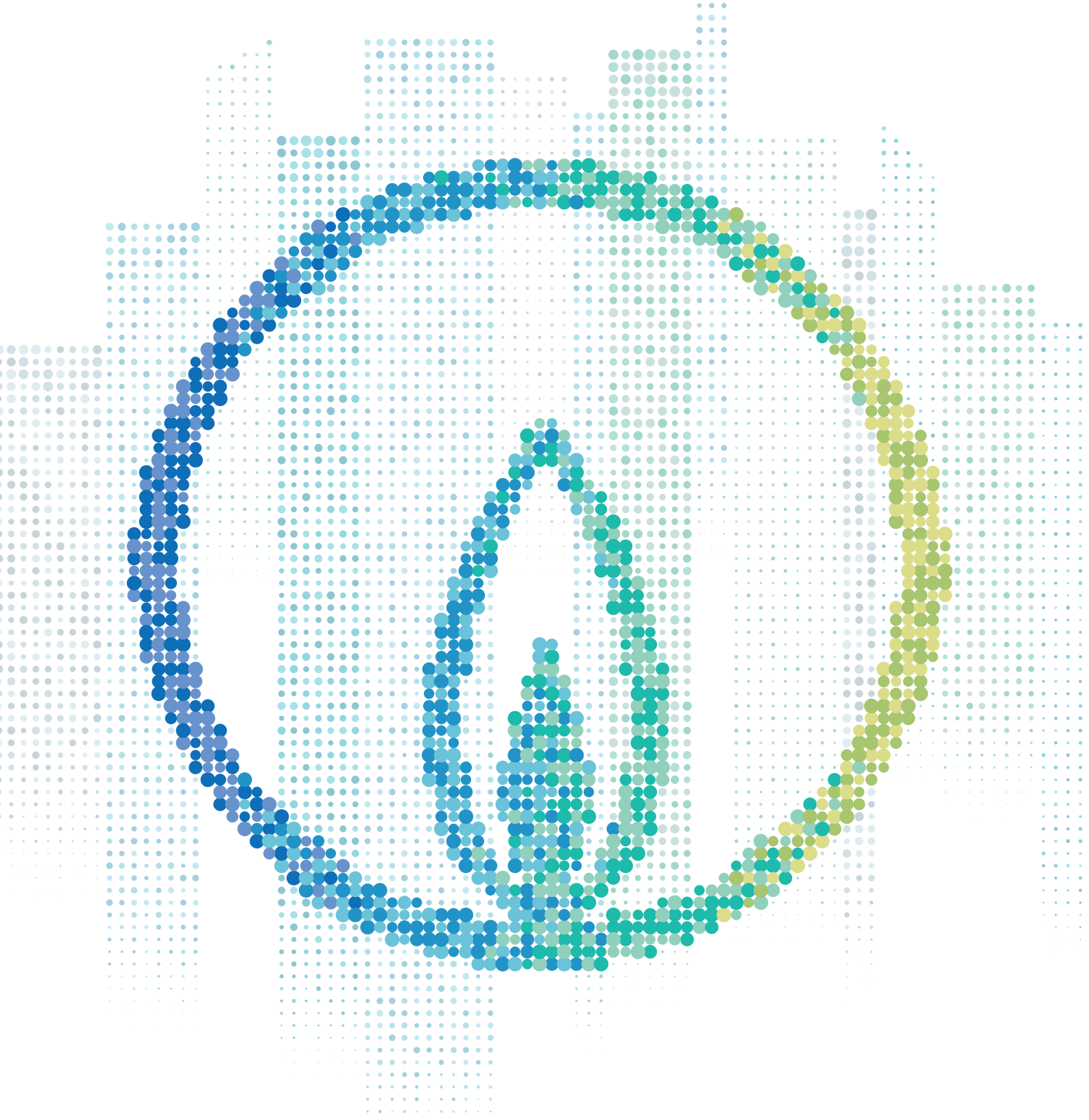




智慧燃展未來  
Smart Energy for a Brighter Future





lowingas



lowingas

## Vision

To be Asia's leading clean energy supplier and quality service provider, with a focus on innovation and environmental-friendliness.

## Mission

To provide our customers with a safe, reliable supply of energy and the caring, competent and efficient service they expect, while working to preserve, protect and improve our environment.

## Organisation Values

- Accountability
- Creativity
- Leadership
- Open Communication
- Driving Achievement
- Respect and Integrity
- Continuous Learning
- Teamwork
- Entrepreneurial Spirit



The Hong Kong and China Gas Company Limited was established.

1862



Services commenced in Kowloon with the commissioning of the Jordan Road Works.

1892

Naphtha was introduced as a production feedstock for the first time.

1973

1864

The West Point Works commenced production with a capacity of 3,400 cubic metres a day, to serve 500 street lamps through 24 km of mains.



1956

New Ma Tau Kok Plant opened, with the Jordan Road Works closed.



1986

The Tai Po Plant started production with a daily capacity of 2.8 million cubic metres.



## Business Overview

Established in 1862, The Hong Kong and China Gas Company Limited (Towngas) is Hong Kong's first public utility. In 2022, we celebrated the 160th anniversary of the Company and shared the joy of reaching this important milestone with the community. With the new goal and direction of "Smart Energy for a Brighter Future", we have embarked on a new journey towards the next 160 years.

From the time we lit the first street lamp in Hong Kong more than a century ago, our mission and vision have been closely linked to the daily lives of the people. Today, Towngas has become a strong and modern energy company that stands out among its peers. With two world-class gas production plants in Hong Kong and pipelines throughout the territory, we are able to inject a constant flow of vitality into every household and every industry.

For over 160 years, we have been keeping pace with the times by providing households with a wide range of smart, quality cooking appliances and one-stop kitchen design services, as well as setting up the Towngas Cooking Centre to promote flame cooking, turning the kitchen business into smart and stylish lifestyle delights. For our industrial and commercial customers, we continue to innovate with efficient, energy-saving and environmentally friendly products and applications to meet the needs of different industries.

With the reform and the opening up of the country, Towngas seized the opportunity to enter the mainland market in 1994 and diversify under the brand name of "Towngas China". Currently, our businesses cover natural gas sectors, environmentally-friendly energy, smart energy, water sectors and urban waste treatment, making us one of the leading groups in the energy industry in Greater China.



Services commissioned in Panyu, Guangdong province, our first joint venture on the mainland.

1995

Establishment of Hong Kong & China Water Limited with its first project in Wujiang.

2005



The Group's first food waste project, located at Suzhou Industrial Park, went into trial production.

2019



Towngas celebrated its 160th anniversary.

2022

1999

Began the use of landfill gas in our operations.

2006

Introduction of natural gas as a production feedstock in Hong Kong.



2021

"Towngas China" was renamed "Towngas Smart Energy Company Limited".



Towngas has always been environmentally conscious as part of its business development approach. As early as the 1970s, the Group switched to naphtha instead of heavy oil and coal in the production of gas, and we have since introduced natural gas as a key feedstock to further reduce carbon emissions in the production process.

