

# UTILITIES REVIEW



Sembcorp's Thermal Powertech Corporation India project in Andhra Pradesh, India

## Competitive Edge

- A leading developer, owner and operator of energy and water assets with strong operational, management and technical capabilities
- Operations in 14 countries with an established presence in Asia and a strong growing presence in emerging markets
- Strong track record in generating and supplying power, steam and natural gas, and providing total water and wastewater treatment solutions for industries and water-stressed regions
- Global leader in the provision of energy, water and on-site logistics to multiple industrial site customers

## Performance Scorecard

Financial Indicators (\$ million)	2014	2013	Change (%)
Turnover	<b>4,890.9</b>	5,137.6	(5)
EBITDA	<b>629.1</b>	713.8	(12)
PFO	<b>521.9</b>	612.9	(15)
– EBIT	<b>432.9</b>	532.2	(19)
– Share of results: Associates & JVs, net of tax	<b>89.0</b>	80.7	10
Net profit	<b>408.0</b>	449.9	(9)
ROE (%)	<b>14.8</b>	19.3	(23)

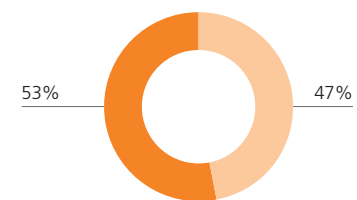
## Operational Indicators

	2014	2013
Power capacity (megawatts)	<b>7,879</b>	7,277
Steam capacity (tonnes per hour)	<b>4,532</b>	4,702
Water & wastewater treatment capacity (cubic metres per day)	<b>9,514,726</b>	8,578,498

Note: Capacity refers to total gross capacity of facilities in operation and under development.

## PFO\* by Geography

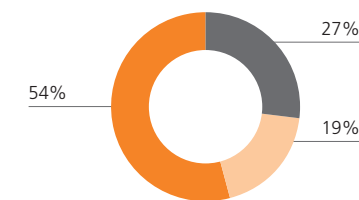
- Singapore
- Overseas



\* Excluding Corporate

## PFO\* by Segment

- Energy
- Water
- On-site logistics & solid waste management



\* Excluding Corporate



Key Developments



Commenced operation of the 400-megawatt Sembcorp Cogen @ Banyan in October, strengthening our market leadership on Jurong Island, Singapore



Acquired a 60% stake in Green Infra, a leading renewable energy group with 700 megawatts of wind and solar power assets in six resource-rich states in India



Marked a milestone at our first power project in India, Thermal Powertech Corporation India, with the synchronisation of the plant's first 660-megawatt unit to the grid



Expanded our power business in China with a conditional agreement for two coal-fired power plants in Chongqing totalling 1,620 megawatts. The plants' strategic mine-mouth location will allow for power production at a competitive cost



Named Asia's Leading Private Sector Developer by Project Finance International (PFI) in its inaugural PFI Asia Best Practice citations



Named the Leader in Wastewater Treatment for Chemical Industrial Parks by ChinaWaterNet at the China Water Industry Annual Award 2013

OPERATIONS AND FINANCIAL REVIEW

Underlying operations deliver growth in earnings

Underpinned by contribution from its overseas operations, the Utilities business delivered profit growth from its underlying operations despite intense competition in Singapore's power market.

The business' turnover was S\$4.9 billion in 2014 compared to S\$5.1 billion in 2013, while net profit was S\$408.0 million, compared to S\$449.9 million last year. Excluding significant items in 2013<sup>1</sup>, net profit grew by 7% in 2014.

Profit from operations (PFO) stood at S\$521.9 million, a 15% decline from last year's S\$612.9 million. Excluding 2013's significant items, PFO decreased by 6% in 2014.

