#### REPORT INTRODUCTION

#### **CHAIRMAN'S LETTER**

## Chairman's Letter

Con Edison energizes the lives of more than 10 million people across the metropolitan New York area.

We have long been recognized by leaders in business, government, and the energy industry for providing customers with safe and reliable energy. Yet we are also in the forefront of change. Changes in technology, policy, and customer expectations are creating extraordinary opportunities for us. We are finding new ways to excel at what we do—eliminate accidents and injuries, protect the environment, improve the performance of our energy systems, and enhance our customer experience.

Given the public's growing desire for renewable and distributed energy resources beyond the traditional forms of electric, gas, and steam, we are preparing for a future that includes newer resources—including solar, wind, combined heat and power, fuel cells, and battery storage. New York City's largest rooftop solar installation, in the Brooklyn Navy Yard, is one of our projects.

We have invested \$2.5 billion in large-scale solar and wind projects in 16 states through our Clean Energy Business subsidiary, and we are North America's fifth-largest solar producer. At the same time, we are increasing customer options for energy savings and expanding our vigorous energy efficiency programs.

Since 2005, we have reduced our carbon footprint by 48 percent, which is equivalent to taking 500,000 cars off the road. We have converted more than 6,500 large buildings from oil to cleaner natural gas—that is in part why New York City has its cleanest air in 50 years.



Facing new challenges posed by climate change, we have invested \$1 billion to make our energy systems more resilient. These upgrades have prevented more than 225,000 customer outages since 2013. We will also be installing more than 5 million smart meters over the next five years to reduce energy usage, improve electric system performance, and give our customers improved visibility and control of their energy use.

Our customers and communities matter. Last year, we made more than \$12 million in charitable contributions to local non-profits. Our employees also donated 12,000 hours of their own time volunteering in our communities.

Con Edison finished 2016 with the lowest injury rate in our company's history. Orange & Rockland Utilities had its second-lowest injury rate ever. While those facts are impressive, we won't claim success until we meet our goal of a zero-harm environment for our employees and the people we serve.

We finished 2016 strong, and we're poised to build on that momentum. Read, watch, and listen to our Sustainability Report to learn more about what we're doing to better serve our customers and protect the environment. Because more than 10 million people are depending on us for reliable power and a sustainable future.

- John McAvoy, Chairman, President, and Chief Executive Officer, Consolidated Edison, Inc.

#### **COMPANY PROFILE**

# **Company Profile**

Consolidated Edison, Inc. is one of the nation's largest investor-owned energy-delivery companies, with approximately \$12 billion in annual revenues and \$49 billion in assets. The company provides a wide range of energy-related products and services to its customers through the following subsidiaries:

- Consolidated Edison Company of New York, Inc. (CECONY)
   (http://www.coned.com/), a regulated energy company providing electric, gas, and steam service to more than three million customers in New York City and Westchester County;
- Orange & Rockland Utilities, Inc. (O&R) (http://www.oru.com/index.html), a regulated energy company serving customers in a 1,300-square-mile area in southeastern New York State and northern New Jersey;
- Con Edison Clean Energy Businesses, Inc. (CEB), which through its subsidiaries
  develops, owns, and operates renewable and energy infrastructure projects and
  provides energy-related products and services to wholesale and retail customers;
  and
- <u>Con Edison Transmission (CET) (http://www.conedtransmission.com/)</u>, which through its subsidiaries invests in electric and natural-gas transmission projects.

Read our 2016 Annual Report (http://investor.conedison.com/phoenix.zhtml?c=61493&p=irol-reportsannual).



CECONY Electric	<b>CECONY Gas</b>	<b>CECONY Steam</b>	O&R Electric	O&R Gas	CEBs (CES, CEE, CED, CET)
8,106	1,508	551	637	184	1,091

## **Revenue by Business**







#### REPORT INTRODUCTION

#### SUSTAINABILITY STRATEGY

# Sustainability Strategy

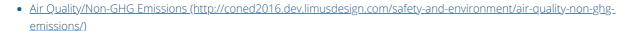
Con Edison embeds sustainability goals, processes, and metrics into our core business strategy and operations to create lasting value for our communities and the customers we serve. To that end, we have developed a tighter integration between our sustainability priorities and our long-range planning. In addition, we have established a Sustainability Leadership Council to strengthen sustainability governance across all aspects of our company.

