Climate change

We recognise the threat from climate change; from changing weather patterns, floods and droughts. At RB, climate change is a material issue. We are committed to reducing our environmental impact while helping deliver global climate change targets.

Making progress

Aim	Status in 2018	Aim	Status in 2018
40% reduction in GHG from manufacturing by 2020	**35.2%** reduction per unit of production vs 2012	**35%** reduction in energy consumption by 2020	**22.6%** reduction per unit of production vs 2012
Aim	**Status in 2018**	**Aim**	**Status in 2018**
100% renewable energy by 2030	**30%** of manufacturing sites sourcing renewable energy	**1/3** reduction in our carbon footprint per dose by 2020	**4%** reduction since 2012

1. Greenhouse gases from our manufacturing

We have direct control over the greenhouse gases (GHG) emitted during product manufacture and are committed to reducing GHG emissions in line with calls to limit global warming.

2. Greenhouse gases across our full value chain

Through the design of our products and the influence we have on our suppliers, customers and consumers, we work to maximise the benefit and minimise the climate change impact associated with our products.

3. Transportation and logistics

As a global company, we recognise the importance of transport and distribution to our business. We work with our transport contractors to improve efficiency and reduce emissions.

4. Carbon offset programme

While reducing our emissions and switching energy sources, we also consider offsetting and ran our 'Trees for Change' carbon offset programme from 2006 to 2015.

5. Resilience to the effects of climate change

In building a more resilient business, we aim to minimise potential climate-related risks for our product portfolio and operations while also identifying areas where we can create opportunities through all our work to further minimise climate change.

We take a value-chain approach to understanding and managing our climate change risks and impacts, based on carbon life cycle modelling. This helps prioritise efforts to address the biggest risks and opportunities. RB is committed to making more with less environmental impact. We target not only the aspects under our direct control such as energy reduction in our factories and investing in purchased and on-site renewable energy, but also tackle the much larger carbon emissions and water impact embedded in our products. These stem from the materials we use, how people use our products and also the disposal and recycling of product packaging. Our Environment policy and our sustainable innovation programme confirm our commitment and frame our work.

Reflecting these different elements, we have two GHG reduction targets:

1. To achieve a 40% reduction in our GHG emissions (per unit of production) in our own manufacturing sites and warehouses by 2020, through driving energy and production efficiency programmes.
2. A 1/3 reduction in our carbon footprint per dose by 2020 versus 2012, which aims to reduce GHG emissions across the full value chain of our products.

Click here to read more about our approach to sustainable innovation.

Climate change stewardship

Stewardship of our climate change strategy is the responsibility of RB's Board of Directors and our Corporate Responsibility, Sustainability, Ethics and Compliance (CRSEC) Committee, a sub-committee of the Board. It is responsible for overseeing its implementation, progress and performance against our 2020 targets. More information on our approach, in line with the Taskforce for Climate-related Financial Disclosures (TCFD) recommendations, can be found in our RB Insights 'Understanding Climate Change Risks'.

Click here for more information on understanding climate change risks.

Click here to read our Environment policy.

Climate change continued

1. Greenhouse gases from our manufacturing

At RB, we have a long history of focusing on reducing GHG emissions and since launching our current targets in 2012, we have made significant progress across our manufacturing sites, improving energy efficiency and sourcing renewable electricity. We will continue to make improvements, while reducing absolute carbon emissions by expanding our use of renewable energy to support delivering on our Science Based Targets. Additionally, given that RB's operations represent only a small part of our overall carbon footprint, our Science Based Targets will extend to cover the wider value chain.

Our 2018 GHG emissions associated with our operations, Scope 1 and 2 (including R&D and offices), were 148,214 and 247,856 tonnes of CO_2e respectively, which results in a total of 396,070 tonnes of CO_2e. These emissions are generated directly on site, through burning fossil fuels for space heating, hot water and process heating or cooling (Scope 1), and indirectly from our use of electricity (Scope 2). Our 2018 GHG emissions data Scope 1 and 2 includes our IFCN (Infant Formula and Child Nutrition) operations.

We track and report our GHG emissions, following a dual market-based and location-based methodology in line with the WRI/WBCSD GHG Protocol and Scope 2 Guidance. In line with the location-based approach, our Scope 2 emissions for 2018 were 309,179 tonnes of CO_2e and our total Scope 1 and 2 tonnes of CO_2e was 457,393. This equates to approximately 61,323 tonnes of CO_2e being saved due to our commitment to sourcing renewable energy.

