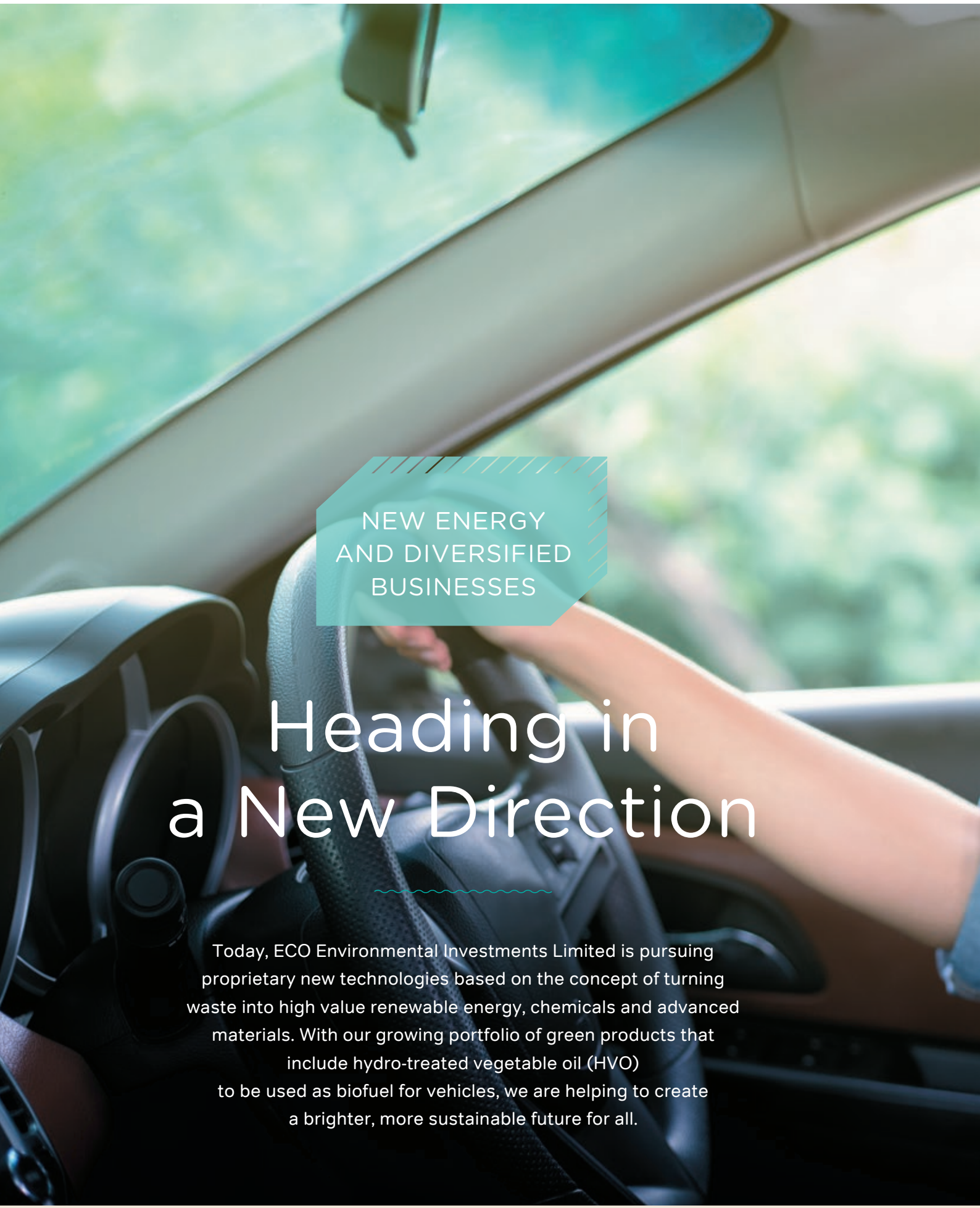
