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 adhere with all applicable environmental regulations, and have not been fined or otherwise sanctioned for any environment-related violations in 2015.

ENVIRONMENTAL FOOTPRINT

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

In 2015, M1's mobile networks, offices and data centre operations used 60,854,140kWh of electrical power, 3.8% higher than the year before. This was to support increased business requirements, including the deployment of more than 100 new base station sites and a small cell trial to further enhance coverage and support customers' growing mobile data needs, as well as additional corporate customer demand for our connectivity and data centre solutions.

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. In spite of higher voice and data traffic, the three sites used 51,648 litres of diesel fuel in 2015, 25.6% lower than 2014. This decline was primarily driven by the increased power generation from our solar photovoltaic (PV) power system in Pulau Satumu. Installed in August 2014, the solar PV system saw its first full year of operations in 2015.

We maintain a fleet of vehicles for our field engineers to install new mobile equipment and perform drive tests, site maintenance or repairs. In 2015, fuel consumption for our diesel vehicle fleet was 24,164 litres, 11.6% higher than the year before, and 12,642 litres for our petrol vehicle fleet, 9.3% lower than the year before.

M1's retail operations used an estimated 315,989kWh of electrical power in 2015. This was 6.0% lower compared to 2014, as we completed our M1 Shop renovation programme which included a replacement of the majority of our light fittings to energy-efficient light emitting diode (LED) lights.

In addition to energy, water is used for drinking, cleaning and equipment cooling purposes in our daily operations. In 2015, total water consumption was 61,375m^3, 7.3% higher than the year before, as we increased our gross floor area by 17.8%. However, potable water consumption was 54,774m^3, 4.3% lower than the year before, due to the introduction of NEWater for cooling purposes in our new data centre. NEWater is reclaimed water for industrial use.

Electricity consumption	2015 (kWh)	2014 (kWh)
M1 buildings and data centre operations	31,430,594	30,627,609
Mobile networks	29,423,546	28,022,425
Retail outlets[1]	315,989	336,119
Total	61,170,129	58,986,153

Fuel consumption	2015 (in litres)	2014 (in litres)
Diesel (offshore base stations)	51,648	69,394[2]
Diesel (fleet)	24,164	21,663
Petrol (fleet)	12,642	13,940

Water consumption	2015 (m^3)	2014 (m^3)
Potable water	54,774	57,212
NEWater	6,601	-
Total usage	61,375	57,212

1 Estimated based on utility bills
2 Restated from 70,680 litres due to an editorial error

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.

EFFICIENT BASE STATION NETWORK

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.

With the deployment of solar 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, we have reduced the use of diesel over the years. Although the terrain on Pulau Tekong does not the permit the installation of solar PV power systems, the overhaul of the base station's generators, which was completed in January 2015, has enhanced their efficiency and reduced annual diesel usage by 17%.

In 2015, we also began deploying small cells in selected high traffic sites including malls, libraries and MRT stations. Small cells enable us to enhance the mobile data experience in a more targeted and energy-efficient manner, compared to using a base station.

EFFICIENT FACILITIES

M1's new 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.

A lighting optimisation programme, to replace 6,600 fluorescent light fittings at our buildings in Jurong and Aljunied, with energy-efficient LED lights, was completed in 2014 and yields an estimated power savings of 450,000kWh a year.

EFFICIENT OPERATIONS

The revamp of our M1 Shop retail outlets to enhance productivity and customer experience, as well as minimise our carbon footprint, was completed in 2014. In-shop light fittings were changed to LED where possible, and our migration to a streamlined transaction process using wireless tablets enabled us to cut down on the use of printed brochures, receipts, forms and other non-recyclable materials by 20% annually. M1 has also been using sustainably sourced, environmentally-friendly Forest Stewardship Council (FSC) certified paper for all our printing needs since 2014. An e-billing programme was also launched in 2015 to migrate staff to electronic bills and payment, and this will be extended progressively to customers.

Sustainability Report

OUR ENVIRONMENT

GREEN BUILDINGS M1's new five-storey annex building in Jurong has been fitted with smart green features, including:

- Intelligent façade design and extensive greenery help minimise environmental heat gain within the building. These features, alongside with an enhanced chiller plant system, reduce the energy used for cooling by more than 13% compared to another similar sized building
- Energy efficient light fittings such as LED lights and high frequency electronic ballasts lamps, deliver 30% lower energy usage while ensuring comfortable lighting levels
- Motion activated lighting and elevators with variable voltage and variable frequency motor derived elevators, reduce energy during low occupancy periods such as after office hours
- PUB's Water Efficient Labelling Scheme 3 tick rated water fittings, improves water efficiency
- Use of environmentally-friendly building materials including gypsum board in areas such as car park and toilets