During the past two years we have worked with BSR, a leading sustainability consulting firm, to help us refresh our materiality assessment and determine our key sustainability priorities.

The sustainability priorities listed below reflect our core business areas of focus: Safety & Environment, Operational Excellence, and Customer & Community. More details on each of these priorities can be found in this report.

#### **Safety & Environment**

- Employee Health & Safety (http://coned2016.dev.limusdesign.com/safety-and-environment/employee-health-safety/)
- Public Safety (http://coned2016.dev.limusdesign.com/safety-and-environment/public-safety/)
- GHG Emissions Reductions (http://coned2016.dev.limusdesign.com/safety-and-environment/gng-emissions-reductions-introduction/)



- Waste Management (http://coned2016.dev.limusdesign.com/safety-and-environment/waste-management/)
- Habitat & Biodiversity (http://coned2016.dev.limusdesign.com/safety-and-environment/habitat-biodiversity/)
- Electric Vehicles (http://coned2016.dev.limusdesign.com/safety-and-environment/electric-vehicles/)
- Oil-to-Gas Conversions (http://coned2016.dev.limusdesign.com/safety-and-environment/oil-to-gas-conversions/)
- Water (http://coned2016.dev.limusdesign.com/safety-and-environment/water/)
- ISO Certification (http://coned2016.dev.limusdesign.com/safety-and-environment/iso-certification/)

#### **Operational Excellence**

- <u>Physical/Cyber Security & Data Privacy (http://coned2016.dev.limusdesign.com/operational-excellence/physical-cybersesurity-data-privacy/)</u>
- Ethical Business Practices (http://coned2016.dev.limusdesign.com/operational-excellence/ethical-business-practices/)
- Climate Resilience (http://coned2016.dev.limusdesign.com/operational-excellence/climate-resilience/)
- Core System Upgrades (http://coned2016.dev.limusdesign.com/operational-excellence/core-system-upgrades/)
- Supply Chain (http://coned2016.dev.limusdesign.com/operational-excellence/supply-chain/).
- <u>Governance (http://coned2016.dev.limusdesign.com/operational-excellence/governance/)</u>



#### **Customer & Community**

- <u>Stakeholder Engagement & Collaboration (http://coned2016.dev.limusdesign.com/customer-and-community/stakeholder-engagement-collaboration/)</u>
- <u>Digital Customer Experience (http://coned2016.dev.limusdesign.com/customer-and-community/digital-customer-experience/)</u>
- <u>Energy Efficiency, Renewables, & Distributed Energy (http://coned2016.dev.limusdesign.com/customer-and-community/distributed-energy-resources/)</u>
- <u>Talent Attraction, Development, & Retention (http://coned2016.dev.limusdesign.com/customer-and-community/talent-attraction-development-retention/)</u>
- Workforce Diversity & Inclusion (http://coned2016.dev.limusdesign.com/customer-and-community/workforce-diversity-inclusion/)
- <u>Training & Professional Development (http://coned2016.dev.limusdesign.com/customer-and-community/training-professional-development/)</u>
- Volunteerism (http://coned2016.dev.limusdesign.com/customer-and-community/volunteerism/)

#### REPORT INTRODUCTION

#### **R&D/INNOVATION**

## **R&D/Innovation**

Innovative spirit and hard work are two of our company's greatest assets. Our research and development teams work diligently to find solutions that make the workplace safer and improve the quality of life for our customers. Here are some of our ongoing projects:

