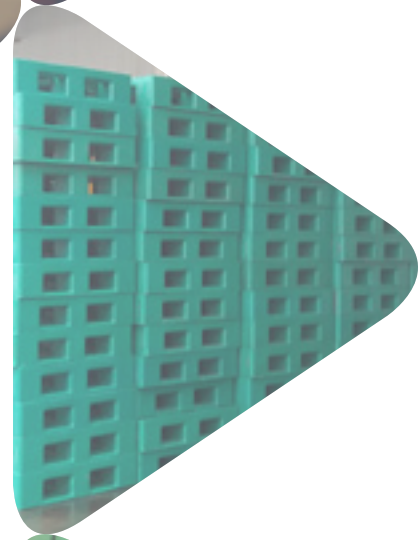
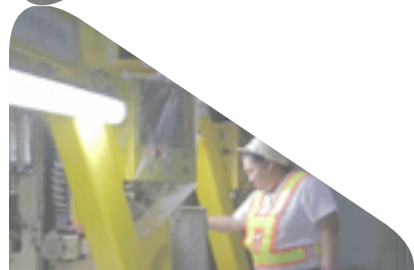










natural resources

Based on years of experience operating in different markets, we are able to replicate best practices in our operations. We also benchmark with other companies to consider potential investments for water conservation, use of renewable energy, sustainable farming, science-based eco-friendly animal husbandry, and effective waste management through the recycling of waste across our business units (BUs).

URC Distillery, Bais, Negros Oriental

NATURAL RESOURCES

URC belongs to an industry that is dependent on natural resources for raw materials. As such, we require the utmost care in utilizing our operational resources to manage the impact on the environment. In line with our purposeful transformation, we intend to further enhance our approach to responsible management of natural resources.

ENVIRONMENTAL COMPLIANCE: SYNERGY AT URC

103-1 103-2 103-3

Environmental compliance is the baseline of responsible resources management, which is essential to business continuity. As a diverse and fully integrated business, we look for ways to synergize our operations so that we adequately manage our resources. Over time, we have continued to enhance this overall approach.

Across our operations, URC studies all applicable regulatory requirements; determines and assesses the gaps; identifies the permits and licenses needed per facility; establishes the relevant guidelines; develops and implements action plans; and provides the needed infrastructure and other resources to meet mandatory conditions. We fully comply with the regulations of the countries where we operate and sell our products, as well as any conditions required by our customers.

In the domestic market, which is the scope of this report, we are continuously monitoring our performance based on environmental regulations put forward by the Philippine Department of Environment and Natural Resources (DENR), National Water Resources Board (NWRB), and the pertinent City or Municipal Environment and Natural Resources Office (CENRO/MENRO). Aside from these, we also seek to comply with the requirements of energy regulatory bodies such as the Department of Energy (DOE) and the Energy Regulatory Commission (ERC).

Our environmental compliance is evaluated based on governing laws and requirements prescribed by our regulators, including but not limited to the Philippine Clean Water Act (Republic Act No. 9275); Clean Air Act (R.A. No. 8749); Ecological Solid Waste Management Act (R.A. No. 9003);Toxic Substances and Hazardous and Nuclear Wastes Control Act (R.A. No. 6969); Pollution Control Law (R.A. No. 3931, as amended by Presidential Decree 984); the Environmental Impact Statement System (P.D. No. 1586); and the Laguna Lake Development Authority (LLDA) Act of 1966 (R.A. No. 4850). Our Environmental Compliance Certificates (ECCs) fulfill the requirements of Presidential Decree No. 1586, in accordance with DENR Administrative Order No. 2003-30.

Given that we generate renewable energy and sell our excess power supply, we also comply with the Renewable Energy Act (R.A. No. 9513) and the Electric Power Industry Reform Act (R.A. No. 9136).

URC SURE's biomass-fired power cogeneration plant in Kabankalan, Negros Occidental adheres to the standards for energy generation set by the DOE, ERC, and the National Grid Corporation of the Philippines (NGCP).

At URC, we are guided by transparency, ethics, and fairness. Our enduring commitment is to do business with integrity. It is the responsibility of all URC BUs to comply with applicable environmental laws and regulations. Corporate direction and alignment is provided from the JG Summit Holdings, Inc. (JG Summit) level under the Government Affairs, Legal, and Corporate Governance departments with all the BUs.

