

**Environmental Report**  
DECEMBER 2017

**FORTIS**<sup>INC.</sup>

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# CORPORATE ENVIRONMENTAL STATEMENT

Fortis believes that responsible management is good for the planet, business and our customers. Fortis is committed to conducting business in an environmentally responsible manner. The Corporation uses sound environmental judgment in its decision making, planning and operations to meet the existing and future energy needs of its customers. To fulfill this commitment, Fortis and its subsidiaries endeavour to:

- meet and comply with all applicable laws, legislation, policies, regulations and accepted standards of environmental protection;
- manage activities consistent with industry practice and in support of the environmental policies of all levels of government;
- identify and manage risks to prevent or reduce adverse consequences from operations, including preventing pollution and conserving natural resources;
- regularly conduct environmental monitoring and audits of environmental management systems and protocols, and strive for continual improvement in performance;
- regularly set and review environmental objectives, targets and programs;
- communicate openly on environmental issues with stakeholders, including customers, employees, contractors and the general public;
- support and participate in community-based projects that focus on the environment;
- provide training for employees and those working on behalf of the utilities to enable them to fulfill their duties in an environmentally responsible manner;
- work with industry associations, government, investors and other stakeholders to establish standards for the environment appropriate to the utility business; and
- seek feasible, cost-effective opportunities to decrease greenhouse gas (GHG) emissions and increase renewable energy sources.

This report contains 2016 performance and historical indicator data from Fortis utilities and recent information about environmental programs and initiatives at our utilities. As part of efforts to strengthen disclosure, this is the second Environmental Report issued in 2017. Fortis produced a second report this year to provide current environmental data to stakeholders.



# FORWARD-LOOKING INFORMATION

Fortis Inc. ("Fortis" or the "Corporation") includes "forward-looking information" in this report within the meaning of applicable Canadian securities laws and "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 (collectively referred to as forward-looking information). Forward-looking information included in this report reflects the expectations of Fortis management regarding future growth, results of operations, performance, business prospects and opportunities. Wherever possible, words such as "anticipates", "believes", "budgets", "could", "estimates", "expects", "forecasts", "intends", "may", "might", "plans", "projects", "schedule", "should", "target", "will", "would" and the negative of these terms and other similar terminology or expressions have been used to identify forward-looking information, which includes, without limitation: the Corporation's forecast gross consolidated capital expenditures for the period 2018 through 2022; statements related to Tucson Electric Power Company's (TEP) 2017 Integrated Resource Plan, including targets, benefits and expected outcomes, timing and benefits associated with planned coal generation retirements, expansion and composition of the renewable energy portfolio; the expectation that intensity factor will improve over the medium to long term; the nature, timing and expected costs and benefits of certain capital projects including, without limitation, upgrades to two hydroelectric generating facilities and the pipeline integrity management program at FortisBC, replacing coal facilities at UNS Energy Corporation (UNS Energy), planned wind energy connections at ITC Holdings Corp. (ITC); additional opportunities beyond the base plan including the Wataynikaneyap Project; estimated 2017 energy savings at FortisOntario; and the creation of additional renewable energy capacity at FortisAlberta.

Forward-looking information involves significant risk, uncertainties and assumptions. Certain material factors or assumptions have been applied in drawing the conclusions contained in the forward-looking information. These factors or assumptions are subject to inherent risks and uncertainties surrounding future expectations generally, including those identified from time to time in the forward-looking information. Such risk factors or assumptions include, but are not limited to: uncertainty regarding the outcome of regulatory proceedings of the Corporation's utilities and the expectation of regulatory stability; no material capital project and financing cost overrun related to any of the Corporation's capital projects; sufficient human resources to deliver service and execute the capital program; risk associated with the impact of less favorable economic conditions on the Corporation's results of operations; and no significant changes in laws and regulations that may materially negatively affect the Corporation and its subsidiaries. Fortis cautions readers that a number of factors could cause actual results, performance or achievements to differ materially from the results discussed or implied in the forward-looking information. These factors should be considered carefully and undue reliance should not be placed on the forward-looking information. For additional information with respect to certain of these risks or factors, reference should be made to the continuous disclosure materials filed from time to time by Fortis with Canadian securities regulatory authorities and the Securities and Exchange Commission. Fortis disclaims any intention or obligation to update or revise any forward-looking information, whether as a result of new information, future events or otherwise.

Unless otherwise specified, all financial information referenced is in Canadian dollars.

# STRONG RESULTS FOR A CLEANER ENERGY FUTURE

## Core strategy focused on transmission and distribution

Fortis is primarily an electric and natural gas transmission and distribution company with 91% of total assets related to transmission and distribution. These assets primarily include poles, wires and natural gas pipelines, which have low environmental impact. In 2016, we dramatically increased our focus on transmission and distribution with the purchase of ITC – the largest independent electricity transmission company in the United States. Our focus on transmission and distribution places the Corporation in a preferred position on environmental matters versus many other industry participants.

## A shift away from coal generation

In Arizona, Tucson Electric Power ("TEP"), a subsidiary of the Fortis utility UNS Energy, is the only Fortis utility with coal-fired generation, representing approximately 6% of total assets. In the last three years the percentage of coal used by this utility in relation to total fossil fuel-based owned generation has decreased by over 17%. Through TEP's diversification efforts the utility has realized a 16% total carbon dioxide ("CO<sub>2</sub>") emission reduction from the 2006 baseline year to 2017 and is targeting a 30% reduction by 2030 as the utility implements its long-term resource diversification plan while meeting future electricity demand.

## A shift to lower carbon resources and renewables

At Fortis, our utilities are shifting their focus toward natural gas and renewable power generation. Our cumulative natural gas gross owned generation has increased from 2014 to 2016, reducing our reliance on coal and other fuels and easing environmental

impacts. In addition to generation, Fortis is also investing in natural gas infrastructure. In April 2016, Fortis completed the acquisition of the Aitken Creek natural gas storage facility ("Aitken Creek"). This facility has a total working gas capacity of 77 billion cubic feet ("BCF") and is the only underground gas storage facility in the Canadian province of British Columbia.

The total gross solar energy generated by Fortis increased from 33,000 megawatt hours ("MWh") in 2014 to 82,000 MWh in 2016. Solar energy purchases increased from 206 GWh to 526 GWh, while our wind energy purchases increased from 581 GWh to 680 GWh. Solar energy opportunities are a priority at UNS Energy and FortisTCL, our utility in the Turks and Caicos Islands. Further, the Caribbean Utilities Company Limited has been evaluating opportunities to change its current energy mix to wind and solar resources. These opportunities will allow the utility to reach a 60% renewables target energy mix by 2030. We will continue to explore opportunities to increase our use of solar and wind while delivering safe, reliable and affordable electricity.

## A capital investment plan designed to allow the grid to deliver cleaner energy

Today's utility environment is characterized by changing customer expectations related to cleaner energy, the need for a more resilient grid and increased use of technology. The Fortis five-year capital investment plan of approximately \$14.5 billion from 2018 through 2022 is driven by projects that improve the transmission grid, address natural gas system capacity and natural gas pipeline network integrity, and replace aging infrastructure. The plan will also increase cyber protection and allow the grid to deliver cleaner energy.

# MESSAGE FROM THE PRESIDENT AND CEO



Fortis continues to provide safe, reliable and affordable energy to our customers. Delivering cleaner energy is a key strategic initiative for Fortis as we plan for the future. Our customers want and expect flexibility in terms of where their energy comes from, and the control they have over their energy use.

In 2017, we elevated our focus on sustainability by announcing that Ms. Nora Duke assumed duties for matters related to sustainability and was appointed Executive Vice President, Sustainability and Chief Human Resource Officer. Ms. Duke will focus on enterprise-wide sustainability and stewardship priorities. We have also increased our discussions with investors on matters related to environment and sustainability, including meetings with individuals and groups of investors. Further, this is the second Environmental Report Fortis has issued in 2017 to update our environmental disclosure and provide current data.

Our focus on energy delivery naturally limits our impact on the environment. Fortis owns very little generation. Transmission and distribution is central to our business and represents 91% of total assets. Infrastructure associated with transmission and distribution, including poles, wires and natural gas pipes, have a significantly lower environmental impact than fossil fuel-based generation assets. In 2016, we increased our transmission and distribution portfolio with the purchase of ITC – the largest independent electricity transmission company in the United States.

Of the remaining 9% of assets that are not transmission and distribution, 6% comes from fossil fuel-based generation, and 3% from renewable generation assets. Of this 6%, our utility in Arizona, TEP is the primary producer of fossil fuel-based generation, and is the only Fortis utility that uses coal for energy production.

TEP is taking significant steps to reduce carbon emissions. Part of its plan to meet future electricity needs, TEP anticipates a 36% (508 megawatt) reduction in coal-fired generation over the next five years through retirements. These plant closures will result in meaningful reductions in air emissions and water consumption as well as cost savings for TEP customers. The southern Arizona utility is also capitalizing on its sunny climate with an expanding solar power portfolio that exceeds the state's renewable energy mandate. TEP has already realized a 16% total CO<sub>2</sub> emission reduction from its 2006 baseline year to 2017, and the goal is to have a 30% emissions reduction by 2030.

At Fortis, total GHG emitted per million dollars of revenue has decreased by 10% during the last three years. Additionally, the percentage of coal used for energy production at TEP has decreased by over 17% in the last three years. We expect this downward trend to continue as TEP retires coal-fired generation assets.

While the use of coal in our limited generation profile continues to decrease, our natural gas operations have grown. From 2014 to 2016, our owned generation from natural gas has increased. Natural gas is a cleaner alternative for power generation, and allows customers to shift away from coal, diesel and fuel oil, which in turn reduces GHG emissions.