As one of the first companies in Hong Kong to promote sustainable development, Towngas has prioritised environmental, social and governance (ESG) issues in its daily operations and has continued to improve its management in this area. We have always been committed to safe production standards and customer-focused service, and are dedicated to fulfilling our corporate citizenship responsibilities.

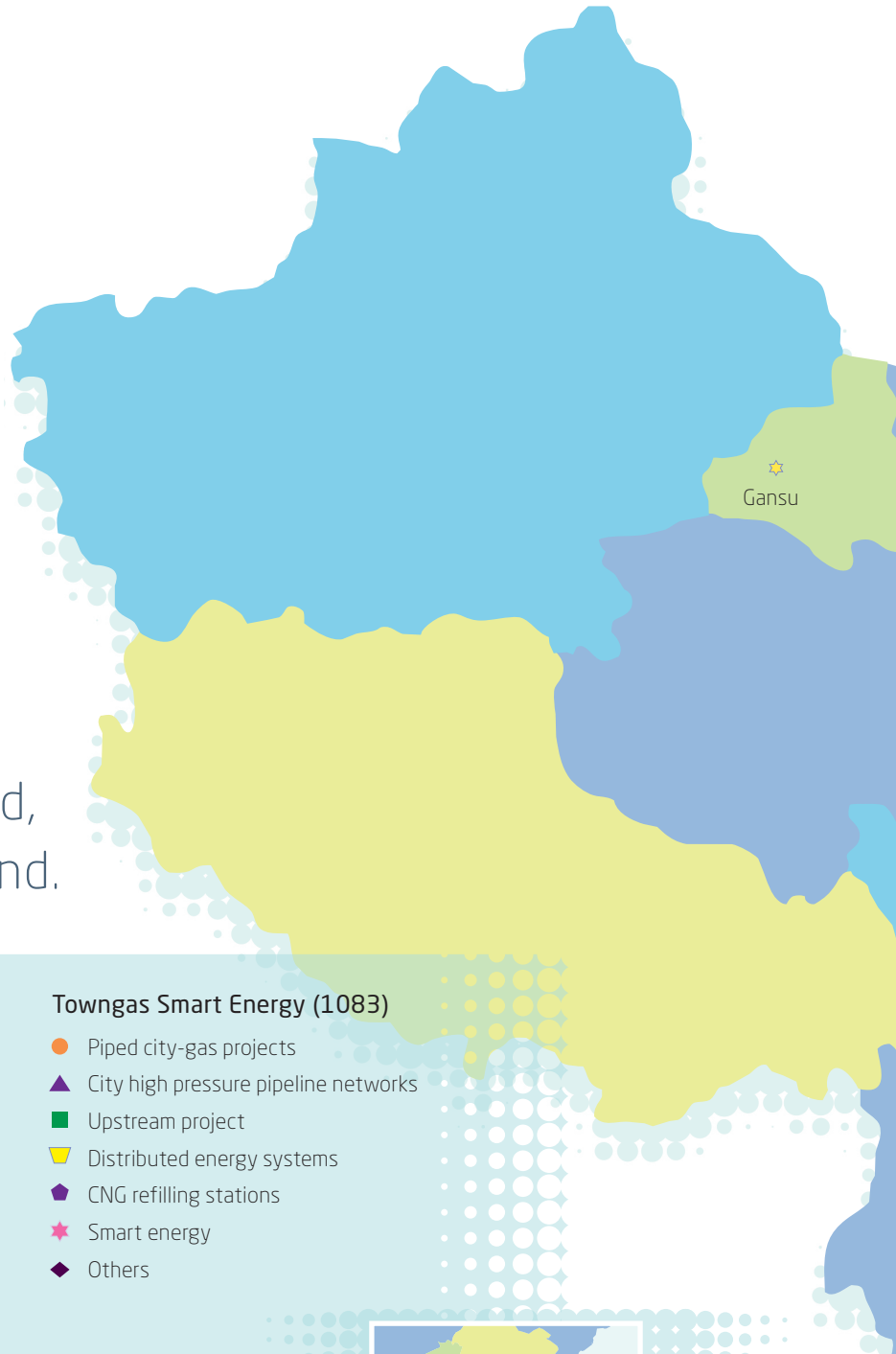
Towngas understands that its employees are its most valuable asset and makes every effort to attract, motivate and retain the best and brightest. Through a range of employee training programmes, all employees, regardless of their background, race, religion, or disability, can find a platform for their talents to flourish.

As times change, environmental pollution, climate change and energy crises pose serious threats to sustainable human development. Being an energy company, Towngas has taken up the mission and opportunities given to it by the times, harnessing the power of technology and aiming to leave a future of green energy and blue skies for future generations.

Years of hard work have yielded fruitful results, and we will carry on from past success towards even brighter prospects. With a new outlook, Towngas is embarking on a new journey with even greater ambitions and contributions.

# Business Coverage in 2022

Based in Hong Kong, Towngas has a portfolio comprising **624 projects\*** in 28 provincial regions on the Chinese mainland, as well as one in Thailand.



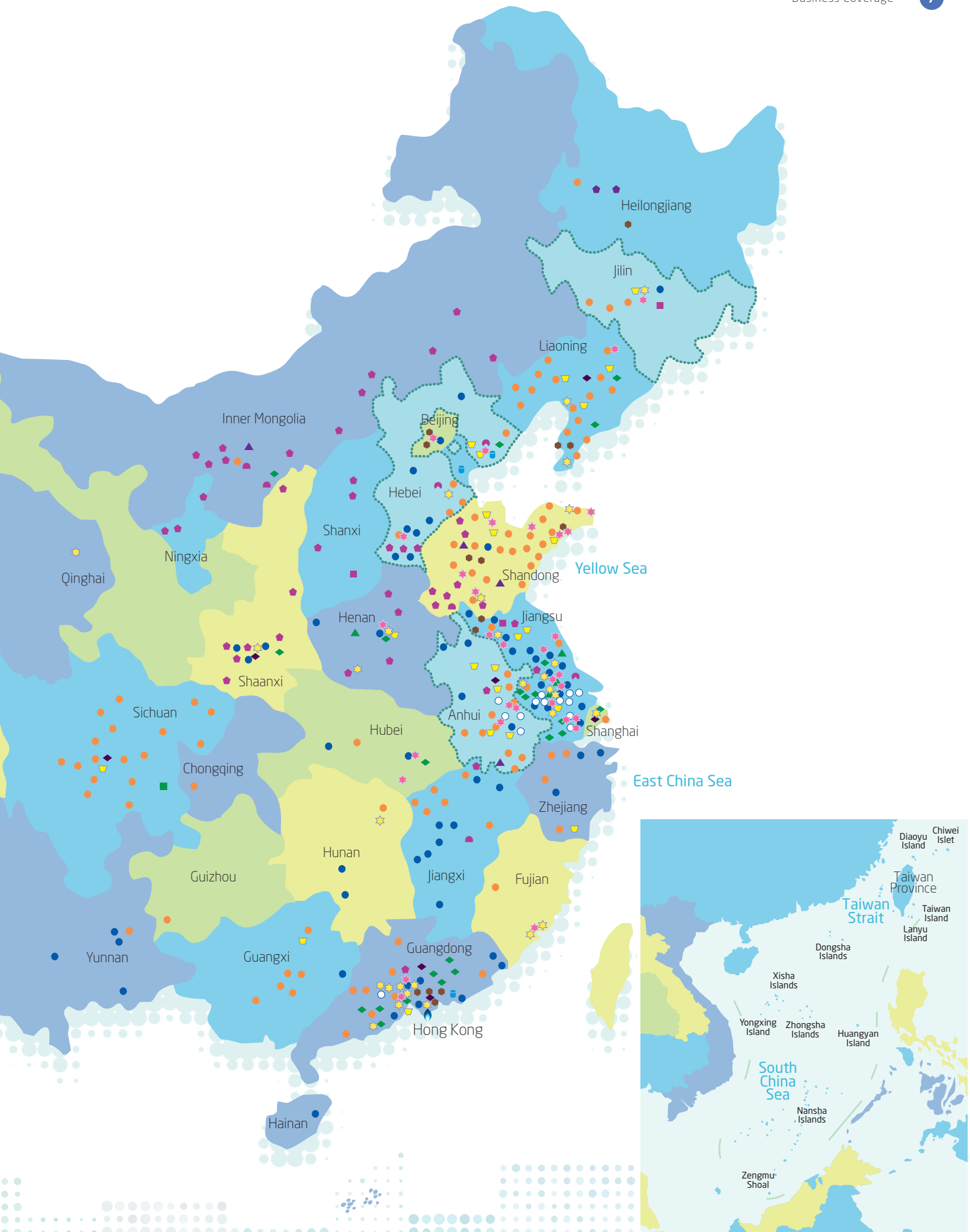
### Towngas (0003)