As part of our commitment to the preservation and conservation of the environment, we continue to establish a Safety, Health, and Environmental Policy across URC. The Policy aims to satisfy the requirements of International Standards, such as ISO 14000 on environmental management and OHSAS 18001 on occupational health and safety management. It also underscores URC's commitment as a responsible citizen in the communities where the business exists.

In managing environmental compliance, evaluation is done through audits by both internal and external auditors. For URC Branded Consumer Foods Group (BCFG), in particular, a Plant Environmental Assessment process is being conducted semi-annually by the Plant Environment, Health and Safety (EHS) Engineers, and annually by the Corporate Operational Governance and Sustainability Group, to validate the plants' compliance with environmental laws and regulations, and implementation of operational controls and management system standards.

EFFICIENT PRODUCTION & MATERIAL USE

103-1

URC is focused on finding solutions that lead to seamless and efficient operations. The responsible use of natural resources — intrinsic to our business — entails that we minimize our environmental impacts and optimize synergies where possible, whether in the careful sourcing of raw materials from select suppliers, or in the proper use, reuse, or disposal of these same materials and the material by-products generated from our operations.

Certified Sustainable

103-2

We are looking into sourcing materials from organizations that undergo regular audits and are certified sustainable. At BCFG, for example, we support this initiative by patronizing suppliers of palm oil, such as Cargill and Oleo Fats, which have been certified by the Roundtable on Sustainable Palm Oil (RSPO). Our subsidiaries, Snack Brands Australia and Griffin's Foods Ltd., also use only RSPO-certified palm oil for their products. Meanwhile, URC Agro-Industrial Group (AIG) has been procuring US soybeans for more than 10 years, and received its certification from the US Soybean Sustainability Assurance Protocol in 2016.

As a multinational company, URC also emphasizes the regional and local sourcing of raw materials. Buying local allows us to minimize our carbon footprint and, at the same time, support our communities. At BCFG Philippines, we patronize local sugar cane producers, whereas at BCFG Vietnam, our green tea comes from the highlands of Vietnam.

Renewable and Recyclable

103-2 303-3

Currently, URC utilizes a mix of renewable and non-renewable raw materials. We try to extend the life of our raw and associated process materials by recycling or reusing these same materials elsewhere in our operations.

Among our non-renewable but recyclable materials would be the polyethylene terephthalate (PET) resin used for our C2 bottles, and polypropylene (PP) resin used for our Rong Do packaging. The food-grade PET material can be reground and mixed in with virgin resin to create new bottles. Meanwhile, our PP resin is one of the safest and most flexible plastics used in food packaging. Notably, post-consumer recycling can be done for both types of resin to create new packaging.

As a responsible manufacturer, URC is collaborating with concerned stakeholders — such as other food manufacturers, and non-governmental organizations (NGOs) — to

reduce the amount of plastic waste that ends up in landfills and oceans. *(More information on our waste management efforts may be found in the feature, "A Wealth of Uses for URC Waste," on pages 50-51.)*

Meanwhile, the molasses from sugar production at URC Sugar and Renewables (SURE), and pasta trimmings from flour milling at URC Flour and Pasta Division, are mixed, pulverized, and further processed by URC AIG to use as animal feeds. These associated process materials are fed to the hogs and chickens, which makes for a very cost-effective means to feed our livestock.

Biofuels Promotion, Waste Conversion, & CO_2 Recovery

303-3

URC, through SURE, strongly supports the government's Biofuels Act by producing ethanol that is suitable for blending with fossil fuels like gasoline. The Act mandates a minimum blend of 10% bioethanol per volume of fuel. The URC Distillery, located in Bais, Negros Oriental, uses molasses as its primary feedstock in producing this commercial fuel-grade bioethanol. It is the first ethanol distillery plant in Southeast Asia to utilize a spent wash incineration boiler, ensuring environmentally safe and hazard-free operations.

Most recently the URC CO_2 Recovery & Liquefaction Plant, also located in Bais, started operations to recover, purify, and liquefy the carbon dioxide naturally produced from fermentation and bioethanol production at the Distillery. We are now selling our liquid CO_2 to a leading supplier of industrial, process, and specialty gases worldwide, as well as a leading retailer of liquid CO_2 and dry ice in the Philippines.