#### Safety

- A machine using advanced robotic technology to allow workers to remotely perform key cable splicing operations. It would be the first of its kind for a utility company
- The use of drones (unmanned aerial vehicles) to inspect steam boilers as high as 150 feet. A special cage protects the drone from making contact with the boiler tubes and burners
- Two ergonomic devices that reduce the risk of back injuries caused by repetitive motion or heavy work. One device is worn over a worker's clothes, the other clips onto a worker's belt

#### **Operational Excellence**

 Technologies capable of estimating emissions from non-hazardous leaks in our gas distribution system to give priority to repairing leaks that have the highest natural gas emissions



• A process to better control voltage levels on feeder lines that run from substations to the electric distribution system to increase efficiency, reduce overall energy use, manage energy demand during peak periods, and help facilitate solar and other distributed energy resources

#### **Customer Experience**

- Advanced steam-heating control lets occupants in a Long Island City building use a smart wall thermostat to schedule their desired apartment temperature. This will save customers money, give customers control, and increase comfort
- Testing software that would provide financial incentives to customers who charge their electric vehicles during our system's off-peak periods
- Working with the Fire Department of New York on a first-of-its-kind program to test the safety of lithium ion and other battery chemistries before they are installed in large city buildings

We began placing methane detectors in homes in 2016. Methane detectors have been effective in alerting residents to natural gas leaks and enhancing public safety. One of our Bronx customers, Pearl Alleyne, says her home methane detector saved her life



REPORT INTRODUCTION

#### **AWARDS & RECOGNITION**

# **Awards & Recognition**

As we continue to serve our customers, promote safety, and help preserve the environment, we receive many plaudits and prestigious awards for our projects and operational excellence. Here is a baker's dozen from our list of honors:

- **JD Power** ranks us No. 1 in customer satisfaction among large utilities in the East. The market research company's survey includes six categories: power quality and reliability; corporate citizenship; price; billing and payment; communications; and customer service
- For the ninth year in a row, our company was recognized by **PA Consulting Group, Inc.** with the Outstanding System-Wide Reliability Award
- Con Edison is No. 19 overall among U.S. companies—and No. 2 among U.S. energy companies—in the 2016 Newsweek
   Green Rankings. Our overall U.S. ranking is up from No. 32 last year. Newsweek ranks companies based on corporate sustainability and environmental impact
- The New York League of Conservation Voters, a group that includes business leaders, politicians, and environmental leaders, honored us at its 2017 annual spring gala
- Ten Con Edison employees won Technology Transfer Awards from the **Electric Power Research Institute**, a national energy research organization
- O&R was recognized as a Tree Line USA energy company for the 15<sup>th</sup> consecutive year by the New York State
   Department of Environmental Conservation
- For the 16<sup>th</sup> successive year, O&R was **United Way of Rockland County's** largest corporate donor. Since 1993, O&R has contributed more than \$4 million to United Way
- O&R became the first East Coast-based utility to be **Gold Shovel Standard**-certified. All employees who break ground as part of their job completed their excavator training
- We received a 2016 Emergency Response Excellence Award from **Davies Consulting** for how we handled Superstorm Sandy
- We scored 95 out of 100 on the **Human Rights Campaign's** 2017 Corporate Equality Index, which rates workplaces on lesbian, gay, bisexual, and transgender equality
- Stevens Institute of Technology, known as "the innovation university," named us Employer of the Year
- **The National Safety Council** gave CECONY a Remarkable Results Award after more than 700 employees completed our defensive driving course
- The Conference Board awarded us with a New Communications Research Award in the category of Digital & Social Media for Social Good for our Facebook Live video of the recovery efforts after Hurricane Matthew in Virginia

Sustainability is an umbrella that covers everything we do as a company.

#### **EMPLOYEE HEALTH & SAFETY**

# **Employee Health & Safety**

As a measurement of progress toward a zero-harm workplace, the company is pursuing a reduction in the OSHA injury and illness incidence rate to 1.00 by 2019 (calculated in accordance with Bureau of Labor Statistics' methodology). We are also specifically focused on the elimination of severe injuries—we have set a goal of zero high-hazard injuries.