PFO (\$ million)	2014	2013	Change (%)
Singapore	285.7	304.8	(6)
Rest of ASEAN, Australia & India	62.5	46.1	36
China	86.4	85.7	1
Middle East & Africa	46.4	111.5	(58)
UK	46.4	(52.0)	NM
The Americas	9.3	3.1	199
Corporate*	(14.8)	113.7	NM
Total PFO	521.9	612.9	(15)
Less: Interests & taxes	(113.9)	(163.0)	30
Net profit	408.0	449.9	(9)

\* Includes Sembcorp Salalah Power and Water Company IPO gains in 2013

<sup>1</sup> Significant items in 2013 amounted to S\$68.6 million, comprising the gain from the IPO of Sembcorp Salalah Power and Water Company, partially offset by an impairment for Teesside operations in the UK.

Singapore operations accounted for 53% of total PFO, while overseas operations accounted for 47%.

In 2014, PFO from operations in **Singapore** decreased 6% to S\$285.7 million, reflecting intense competition in the local power market. The Uniform Singapore Energy Price continued to slide, averaging S\$137 per megawatt for the year compared to S\$173 per megawatt in 2013. New income streams from the Banyan facilities, short-term merchant income and improved contractual rates in the solid waste management business helped to mitigate the decline in PFO.

The business' PFO from the **Rest of ASEAN, Australia & India** grew 36% to S\$62.5 million. In Vietnam, we raised our effective stake in Phu My 3 power plant to 66.7% and commenced recognition of our additional 33.3% stake in September. Arising from this transaction, a S\$10.3 million one-off net gain was recognised. Meanwhile, our solid waste management associate in Australia, the other major contributor within this region, delivered a comparable performance to last year's.

PFO contribution from our business in **China** stood at S\$86.4 million in 2014, comparable to S\$85.7 million in 2013. Our Yangcheng coal-fired

power plant and Shanghai Cao Jing cogeneration plant delivered a better performance in 2014, but this was offset by weaker performance by our wind power assets and water operations. In the fourth quarter, an increase in the natural gas tariff was implemented by the government, affecting the performance of the gas-fired Shanghai Cao Jing plant for the quarter.

Our **Middle East and Africa** operations registered a PFO of S\$46.4 million in 2014 compared to S\$111.5 million in 2013, due to the deconsolidation of Sembcorp Salalah Power and Water Company after its initial public offering in September 2013. Meanwhile, operations in the **UK** recorded a PFO of S\$46.4 million, backed by an improved performance on Teesside. As part of our strategy to restructure our business on Teesside and develop the Wilton International site into a green hub, we divested our asset protection business and de-commissioned two ageing coal-fired boilers on the site. During the year, we also successfully extended contracts with two on-site customers. Meanwhile, our businesses in **the Americas** spanning Chile, Panama and the Caribbean registered a combined PFO of S\$9.3 million, compared to S\$3.1 million in 2013, on the back of an improved operating performance.

**BUILDING A STRONG DEVELOPMENT PIPELINE TO DRIVE LONG-TERM GROWTH**

**Growing Our Portfolio**

Adding over 3,400 megawatts of power and 1.6 million cubic metres per day of water and wastewater treatment capacity to our operating portfolio in 2015 and 2016

In 2014, we remained focused on sowing the seeds for future growth. In 2015 and 2016, we will add over 3,400 megawatts of power and 1.6 million cubic metres per day of water and wastewater treatment capacity to our operating portfolio, bringing our gross power and water capacity to almost 7,900 megawatts and over 9.5 million cubic metres per day.