With Natural Resources as a key focus area in our sustainability strategy, we strive to make sustainable choices and connections. In the years to come, we hope to improve our linkages so we can better manage our resources and thus optimize URC operations.

WATER MANAGEMENT

103-1

Water is a scarce and critical resource. As a food and beverage company, we utilize water at every stage of our manufacturing process. We understand the importance of efficient water management given that our water use affects operational cost, stability of water supply, compliance to government standards, and overall business continuity. Our commitment to sustainability means that we practice water source protection and conservation.

Protecting Water Sources

103-2 303-2

We are monitoring our performance based on the requirements of the National Water Resources Board (NWRB). We withdraw water from different sources, and adhere to the maximum allowable extraction rate.

URC BCFG utilizes deep wells and avails of municipal water, whereas URC BOPP Packaging and URC Flexible Packaging draw water primarily from deep wells. URC SURE draws from deep wells and rivers, and avails of municipal water during off-season repairs. Notably, URC SURE also reduces its water consumption by recycling water. URC SURE is able to extract water from sugar cane during milling, and condenses water vapor to extract more water.

URC AIG draws from deep wells and procures water from Metropolitan Cebu Water District. Meanwhile, URC Flour and Pasta Division procures water from Davao City Water District. Both also purchase water from Manila Water. Our water providers have developed their own environmental management systems and comply with national regulations.

We are gathering our baseline data on the amount of water withdrawn annually, and the potential impacts of our continued tapping of the water sources on the locality. BCFG, for one, is planning to conduct a source vulnerability assessment to identify water sources at risk of becoming scarce and polluted, critical areas for deep well water use, and possible losses in lakes. We also recognize the importance of looking for alternative sources of water aside from the deep wells that our plants are currently using.

Practicing the 3Rs

103-2 303-3

Water is a non-renewable ingredient and associated process material in our food and beverage production. In managing our water use, we follow the three Rs: Reduce, Reuse, and Recycle.

Implementation of the three Rs is based on the need or requirement of the plant. An assessment is being done by comparing the actual versus the theoretical water usage of each product category or plant. Priority is given to product categories or plants with high water usage.

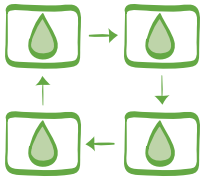
We are currently closely monitoring our water use ratio (WUR), or the amount of water used (in liter) per product (in kilogram), in BCFG plants.

Fixing the Basics

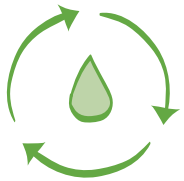
We identified that there are water leaks in the plant operations and we strongly believe these can have a negative impact on our water consumption goals. Having this in mind, we will be more pro-active in sweeping all existing leaks and preventing future leaks through initiatives that will address plant maintenance, ensuring all the pipes and fittings within the operation are in good condition.

URC is very much cognizant of the need to conserve water, hence, we insist on recycling and reusing as much of the resource as we are able. Several BCFG plants have started the practice of using non-virgin water in washing some of our key raw materials in snacks, such as corn and potato. In BCFG Vietnam, for example, bottle rinse water is collected and reused — around 12% of water withdrawn is recycled in this manner. We also use recycled water in daily activities of the plant, such as watering the greenery, and using treated water for toilet-flushing.

URC SURE has several initiatives in place to reduce water wastage:



SURE-SONEDCO employs a closed loop system to efficiently recirculate its condenser water requirement, with a flow of **6.65 million (MN) liters (L) per hour**.



Recycling is embedded in the processes of specific milling sites, namely SURE-PASSI (**364.50MN L** or **10.92%** of treated wastewater recycled as make-up water to spray ponds, and used in condensers as cooling medium), SURE-TOLONG (**263.91 thousand L** or **1.37%** of treated wastewater reused in the wet scrubber as spray water), and SURE-Distillery (**257.69MN L** or **34.97%** spent wash mainly recycled to the fermentation process and fired to boiler).

