies that either promote renewable-based, gas-fired, or nuclear electricity generation, or phase out coal-fired generation, or any combination thereof.

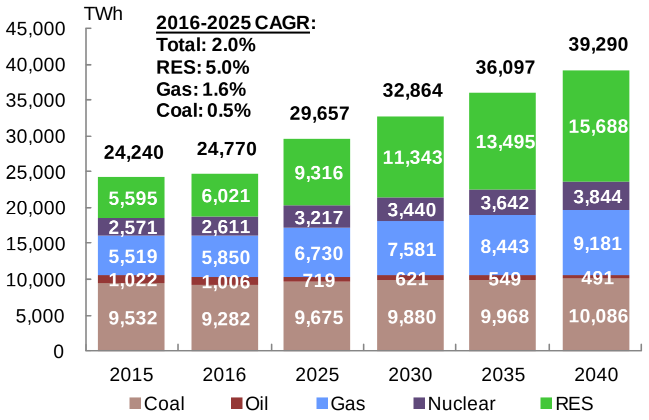
The IEA forecasts electricity generation to increase by 58.6% from 2016 to 2040 in its New Policies Scenario ("NPS"), led by growth in RES and gas-fired generation as coal-fired generation remains nearly flat. Led by preferential energy policies promoting capacity expansion to shift away from coal and towards RES, RES generation is forecast to rise by 260.6% by 2040 from 2016 levels, with solar PV expected to lead ahead of wind power for the majority in RES capacity expansion due to recent policy changes in China and falling capital costs. Gas-fired and nuclear generation is forecast to rise 69.7% and 47.2% over the same period, respectively. Coal-fired generation is expected to rise only 8.7% by 2040 as global retirements of coal-fired capacity offset new capacity additions predominantly based in China and India.

Figure 1: Energy Demand for Power Generation, NPS



Source: IEA World Energy Outlook 2017.

Figure 2: Electricity Generation by Type, NPS



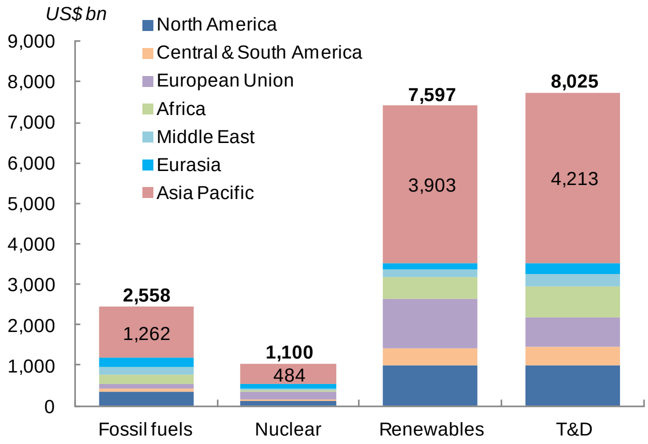
Source: IEA World Energy Outlook 2017.

Electricity Investment

According to the IEA's World Energy Investment 2018 report, global investment in the power sector fell by 6% YoY to US$ 750 bn in 2017, as a 10% YoY decrease in power generation investment outweighed a 1% YoY increase in transmission and distribution ("T&D") networks. T&D and RES investment were the largest area of spending at US$ 303 bn and US$ 298 bn, up 1% YoY and down 7% YoY, respectively. Fossil fuel power generation investment and nuclear power investment reached US$ 132 bn and US$ 17 bn, down YoY 9% and 44%, respectively. Coal-fired investment continued to fall, led by decline in China and India. Solar PV investment increased despite decline in Solar PV unit costs. Other forms of RES investment largely decreased. Led by economic and environmental factors, investment in coal-fired generation is expected to continue its decline, whereas investment in RES power generation (including nuclear power) and T&D is expected to remain high.

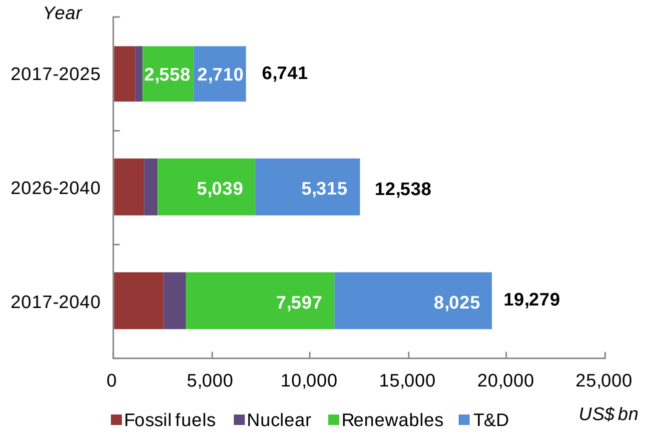
RES and T&D future investments are expected to account for 39.4% and 41.6% of the total power sector investment to 2040, equivalent to US$ 7,597 bn and US$ 8,025 bn over a 23-year period, respectively. The IEA's average annualized power sector investment projections for 2017-2040 represent US$ 111 bn, US$ 48 bn, US$ 330 bn, US$ 349 bn p.a. for fossil fuels, nuclear, RES, and T&D, respectively. Regionally, China and India will account for the largest portions of total power sector investment, at 23.2% and 12.1% of total projected investment, equivalent to US$ 4,467 bn and US$ 2,336 bn, respectively. RES investments have been rising even as unit costs for solar PV and continue to fall, which we expect to accelerate capacity buildup for RES as long as grid integration is sufficient; hence, significant portions of the even larger estimates for T&D investment will be targeted to improve the current curtailment and overall utilization issues of RES power generation. Fossil fuel investment will be primarily focused on increasing gas-fired power generation with certain emerging countries and countries with a lack of stable and cheap natural gas sources, such as India, which is expected to build up coal-fired capacity over the forecasted period.

Figure-3: Cumulative Investments in the Power Sector by Region and Type, 2017-2040



Source: IEA World Energy Outlook 2017.

Figure-4: Cumulative Investments in the Global Power Sector by Type



Source: IEA World Energy Outlook 2017.

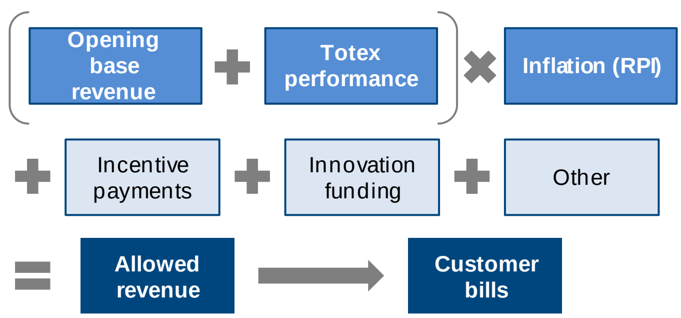
Policy will continue to determine scale and direction of electricity supply investment, and will be especially important in influencing RES investment. In 2016, 94% of global power generation investment was made by companies operating under fully regulated revenue schemes. In China, where 21% or approximately US$ 145 bn of total investment in the global electricity sector in 2016 was generated, public policy is the driving force behind that investment. In July 2017, China's National Energy Administration ("NEA") issued the "13th Five-Year Plan Implementation Guidance" for RES, which aims to add cumulative wind and solar capacity of 110.4GW and 86.5GW from 2017-2020, respectively. This would mean a 65.4% increase from China's total wind power generation capacity of 168.7GW in 2016 and a 111.8% increase in solar PV capacity from 77.4GW in 2016; which also represents 4-year CAGRs for China's wind and solar PV capacity of 13.4% and 20.6%, respectively. In Hong Kong, the government entered into long-term contracts with the two utilities companies that allow for a fixed return on average net fixed assets, which impacts the level of investment to be expected. In Australia, the electricity market is regulated by the Australian Energy Regulator ("AER') according to the "National Electricity Rules", and the COAG Energy Council issues the 15-year "National Energy Productivity Plan", which provides guidance for new energy investment.