CECONY'S 1.17 injury and illness rate in 2017 surpassed our goal of 1.20. We had 137 recordable employee injuries in 2016, and in 2017 we lowered that to 126 recordable employee injuries, our lowest ever. CECONY has reduced injuries by more than 60 percent since 2009; O&R has seen a 50-percent reduction in injuries since 2009.

Among the reasons for the improvement:

- strong, constructive partnerships between management and union leadership on safety
- formalized job planning, with special emphasis on high-energy jobs, in every organization
- open communication and inclusion on every job at every level
- the pursuit of predictive analytics as means to continue improvement of our safety record
- companywide use of error-avoidance tools

O&R saw its third-lowest incidence rate of 1.93 in 2017, though this was above the goal of 1.5. The Company experienced one High Hazard Injury, the first High Hazard Injury since June 2009. O&R continues to implement and engage employees in zero harm strategies.

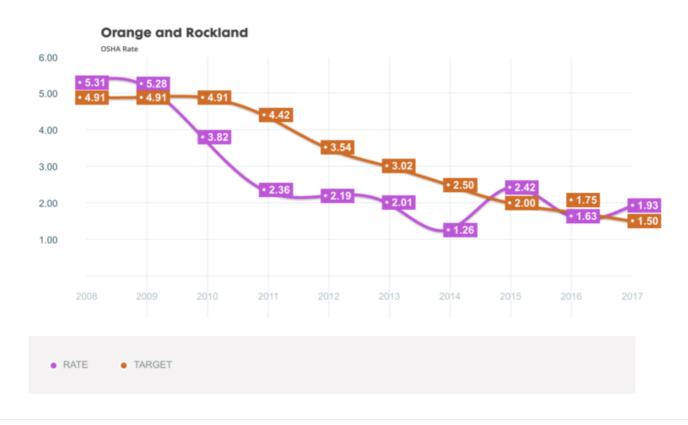
Our company also introduced LiveSafe, a free mobile app that gives employees a direct line to corporate security, quick access to safety maps, contact with emergency responders, and other resources to keep them safe on the job and at home.



#### Con Edison of New York



## **Orange and Rockland**



SUSTAINABILITY REPORT 2016-2017

SAFETY & ENVIRONMENT

#### **PUBLIC SAFETY**

# **Public Safety**

We have invested more than \$2.9 billion in 2016 to fortify our electric, gas, and steam infrastructure. This investment underscores our commitment to providing energy to millions of customers efficiently and responsibly while protecting the environment and keeping people safe throughout our service area.

## **ELECTRIC**

CECONY continues to develop tools, techniques, and management strategies to improve safety, troubleshooting, and program efficiency. Distribution Engineering and Electric Operations teams developed thermal imaging of secondary assets and mobile contact-voltage (also known as stray voltage) scanning in high-activity areas, and introduced latched vented covers. These efforts complement previously existing programs including contact-voltage detection, cover venting, and underground inspection.

CECONY's underground networks are surveyed for contact voltage 12 times a year, using mobile detectors. In 2016, we found and eliminated 8,961 cases of contact voltage. Of those, 6,529 cases (73 percent) were on non-CECONY equipment (streetlights, electric signs, and other structures). We performed more than 55,000 inspections of our underground system (manholes, service boxes, and transformer vaults).

O&R's testing of its electric system is completed at least once every five years. In 2016, O&R found and eliminated 16 cases of contact voltage, all on company-owned equipment, and performed 44,510 tests and inspections.

In an emergency, our crews serve the public wherever we are needed. In October, we traveled to Virginia to help restore power and assist residents after Hurricane Matthew:

## **GAS**

As part of our ongoing effort to reduce our carbon footprint and sharpen our focus on natural gas safety, we are working with the New York State Public Service Commission (PSC) to develop a program to identify and reduce emissions from small volume, non-hazardous leaks of methane gas. Currently, non-hazardous leaks are scheduled for repair based on the availability of resources and the leak's proximity to other types of street-opening work. In 2016, we focused on reducing the backlog of non-hazardous leaks. We've maintained historically low levels of such leaks into 2017 and have typically repaired these type 3 leaks on average in less than 40 days.