	2015	2016
<b>Thermal Energy</b> 2,640MW	<ul style="list-style-type: none"> <li><b>Thermal Powertech Corporation India (Unit 1)</b> Andhra Pradesh, INDIA 660MW</li> <li><b>Thermal Powertech Corporation India (Unit 2)</b> Andhra Pradesh, INDIA 660MW</li> </ul>	<ul style="list-style-type: none"> <li><b>NCC Power Projects (Unit 1)</b> Andhra Pradesh, INDIA 660MW</li> <li><b>NCC Power Projects (Unit 2)</b> Andhra Pradesh, INDIA 660MW</li> </ul>
<b>Renewable Energy</b> 797MW and 140tph of steam	<ul style="list-style-type: none"> <li><b>Huanghua Wind Power Expansion</b> Hebei, CHINA 48MW</li> <li><b>Wind and Solar Power in India</b> Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Tamil Nadu, INDIA 700MW</li> </ul>	<ul style="list-style-type: none"> <li><b>Energy-from-Waste Facility</b> Jurong Island, SINGAPORE 140tph of steam</li> <li><b>Wilton 11 Energy-from-Waste Facility</b> Teesside, UK 49MW or 190tph of steam</li> </ul>
<b>Water</b> 1.6 million m <sup>3</sup> /day	<ul style="list-style-type: none"> <li><b>Fujairah 1 Desalination Expansion</b> Fujairah, UAE 30MiGD / 136,800m<sup>3</sup>/day</li> <li><b>Nanjing Industrial Water Plant Expansion</b> Jiangsu, CHINA 120,000m<sup>3</sup>/day</li> <li><b>Changzhi Total Water Management Plant</b> Shanxi, CHINA 1.3 million m<sup>3</sup>/day <i>Partial operations</i></li> </ul>	<ul style="list-style-type: none"> <li><b>Lianyungang Industrial Wastewater Treatment Plant</b> Jiangsu, CHINA 20,000m<sup>3</sup>/day</li> <li><b>Changzhi Total Water Management Plant</b> Shanxi, CHINA 1.3 million m<sup>3</sup>/day <i>Full completion</i></li> <li><b>Jingmen Industrial Wastewater Treatment Plant</b> Hubei, CHINA 10,000m<sup>3</sup>/day</li> </ul>

*m<sup>3</sup>/day*: cubic metres per day; *MiGD*: million imperial gallons per day; *MW*: megawatts; *tph*: tonnes per hour

**ASEAN and the Middle East**

Besides securing new projects to build up our project pipeline, we have also maintained a strong focus on the execution of projects under development. During the year, we added 400 megawatts of gross power and 200 tonnes per hour of steam to our total operating capacity with the completion and operation of Sembcorp Cogen @ Banyan, our second cogeneration plant in Singapore's Jurong Island petrochemical hub. This investment reinforces our position as the preferred supplier of energy, water and on-site logistics to companies on Jurong Island. Meanwhile in the UAE, our 30 million imperial gallons per day expansion to the desalination capacity of the Fujairah 1 Independent Water and Power Plant is progressing well and is expected to come onstream in the third quarter of 2015.

**China**

In 2014, we continued efforts to extend the reach of our industrial water and wastewater treatment business in China, particularly in the industrial and petrochemical sectors. We made good progress in the construction for an upcoming 120,000 cubic metres per day expansion to our Nanjing industrial water facilities, as well as an upcoming total water management plant to serve a major coal-to-chemicals customer in Changzhi. As at end 2014, these plants were respectively 70% and 37% complete, with the Nanjing expansion on track for completion in the first half of 2015, and partial operations for the Changzhi project expected in 2015. In addition, in response to customer feedback that a higher demand was expected, we increased the planned cooling water capacity of the Changzhi plant by a further 144,000 cubic metres per day. This brings the project's total water capacity to 1.3 million cubic metres per day. The project has been selected by the governments of China and Singapore as a joint showcase for integrated water management.

In June, we signed a joint venture agreement to acquire and upgrade an existing wastewater treatment facility at the Lianyungang Lingang Chemical Industrial Park. We will equip the facility to effectively treat high concentration wastewater and increase its capacity to 20,000 cubic metres per day. This project is significant as it kicks off a new collaboration with the Jiangsu Environment Protection Department, which has chosen Sembcorp as their partner to improve industrial wastewater management at Jiangsu's industrial parks. If successful, this could provide a model that can be replicated at industrial parks across Jiangsu and other provinces.

On the energy front, we inked a conditional joint venture agreement for a mine-mouth coal-fired power project in Chongqing. Sembcorp will hold 49% in the joint venture, which will own an existing 300-megawatt coal-fired power plant and develop an adjacent 1,320-megawatt coal-fired power plant targeted for completion in 2017. The entire project will cost approximately RMB6 billion (approximately S\$1.2 billion). The plants' strategic mine-mouth location offers significant savings in logistics costs and will enable the production of power at a lower cost.