1 Pre-acquisition data for our IFCN business is not available. To ensure comparison with our 2012 target baseline, the 2018 data shown excludes IFCN. Including IFCN, 2018 manufacturing and warehouse energy use was 0.6304 GJ per 1,000 CUs.

CASE STUDY

Energy-efficient lighting, RB Mexico

RB's plant in Chihuahua, Mexico was able to reduce its warehouse's energy consumption by 50% after installing sunlight 'domes and tubes' and highly efficient replacement lighting.

The 'Solatubes' collect, multiply and project natural sunlight into the warehouse, removing the need for electrically powered lights.

Improving energy efficiency

Becoming more energy efficient is essential for significantly lowering carbon emissions, helping reduce energy costs as well as our environmental footprint. Since 2012 we have reduced our energy consumption per unit of production by a total of 22.6%[1] ensuring we remain on track to meet our goal of a 35% reduction by 2020. See Appendix 1 for details.

Our approach comprised two core elements:

1. Measuring, monitoring and tracking energy consumption across our operations from site to regional, Business Unit level thought to Corporate. We use dedicated software to collect, assess and benchmark site performance, and identify opportunities for improvement across the business.
2. Implementing a variety of energy-saving projects across our operations, such as chiller replacement, heat recovery, conveyor switching, installing variable speed drives, automatic boiler regulators, compressed air optimisation, LED lighting and installing automated heating, air conditioning and lighting controls.

3,000t
GHG emissions saved

CASE STUDY

Drive for energy efficiencies in Thailand

Bangpakong investing for the future

At Bangpakong, Thailand, our on-site team conducted a full review, focusing on energy intensive processes to identify energy savings opportunities. These include upgrading cooling towers, installing temperature, air and lighting controls, and integrating system improvements, saving 15% of the site's energy use, plus the installation of a CHP, providing the site with electricity, heat and steam and saving an estimated 3,000 tonnes of GHG emissions.

Bangplee innovations in air conditioning

Air conditioning can be a significant and increasing consumer of energy. At our site in Bangplee, Thailand, we investigated what more could be done by investing in new, more efficient technologies. The site opted for the '5 Plus' Technology which provides up to 40% savings. In addition, due to innovative electronic-based parts, operating and maintenance needs decreased, plus cooling capacity and compressor lifetime improved.

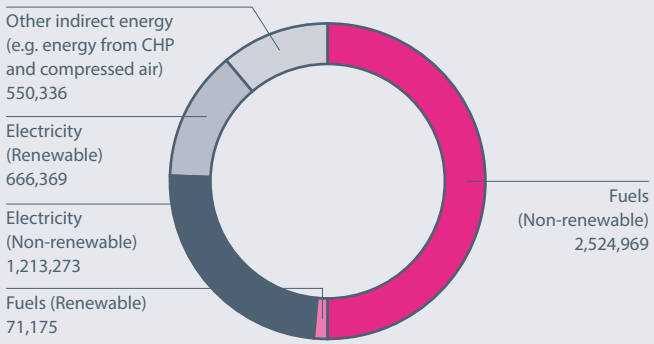
Climate change continued

Renewable energy

We are increasing our use of renewable energy, and are committed to sourcing 100% renewable electricity by 2030. In support of this, RB joined the RE100 initiative, a collaborative, global initiative, uniting like-minded organisations to drive change and increase availability, demand and delivery of renewable energy. As a result, over 30% of our manufacturing sites are currently using energy from renewable sources, with the majority of our US and EU sites now purchasing renewable electricity.

In 2018, we used 5,026,122 GJ of energy across our sites (including our IFCN operations). This comprised:

Energy used across our sites in 2018 in GJ



Underlying our commitment to renewable energy is our investment in solar energy, for example at our plants in Belle Mead, Cali and Mauripur, plus the Power Purchase Agreement (PPA) we signed for our Mysore plant in the Indian state of Karnataka. As our first solar-powered factory in India, this is delivering a reduction of over 75% in carbon emissions.

Other emissions

RB is not a significant user of ozone depleting substances (ODS) and, as a result, this is not a significant issue for our business. Common industrial air emissions such as sulphur and nitrous oxides (SO_x and NO_x) and particulates (dust) are not generally emitted from our manufacturing facilities. Where present, these emissions are below applicable legal requirements.