UK Electricity and Gas Distribution Markets

The UK's 14 electricity distribution networks ("DNO") distributed 284.9 TWh of electricity in 2017, down 0.7% YoY. The IMF estimates the UK's GDP to grow at a 5-year CAGR of 1.6% from 2018-2023. The UK's population is expected to grow at an average rate of 0.5% per year during 2017-2023 from 65.7 mn to 68.0 mn. UK Power Networks ("UKPN"), collectively owned by PAH and CKI Holdings (01038 HK), through its 3 DNOs distributed 80.0 TWh, up 0.6% YoY and represents 28.1% of the total. The UK's 8 gas distribution network companies ("GDN') are responsible for maintaining and extending the gas distribution network and for providing a 24-hour gas emergency service. PAH together with CKI Holdings own Northern Gas Networks ("NGN") and Wales & West Utilities ("WWU"). As of March 31st 2017, both GDNs met their annual output requirements under RIIO-GD1 in terms of reliability, environment, connections, customer satisfaction, social obligations, and safety.

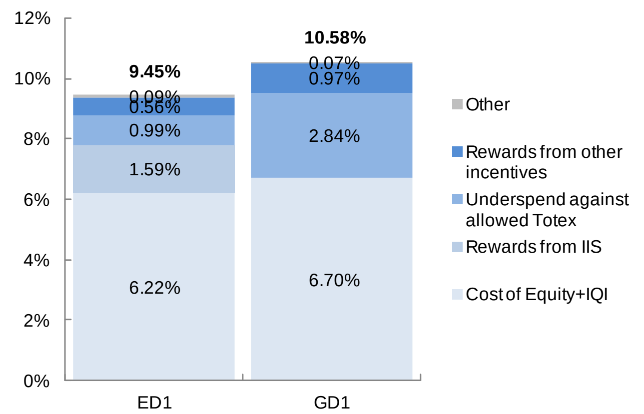
The UK market is regulated by Great Britain's Office of Gas and Electricity Markets ("Ofgem"), with price controls set using the RIIO (Revenue=Incentives+Innovation+Output) model, a performance-based framework for setting prices. The RIIO-ED1 regulatory framework for electricity DNOs runs for an 8-year period from April 1st, 2015 to March 31st, 2023. The RIIO-GD1 regulatory framework for GDNs runs for an 8-year period from April 1st, 2013 to March 31st, 2021. Returns for DNOs and GDNs are expressed in terms of return on regulatory equity ("RoRE"), where regulatory equity is measured using a number of regulatory assumptions. Figure-5 shows a breakdown of how allowed revenue for DNOs and GDNs are calculated, with inflation a significant independent factor of the formula. Figure-6 shows the estimated RoRE of the entire DNO and GDN sectors based on the most recent forecasts by Ofgem, where 9.45% and 10.58% represent the regulatory asset value ("RAV") weighted average RoRE of the sectors for the 8-year regulatory period, respectively. Under the RIIO framework, companies that most efficiently spend their allowed capital and operating expenditures in addition to successfully qualifying for various incentive schemes tend to realize higher returns than their peers.

Figure-5: Simplified Process for Calculating Allowed Revenue Under RIIO



Source: Ofgem.

Figure-6: Simplified RoRE to Show Key Drivers of Industry Performance

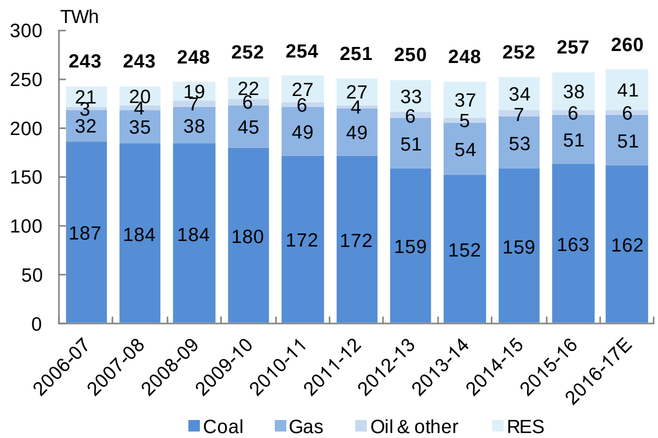


Source: Ofgem.
Note: IQI=Information Quality Incentive; IIS=Interruption Incentive Scheme.

Australia Electricity and Gas Markets

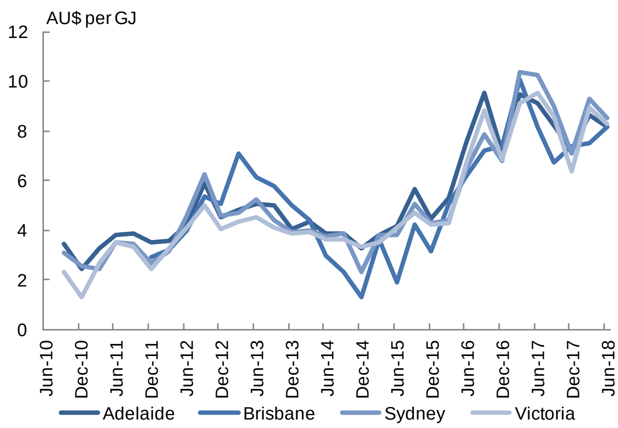
The IMF estimates Australia's GDP to grow at a 5-year CAGR of 2.8% from 2018-2023. Australia's population is expected to grow at an average 1.6% per year during 2016-2023 from 24.4 million to 27.2 million. While annual electricity generation over the past decade was up only 7.0%, proportion of RES to total generation is estimated to have increased from 8.6% during 2006-2007 to 15.8% in 2016-2017, up from 21 TWh to 41 TWh per year. Australia's gas prices have steadily increased over the past few years, with average quarterly prices for March 30th, 2018 at AU$ 8.61/GJ, up from AU$ 5.24/GJ at March 30th, 2012, which represents a 5-year CAGR of 10.4%.

Figure-7: Australia Electricity Generated by Fuel Type, 2006-2017



Source: Australian Energy Statistics.
Note: fiscal year from July 1st – June 30th.

Figure-8: Australia Quarterly Gas Prices, Sep. 2010 to Mar. 2018



Source: AER, AEMO.

Energy policy uncertainty at the federal level is likely to persist in the short term as the National Energy Guarantee ("NEG") remains unratified. The meeting in April was met with opposition from states who felt the 26% reduction in emissions from 2005 levels by 2030 was too low of a target. Queensland's own target is 30% reduction in emissions from 2005 levels by 2030, with 50% of energy from RES by 2030.

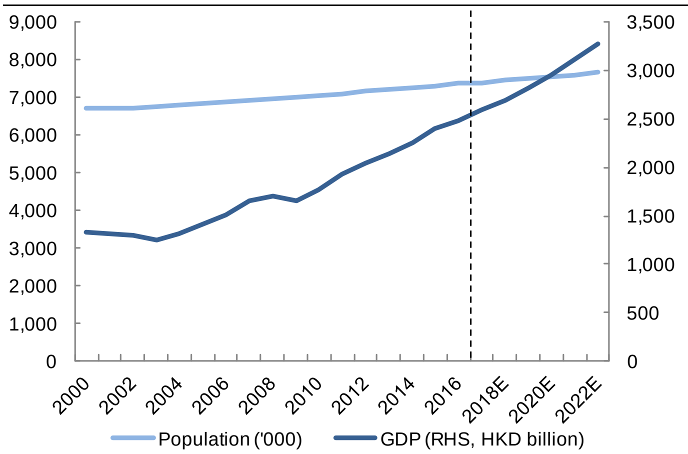
Distribution network service providers ("DNSP") that PAH has interest in have 5-year regulatory schemes with revenue caps determined by the Australian Energy Regulator ("AER") expiring between 2020-2022. The AER's final decision takes into consideration estimated operating expenses, capital expenses, and cost of capital investments for the regulated operators, as well as controlling tariff impacts for customers. With the exception of PAH's newly acquired DUET Group's EDL business, the vast majority of PAH's Australia based assets are fully regulated network distributors.