Further, because much of the energy passing through our system is not owned by Fortis, our focus is on how to facilitate bringing more renewable energy onto the grid while maintaining a strong, reliable system. Clean energy from solar and wind is becoming more affordable, and storage solutions for these renewables sources are becoming more viable. The total gross solar energy generated by Fortis increased from 33 GWh in 2014 to 82 GWh in 2016 and more clean energy, especially from solar will be part of our generation mix in the future. Delivering cleaner energy has a strong focus in our \$14.5 billion five-year capital investment plan. The plan is driven by projects that improve the transmission grid, address natural gas system capacity and natural gas pipeline network integrity and replace aging infrastructure. The plan will increase cyber protection and allow the grid to deliver cleaner energy.

One of the important projects we are pursuing is the Wataynikaneyap Power project. Our utility FortisOntario is partnering with First Nation communities in remote northwestern Ontario to connect these communities to the electricity grid for the first time. This project will enable communities to move away from a diesel plant system that produces significant GHG emissions, along with other environmental risks while providing greater reliability to meet the needs of residents.

The shift towards renewables needs to be well planned and carefully executed, always with a focus on providing safe, reliable and affordable energy to customers. We are on the right path – constantly striving to facilitate the delivery of clean energy to our customers.

Sincerely,



Barry Perry

President and Chief Executive Officer  
Fortis Inc.

# OUR RESOURCE MIX

## Primarily a Transmission and Distribution Company

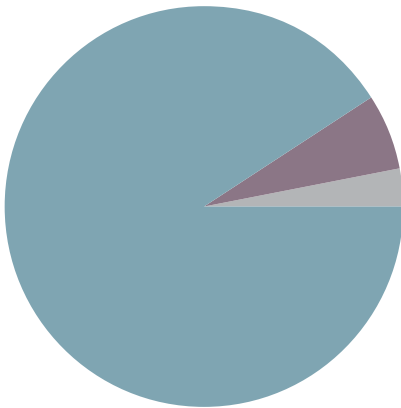
Transmission, distribution and other assets represent 91% of total assets.

Of the 9% of Fortis total assets associated with generation, one-third is renewables. The remaining two-thirds of our generation assets (6% of Fortis total assets) comes from fossil fuel generation.

Fortis utilities in Arizona and the Caribbean account for almost all of the fossil fuel-based generation.

UNS Energy in Arizona produces 93% of the Corporation's fossil fuel-based generation, with the remaining 7% generated by Caribbean Utilities Company, Ltd. ("CUC") and FortisTCl. These operating companies work closely with regulators and local stakeholders to seek opportunities to invest in cleaner energy while ensuring safe, reliable and affordable energy for customers. Each business is in compliance with regulatory orders in their respective jurisdictions.

All of our operating utilities have a comprehensive Environmental Management System; the majority of these systems are ISO 14001 compliant.



**91% Transmission, Distribution and Other Assets** (as of September 30, 2017)

**6% FOSSIL FUEL-BASED GENERATION**

**3% RENEWABLE GENERATION**

## UES More Than Doubles Renewable Capacity with Red Horse Expansion

UniSource Energy Services ("UES"), a subsidiary of UNS Energy in Arizona, more than doubled its renewable generating capacity in July 2016 with a solar and wind expansion project near Willcox, Arizona.

The 37-MW Red Horse project expansion produces enough electricity annually to power more than 6,000 homes, making it the single largest renewable energy resource for UES. The entire Red Horse project generates enough solar and wind energy to meet the annual electric needs of more than 21,000 homes.

The Red Horse facility is owned and operated by Houston-based Torch Renewable Energy, which sells energy output to UES.

## A Shift Away from Coal Generation

At Fortis, we are working toward decreasing the use of coal for energy production. In the last three years, the percentage of coal used for energy production has decreased by more than 17%. During the same time period, the percentage of GHG emissions related to coal owned generation decreased by 11%.

The intensity factor across the Fortis group in 2016, calculated as metric tonnes of GHG emitted per GWh of generation from owned facilities and purchased energy, was 420, an overall decrease of 7% from 452 in 2014.

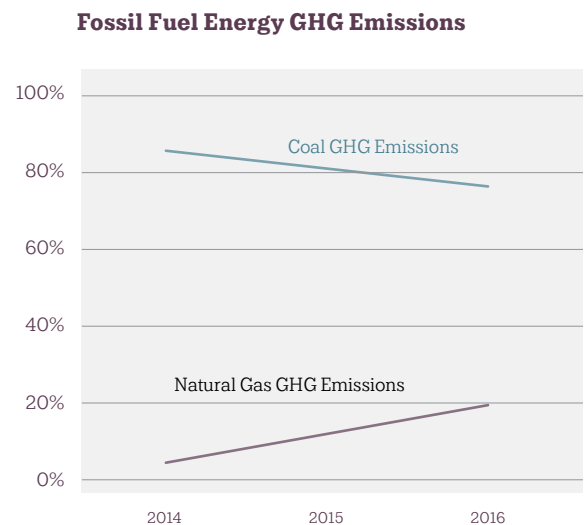
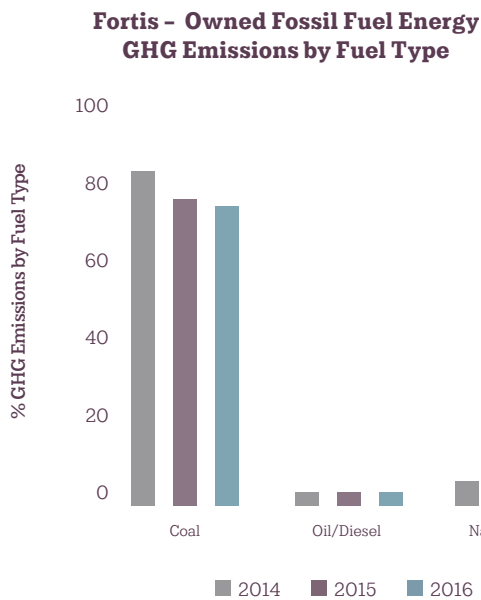
In the past three years, Fortis has seen overall reductions of the intensity factor across the group; however, in a given year reductions may not progress due to changes in the types of energy supplied from owned generation and purchases. We expect improvement in the intensity factor

to continue over the medium to long term.

UNS is targeting a decreased utilization of coal for generation in Arizona where TEP has already realized a 16% total CO<sub>2</sub> emission reduction through diversification efforts from 2006 baseline year to 2017. The utility expects to reach a 30% reduction by 2030.

UNS produces 93% of the Corporation's fossil fuel-based generation, with the remaining balance is largely attributable to Caribbean operations. TEP has developed and is implementing a long term plan to meet future electricity needs known as the Integrated Resource Plan<sup>1</sup>. This plan outlines a long-term diversification strategy, which anticipates the retirement of coal-fired units, and replacement of that capacity with renewable energy and efficient natural gas resources.

The following charts illustrate year over year changes in Fortis GHG emissions by fossil fuel type. Decreases in GHG emissions from coal fueled generation are expected to continue as coal-fired units are retired at TEP.



<sup>1</sup>For more information: [TEP - 2017 Integrated Resource Plan](#).



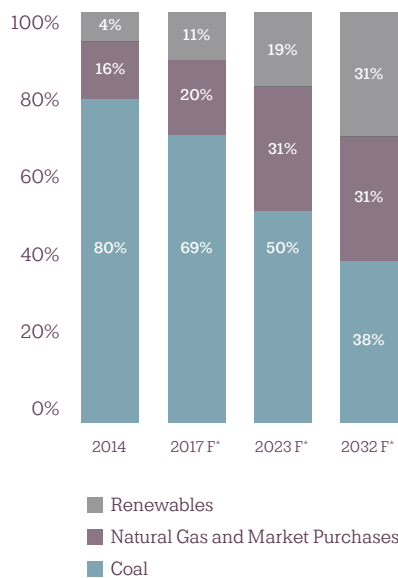
# TEP'S 2017 INTEGRATED RESOURCE PLAN – A MORE BALANCED USE OF RESOURCES

For the last 50 years, TEP has relied on a fleet of baseload coal plants to meet the majority of customers' energy needs. Resource economics and environmental considerations have shifted the historically strong preference for coal to a more balanced use of coal, natural gas, and renewable resources.

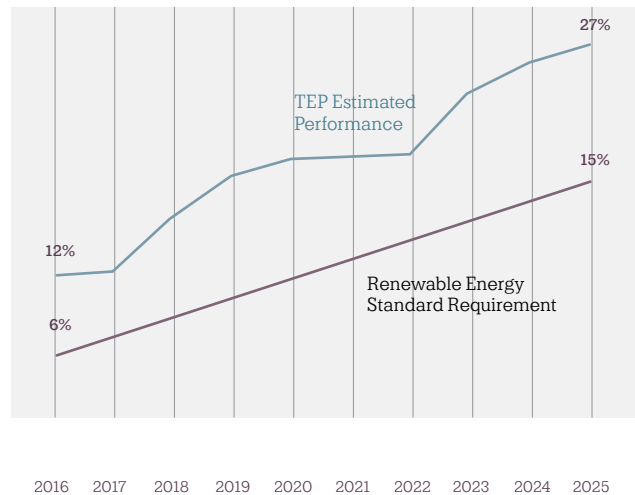
As part of TEP's longer-term portfolio diversification strategy, the utility is reducing its significant reliance on coal to approximately 38% of retail energy deliveries. Over the next five years, TEP will reduce its coal-fired capacity by 36% (508 megawatts ("MW")) through planned plant retirements.