CASE STUDY

Mysore's solar farm

Mysore, Karnataka, India is the first RB factory to sign a Power Purchase Agreement under which they are to receive 100% renewable electricity supplied directly from a newly built solar farm.

RB has committed to buying 3.5 million kWh of renewable electricity over the next ten years, ensuring the necessary funding for the project was secured.

This supply agreement will reduce the plant's carbon emissions by 75% in addition to decreasing costs over the ten-year period.

2. Greenhouse gases across our full value chain

We recognise that the products we sell affect the climate through the product design choices we make and the suppliers we work with. RB is committed to developing innovative products and technologies that require less energy and produce fewer emissions.

By designing our products in ways that reduce the amount of energy required to make, use and dispose of them, we can decrease the associated emissions. We choose ingredients and packaging materials that have a low carbon footprint and work in partnership with other RB teams and suppliers to reduce the carbon and water footprints of our products. De-carbonising our products makes good business sense, enabling resilience to direct and indirect climate change impacts.

Measuring our carbon footprint across our full value chain, both upstream and downstream, entails a robust and comprehensive calculation of GHG emissions throughout the life cycle of our products – from the sourcing of raw materials, to the way they are manufactured, used and disposed of. By better understanding where our impacts are high, we can deploy additional reduction measures.

In 2018, we calculated the full value chain impacts from our new IFCN division following the Mead Johnson Nutrition acquisition. This provided new insights, both in terms of the hotspots within the IFCN division as well as the size of the IFCN impact relative to the whole of our business. We will use this information to roll out our sustainable innovation work across IFCN in 2019.

Click here for more information on our sustainable innovation programme.

Climate change continued

One-third lower carbon footprint per dose by 2020

Our carbon performance is measured by our total carbon footprint per dose of product against a 2012 baseline (65.7g CO_2e per dose). In 2018, our total carbon footprint was 63.1g CO_2e per dose, a 4% decrease against 2012. The total carbon footprint for the full value chain of RB products and its breakdown is shown in the infographic on page 5.

We have successfully delivered reductions in a number of areas such as plastics used in packaging. Working with suppliers, we also have programmes in place to reduce the impacts from natural raw materials. However, we are behind our targets on full value chain GHG reductions.

Most of our GHG emissions occur when consumers use our products. Despite making progress, influencing consumer behaviour remains a key challenge and we have therefore been working with partners to effect change. For example, Finish have been collaborating with key makers of dishwashers to ensure our dishwasher tablets deliver the same performance at lower temperatures and with reduced water use. This means that GHG emissions from consumer use will reduce over time, as people replace their existing dishwashers with new, more efficient models. Alongside this, as people also move from hand washing to energy and water-efficient dishwashers we can similarly drive significant carbon and water savings globally.

However, this move will increase RB's own carbon and water footprint, because the impact will be linked to our products, despite the overall positive impact on saving water and contribution to reducing global water scarcity.

CASE STUDY

Roof-mounted solar power at Mauripur

At our factory in Mauripur, in Pakistan, we've increased our use of renewable energy with the installation of a 107 KW high efficiency roof-mounted poly-crystalline solar system. The system is designed to operate during daytime (off-peak hours) in parallel with the local electricity grid, providing the site with clean power and reducing its GHG emissions.

50%
Site's heat load is now renewable

CASE STUDY

Renewable hot water at Uttaranchal

At our plant in Uttaranchal, India, we've gone one step further by installing dual axis parabolic solar dishes, to generate renewable hot water. The dishes are 95m² in size and move during the day to track the sun and maximise energy output. With just five dishes, 50% of the site's heat load is now renewable, decreasing energy use by 25% and reducing GHG emissions.