Hong Kong Electricity Market

The IMF estimates Hong Kong's GDP to grow at a 5-year CAGR of 3.1% from 2018-2023; electricity consumption is likely to remain flat. Population growth is estimated by the Census and Statistics Department of Hong Kong ("C&SD") to remain near historical rates, growing at a CAGR of 0.6% from 2017-2023, similar to the historical CAGR of 0.6% for 2000-2017. Despite some population growth, electricity consumption has remained nearly flat, with a CAGR of 0.1% during 2005-2017. This is primarily due to a lack of energy intensive industries and the majority of demand from commercial use, where 64.0% of total electricity in 2017 was consumed. Over the forecast period 2017-2023, we expect electricity consumption to remain flat due to efficiency gains; however, a transition towards more gas-fired generation sources is underway in Hong Kong, which adds a degree of uncertainty as the possibility of rising electricity prices in Hong Kong could increase.

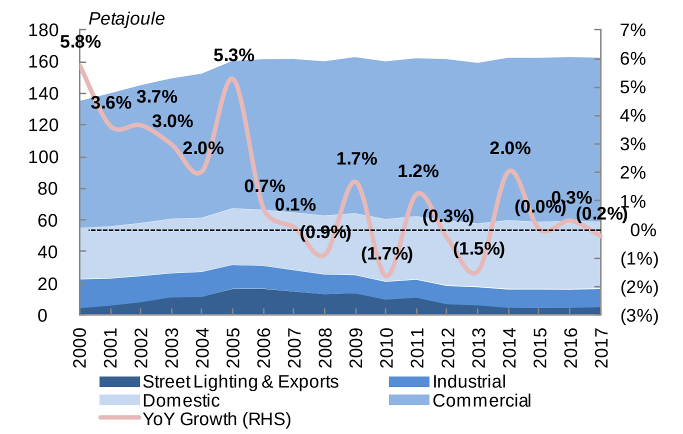
Hong Kong's "Climate Action Plan 2030+", published by the Environment Bureau, aims to achieve a reduction in energy intensity of 65%-70% from 2005 levels by 2030. In accordance with the Paris Agreement, the Environment Bureau plans to reduce coal use in the fuel mix for electricity generation from 48% in 2015 to 25% by 2020. Hong Kong has limited opportunity for RES generation so natural gas will become the dominant component of Hong Kong's power generation mix over the next 10 years as coal is phased out. The C&SD estimates electricity generated using natural gas to rise from 15.7 TWh in 2017 to 30.0 TWh in 2026, representing a CAGR of 7.5%.

Figure-9: Hong Kong GDP and Population, 2000-2022E



Source: IMF, C&SD HK.

Figure-10: Hong Kong Annual Electricity Consumption and YoY Growth, 2000-2016

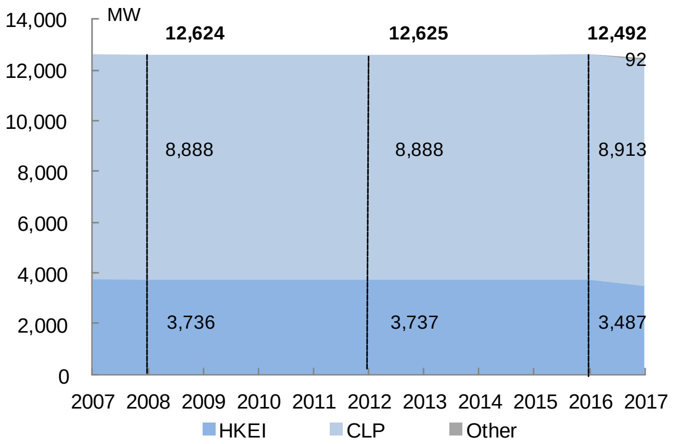


Source: C&SD HK.

In 2017, Hong Kong's maximum installed power generation capacity was 12,492 MW. Hong Kong's power generation capacity has remained practically unchanged over the past decade. Hong Kong's primary power stations, CLP's Black Point, CLP's Castle Peak, and Hong Kong Electric's Lamma Island Power Station were all originally commissioned in the late 1980s and 1990s, which, apart from minor modifications, have since remained largely unchanged.

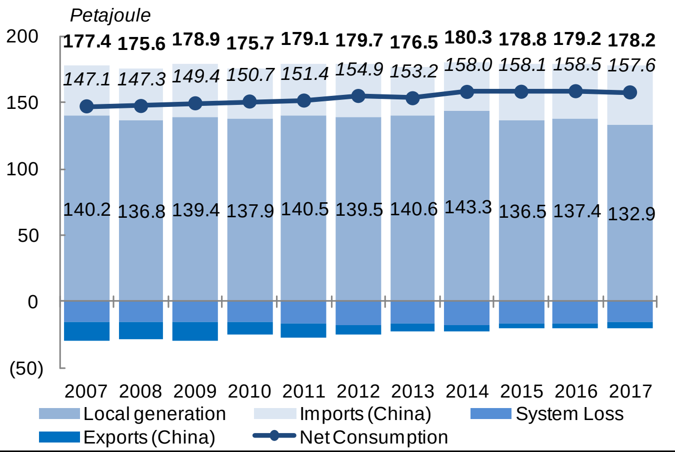
Hong Kong is likely to import approximately 25% of its electricity from Nuclear power plants in China through the medium term. Hong Kong's total electricity generation (before system loss and exports) was 178.2 PJ in 2017, nearly flat over a 10-year period. Consistent with the "Climate Action Plan 2030+", 2017 imports of nuclear electricity from China were 43.5 PJ, up 8.2% YoY, and represents 25.4% of total electricity generation. From 2007-2017, nuclear electricity imported from China averaged 22.2% of total electricity generation. The Environment Bureau expects Chinese nuclear electricity imports to account for approximately 25% of total electricity generated through the medium term, citing that its import agreement expires in 2034.

Figure-11: Maximum Installed Generating Capacity, 2007-2017



Source: C&SD HK, the Companies.