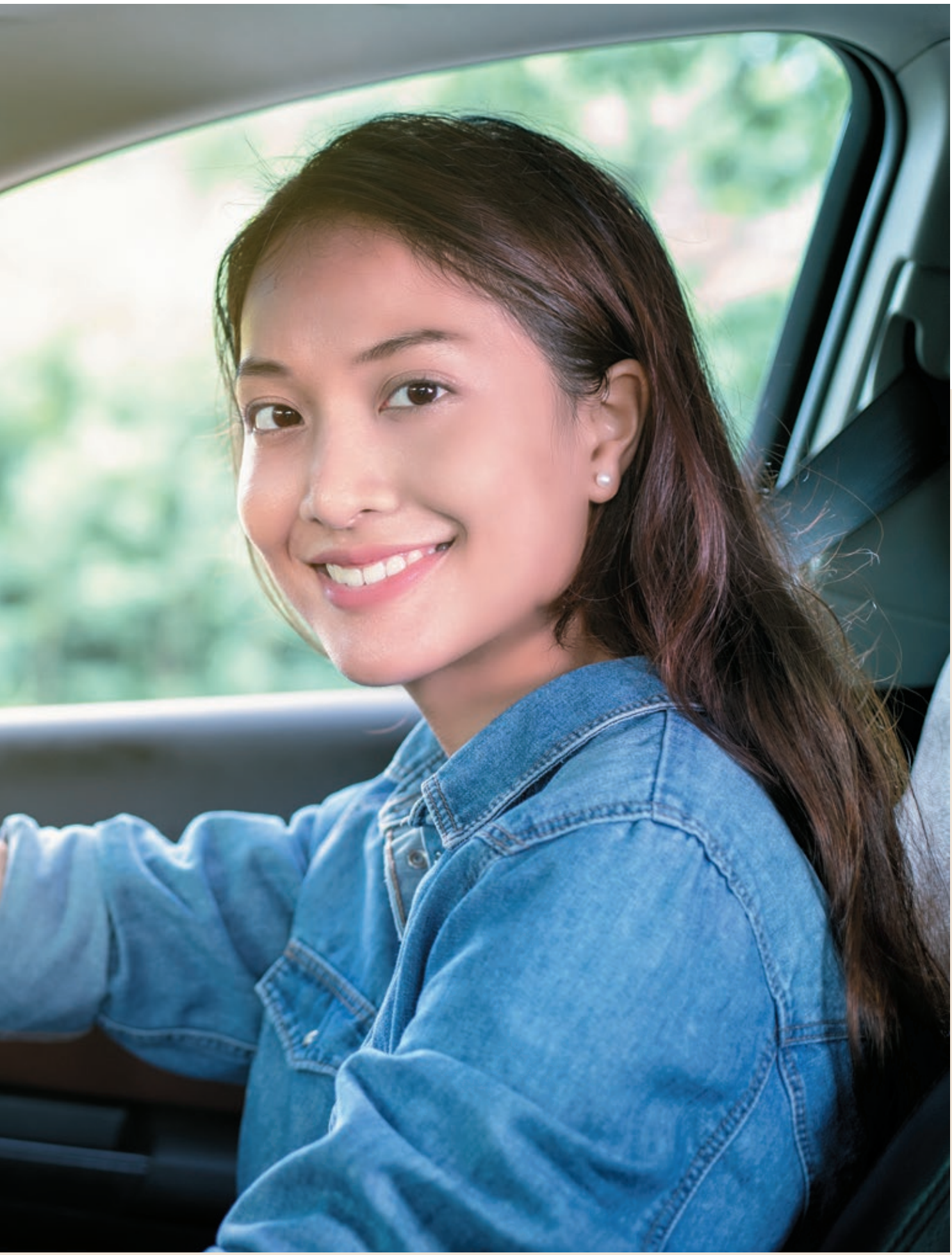