## Tucson Electric Power's Resource Diversification Plan Exceeding Arizona's Renewable Energy Standard

**TEP's Coal-Fired Generation Declining<sup>1</sup>**



**TEP's Estimated Performance vs. Arizona's Renewable Energy Standard**



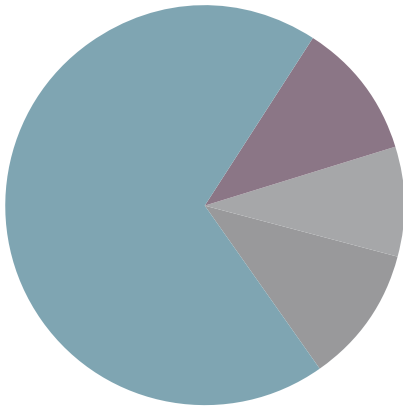
Through its Integrated Resource Plan, TEP significantly exceeded the Arizona renewable energy standard in 2016 and is expected to continue to do so through 2025.

TEP plans to exit San Juan Coal Fired Generating Station Unit 2 at the end of 2017, the Navajo Coal Fired Generating Station at the end of 2019, and

the San Juan Coal Fired Unit 1 in 2022. These planned coal-fired plant retirements will help TEP reduce costs and rebalance its resource portfolio over the longer term. This reduction in coal resources will result in cost savings for TEP customers and meaningful reductions in air emissions and water consumption.

<sup>1</sup> Forecasted. The portfolio energy charts shown above represents the energy resource mix to serve TEP's retail customers. Wholesale market sales are excluded from these results. By 2030, TEP's retail customers will be served from 30% renewables. This is based on a combination of utility-scale and distributed generation resources.

## TEP Energy Portfolio Outlook: 2017-2030



### TEP Portfolio Energy Mix - 2017<sup>1</sup>

**69% COAL GENERATION**

**11% NATURAL GAS**

**9% MARKET PURCHASES**

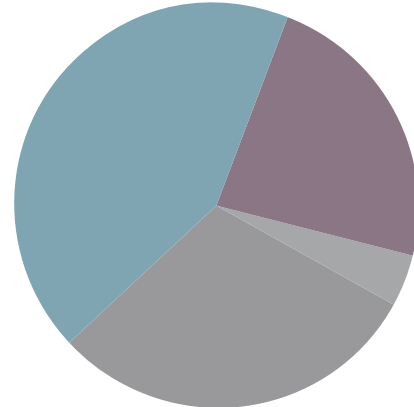
**11% RENEWABLE RESOURCES**

TEP will continue to expand its portfolio of renewable energy resources as a component of its overall resource diversification plan as well as a targeted goal of serving over 30% of retail load with renewable energy by 2030.

From TEP's base line year of 2006, the utility plans to cut sulfur dioxide emissions approximately in half, decrease nitrogen oxide by 65% and carbon dioxide by 30%. These reductions in emissions are largely driven by planned coal-fired unit retirements. Further reductions can be expected by the planned retirement of additional units by 2032.

As TEP expands its renewable energy portfolio, the utility continues to evaluate the most cost-effective options available. TEP expects to have a higher percentage of solar resources, primarily due to favorable production curves, low costs, and lack of available transmission to import other resources.

TEP expects its resource mix to include large scale wind resources in eastern Arizona and New Mexico that utilize existing transmission facilities and also new large regional transmission



### TEP Portfolio Energy Mix - 2030<sup>1,2</sup>

**43% COAL GENERATION**

**23% NATURAL GAS**

**4% MARKET PURCHASES**

**30% RENEWABLE RESOURCES**

projects. Planned energy storage systems will also play a greater role in the integration of more renewable energy into TEP's resource portfolio.

The emission reduction associated with TEP's energy diversification strategy is consistent with the requirements of the October 2015 U.S. Environmental Protection Agency Clean Power Plan.

This long-term commitment to clean energy resources will help minimize long-term environmental risk while locking in lower-cost sustainable sources of energy for decades to come.

### Reducing Emissions at TEP 2006-2030

**SO<sub>2</sub>** ↓ 47%  
Sulfur Dioxide

**NO<sub>x</sub>** ↓ 65%  
Nitrogen Oxide

**CO<sub>2</sub>** ↓ 30%  
Carbon Dioxide

<sup>1</sup> The portfolio energy charts shown above are based on TEP's 2017 IRP, and represents the energy resource mix to serve TEP's retail customers. Wholesale market sales are excluded from these results. Based on a combination of utility-scale and distributed generation resources.

<sup>2</sup> Forecasted.

# A SHIFT TO LOWER CARBON RESOURCES

The focus on increasing utilization of natural gas is working. Natural gas allows customers to shift away from coal, diesel and fuel oil, which in turn reduces environmental impacts. Fortis utilities in British Columbia, New York and Arizona utilize natural gas as a key energy resource in their service territories.

## Natural Gas at FortisBC

Growing our number of natural gas customers is a priority at FortisBC as it offers cleaner, affordable energy for many transportation and industrial applications<sup>2</sup>. In April 2016, Fortis completed the acquisition of the Aitken Creek natural gas storage facility, which has a total working gas capacity of 77 BCF and is the only underground gas storage facility in British Columbia. This acquisition significantly increased the capacity and interest of Fortis in the natural gas sector.

In August 2016, the Province of British Columbia released its Climate Leadership Plan. In the plan, the British Columbia government described the importance of natural gas in combatting climate change.

FortisBC provides \$171.7 million in incentives to customers to support the use of natural gas in markets such as mine haul trucks, heavy duty trucks, marine, remote power generation and rail. Simply put, cleaner burning natural gas is replacing diesel and marine fuel oil in these areas.

FortisBC was the first utility in North America to offer Renewable Natural Gas (“RNG”) to customers. Working with British Columbia suppliers, the utility turns organic waste from sources such as

landfill sites into biogas that is then upgraded and injected into the existing system. Nearly 500 new customers signed up for the FortisBC RNG program in 2016. Their consumption of RNG avoided 8,117 tonnes of CO<sub>2</sub> emissions, the equivalent of removing 1,715 cars from the road. Looking ahead, FortisBC plans to supply Liquefied Natural Gas (“LNG”) to ship operators that choose to convert from higher emitting fuels. Converting just one ocean-going tanker, cruise ship, or container ship to run on LNG instead of heavy fuel oil will reduce GHG emissions by about 93,500 tonnes annually, equivalent to taking more than 19,800 vehicles off the road. Utility investments in LNG fueling infrastructure will help establish British Columbia as a marine bunkering centre on the west coast of Canada capable of providing LNG to an increasing number of LNG vessels and leading to global reductions in GHG emissions.

## A cleaner, more efficient natural gas delivery system at Central Hudson

At our utility Central Hudson, 29 kilometres of leak-prone natural gas pipe was replaced in 2016 as part of a multi-year program. This progress more than doubled the historic rate of replacement and uses more modern materials that are less susceptible to environmental conditions. Natural gas service was expanded in the Central Hudson service territory into 12 new neighbourhoods to accommodate the demand by local business for efficient and cleaner fuel<sup>3</sup>. These infrastructure improvements support the ongoing transition to a cleaner and more efficient energy delivery system in New York State.

<sup>2</sup> For more information: [FortisBC 2016 Corporate Report](#).

<sup>3</sup> For more information: [Central Hudson 2016 Annual Report](#).

# ADDING MORE RENEWABLES – WIND, SOLAR AND HYDROELECTRIC GENERATION

## Wind

At Maritime Electric on Prince Edward Island, approximately 23% of electricity comes from local wind farms – a level unmatched in any other Canadian province. At ITC, 6,424 MW of wind energy production capacity is currently connected to the company's systems in Iowa, Minnesota, Michigan, Kansas and Oklahoma, with an additional 1,986 MW planned.

More than half of the wind capacity connected to ITC is in Iowa, where the generation sometimes exceeds the load on the system. The investments of ITC in transmission have enabled wind farms to be optimally located and resulted in savings of millions of dollars for customers.

## Solar

The total gross solar energy generated by utilities in the Fortis group increased from 33,000 MWh in 2014 to 82,000 MWh in 2016 primarily at UNS Energy in Arizona and Caribbean locations. TEP significantly expanded its solar resources in March 2016 with a 21 MW expansion of its largest community-scale solar resource, the 35 MW Avalon Solar array. The system uses a single-axis tracker system to maximize output.

The project site was chosen in accordance with an Environmental Protection Agency program to construct renewable energy projects on abandoned land.

In May 2017, TEP announced plans to buy solar energy from a new 100-MW solar array. That system and an accompanying 30-MW energy storage facility are expected to be in service by the end of 2019. TEP anticipates adding 800 MW of renewable capacity by the end of 2030, boosting its total green energy portfolio to approximately 1,200 MW. Those resources will help TEP work toward its goal of delivering at least 30% of its power from renewable resources by 2030 - doubling the State of Arizona's 2025 goal. In New York State, Central Hudson is also active in solar and distributed generation. Since 2007, the utility has been ranked in the top 5% among U.S. utilities in support of solar energy by the Solar Electric Power Association.

By the end of 2016, 6,645 homes, businesses and municipalities within Central Hudson's service territory had installed grid-connected solar electric systems. This represents nearly 61 MW of installed capacity. Together, these solar electric systems will offset GHG emissions by about 34,000 tonnes annually.

## FortisBC – The 2017 Natural Gas Fleet Program Award Recipient

In October 2017, FortisBC received the 2017 Natural Gas Fleet Program Award from NGVAmerica, a national organization dedicated to the development of a growing, profitable and sustainable market for vehicles powered by natural gas or biomethane.

The utility focused on internal and external fleets to help meet GHG emission reduction goals, improve air quality in local communities and provided a cost effective alternative fuel choice for customers.

FortisBC Gas Division has converted over 140 of its own vehicles to natural gas, with a target of converting 50% of all new fleet vehicles through 2018.