**India**

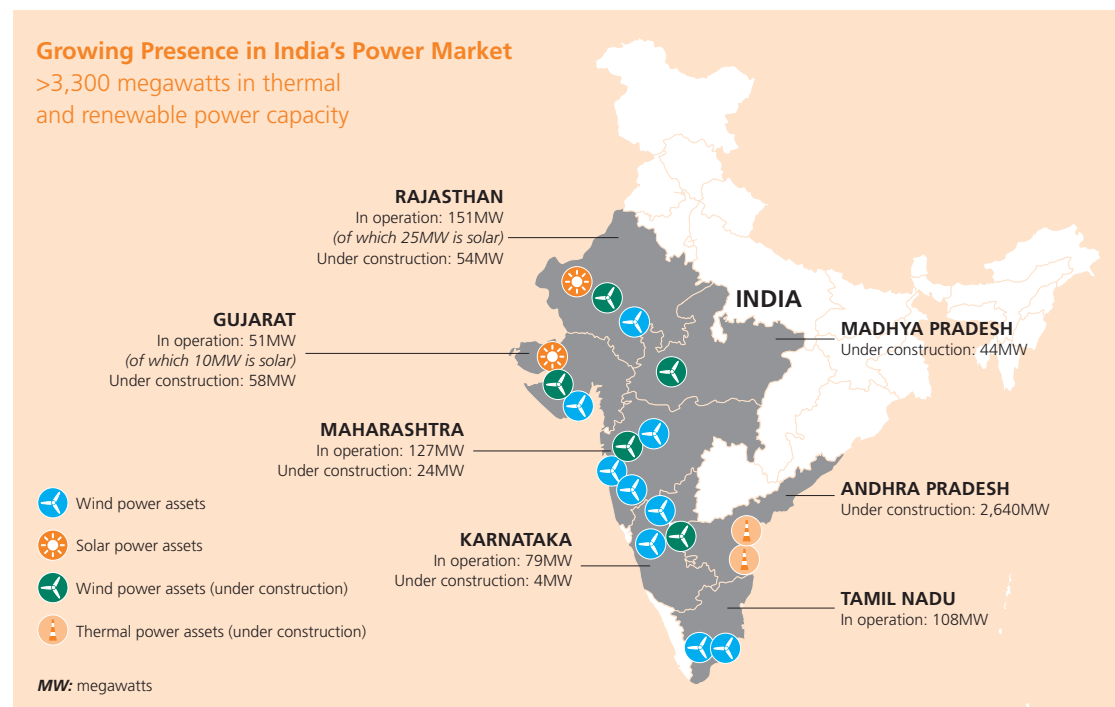
Construction of our two supercritical coal-fired projects in Nellore, Andhra Pradesh is progressing well, and the plants are on track to be completed in 2015 and 2016 respectively.

The first of these 1,320-megawatt power plants will commence commercial operation of its initial 660-megawatt unit in the first quarter of 2015. The plant's second 660-megawatt unit is expected to undergo commissioning soon and begin commercial operation in the third quarter of the year. During the year, we increased our stake in this US\$1.5 billion project from 49% to 65%, giving us majority control. To maintain flexibility,

the plant's load will be sold through a mixture of long-term, medium-term and short-term contracts. To date, we have secured power purchase agreements for the sale of 900 megawatts of power, including a long-term agreement to supply 500 megawatts to the states of Andhra Pradesh and Telangana.

We embarked on our second coal-fired power project in the country early in the year, with the acquisition of a 49% stake in a 1,320-megawatt

facility being built on an adjacent site. This acquisition doubled our thermal power capacity in India to 2,640 megawatts. The proximity of both plants will enable us to benefit from operational synergies, such as shared coal importation and logistics infrastructure and a common management team. The total investment for our 49% stake amounts to Rs 923.4 crores (approximately S\$190.7 million), and we intend to increase our share to 65% upon receipt of relevant approvals.