NEW ENERGY
AND DIVERSIFIED
BUSINESSES

Heading in a New Direction

Today, ECO Environmental Investments Limited is pursuing proprietary new technologies based on the concept of turning waste into high value renewable energy, chemicals and advanced materials. With our growing portfolio of green products that include hydro-treated vegetable oil (HVO) to be used as biofuel for vehicles, we are helping to create a brighter, more sustainable future for all.



NEW ENERGY AND DIVERSIFIED BUSINESSES

The key proposition of our new energy business is to create value through the development of clean energy, chemicals and advanced material products that not only bring substantial returns to the Group and its investors but also address the pressing environmental challenges faced by the global community.

New ECO Energy

In 2000, ECO Environmental Investments Limited (ECO) was established as a business platform for pursuing new energy opportunities. Since then, ECO has embraced the conversion of low value feedstocks into high value products as its core strategy. These feedstocks, which primarily comprise waste, are used to produce clean energy and advanced chemical and material products.

As symbolised by its company logo, ECO has always put ecological friendliness at the core of its business. Recognising that technological innovation would power its green journey, ECO has been strengthening its research and development capabilities and now has two research facilities in Shanghai and Jiangsu province, respectively.

Today, ECO has already developed a strong list of proprietary technologies, many of which are ready to be implemented and will be instrumental in defining ECO's competitive edge. With these technologies, a sustainable business portfolio is gradually taking shape, including products based on unconventional gas resources, agricultural waste, bio-grease waste and tar oil.

Trial production began at ECO's HVO plant in Zhangjiagang, Jiangsu province, with the potential of making a significant contribution to carbon reduction.

ECO's vision is to become a world-class green industry leader, to provide solutions that overcome environmental challenges arising from climate change, and respond to sustainable development for future generations.

From LNG to Advanced Biofuels

During the year, our liquefied natural gas (LNG) plant in Shanxi province marked its 10th anniversary of shipping LNG to customers. This plant liquefies the coalbed methane extracted from the seams of neighbouring coal mines and converts it into LNG, a source of green energy in high demand in the region.

Coalbed methane is a potent greenhouse gas (GHG) if inadvertently released into the atmosphere. By capturing coalbed methane and putting

This new plant set up by ECO started production of high-quality ethylene glycol in Ordos, Inner Mongolia Autonomous Region.

At ECO's R&D centre at Zhangjiagang, Jiangsu province, our researchers are developing new proprietary green technologies.

this unconventional gas resource into commercial use, ECO has been making a significant contribution towards the reduction of GHG emissions.

Following the 2015 Paris Agreement, in 2018 the EU signed off on a new set of Renewable Energy Directives. These Directives call for increasing Europe's overall renewable energy targets to 32 per cent by 2030 and raising its target for the transport sector to 14 per cent.

At Zhangjiagang, Jiangsu province, ECO has successfully put into trial production a plant to produce HVO. In 2018, two shipments of HVO totalling 7,000 tonnes were exported to European markets. As HVO can be readily blended with diesel oil, these shipments will help to meet Europe's renewable energy targets.

ECO's HVO is an advanced biofuel produced from palm oil mill effluent (POME), a feedstock with low indirect land use change (ILUC) impacts. Certified under the International Standard of Carbon Certification (ISCC) Scheme, ECO's HVO will help achieve a significant reduction in carbon emissions and meet the demand for more advanced biofuels as the world steps up its efforts to combat climate change. ECO is now expanding its HVO production facility at Zhangjiagang and is continuing to improve its process technology, while also exploring the potential of other feedstocks such as used cooking oil.

In addition to HVO, ECO has been researching the conversion of agricultural waste into cellulosic ethanol, another important advanced biofuel that can be blended with gasoline to offer significant reductions in carbon emissions.

From Fuels to High Value Chemicals

After years of producing methanol from coal at its plant in Ordos, Inner Mongolia Autonomous Region, ECO has added an ethylene glycol (EG) production unit, which makes use of 40 per cent of the syngas derived from coal gasification.