1,600t
GHG emissions saved

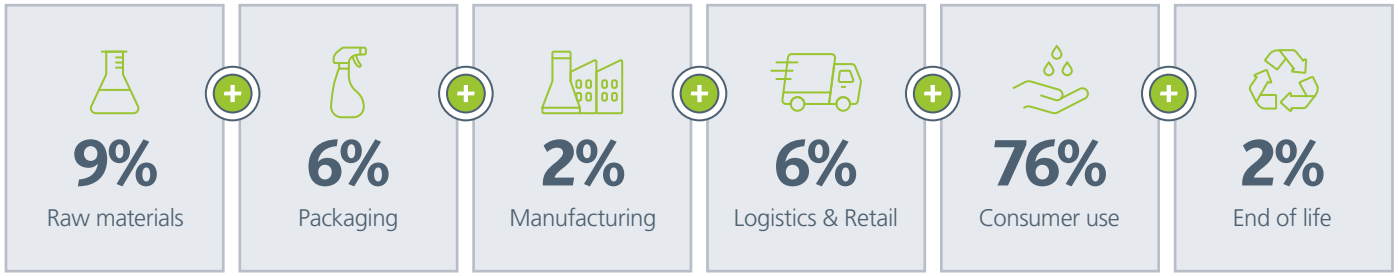
CASE STUDY

Moving away from coal power in China

At our sites in Anhui and Shanxi in China we focused on what energy we use on site and how it is produced. In 2018, both sites invested in the installation of new cleaner burning natural gas boilers, plus additional heat recovery, moving away from less efficient coal fired boilers and saving an estimated 1,600 tonnes of GHG emissions.

Climate change continued

Our carbon footprint



Looking forward, as RB grows, this in turn will drive up the overall carbon footprint of our products. For example, bar soap is both carbon and water intensive as it uses a relatively large amount of energy (e.g. carbon) to heat water as well as having a high water impact at point of use. This is an example of improved hygiene and associated health benefits from hand and body washing, where the benefit is delivered with negative life cycle impacts. This will mean that we will have to work even harder to deliver GHG reductions across the value chain to compensate for growth or find new ways to make soap with lower emissions. We acknowledge this will be challenging, but we also believe this will open up new opportunities for us.

Click here for more information on our breakdown of product life cycle emissions in Appendix 2.

Click here for more information on our approach to responsible sourcing.

Click here for more information on plastics and packaging.

CASE STUDY

CDP

We recognise the importance of driving transparency and stakeholder disclosures. We're delighted to be included in CDP's 2018 Supplier Engagement leaderboard, achieving A listing, as well as A- listing for climate. We're proud of our achievements but we know there is much to do across all three of CDP's focal areas of climate, water and deforestation, both within our supply chain and in our own operations. Deforestation accounts for up to 15% of the world's greenhouse gas emissions, so we're committed to advancing our work on palm oil and other issues where supplier collaboration is key. For our CDP 2018 Palm Oil and Timber disclosures RB was awarded the above-industry scores of A- and B- respectfully.

CASE STUDY

Mucinex Fast-Max

The Sustainable Innovation Application helped to identify some surprising carbon, water and packaging savings for these Cold, Flu & Sore Throat Caplets. The product was originally available in a bottle, but incorporating Sustainable Innovation at the forefront of our development process helped to identify that the caplets are almost 95% lighter, saving more than 80% of greenhouse gas emissions and more than 90% of the water impact.

3. Transportation and logistics

As a global consumer goods company, we recognise the importance of transport and distribution in our business. However, in 2018 logistics accounted for only 2% of our total carbon footprint. We use transport contractors to move our products by road, sea, rail and sometimes air; consequently, we do not have operational control of these companies, but we work with them to improve efficiency and reduce emissions.

Most of our impact is through road transportation. To reduce the environmental impact (and cost) of product transport, we are working with our transport contractors to:

- Combine our truck journeys with those of other companies, so that a truck is carrying products on both the outward and return legs of its journey, reducing 'empty' running.
- Combine 'less than a truck load' shipments.
- Move freight off roads to rail, inland waterways and inland sea shipping.

This will increase our efficiency and reduce our total carbon footprint, contributing to our carbon reduction goals.

Climate change continued

4. Carbon offset programme

RB ran a carbon offset programme called 'Trees for Change' in British Columbia between 2006 and 2015. We launched this programme because we wanted to actively mitigate our company's impact on climate change and this offered us a means, in addition to our existing activities, to do so.

Our goal for the programme was to plant enough trees to take in the same amount of carbon dioxide as our manufacturing operations generated from 2006 to 2017, effectively making our manufacturing operations carbon neutral. We achieved this goal through planting over 8 million native trees since the inception of the programme. Our methodology for estimating the carbon sequestered by the trees planted in our RB Trees for Change programme is aligned to the Intergovernmental Panel on Climate Change's (IPCC) Good Practice Guidance (GPG) for Land Use, Land-Use Change and Forestry (LULUCF) Projects (2003).

We have always managed the programme in-house rather than using an external offsetting company, which means we are responsible for ensuring enough trees survive and grow, while maintaining the land we own using local contractors and striving to be a good neighbour.

