RTI INTERNATIONAL

Sustainability Report

2017

President's Message

As a global leader in environmental research, RTI sets an example for being a good steward for the environment. We leverage the extensive know-how and scientific expertise gained through our research to implement sustainable practices across our operations. Since launching our sustainability program in 2008, we have improved our operations and upgraded our facilities to ensure we are acting in an environmentally responsible way. We continue to support efforts at the organizational and individual levels to maintain a culture of environmental sustainability, and to help ensure that RTI remains a great place to work.

Since our last sustainability report in 2014, we have completed several projects across our main campus to further reduce our environmental impact, such as recovering condensate water from our building air handlers for reuse in our Central Utility Plant, retro-commissioning buildings to ensure energy efficient operations, and continuing to support waste diversion through recycling on our main campus and at our domestic offices. We also routinely monitor our energy and water consumption to ensure that we are judicious in our use of these resources.

In 2016, we began construction of a new 190,000-square-foot office building, referred to as "Project Horizon." This will be a LEED- and Energy Star–certified facility with sustainable features such as locally sourced materials, electric vehicle charging stations, and a green roof. This new building is scheduled to open in 2018, RTI's 60th anniversary, and will be a reflection of RTI's proven longevity, collaborative spirit, and environmental stewardship.

Through the efforts outlined in our 2017 Sustainability Report, we have reduced our environmental impact and promoted a sustainable workplace, both locally and around the world.

I encourage you to read this report to learn more about our sustainability program and accomplishments, as well as some of our key environmental research projects.

E. Wayne Holden
President and Chief Executive Officer

RTI International's environmental research translates beyond the lab into operational practice.

Our Sustainability Program

Commitment

As a leader in the scientific community, RTI International is committed to delivering the promise of science for global good. RTI's investigators routinely study a wide range of environmental topics, such as energy efficiency, climate-smart agriculture, air quality, water resources, and waste management. We continually work to develop new tools, techniques, processes, and policies to improve energy use, reduce greenhouse gases, and promote the sustainability of the environment.

That work translates beyond our scientific labs and into RTI's operational practices. In 2008, we launched our sustainability program with a focus on environmental impacts to demonstrate our mission of improving the human condition by turning knowledge into practice. We rely on our scientific understanding, technical expertise, and business acumen to implement sustainable practices and ensure environmental responsibility. Each year, we initiate several projects to reduce our environmental impact and natural resource consumption. In the future, RTI will also assess expanding beyond reporting on environmental sustainability to better highlight the broader social responsibility efforts being undertaken across the institute.

Commitment

All ongoing maintenance efforts, renovation projects, and new construction projects at RTI's main campus are planned and completed with sustainability in mind. The program not only monitors and reports resource use, but also provides training and information to employees to promote sustainability in the workplace, at home, and in the community. These efforts include engaging our staff members to reduce energy and water consumption, retro-commissioning our existing buildings, and improving the energy efficiency of our Central Utility Plant (CUP).

In addition, we encourage our employees to be responsible citizens. RTI offers staff members the opportunity to safely recycle old electronics and batteries and to charge their electric vehicles (EVs) on campus during work hours; RTI also offers subsidies for using alternative transportation. To date, nearly 100 employees are a part of RTI's bicycling community and almost 85 people use bus and vanpool for daily commute to work.

In This Report

We discuss the role that environmental sustainability plays in RTI facilities operations and research. We continually update and refresh our main campus, take efforts to reduce energy consumption, encourage recycling, and make our offices more sustainable. RTI-leased offices across the United States take part in sustainability efforts by recycling and by encouraging employees to commute to work in a more energy-efficient and sustainable manner. RTI research groups across the world play a role by contributing their sustainability-oriented research. This report focuses on RTI's main campus in Research Triangle Park (RTP), North Carolina, during the calendar years 2014–2016. During the period covered in this report, changes in RTI's footprint included the following:

- Disconnecting utilities to Building 1 in September 2016 in preparation for demolition
- Launching construction of the Project Horizon building
- Divesting ownership of the 94,000-square-foot Advanced Technology Building (ATB), located a couple of miles from our main campus, in October 2016.

We look forward to the opening of Project Horizon, a 670-occupant office building with a cafeteria, multipurpose room, and collaborative work spaces. This new addition will enable us to consolidate additional staff members onto our main campus and support RTI's continued growth in an efficient, sustainable manner.

This report will use the Greenhouse Gas (GHG) Protocol as a framework to calculate emissions from electricity and natural gas consumption, as well as refrigerant use, on-site gasoline use, employee commuting, and business-related travel. The GHG Protocol was developed by the World Resources Institute and is recognized by the International Organization for Standardization as the most prominent emission calculations.