Figure-12: Hong Kong Electricity Production Breakdown, 2007-2017

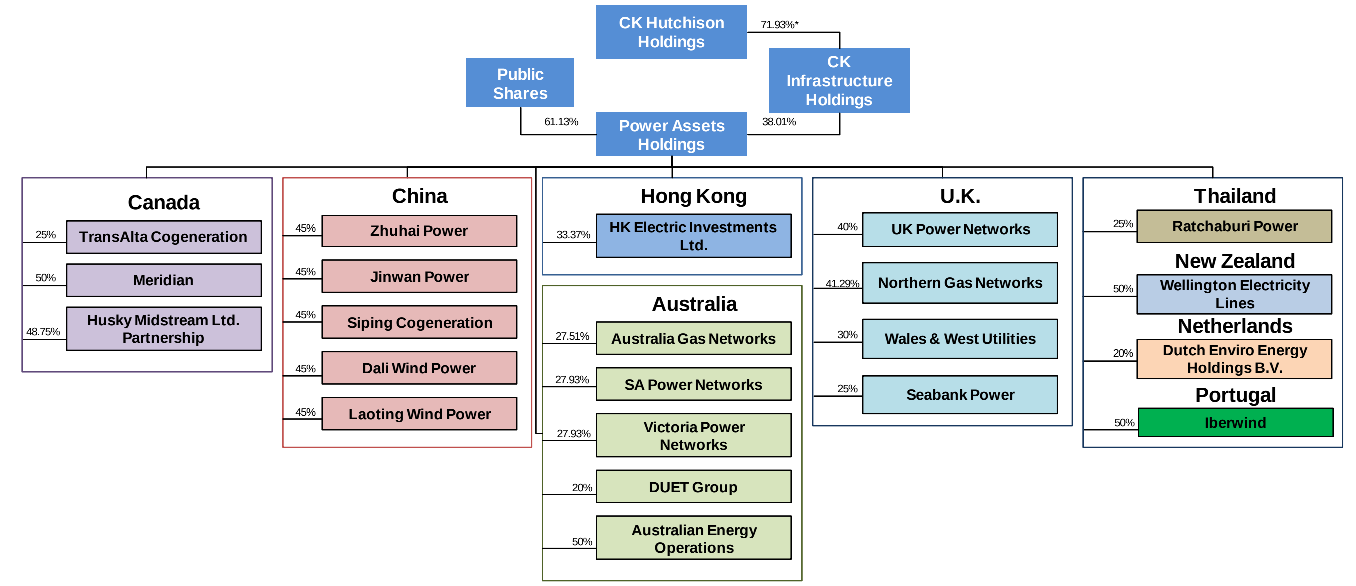


Source: C&SD HK.

COMPANY OVERVIEW

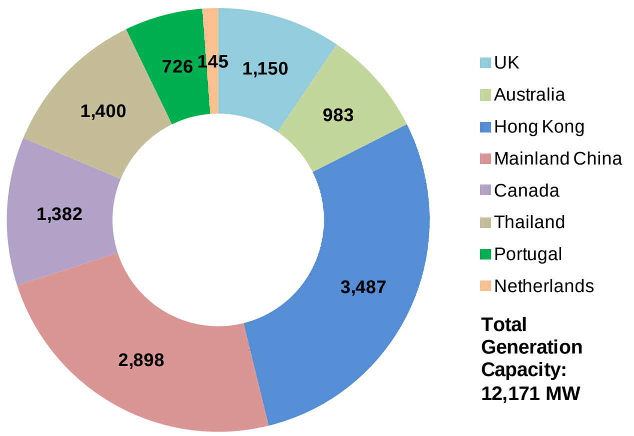
PAH is a global investor primarily in utilities-related businesses. PAH owns assets in 8 countries with 45.6% of its profits in 2017 (2016: 69.2%) originating from the UK due to significant holdings in electricity and gas utilities. CK Infrastructure Holdings (01038 HK) is PAH's largest shareholder through its 38.87% interest in the Company; additionally, CK Hutchison Holdings (00001 HK) has a 75.67% interest in CK Infrastructure Holdings. As a part of the CK group corporate structure, PAH achieves synergy in its acquisitions through focusing on primarily energy based assets. PAH's net profit in 2017 was HK$ 8,319 mn, up 29.6% YoY.

Figure-13: Power Assets Holdings Corporate Structure



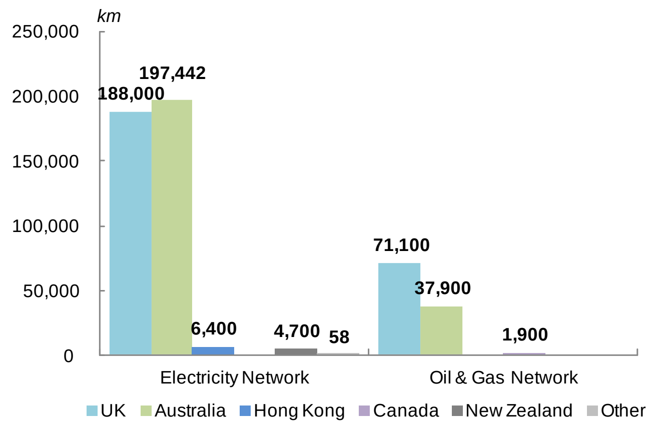
Source: the Company
**CKHH's profit sharing interest in CKI is 75.67%. 71.93% is CKHH's legal interest in CKI.*

Figure-14: PAH's Generation Capacity by Region (MW), 2017



Source: the Company.

Figure-15: PAH's Network Length, 2017



Source: the Company.

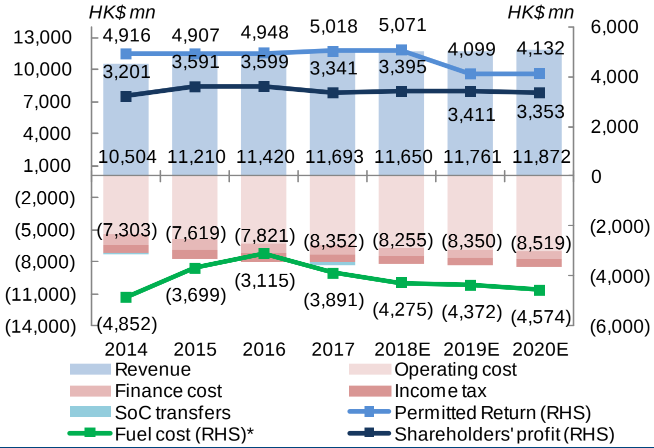
The UK

PAH's UK assets contributed HK$ 3,790 mn to its net profit in 2017, down 14.7% YoY. The decline in profit was mostly due to a decline in exchange rates. UKPN constitutes the London Power Networks, South Eastern Power Networks, and Eastern Power Networks. UKPN distributed 28.1% of total distributed units by network operators regulated by Ofgem during FY2017 (year ended March 31st, 2017) making them the largest UK regulated DNO. NGN and WWU are the two smallest GDNs out of four in the UK by RAV as at March 31st, 2017. PAH also owns 25% of Seabank Power Plant, a combined cycle gas-fired 1,150 MW power plant.

Hong Kong

HKEI contributed HK$ 1,115 mn, down 7.2% YoY, and represented 13.4% of PAH's net profit in 2017. The Company's reduced interest in HKEI freed up resources to pursue overseas acquisitions. The new SoC agreement, to be implemented beginning January 2019, will reduce the permitted return from 9.99% to 8.0% of average net fixed assets for HKEI, which is equivalent to a reduction in permitted returns of approximately HK$ 972 mn in 2019E by our estimates. HKEI announced a 1.9% increase in net tariffs to HK$ 112.5/kWh for 2018 after cutting them by 17.2% YoY in 2017; dramatic increases to tariffs over the next few years remain unlikely. Expenses on the installation of new 350MW L10 and L11 gas turbine combined cycle units ("GTCC") are to comply with Hong Kong's fuel mix target by 2020, in addition to rising fuel costs limiting upside for HKEI's performance.