Gasification is a clean technology for turning coal into syngas for further chemical transformation, without emitting flying ash, SO_x (which is fully recovered as pure solid sulphur), or NO_x. The EG produced from syngas has much

higher value than methanol, as it is a chemical in wide demand for the manufacture of polyester fibres. Since mainland China has an enormous textile industry and today imports most of the EG it uses, the prospect of producing this chemical from China's abundant coal resources has been widely welcomed by the industry.

The production of EG has opened the door for ECO to produce other high value chemicals. Among these, ECO has been researching the production of dimethyl carbonate (DMC) using two possible approaches: the more advanced carbonylation of methyl nitrite process, and the synthesis of methanol with carbon dioxide. ECO plans to test these new technologies in 2019 and sees particularly good potential for DMC, a fuel oxygenate additive that could help to reduce emissions of carbon and particulate matters.

ECO is also researching the production of high value chemicals using agricultural waste as a feedstock. After each harvest season in China, vast amounts of agricultural waste that are unavoidably produced have, until now, been either ploughed back into the field, which damages top-soil, or incinerated in-situ, which causes extensive air pollution. Our ECO's research, therefore, will have profound economic and environmental benefits for the country.

Agricultural waste produced during the harvest season is now being used by ECO as a feedstock for high value chemicals.

After years of R&D, ECO has successfully developed an innovative method to decompose agricultural waste into its three basic components, namely cellulose, hemicellulose and lignin. Our pilot production plant, situated in mainland China's corn belt of Tangshan, Hebei province, is expected to start trial production of furfural and paper pulp by the end of 2019. Further research is now on-going to exploit the vast potential of hemicellulose and cellulose.

Carbon Materials Development

In the push to make transport more environmentally-friendly, many governments around the world are throwing their support behind electric-powered vehicles. Some European countries have even announced plans to ban internal combustion cars by 2040. Successfully electrifying transportation, however, will largely depend on breakthroughs in the continuing development of on-board power storage technologies and a new generation of light-weight auto body materials.

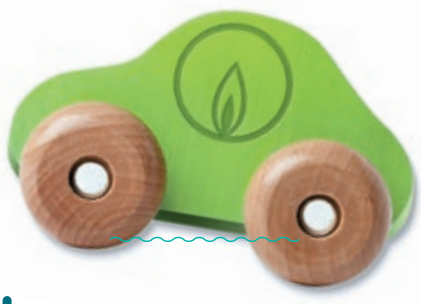
To that end, ECO has developed a patented technology to extract high-quality activated carbon and mesophase pitch from tar oil, a by-product of the coke making process, with potential use in the manufacture of super capacitors, graphitic anode and carbon fibre. Currently, ECO is designing a demonstration plant in Inner Mongolia Autonomous Region for the manufacture of activated carbon and pitch to be used in carbon fibre spinning. Construction of the plant is expected to commence in 2019.

Business in Hong Kong

Despite uncertainties in the global economic and political environment, the overall business performance of ECO in 2018 was positive.

Both our aviation fuel and LPG filling station businesses remained stable. Our airport-based aviation fuel tank farm operation, one of the largest of its kind in the world, received and delivered about 6.76 million tonnes of jet-A1 fuel to Hong Kong International Airport in 2018. Since the signing of a 40-year franchise agreement with Hong Kong Airport Authority in 2002, the operation has generated steadily increasing income. Our LPG filling station business, with five dedicated stations for taxis and minibuses, continued to run smoothly and sold nearly 60,000 tonnes for a revenue of over HK$400 million.

In Hong Kong, we also make use of landfill gas collected from two strategic landfills: the North East New Territories (NENT) and South East New Territories (SENT). In addition to the NENT facility, which has been in operation since 2006, the new facility at SENT recorded its first full year operation in 2018. By collecting and utilising landfill gas that would otherwise have been flared off, these landfill sites have substantially reduced in-situ GHG emissions. Furthermore, treated landfill gas is used as a substitute for naphtha in town gas production, which is the renewable portion of our energy mix.