At Fortis utilities in the Caribbean, in June 2017 CUC celebrated the opening of Entropy's 5-MW Solar Farm, the first commercial grade renewable energy generating asset on the Cayman Islands. The solar farm houses over 20,000 solar panels, which generate enough electricity to power approximately 800 homes. FortisTCL commissioned its maiden decentralized renewable energy generation customer program in 2017 called Utility Owned Renewable Energy. The program is part of FortisTCL's strategy to meet its energy portfolio diversification goal of having 5% of retail electricity generated from renewable sources.

### Hydroelectric Generation

FortisBC operates and maintains the 335-MW Waneta Expansion, of which Fortis owns a 51% interest.

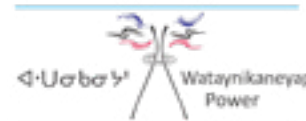
FortisBC has received approval from the British Columbia Utilities Commission to make upgrades at two of its hydroelectric generating plants on the Kootenay River in British Columbia. One project is to refurbish four of the original generating units at Upper Bonnington, and the second is to replace 14 spillway gates and reinforce the associated structures at the Corra Linn Dam. The Upper Bonnington project will bring the units, originally built in 1907 and 1916,

up to modern safety and environmental standards, keeping the units operable for at least another 20 years. In addition to power generation, the Corra Linn Dam plays a critical role in controlling the reservoir levels at Kootenay Lake, which helps protect people, habitat and communities downstream from floods. Both projects are scheduled to be completed in 2021. All of FortisBC's electric generating assets are hydroelectric, providing renewable energy for its customers in British Columbia.

At Belize Electric Company Ltd., the company produces approximately 40% of the country's energy needs through hydro generation, and is the largest renewable energy supplier in Belize.

Newfoundland Power's Pierre's Brook Hydroelectric Plant, located in Witless Bay, has been providing reliable energy production for 85 years. Annually, the facility generates approximately 25 GWh of electricity. In 2016, Newfoundland Power invested \$15 million to upgrade the facility to ensure optimal performance for years to come. Other capital programs focus on runner replacements to increase the efficiency of Newfoundland Power's other hydroelectric plants.

## FortisOntario Partners with First Nations to Bring Reliable, Cleaner Energy to Remote Communities



FortisOntario is working on a project that will see many First Nation communities connect to the electricity grid for the first time. The partnership is called Wataynikaneyap Power, which translates to "line that brings light". Wataynikaneyap Power will develop and operate new transmission facilities to connect remote First Nation communities in northwestern Ontario.

This project will enable communities to move away from diesel plant systems that produce significant GHG emissions and are not able to sufficiently meet the needs of the communities. Without access to reliable power, basic services such as education, health, safe drinking water and the ability to connect new homes and build critical infrastructure have been negatively impacted.

The project will include the construction of 1,800 kilometres of transmission lines at an estimated cost of \$1.6 billion.

# OUR ENERGY EFFICIENCY PROGRAMS

Fortis utilities work with stakeholders and regulators to develop energy efficiency programs for customers. The purpose of these programs is to optimize energy use and promote energy conservation.

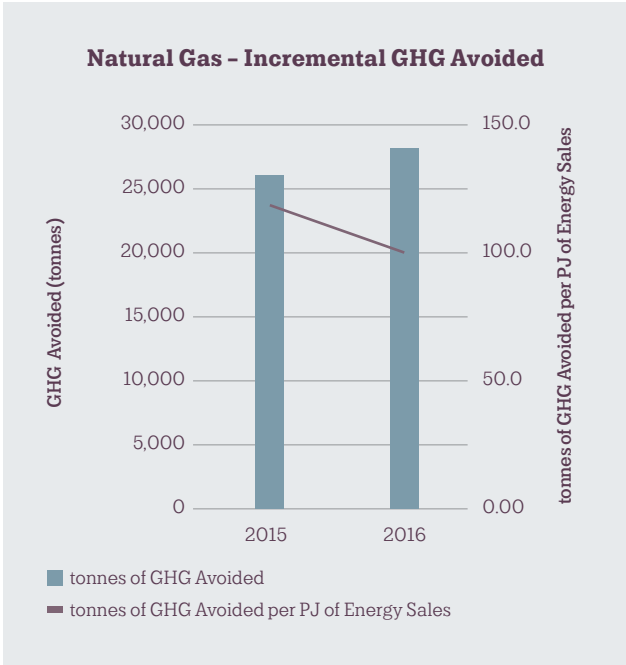
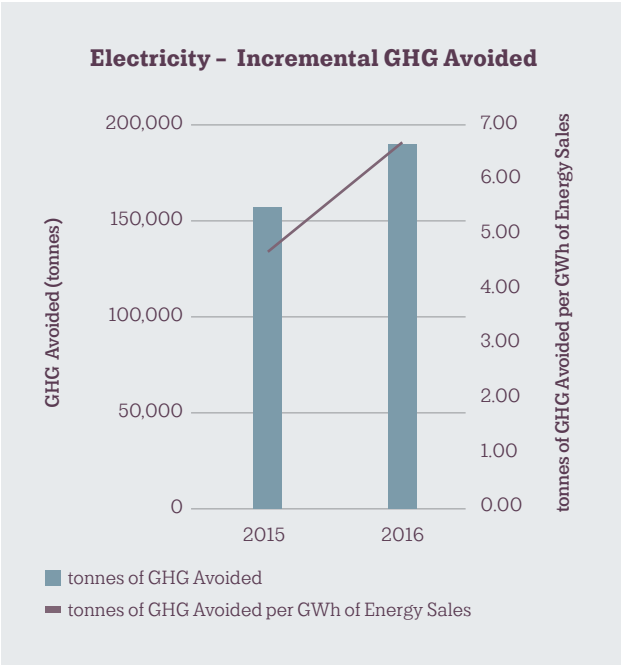
The amount of GHG avoided increased from 2015 to 2016 as a result of electricity and natural gas energy efficiency programs at Fortis utilities. Our natural gas operations saw a year over year decrease in tonnes of GHG avoided per petajoule ("PJ") due to an increase in the amount of natural gas sold in 2016.

Energy efficiency programs at Fortis utilities include rebates to encourage such activities as efficient construction, LED lighting and home insulation. Fortis utilities also offer informational programs as well as calculating tools and tips to help customers manage their energy use.

Highlights include:

**FortisBC** estimates that 260,000 MWh of electricity and 2,760,000 gigajoules ("GJ") of natural gas have been saved by customers through efficiency programs in the 2016 calendar year alone. The utility offers a wide range of programs to both residential and business customers to encourage reductions in energy use.

**Newfoundland Power's** takeCHARGE rebate programs have saved enough combined energy for customers to provide approximately \$3 million in savings on their electricity bills each year. The utility has also implemented a paperless billing program, enabling Newfoundland Power to save approximately 2.5 million sheets of paper annually. This makes Newfoundland Power an electronic billing leader among Canadian utilities<sup>4</sup>.



<sup>4</sup> For more information: [Newfoundland Power 2016 Report on Operations](#).

**Caribbean Utilities Company** in the Cayman Islands and FortisTCI in the Turks and Caicos Islands offer the Consumer Owned Renewable Energy program where customers can connect to the distribution grid and receive credits for generated power.

At **UNS Energy** in Arizona, residential customers can claim utility incentives for efficient air conditioning systems, smart thermostats, pool pumps, lighting and high performance homes. UNS Energy utilities



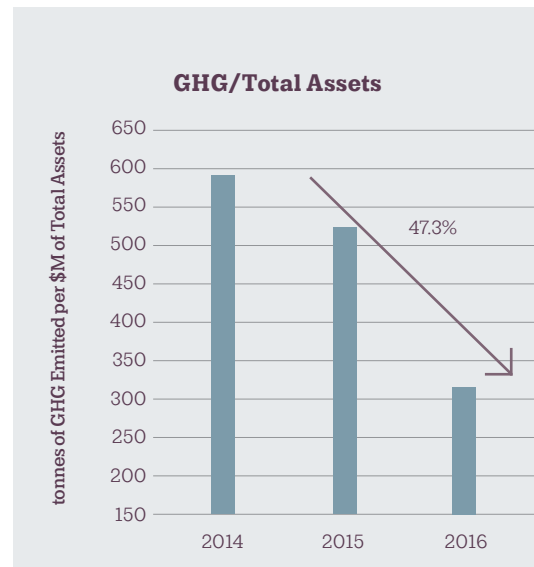
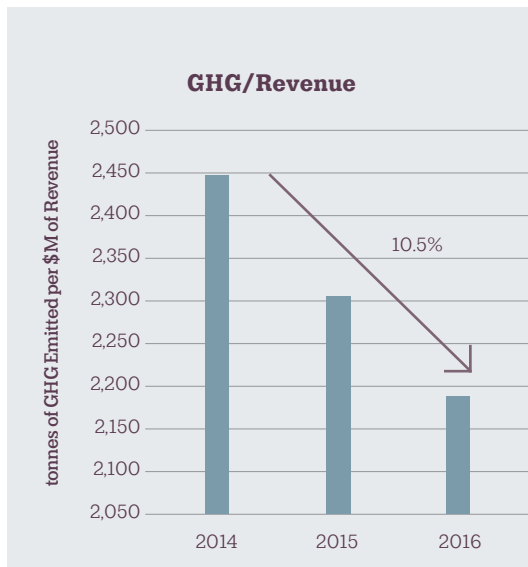
also offer programs that help businesses reduce the cost of installing new energy efficient equipment, including lighting, refrigeration controls and HVAC.

In 2016, **Central Hudson** introduced new lighting programs to encourage customers to purchase LED lights at a reduced cost. The Community Lighting Initiative was one of the programs launched and targeted toward low income customers. Central Hudson partnered with community organizations such as the United Way to distribute LED bulbs to customers.