Figure-16: HKEI Financial Highlights, 2014-2020E



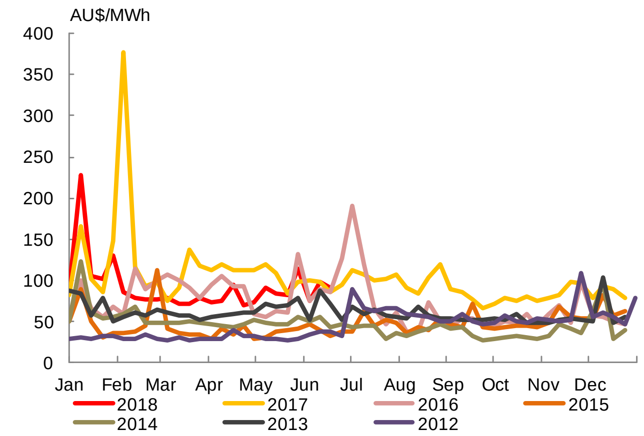
Source: the Company, Guotai Junan International.
**Note: 2017-2020E are estimated figures*

Australia

In 2017, net profit contribution from PAH's Australian assets were HK$ 1,388 mn, up 42.7% YoY. The large increase in profit is due to the acquisition of DUET Group, completed on May 2017 together with CKI (01038 HK) and CKAH (01113 HK). PAH, CKI, and CKAH collectively own 20%, 40%, and 40% of DUET Group, respectively. Assets acquired through the DUET acquisition are consistent with PAH's investment strategy and area of expertise in stable regulated businesses such as DNSPs.

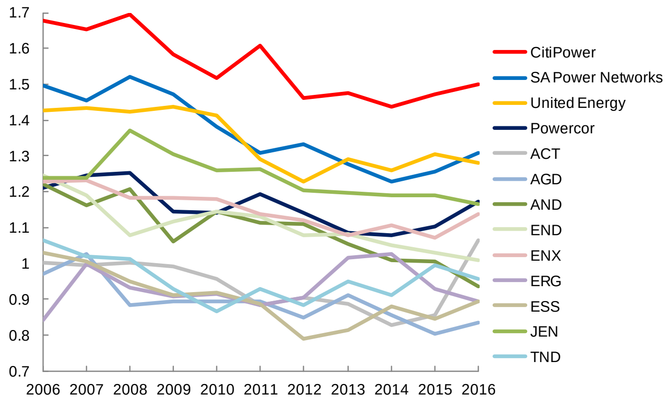
PAH's DNSPs are consistently the best performing in Australia measured, in terms of multilateral total factor productivity ("MTFP"). MTFP is an econometric measurement of productivity of DNSPs based on a variety of inputs and outputs including throughput, customers, maximum demand, sub-transmission lines & cables, circuit length, operating expenses, and cost of capital. In 2016, CitiPower, SA Power Networks, United Energy, and Powercor were the top 4 DNSPs by MTFP. Historically, with the exception of Powercor, PAH's DNSPs have been the top 3 DNSPs by MTFP. An overall reversion to growth has occurred in the MTFP indexes broadly following the implementation of the 5-year distribution schemes in 2016. This is likely to result in earnings growth underpinned by efficiency improvements; however, there remains uncertainty regarding the electricity and gas markets as a whole which could negatively impact DNSP performance.

Figure-17: Australia Volume Weighted Wholesale Electricity Prices, 2012-2017



Source: AER

Figure-18: Australia DNSP MTFP Indexes, 2006-2016



Source: AER, Economic Insights

China

Investment opportunities in RES generation and grid expansion may present themselves over the next few years as China's energy reform continues moving forward. PAH's net profit from its China assets in 2017 were HK$ 271 mn, down 12.0% YoY. PAH has invested in 2,800 MW of thermal power generation as well as two wind farms with 97.5 MW of combined capacity in China. The Company's coal-fired power plants in recent years have faced difficulties due to China's gradual energy reform policies as the industry struggles with oversupply and a transition towards RES. Since grid integration as well as RES capacity are expected to be the focus of new investment, synergic opportunities that PAH's investment profile may present themselves in the near future.

Canada

The Company's Canadian assets typically operate under long-term sales agreements and should contribute stable earnings to the Company. The Company's Canadian assets include power generation capacity of 1,382MW with Meridian and Transalta Cogeneration, as well as 48.75% interest in the midstream assets of Husky Energy. The Husky asset portfolio includes a 1,900 km pipeline in the Lloydminster region, 4.1 mb of storage capacity in Hardisty and Lloydminster regions, and other ancillary assets. The Husky pipeline output and power generation are guaranteed by long-term off-take contracts and PPAs.

Other Segments

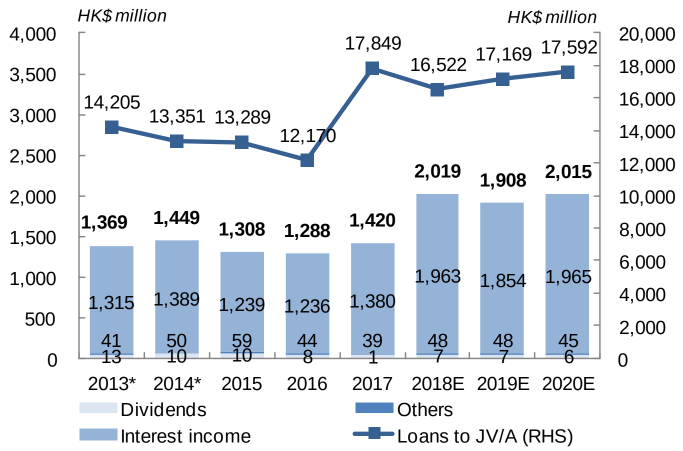
The Company is also interested in a number of energy related assets in the Netherlands, Portugal, Thailand, and New Zealand. PAH's interest in the Netherlands and Portugal are RES focused, with a 20% stake in the 145 MW energy-from-waste business of Dutch Enviro Energy Holdings and a 50% stake in Iberwind's 726 MW wind power generation. PAH's 25% interest in the 1,400 MW gas-fired CCGT under Ratchaburi Power in Thailand and the 50% interest in Wellington Electricity Lines which distributes power to 167,000 customers over 4,700 km of network round out the remainder of PAH's asset portfolio.

FINANCIAL ANALYSIS

Revenue

We forecast revenue for PAH to be HK$ 2,019 mn, HK$ 1,908 mn, and HK$ 2,015 mn for 2018E-2020E. The Company's revenue represents interest income from loans to JVs & associates as well as dividends from other financial assets and consulting fees. Since the Company's spin-off of its HK Electric business in 2014 and subsequent sale of 16.53% of its interest in HK Electric to Qatar Investment Authority in 2015, PAH's interest in HK Electric stands at 33.37%. The Company's revenue for 2017 was HK$ 1,420 mn, up 10.2% YoY. The increase in revenue was due to higher interest income from PAH's loans to JVs and associates, which amounted HK$ 1,380 mn, up 11.7% YoY.

Figure-19: PAH's Revenue Breakdown and Loans to JV/A, 2013-2020E



Source: the Company, Guotai Junan International.
*note: 2013-2014 revenues are adjusted to exclude HK Electric related income.

Results of JVs and Associates

We forecast share of profits from JVs for 2018E-2020E to be HK$ 4,683 mn, HK$ 4,686 mn, and HK$ 4,706 mn, respectively, representing a 3-year CAGR of 2.1%. We expect stable earnings from Australian Gas Networks and some earnings growth from Husky Midstream in Canada. The Company's profits from its UK T&D assets are expected to remain relatively stable under the Ofgem RIIO Regulation scheme as we expect RPI to remain near 3.0% over our forecast period.

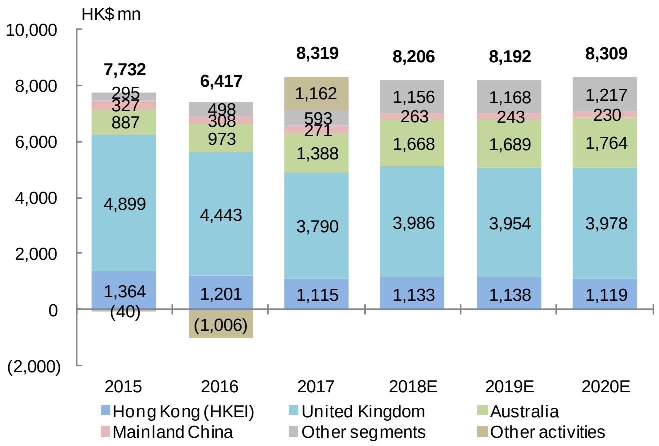
We forecast share of profits from associates for 2018E-2020E to be HK$ 1,811 mn, HK$ 1,833 mn, and HK$ 1,829 mn, respectively, representing a 3-year CAGR of 1.8%. Over the forecast period, we expect growth from Australia due to higher electricity prices to offset decline in profit contribution from HKEI along with higher fuel and operating costs as well as lower permitted return.