- Towngas Group Hong Kong headquarters
- Piped city-gas projects
- Liquefied natural gas receiving stations
- Provincial natural gas pipeline networks
- City high pressure pipeline networks/ underground gas storages
- Upstream projects
- Smart energy
- CNG/LNG refilling stations
- Water/Waste treatment
- Telecommunications
- Coal mining, logistics and coal-based chemicals
- Biomass
- Oilfield
- Others

### Towngas Smart Energy (1083)

- Piped city-gas projects
- City high pressure pipeline networks
- Upstream project
- Distributed energy systems
- CNG refilling stations
- Smart energy
- Others

\* As at December 2022





## Mainland Businesses

In 1994, Towngas expanded its business onto the Chinese mainland and established its first project company in Panyu under the brand Towngas China to develop its city-gas business. In 2005, it entered the water services market with the brand Hua Yan Water and achieved synergy in operational management. To date, Towngas has secured over 600 projects in 28 provincial regions on the Chinese mainland, covering upstream, midstream and downstream natural gas sectors, environmentally-friendly energy, smart energy, water sectors and urban waste treatment.



## New Business Direction

The Group embarks on a new business direction – renewable energy – that will reposition us as an integrated energy operator working towards the country’s “30-60” decarbonisation goals of reaching peak carbon emissions by 2030 and achieving carbon neutrality by 2060.

In November 2021, Towngas China Company Limited, a Towngas subsidiary company, received HK\$2.8 billion from a well-known private equity fund, Affinity Equity Partners. This investment enables us to accelerate our transition from a traditional utility

company into a leading integrated clean energy supplier, with technology and innovation as our focus. Along with this new direction, Towngas China Company Limited was also renamed Towngas Smart Energy Company Limited (Towngas Smart Energy). This paved the way for us to expand our products and services into renewable energy, such as solar energy systems for our commercial and industrial (C&I) customers, Distributed Energy Systems (DES) and energy storage projects. The investment will also expand our digital capabilities through smart energy management systems.



Dr Lee Ka-kit (left), Chairman of Towngas Group, and Mr Peter Wong Wai-ye, Managing Director, at the press conference on the renaming of Towngas China to Towngas Smart Energy.

At Jiawang Industrial Park in Xuzhou, Jiangsu province, we supply steam heat to local residents and businesses as a replacement for coal.



The Group actively promotes renewable energy and is committed to contributing to the country's low-carbon environmental cause.



Currently, there are around 2,600 national and provincial industrial parks on the Chinese mainland. One of the main businesses of Towngas Smart Energy is the development of zero-carbon smart industrial park projects. For these projects, we are installing solar photovoltaic power generation systems on the rooftops of large-scale production plants and logistics warehouses inside existing industrial parks. The solar energy supplied will be configured for use in energy storage, charging and swapping power stations, multi-energy supply (cold, heat, electricity) and other energy facilities.

Towngas Smart Energy will build an integrated, smart, and sustainable renewable energy business based on three core pillars: integration, digitalisation and decarbonisation. By leveraging the new business development model of building and managing zero-carbon smart industrial parks, and applying cutting-edge technologies such as advanced energy storage technology, smart energy platform, blockchain and chips, the Group can create an integrated "source-grid-load-storage" smart regional energy supply management system.

The Group has also established a carbon asset company providing carbon emissions measurement, carbon trading and other carbon management services to help customers in zero-carbon smart industrial parks achieve decarbonisation and green governance. Due to the huge energy demand of industrial parks, we believe our smart energy services in these parks will grow rapidly. To date, we have planned more than 130 renewable energy projects for development.



## Upstream and Midstream Businesses

Our investments in midstream and upstream projects include long-haul pipelines, gas storage facilities and liquefied natural gas (LNG) terminals, which help us make purchases of gas from diversified sources to guarantee supply and save costs. Our underground salt-cavern gas storage project in Jintan, Changzhou, Jiangsu province, one of our midstream projects, is strategically located in the highly industrialised eastern part of China. The Jintan facility will ultimately comprise 25 wells with a total planned storage capacity of 1.1 billion cubic metres. Situated in economically active eastern China with a superior geographical location, this storage facility enables city-gas projects in the region to supplement the gas supply during the peak winter period. In the longer term, the facility is set to supply gas to other areas through interconnected pipeline networks and seize the opportunity of the official commencement of the national pipeline network to explore a new model for the commercial operation of gas storage.

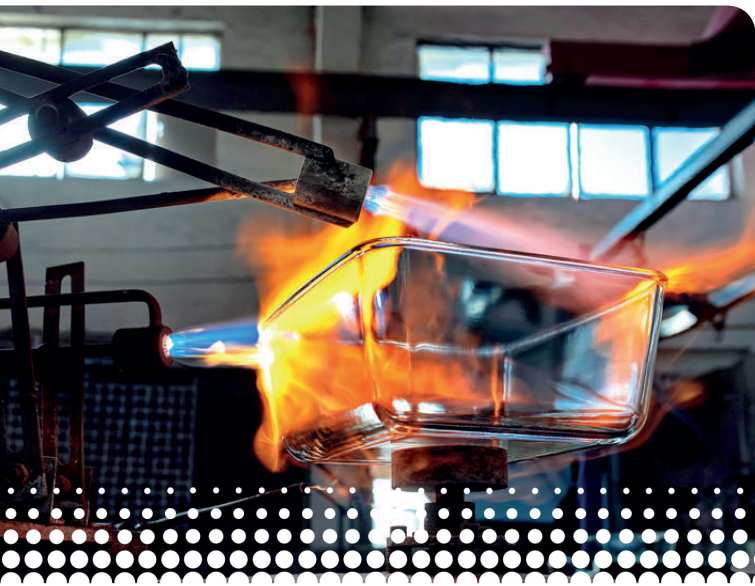
- ▲ The Group's underground natural gas storage facility in Jintan district, Jiangsu province, can help supplement and regulate gas supply during the winter peak period in eastern China.