**FortisOntario** has an assigned six-year target (2015 – 2020) of 35.99 GWh of energy savings. By the end of 2016, FortisOntario customers saved 16.9 GWh of energy through energy efficiency programs. It is estimated that by the end of 2017, customers in the service territory will have reached 67% of the six-year target.

## Reducing GHG Emissions

The following charts display the tonnes of GHG emitted per million dollars of revenue and total assets. Both indicators are trending downward from 2014 to 2016, with a significant decrease in 2016 primarily attributable to the acquisition of ITC - the largest independent electricity transmission company in the United States.



# OUR BIODIVERSITY PROGRAMS

Leadership in environmentally responsible practices is a priority at Fortis utilities. The following activities support the protection of birds, bats, fish and their habitats.

## Bird and Bat Protection

Fortis utilities implement various protection measures and nest management tools to protect migratory birds. Examples of work to protect birds and their habitat include:

**ITC** installs bird diverter technology on its transmission lines, which are coiled objects designed to help make the lines more visible to large birds such as eagles, hawks and blue heron that frequent certain transmission corridors. In 2016, ITC Michigan completed work in partnership with the U.S. Fish and Wildlife Service and the Michigan Department of Natural Resources on the design and layout of several miles of bird diverters on lines crossing Crow Island State Game Area in central Michigan. ITC Midwest also installed bird diverters in 2016 along new lines in southern Minnesota and northern Iowa, and ITC Great Plains installed the

technology on sections of its new Elm Creek-Summit line in Kansas, all to discourage bird contact with the lines. In a creative use of decommissioned wooden transmission structures, ITC Midwest donated ten cedar poles to the Iowa Department of Transportation in 2015 to support habitat for the northern long-eared bat, a federally endangered species<sup>5</sup>.

**Newfoundland Power's** osprey nest program helps to minimize risks associated with nests on or near the utility's electrical equipment. Program activities include trimming nest material, placing traffic cones on structures and removing or relocating nests to platforms installed on or near utility structures. Similar programs are in place at ITC, FortisAlberta and FortisBC.

**FortisAlberta** has established an Avian Protection Plan, now in its sixth consecutive year. Plan activities include redesigning power lines and building safe nesting platforms. In 2016, FortisAlberta completed an assessment of more than 1,400 kilometres of power lines near the town of Vulcan, Alberta to identify upgrades to prevent raptors from

In September 2016, Fortis joined the Energy Impact Partners ("EIP") utility coalition, a collaborative strategic private equity firm investing in companies that are the building blocks for a clean, digital and transformed future for the energy industry.

EIP has invested in companies that are:

- Enabling the transition to the smart grid and integration of renewable and distributed energy resources;
- Developing electric vehicle charging software and services;
- Delivering smart outdoor lighting and enabling Smart City applications; and
- Engaging utility customers in improving energy efficiency through data collection and analytics.

To learn more, visit [www.energyimpactpartners.com](http://www.energyimpactpartners.com)



<sup>5</sup> For more information: [ITC Sustainability Report](#).



nesting on power lines and to reduce the risk of bird collisions with power lines.

At **Central Hudson**, while installing optical ground wire, two specific poles were located adjacent to a known bat hibernation area. Central Hudson coordinated with the New York State Department of Environmental Conservation and implemented a two-phase project to accommodate the winter hibernation of the bats. Education was also provided to operators, employees and contractors on the biology of the bats, activities that may affect bat behavior and ways to avoid and minimize effects to their hibernation.

**TEP** installed a custom basket on a utility pole just north of the H. Wilson Sundt Generating Station in May 2016 to provide red-tailed hawks, ravens and other raptors with a safe place to nest. Birds have repeatedly created nests in nearby transmission structures and other equipment, placing them at risk of electrocution and increasing the potential for power outages. The basket installation was part of TEP's robust Raptor Protection Program. For more than a decade, the utility has collaborated with University of Arizona wildlife biologists to identify nesting sites and install safeguards on new and existing electric equipment throughout its service territory to keep large birds safe.



## Fish and Fish Habitat Protection

At **ITC**, water quality protection is factored into all aspects of operations. Activities include minimizing or avoiding wetland impact, incorporating pollution prevention technologies and the installation of rain gardens to treat storm water at its warehouse facilities. ITC also has ongoing partnerships with watershed conservation groups including Friends of the Rouge, a major urbanized watershed in southeast Michigan.

At **Newfoundland Power's** Rose Blanche Hydro Development, several design features were incorporated to enhance the ecosystem and support fish populations. Three fish passage structures and a habitat compensation channel are located in the river downstream, and the plant design ensures a regulated stream flow to support fish populations.

At **FortisBC**, hydroelectric generation facilities located in proximity to white sturgeon populations have comprehensive risk management and relocation plans.

## Invasive Species Management

**FortisBC** has signed a five-year agreement with the Province of British Columbia to provide \$1.25 million for BC's Invasive Mussels Defence Program. Zebra and Quagga mussels are aquatic invasive species that the Province of British Columbia has identified as posing a significant threat to aquatic environments and infrastructure. Hydroelectric facilities are particularly vulnerable and will incur substantial additional maintenance costs if the species become established in British Columbia. The Invasive Mussel Defence Program, part of the Province of British Columbia's mandate to manage aquatic invasive species in the province, is designed to prevent invasive mussels from entering British Columbia and to respond to any intrusions that are identified.

# OUR COMMUNITY PARTNERSHIPS

Fortis utilities partner with community groups to give back and support environmental initiatives in the regions we operate.

Highlights of community partnerships include:

**FortisBC** provided funding to Ducks Unlimited Canada to support its restoration of the Osoyoos Oxbows, a sensitive riparian wetland that supports critical nesting habitat for the endangered yellow-breasted chat. FortisBC also sponsored Evergreen, a Canadian charity that transforms public landscapes into community spaces through natural restoration of green spaces. FortisBC employees regularly volunteer to help with invasive plant removal, as well as the planting of native trees and shrubs to improve wildlife habitat.

**Newfoundland Power's** energy conservation initiatives include employee-driven community events and partnerships. In 2017, the utility's EnviroFest celebrated 20 years of hosting beautification projects across the island of Newfoundland. Employees work with school, community and environmental partners to identify opportunities for promoting environmental awareness. Since 1997, the employee-driven program has partnered with more than 300 community groups, completed nearly 100 projects and planted over 3,000 trees.

The **Caribbean Utilities Company** donated and planted 50 trees throughout Grand Cayman to celebrate its 50<sup>th</sup> anniversary in 2016. The utility has also supported the Mangrove Environmental Education Program since 2000, which is designed to increase awareness of biodiversity and the cultural significance of mangroves.

In 2016, **ITC Great Plains** continued its membership on the Kansas Governor's Task Force for the preservation of the Ogallala Aquifer, one of the world's largest aquifers located beneath the Great Plains region in the United States. ITC Michigan supported the Southwest Michigan Land Conservancy's efforts to provide free and open access to Bow in the Clouds Preserve, a wilderness experience within the city limits of Kalamazoo. ITC Michigan also supported the Huron Pines conservation organization in 2016 on its Kirtland's Warbler Initiative and projects to enhance the Au Sable River Watershed, a major tributary to Lake Huron.

**FortisOntario** is a proud supporter of "Corridors for Life", a joint research project sponsored by utilities and other stakeholders in the northern region of Ontario. The project was created with a mission to improve management and maintenance practices on utility corridors that support environmental stewardship.

## Central Hudson Completes Cleanup on Rondout Creek

In 2017, Central Hudson completed cleanup of the site of a former Manufactured Gas Plant ("MGP") in the City of Kingston, New York. MGPs were used throughout the United States from the mid-1800s through the early to mid-1900s to produce gas for light, heating and cooking.

Central Hudson worked cooperatively with various regulatory agencies, including the New York State Department of Environmental Conservation, to develop a remediation plan to remove the contaminants.

*"This project is good for the Hudson River, good for the environment and good for our community."*  
- Mayor, City of Kingston

# CORPORATE PROFILE

Fortis is a leader in the North American regulated electric and gas utility business, with total assets of approximately \$47 billion as of September 30, 2017.

The Corporation's more than 8,000 employees serve 3.2 million utility customers in five Canadian provinces, nine U.S. states and three Caribbean countries.

As of December 31, 2016, the Corporation's electricity transmission and distribution systems met a combined peak demand of 33,021 MW and its gas distribution systems met a peak day demand of 1,586 terajoules.

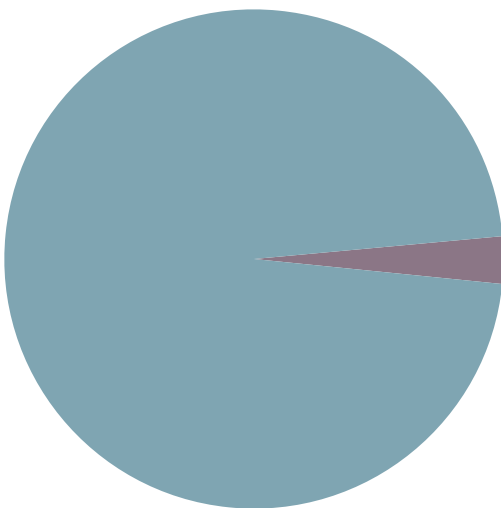
In October 2016, Fortis closed the \$15.7 billion (US\$11.8 billion) transaction to acquire ITC, the largest independent electricity transmission company in the United States. ITC owns and operates high-voltage transmission facilities in Michigan, Iowa, Minnesota, Illinois, Missouri, Kansas and Oklahoma, serving a combined peak load exceeding 26,000 MW along 25,000 kilometres of transmission line.

## A Highly Regulated Utility Business

Approximately 97% of our business is comprised of regulated utilities located in Canada, the United States and the Caribbean, operating in a broad range of regulatory jurisdictions across North America.