Our forecast for profits from JV and associates during 2018E-2020E are HK$ 6,494 mn/HK$6,519 mn/HK$ 6,534 mn respectively. Our forecast represents YoY growth of 5.5%/0.4%/0.2% over the same period, respectively, and also represents a 3-year CAGR of 2.0%.

Shareholders' Profit

We estimate shareholders' profit in 2018E-2020E to be HK$ 8,206 mn, HK$ 8,291 mn, and HK$ 8,412 mn, respectively, representing a 3-year CAGR of (0.0%). Our forecast represents YoY growth of (1.4%)/(0.2%)/1.4%, respectively. Shareholders' profit in 2017 was HK$ 8,319 mn, up 29.6% YoY, which was primarily due to a one-off gain of HK$ 922 mn from disposal of properties. In addition, an exchange gain of HK$ 209 mn was booked in 2017, compared to a loss of HK$ 787 mn in 2016. Looking forward, earnings in the UK, Australia, Europe, and Canada are expected to offset weaknesses in Hong Kong and China, keeping shareholders' profit nearly flat over our forecast period.

Figure-20: PAH's Shareholders' Profit by Region, 2015-2020E



Source: the Company, Guotai Junan International.

Table-2: PAH's Financial Highlights

	2016	2017	2018E	2019E	2020E
Income Statement (HK$ mn):					
Revenue	1,288	1,420	2,019	1,908	2,015
Operating income/(costs) - net	(1,036)	1,137	39	79	118
Operating profit	252	2,557	2,057	1,987	2,133
Finance costs	(248)	(295)	(251)	(215)	(255)
Share of profits from JV	4,705	4,421	4,683	4,686	4,706
Share of profits from Associates	1,696	1,733	1,811	1,833	1,829
Profit before tax	6,405	8,416	8,300	8,291	8,412
Income tax	12	(97)	(94)	(99)	(104)
Shareholders' profit	6,417	8,319	8,206	8,192	8,309
Profitability & liquidity:					
ROE (%)	5.3	7.8	9.1	9.5	9.4
ROA (%)	4.8	7.0	8.2	8.6	8.5
Current ratio (x)	23.4	3.7	3.1	3.0	3.2
Interest coverage (x)	25.9	28.2	32.7	38.1	32.6
Net gearing (%)	net cash	net cash	net cash	net cash	net cash
Valuation:					
DPS	7.72	16.30	2.84	2.90	2.94
Payout ratio (%)	256.8	418.2	73.9	75.5	75.6
PER	18.6	14.4	14.6	14.6	14.4
PBR	1.0	1.3	1.4	1.4	1.3

Source: the Company, Guotai Junan International.

1H2018 Review

The Company's 1H2018 shareholders' profit increased 2.4% YoY to HK$ 4,120 million. Interim dividend was held unchanged YoY at HK$ 0.77/share, representing a payout ratio of 39.9%. The increase in earnings was primarily due to lower interest expenses in the UK, profit contribution from newly acquired DUET Group in Australia, and higher electricity sales in mainland China. Decreased interest income from the Company's bank deposits as well as higher operating and financing costs of HKEI in Hong Kong affected earnings negatively.

Table-3: PAH's 1H2018 Results

HK$ million	1H2018	1H2017	Δ YoY
UK	2,205	2,075	*6.3%*
Hong Kong	328	335	*(2.1%)*
Australia	830	623	*33.2%*
Mainland China	234	163	*43.6%*
Others	523	828	*(36.8%)*
Shareholders' profit	**4,120**	**4,024**	***2.4%***
EPS (HK$/share)	**1.93**	**1.89**	***2.4%***
DPS (HK$/share)*	**0.77**	**0.77**	***0.0%***

*Source: the Company, Guotai Junan International. *Note: excludes special dividends.*

On June 13th, 2018, the Company in concert with the CK Consortium (00001 HK, 01113 HK, 01038 HK, and 00006 HK) announced its proposal to acquire 100% of APA Group in Australia. APA Group is a regulated natural gas infrastructure business in Australia and owns the majority of gas transmission pipelines in Australia. It also has significant interests in distribution networks as well as gas storage facilities, gas-fired power stations, and wind farms. The CK Consortium's offer of AU$ 11.00 per share represents a 33.0% premium on APA Group's closing price on June 12th, 2018 of AU$ 8.27 per share. As of June 29th, 2018, APA Group announced that it has allowed the CK Consortium to undertake due diligence, but has not responded to the offer. If successful, the acquisition would further expand upon the CK Consortium's already substantial ownership of Australia's energy T&D assets.

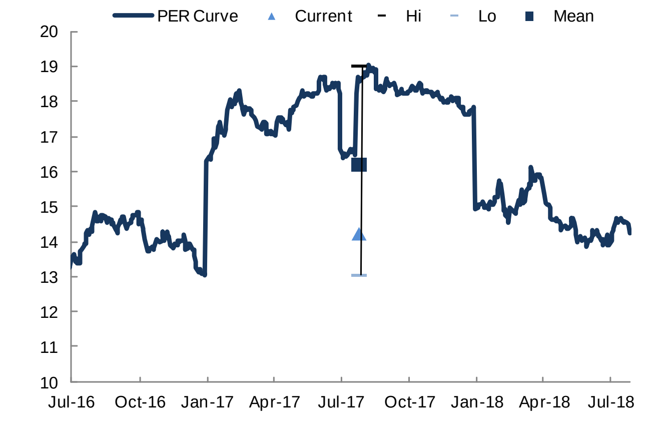
MAJOR RISKS

- **Exchange rate risk** – approximately half of PAH's earnings come from the UK, fluctuations in sterling exchange rates could result in large foreign exchange losses for the Company.
- **Inflation risk in UK** – regulated tariffs are based on RPI in the UK, weakness in the RPI could reduce PAH's UK assets' earnings.
- **Future acquisition difficulties** – while PAH has the most expertise when it comes to management of energy based assets, future acquisitions by the CK Group could favor CKI and CKAH over PAH. Specifically, uncertainty exists surrounding the Company's prospects on future acquisitions in Australia.
- **HKEI weakness** - the outlook for HKEI is skewed bearish due to the new SoC agreement and higher expected operating and fuel costs.

VALUATION

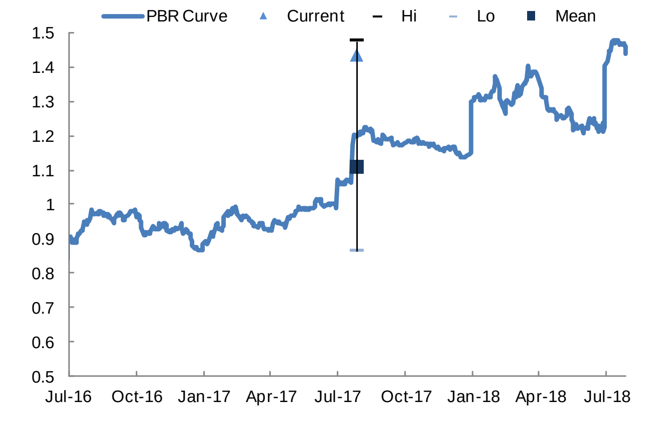
We initiate our coverage with a TP of HK$60.00 and investment rating "Accumulate". The TP represents 15.6x/15.6x/15.4x 2018E-2020E PER and 1.5x/1.5x/1.4x 2018E-2020E PBR. The 2-year historical average PER and PBR of PAH are 16.2x and 1.1x, respectively. The weighted average PER of PAH's Hong Kong-listed peers for 2018E-2020E are 15.5x, 16.8x, and 16.2x, respectively. We think the fair PER for PAH lies between 15.0x-16.0x near the peer average, mostly due to its healthy cash balance and stable dividends. The 5-year historical average of PAH's adjusted (excl. special dividends and non-recurring gains) payout ratio is 71.3%. We believe PAH's payout ratio will remain at a relatively high level, and we expect the combination of stable earnings and dividend growth to support its share price.