Cleanness

Telecommunications

Our telecommunications business in Hong Kong and mainland China is handled by Towngas Telecommunications Company Limited (TGT), which offers connectivity and data centre and cloud computing services for international and local telecommunications service providers, operators and corporations, among others. During the year, the business of this subsidiary continued to grow steadily.

In Hong Kong, our competitive advantage in this sector is based on our Glass-In-Gas (GIG) technology, which enables optical fibres to be installed within our extensive gas pipe network – a more cost-effective and interference-free alternative to traditional road opening methods. During the year, we extended our fibre network to Sai Kung so that customers there could enjoy the highly reliable transmission quality and comprehensive services provided by TGT. This technology is also being applied in mainland China, where we have obtained Technical Standards for Laying Fibre Casing Pipe in Gas Pipeline approval from China Gas Association. TGT is currently expanding its connectivity business on the mainland through cooperation with a strategic partner to integrate their combined resources.

TGT is also involved in the data centre business, leveraging its strengths in connectivity, the cloud and fog computing to deliver cutting-edge total solutions to customers. As a leading data centre infrastructure provider, TGT offers bespoke professional management and reliable cloud computing services through its world-class data centre in Hong Kong and mainland China.

Currently, TGT operates seven large-scale data centres in San Po Kong and at Tseung Kwan O Industrial Estate in Hong Kong, and in Beijing, Dalian, Dongguan, Harbin and Jinan on the mainland. Together, these data centres can accommodate up to 16,000 server racks.

International awards and recognitions received by TGT during the year included the Digital Transformation Award at the 13th China IDC Industry Annual Ceremony and the Solution of the Year FY17 at the Hitachi Vantara Partner Summit 2018.

In order to capitalise on the fast-growing business demand for advanced data centres, TGT will be expanding its footprint to Taiwan and, ultimately, bringing its business know-how and expertise to the world.

Information Technology

Our wholly-owned subsidiary, S-Tech Technology Holdings Limited (S-Tech), was set up to meet the information technology needs of our joint venture projects. The core activities of this business include the provision of software development, solution implementation and systems integration services for our city-gas businesses' advanced customer service and piping network management needs.

In 2018, the services of S-Tech's Towngas Customer Information Systems were provided to 85 per cent of the Group's city-gas joint ventures on the mainland, 64 per cent of which are now using the latest cloud version to reduce operational costs and shorten development cycles. A total of more than 15 million customers currently enjoy these services.

Other services offered by S-Tech to city-gas joint ventures include mobility applications for meter reading, maintenance services and Regular Safety Inspections for residential, commercial and industrial customers, all of which are designed to save management costs and improve service quality.

In 2018, S-Tech launched a new product, the Artificial Intelligent Call Centre System, which has been implemented in several joint ventures. S-Tech also continued working on the integration of its Towngas Customer Information System with other systems, including the Virtual Customer Centre, NFC/remote meters, Towngas Payment Platform, Towngas Management System, as well as the e-Invoice platform.

Civil and Building Services Engineering

U-Tech Engineering Company Limited (U-Tech) is a wholly-owned subsidiary of the Group providing consultancy and engineering contractor services in Hong Kong and Macao. Among the services it offers are utilities installation, infrastructure construction, trenchless technologies, and civil and building services engineering for public and private projects.

In 2018, U-Tech celebrated its 20th anniversary and its growth from a small gas pipelaying contractor into a reputable multi-disciplinary engineering professional service provider today. The year was also significant for the Company's acquisition of the Permanent Group C Waterworks Tenderer qualification of the Hong Kong Government, its highest tender category. As a result, U-Tech became eligible to bid for unlimited tender sums from the Water Supplies Department. During the year, U-Tech also won a waterworks contract for the construction of a fresh water services reservoir and the associated pipeworks at Fanling.

Other new business secured in 2018 included U-Tech's first contract with Evergrande for fire

The environmentally-friendly TGT Dalian Data Centre 1 received the LEED CS (Core and Shell System) Gold Level Certificate of the U.S. Green Building Council.