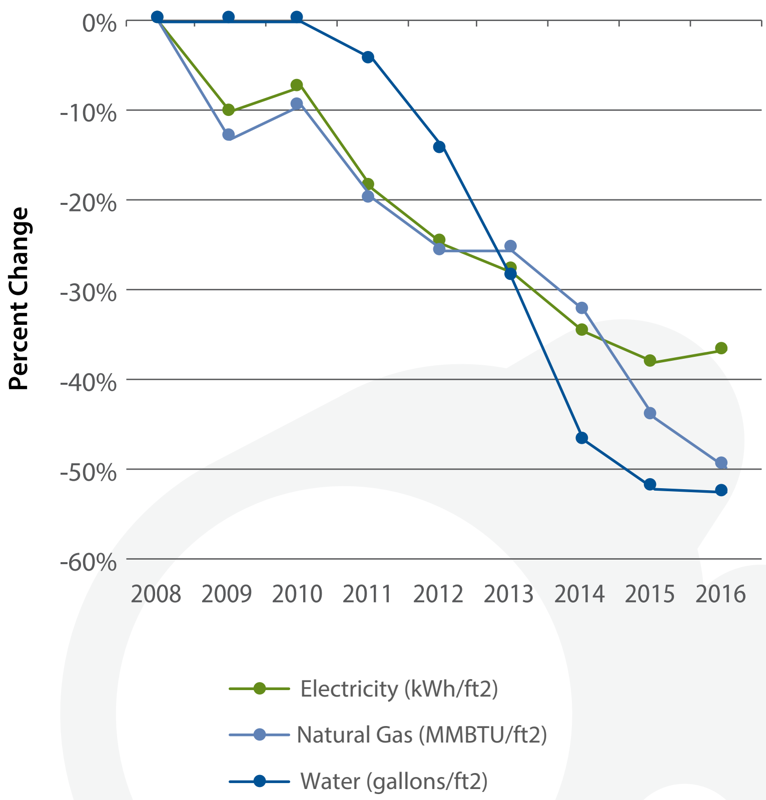
Looking Back

Since the inception of RTI's sustainability reporting, we have made considerable reductions in energy and water consumption across the RTP campus, as well as increased waste diversion through recycling and composting. The Facilities Engineering Department focuses its sustainability efforts on energy reductions through infrastructure upgrades and modifications and energy efficiency measures. RTI Facilities Engineering is deeply committed to monitoring consumption across campus in real time. Some of the larger sustainability related projects that RTI has completed since the beginning of its sustainability effort are highlighted in Table 1.

Accomplishments

These past improvements led to significant reductions in electricity, natural gas, and water usage on campus. Figure 1 quantifies past achievements and further reductions since 2014.

Figure 1. Main Campus Reductions Against 2008 Baseline



Previous Sustainability Actions

Retro-commissioning eight buildings

Installing condensate returns at three buildings

Constructing two Leadership in Energy and Environmental Design (LEED) buildings and achieving Energy Star certification on two existing buildings

Utilizing energy consumption monitoring and tracking systems

Installing 240,000 square feet of white roof on nine buildings

Introducing three electric vehicle charging stations

Planting native landscape

Enacting energy efficiency campaigns—such as Reduce the Juice and Shut the Sash—to involve building occupants

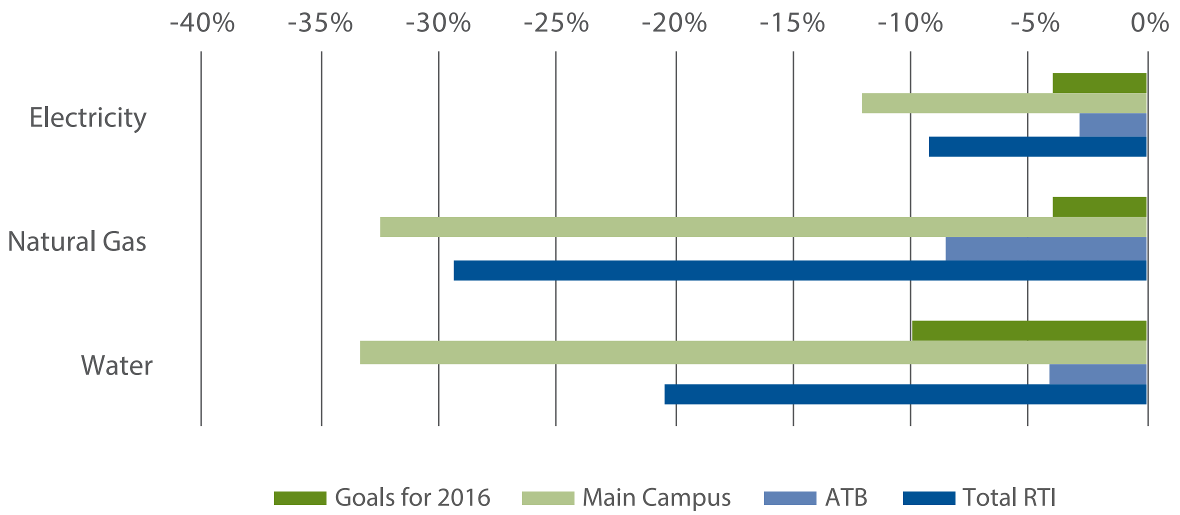
Achievements 2014–2016

Beginning in 2014, we set a goal to reduce overall energy consumption by 4% and to reduce water usage by 10% per square foot by 2016. We expected modest reductions through the following projects:

- Decommissioning end-of-life and inefficient buildings (Building 1 and Animal Research Facility [ARF])
- Retro-commissioning Haynes building and Building O9
- Capturing condensate from ATB's heating, ventilation, and air conditioning system.

Those activities—plus others—allowed RTI's main campus to not only achieve the 4% goal, but to exceed it for both electricity and natural gas, reducing electricity usage by 12% per square foot and natural gas consumption by 33% per square foot. We doubled our goal of reducing water usage by achieving a 21% per-square-foot reduction. Figure 2 includes the reductions achieved 2014–2016 across both main campus and ATB, according to a 2013 baseline.

Figure 2. Main Campus Consumption per ft^2 (Goal vs Actual)



Due to the nature of its operations, ATB has been one of RTI's bigger energy and water consumers. However, as of October 2016, RTI divested this building. In this report, ATB data have been reported separately to more accurately evaluate reductions in RTI's consumption.

Energy

All of RTI's operations require energy—heating, cooling, and ventilation of work spaces and common areas; running laboratories; and operating data centers. To reduce our energy use, our sustainability program focuses on conserving energy and deploying increasingly efficient technology to support our operations. The benefits of energy conservation are two-fold—it is both environmentally friendly and reduces operational cost.

Weather plays a prominent role in energy consumption, requiring buildings to be heated and cooled as needed. To measure our buildings' efficiency against the weather, we use Heating Degree Days (HDDs) and Cooling Degree Days (CDDs). These are measures of how much higher in the cooling season or lower in the heating season the outside temperature is than a base temperature. For example, if the average temperature for a summer day is 80°F, for the base temperature of 50°F, the day is assigned 30 CDDs. The degree days are added up for the year and reflect how hot or cold the year was on average. Using this method allows us to analyze energy consumption by determining how efficient our buildings are or if they are merely keeping up with the weather.