Figure-21: PAH's 2-Year PER Curve



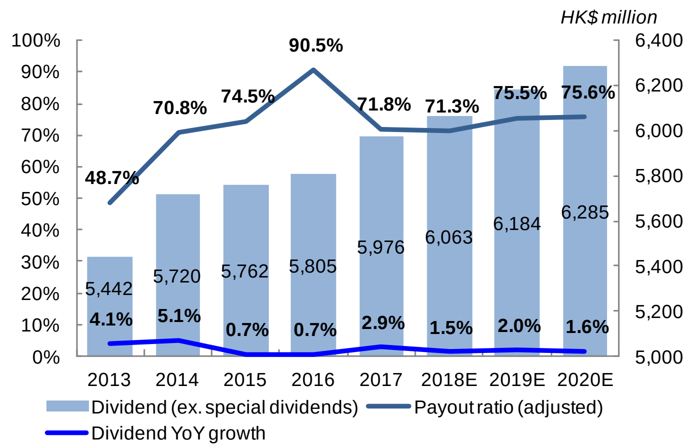
Source: Bloomberg.

Figure-22: PAH's 2-Year PBR Curve



Source: Bloomberg.

Figure-23: PAH's Dividend, YoY Growth, and Payout Ratio, 2013-2020E



Source: the Company, Bloomberg.

Our DCF Valuation suggests a valuation of HK$ 146,562 mn, equivalent to HK$ 68.7 per share. Our DCF valuation represents 17.9x / 17.9x / 17.6x 2018E-2020E PER and 1.7x / 1.7x / 1.6x 2018E-2020E PBR. Our TP represents a 12.6% discount to our DCF valuation.

Table-4: DCF Valuation

WACC Calculation		DCF Calculation	g=1.0%
Risk-free rate	2.3%	PV of FCF and terminal value (2018E-2033E)	142,184
Market risk premium	11.4%	Net (Debt)/Cash	4,378
Beta	0.550	**NAV (HK$ mn)**	**146,562**
Cost of equity	8.5%	**NAV per share**	**68.7**
Interest rate	4.3%	TP (HK$)	60.0
Effective Tax rate	5.2%	TP % discount to NAV	12.6%
Cost of debt	4.1%		
Equity ratio	96.4%		
Debt ratio	3.6%		
WACC	8.4%		
Terminal growth rate	1.0%		

Sensitivity Analysis for NAV (HK$ '000)		Perpetual growth rate (%)				
		0.0%	0.5%	1.0%	1.5%	2.0%
WACC (%)	6.9%	179,605	188,500	198,905	211,240	226,098
	7.4%	162,877	170,048	178,342	188,043	199,545
	7.9%	148,600	154,441	161,129	168,865	177,913
	8.4%	136,312	141,112	146,562	152,802	160,019
	8.9%	125,657	129,633	134,113	139,199	145,023
	9.4%	116,356	119,673	123,385	127,567	132,315
	9.9%	108,188	110,972	114,070	117,536	121,442

Source: Guotai Junan International.

Table-5: Peers Comparison

Company	Stock Code	Currency	Last price	PE (fiscal year) 17A	18F	19F	20F	PB (fiscal year) 17A	18F	19F	20F	ROE(%) 18F	D/Y(%) 18F	EV/EBITDA 18F
HK-Listed Peers														
Power Assets Holdings Ltd	6 HK	HKD	56.10	14.4	15.2	15.2	14.8	1.3	1.4	1.4	1.4	8.7	5.0	92.7
Ck Infrastructure Holdings L	1038 HK	HKD	58.70	14.4	13.1	12.4	12.1	1.4	1.3	1.3	1.2	10.2	4.3	66.5
Clp Holdings Ltd	2 HK	HKD	88.15	15.6	15.7	17.4	16.4	2.0	1.9	1.8	1.7	12.7	3.4	10.7
Hk Electric Investments -Ss	2638 HK	HKD	7.98	21.1	20.8	27.4	27.0	1.4	1.4	1.4	1.4	6.8	5.0	13.8
Simple Average				16.4	16.2	18.1	17.6	1.5	1.5	1.5	1.4	9.6	4.4	45.9
Weighted Average				15.7	15.5	16.8	16.2	1.6	1.6	1.5	1.5	10.5	4.2	43.6
HK-Listed Large Cap Gas Distributors														
Kunlun Energy Co Ltd	135 HK	HKD	6.75	9.9	10.1	8.7	8.0	1.1	1.1	1.0	0.9	11.8	3.5	5.5
Beijing Enterprises Hldgs	392 HK	HKD	38.50	7.1	6.7	6.1	5.5	0.7	0.7	0.6	0.6	10.3	2.8	12.0
China Gas Holdings Ltd	384 HK	HKD	32.45	38.2	26.4	20.9	17.6	7.8	5.7	4.8	4.1	24.9	1.2	19.0
Enn Energy Holdings Ltd	2688 HK	HKD	80.90	27.1	18.3	15.4	13.4	4.3	3.7	3.2	2.7	21.7	1.8	10.9
China Resources Gas Group Lt	1193 HK	HKD	36.45	21.7	18.9	16.9	14.7	3.7	3.3	2.8	2.5	17.8	1.8	10.2
Hong Kong & China Gas	3 HK	HKD	16.10	30.1	30.3	28.8	27.2	4.1	3.9	3.8	3.6	13.5	2.1	25.8
Towngas China Co Ltd	1083 HK	HKD	7.70	15.4	15.1	13.5	12.0	1.3	1.3	1.2	1.1	8.7	2.1	12.8
Simple Average				21.4	18.0	15.7	14.0	3.3	2.8	2.5	2.2	15.5	2.2	13.8
Weighted Average				27.0	22.9	20.3	18.3	4.4	3.7	3.3	3.0	17.1	2.0	17.7
International Peers														
Nextera Energy Inc	NEE US	USD	81.09	18.6	17.1	16.3	15.5	1.4	1.3	1.3	1.3	7.8	4.5	12.0
Duke Energy Corp	DUK US	USD	166.98	14.6	21.5	19.9	18.7	2.8	2.3	2.2	2.1	12.0	2.7	12.9
Southern Co/The	SO US	USD	47.97	57.1	16.5	15.9	15.3	2.0	1.8	1.7	1.7	11.4	5.0	12.2
American Electric Power	AEP US	USD	71.14	18.3	18.2	17.3	16.3	1.9	1.8	1.8	1.7	10.3	3.5	11.2
P G & E Corp	PCG US	USD	43.48	13.5	12.0	10.8	11.5	1.2	1.1	1.0	0.9	9.9	2.4	7.5
Edison International	EIX US	USD	66.51	38.4	16.3	14.7	13.7	1.9	1.7	1.6	1.6	10.8	3.6	9.0
Xcel Energy Inc	XEL US	USD	46.59	20.6	19.0	18.0	17.0	2.1	2.0	1.9	1.8	10.6	3.3	11.1
Ppl Corp	PPL US	USD	28.79	17.6	12.3	11.8	11.3	1.9	1.6	1.6	1.5	14.2	5.7	10.0
Allete Inc	ALE US	USD	77.16	22.8	22.6	21.0	19.1	1.9	1.8	1.8	1.7	8.0	2.9	12.8
Firstenergy Corp	FE US	USD	35.01	n.a.	14.7	13.9	13.7	4.0	2.4	2.2	2.0	23.8	4.1	9.4
Entergy Corp	ETR US	USD	80.55	35.2	12.6	13.6	14.3	1.8	1.7	1.6	1.6	12.6	4.5	10.4
Eversource Energy	ES US	USD	60.08	19.3	18.4	17.3	16.4	1.7	1.7	1.6	1.5	9.1	3.4	12.4
Ausnet Services	AST AU	AUD	1.62	22.6	20.0	24.1	23.1	1.6	1.6	1.4	1.5	8.0	5.5	11.3
Erm Power Ltd	EPW AU	AUD	1.52	n.a.	50.5	26.1	7.9	0.7	0.8	0.8	0.7	1.5	4.6	3.7
Simple Average				24.9	19.4	17.2	15.3	1.9	1.7	1.6	1.5	10.7	4.0	10.4
Weighted Average				24.9	17.5	16.5	15.8	2.1	1.8	1.7	1.7	11.3	3.8	11.4