U-Tech uses its expertise and advanced technology to provide first-class maintenance services for water facilities in Hong Kong's outlying islands, allowing residents to enjoy clean, potable water.

services installation works at their residential development at Tuen Mun and the first supply and installation of electrical works contract with Wheelock for their residential development at Plantation Road. U-Tech also acquired the first supply and installation of electrical works contract from Gammon Construction for Goldin's residential development at Homantin.

Recognitions of U-Tech's high quality and safety standards during the year included a fifth consecutive Safety Performance Award – Construction from the Occupational Safety and Health Council.

Manufacturing

M-Tech Metering Solutions Company Limited (M-Tech), a wholly-owned subsidiary of the Group, develops and markets proprietary smart gas meters. These meters are based primarily on Micro-Electro Mechanical Systems (MEMS) technology to ensure greater accuracy under various temperature and pressure conditions.

In 2018, M-Tech launched an advanced small commercial meter with MEMS technology that replaces conventional diaphragm meters. Since its launch in early 2018, the meter has become well accepted in mainland China for its pre-payment and smart metering functions that compile tier tariffs. Its features allow for tariff prepayments, tier tariff settings and gas consumption records to avoid conflicts in the event of a tariff adjustment. Others include gas safety functions that provide regular safety inspection alerts, excess flow cut-off and external interference alarms.

M-Tech is also developing other smart meters for residential applications, which are in high demand in Europe where customers are increasingly turning to smart meters.

Another wholly-owned subsidiary of the Group, G-Tech Piping System (Zhongshan) Company Limited (G-Tech) manufactures high-quality polyethylene (PE) pipes, supported by GH-Fusion Corporation Limited, which specialises in PE fittings.

During the year, G-Tech expanded its production capacity by adding a pipe extrusion production line at its plant in Maanshan, Anhui province, to attract new clients in the growing markets of eastern China. With the addition of the Maanshan plant in 2016, G-Tech currently operates two factories on the mainland, including its original extrusion plant in Zhongshan, Guangdong province.

As M-Tech and G-Tech continue to broaden their product range, both companies will be seeking further opportunities to acquire new customers in mainland China as well as in overseas markets.

2018
New Energy and Other Projects

	Year of Establishment	Project Investment Rmb M	Registered Capital Rmb M	Equity Share %
New Energy Projects				
COAL MINING				
Inner Mongolia Ordos Kejian	2011	681	486	100%
COAL-BASED CHEMICALS				
Jiangxi Fengcheng	2009	1,250	350	40%
Inner Mongolia Ordos	2009	1,620	1,017	100%
CNG/LNG REFILLING STATIONS				
Shaanxi Xianyang	2008	12	12	100%
Shaanxi Huitai	2010	54	27	100%
Shaanxi Lueyang	2014	21	13	100%
Shaanxi Fengxiang	2014	30	15	100%
Shaanxi Shenmu	2015	60	38	100%
Shaanxi Baoji	2015	29	14	100%
Shaanxi Zhouzhi	2016	14	10	100%
Shaanxi Weinan Gushi	2016	21	14	100%
Shaanxi Weinan Tianshi	2016	15	11	100%
Shaanxi Hancheng	2016	46	41	90%
Shanxi Yuanping	2008	40	20	42%
Shanxi Lingshi	2013	25	20	75%
Shanxi Xinzhou	2016	30	15	100%
Shandong Chiping	2010	30	15	100%
Shandong Dongping	2010	43	26	91%
Shandong Jiaxiang	2012	50	28	100%
Shandong Weishan	2014	58	29	100%
Shandong Shanxian	2014	28	14	100%
Shandong Linqing	2014	22	13	100%
Shandong Heze	2015	23	13	90%
Hebei Shijiazhuang	2014	65	31	100%
Xingtai (Gangxing)	2014	20	17	80%
Xingtai (Xinghua)	2016	24	23	80%
Henan Xinmi	2010	29	15	100%
Henan Anyang	2012	29	14	100%
Henan Kaifeng	2013	29	15	100%
Henan Linzhou	2013	30	20	100%
Henan Nanyang	2015	14	10	100%
Henan Wuyang	2017	15	15	85%
Inner Mongolia Huhhot	2014	28	14	90%
Inner Mongolia Wulatezhong Qi	2015	11	8	100%
Inner Mongolia Xiwuzhumuqin Qi	2015	30	15	100%
Inner Mongolia Chifeng	2015	30	15	100%
Inner Mongolia Chaha'eryouyiqian Qi	2015	30	15	100%
Inner Mongolia Xilingol	2016	30	15	100%
Inner Mongolia Ulanqab Huade	2016	29	14	100%
Inner Mongolia Ulanqab Chahar	2016	15	11	100%
Inner Mongolia Bayannur Uradqian Qi	2016	15	7	100%
Inner Mongolia Bayannur Linhe	2016	14	10	90%
Inner Mongolia Bayannur Hanggin	2016	13	10	90%
Ningxia Guangwuxian	2015	15	11	100%
Ningxia Qingtongxia	2015	21	15	100%
Ningxia Jinyintan	2015	28	14	100%
Ningxia Zhongwei	2016	18	12	100%
Ningxia Zhongwei Haixing Development Zone	2016	30	15	100%
Jiangxu Xuzhou	2015	40	20	80%
Anhui Maanshan	2006	15	11	30%

