





Water

Preserving our beautiful waters

Hong Kong is surrounded by beautiful waters teeming with marine life. It is a vital resource we must preserve.

At Hongkong Electric we take this seriously. It is among our prime mandates. That is why we reuse water, collect rainwater and treat wastewater before discharge. A host of systems and resources are in place to ensure our nearby waters stay clean, healthy and fresh.

Ambient Seawater Quality

Seawater is pumped through our generating units for various cooling purposes. However, the temperature rise of the ambient seawater around Lamma Power Station is kept small to minimize the impact on the surrounding ecology. This was predicted by a mathematical model prior to the development and later verified by extensive seawater temperature surveys.

The chlorination of seawater, required to keep our plants free from barnacles which would otherwise endanger the operation of the generating units, is kept at a low level. Regular monitoring confirms the residual chlorine level remains within acceptable levels.

It has never happened, but we are completely prepared for an accidental oil spill and regularly conduct drills on our contingency plans.

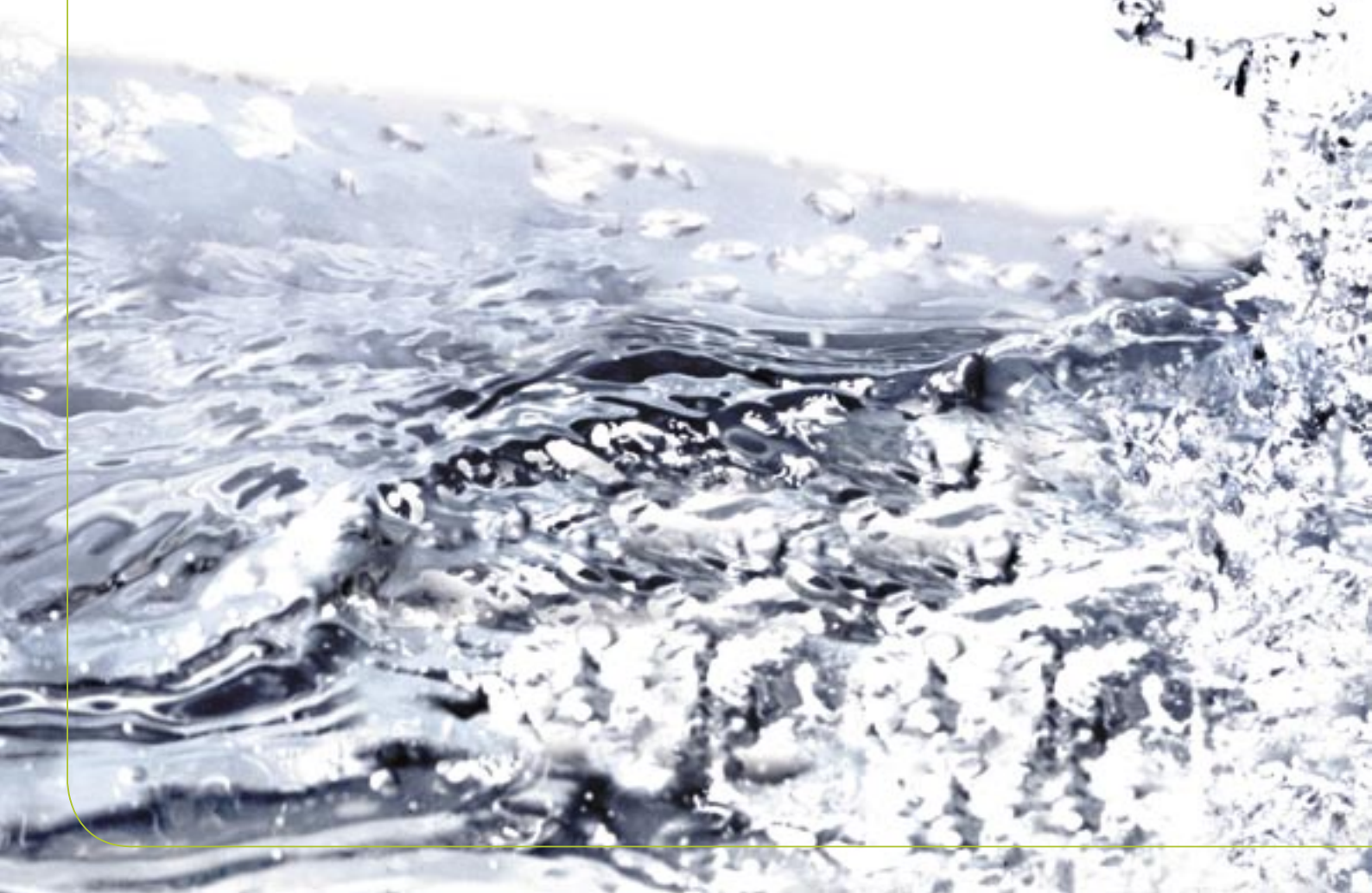


Wastewater is collected for reuse.

Effluent and Sewage Treatment Plants

Lamma Island does not have extensive public sewage collection and treatment facilities, which is why we installed our own sewage treatment plants at Lamma Power Station from the outset.

In addition, our wastewater treatment plants remove oil, grease, suspended solids and heavy metals from the wastewater.



Reducing Wastewater at Source

We see the importance of reducing wastewater at source. This is why our processes are frequently reviewed to minimise the production of wastewater. Through these reviews, we have successfully reduced the effluent generated from our FGD plants to less than half of the design quantity.

An important effluent-reducing measure is to retrofit submerged scraper conveyors (SSCs) to all our coal-fired generating units. Located at the bottom of the boiler, the SSC removes furnace bottom ash (FBA) produced in burning coal. Working on a closed-loop sluicing principle, FBA is conveyed to a filtering basin where the filtered water is recirculated within the system. It is much more environmentally friendly than the previous once-through sluicing system in which the sluicing sea water forms a significant portion of the power station's effluent discharge.

Reuse of Plant Effluent and Collection of Rainwater

We reused more than 130,000 tonnes of wastewater and rainwater in 2004.

Our coal yard re-circulation system is used to recycle coal yard drainage collected from rain and water spraying, thus saving resources and reducing the discharge of effluent.

Collection pits have been constructed to collect rainwater and reusable effluent for the preparation of limestone slurry, which is used in the flue gas desulphurisation process. A staged reuse of water is practised in our power station. One combined effect of these schemes has been the significant reduction in the amount of town water used by the power station.

HEC band playing music at the beach near our power station.