Fortis also owns long-term contracted hydroelectric generation assets in British Columbia and Belize, and a natural gas storage facility in British Columbia.

Our utilities are subject to significant regulatory oversight, including our environmental management frameworks. Our utilities work with regulators, stakeholders, community groups and customers to develop plans to reduce our carbon footprint, invest in infrastructure, cleaner generation and capital plans and energy efficiency programs for customers. We work with regulators to carefully balance the delivery of a greener future while at the same time ensuring cost-effective, reliable energy for customers.



**Total Assets** (as of September 30, 2017)

**97% REGULATED UTILITIES**

**3% NON-REGULATED ENERGY INFRASTRUCTURE**

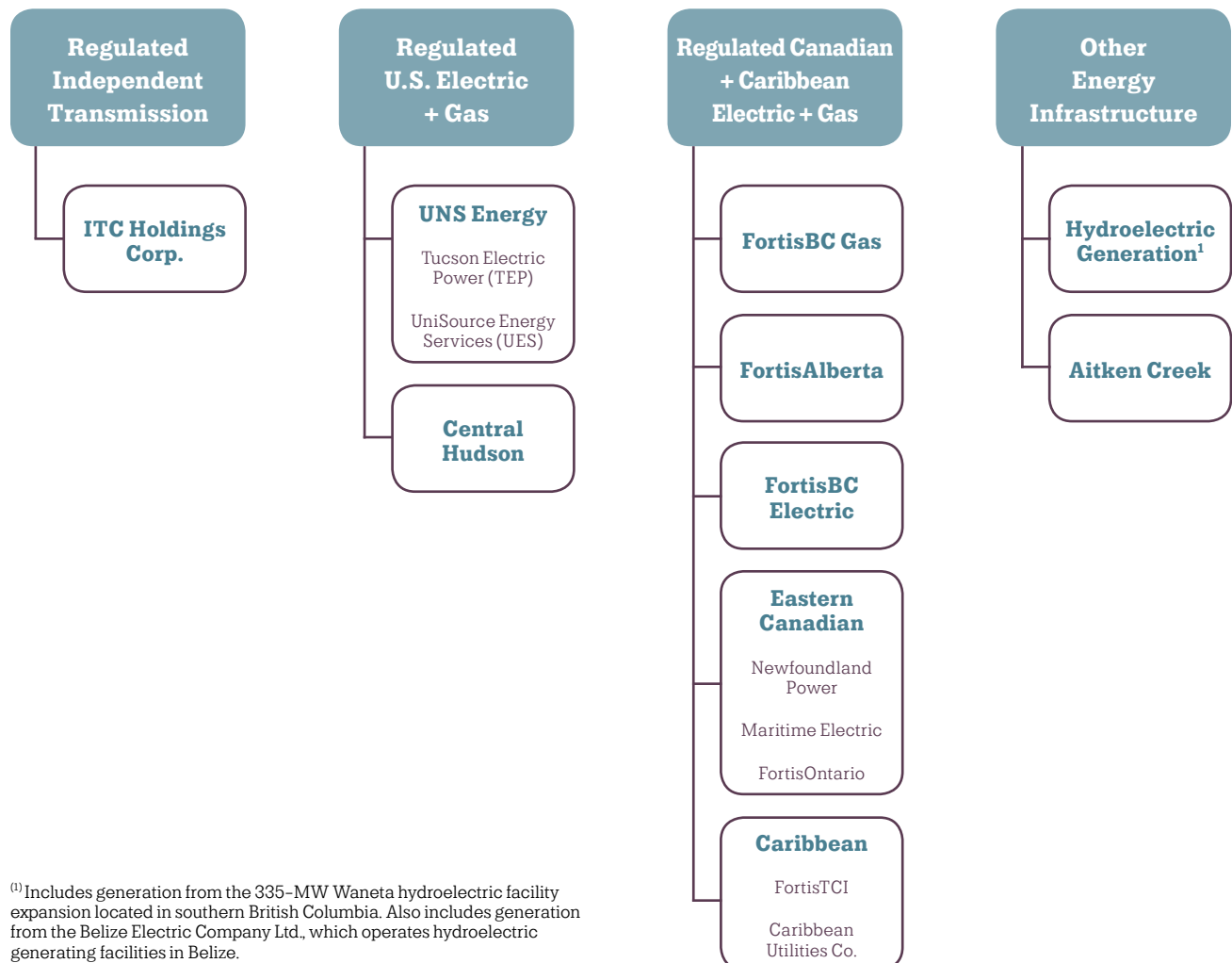
## ITC Earns Grasslands Project Award from the Wildlife Habitat Council

In November 2017, ITC Michigan earned the Grasslands Project Award from the Wildlife Habitat Council, a global organization, for its native plant restoration work on the transmission corridor crossing the Chippewa Nature Centre in Midland, Michigan.

Four applications of native seed mixes from 2012 to 2016, along with invasive species control efforts, enhanced the existing native plant diversity. These native species provide larval host plants, nectar and pollen sources throughout the growing season, and nesting and cover materials for native pollinators.

These activities are part of ITC’s ISO 14001-based environmental management system, which focuses on environmental sustainability at ITC facilities as well as in the planning, construction, operation and maintenance of its electricity transmission systems.

### Fortis Utility Operations



<sup>(1)</sup> Includes generation from the 335-MW Waneta hydroelectric facility expansion located in southern British Columbia. Also includes generation from the Belize Electric Company Ltd., which operates hydroelectric generating facilities in Belize.

# LOOKING AHEAD

Delivering cleaner energy to customers is a key strategic initiative for Fortis. The Corporation's five-year capital investment plan of approximately \$14.5 billion from 2018 through 2022 is driven by projects that improve the transmission grid, allow the grid to deliver cleaner energy, address natural gas system capacity and gas line network integrity, replace aging infrastructure and increase cyber protection.

At **UNS Energy**, plans are underway to modernize natural gas generating resources and introduce more renewables to the grid. The UNS Energy base capital plan also includes replacing higher-cost, aging coal facilities while reducing rate pressures for customers.

Along with other electric distribution companies, **FortisAlberta** is part of a plan to create 5,000 MW of additional renewable energy capacity by 2030. This includes proposed investment in distributed energy resources-related equipment and technology to support grid modernization to facilitate DER integration.

At **FortisBC**, the \$400 million LNG Tilbury Facility expansion project is nearing completion. The expansion includes building a new storage tank and additional liquefaction equipment to support

the growing LNG demands of the transportation sector, remote communities and industry in British Columbia. The expanded facility will be able to liquefy an additional 34,000 GJ of natural gas per day and will add 1.1 million GJ of additional storage capacity.

**FortisBC** has a Pipeline Integrity Management Program planned to improve pipeline safety and integrity. This program includes 48,200 kilometres of distribution and transmission lines and includes an investment of approximately \$300 million.

At **ITC**, there is an anticipated increase in energy storage needs and growth in intermittent renewable generation. This change is driven by the potential for distributed resources, renewables and ongoing diversification of the energy resources.

Fortis will continue to use this Environmental Report to measure performance, identify trends in environmental data and demonstrate how we consider the environment when discussing business strategies.

If you have any questions, please email us at [info@fortisinc.com](mailto:info@fortisinc.com)

## ITC's Right Tree, Right Place Program

ITC works with residents to help them understand what kinds of plants and shrubs can be safely established near transmission lines – and the right places for trees. ITC holds education events in communities to complement property owner landscape management and help prevent tree interference with transmission lines.

ITC is a perennial awardee of the Tree Line USA certification in partnership with the Arbor Day Foundation in recognition of tree-care education programs and sponsorship of tree-planting events.

# PERFORMANCE INDICATOR RESULTS

## Summary Indicators

The following table provides a summary of the Corporation's owned generation capacity. Total fossil owned generation capacity increased from 2015 to 2016, largely due to increased natural gas capacity. In the last three years the percentage of natural gas losses has decreased by 27% while the amount of natural gas sold has increased by nearly 19%, thus reducing the amount of GHG emissions by 25%.

During the same period, our water consumption has decreased by 11% and will continue to decrease in the future, largely driven by the planned coal-fired unit retirements.

| Owned Generation Capacity – Fossil and Non-Fossil (MW) |                |                |                |
|--|----------------|----------------|----------------|
|  | 2014           | 2015           | 2016           |
| <b>Fossil</b>  |                |                |                |
| Coal <sup>(1)(2)</sup>                                 | 1,515          | 1,320          | 1,412          |
| Oil  | 81             | 81             | 81             |
| Diesel   | 341            | 347            | 375            |
| Natural Gas  | 1,399          | 1,399          | 1,555          |
| Biofuel  | <sup>(3)</sup> | <sup>(3)</sup> | <sup>(3)</sup> |
| <b>Total Fossil</b>                                    | <b>3,336</b>   | <b>3,147</b>   | <b>3,423</b>   |
| <b>Non-Fossil</b>                                      |                |                |                |
| Hydroelectric  | 442            | 612            | 563            |
| Solar  | 53             | 53             | 54             |
| <b>Total Non-Fossil</b>                                | <b>495</b>     | <b>665</b>     | <b>617</b>     |
| <b>Total Owned Generation</b>                          | <b>3,831</b>   | <b>3,812</b>   | <b>4,040</b>   |

(1) The changes in coal capacity between 2014 and 2016 are attributed to changes in the lease agreement for UNS Energy's Springerville Generating Station Unit 1 and the conversion of UNS Energy Sundt Unit 4 from coal to natural gas.

(2) UNS Energy accounts for 100% of the SGS Unit 1 generation and emissions.

(3) Biofuel from the City of Tucson's Los Reales Landfill is transported about three miles to help run the H. Wilson Sundt Generating Station's Unit 4, which was also powered by natural gas and coal in 2014-2015, and natural gas in 2016. This results in the generation capacity of between 3-4 MW of electricity per year from biofuel.