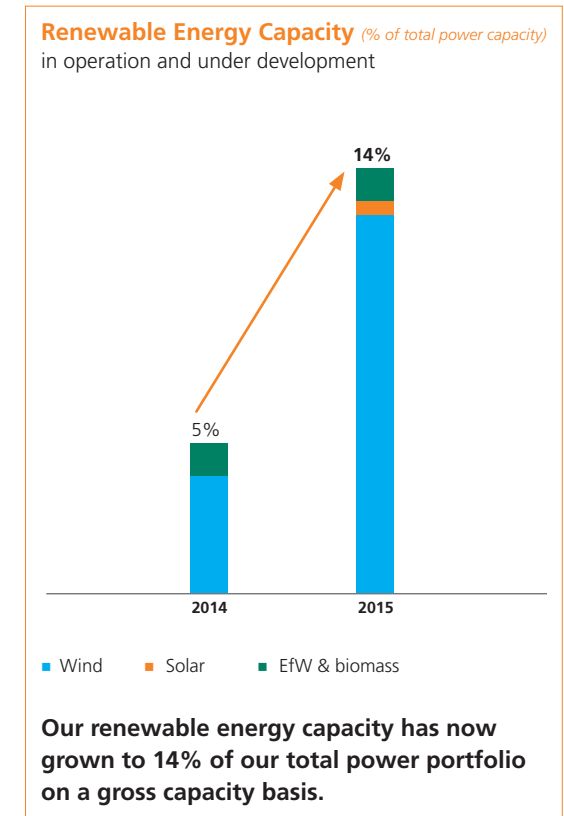
**A Balanced Portfolio for Sustainability**  
 Growing our renewable energy business and capabilities globally

Expanding our renewable energy capabilities and capacity as part of having a balanced portfolio of high-efficiency thermal and renewable energy assets is a key element in our strategy for building a sustainable power portfolio. To this end, we have made meaningful progress. From 5% of our total power capacity in 2014, renewable energy now comprises 14% of our total power portfolio on a gross capacity basis.

In China, our 48-megawatt wind power capacity expansion in Huanghua, Hebei province, was completed in February 2015. Meanwhile, construction of our energy-from-waste (EfW) facilities in Singapore and the UK is 38% and 48% complete respectively. Our upcoming 140 tonnes of steam per hour EfW facility on Singapore's Jurong Island will be our largest in the country, and both it and our 49-megawatt EfW facility on Wilton International in the UK are targeted for completion in 2016.

In February 2015, we marked our entry into India's fast-growing renewable energy market with the acquisition of a 60% stake in Green Infra, a leading renewable energy group with wind and solar power assets in six states across the southern, western and central regions of the country. The addition of Green Infra will add approximately 700 megawatts of operating assets to Sembcorp's renewable energy portfolio in 2015. The acquisition almost triples Sembcorp's total renewable energy

capacity to over 1,000 megawatts globally. With gas-fired and coal-fired thermal power plants, as well as a global renewable portfolio that encompasses wind, solar, energy-from-waste and biomass assets, Sembcorp is now well-positioned for growth in both the thermal and renewable energy sectors.





**Renewable Energy**

Sembcorp's renewable energy portfolio includes wind power, solar power, energy-from-waste (EfW) and biomass energy assets in Singapore, China, India and the UK. Our renewable energy capacity stands at over 1,000 megawatts of power in operation and under development, accounting for 14% of our total power capacity, as well as 330 tonnes per hour of steam.



**Wind**

Sembcorp has 961 megawatts of wind power assets in operation and under development in China and India. In China, Sembcorp has four wind power assets across Inner Mongolia and Hebei, with a combined capacity of 296 megawatts. In India, Sembcorp's 665 megawatts of wind power assets are found in six states across the country's renewable resource-rich southern, western and central regions.



**Solar**

Sembcorp has 35 megawatts of solar power assets in operation, located in the states of Rajasthan and Gujarat in India's western region.



**Energy-from-Waste**

Sembcorp's woodchip boiler plant on Singapore's Jurong Island produces 60 tonnes per hour of steam using waste wood collected and processed by the company's solid waste management operations. Sembcorp is also developing a 140 tonnes per hour steam facility on Jurong Island that will be fuelled entirely by industrial and commercial waste. Both our Jurong Island EfW facilities demonstrate our unique capabilities to manage the entire EfW value chain in Singapore.