The Group's storage tank project at the liquefied natural gas ("LNG") receiving terminal in Caofeidian district, Tangshan city, Hebei province, is progressing well. The project includes the right to use two storage tanks of 400,000 cubic metres in total alongside a jetty for importing 1 million tonnes of LNG per annum for a contract term of 50 years. This project, commissioned gradually since the end of 2022, will significantly enhance the Group's gas storage capacity and alleviate the need to build separate gas storage facilities by different companies under the Group. Through this project, the Group can also purchase gas directly from overseas to reduce the cost of natural gas.

The construction of a shale gas liquefaction plant in Weiyuan, Sichuan province, is expected to be completed in early 2023, becoming a gas storage and peak-shaving base in southwestern China. Cooperation agreements for this project have already been reached with many upstream and downstream enterprises. By 2025, it will have a total production capacity of 300,000 tonnes of LNG per annum.

## City gas

The Group currently operates 315 city gas projects in 24 provinces, municipalities and autonomous regions on the Chinese mainland, with over 37 million gas customers and a total gas supply network of over 120,000 kilometres, making it one of the largest city-gas enterprises on the mainland.



The demand for clean energy increased sharply with the announcement of China's "30-60" decarbonisation goals. A good growth in gas sales was achieved, due largely to the recovery of the C&I sector. In 2021, the total volume of city-gas sales was over 31 billion cubic metres, an increase of 16 per cent compared with the previous year, with C&I sales rising 19 per cent. A growing source of revenue for us is the DES business. Based on an integrated energy supply, for example, these systems use natural gas to generate electricity for space heating. They also produce steam through waste heat for an overall efficiency rate of 80 per cent or more. In 2021, our DES business accounted for 368 million cubic metres of our total gas sales, an increase of 39 per cent from the year before. The Group also made a stronger effort to expand the steam and hot water supply market, including district household heating, and heat or steam supply to C&I customers. We developed steam boiler projects and worked closely with our business partners to provide integrated energy solutions based on innovative technologies. One example is a dual-fuel smart system to control heat pumps and water heaters that supply hot water in hotels.




We supply natural gas and gas equipment to commercial and industrial customers in a wide range of industries.



The Group has always regarded safe operation as its core mission and ensures safety in all aspects through strengthening supervision, setting standards, implementing stringent inspections and launching extensive awareness campaigns. The Group introduced the regular safety inspection plan implemented in Hong Kong to the mainland, whereby it visits customers every 12 to 24 months to inspect gas appliances and pipelines. It also conducts comprehensive safety and risk management audits for each of its subsidiaries biennially, launches “safety year” activities, transforms outdated pipeline networks, eliminates potential threats and standardises installation work. These measures have significantly contributed to the elevation of safety standards in the mainland city gas industry.

In terms of services, the Group has set up a number of customer centres on the mainland to provide one-stop quality services, including consultation, gas bill payment, application for gas supply, repair and maintenance, gas appliance purchase and more. The Company’s 24-hour hotline centre regards the motto “you can hear our smile” as its service standard, with staff responding to customer requests in a timely manner. The Company also nurtures a warm service culture and improves customer satisfaction through the Smile Service Ambassador Awards Competition and Dandelion Scheme.



We carry out rigorous safety inspections and make an important contribution to raising safety standards in the gas industry. 



Mia Cucina creates a cooking space that combines fun, aesthetics and pleasure for customers.



## Extended Businesses

Through our extensive network of online and offline channels, we provide a wide variety of stylish kitchen equipment and cabinets, gas appliances, home accessories, health services and food products for healthy and comfortable living.

Our Bauhinia line of gas appliances is renowned for its high quality and safety standards. With the development of the Internet of Things (IoT), we have introduced a smart product series that includes range hoods, cookers, water heaters and space heaters. These and other Bauhinia smart kitchen appliances and devices can all be controlled through mobile apps. In 2021, we further added smart household gas alarms and household water purification products to the line. In the same year, we initiated a strategic plan to expand our residential space heating business. Capitalising on centralised material purchasing as well as standardised installation, designs and workmanship, we aim to establish a consistent brand image for Towngas Space Heating.

For Towngas Lifestyle, we launched an upgraded Moment+ online platform. It offers a comprehensive range of home services and products, gas-related services, as well as health management information and other related products and services. Through our Moment+ Community Healthy Lifestyle Experience Centres, we formed a new online and offline integrated business model focusing on health and lifestyle. Moreover, we built a strong community network and a one-stop-shop platform in partnership with renowned medical and health brands. Services



include health management, nutrition and diet consultation services, family insurance, cooking classes and in-home cleaning.

In response to the growing demand for high-end home products, The Group introduced the Mia Cucina cabinets from Hong Kong to the mainland market in 2016. From kitchen cabinet consultation to measurement and design, from product supply to installation and after-sales service, professional kitchen unit engineers and project teams are ready to provide customers with a cooking space that combines fun, aesthetics and pleasure. With its high-quality products, the Mia Cucina kitchen unit business has achieved breakthroughs in its projects across East China, Central China and South China.

## Water Supply and Wastewater Treatment

In 2005, Towngas began its foray into the water supply market on the mainland and established the Hua Yan Water brand, specialising in tap water supply and wastewater treatment, water quality and meter testing, and smart water supply services. Hua Yan Water currently operates nine water projects, serving over 2.6 million households with a daily water supply capacity of 4.67 million tonnes. Another subsidiary, Hong Kong and China Environmental Holdings Company Limited (Hua Yan Environmental), coordinates our environmental governance and municipal waste utilisation businesses. With an objective to achieve zero waste and waste-to-energy, Hua Yan Environmental's businesses include food waste treatment, waste incineration for power generation, and sewage treatment.

Hua Yan Water has accumulated a wealth of experience in wastewater treatment.



We achieved satisfactory progress in our urban organic waste treatment projects at Suzhou Industrial Park, Jiangsu province, and Tongling, Anhui province. The project at Suzhou Industrial Park has cumulatively processed more than 300,000 tonnes of organic waste and produced 13 million cubic metres of bio-natural gas. An additional production line in the Suzhou project was commissioned in 2021, increasing daily processing capacity to 800 tonnes. Two municipal waste treatment projects in Changzhou, Jiangsu province, began construction in 2022, which are expected to increase our urban waste processing capacity to 1,500 tonnes per day when completed. Another project, an incineration treatment facility for electricity generation in Jiashan, Changzhou, has been included on the list of key provincial eco-environment projects, with a daily working capacity of 1,500 tonnes in the first phase.





