

Towngas-IPE “Zero-Carbon Factory” Officially Commissioned

(22 August 2022) Towngas Energy, a subsidiary of Towngas Smart Energy, and IPE Group jointly hosted the commissioning ceremony of the Towngas-IPE zero-carbon factory recently. The ceremony was attended by officials from the Zengcheng District Science and Technology Innovation Bureau, the Bureau of Science and Technology, Industry, Commerce and Information, and Xiancun Town. They were also joined by Mr Zeng Guangsheng, the Chairman, Mr Lau Siu Chung, the Chief Operating Officer, and the management team of IPE Group, along with Towngas Smart Energy Senior Vice President Mr Zhang Jinbai, Shenzhen Towngas China Integrated Energy General Manager Mr Li Yicai, among others.

Mr Zeng Guangsheng, the Chairman of IPE Group, expressed high recognition of the work of both teams. He said that as a global leader in ultra-high precision metal processing and a partner of the world’s leading manufacturers, IPE wants to “hit the nail on the head”. That is why IPE puts quality before quantity when choosing a partner for zero-carbon development. After a rigorous selection process, IPE eventually reached a zero-carbon agreement with Towngas Energy, a company with excellent professionalism, good service awareness and comprehensive strength, to forge a strong partnership. From the data of the trial run, the energy-saving effect of the phase one project was remarkable. In the future, the two sides will continue to deepen cooperation based on the operational phase one project in operation, expand the energy saving and consumption reduction efforts of the phase one project, and quickly push forward the implementation of the phase two projects on photovoltaic, water storage and cooling, and energy storage, so as to make Xinhao Precision Technology a benchmark for the implementation of the dual carbon goals in Guangzhou and even in Guangdong province.

In his speech, Mr Zhang Jinbai, the Senior Vice President of Towngas Smart Energy, thanked the full support and confidence of IPE in entrusting the core energy security system to the company for investment, construction and operation, allowing the zero-carbon factory to be up and running swiftly. The phase one trial run of the photovoltaic, air-conditioning and air compressor systems has so far achieved the expected results and has better safeguarded the production of Xinhao Precision Technology.

With the objective of building a zero-carbon factory, Towngas Energy provides a smart integrated energy solution for IPE. With the four-pronged approach of “Green Power + Energy Saving + Intelligence + Offset”, Towngas Energy is actively engaged in various projects such as distributed rooftop photovoltaic, energy-saving transformation of central

air-conditioning systems and air compressor systems, and waste heat recovery for domestic hot water supply. In the future, the two sides will also start in-depth cooperation on energy storage, virtual power plants and demand-side response, so as to establish the project as a benchmark for energy saving and carbon reduction in Guangdong and the two participating parties, and also help the IPE Guangzhou factory achieve its “carbon neutrality” target ahead of schedule.

The project makes full use of idle rooftop resources. The first phase of the 2.1MW distributed PV plant was connected to the grid in January 2022, and the second phase of the 3.1MW distributed PV plant has been launched. In the future, we will also build a demonstration of the photovoltaic carport and charging station integration. The project utilises Longi monocrystalline silicon high-efficiency components and GoodWe inverters, with a fixed tilt angle of 10°. It has a power generation efficiency of over 21%, 1,038 annual power generation hours, annual power generation capacity of 5.4 million kWh/year and carbon reduction of 2,820 tonnes/year, and is expected to save over RMB 1 million annually in electricity costs for IPE.

Energy saving and carbon reduction in the industrial auxiliary plant rooms is an important way to realise “dual carbon” goals in the manufacturing industry. Through design optimisation, efficient equipment utilisation and smart energy management application, the project aims to achieve energy saving and carbon reduction, as well as safe and stable operation.

Before the energy saving project, the combined annual electricity consumption of the air-conditioning system and the air compressor system was 17.9 million kWh, accounting for 45% of the plant’s 40 million kWh electricity consumption.

It is estimated that with the project, the annual electricity consumption of the air-conditioning system and air compressor system can be reduced to 11.9 million kWh, saving 34% of energy and 6 million kWh/year, equivalent to saving an average of RMB 800,000 in electricity and reducing 3,200 tonnes of carbon dioxide emissions per year for IPE.

In implementing the integrated energy solution, Towngas Energy has improved the operational efficiency and effectiveness of its infrastructure facilities through smart and digital means, which reduces the number of staff on duty by more than three compared to the conventional method of operation. Through the application of IoT + AI technology on the smart platform, project parameters can be collected in real-time, allowing the best operation strategy to achieve an accurate energy supply.

Through our distributed photovoltaic, industrial central air-conditioning energy saving transformation, industrial air compressor energy saving transformation and smart platform, the project can achieve 5.4 million kWh/year of green power, 6 million kWh/year of electricity saving, a comprehensive energy saving rate of 30% and 6,000 tonnes/year of carbon reduction. In the future, we will continue to explore the scope of energy saving and carbon reduction by increasing the scale of photovoltaic installations, integrating photovoltaic and charging piles, battery storage, water storage and cooling, virtual power plants, green power trading and carbon services, etc., so as to achieve the goal of “zero-carbon factory” as soon as possible.

At present, IPE’s “zero-carbon factory” has completed a comprehensive carbon verification and achieved carbon neutrality for both stationary and mobile sources in 2021 through the purchase of carbon offset products, and received a “carbon neutral” certificate from the Guangzhou Carbon Emission Trading Centre.

In the future, Towngas Energy will continue working with its eco-partners to become the number one brand in the field with its zero-carbon smart industrial parks.

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