As a major consumer of fossil fuels, we recognise our responsibility to reduce our emissions, work with partners, governments and industry, and contribute to the global response to climate change and resource constraints. Our comprehensive environment strategy ensures that we play a positive role in the community while reducing cost and risk.

— Measures of performance: fuel and energy use, carbon emissions and waste to landfill

**Environmental Performance**

<table>
<thead>
<tr>
<th>Category</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fleet age (Qantas Group)</td>
<td>9.6 years</td>
</tr>
<tr>
<td>Fuel efficiency</td>
<td>6.2% improvement</td>
</tr>
<tr>
<td>Total emissions (scope 1 &amp; 2)</td>
<td>12,387,666 tonnes CO₂-e (0.5% efficiency improvement)</td>
</tr>
<tr>
<td>Total fuel consumption</td>
<td>4,873,267 litres (increase of 1.4% against prior year)</td>
</tr>
<tr>
<td>Electricity</td>
<td>23.1% reduction</td>
</tr>
<tr>
<td>Water</td>
<td>10.4% reduction</td>
</tr>
<tr>
<td>Waste to landfill</td>
<td>24.5% reduction</td>
</tr>
</tbody>
</table>

**Measure, Reduce, Offset and Influence**

Human-induced climate change and resource scarcity is impacting natural environments and communities around the world, influencing consumer behaviour and reshaping government policies and regulations at a global and local level. Qantas supports the world-wide priority of limiting the rise in global temperatures to below 2 degrees above pre-industrial levels and recognises our responsibility to reduce our impact on the environment.

Environmental performance and risks, including climate change, are monitored and reported at all levels of the Qantas Group — from Board-level oversight by the Committee for Health, Environment, Safety and Security through to our business unit safety committees.
We continue to work with General Electric to embed enhanced fuel analytics into our operations to reduce fuel consumption. In 2016/17, we developed the FlightPulse iPad application to deliver individualised fuel use data to pilots to give them better access to data on fuel consumption and fuel efficiency practices.

While our absolute emissions increased in 2016/17 due to increased flying, our fuel efficiency continues to improve, with initiatives across the Group delivering 30.2 million litres in fuel savings. We are on track to meet our 2020 target of 1.5 per cent per annum average increase in fuel efficiency, and the introduction of the Boeing 787-9 Dreamliners to Qantas International in 2018 will deliver a step change.

In 2016/17, we conducted a feasibility study with the Crucible Group into converting quarantine waste to energy which demonstrated the technical, engineering, environmental, biosecurity and economic perspectives. The focus in 2017/18 will be on the commercialisation pathway.

We are also investing in:

- The electrification of our ground fleet, with 12 electric belt loaders ordered and due into service in 2017 to replace diesel powered units.
- Innovative flight planning systems to deliver operational and fuel efficiency benefits.
- Technology enablers to accelerate the fuel efficiency benefits of our over 100 initiatives across the airline businesses.

We have the world’s largest airline offset program and have now been carbon offsetting for over 10 years. In 2016/17, we reached three million tonnes offset.

We continue to offset the emissions from our own business travel and ground operations and give customers the choice to offset when they fly.

We are now commercialising and sharing this capability with other businesses. Through commercial partnerships we provide customers with carbon offsets from high quality projects, scalable technology that allows their customers to offset purchases, and market research insights on sustainability from Qantas Frequent Flyers. This is adding new value to our customers and scaling our internal carbon market capability.
Every 53 seconds a Qantas customer flight is offset.

International Action

Aviation has been on the front line of the global business response to climate change, becoming the first industry to voluntarily commit to emissions targets out as far as 2050.

In October 2016, an historic agreement was reached to meet the industry’s commitment of carbon neutral growth from 2020. The Carbon Offset and Reduction Scheme for International Aviation (CORSIA), commencing in 2021 under the United Nations body for aviation, will require airlines to purchase offsets to meet their share of the industry’s growth emissions. Qantas strongly advocated in support of the Australian Government opting into the first phase of the scheme to avoid the alternative patchwork approach to carbon pricing.

In June 2017, we supported the IATA resolution calling for governments to implement policies to accelerate the deployment of aviation biofuels. We continue to work with Australian federal and state governments on the design of policies to support commercialisation of aviation biofuels in Australia, which is currently sub-scale.

Protecting Against Pollution

PFAS is a group of chemicals that have been used in a range of industrial and consumer products for many decades, including fire fighting foams. There is an increasing move away from these chemicals because they may pose a potential risk to human health and the environment.

We have committed to installing aviation accredited PFAS-free fire-fighting foam in all Qantas Group sites over the next 12 months. We are the first major Australian airline to do so.

A spill of fire-fighting chemicals (containing PFAS) at our Brisbane hangar in April 2017 fell well below the environmental standards that the Qantas Group sets itself and has been followed by an extensive clean-up and investigation, in collaboration with Queensland and federal regulators as well as Brisbane Airport.

Three Global Industry Emissions Targets

1. 1.5% average annual fuel efficiency improvement from 2009 to 2020

2. Carbon neutral industry growth from 2020

3. 50% reduction in net emissions by 2050 (2005 baseline)

Around 80% of consumers expect that businesses will act to solve environmental challenges.

— 2017 Qantas consumer environment benchmark study