In addition, RTI measures efficiency by calculating its energy use per square foot. Lab space typically consumes four-to-five times as much energy as an equal-sized office building, and RTI—as a research facility—has more than 317,000 square feet of lab space on our main campus. As we upgrade our lab buildings, we expect the overall efficiency to improve.

Clean Power Plants

Creating Cleaner, More Efficient Power Plants

Traditionally, cleaning syngas—a byproduct of gasification power plants—has involved the need for substantial gas cooling and complex heat recovery systems to curb the release of carbon dioxide, sulfur, and other contaminants into the atmosphere. Existing technologies have proven to be too expensive or incapable of working in some key applications and suffer from inefficiencies and high capital and operating costs.

RTI has developed a process to clean syngas at warm temperatures, thereby improving the overall process efficiency and reducing capital and operating costs by as much 50% compared to traditional technologies. Our warm gas desulfurization (WDP) technology is capable of removing up to 99.9% of the total sulfur contaminants directly from raw syngas at gasifier pressure and warm process temperature (250–650°C).

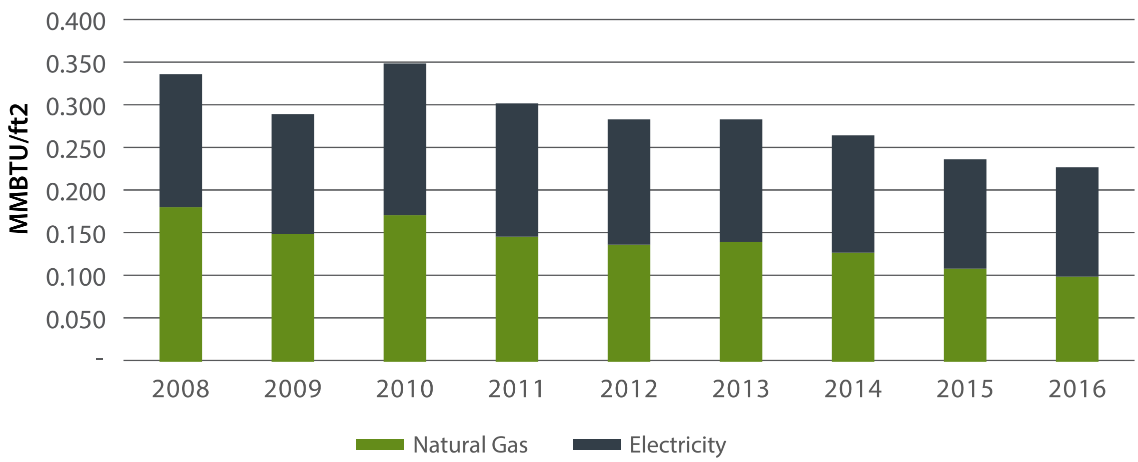
We successfully completed more than 3,500 hours of pre-commercial scale testing of WDP technology at the Tampa Electric site in April 2016, and the technology has now been demonstrated to achieve up to 99.9% removal of total sulfur from syngas at temperatures as high as 650°C.

By decoupling sulfur removal and carbon capture, this technology offers enhanced design flexibility and enables a capable and economic syngas cleanup option for essentially all applications. Replicating process performance through pre-commercial scale has now positioned WDP to dramatically impact the landscape of syngas cleanup, and we are teaming with industrial partners to offer the WDP technology and sorbent commercially.

Results

RTI has made significant gains in reducing energy usage on the main campus since the inception of our sustainability program in 2008. Total consumption jumped with the purchase of ATB in late 2009, but began decreasing soon after because energy-saving projects—such as retro-commissioning buildings, expanding the CUP, and retiring aged and inefficient laboratories—helped offset the increase from ATB consumption. Figure 3 shows the total energy used (in 1 million British Thermal Units [MMBTU] per square foot) at RTI since the sustainability program's inception.

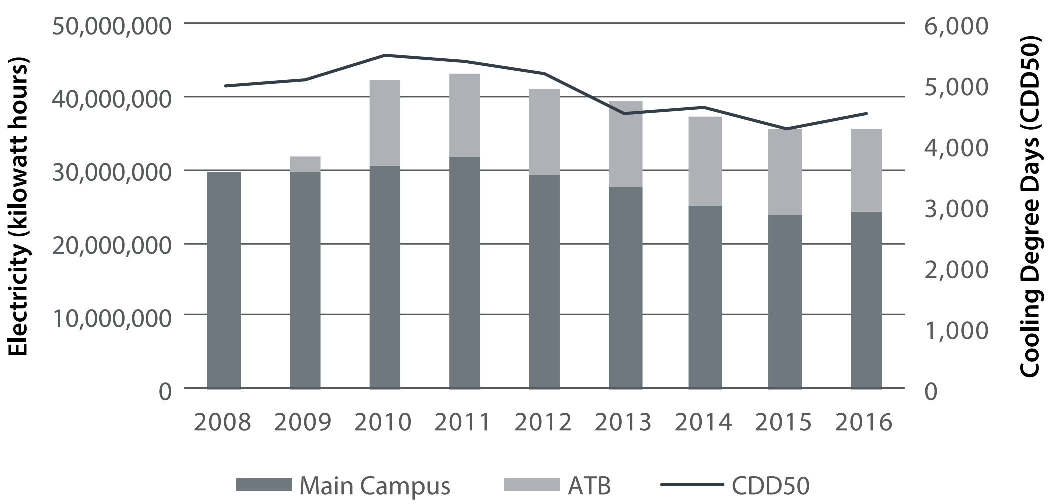
Figure 3. Comparison of Energy Use by Type



Electricity

Electricity use is largely driven by the number of days warm enough to require buildings to be cooled. Figure 4 demonstrates the dependence and shows slight increases in efficiencies in kilowatt-hours (kWh) per CDD.