Water conservation is also applied by recycling spent wash from the URC Distillery to be mixed with mud press for fertilizing sugarcane fields, and treated wastewater from SURE-CARSUMCO (**25.86MN L**) discharged to the rice fields upon the need of farmers. *(More information on recycling wastewater may be found in the sidebar titled "How do we recycle our wastewater?" on page 46.)* Given the nature of SURE operations, there are cases where wastewater discharges are higher compared to water extracted due to water from sugarcane.

We are committed to continuously improving our water resource management programs. The effectiveness of our approach is evaluated on our regular operations review. Through this, we have identified the need to establish the ideal water usage per product, to have a thorough water mapping, and to have a URC-wide water conservation program.

ENERGY & EMISSIONS

103-1 103-2 302-1 305-1 305-2

URC recognizes that energy management will have positive impacts on the organization and the environment, resulting not only in regulatory compliance but also reduced carbon footprint, lower production cost, and significant savings on operational expenditures (OPEX). Hence, responsible energy use is a crucial aspect in our company's sustainability.

We are committed to reducing our overall energy consumption through continuous technical innovation, sustainable energy conservation programs, elimination of waste to improve energy efficiency, use of alternative sources of energy, and administration of proper and effective training of personnel at all levels of the organization.

Initially, Energy Conservation (ENERCON) committees at plant level have been organized to lead and manage the energy improvement programs. We conducted energy mapping to identify the areas and processes to be prioritized.

Some of the programs and initiatives that we are implementing to reduce the energy usage in the priority areas/processes are: installation of power meters; identification of processes leaks and other wrong practices; technological innovation; resizing of motors; conversion of low efficiency motors to high efficiency motors; migration of motors to Variable Frequency Drivers (VFD); and conversion of steam-driven equipment to motors for SURE.

URC employs qualified engineers to act as energy managers, and to submit energy conservation programs and energy audits in accordance with Republic Act No. 73, "An Act to Further Promote Energy Conservation and for Other Purposes," which regulates industrial, commercial and transport establishments. For BCFG, quarterly reports on energy use and an annual report on our energy conservation programs are being duly submitted to the Department of Energy.

ENERCON Initiative

The ENERCON program of the parent company JG Summit is being implemented and cascaded URC-wide. It emphasizes the importance of energy management and conservation to every business unit. Each BU adopts their own approach to realize this commitment according to their identified parameters.

We aim to be part of the global effort to combat climate change by reducing our carbon footprint. This entails close monitoring of our energy use, and the greenhouse gas (GHG) emissions that trap heat in the atmosphere and contribute to global warming.

URC recognizes that energy management will have positive impacts on the organization and the environment, resulting not only in regulatory compliance but also reduced carbon footprint, lower production cost, and significant savings on operational expenditures (OPEX).

In 2016, we were able to consume around 2.49 billion megajoules (MJ) from our Scope 1 energy sources such as coal, bunker oil, diesel, and liquid petroleum gas (LPG). On the other hand, our Scope 2 energy consumption amounted to around 1.16 billion MJ from electricity use. We are just starting to baseline our usage for the first two years, and we believe we can further optimize by increasing our renewable sources of energy and generating our own power. Baselines are derived from historical records, and targets are set to further reduce energy consumption.

Our GHG emissions for the year amounted to 195,345.13 metric tons of carbon dioxide ($mtCO_2$) from our fuel energy sources while our GHG from electricity sources, reached 216,731.14 $mtCO_2$ from our power demand. Although we regularly burn fossil fuels to operate our various equipment (e.g., boilers, ovens, generation sets, forklifts), we minimize this practice by substituting fuels or equipment for cleaner or more efficient combustion.

In our sugar mill in Negros, the biomass cogeneration facility was expanded to maximize the usage of bagasse and produce power, not only to support its own milling operations but also for exporting to the power grid. Furthermore, we have also been reducing our dependence on non-renewable fuel sources by using waste materials as fuel, such as spent wash for our spent incineration boiler, bagasse for our biomass-fired power cogeneration plant, and manure for our biogas digester plant.

Our transport and logistics also consume fossil fuels. This year, we invested in barges for our flour business — comparatively, ocean freight has fewer emissions compared to air freight.

For the plants, the energy usage is tracked and monitored daily, and the desired ratio of energy use is reviewed by the Water and Energy Management Committee on a monthly basis. Furthermore, the BUs submit an energy consumption report to the JG Summit Energy Committee on a monthly basis, and yearly recognition is given to those who achieved their targets.