	Year of Establishment	Project Investment Rmb M	Registered Capital Rmb M	Equity Share %
New Energy Projects				
CNG/LNG REFILLING STATIONS				
Jiangxi Pengze	2015	45	30	70%
Guangdong Guangzhou	2013	26	13	100%
UPSTREAM PROJECTS				
Shanxi LCBM	2006	600	200	70%
Jilin Tianyuan	2007	140	5	50%
Xuzhou COG	2014	450	150	80%
COAL LOGISTIC PROJECT				
Shandong Jining Jiaxianggang Logistic Port	2011	540	180	88%
BIOMASS				
Zhangjiagang	2014	840	271	100%
Hubei Xingzhou	2017	170	134	100%
Luanzhou	2017	280	140	100%
Oilfield Project				
Phetchabun Province in Thailand	2012	USD 181M	USD 12,000	100%
Telecommunication Projects				
Shandong Jinan	2008	80	40	90.1%
Shandong Jinan Chibo	2009	504	168	87.4%
Shandong Laiyang	2011	14	USD1.6M	90%
Xuzhou Fengxian	2011	11	8	100%
Xuzhou Peixian	2012	13	9	100%
Liaoning Dalian DETA	2010	14	10	49%
Dalian Yida	2011	190	76	90%
Harbin	2013	158	63	80%
Beijing Zhongjing	2014	14	10	49%
Beijing Chibo	2014	14	10	98.7%
Dongguan	2013	240	80	60%
Shenzhen (Qianhai)	2014	59	30	100%
Shenzhen (Interlink Connectivity)	2015	100	40	30%
Other Projects				
Shenyang Sanquan Construction Supervisory	2011	4	3	60%
ECO Engineering Management (Xi'an)	2014	13	9	100%
Suzhou Industrial Park Broad Energy Services	2012	170	71	25%
GH Yixing Ecology	2013	184	184	100%
Dalian (New Energy Technology)	2015	USD 4.75M	USD 4.75M	55%
M-Tech	2011	60	30	100%
GH-Fusion	2001	87	43	50%
G-Tech	2012	77.5	41	100%
Towngas Technology	2011	30	21	100%
S-Tech (Zhuhai)	2014	14	7	100%
ECO Engineering Management (Shenzhen)	2014	30	15	100%
Towngas Life Style	2015	7	5	100%
Towngas Payment Technology (Shenzhen)	2015	50	28	100%
Hong Kong & China Gas International Energy Trading	2016	125	50	100%
Mia Cucina Kitchen Cabinets (Shenzhen)	2017	125	50	100%
Inner Mongolia Ordos Carbon Material	2017	640	240	100%