## Hong Kong Businesses

For the past 160 years, Towngas has provided the people of Hong Kong with safe, reliable and clean energy, in addition to innovative products for its customers to enjoy a more comfortable and convenient lifestyle. In Hong Kong, Towngas operates a gas network of over 3,700 kilometres in service of more than 1.9 million customer accounts, whose trust and support it has earned through its commitment to providing quality products and services.



## Safe Gas Supply

“Safety first” is a core principle at Towngas, which prioritises the safety of the public and its customers and employees. Its 24-hour grid control centre, regular region-wide pipeline inspections and round-the-clock emergency maintenance safeguard the city’s reliable gas supply. In addition, its regular safety inspection programme ensures the safety of the gas supply system and cooking appliances for effective incident prevention. Currently, Hong Kong leads the world with a gas supply reliability rate of up to 99.996 per cent.

To meet the energy demand of Hong Kong’s infrastructure development, Towngas is committed to its long-term investment in the expansion of the city’s pipeline network. The Company is also working continuously to improve the pipeline network distribution in every district, with resources earmarked to bring in new equipment for work efficiency enhancement.





All calls to the Towngas Customer Service Hotline are answered by customer service officers, rather than a 'cold' pre-recorded voice message system.

## Customer Service

Public utility services are closely connected with people's everyday lives. Prioritising its customers, Towngas has introduced the Six Star Service scheme, under which 21 customer centres have been set up. In addition, our 24-hour hotline can handle customer enquiries in multiple languages, including Tagalog and Indonesian, facilitating communication with foreign domestic helpers. To minimise customers' waiting time, Towngas pledges to connect and disconnect gas supply within one working day and provide repair and installation services within two working days upon customer request. Time slots for repair services have also been increased to 13 sessions to allow greater flexibility for customers, with the earliest session available for repair service being 9 am to 10 am.

Towngas regularly upgrades its website and virtual service platform to offer more efficient and versatile services as well as encourage customers to join in its environmental protection efforts. Towngas understands the importance of direct communication and follow-up, and regular surveys are conducted to solicit the opinion of its customers. The Company also pledges to handle any written suggestions by customers within three working days and provide resolutions to respective problems or a statement of when the matter will be resolved within two weeks. The Towngas Customer Focus Team also visits different districts to gather views from customers on its products and services while promoting gas safety.

## Market Development

Towngas has invested great efforts in the commercial sector by continuously exploring new gas applications. Industry-specific, high-efficiency, environmentally friendly energy solutions and superb gas products are launched to help boost the competitiveness of its industrial and commercial customers. Towngas' high-efficiency condensing boilers have been popular with customers since their launch, with 20 per cent greater efficiency than traditional models. Gas desiccant dehumidification systems effectively improve indoor air quality, and are widely used in shopping malls, food production facilities, wet markets, hospitals and more, including large-scale structures such as the Hong Kong Convention and Exhibition Centre and the Hong Kong Film Archive. Furthermore, Towngas has introduced a series of products with high energy efficiency, such as steam cabinets, food steamers, wok ranges and stockpot ranges. Certain technologies applied, such as heat recovery techniques in high energy efficiency steamers, have been patented, effectively enhancing energy efficiency and improving indoor air quality.

In the residential market segment, Towngas offers one-stop kitchen equipment solutions, including high-quality cooking appliances, water heaters, ovens, range hoods and clothes dryers. Appliances under the TGC brand are specifically designed with creativity and style for Hong Kong's unique living environment, with built-in hobs that come with automatic power-off and timing functions to enhance safety and convenience during cooking. Another cooking appliance brand of the Company, SIMPA, emphasises minimalist designs with comprehensive functions, economical prices and practicality to suit the needs of Hong Kong people.



↑ Towngas is committed to creating smart kitchens for customers.

In addition, in order to allow families to make good use of their kitchen space, Towngas introduced its high-end Mia Cucina brand of kitchen cabinets as well as cooking appliances and equipment in 2010. Using top-notch European panel materials and accessories and offering consultation, design, tailor-making and installation services for customers, the professional Towngas team helps customers create an ideal cooking space according to their lifestyle and preferences, making Mia Cucina a popular choice for retail clients and property developers.

Towngas also strives to promote the culture of flame cooking. The Towngas Cooking Centre was established in 1977 to provide a wide range of cooking courses for food lovers to experience the joy of flame cooking and to learn professional and comprehensive cooking skills. The Centre has also joined hands with Disciples Escoffier to offer diplomas in pastry and culinary arts. Students can learn from Michelin-starred and internationally renowned chefs before passing exams to obtain the French National Diploma in culinary studies from the French Ministry of Education, which qualifies them to open restaurants in France.

Our Towngas Fun membership programme, launched in 2020, has also helped to build customer loyalty. By offering welcome rewards and the opportunity to collect points for redemption of our products, Towngas Fun succeeded in attracting over 200,000 members by the end of October 2022.



↑ Towngas opens the new concept restaurant CulinArt 1862.

To celebrate our 160th anniversary, we have opened a new concept restaurant that combines culinary skills and art, infusing our ingredients with aesthetic elements for the ultimate taste and visual enjoyment, and presenting the delicacies to our guests.



## Diversified Businesses

Towngas remains committed to keeping pace with the times and actively expanding its business. Apart from operating and developing various energy businesses, the Company's scope has grown to include telecommunications and information technology, manufacturing, civil engineering and building services, as well as plant design, construction and gas project consultation.

## New Renewable Energies

As biomass could be one of the key solutions for attaining carbon neutrality, we grouped all our businesses that make use of biomass as feedstock into a single platform, and gave it a new identity – EcoCeres, Inc (EcoCeres). We have proprietary technologies to convert waste-based bio-grease, such as used cooking oil or palm oil mill effluent (POME), into hydro-treated vegetable oil (HVO). Our plant in Jiangsu province has been going through a period of transformation with the introduction of better catalysts, enhanced production capacity and a higher-value product mix. In 2021, EcoCeres produced 185,000 tonnes of HVO, all of which were exported to Europe, where it is used as an advanced biofuel. We operate a diverse range of businesses that provide innovative environmental solutions and contribute to global carbon reduction initiatives.

In 2021, we completed the upgrade of our Jiangsu plant, which expanded production capacity by 40 per cent to 1,000 tonnes per day. We also gave our plant a new capability for converting some of the HVO produced into sustainable aviation fuel (SAF). Given the proven technologies and processes that go into our HVO project, we are now exploring other possible sites, such as in Southeast Asia, for a plant closer to feedstock sources for utilising the abundant POME waste there.

Another proprietary technology owned by EcoCeres makes use of agricultural waste (the inedible portion of harvested crops) as feedstock. This technology involves decomposing agricultural waste into its basic components of hemicellulose, cellulose and lignin, which then become the precursors for the production of renewable products, including furfural and cellulosic ethanol, the latter of which is in high demand in European markets.



Our HVO plant in Zhangjiagang, Jiangsu province.

The pioneering coalbed methane project in Shanxi province for producing liquefied natural gas (LNG) recorded excellent performance. Owing to much higher LNG prices in 2021, this project proved to be an outstanding investment, both in financial and environmental terms. We also reinforced our LNG production with the commissioning of a new coke oven gas-to-LNG plant in Ningxia Hui Autonomous Region. This plant will be a key supplier of clean fuel for road transport in the country's western region.