Cost per unit of production

Looking at our largest BCFG plant, which is Pampanga, our solid production (such as confectionary, snacks, biscuits, and coffee) is averaging at 988.62 MJ per unit, while our liquid products (ready-to-drink beverage) are averaging at around 1,025.34 MJ per unit. Moving forward, we aim to improve our energy consumption against the baseline.

Data on URC's energy consumption is provided by JG Summit ENERCON, which gathers the gross energy consumption figures for all five URC business units. The available data covers total URC operations except for the Balayan milling site under URC SURE. To ensure consistency in following the GRI Standards, the corresponding data on our emissions performance has been calculated and converted directly from our energy consumption. This was accomplished using conversion factors from the Institute of Global Environment Studies (IGES) and the US Environmental Protection Agency (US EPA). Original figures in kilowatt-hour were converted to megajoules using the standard metric of 1 kilowatt-hour = 3.6 megajoules.

The creation of the ENERCON Committee as the designated governing body on all energy conservation initiatives will institutionalize energy management in URC. With full resolve to ensure the sustainability of the ENERCON program, a feedback mechanism on the compliance of every BU shall also be established.

Leaders of energy conservation within JG Summit Holdings met last March at the ENERCON Summit 2017, with the theme "Embracing the Regime of Retail Competition and Open Access," to take stock of the effectiveness of the Energy Conservation program, exchange best practices, and discuss other ways their units can contribute to lowering energy costs and raising the competitiveness of the Conglomerate.

Participants included energy conservationists from URC BCFG, AIG, Flour and Pasta Division, Sugar and Renewables Division (SURE), JG Summit Petrochemicals Group, and other business units within the conglomerate. Among the energy cost drivers discussed were inefficiencies, additional processes, continued expansion, and the rising power costs.

Energy savings, in fact, had been achieved through varied energy conservation initiatives; efficiency improvements in processes and equipment, as well as enhanced skills; use of new and efficient technology; and economic procurement of electricity sources. Total energy consumption of JG Summit stayed close to baseline consumption.

As defined in our strategic priorities on resources management, we will continue to monitor the company's energy usage and ensure that we achieve our targets.

Generating Electricity for Own Use

A portion of our energy requirements is provided by biomass, a renewable energy resource being utilized in URC SURE and URC AIG.

AIG uses a biogas digester to collect the methane gas and organic fertilizer produced during the anaerobic decomposition of waste. The biogas yield serves as the fuel to generate electricity. This technology not only helps improve energy efficiency in both the chicken and hog farms, but also helps nature by preventing the discharge of effluents generated by their operations from harming the environment.

AIG's 160 kilowatt (kW) biogas digester plant in Naic, Cavite produces enough energy from chicken manure to supply the power demand of its five chicken houses and other farm facilities, which are tunnel-ventilated, climate-controlled, and fully automated. The waste-to-energy plant has enabled the layer farm to cut electricity costs by 36%. Similarly, AIG's 400 kW biogas digester plant in San Miguel, Bulacan uses hog manure to generate electricity for its hog farm, particularly for the Growing Finishing Unit and Hog Breeding Unit. Together, the two facilities have allowed up to Php 1.7 million in savings, monthly. As AIG expands its sow levels in the next three years, the hog waste-to-energy initiative will also expand, potentially resulting in increased savings.

Meanwhile, the URC Biomass-Fired Power Cogeneration Plant located in Kabankalan City, Negros Occidental can generate 46 megawatts (MW) of electricity using bagasse, a by-product of sugar milling, as fuel. The plant already exports 20 MW of its total power to the national grid. We have also modernized our equipment in SURE, resulting in lower domestic power consumption and greater capacity to export power to the grid. This entire investment supports the government's Renewable Energy Act, and we are one of the few players in the sugar industry who are feed-in-tariff (FIT) compliant.

We are looking forward to increasing our capacities in the near future. Apart from energy savings, increasing our use of renewables could only reduce our dependence on non-renewable energy sources, and bring us closer to our vision of a sustainable URC.