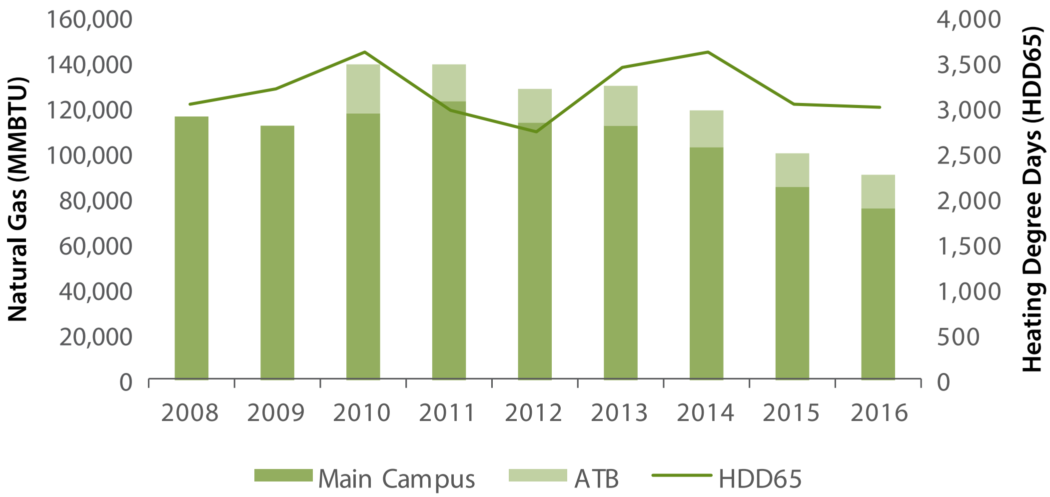
Figure 4. Electricity Use and Degree Days



Natural Gas Consumption

Natural gas usage has decreased steadily since 2013—totaling an overall 28% decrease by 2016. As shown in Figure 5, our natural gas usage is closely tied to the number of HDDs in RTP. However, since 2013, usage has become more efficient per degree day through retro-commissioning and upgrades to the buildings.

Figure 5. Natural Gas Use and Degree Days



Reducing Natural Gas Waste

Reducing Natural Gas Waste in Production

Despite an abundance of domestic natural gas and shale oil reserves, these resources are often found in isolated locales, which leads to unconventional oil production and often results in natural gas that is not utilized.

The U.S. Energy Information Administration reported that the United States burned off, or flared, more than 260 billion cubic feet of natural gas in 2013 to release pressure during production. As natural gas production increases, the search is on for new technologies to address waste associated with flaring and venting natural gas.

One potential solution is small-scale gas-to-liquid (GTL) systems that can turn distributed gas into fuels or commodity chemicals, such as methanol, to reduce the need for flaring.

Working with MIT, Columbia University, and industrial partners, RTI is developing a small-scale GTL system that converts natural gas by integrating existing internal combustion engine technology with methanol synthesis. Our compact reformer produces synthesis gas—the first step in the commercial process of converting natural gas to liquid fuels.

This technology can reduce greenhouse gas emissions from flaring and turn a wasted resource into useful products. The approach delivers low capital expenditures and fast replacement times. Deployed at commercial scale, the potential savings associated with this approach are staggering. If only 50% of non-marketed natural gas were recovered, savings could reach $7.5 billion per year.

Reducing Carbon Dioxide

Cutting Carbon Dioxide (CO_2) Emissions at Cement Plants

Cement plants are large sources of CO_2 emissions, and plant operators have begun looking into carbon capture and sequestration technologies to mitigate CO_2 emissions on a commercial scale.

RTI's solid sorbent CO_2 capture technology—developed for coal power plant applications—is a good fit for the cement industry to potentially reduce the energy load, capital and operating costs, and evaporative emissions compared to conventional CO_2 scrubbing.

Our process selectively removes CO_2 from industrial exhaust gas streams through a cyclic, thermal-swing, absorption-desorption process—generating a high-purity CO_2 product that is sequestration-ready. This type of carbon capture uses a dry, solids-based technology that fits well with the operational model of most cement plants.

RTI is demonstrating the technical and economic feasibility of our carbon capture technology at a commercial cement plant in Norway. So far, assessments of the technology's primary economic performance indicators—capital cost, operating cost, cost for carbon captured/avoided, and energy consumption—show the technology is economically competitive with conventional and next-generation technologies. Additionally, the technology could create a 40% reduction in energy penalty, and substantially reduce greenhouse gas emissions from cement plants.

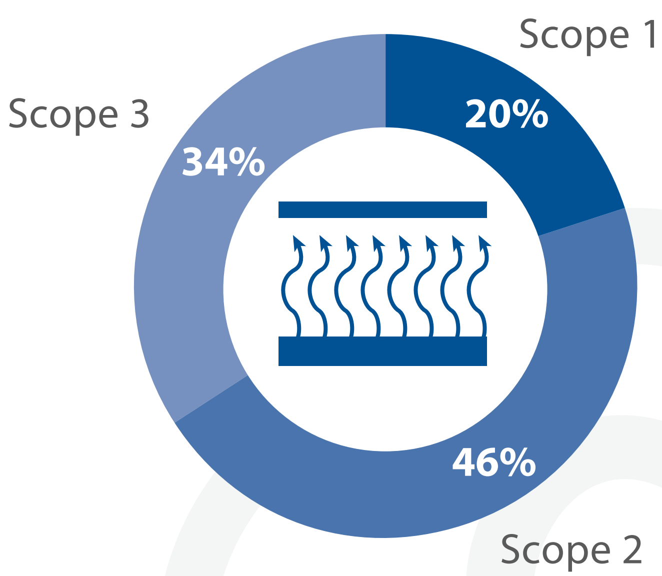
Given continued success, our solid-sorbent carbon capture technology has the potential for application across a broad range of industries including cement, coal-fired power plants, natural gas combined cycle power plants, natural gas processing, steel plants, and other industrial sources.

Greenhouse Gas Emissions

GHG emissions are determined by using the GHG Protocol, which splits up emissions released by a company into three scopes. Scope 1 covers combustion on RTI's main campus, most notably natural gas consumption. Scope 2 deals with indirect emissions, such as those from the production of electricity used by the RTP campus. Scope 3 covers all transportation emissions from commuters and business-related travel. Emissions are measured in metric tonnes of CO_2-equivalents ($MTCO_2$-eq).

RTI's GHG emissions by scope are illustrated in Figure 6.