We will leverage our proprietary technology to create a platform for an advanced new materials business offering carbon fibre, thermal interface material, carbon paper and super-activated carbon for electric/new energy vehicles, as well as energy storage industries.

Towngas remains committed to keeping pace with the times and actively expanding its business. Apart from operating and developing various energy businesses, the Company's scope has grown to include telecommunications and information technology, manufacturing, civil engineering and building services, as well as plant design, construction and gas project consultation.



## Telecommunications

With solid infrastructure and resources, Towngas Telecommunications Company Limited (TGT), a wholly-owned subsidiary of the Group, provides services to Hong Kong, the Chinese mainland and international telecommunications service providers, operators and corporations. TGT today has world-class data centres across Hong Kong and the Chinese mainland, offering strong connectivity and advanced data services such as fog and cloud computing. In 2021, TGT began expanding its Data Centre 2 in Hong Kong in order to satisfy the growing market demand for big data and 5G communications services. Moreover, TGT installed the “5G Sharing System” that offers high speed, low latency and stable 5G mobile communication application service, as well as related applications for the convenience of customers in residential and commercial areas. In future, TGT will continue exploring additional growth opportunities and introducing new technologies, such as smart home applications.

## Information Technology

Our wholly-owned subsidiary, S-Tech Technology Holdings Limited (S-Tech), was established to provide our city-gas companies with information technology that supports customer service management. Currently, this business is engaged in cloud software development, solutions implementation and systems integration services. With these services, our city-gas businesses are able to manage their advanced customer service and gas piping network systems more efficiently. The Towngas Customer Information System (TCIS) developed by S-Tech covers 93 per cent of the Group’s city-gas companies on the mainland. In 2021, the cloud and non-cloud-based versions of TCIS3.0 were implemented in 154 city-gas companies, achieving 100 per cent availability.



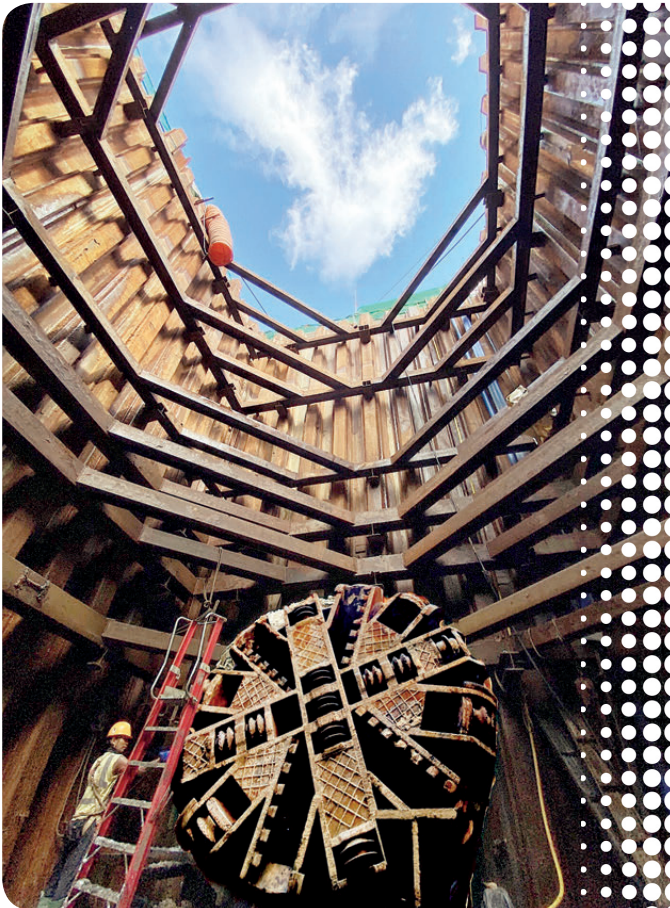
## Manufacturing

M-Tech Metering Solutions Company Limited (M-Tech) is a wholly-owned subsidiary of the Group that develops and markets smart gas meters. Many of these devices incorporate the latest developments in advanced technology, including Micro-Electromechanical Systems and Narrowband Internet of Things (NB-IoT), to provide products with smart features that enhance customer safety and services, as well as wider measuring ranges. In 2021, M-Tech sold 460,000 residential NB-IoT meters, which was more than twice the number sold the year before. By integrating this product with an S-Tech platform, an SMS warning can be sent automatically to registered users' mobile phones. M-Tech also introduced an ultrasonic gas meter during the year to offer commercial and industrial customers a more accurate, sensitive and durable product.

Another wholly-owned subsidiary of the Group, G-Tech Piping System (Zhongshan) Company Limited (G-Tech), supplies high-quality polyethene (PE) piping and related ancillary products with the support of GH-Fusion Corporation Limited, a joint venture between Towngas and Fusion Group (United Kingdom) specialising in PE pipe fittings. Together with its two logistics centres, G-Tech offers quality products, high distribution efficiency and excellent customer service.

## Civil and Building Services Engineering

Utilising its technical expertise and trenchless technologies, U-Tech Engineering Company Limited (U-Tech) provides its clients with a comprehensive one-stop service. U-Tech won a number of large projects in Hong Kong from the Government and private sector based on the strength of its technical competence and competitive prices. The new projects include electrical installation and fire services contracts for two residential developments in the Kai Tak Development area and a three-year contract for the Water Supplies Department. The latter project, which involves the rehabilitation of ageing water mains on Hong Kong Island and the outlying islands, is one of the largest waterworks contracts ever secured by U-Tech.



## Plant Design, Construction and Gas Project Consultation

The services provided by P-Tech Engineering Company Limited (P-Tech) range from professional consulting, project feasibility studies, project risk assessment and project management to plant equipment installation and commissioning services. P-Tech has more than 20 years of experience operating and maintaining high-tech gas plants, oil depots, renewable energy facilities and related control systems. The Company also undertakes projects to provide one-stop services from project design, procurement, contract bidding and construction to commissioning and acceptance testing. With years of experience in professional plant operation and maintenance, P-Tech has established a preventive maintenance management system, which effectively extends the service life of production equipment and reduces production and operation costs for customers.



The aviation fuel storage at Tuen Mun, Hong Kong. 

## Aviation Fuel Facilities

Towngas signed a 40-year franchise agreement with the Hong Kong Airport Authority in 2002 to design, construct and operate aviation fuel facilities, while providing sufficient fuel reserves for the flights using the Hong Kong International Airport. The project includes eight large storage tanks with a total storage capacity of 264,000 cubic metres and berths at two piers for oil tankers with a displacement of up to 80,000 tonnes to dock at. Aviation fuel is transported directly from Tuen Mun to the nearby airport island via two submarine pipelines. The project was put into full operation in 2010, and is currently the main logistics base for aviation fuel in Hong Kong.



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# ESG SYMPOSIUM 2022



## Igniting a Brighter Future

As an energy company with roots in Hong Kong, Towngas was one of the first enterprises to promote sustainable development, and has insisted on making environmental, social and governance (ESG) issues a primary consideration in its daily operations over the years.

