

# SHELL

## Providing more and cleaner energy

Energy is a fundamental need in society. It is essential for survival, for health and the benefits of modern life. We need it for cooking, heating and cooling, for travel and all forms of economic activity.

Shell has provided energy to people for over 125 years, and is one of the world's leading energy companies. Shell continues to meet customers' evolving energy needs: from kerosene, to oil, to natural gas and, increasingly, low-carbon biofuels and renewable energies such as wind and solar power.

By 2050 the number of people on the planet is forecast to grow to 9 billion – that's nearly 2 billion more of us than today. Around three-quarters of the world's population will live in cities by mid-century, putting more pressure on the food, water and energy resources essential for our shared well-being and prosperity.

Shell is well-positioned to seize the opportunities and meet the challenges. Shell's business has been built on a foundation of innovative technology and skilled employees. Shell's know-how, technology and innovations are helping to deliver more and cleaner energy.

### INNOVATING IN URBAN GROWTH

Shell's ambition is to reduce the Net Carbon Footprint of its energy products by around half by 2050 in step with society's progress towards achieving the goals of Paris. The Shell New Energies business is part of this transformation. In July 2019, Shell New Energies launched the company's first global City Solutions Living Lab in Singapore. This is aligned with the city-state's active push for energy transition and sustainability, its pro-business environment and Shell's long-standing presence in Singapore.

The new Shell City Solutions Living Lab will have a dedicated team with multi-disciplinary expertise that focuses on helping cities move people and goods with lower emissions, switch to cleaner energy options and embed sustainable features in built environments.

It will adopt a user-centric approach of co-creating and experimenting

with city stakeholders such as the government, the private sector and local communities, on innovative concepts, technologies and business models in actual living environments. Energy solutions that Shell develops successfully in Singapore can potentially be replicated in cities around the world.

Shell City Solutions has worked with the Port of Singapore Authority (PSA) Singapore to understand the energy needs of the Pasir Panjang Terminal and the future Tuas Port, and together, they have identified opportunities for carbon reduction such as switching to cleaner fuel options and the study of a near net-zero energy building.

### INNOVATING WITH SOLAR POWER

Shell has a significant manufacturing presence in Singapore. There are plans to install a solar photovoltaic (PV) power generation system with a combined peak capacity of around three megawatts at three of the Shell sites in Tuas, Jurong Island and Pandan.

The first and largest of the three Shell solar farms will be atop the Shell lubricants plant in Tuas. With more than 6,500 panels, the solar farm is expected to produce approximately





3,300 megawatt hours of renewable energy annually, enough to power about 700 four-room Housing Development Board households. This can result in the avoidance of a third of the plant's greenhouse gas emissions from electricity use, or approximately 1,200 tonnes on a carbon dioxide-equivalent basis per year. This is also equivalent to taking about 700 cars off the road for one year. The generated solar energy will be used to help power operations at the lubricants plant.

Installations at Shell's sites in Pandan and Jurong Island are expected to start in late 2019 and early 2020 respectively. Shell is also exploring more solar installations at other Shell sites in Singapore.

As part of our efforts to trial low carbon solutions, Shell has signed a Memorandum of Understanding with the Energy Market Authority of Singapore (EMA) to jointly work on growing the adoption of energy storage systems. This could include piloting commercially viable business models with innovative solutions that integrate storage systems and solar power to Shell sites in Singapore.

## INNOVATING WITH ELECTRIC VEHICLE CHARGING

Shell has also launched electric vehicle (EV) charging with Shell Recharge – a first for Singapore and Southeast Asia. This new service al-

lows drivers to charge their cars on the go at Shell service stations.

The Shell Recharge 50kW rapid direct current (DC) chargers typically provide from 0% to 80% charge in approximately 30 minutes and are compatible with most electric vehicles in Singapore. Shell Recharge will be available at 10 Shell stations by the end of 2019. This represents close to 20 per cent of Shell's retail network in Singapore.

Shell Recharge is one such example of how the company is making it more convenient for customers to embrace cleaner mobility. Beyond private EV car owners, Singapore's growing fleet sector also stands to benefit as they now have access to reliable rapid chargers at easy-to-access locations. With Shell Recharge, fleet companies can embark on the transition to electric vehicles in a simple and cost-effective manner, reducing their emissions in the process.

## ABOUT SHELL

Headquartered in The Hague, Netherlands, Shell has an average of 86,000 employees in more than 70 countries. Shell's purpose is to power progress together with more and cleaner energy solutions. We believe that rising standards of living for a growing global population are likely to continue to drive demand for energy, including oil and gas for years to come. At the same time,

technology changes and the need to tackle climate change means there is a transition underway to a lower-carbon, multisource energy system. We aim to meet the energy needs of society in ways that are economically, socially and environmentally viable, now and in the future.

Shell has been in Singapore since 1891. The company has more than 3,100 employees and is one of Singapore's largest foreign investors. For 125 years, Shell has contributed to Singapore's social and economic growth, and helped to build its talent and intellectual capital. One of the reasons for Shell's success in Singapore is its good working relationships and long-term partnerships with staff, the union, customers, community and the government. Today, with a New Energies business focused on solar, wind, hydrogen and biofuels, Shell is also actively investing in partners that are providing cleaner energy solutions to Singapore and the world.



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