As part of our strategic priorities under Our Purposeful Transformation, we are taking steps to further improve how we manage energy and emissions. We evaluate the effectiveness of our management approach on energy through the yearly assessment of our energy use, comparing the actual usage against the established targets and standards. We also assess employees' awareness and commitment to energy saving programs and initiatives.

WASTE MANAGEMENT

103-1 103-2 103-3

Managing our effluents and waste, apart from our emissions, is integral to the regulatory compliance and social responsibility of URC. How we approach these aspects affects both our operations, as well as how we are perceived by our stakeholders. Proper management encourages cost-efficiency (such as through waste-to-energy initiatives), and ensures sanitary operations that would prevent complaints and environmental grievances from the communities where the BUs operate (part of our social license to operate).

URC has various existing BU-initiated activities with corresponding internal goals and targets. The initiatives aim to reduce wastes (liquid, solid, and residual waste) by optimizing our operations, which will lead to the reduction of manufacturing rejects. Recognizing that we are a business with value scrap that generates excess and leaves packaging footprint, recycling and reclamation are highly material to URC.

At present, URC BCFG is set to undergo pre-assessment for the standards under ISO 14001: Environmental Management System. A number of manufacturing plants are recycling the wastewater effluents for cooling tower makeup. We also shred packaging materials on-site. *(More information on URC's current waste reutilization may be found in the feature, "A Wealth of Uses for URC Waste," on pages 50-51.)*

The proper management of emissions, effluents and waste is the responsibility of the Environment, Health and Safety (EHS) Committees across the BUs. We frequently evaluate our compliance with regulatory standards through analysis of our effluents and wastes by DENR-accredited testing centers. Copies of the results are submitted to DENR for their evaluation.

Managing Wastewater Effluents

306-2 306-5

As part of our environmental compliance, URC meets the required wastewater effluent quality based on the standards stipulated under DENR Administrative Order (AO) No. 2016-08, "Water Quality Guidelines and General Effluent Standards of 2016."

URC has the capacity to process wastewater amounting to 7,265 cubic meters per day.

Often, treated wastewater is coursed through the approved water receivers or water systems. Non-hazardous waste from BCFG and AIG are discharged through public sewage. URC Flour and Pasta has no wastewater treatment plant yet; however, the volume of wastewater discharge is not considered significant, given that flour milling is a dry operation process, and the final effluent conforms to standard specifications provided by DENR AO No. 1990-35, "Revised Effluent Regulations of 1990." For SURE, there are cases where wastewater discharges are higher compared

to water extracted, due to water from sugarcane. Recycling and disposal of wastewater is taken care of by the waste management facility owned by each SURE plant.

By proximity to our facilities, however, affected bodies of water would be Batangas Bay (near our URC BOPP Packaging and URC Flexible Packaging plants in Simlong, Batangas), Sicopong River in Negros Oriental (near SURE-TOLONG), and the Ilog-Hilabangan River (near SURE-SONEDCO), also in Negros. AIG on the other hand, has operating units near the Pasig River, Laguna Lake, Candaba Swamp in Pampanga, Pinatubo River, and the Pacific Ocean. As a responsible company, we try to keep these waters pristine.

Responsible Waste Disposal

We methodically collect our waste on-site, and separate it based on whether these are hazardous or non-hazardous.

URC tries to minimize wastage by reincorporating manufacturing by-products — such as candy mass — back into the production process. As previously mentioned, URC also converts by-products such as wheat bran and pollard into animal feeds.

Other items, though equally non-hazardous, are harder to dispose of, such as the refinery press cake, which are the remaining solids after the juice has been extracted. Unlike mud cake and ash, refinery cake has no agricultural use and must be temporarily stored in a landfill, before being transferred off-site.

URC is also looking into better ways to minimize its plastic footprint, by working with the Philippine Alliance for Recycling and Materials Sustainability (PARMS), an organization composed of peers in the food manufacturing and consumer goods business, and NGOs like Zero Waste Recycling Movement of the Philippines, Inc. (ZWRMPF, Inc.).

URC tries to minimize wastage by reincorporating manufacturing by-products...

How do we recycle our wastewater?

Our wastewater is treated on-site for reuse, majority as wash water or irrigation for the rice field;*

spent wash, which is a by-product of the distilling process, is recycled during the fermentation process that produces fuel-grade ethanol and incinerated via the boiler to generate steam and power; or

mixed with mud press for bio-compost that fertilizes the sugar cane fields.