The Company is committed to environmental protection and public welfare as a long-term business, taking the lead in the development of green and low-carbon energy and promoting community awareness of environmental protection and education.

We are not only determined to provide quality products and services to the public with our persistent spirit of innovation, but also actively seek to give back to society by fulfilling its corporate social responsibility, based on the concept of utilising one's strength to benefit society.

We take care of our staff's physical and mental health and regard them as our most important asset. We also promote the traditional virtues of caring for the young and the old, and aiding the poor and the people in need.

We want to use our strengths and the power of the business community to create a world of blue skies and a livable future for generations to come.

## Going Green and Low Carbon

In its business operations, Towngas steadfastly adheres to its pledge for environmental protection, striving to develop clean energy for households, commercial and industrial enterprises and the transportation sector, with the ultimate goal of creating a sustainable future and reducing the carbon footprint of its operations.

The Company adopts an environmentally friendly raw material portfolio for gas production, comprising natural gas, naphtha and landfill gas, as part of its committed efforts in carbon emission reduction. In 1999, it built Hong Kong's first landfill gas utilisation plant at the Shuen Wan Landfill adjacent to Tai Po Industrial Estate, replacing a portion of naphtha as a heating fuel in the process of gas production.

In 2007, stepping up its efforts for energy recycling, the Company launched Hong Kong's largest landfill gas utilisation project at the North East New Territories (NENT) Landfill. In 2017, the Company's third landfill gas utilisation plant in South East New Territories began operation, further utilising landfill gas, which helps reduce carbon dioxide emissions and naphtha consumption.

Today, we are actively exploring the extraction of hydrogen, which makes up 49% of our gas, to combine with more than 3,700 kilometres of Towngas gas pipelines throughout the territory, providing a safe, efficient and cost-effective energy option for green transport in Hong Kong.

Aiming to become a leading environmentally friendly enterprise, Towngas became the first energy supplier to issue green bonds in Hong Kong in November 2017. The capital raised is used for the Converting Waste into Treasure projects such as the South East New Territories (SENT) Landfill Project and other eligible green investment projects. In its daily operations, Towngas adopts measures for energy conservation and waste management, implementing comprehensively the concept of 5Rs, namely Reduce, Replace, Recover, Recycle and Reuse, with proceeds obtained from recycling going towards the promotion of environmental protection.



▲ The Climate-related and Nature-related Directive Guide published by Towngas.

In response to climate change, Towngas conducted a comprehensive climate change risk assessment for its Hong Kong operations in 2015. Since then, the Group has gradually expanded the assessment to its mainland project companies, in a bid to reduce potential impacts caused by extreme weather phenomena on its businesses and ensure a safe and stable energy supply for the public. In 2022, Towngas Smart Energy, a subsidiary of the Group, officially joined the China Oil and Gas Methane Alliance, aiming to reduce the average methane intensity in natural gas production to below 0.25% by 2025. In the same year, we took the lead in publishing the Climate-related and Nature-related Directive Guide as a pilot integrated document to assess and outline the future development of the Company's businesses in addressing risks and opportunities in the relevant areas.

To explore more zero-carbon technology solutions, Towngas successfully organised the first TERA-Award Smart Energy Innovation Competition in 2021, receiving 208 entries from 23 countries and regions around the world. In 2022, we were back with the second edition of the Competition, focusing on five key areas: Renewable Energy, Energy Storage and Conversion, Energy Saving and Carbon Reduction, Hydrogen and Fuel Cells, and Energy Digitisation. We received an overwhelming number of entries, underlining the growing global impact of the Competition.

## Strengthening Corporate Governance

The Group's Board regularly reviews key environmental, social and governance-related issues. In 2019, an ESG Committee led by a member of the Board was established to drive the initiative and follow up on the implementation of the objectives set in each area. The Towngas Group has won an average of more than 50 ESG-related awards each year, including retaining the top spot in the Greater China Business Sustainability Index and an upgrade in MSCI ESG rating from "BBB" to "A" in 2022.

As a gas supplier and utility company, Towngas considers "safety" a top priority, and our goal is to achieve "zero accidents". Our pioneering regular safety inspection service every 18 months, which was later introduced to the mainland, has now become the industry standard. Today, the gas supply in Hong Kong is 99.996% stable.

"Innovation" is deeply rooted in Towngas' DNA. The Company introduced the concept of "Quality Circle" to establish an innovative mechanism to strengthen the concept of quality service, thereby enhancing the competitiveness of the Company. We encourage our employees to be innovative and to implement their ideas, which has led to a large number of self-developed products being put into use for the benefit of society. When even a stove or a meter can be digitalised and intelligentised, it is proof that we are committed to making the "kitchen business" as relevant to our customers as possible.



Towngas retains the top spots in three Business Sustainability Indices.



Towngas Group successfully organises the TERA-Award Smart Energy Innovation Competition.



On the other hand, Towngas regards its employees as its most valuable asset and has always valued cultural diversity and promoted equal opportunities to attract different talents. We believe that building a culture of care, reward and innovation is the key to long-term corporate development. The Company strives to create a harmonious workplace where employees can excel, and to nurture talents by fostering a culture of continuous learning. Each year, the Company organises the Outstanding Employee Award to recognise and reward exceptional contributions from colleagues.



The Towngas Training Institute (TTI) is committed to providing professional gas training to the Group's colleagues and contractors in Hong Kong and on the mainland, nurturing talents for the industry. In July 2022, the Towngas Energy Academy was established, serving as a research platform with a focus on smart and green energy.

In recent years, Towngas has been flexible and innovative in taking care of the physical and mental health of its staff in the face of the challenges of the epidemic. For example, online yoga and integrated exercise classes were organised, the annual long-distance running competition was transformed into an online run, and a series of seminars and workshops were launched online to provide information on combating the epidemic.

Ms Fan Kit-ye (3rd from left), Head of Corporate Human Resources; Mr Daniel Fung Man-kit (4th from left), Head of Strategy & Innovation and Commercial - Hong Kong Utility, and other members of the management team visit the frontline colleagues in person.



Mr Alan Chan Ying-lung (3rd from left), Chief Investment Officer of Towngas, gives away herbal tea and other heat relief materials to colleagues working outdoors.



## Fulfilling Corporate Responsibilities

As a member of society, Towngas has been actively involved in community service through various channels since the 1970s. Caring for the elderly is one of the most important aspects of our ongoing efforts. In 1999, the Company launched its Soup to Warm the Heart programme, under which volunteers visit elderly people living alone in various districts, showing care for them by bringing them soup. With the active support from the Company and the employees, the Towngas Volunteer Service Team was formally established in the same year, and has accumulated nearly one million hours of volunteer work to date.

To preserve Chinese cultural traditions and promote family and neighbourhood harmony, the Company organises the Rice Dumplings for the Community and Mooncakes for the Community programmes every year. Towngas volunteers join hands with various non-profit organisations in wrapping rice dumplings and delivering mooncakes to the elderly, the underprivileged, grassroots families and others in need, as well as local ethnic minorities, to share love and care on these festive occasions. So far, Towngas has given away a total of 4,244,400 rice dumplings and 2,962,430 mooncakes. Even during the worst days of the epidemic, Towngas never stopped supporting the community, but continued to spread its love and care through online activities.



