煤氣 Towngas

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Feature

Interview with Mr Peter Wong, Deputy Managing Director

For this issue of the ESG Bulletin, we had the honour of inviting Mr Peter Wong Wai-yee for a sharing on the Group's renewable energy projects in the mainland as well as an introduction on future opportunities for environmental protection-related developments.

How did the Group embark on the path of environmental protection in Mainland China?

Towngas expanded into mainland China in 1994 with its city-gas business. As there was no natural gas supply back then, the Company transmitted a natural gas substitute. In early 2000, the mainland government pushed for industrial customers' adoption of natural gas, a clean energy, mandating some to switch from coal to gas in order to reduce emissions. In 2003, upon completion of the mainland's West-East Gas Pipeline in China, Towngas officially launched its piped natural gas business. In its development of about three decades, Towngas benefited from the government's environmental protection policies; on the other hand, it took the initiative to leverage China's urbanisation and create business opportunities for its natural gas business while improving the environment through reducing air pollutants and carbon emissions.

New opportunities presented by the 30/60 dual carbon goal

The 30/60 dual carbon goal comprises the two main objectives of carbon peaking by year 2030 and carbon neutrality by year 2060,

as mentioned by President Xi Jinping at a United Nations meeting last September. While China is the world's top coal consumer, in recent years, the country has proactively addressed its environmental issues and proposed the gradual reduction of coal-powered electricity. However, numerous provinces have recorded an increase in industrial and residential power consumption. As the downstream industrial, commercial and residential demand for electricity continues to rise, modern low-emission power plants were still under planning and construction, resulting in an inevitable supply-demand gap for power generated from renewable energy sources in China. At this juncture, distributed photovoltaic systems have gradually assumed the role of a virtual power plant, thanks to their utilisation of renewable energy, ease of installation and immediate power supply. Such projects resolve clients' low-cost power issue while generating carbon credits that can be sold to other enterprises for additional income.

What are virtual power plants?

Due to the difficulty of establishing large-scale renewable energy facilities in urban areas, the Group has in recent years focused on helping factories install rooftop solar panels for a supply of clean renewable energy. The Group aims to expand its total installed capacity for photovoltaic power generation to 10 gigawatts, equivalent to the combined total capacity of Hong Kong's three power plants, Castle Peak Power Station, Black Point Power Station and Lamma Power Station. Yet unlike traditional power plants, its power generation units are distributed on the rooftops of different buildings and pooled together to meet users' needs.

Smart energy for industrial parks

One challenge of traditional distributed energy is liaising with individual plant owners on installation and contract details. Smart energy for industrial parks, on the other hand, is led by the government: distributed solar energy systems are installed on the rooftops of all main buildings of the park, while power generation and consumption data are uploaded online in real time. Since solar-powered systems are subject to weather conditions, energy storage is essential for the system to offer a consistent supply. Paired with a smart power grid, the system can coordinate storage, grid and load to store energy during off-peak periods and release energy during peak periods to achieve peak-shaving and valley-filling as well as avoid surpassing the contracted load. This concept is similar to traditional power companies uploading data from customers' smart meter for real-time supply-demand management.

In addition, as China gradually opens up power trading in different provinces and regions, which allows for the distributed power generated to be sold directly to nearby energy consumers through the power grid instead of limited to the generating party's own use, distributed photovoltaics will be one of the trends for future renewable energy development.

Environmental sanitation and food waste treatment

Aside from carbon reduction and energy conservation, the mainland government has also been proactive in handling the issue of city waste in recent years, including curbing waste at the source, launching waste sorting and recycling, establishing food waste treatment facilities and more. In response, the Group officially commissioned its first food waste treatment project in Suzhou Industrial Park in early 2019. The facility has a daily capacity to process 500 tonnes of food waste, green waste and leachate, which are then transformed into natural gas, oil products and solid fuel to be used within and outside of the industrial park. Among these, the anaerobically produced bio natural gas is directly fed into the Group's Suzhou city gas network in order to share the green products with customers. As the project reduces the consumption of fossil fuel, i.e. traditional natural gas, the Company is exploring the sales of carbon credits to other enterprises. In addition to protecting the environment and enhancing the image of the Group, this will generate additional income for a win-win-win outcome.

With the commissioning of the project, the Company has accelerated it development of more waste treatment projects. In addition to two new food waste treatment projects in Tongling and Changzhou, the Group is developing the first integrated waste incineration power generation project with a daily processing capacity of 2,000 tonnes in a circular economy industrial park in Jiashan, Changzhou. Aside from processing domestic waste, the project also incinerates stale waste and industrial waste. On top of income obtained from power generated from waste and fees from waste treatment, environmental sanitation businesses such as the treatment of fly ash and hazardous waste will also offer substantial income, effectively protect the operation of the project.

Going forward, the Group will continue to advance towards the goals of smart energy development and city waste treatment, and invest its best efforts in realising sustainable development.

▲The Group's first food waste treatment project in Suzhou Industrial Park