Figure 6. GHG Emissions 2014-2016

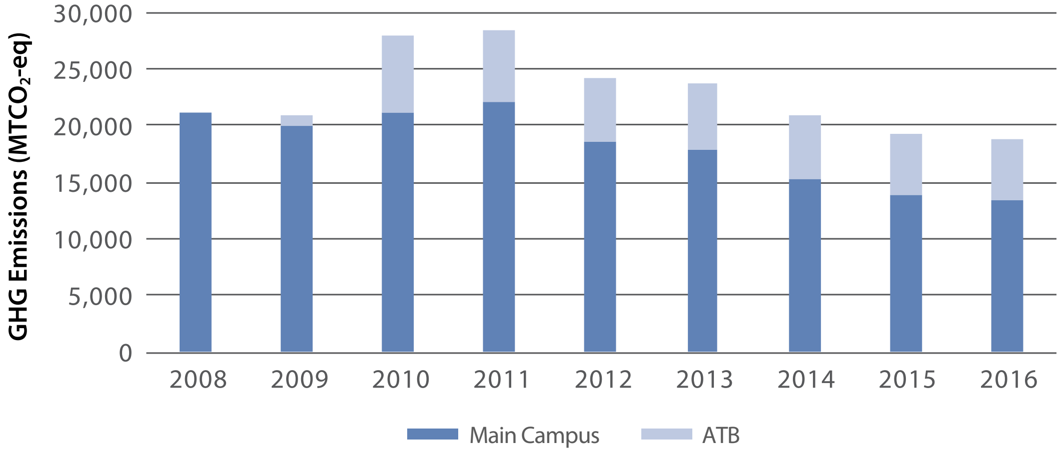


Scopes 1 and 2

Due in great part to a 4% reduction in electricity and natural gas consumption on RTI's main campus, GHG emissions have been reduced by 3.1% since our last sustainability report in 2014. Figure 7 illustrates the GHG emissions from energy use.

Scope 1 emissions—that is, those that RTI directly creates—have decreased since 2011. This includes emissions from natural gas usage, RTI-owned service vehicles, refrigerant use, and diesel fuel for generators on main campus. It is important to note that our Scope 2 (electricity) emissions are dependent on Duke Energy's electricity grid, and that a portion of the reductions seen in this area are due to the utility's use of cleaner energy.

Figure 7. GHG Emissions from Electricity and Natural Gas Consumptions



Scope 3

Overall, RTI employees emitted 9,145 $MTCO_2$-eq from travel in 2014, 10,569 $MTCO_2$-eq in 2015, and 11,052 $MTCO_2$-eq in 2016. Figure 8 breaks down these emissions by source.

Figure 9 shows the trend in business-related travel emissions since 2008. Air travel, or long-haul travel, has increased in recent years. Commuting miles also increased as RTI main campus continued to gain more employees. RTI's travel-related emissions have increased by an average of 1.3% per year since 2008, led by long-haul air travel and single-occupancy vehicle travel as RTI has continued to grow and expand our operations locally and globally.

To reduce GHG scope 3 emissions, RTI has promoted electric vehicles on our main campus. Since 2011 there are two Level-2 EV charging stations where employees can charge their EVs while at work. Additionally, there are three Level-1 plugs in the parking deck. Roughly 10 vehicles use these stations regularly.

To offset some GHG emissions from single-occupancy vehicles, RTI offers its employees transit subsidies for using alternative methods to get to work. On our main campus, incentives for vanpool, bus travel, and bicycle-to-work have increased over the years. In October 2016, the vanpool incentive more than doubled. In regional offices, RTI provides a fixed monthly subsidy for using public transportation.

Figure 8. GHG Transportation Emissions 2014-2016

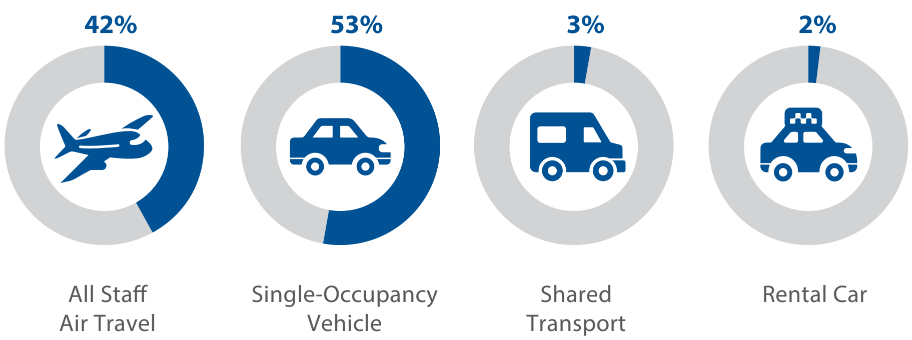
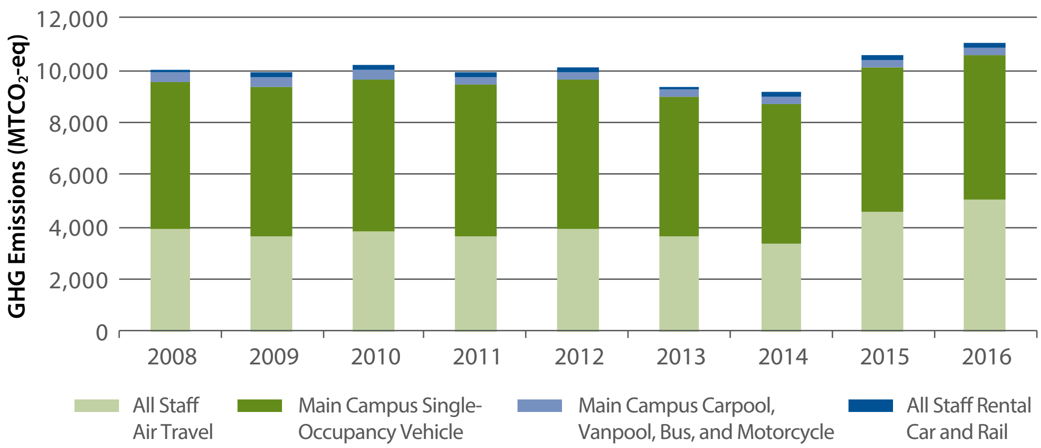