* Some wastewater is discharged into different rivers, but we ensure that the amount and quality withdrawn is acceptable by DENR standards.

Best-in-class Practices on WASTE MANAGEMENT at Griffin's

The Griffin's Food Company, New Zealand

What's good for URC Philippines is also good for URC International. The discipline of making waste functional is practiced both here and abroad. Take New Zealand subsidiary Griffin's as an example:

- **Used oil is given a second life.**
  Griffin's natural waste oil is recovered and sent off-site to be cleaned, reprocessed, and used for biodiesel and other environmentally friendly industrial applications.

- **Food "waste" becomes a new product.**
  Griffin's separates food waste into starch, dry product and wet product — this allows the company to earn revenue from waste materials and recycle starch into raw material for packaging products.

- **Farms benefit from consumer production.**
  Production waste of Griffin's is moved through Eco Stock to farms, and is used for stock feed for both cattle and pigs.

Today, we remain focused on building on our existing initiatives on reutilizing waste, and fully intend to formalize policies and guidelines over the long term. In line with Our Purposeful Transformation strategy, our goal is to institutionalize these initiatives as One URC using a robust and comprehensive framework, including appropriate environmental monitoring and accounting measures.

Multi-Use Plastics

102-15

There used to be an excess of scrap plastic in URC's plant in Simlong, Batangas. Given that plastic can only be recycled a number of times, the build-up of waste material is inevitable. Recently, however, URC has found a way to not only reduce waste, but also gain from a market-ready product made of recycled scrap: plastic pallets.

MAKING THE BOPP FILM

Owned and managed by URC BOPP Packaging, the Batangas plant produces the plastic film materials used by the Company. Specifically, machinery converts resin material into Bi-axially Oriented Polypropylene (BOPP) films, which is used for the packaging of different consumer products, particularly food. BOPP is non-toxic, and resistant to ultraviolet (UV) light, acid, and mild chemicals, as well as heat — ideal material for storing and slowing the spoilage of food products.

In the process of converting the resin material into BOPP film roll form, the plant regularly generates scraps. These scraps undergo a recycling process that transforms them into re-granulated pellet resins or "regrinds". Unfortunately, only a limited quantity of regrinds can be reused back into the mainline machine system, as it may affect the quality of the films. Regrinds can be sold "as is," but at a very low market price, or can be recycled.

UPCYCLING SCRAP PLASTIC

URC BOPP Packaging is constantly implementing improvements in the production process to measure and minimize scrap generation. In fact, the Batangas plant is the only BOPP Plant in the Philippines that has an integrated management system with ISO certifications — ISO 9001:2008 Quality Management System and ISO 14001:2004 Environmental Management System. Part of our waste management strategy is to find ways to utilize the net generated regrinds inventory, instead of selling it at a losing price.

...the Batangas plant is the only BOPP Plant in the Philippines that has an integrated management system with ISO certifications — ISO 9001:2008 Quality Management System and ISO 14001:2004 Environmental Management System.

In 2016, the business unit started to explore the use of regrinds into different plastic products. One result was a feasible plastic pallet tolling project, envisioned to serve the needs of URC affiliates using plastic pallets in their warehouse. This led to a partnership between URC BOPP Packaging and URC Branded Consumer Foods Group (BCFG) for the latter's plastic pallet requirements used in various URC food products.

Plastic pallets are particularly useful in highly regulated and hygiene-sensitive industries such as food manufacturing. These pallets serve as a hygienic bed for merchandise when storing and shipping — minimizing contact with the floor or ground, forming an easy in and out of the truck bed or other conveyance, and reducing the risk of damage to the products. Compared to the traditional wooden pallet, the plastic pallet has the advantage because it is both lightweight and durable, easier to clean and unlikely to harbor bacteria, and made of one single piece with no nails or screws that could snag the product. Using plastic pallets also eliminates the risk of injuries from splintered wood or loose boards.

URC BOPP Packaging delivered its first batch of plastic pallets to URC BCFG plants in July 2016. There have been no major complaints regarding these products, and the deliveries continue to date.