Source: Bloomberg, Guotai Junan International.

Financial Statements and Ratios

Income Statement

Year end 31 Dec (HKD m)	2016A	2017A	2018F	2019F	2020F
Total Revenue	1,288	1,420	2,019	1,908	2,015
Direct costs	(6)	(1)	(5)	(3)	(4)
Other net income/(loss)	(221)	1,663	559	587	616
Other operating costs	(809)	(525)	(515)	(504)	(494)
Operating Profit	252	2,557	2,057	1,987	2,133
Finance costs	(248)	(295)	(251)	(215)	(255)
Share of profits of JV	4,705	4,421	4,683	4,686	4,706
Share of profits of Associates	1,696	1,733	1,811	1,833	1,829
Profit Before Tax	6,405	8,416	8,300	8,291	8,412
Income Tax	12	(97)	(94)	(99)	(104)
Profit After Tax	6,417	8,319	8,206	8,192	8,309
Non-controlling Interest	0	0	0	0	0
Shareholders' Profit / Loss	6,417	8,319	8,206	8,192	8,309
Basic EPS	3.010	3.898	3.845	3.839	3.893

Cash Flow Statement

Year end 31 Dec (HKD m)	2016A	2017A	2018F	2019F	2020F
PBT	6,405	8,416	8,300	8,291	8,412
Income from JV/A	(6,401)	(6,154)	(6,494)	(6,519)	(6,534)
Tax paid	42	(49)	(94)	(99)	(104)
Other operating cash flows	680	(1,100)	(480)	166	(78)
Cash from Operating Activities	726	1,113	1,232	1,839	1,696
(Increase)/decrease in bank deposits	(44,471)	45,648	850	0	0
Investments in JV/A	(5,215)	(4,133)	(1,391)	710	812
Dividends from JV/A	3,794	3,727	3,844	3,939	3,981
(Loans to)/repayments from JV/A - net	0	(3,323)	1,327	(647)	(423)
Other investing activities	44	974	(8)	(8)	(9)
Cash from Investing Activities	(45,848)	42,893	4,622	3,994	4,362
Change in gross debt	0	(2,028)	(2,790)	634	589
Dividends paid	(5,805)	(32,632)	(18,782)	(6,096)	(6,217)
Other financing activities	42	(1)	(28)	(35)	(37)
Cash from Financing Activities	(5,763)	(34,661)	(21,600)	(5,496)	(5,665)
Cash at Beg of Year	66,097	15,212	24,557	8,811	9,148
Net Changes in Cash	(50,885)	9,345	(15,746)	337	393
Cash at End of Year	15,212	24,557	8,811	9,148	9,541

Balance Sheet

Year end 31 Dec (HKD m)	2016A	2017A	2018F	2019F	2020F
Fixed assets	29	14	14	14	15
Interest in joint ventures	42,739	56,415	58,948	61,261	63,197
Interest in associates	24,202	24,589	24,769	24,974	25,201
Other non-current assets	936	409	417	425	433
Total Non-current Assets	67,906	81,427	84,148	86,673	88,846
Cash & Cash Equivalents	15,212	24,557	8,811	9,148	9,541
Bank deposits >3m + overdrafts	46,498	850	0	0	0
Trade and other receivables	161	167	367	363	404
Total Current Assets	61,871	25,574	9,178	9,511	9,945
Total Assets	129,777	107,001	93,326	96,184	98,791
Trade and other payables	2,595	3,197	2,949	3,105	3,061
Other current liabilities	46	3,635	59	65	72
Total Current Liabilities	2,641	6,832	3,008	3,170	3,133
Bank loans and other interest-bearing borrowings	8,514	3,679	4,433	5,067	5,656
Derivative financial instruments	52	789	750	712	676
Other non-current liabilities	159	121	132	135	133
Total Non-current Liabilities	8,725	4,589	5,315	5,914	6,466
Total Liabilities	11,366	11,421	8,323	9,084	9,599
Share capital	6,610	6,610	6,610	6,610	6,610
Reserves	111,801	88,970	78,394	80,491	82,582
Total Shareholders' Equity	118,411	95,580	85,004	87,101	89,192
Minority Interest	0	0	0	0	0
Total Equity	118,411	95,580	85,004	87,101	89,192

Financial Ratios

	2016A	2017A	2018F	2019F	2020F
Growth:					
Revenue	(1.5%)	10.2%	42.2%	(5.5%)	5.6%
Share of profits from JV/A	(5.1%)	(3.9%)	5.5%	0.4%	0.2%
Shareholders' profit	(17.0%)	29.6%	(1.4%)	(0.2%)	1.4%
Profitability:					
ROE	5.3%	7.8%	9.1%	9.5%	9.4%
ROA	4.8%	7.0%	8.2%	8.6%	8.5%
Liquidity:					
Current ratio (x)	23.4	3.7	3.1	3.0	3.2
Interest coverage (x)	25.9	28.2	32.7	38.1	32.6
Net gearing	net cash	net cash	net cash	net cash	net cash
Dividend payout ratio	256.8%	418.2%	73.9%	75.5%	75.6%

Source: the Company, Guotai Junan International.

Company Rating Definition

The Benchmark: Hong Kong Hang Seng Index

Time Horizon: 6 to 18 months

Rating		Definition
Buy	买入	Relative Performance>15%; or the fundamental outlook of the company or sector is favorable.
Accumulate	收集	Relative Performance is 5% to 15%; or the fundamental outlook of the company or sector is favorable.
Neutral	中性	Relative Performance is -5% to 5%; or the fundamental outlook of the company or sector is neutral.
Reduce	减持	Relative Performance is -5% to -15%; or the fundamental outlook of the company or sector is unfavorable.
Sell	卖出	Relative Performance <-15%; or the fundamental outlook of the company or sector is unfavorable.

Sector Rating Definition

The Benchmark: Hong Kong Hang Seng Index

Time Horizon: 6 to 18 months

Rating		Definition
Outperform	跑赢大市	Relative Performance>5%; or the fundamental outlook of the sector is favorable.
Neutral	中性	Relative Performance is -5% to 5%; or the fundamental outlook of the sector is neutral.
Underperform	跑输大市	Relative Performance<-5%; Or the fundamental outlook of the sector is unfavorable.

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