

SUSTAINABILITY REPORT

OUR ENVIRONMENT

We strive to conduct our business operations efficiently, to minimise our environmental footprint and make effective use of limited resources. We are committed to adhering with all applicable environmental regulations, and have not been fined or otherwise sanctioned for any environment-related violations in 2016.



ENVIRONMENTAL FOOTPRINT

Energy, generated from both renewable and non-renewable sources, continued to be the main resource consumed in the provision of our services.

In 2016, our mobile networks, offices and data centre operations used 62,387,979kWh of electrical power, 2.5% higher than 2015. This was to support increased business requirements including the deployment of approximately 200 new base station sites to enhance coverage and support customers' growing data needs, as well as testbed projects such as our upcoming NB-IoT and HetNet networks. In 2016, we included our fibre operating centre's energy usage, based on data provided by the fibre network company NetLink Trust and our own meter readings.

We also operate three offshore base stations, at Pulau Satumu, Pulau Tekong and St. John's Island. These islands are not connected to Singapore's power grid, and therefore on-site diesel generators are required to provide power for the base station equipment. The three sites used 48,774 litres of diesel fuel in 2016, 5.6% lower than 2015, primarily driven by the upgrade of the solar hybrid battery on our Pulau Satumu site in January 2016.

Our fleet of vehicles support our field engineers who are responsible for installing new mobile equipment, performing drive tests, and conducting site maintenance and repairs. In 2016, fuel consumption for

ENVIRONMENTAL CONSERVATION

We continually review our business operations to identify ways to help us increase productivity and reduce impact to the environment, and at the same time, deliver consistent quality service to our customers.

Our key efforts are in the following areas:

NETWORKS

Our base stations network, which enables us to deliver mobile voice and data services to our customers, makes up approximately half of our energy consumption. We continually review our base station operations to identify ways to reduce energy consumption, including upgrading our base stations with multi-radio units that do not require air conditioning. This has yielded annual power savings of 6,876,600kWh.

We deployed solar photovoltaic (PV) power systems to supplement the use of diesel power generators for our offshore base station sites on Pulau Satumu and St. John's Island, and this initiative has enabled us to reduce the use of diesel over the years. As the terrain on Pulau Tekong does not permit the installation of solar PV power systems, the base station's generators were overhauled. This overhaul, completed in January 2015, has enhanced the generators' efficiency and reduced annual diesel usage by 17%.

Following a successful trial, more small cells were deployed at selected high traffic sites such as malls, libraries and MRT stations in 2016. Small cells enable us to enhance the mobile data experience in a more targeted and energy-efficient manner, compared to using a base station. We will continue to roll out more small cells in 2017.

FACILITIES

M1's 4,214sqm five-storey annex building, sited next to our MiWorld building in Jurong, is fitted with environmentally-friendly features such as LED lights and rainwater harvesting tanks. The building, which has successfully achieved the Building and Construction Authority's Green Mark Gold certification, also utilises reclaimed NEWater and condensate water, instead of potable water for cooling purposes.

All our buildings, in Jurong and Aljunied, are fitted with energy-efficient LED lights and this yields an estimated power savings of 450,000kWh a year.



our diesel vehicle fleet was 26,635 litres, 10.2% higher than the year before, and 11,273 litres for our petrol vehicle fleet, 10.8% lower than the year before, as we shifted usage to diesel vehicles in covering our expanded networks.

M1's retail operations used an estimated 322,310kWh of electrical power in 2016, 2% higher compared to 2015. In addition to energy, water is used for drinking, cleaning and equipment cooling purposes in our daily operations.

In 2016, total water consumption was 60,996m³, marginally lower compared to 2015. We began using NEWater for cooling purposes in our new data centre in 2015, and in 2016 we increased our usage of NEWater, thereby reducing the usage of potable water. NEWater is reclaimed water for industrial use and has a lower environmental impact.



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GENERAL OPERATIONS

Our M1 Shop retail outlets are designed to enhance productivity and customer experience, as well as minimise our carbon footprint. In-shop light fittings were changed to LED where possible, and our streamlined transaction process using wireless tablets enables us to cut down on the use of printed brochures, receipts, forms and

other non-recyclable materials by an estimated 20% annually.

M1 uses sustainably sourced, environmentally-friendly Forest Stewardship Council (FSC) certified paper for all our printing needs. Through an e-billing programme, we have migrated all employees from paper to electronic bills and payment, and are progressively migrating our customers as well.

OPCO POWER USAGE

For 2016, we are reporting the power used by our fibre OpCo (Operating Centre). Our OpCo equipment supports the fibre broadband connectivity we provide to our residential and corporate customers. Our reported usage is based on data provided to us from fibre network company NetLink Trust and our own meter readings.

For 2016, the OpCo energy consumption is 1,604,038kWh, 2.5% of our total power consumption.

SENTOSA GREEN WIFI

M1, in collaboration with the IMDA and Sentosa Development Corporation, launched Singapore's first solar-powered WiFi hotspot along Sentosa's Merlion Walk.

The Wireless@SG hotspot, which is located outdoors, was part of a trial to test the viability of this renewable power source and wireless backhaul systems, which can reduce the amount of trenching required to lay power and network cabling during deployment. The trial was launched in March and ended in September 2016.

Electricity consumption	2016 (kWh)	2015 (kWh)
M1 buildings and data centre operations	30,835,554	31,430,594
Mobile networks	31,552,425	29,423,546
Fibre OpCo	1,604,038	NA ¹
Retail outlets ²	322,310	315,989
Total	64,314,327	61,170,129

Fuel consumption	2016 (litres)	2015 (litres)
Diesel (offshore base stations)	48,774	51,648
Diesel (vehicle fleet)	26,635	24,164
Petrol (vehicle fleet)	11,273	12,642

Water consumption	2016 (m³)	2015 (m³)
Potable water	48,735	54,774
NEWater	12,231	6,601
Total	60,996	61,375

¹ Our total reported energy consumption for 2015 does not include our fibre operating company energy consumption which we began tracking in 2016

² Power usage at some M1 Shops usage is estimated based on available utility bills