

## Background

Until more renewable energy options become practical, the electricity used at Soneva Fushi will continue to be produced with diesel generators. Reducing the power demand, however, is something we are continuously working on. Examples of this effort are displayed in our production of hot water and freshwater, two energy-intensive processes.

## Heat Recovery



SONEVA FUSHI  
BY SIX SENSES

### Concept

Depending on the resort's occupancy, 10-20,000 litres of water need to be heated each day. This was formerly achieved with 20 electrical water boilers. Now that a heat recovery (cogeneration) system is installed in the generators, the heat that used to escape and be wasted during power generation heats the cooling agent of the generator, gets passed on to a heat exchanger attached to the generator's radiator and is transferred to the cold freshwater from the desalination plant via stainless steel plates. In this way, 30 °C water is heated to 50 °C. Another (self-made) heat recovery system is installed in our laundry, whereby the hot exhaust leaving the drying machines is brought in contact with cold water pipes and thereby produces hot water necessary for the laundry machines — a close-knit cycle.



## Pressure Recovery

### Concept

Our freshwater production works through reverse-osmosis desalination, whereby pressurised seawater is filtered via a semi-permeable membrane. In 2007, an innovative energy recovery system (ERI) was installed in our desalination plant, which uses the brine energy to pressurise seawater to the same pressure as the brine. Previously, three reverse-osmosis plants producing 300,000 l of water were used. With the new system, one of the plants was upgraded and made more efficient, while the other two could be switched off. This is equal to 45 % energy savings in the desalination process.