The following table provides a summary of the Corporation's owned gross energy generation and energy purchases.

| <b>Gross Energy (GWh)</b>             |               |               |               |
|---------------------------------------|---------------|---------------|---------------|
|                                       | <b>2014</b>   | <b>2015</b>   | <b>2016</b>   |
| <b>Owned Generation - Fossil</b>      |               |               |               |
| <b>Fossil</b>                         |               |               |               |
| Coal                                  | 10,296        | 9,425         | 9,249         |
| Oil                                   | 5             | 4             | 2             |
| Diesel                                | 855           | 887           | 918           |
| Natural Gas                           | 1,374         | 3,472         | 4,087         |
| Biofuel                               | 23            | 32            | 28            |
| <b>Total Fossil</b>                   | <b>12,553</b> | <b>13,820</b> | <b>14,284</b> |
| <b>Owned Generation - Non-Fossil</b>  |               |               |               |
| Hydroelectric                         | 2,420         | 2,581         | 2,620         |
| Solar                                 | 33            | 77            | 82            |
| <b>Total Non-Fossil</b>               | <b>2,453</b>  | <b>2,658</b>  | <b>2,702</b>  |
| <b>Total Owned Generation</b>         | <b>15,006</b> | <b>16,477</b> | <b>16,986</b> |
| <b>Purchases</b>                      |               |               |               |
| Purchases (from grid)                 | 10,913        | 12,482        | 11,260        |
| Purchases (Renewables)                | 7,180         | 7,349         | 7,062         |
| <b>Total Purchases</b>                | <b>18,093</b> | <b>19,831</b> | <b>18,322</b> |
| <b>Total Generation and Purchases</b> | <b>33,099</b> | <b>36,308</b> | <b>35,308</b> |

The following table includes the tonnes of GHG emitted and the intensity factor for Fortis generation and energy purchases.

|                                       | tonnes of GHG Emitted |                   |                   | Intensity Factor (tonnes of GHG Emitted/GWh) |            |            |
|---------------------------------------|-----------------------|-------------------|-------------------|--|------------|------------|
|                                       | 2014                  | 2015              | 2016              | 2014   | 2015       | 2016       |
| <b>Owned Generation - Fossil</b>      |                       |                   |                   |  |            |            |
| Coal                                  | 8,905,012             | 8,474,369         | 8,322,879         | 865  | 899        | 900        |
| Oil                                   | 7,906                 | 6,956             | 5,107             | 1,581  | 1,712      | 2,554      |
| Diesel                                | 566,421               | 590,951           | 596,912           | 662  | 666        | 650        |
| Natural Gas                           | 703,598               | 1,475,734         | 1,965,926         | 512  | 425        | 481        |
| Biofuel                               | (2)                   | (2)               | (2)               | (1)  | (1)        | (1)        |
| <b>Total Fossil</b>                   | <b>10,182,937</b>     | <b>10,548,010</b> | <b>10,890,824</b> | <b>811</b>                                   | <b>763</b> | <b>762</b> |
| <b>Owned Generation - Non-Fossil</b>  |                       |                   |                   |  |            |            |
| <b>Total Non-Fossil</b>               | <b>-</b>              | <b>-</b>          | <b>-</b>          | <b>-</b>                                     | <b>-</b>   | <b>-</b>   |
| <b>Total Owned Generation</b>         | <b>10,182,937</b>     | <b>10,548,010</b> | <b>10,890,824</b> | <b>679</b>                                   | <b>640</b> | <b>641</b> |
| <b>Purchases</b>                      |                       |                   |                   |  |            |            |
| Purchases (from grid)                 | 4,781,530             | 4,445,323         | 3,938,121         | 438  | 356        | 350        |
| Purchases (Renewables)                | -                     | -                 | -                 | -  | -          | -          |
| <b>Total Purchases</b>                | <b>4,781,530</b>      | <b>4,445,323</b>  | <b>3,938,121</b>  | <b>264</b>                                   | <b>224</b> | <b>215</b> |
| <b>Total Generation and Purchases</b> | <b>14,964,467</b>     | <b>14,993,333</b> | <b>14,828,945</b> | <b>452</b>                                   | <b>413</b> | <b>420</b> |

(1) Biofuel from the City of Tucson's Los Reales Landfill is transported about three miles to help run the H. Wilson Sundt Generating Station's Unit 4, which was also powered by natural gas and coal in 2014-2015, and natural gas in 2016. This results in the generation capacity of between 3-4-MW of electricity per year from biofuel.

(2) Biofuel emissions were not included since these emissions are from a landfill and are considered carbon neutral. The landfill would have emitted GHG through a natural process if the gas was not captured to be used as a fuel for generation.



## Electricity Indicators

Sources of direct and indirect GHG emissions are associated with fossil fuel generating facilities and energy purchases, respectively. The tables below provide a summary of the Corporation's owned gross generation and energy purchases by fuel type and the associated GHG emissions.

The percentage of natural gas utilized for gross owned generation has increased since 2014. In terms of GHG emissions by fuel type, Fortis has seen a decrease in the percentage of coal-related GHG emissions since 2014.

### Owned Fossil Fuel Energy Production by Fuel Type

| Fuel Type           | Gross Owned Generation (GWh) |               |               | %             |               |               |
|---------------------|------------------------------|---------------|---------------|---------------|---------------|---------------|
|                     | 2014                         | 2015          | 2016          | 2014          | 2015          | 2016          |
| Coal                | 10,296                       | 9,425         | 9,249         | 82.02         | 68.20         | 64.75         |
| Oil/Diesel          | 860                          | 891           | 920           | 6.85          | 6.45          | 6.44          |
| Natural Gas         | 1,374                        | 3,472         | 4,087         | 10.95         | 25.12         | 28.61         |
| Biofuel             | 23                           | 32            | 28            | 0.18          | 0.23          | 0.20          |
| <b>Total Fossil</b> | <b>12,553</b>                | <b>13,820</b> | <b>14,284</b> | <b>100.00</b> | <b>100.00</b> | <b>100.00</b> |

### Owned Fossil Fuel GHG Emissions by Fuel Type

| Fuel Type           | GHG Emissions (tCO <sub>2</sub> e) |                   |                   | %             |               |               |
|---------------------|------------------------------------|-------------------|-------------------|---------------|---------------|---------------|
|                     | 2014                               | 2015              | 2016              | 2014          | 2015          | 2016          |
| Coal                | 8,905,012                          | 8,474,369         | 8,322,879         | 87.45         | 80.34         | 76.42         |
| Oil/Diesel          | 574,327                            | 597,907           | 602,019           | 5.64          | 5.67          | 5.53          |
| Natural Gas         | 703,598                            | 1,475,734         | 1,965,926         | 6.91          | 13.99         | 18.05         |
| Biofuel             | (1)                                | (1)               | (1)               | (1)           | (1)           | (1)           |
| <b>Total Fossil</b> | <b>10,182,937</b>                  | <b>10,548,010</b> | <b>10,890,824</b> | <b>100.00</b> | <b>100.00</b> | <b>100.00</b> |

(1) Biofuel emissions were not included as these emissions are from a landfill and are considered carbon neutral. The landfill would have emitted GHG through a natural process if the gas was not captured to be used as a fuel for generation.

## Fortis - Owned Generation and Purchases

In 2016, total gross owned generation increased while energy purchases by Fortis decreased compared to 2015.

| Gross Owned Generation |                              |               |               |                               |                   |                   |
|------------------------|------------------------------|---------------|---------------|-------------------------------|-------------------|-------------------|
| Fuel                   | Gross Owned Generation (GWh) |               |               | Direct GHG Emissions (tonnes) |                   |                   |
|                        | 2014                         | 2015          | 2016          | 2014                          | 2015              | 2016              |
| Fossil                 | 12,553                       | 13,820        | 14,284        | 10,182,937                    | 10,548,010        | 10,890,824        |
| Non-Fossil             | 2,453                        | 2,658         | 2,702         | -                             | -                 | -                 |
| <b>Total</b>           | <b>15,006</b>                | <b>16,478</b> | <b>16,986</b> | <b>10,182,937</b>             | <b>10,548,010</b> | <b>10,890,824</b> |

| Energy Purchases |                        |               |               |   |                  |                  |
|------------------|------------------------|---------------|---------------|---|------------------|------------------|
| Fuel             | Energy Purchases (GWh) |               |               | Indirect GHG Emissions (tCO <sub>2</sub> e) |                  |                  |
|                  | 2014                   | 2015          | 2016          | 2014  | 2015             | 2016             |
| Fossil           | (1)                    | (1)           | (1)           | (1)   | (1)              | (1)              |
| Non-Fossil       | (1)                    | (1)           | (1)           | (1)   | (1)              | (1)              |
| <b>Total</b>     | <b>18,093</b>          | <b>19,831</b> | <b>18,322</b> | <b>4,781,530</b>                            | <b>4,445,323</b> | <b>3,938,121</b> |

(1) A breakdown of energy source by type is not available because a significant portion of the energy purchased is from the grid. Where a determination of the purchased energy source cannot be made, GHG emissions are estimated using emission factors to take into account the energy generation mix from where the grid is located.

## Fuel Used in Owned Generation

In 2016, coal used in owned generation decreased while use of natural gas increased compared to 2015.

|                  | 2014        | 2015        | 2016        |
|------------------|-------------|-------------|-------------|
| Coal (tonnes)    | 4,598,597   | 4,317,696   | 4,194,958   |
| Oil (Litres)     | 2,921,818   | 2,572,081   | 1,713,285   |
| Diesel (Litres)  | 209,156,218 | 223,384,382 | 225,378,937 |
| Natural Gas (PJ) | 13.13       | 29          | 32          |
| Biofuel (PJ)     | 0.56        | 0.75        | 0.64        |

The tables below show the water consumption indicators for UNS Energy only and on a combined basis for three Fortis utilities.