Figure 9. Total GHG Emissions from Business Related Travel



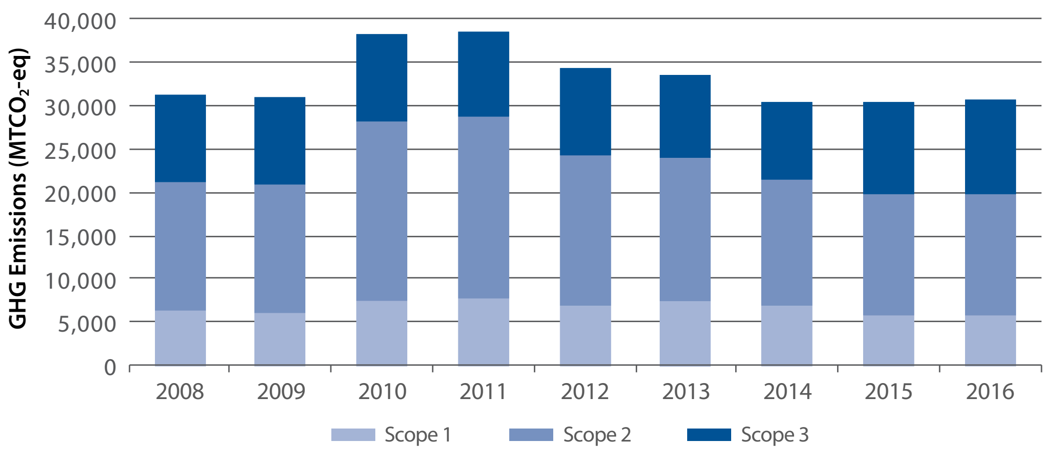
Offsets

Duke Energy allows large-volume purchasers to buy 100 kWh blocks of electricity for $2.50 per block. This payment goes directly to NC Green Power, a local non-profit, to support solar power programs implemented at schools to lower their electricity costs. RTI buys 100 blocks every month—10,000 kWh in total—supporting NC Green Power's initiatives and offsetting our electricity emissions by 47 $MTCO_2$-eq every year.

Overall

From peak emission levels following the acquisition of ATB, RTI GHG emissions have been reduced by 6,000 metric tonnes and leveled out over the past 3 years, even as RTI staffing and travel have grown. Figure 10 illustrates these changes in total emissions.

Figure 10. Total Emissions



Abu Dhabi Energy and Water

Moderating Energy and Water Use in Abu Dhabi

RTI International researchers have been supporting government agencies in Abu Dhabi to reduce energy and water consumption using demand-side management (DSM). The Emirate is projected to continue experiencing rapid population and economic growth and has determined that current levels of consumption per capita are not sustainable. DSM will help reduce the Abu Dhabi's carbon footprint and meet its international greenhouse gas emission reduction commitments.

Since 2008, RTI has worked with the government of Abu Dhabi to identify and document opportunities for electricity and water savings. Most recently this has included launching DSM initiatives targeted at the residential, commercial, and government sectors. Our team supported DSM in Abu Dhabi at every stage

- baselining technical and economic savings potential
- developing a comprehensive DSM strategy for the Emirate
- conducting pilot projects to demonstrate achievable savings and cost effectiveness
- supporting actual implementation of the DSM program within the Abu Dhabi Distribution Company.

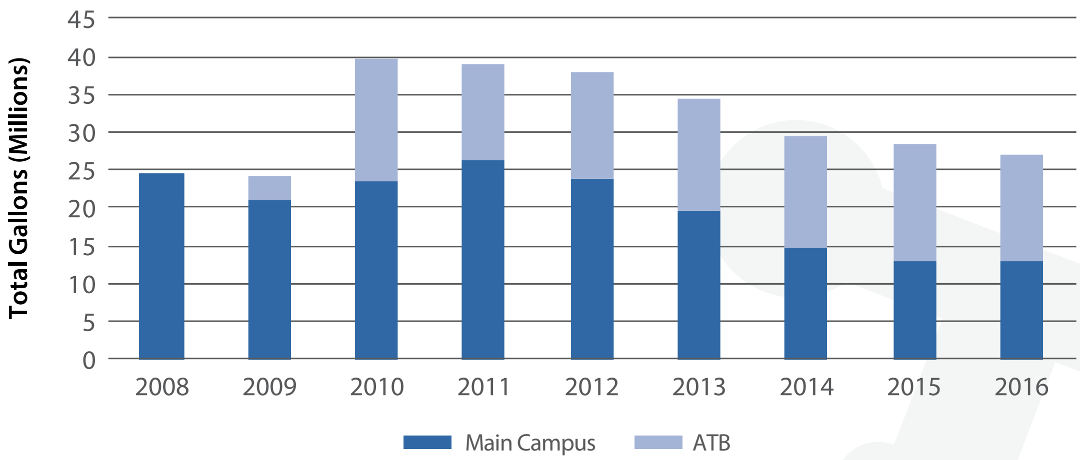
These projects have boosted awareness of DSM in the region and sparked collaboration among key agencies to pursue potential solutions.

Water Consumption

Water is used extensively across RTI's main campus, including for laboratory operations, heating and cooling, domestic uses in office buildings, irrigation, and general maintenance activities. In the past, some of our reduction efforts included employing low-flow toilets, planting native plants, and spreading awareness on campus about water conservation, as well as monitoring our water consumption to identify potential major system losses.

We have reduced our water consumption more than expected in our set goals for 2016. This goal involved reducing consumption by 10% of its 2013 level. We met that goal, decreasing consumption by 18% on our main campus and decreasing overall consumption by 21%. Figure 11 shows RTI water consumption reduction over time.