We recognise that land use priorities are changing within British Colombia. As a result, in 2015, we paused the programme while we completed a full review. As part of this review, we engaged with local stakeholders to understand how RB's Trees for Change programme could continue to make a positive contribution to the local community. Based on the feedback from the community, in 2016 we decided to continue to maintain the trees and land already planted as part of the programme, but to discontinue efforts to purchase any additional land. RB will continue to be a responsible neighbour, maintaining the land it owns and keeping the properties safe and secure, using local suppliers.

At this time, we do not plan on implementing another Trees for Change programme. Instead, we will focus our efforts and resources on reducing RB's greenhouse gas emissions through manufacturing efficiencies, renewable energy and reduction efforts along the full value chain.

5. Resilience to the effects of climate change

As part of building a resilient future business, we aim to understand the risks posed to sourcing, making and selling our ingredients and products through climate change, for example floods, droughts and temperature changes that influence the transmission of diseases. The better we understand these risks, the better we are prepared for them and can continue to provide our customers and consumers with a relevant product offering. You can find more information of the work we are doing in this area in our RB Insights 'Understanding climate change risks'.

Click here for more information on understanding climate change risks.

Outlook for 2019

Recent changes in our business, such as the acquisition of Mead Johnson Nutrition, have led to changes in our overall environmental footprint. As a result, we have decided to review RB's goals to ensure they reflect the new business. We have committed to setting carbon reduction targets that support climate science and help limit global warming in line with the objectives of the United Nations Framework Convention on Climate Change (UNFCCC).

We took our first step towards this in 2018 by committing to setting Science Based Targets. In line with the recommendations from the Task Force on Climate-related Financial Disclosures (TCFD), we have also reviewed our business strategy and climate-related risks in line with various scenarios to establish future reduction opportunities and performance goals. We are currently preparing new long-term climate change goals that will ensure we deliver our commitments by 2030.

Climate change continued

Appendix 1

Energy and greenhouse gas data

Energy usage	Units	2012	2013	2014	2015	2016	2017	**2018****	% Change vs. 2017	% Change vs. 2012
Energy use per unit of production	GJ per 1,000 CU	0.4704	0.4488	0.4130	0.3959	0.3939	0.3767	**0.3640**	-3.4%	-22.6%
GHG emissions per unit of production*	tCO_2e per 1,000 CU	0.0402	0.0392	0.0374	0.0347	0.0313	0.0278	**0.0260**	-6.3%	-35.2%

Note: All data for manufacturing and warehouses unless otherwise stated.

* GHG emissions data are in line with the Scope 2 GHG Protocol market-based approach.

** Pre-acquisition data for our IFCN business is not available. To ensure like-for-like comparisons, target performance trends vs 2012 exclude IFCN. Including IFCN, 2018 manufacturing and warehouse GHG emissions were 0.0521 tCO_2e per 1,000 CUs and energy use was 0.6304 GJ per 1,000 CUs.

Appendix 2

Greenhouse gas emissions across the full value chain (Scope 1-3)***

Total carbon footprint impact 2018 (RB excl IFCN)		Raw materials	Packaging	Manufacturing	Logistics and retail	Consumer use	End of life	Total/ average
Carbon 2018	total (million tCO_2e)	2.9	1.9	0.4	1.7	26.4	0.7	34.0
	g/dose	5.3	3.5	0.8	3.1	49.0	1.3	63.1
	% split	8	6	1	5	78	2	100

The system has been developed with reference to the requirements and principles of recognised international standards such as PAS 2050:2011 and the greenhouse gas protocol.

Total carbon footprint reductions (RB excl IFCN)		2012 (baseline)	2017	2018	% Change on 2012	% Change on 2017
Carbon 2018	g/dose	65.7	64.6	63.1	-4%	-2%

Total carbon footprint impact for IFCN 2018		Raw materials	Packaging	Manufacturing	Logistics and retail	Consumer use	End of life	Total/ average
Carbon 2018	total (million tCO_2e)	0.5	0.1	0.2	0.7	2.8	0.1	4.4
	% split	11	3	4	15	63	3	100

*** Pre-acquisition data for our IFCN business is not available. To ensure like-for-like comparisons, target performance trends vs 2012 exclude IFCN. Including IFCN, the 2018 carbon footprint across the full value chain is 38.4 million tonnes of CO_2e.