The PSC reached a \$153 million settlement with Con Edison related to the investigation of a 2014 East Harlem gas explosion. Since that incident, we have greatly increased investments in our gas systems to further enhance public safety. We accelerated our cast iron and unprotected-steel, gas-main replacement plan and established monthly system-wide gas leak patrols. We improved emergency response procedures with the Fire Department of New York and coordination with key city agencies. We also closely worked with the city on legislation regarding building gas pipe inspections.

We launched a successful media campaign, "Smell Gas, Act Fast," featuring videos and social-media posts that informed customers on what to do if they smelled gas. The videos were done in English, Spanish, Chinese, and Korean. Here's the English-language version:

## **STEAM**

#### Sustainability Report 2016-2017



We provide steam service for approximately 2.5 million people in Manhattan through an underground network of pipes. By generating steam primarily through co-generation, we provide efficient production and reduce emissions that would otherwise be generated by localized boilers and equipment. We focus on identifying ways to lower costs to customers, maintain high reliability, improve resiliency, and protect the environment. In 2016, we continued to achieve safe and efficient operations while meeting our customers' needs and maintaining focus on continued bill reductions. We maintained an overall reliability rate of 100 percent and met a peak demand of eight million pounds of steam on January 5, 2016.

#### **GHG EMISSIONS REDUCTIONS**

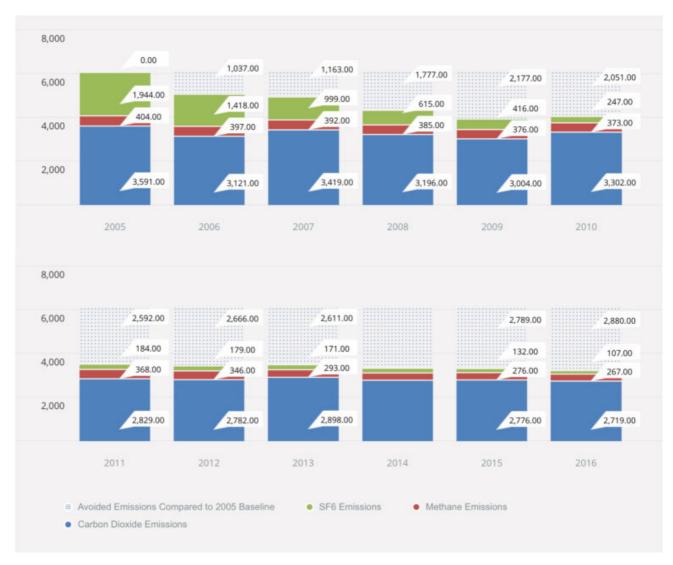
## **GHG Emissions Reductions**

As evidence of the commitment to reduce our carbon footprint, 60 percent of CECONY annual steam production comes from cogeneration, which lowers emissions by one million tons of  ${\rm CO_2}$  per year. O&R reduced greenhouse gas (GHG) emissions by 40 percent from 1990 levels. We continue to firmly support efforts by local, state, and federal agencies to reduce GHG emissions. For example, we work voluntarily with the Environmental Protection Agency (EPA) to lower emissions of sulfur hexafluoride, or SF<sub>6</sub>, from our electrical equipment. We have joined 40 other companies as a founding partner in the EPA's Natural Gas STAR Methane Program. Our residential methane detectors provide customers with a vital warning signal for potential gas leaks. After collaborating with the Environmental Defense Fund, we developed improvements to our leak-detection and repair programs.

Download our report <u>ESG: Committed to Reducing Methane Emissions</u> (http://coned2016.dev.limusdesign.com/files/ESG%20-%20Committed%20to%20Reducing%20Methane%20Emissions%20-%20December%202017%20FINAL.pdf) for more information on our targets and strategies.

In addition to ongoing energy efficiency initiatives that save money for our business and residential customers, we'll begin installing smart meters this summer in our service area. Smart meters will give customers more information about their energy usage and enable them to manage their bills more efficiently.