Figure 11. Water Consumption



Accomplishments

Progress in water conservation was achieved through many projects, including the following:

- Reusing condensate on our main campus (an average of 1.5 million gallons) and at ATB
- Replacing a malfunctioning water level sensor in the Hobbs cooling tower
- Increasing reliability by replacing water fill valves and a water level sensor in CUP cooling towers
- Correcting the CUP cooling tower hot water dispersion plates to eliminate water loss.

Since the beginning of our Sustainability Program, RTI has reduced its water usage by 52% per square foot.

Improving Sanitation

Reinventing the Toilet

Around the world, 2.4 billion people lack access to toilets or improved sanitation, and more than 1 billion resort to open defecation—a practice that poses significant health and environmental risks.

As part of the Bill & Melinda Gates Foundation's "Reinvent the Toilet" challenge, RTI developed a novel waste treatment system designed for use in the places where people need it the most. This closed loop system employs technology to treat and reuse liquids and generate power for the system through the combustion process. It's designed to operate off-grid—without piped-in water, a sewer connection, or outside electricity—converting human waste into burnable fuel; stored energy; and disinfected, non-potable water.

RTI is targeting an operating cost of less than U.S. $.05 per day. We demonstrated, in 2014, our first prototype at the Reinvent the Toilet Fair: India in New Delhi, where researchers and officials were impressed by how our system burns human solid waste, harvests energy from feces, and uses electrochemical disinfection rather than chemicals or additives.

In 2017, our team aims to deploy two additional prototypes, in Duban, South Africa and Coimbator, India. This will test our units in a low-income urban community's shared toilet, shower, and washing stations and at a female workers' dormitory to facilitate our efforts to incorporate women's sanitation needs into the design.

Ultimately, our aim is to complete development of a waste treatment system that can be integrated into modern life in poor rural and urban communities. We are working to ensure the system aligns with cultural norms and will be accepted and used by the people who need it most.

Reducing Waste

Reducing Waste at Military Installations

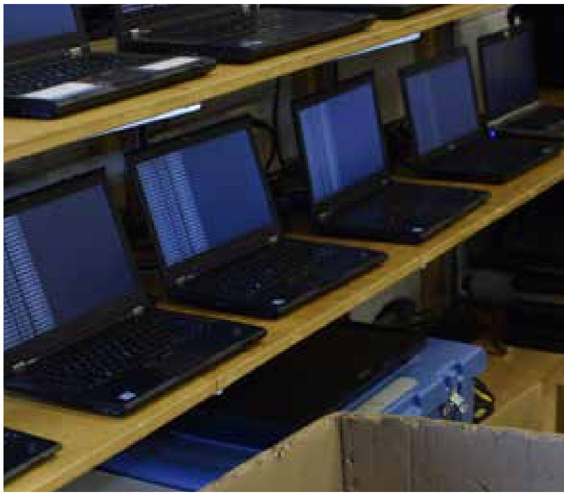
Since 2002, RTI's Municipal Solid Waste Decision Support Tool (MSW DST) has helped cities assess the economic and environmental costs and benefits of alternatives for managing their solid waste. Applied in more than 100 cities and communities worldwide, the MSW DST facilitates planning of solid waste–related activities on a municipal scale and assesses the cost, energy use, and environmental emissions and impacts of multiple waste management strategies.

RTI is currently working with the U.S. Environmental Protection Agency to build a next-generation MSW DST with expanded capabilities to address emerging challenges such as food waste management. Once fully implemented, the next-generation MSW DST will enable cities, solid waste managers, and planners to easily analyze alternatives to their current waste management operations, to execute dynamic planning and analysis as conditions change, and to ultimately be better equipped to achieve waste management goals such as zero-waste.

The U.S. Army Corps of Engineers (USACE) is one entity benefitting from RTI's MSW DST. The U.S. Army spends more than $1.3 billion annually on installation energy, uses more than 41 billion gallons of water, generates 2.3 million tons of solid waste, and emits more than 9.3 million metric tons of greenhouse gases. USACE created a web-based Net Zero Planner to analyze and optimize energy, water, waste planning, and engineering at buildings and installations, and RTI worked with the USACE's Construction Engineering Research Laboratory to design and implement the waste module of its Net Zero Planner.

Waste Diversion

RTI is conscious of the environment, especially when disposing of any waste. Paper, glass, plastic, metal scraps, computers, electronics, and other office materials are recycled; food scraps from the employee cafeteria are composted.



Donations

RTI supports the United Way of the Greater Triangle each year. During 2014–2016, RTI took a special role in the United Way's Teaming For Technology (T4T) program, which diverts otherwise unused electronics to area schools. RTI also donated more than 900 computers, as well as monitors, laptop bags, and other accessories during this time frame.

Recycling

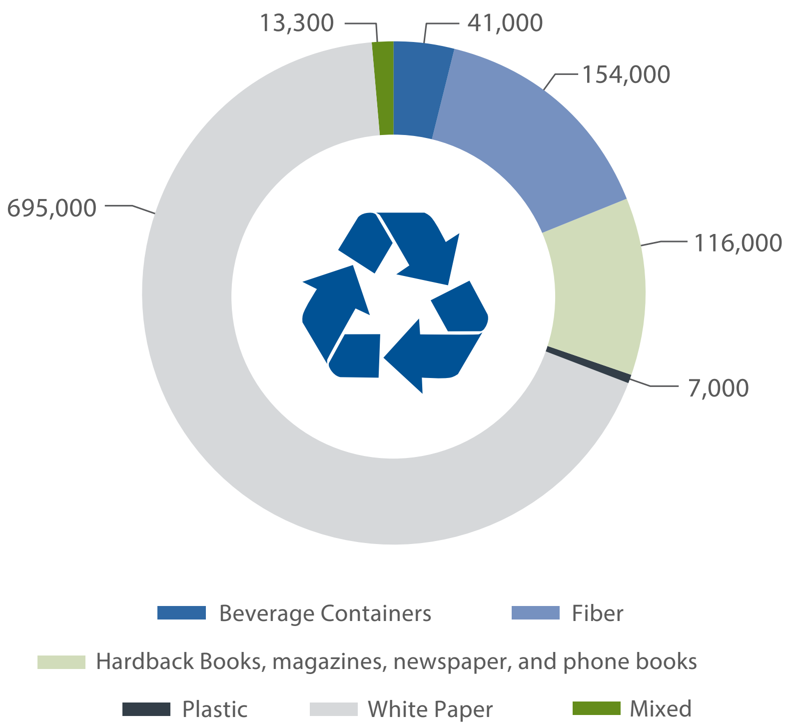
RTI is committed to disposing of e-waste responsibly. RTI recycled more than 30 tons of computers, servers, lab equipment, printers, and power supplies in 2014; almost 8 tons in 2015; and more than 17 tons in 2016. In addition, we recycled more than 3 tons of small electronics—such as keyboards, cables, monitors, batteries, and speakers—in spring 2016.