Mr Peter Wong Wai-ye, Managing Director, sends his blessings and care to the elderly in person.

At the same time, the epidemic has hit all industries in Hong Kong since 2020, with grassroots families facing unemployment, underemployment and reduced income. Towngas launched a series of measures to directly help the industry to alleviate its immediate needs and reduce the food expenses of grassroots families. These measures included the Credit Period Extension Scheme for the Catering Industry, Supporting F&B and the Economy campaign, Love on Delivery fresh food packs programme, Unemployed Support Scheme and Dining Coupon Scheme, and so on.



Mr Isaac Yeung Chung-kwan (right), Head of Corporate ESG / Head of Corporate Affairs, visits grassroots families.

We at Towngas know we also have to change how we think about volunteer work and be creative to keep up with the times. In recent years, we have been focusing more on utilising our corporate and business strengths to support the neglected and even forgotten groups, filling the “gaps” in care and services in society. With this idea in mind, Towngas joined hands with the Hong Kong Sheng Kung Hui Welfare Council to launch the Chef Anchor programme in 2017.

The Chef Anchor programme was a cooking course for elderly people with mild cognitive impairment, designed by occupational therapists and Towngas cooking instructors. The aim is to integrate procedural memory into the ordinary cooking routine, so that patients can undergo procedural training during cooking, delaying their illness and enhancing their self-care ability. As the programme progressed, we also added a new component of carer participation, allowing carers to join in cooking fun to relieve stress and expand their social circles. After years of hard work, the latest study has proven that more than 50% of the elderly and carers who participated in the Chef Anchor programme were able to improve their overall physical and mental health levels.

On the other hand, the Group’s community initiative “Gentle Breeze Movement”, which was launched on the mainland in 2013, is based on the idea that the corporate social responsibility activities carried out by the Company and its subsidiaries can bring warmth to the public like a gentle breeze. To date, the Gentle Breeze Movement has reached 14 provinces, regions and municipalities, including Shaanxi, Guizhou, Sichuan, Anhui and Inner Mongolia Autonomous Region etc., and provided financial and material support to schools with insufficient resources. The renovation of the school building, setting up of the Towngas China Charity Libraries and donation of teaching equipment, learning and living materials, as well as cultural and sports supplies, have benefited nearly 10,000 students from grassroots families, helping them to build their future with knowledge.

From lighting up the streets, igniting the warmth for thousands of homes, to using technology and wisdom to fuel a future of sustainable development, The Hong Kong and China Gas Company Limited, with a history of 160 years, is embarking on a new journey with a new outlook, working together with the community to create a better home.

The Chef Anchor programme is effective in enhancing the physical and mental health of the elderly and their carers.



The Towngas Gentle Breeze Movement helps children from underprivileged areas to build their future with knowledge.



# Major Awards (2013-2022)

## ➤ Gas Industry Award 2014 – Company of the Year Award

— The Institution of Gas Engineers & Managers (IGEM) and the Energy and Utilities Alliance (EUA)



## ➤ 2016 HKMA Quality Award – Grand Award

(Towngas China Company Limited)

— Hong Kong Management Association (HKMA)



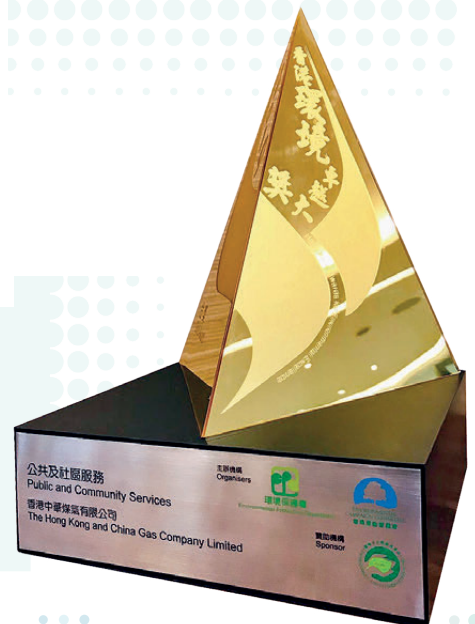
## ➤ 2018 The 9th Hong Kong Outstanding Corporate Citizenship Awards

- Gold Award (Enterprise Category)
- Gold Award (Volunteer Team Category)

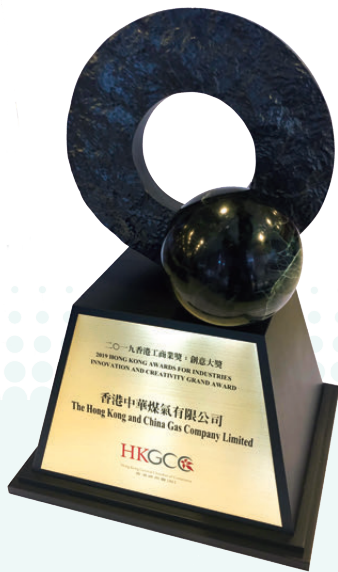
— Hong Kong Productivity Council (HKPC)

## ➤ 2019 Hong Kong Awards for Environmental Excellence – Public and Community Services Sector – Gold Award

— Environmental Campaign Committee (ECC)







## ➤ 2019 Hong Kong Awards for Industries Innovation and Creativity – Grand Award

— Hong Kong General Chamber of Commerce (HKGCC)



## ➤ 2020/21 Hong Kong Sustainability Award

- Grand Award (Large Organizations)
- Award For Excellence in Training and Development – Gold Award

— Hong Kong Management Association (HKMA)



## ➤ BOCHK Corporate Environmental Leadership Awards 2020

- Manufacturing Sector – Gold Award
- Sustainable Business Award

— Federation of Hong Kong Industries (FHKI)

## ➤ 2021 20th Hong Kong Occupational Safety & Health Award

- Safety Performance Award – Outstanding Award
- OSH Enhancement Program Award – Gold Award
- OSH Innovative Award – Gold Award

— Occupational Safety and Health Council (OSHC)





## Retaining in 2021

- Greater China Business Sustainability Index – Ranked 1st, Exemplar Level
- Greater Bay Area Business Sustainability Index – Ranked 1st, Exemplar Level
- Hong Kong Business Sustainability Index – Ranked 1st, Exemplar Level

— The Chinese University of Hong Kong Business School's Centre for Business Sustainability

## ➤ SDG Achievement Awards Hong Kong 2022

- Grand Award
- Project Award – Gold
- Project Award – Outstanding Impact
- Organisation Award (Sustainable Organisation) – Silver

— Green Council



## ➤ ESG Awards 2022

- Outstanding ESG Award
- Best in ESG Practices
- Best in ESG Report
- ESG Project Innovation Award
- Innovative Climate Technology Award

— Television Broadcasts Limited



## ➤ Industry Cares Recognition Scheme 2018, 2022

- Outstanding Caring Awards (Enterprise Group)
- The Most Innovative Award (Enterprise Group)

— Federation of Hong Kong Industries







Towngas website



Towngas Smart Energy website

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