## Con Edison, Inc. Direct GHG Emissions - Scope 1



Scope 1: Direct greenhouse gas emissions from CEI owned or controlled sources (e.g., steam-generating stations)

### STEAM ENVIRONMENTAL EFFORTS

We strive to provide customers with FDA quality steam, of which 60 percent is cogenerated. Because the steam is co-generated, customers can apply for points toward their Leadership in Energy and Environmental Design (LEED) certification and increase their score in Energy Star's Portfolio Manager. Our co-generated steam reduces  $\rm CO_2$  emissions by approximately 25 percent of what would have otherwise been emitted through traditional boilers—that's equal to removing 190,000 vehicles from the road every year.

Here is how our customers benefit from an absence of onsite emissions: They see improvements in the Manhattan skyline from our steam-system enhancements, including our decision to modify two steam-generating stations in 2013 to burn natural gas as a primary fuel rather than No. 6 fuel oil. In 2016, this change alone was responsible for a 7-percent reduction in  $\rm CO_2$  emissions compared to the 2008–09 average. That's equivalent to taking 44,000 vehicles off the road annually. Also, the steam system achieved its lowest historical fuel oil usage levels in 2016, using only 2 percent fuel oil and 98 percent natural gas—a direct result of warmer-than-normal temperatures and an infrequent need to switch fuel.



## **ENERGY EFFICIENCY CUSTOMERS' EMISSIONS**

Con Edison and O&R continued to excel in energy efficiency, resulting in lower bills for customers, cleaner air, and a solidifying of our No. 1 position for reliable service. We gave customers who chose energy-saving HVAC, lighting, building management systems, and other equipment more than \$40 million in incentives. As of April 2017, customers got a discount of up to 50 percent on energy-saving LED light bulbs bought directly from Con Edison Marketplace. For a household that uses 10 LED bulbs for an average of six hours a day, there's a potential annual energy savings of \$121.65 compared to using incandescent bulbs.

We're offering households and businesses better ways to reduce their energy usage through advice on how to take advantage of programmable thermostats, sophisticated building management systems, the latest in lighting, and other technologies. Upgrades made by CECONY customers through our energy efficiency programs in 2016 reduced electrical usage by 160,200 megawatt hours and saved 266,500 dekatherms of gas. That's equal to taking more than 23,000 cars off the road. Since 2009, CECONY has paid customers more than \$280 million to make upgrades.

#### **Energy Efficiency - Avoided Emissions (thousand metric tons)**

2016	2015	2014	2013	2012	2011	2010	2009
191.6	107	118	99	104	94	33	0.4

Con Edison also launched the Connected Homes platform to augment its residential energy efficiency programs. The platform educates customers on their energy usage and provides them with offers for solar panels, home services and products, and connects them with suppliers and retailers through an online marketplace, allows them to compare energy scores, customer reviews, available rebates and pricing of appliances and electronics. Since its launch a year ago, the platform has enabled customers to save over 20,000 megawatt hours of energy.

In 2016, CECONY paid out to \$4.9 million to commercial and industrial customers, \$19.9 million to small businesses, \$10.9 million to owners of multifamily buildings, and \$5.1 million to residential customers.

O&R energy efficiency programs lowered electrical usage by 29,422 megawatt hours and saved 10,261 dekatherms of gas—equal to taking 1,181 cars off the road. O&R offered rebates for the construction of a large data center in Orangeburg. Design of the project's cooling, air, and power supply systems will save the center about \$2.8 million a year. O&R rebates for a holistic energy efficiency project at Rockland Community College—which includes LED lighting, energy management and load management systems, and two combined heat and power generators—is expected to save the college \$900,000 annually.

O&R also expanded My ORU Store, its online customer marketplace for energy efficiency products and services, by adding home products, LED lighting products, advanced power strips, water-saving products, and home services provided by local contractors.