Composting

RTI composts at our cafeteria and our Grab 'N' Go Bar. During 2014–2016, we composted more than 37 tons of food waste. We also recycled more than 65,000 pounds of scrap metal from the main campus during this time.

Other materials RTI recycles include paper, drink containers, and fiber. Multiple labs—including ARF—were cleaned out in 2015, resulting in more than 8,000 pounds of glass being recycled. Figure 12 shows the total makeup of our recycling over the past 3 years.

Figure 12. Pounds of Recycling at RTI 2014-2016



37 tons of food waste composted from RTI dining facilities between 2014–2016

Reducing Post-Harvest Waste

Reducing Post-Harvest Waste in Sub-Saharan Africa

As food makes its way from farm to market to table, a substantial amount goes bad or gets thrown away before it can be eaten. As much as one-third of all food produced is lost after harvest.

Post-harvest food loss (PHFL) hits especially hard in the developing world where 42% of fruits and vegetables spoil while people go hungry. It also carries economic consequences—reducing the income of the world's smallholder farmers by 15%—and ripples through market systems as losses for food processors, retailers, and consumers.

The Rockefeller Foundation's YieldWise initiative aims to reduce waste throughout the food value chain—targeting cassava and tomato production in Nigeria; mangoes in Kenya; and maize in Tanzania, where collectively 70% of people make their living from agriculture. By reducing waste, 470 million smallholder farms in the region can feed more people and extend economic benefits to traders, distributors, sellers, and consumers.

RTI serves as YieldWise's monitoring, evaluation, and learning partner. We analyze and aggregate data, facilitate learning, provide technical assistance, and work with the partners to test hypotheses while gathering data tailored to the value chain contexts. To date, YieldWise has reached nearly 40,000 smallholder farmers with 16,400 metric tons of produce sold to buyers connected through the initiative.

YieldWise aims to reduce PHFL by 50% in the targeted value chains, but the effects of this food loss could reach far beyond its present scope. Results achieved in Nigeria, Kenya, and Tanzania could lay the groundwork for similar efforts involving other crops and locations.

Long-Term Sustainability

Managing Water for Long-Term Sustainability

Irrigation, water supply, hydropower, and other infrastructure projects depend on the availability of sufficient water resources; however, water is vulnerable to climate change, population growth, urbanization, industrial growth, and increasing demand for food.

Governments and planning authorities need frameworks for managing water resources that include accurate estimates of water available in the future under various development and climate scenarios.

RTI developed the Watershed Flow and Allocation (WaterFALL®) model to predict rainfall-runoff. With funding from the Inter-American Development Bank, we adapted this system to evaluate the potential impacts of climate change on water availability and water-related infrastructure in Latin America and the Caribbean. The new system, called Hydro-BID, includes a rainfall-runoff model, watershed delineations, and data to support applications throughout the region.

We continue to work with the Inter-American Development Bank to add new capabilities to Hydro-BID and support integrated water resources management in Argentina, Ecuador, Peru, and Brazil.

Goals Through 2019

During the years 2017 and 2018, we are either planning or sizing multiple projects to further reduce our energy consumption and minimize our impact on the environment. Overall, we expect to see a 3% per-square-foot reduction in electricity, natural gas, and water consumption.

To continue improving our campus, conserving energy, and minimizing our impact on the environment, we have several projects planned, including the following:

- Adding the Cox and Hobbs buildings to the CUP chillers
- Adding the new office building, Project Horizon, to CUP chillers
- Consolidating space
- Upgrading and repairing equipment to be more efficient—in particular, adding variable-frequency drive on new pumps and fans
- Improving the CUP chiller system
- Expanding the LED lighting conversion program

By adding Project Horizon, a 190,000-square-foot office building, overall water consumption is expected to increase; however, by using water-efficient design, we project our water consumption per square foot of space to decline. These projects include implementing the newest technology, expanding use of the CUP, and upgrading our kitchen facilities.

We will continue to maintain and encourage our conservation and sustainability programs—recycling across campus, composting, and donating electronic supplies to local organizations.

Installing LED technology throughout campus will cut electricity demand from lighting by half.

Improve Energy Efficiency

Providing Energy and Climate-Change Support in Critical Priority Countries

RTI, though its recent acquisition of International Resources Group, is working with Critical Priority Countries (CPCs) to provide energy- and climate change–related technical support services to USAID/Washington Bureaus and USAID Missions over the next 5 years.

This project consists of helping CPCs to improve energy efficiency, improve energy sector governance, develop sustainable energy strategies, reduce greenhouse gases, increase access to reliable and affordable clean energy, and reform the energy sector to reduce corruption.

These efforts are intended to improve human well-being, create economic opportunity, and sustain economic growth, as well as to build trust in institutions and encourage private investment in the CPCs.

Project Horizon

Our newest building, Project Horizon, is currently under construction and is scheduled to be finished by 2018. The building is designed to be environmentally conscious and maximize the well-being of its occupants. Some of the sustainable projects are noted in the illustration.

Figure 11. Building Perspective-Model Photo

We acknowledge that our newest building will increase our overall energy and water consumption. However, the energy consumption per square foot of the main campus is expected to decrease because Project Horizon is an environmentally designed office building with low-energy intensity and several green elements. We are committed to decreasing our impact on the environment as much as possible and will continue to implement energy-saving projects throughout our main campus.