Both tables show a year over year increase due to UNS Energy's increase ownership in SGS Unit 1 - from 49.5% in 2015 to 100% in 2016.

| <b>UNS Energy - Water Consumed in Energy Production from Owned Fossil Fuel Generation</b> |                       |                               |
|---|-----------------------|-------------------------------|
|   | <b>million litres</b> | <b>million litres per GWh</b> |
| 2014  | 22,180                | 1.91                          |
| 2015  | 20,909                | 1.63                          |
| 2016  | 22,496                | 1.7                           |

| <b>Fortis - Water Consumed in Energy Production from Owned Fossil Fuel Generation</b> |                       |                               |
|---|-----------------------|-------------------------------|
|   | <b>million litres</b> | <b>million litres per GWh</b> |
| 2014  | 22,180                | 1.91                          |
| 2015  | 20,914                | 1.55                          |
| 2016  | 22,512                | 1.62                          |

\*UNS Energy, Caribbean Utilities Company Limited and Maritime Electric Company Limited are the only utilities that consume water in energy production from owned fossil fuel generation.

## **Natural Gas Indicators**

The table below summarizes information pertaining to natural gas for three Fortis utilities with natural gas operations: FortisBC, Central Hudson and UNS Energy.

|                               | <b>2014</b> | <b>2015</b> | <b>2016</b> |
|-------------------------------|-------------|-------------|-------------|
| Sold (PJ)                     | 231         | 223         | 274         |
| Loss (PJ)                     | 0.386       | 0.236       | 0.281       |
| Loss as a percentage sold (%) | 0.17        | 0.11        | 0.10        |
| Loss (t of GHG)               | 155,553     | 115,687     | 116,396     |

## Revenue and Total Assets Indicators

The following tables display the tonnes of GHG emitted per million dollars of revenue and total assets<sup>1,2,3</sup>.

Both indicators have decreased year over year since 2014. The decreases seen in 2016 are primarily attributable to the Fortis acquisition of ITC - the largest independent electricity transmission company in the United States.

|   | Revenue Indicator                        |              |              | Total Assets Indicator                        |            |            |
|---|--|--------------|--------------|---|------------|------------|
|   | tonnes of GHG Emitted per \$M of Revenue |              |              | tonnes of GHG Emitted per \$M of Total Assets |            |            |
|   | 2014                                     | 2015         | 2016         | 2014  | 2015       | 2016       |
| Fossil Fuel Generation <sup>(4)</sup>   | 1,645                                    | 1,609        | 1,593        | 399   | 366        | 227        |
| Combined Total of GHG Emissions from Fossil Fuel Generation and Natural Gas Losses <sup>(4)</sup> | 1,670                                    | 1,627        | 1,610        | 405   | 370        | 230        |
| Energy Purchases <sup>(5)</sup>   | 772                                      | 678          | 576          | 187   | 154        | 82         |
| <b>Total</b>  | <b>2,442</b>                             | <b>2,305</b> | <b>2,186</b> | <b>592</b>                                    | <b>525</b> | <b>312</b> |

(1) Fortis 2014 Revenue (\$6,190M) and Total Assets (\$25,537M) as reported in the 2014 Fortis Annual Report. Revenue and Total Assets were adjusted to remove non-utility assets.

(2) Fortis 2015 Revenue (\$6,556M) and Total Assets (\$28,804M) as reported in the 2015 Fortis Annual Report. Revenue was adjusted to remove non-utility assets.

(3) Fortis 2016 Revenue (\$6,838M) and 2016 Total Assets (\$47,904M) as reported in the 2016 Fortis Annual Report.

(4) Direct source of emissions.

(5) Indirect source of emissions.



## Energy Efficiency Indicators

In 2016, there was an increase in the amount of electricity and natural gas avoided as a result of energy efficiency programs at Fortis. Natural gas operations did see a year over year decrease in tonnes of GHG avoided per PJ, due to an increase in the amount of natural gas sold in 2016.

### Energy Efficiency Programs - Electricity<sup>1</sup>

| Energy Saved             |                  |       |   |       |
|--------------------------|------------------|-------|---|-------|
|                          | GWh Energy Saved |       | % Energy Saved Relative to Energy Sales |       |
|                          | 2015             | 2016  | 2015                                    | 2016  |
| Incremental Energy Saved | 288              | 344   | 0.85%                                   | 1.20% |
| Cumulative Energy Saved  | 1,549            | 1,893 |   |       |

|                         | GHG Avoided<br>tCO <sub>2</sub> e Avoided |         | GHG Avoided per GWh of Energy Sales<br>(t/GWH) |      |
|-------------------------|---|---------|--|------|
|                         | 2015                                      | 2016    | 2015   | 2016 |
| Incremental GHG Avoided | 154,862                                   | 186,938 | 4.58   | 6.51 |
| Cumulative GHG Avoided  | 783,096                                   | 970,034 |  |      |

(1) The 2015 Energy Efficiency data has been corrected to reflect consistent reporting methodologies among subsidiary utilities.

### Energy Efficiency Programs - Natural Gas<sup>1</sup>

| Energy Saved             |            |      |   |       |
|--------------------------|------------|------|---|-------|
|                          | Petajoules |      | % Energy Saved Relative to Energy Sales |       |
|                          | 2015       | 2016 | 2015                                    | 2016  |
| Incremental Energy Saved | 0.51       | 0.54 | 0.23%                                   | 0.20% |
| Cumulative Energy Saved  | 2.67       | 3.21 |   |       |

|                         | GHG Avoided<br>tCO <sub>2</sub> e Avoided |         | GHG Avoided per PJ of Energy Sales<br>(t/PJ) |       |
|-------------------------|---|---------|--|-------|
|                         | 2015                                      | 2016    | 2015   | 2016  |
| Incremental GHG Avoided | 26,292                                    | 27,798  | 117.7  | 101.3 |
| Cumulative GHG Avoided  | 137,235                                   | 165,033 |  |       |

(1) The 2015 Energy Efficiency data has been revised to correct inconsistent reporting methodologies among subsidiary utilities.

# FORTIS UTILITIES



ITC, headquartered in Novi, Michigan, is the largest independent electricity transmission company in the United States. The FERC-regulated utility owns and operates high-voltage systems in Michigan's Lower Peninsula and portions of Iowa, Minnesota, Illinois, Missouri, Kansas and Oklahoma. In 2016, ITC owned and operated 25,000 kilometres of transmission lines and met a peak demand of 23,231 MW. ([itc-holdings.com](http://itc-holdings.com))



UNS Energy is a vertically integrated utility services holding company, headquartered in Tucson, Arizona. It is engaged through its subsidiaries in the regulated electric generation and energy delivery business, primarily in the State of Arizona, serving approximately 669,000 electricity and gas customers. UNS Energy is primarily comprised of three wholly owned regulated utilities: TEP, UNS Electric and UNS Gas. In 2016, UNS Energy met a peak day natural gas demand of 103 TJ and a peak electricity demand of 3,386 MW. ([uns.com](http://uns.com))



Central Hudson is a regulated transmission and distribution utility serving approximately 300,000 electricity customers and 79,000 natural gas customers in eight counties of New York State's Mid-Hudson River Valley. In 2016, the utility met a peak day natural gas demand of 149 TJ and a peak electricity demand of 1,088 MW. ([cenhud.com](http://cenhud.com))



FortisBC is an integrated energy solutions provider focused on providing natural gas, electricity, propane and alternative energy solutions to approximately 1,164,000 customers in more than 135 communities in British Columbia. In 2016, FortisBC met a peak day natural gas demand of 1,334 TJ and a peak electricity demand of 712 MW. ([fortisbc.com](http://fortisbc.com))



FortisAlberta is a regulated distribution utility providing electricity in central and southern Alberta. The utility's distribution network serves approximately 549,000 customers and met a peak demand of 2,581 MW in 2016. ([fortisalberta.com](http://fortisalberta.com))



Newfoundland Power is an integrated electric utility and the principal distributor of electricity on the island portion of Newfoundland and Labrador, serving approximately 266,000 customers in approximately 600 communities. Newfoundland Power met a peak demand of 1,367 MW in 2016. ([newfoundlandpower.com](http://newfoundlandpower.com))



Maritime Electric is an integrated electric utility that directly supplies approximately 80,000 customers, constituting approximately 90% of electricity consumers on Prince Edward Island. The Company purchases most of the energy it distributes to its customers from NB Power, a New Brunswick Crown corporation, through various energy purchase agreements. Approximately 23% of the energy distributed by Maritime Electric comes from on-Island wind generation. Maritime Electric met a peak demand of 237-MW in 2016. ([maritimeelectric.com](http://maritimeelectric.com))



FortisOntario provides integrated electric utility service to approximately 65,000 customers in Fort Erie, Cornwall, Gananoque, Port Colborne and the District of Algoma in Ontario. The Company owns a 10% interest in three regional electric distribution companies, serving approximately 40,000 customers. FortisOntario met a combined peak demand of 248 MW in 2016. ([fortisontario.com](http://fortisontario.com))



Caribbean Utilities Company Ltd., an approximate 60% owned subsidiary, generates, distributes, transmits and supplies electricity on Grand Cayman, Cayman Islands. The Company serves approximately 29,000 customers and met a peak demand of 103 MW in 2016. ([cuc-cayman.com](http://cuc-cayman.com))



FortisTCI generates and transmits electricity to approximately 15,500 customers on the islands of Providenciales, North Caicos, Middle Caicos, East Caicos, South Caicos, Grand Turk and Salt Cay and met a combined record peak demand of 41.5-MW in 2017. ([fortistci.com](http://fortistci.com))

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