SAVING THE ENVIRONMENT

We use every means to prudently and properly use, reuse, and dispose of our plastic materials, so as not to add to the already burgeoning solid waste problem in the Philippines. Minimizing scrap and extending the lifespan of plastic is eco-friendly, efficient, and cost-effective.

The BOPP plant was able to free up the warehouse space formerly occupied by the regrinds inventory for its BOPP film finished goods products, which are available to serve regular BOPP customer requirements.

We were able to find a better use for our scrap. Converting the regrinds into plastic pallets means they're given a second life, with a new function of storing goods for transport and warehousing. Plastic pallets can be reused more times compared to wooden pallets. This means that fewer trees are cut down to create new wooden pallets; it also means that fewer wooden pallets end up in the landfill.

Given the success of the project, we have also offered these plastic pallets to other divisions of URC, and Robinsons Retail units such as Handyman and Robinsons Supermarket.
We are now also developing a one-way (disposable) pallet to be used in export by URC Flour and Pasta Division.

A Wealth of Uses for URC Waste

Maximizing our resources and minimizing our waste will go a long way to making URC a sustainable company. Our Purposeful Transformation is two-pronged when it comes to waste management: it entails efficient and extended use of our raw materials, and systematic collection and application of alternative functions for waste materials within URC itself. By repurposing our waste and diverting it from the landfill, we are then able to reduce our greenhouse gas (GHG) emissions.

To date, URC has several initiatives, across our business units (BUs), geared toward the reutilization, recycling, and reprocessing of waste.

FROM GARBAGE PILE TO COMPOST GOLD

Transforming waste into organic fertilizer

Various domestic and international divisions of URC donate bio-waste for composting, to the benefit of planters and farmers. For example, product scraps from BCFG Vietnam such as used tea leaves are reused for composting and donated to partner farms. In the Philippines, domestic waste such as mud press from URC Sugar and Renewables (SURE) is withdrawn by planters and applied to fields as organic fertilizers.

PLASTIC SCRAP REPACKAGED AS NEW

Upcycling regrinds into PET bottles

URC's commitment to quality usually entails rejecting packaging materials that do not pass inspection, however small the blemish or dent. Added to which, scrap plastics remain after the materials have been cut and folded or shaped into the desired packaging. Rather than dispose of these materials in a landfill, URC has found ways to reincorporate them into new products. For one, URC's scrap polyethylene terephthalate (PET) material – including bottle rejects – are reground into PET flakes and mixed with virgin PET resin to create new bottles. Only 2-10% reprocessed PET resin is allowed into the mix to maintain the integrity of the bottle.

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WASTE CONVERTED INTO RENEWABLE ENERGY

Bagasse and biomass used to generate power

URC AIG collects chicken manure from its layer farm, which is then used to fuel its biogas digester plant in Naic, Cavite to produce 160 kilowatts (kW) of electricity – more than enough to accommodate the power demand of five fully automated, climate-controlled, and tunnel-ventilated chicken houses. Apart from minimizing waste, the facility is also able to save on power costs of up to Php 6 million annually. In addition, URC AIG uses hog manure to fuel its 400 kW biogas digester plant in San Miguel, Bulacan. The electricity produced by the facility saves the hog farm around Php 14.4 million, annually.

On the other hand, at URC SURE, bagasse or the dry, pulpy residue leftover from the extraction of juice from sugar cane is used as fuel to generate electricity. Currently, the biomass-fired power cogeneration plant in Kabankalan City, Negros Occidental is capable of generating 46 megawatts (MW) of electricity, enough to power the sugar mill operations of URC SURE SONEDCO, and also supply 20 MW to the grid.

Meanwhile, at the URC Distillery, spent wash is recycled during the fermentation process that produces fuel-grade ethanol, and incinerated via the boiler to generate steam and power.

Moving forward, we have identified waste management as a strategic priority, and we intend to further improve on our existing programs. We are motivated by our sincere desire to neutralize any negative impacts our waste generation may have on the environment as a whole, and particularly on the local communities where we operate. We are currently in the process of reviewing our initiatives, and we intend to formalize the interconnected aims of our various divisions. Given that we are already proactive in extending the life cycle of our raw materials and by-products, in time, we expect URC's concerted efforts to significantly reduce waste. At best, we hope to achieve zero waste status.

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URC SURE SONEDCO, Kabankalan City, Negros Occidental