In addition, Sembcorp is developing an EfW plant on the Wilton International site in the UK which will produce up to 49 megawatts of power or 190 tonnes per hour of steam using municipal and commercial waste.



**Biomass**

On the Wilton International site in the UK, Sembcorp runs the country's first large-scale wood-fired renewable energy plant. The biomass power station uses sustainable virgin wood and recycled wood collected from waste disposal sites throughout the country to produce 35 megawatts of power and 130 tonnes per hour of steam.

**Optimising the Management of Our Assets**  
Enhancing competitiveness with technology and innovation

In October, we officially opened the new Sembcorp Technology & Innovation Centre on Jurong Island in Singapore. Comprising laboratories and applied research and development facilities, it is a centre for the development and integration of innovative processes and the commercialisation of emerging technologies.

It also houses an advanced global asset management system to centrally manage our international utilities operations from Singapore. Currently in development, the Sembcorp Global Asset Management System will allow us to better harness our collective global expertise, drive operational excellence and optimise asset performance for enhanced reliability, availability and cost effectiveness.

**The Sembcorp Global Asset Management System**

Sembcorp's new global asset management system will comprise the following three modules, allowing for the centralised management of an international portfolio of utilities plants.



**Process optimisation module**

To benchmark plant performance data and provide automatic alerts for any abnormalities



**Troubleshooting module**

To assist Sembcorp's technical experts in addressing operational issues through the use of predictive analytics



**Predictive maintenance module**

To identify potential equipment problems even before any disruptions happen and allow for greater optimisation of scheduled maintenance and component replacement



## OUTLOOK

In 2015, the world's economy is expected to face strong and complex cross-currents, leading to a mixed economic outlook. According to the World Bank's Global Economic Prospects, while the global economy is expected to grow by a moderate 3% in 2015 against a lower-than-expected 2.6% in 2014, low oil prices are expected to contribute to diverging prospects for oil-exporting and oil-importing countries.

In Singapore, the Ministry of Trade and Industry forecasts the economy to grow between 2% and 4% in 2015, compared to 2.9% in 2014. Meanwhile, the Economic Development Board has lowered its fixed asset investments forecast for 2015 to a range of between S\$9 billion to S\$11 billion, from S\$10 billion to S\$12 billion in 2014. The lower forecast reflects factors such as a sharper focus on attracting projects that are in line with Singapore's stage of economic development, as well as greater uncertainty in the outlook for the global economy. The Utilities business environment in Singapore is expected to be challenging in 2015, with continued intense competition in the power market as well as low oil prices.

According to the World Bank, China's economy is expected to grow at a moderate 7.1% in 2015, down from its estimated 7.4% growth in 2014. The government is expected to continue with its pursuit of structural reforms to make the economy more

market driven and maintain its strong promotion of greater environmental protection.

Meanwhile, the World Bank forecasts that India's economy will grow by an estimated 6.4% in 2015, up from an estimated 5.6% in 2014. This signals regained economic momentum and continued recovery from two years of modest growth between 2012 and 2013, to growth levels that are more in line with the country's high long-term potential. The new government continues to push ahead with measures to reform the power sector, including efforts to resolve coal issues and encourage greater growth in renewable energy. The first of our 1,320-megawatt power plants in India will commence operation in phases in 2015, followed by our second 1,320-megawatt power plant in 2016. Together with our recent acquisition of Green Infra, this will bring our gross power capacity in India to over 3,300 megawatts, comprising both thermal and renewable energy assets.

Despite the mixed global economic outlook, essential energy and water solutions will continue to remain relevant, particularly in emerging growth markets. Sembcorp has built up a successful track record in developing large-scale greenfield projects and is well-positioned to secure opportunities. Our Utilities business remains focused on operational excellence and efficiency, as well as the execution of our significant pipeline of projects and the pursuit of new growth opportunities to deliver long-term growth.



Sembcorp's combined power and desalination facility in Salalah, Oman