



8. Sustainability and Environmental Performance

8.1. Sustainability Governance

HK Electric is committed to protecting the environment and supporting sustainable development. A board-level Sustainability Committee has been established to steer the Company’s work on sustainable development, and assess and manage all of our environment, climate, social and governance-related issue. It is supported by the Sustainability Management Committee chaired by the Managing Director. Our Sustainability Policy as well as all related policies are available on [our website](#).

The Environment Committee ensures that our operations adhere to the Company’s Environmental Policy and comply with all applicable laws and regulations. With continuous improvement in mind, HK Electric’s comprehensive environmental and energy management systems follow international standards ISO 14001 and ISO 50001 respectively.

8.2. Sustainable Development Goals

We support the United Nations’ 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs), which aim to end poverty, protect the planet, and ensure peace and prosperity for all people by 2030.

We have developed a set of internal targets corresponding to three SDGs that are closely aligned with our corporate strategies and business priorities, namely, Affordable and Clean Energy (Goal 7), Industry, Innovation and Infrastructure (Goal 9), and Climate Action (Goal 13).

8.3. Cleaner Fuels

Natural gas and coal are practically the exclusive fuels used at LPS. A small amount of oil is used, mainly for starting and flame stabilisation of coal-fired units. Meanwhile, low-sulphur coal (sulphur content less than 0.14% and less ash content) has been used to help reduce sulphur dioxide and particulates emissions.

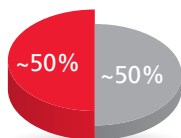
Following the successful commissioning of our new gas-fired combined-cycle unit L10 in February 2020, gas-fired generation now accounts for around 50% of our total electricity output. Meanwhile, the construction of other two new gas-fired units, L11 and L12 is on track for commissioning in 2022 and 2023 respectively. All these new gas-fired units feature advanced efficiency-enhancing technology, and produce about 50% fewer carbon emissions than the existing coal-fired units. They are also equipped with Selective Catalytic Reduction Systems that can reduce emissions of nitrogen oxides by about 90%.

With the commissioning of L12 by 2023, HK Electric will increase the total gas-fired generation ratio to around 70%.

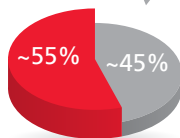
Increase in the Use of Natural Gas in Electricity Generation

● Gas ● Coal

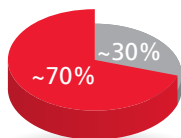
2020
(L10 commissioned)



2022
(L11 commissioned)



2023
(L12 commissioned)

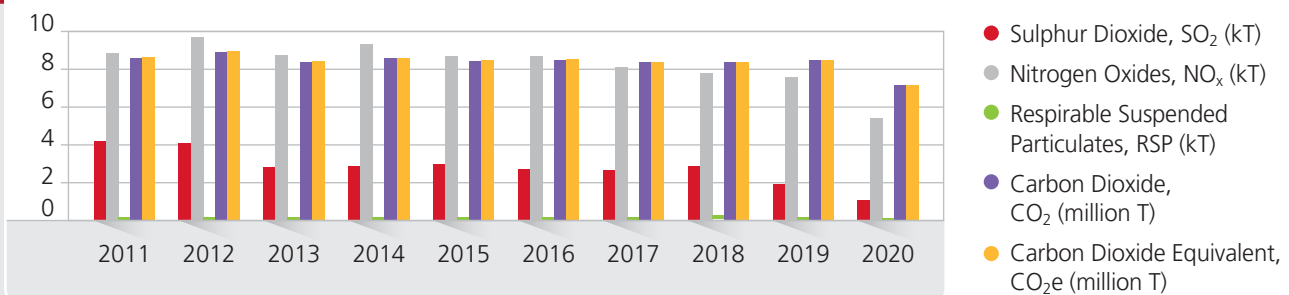


(Based on GWh sent out)

8.4. Emissions Reduction

With the use of cleaner fuels and state-of-the-art technology, HK Electric has made solid progress in reducing the emissions from its electricity generation process over the years. In 2020, we continued to comply with all emissions allowances specified by the Government and recorded reductions in sulphur dioxide, nitrogen oxides and respirable suspended particulates and carbon emissions compared to 2019 (Figure 6).

Figure 6 - Emissions Performance (2011-2020)



8.5. 4R and In-house Green Initiatives

As part of our Environmental Policy, we follow “4R” practices – Reduce, Reuse, Recover and Recycle – to minimise the consumption of valuable resources, such as energy, water and paper, as well as to reduce waste. We set energy saving targets for our main office premises and look for energy saving opportunities through carbon and energy audits. At LPS, our “rain and used water collection system” collects more than 100,000m³ of water for reuse every year and helps cut down the amount of raw water consumption and waste water discharge.

Ash and gypsum, which are by-products of our electricity generation process, are collected for industrial use.

We are also mindful of reducing food waste from our canteens. We encourage our colleagues to order their meals in advance and facilitate flexible serving size according to demand in order to minimise leftovers. We also encourage waste separation and use food waste eliminators to minimise the disposal volume. We donate surplus food to the needy through Food Angel, an NGO in Hong Kong. However, the food donation service was suspended during the COVID-19 pandemic.

Besides, we encourage employees and their families to pledge to “go green” and support the United Nations World Environment Day. In 2020, more than 800 colleagues supported this green appeal which included an environmental quiz, a photo competition, and recycling of used books and electronic gadgets.

Lamma Power Station Water Consumption / Discharge

| | 2018 | 2019 | 2020 |
|--|-------|-------|-------|
| Sea water withdrawal & discharge (million m ³) | 2,031 | 1,930 | 1,738 |
| Town water consumption (million m ³) | 2.19 | 2.35 | 1.87 |
| Wastewater discharge (million m ³) | 0.15 | 0.26 | 0.25 |

Ash / Gypsum Collected for Industrial Uses (kT)

| | 2018 | 2019 | 2020 |
|---|------|------|------|
| Ash produced | 235 | 230 | 153 |
| Ash collected for industrial uses | 237 | 230 | 154 |
| Gypsum produced / collected for industrial uses | 69 | 70 | 39 |