We provide educational and technical assistance to local schools, including a Smart Kids Energy Efficiency program for students on Staten Island:

Learn more about how energy-efficiency upgrades can save money and protect the environment at our <u>Manage Energy</u> (<a href="http://manage-energy.coned.com/#front">http://manage-energy.coned.com/#front</a>) microsite.

Learn more about the Connected Homes platform:

## REDUCTION OF SF<sub>6</sub> EMISSIONS

In the past decade, we have greatly reduced emissions of SF $_6$  (sulfur hexafluoride), a greenhouse gas with a warming potential more than 22,000 times higher than carbon dioxide. SF $_6$  is a non-toxic, non-flammable gas that can remain in the atmosphere for up to 3,200 years. There is no viable alternative to SF $_6$ , which is a highly efficient insulating medium and arc extinguisher used throughout the energy industry in different types of equipment, including high-voltage breakers and gas-insulated switchgear. But limiting SF $_6$  emissions is imperative for a cleaner environment.

In accordance with a 1999 Memorandum of Understanding between the U.S. Environmental Protection Agency and Con Edison, we agreed to reduce  $SF_6$  emissions by five percent annually from a 1996 baseline. In 2016, we released about 96 percent less  $SF_6$  than in 1999. Our reductions in  $SF_6$  emissions have resulted from maintenance programs that address  $SF_6$  gas leaks and targeted replacement of our equipment. To further limit  $SF_6$  emissions, our Fix-It-Now team makes rapid repairs a priority and emphasizes best management practices for gas handling.



#### Con Edison, Inc. GreenHouse Gas Emissions (Pie Chart)



### **LEAKS**

In 2015 and 2016, we teamed with the Environmental Defense Fund (EDF) to better measure non-hazardous leak emission rates of methane gas. We are currently field-testing this new technology developed by Colorado State University (CSU) under an EDF-sponsored program.

In 2016, CSU used its technology to rank non-hazardous gas leaks based on their emission rate. Leaks were identified as small, medium, and large emitters. As part of our overall leak-repair program, we repaired 100 percent of all leaks identified as medium or large. We expect to continue to work with the EDF and others to further develop this technology and incorporate it into our leak-repair program.

## METHANE CHALLENGE

On March 30, 2016, Con Edison joined 40 other local distribution companies as a founding partner in the EPA's Natural Gas STAR Methane Challenge program. As a founding participant in the Natural Gas STAR program since 1993, we welcomed the opportunity to participate in this new partnership as well.

The Natural Gas STAR Methane Challenge program is a flexible, voluntary partnership that allows the EPA to collaborate with partners to promote and track ambitious, transparent commitments to voluntarily reduce methane emissions beyond regulatory requirements and to recognize partners for their progress.

Our company continues to increase the pace of replacing its cast iron and unprotected steel mains. We exceeded our goal of replacing an average of 65 miles of main annually from 2014 – 2016. With the Methane Challenge Partnership Agreement, we're committed to increase main replacement activity over the next two years. Our goal is to replace four percent of our cast iron and steel mains (without cathodic protection) each year by the end of 2018. Specific details on how we will reach this goal were in our implementation plan, submitted to the EPA in 2016.

We distribute natural gas to 1.1 million customers in Manhattan, the Bronx, Queens, and Westchester County, making us one of the largest gas distribution companies in the U.S. with 4,375 miles of gas mains and 370,924 service lines.

#### **AIR QUALITY/NON-GHG EMISSIONS**

# Air Quality/Non-GHG Emissions

In keeping with New York City's goal of reducing GHG emissions, we are converting the generating equipment at our steam and electric generating stations. Currently, those stations burn No. 6 oil as backup fuel to natural gas. But we're converting to No. 4 oil as backup fuel because it's lighter and contains a lower concentration of criteria pollutants. All Con Edison units will be converted to have the capability to burn No. 4 oil by the winter of 2019–20 as required by Local Law 38.



#### **DIRECT EMISSIONS (Thousand Metric Tons)**

	NO <sub>x</sub>	$SO_2$
2016	1.24	0.13
2015	1.49	0.32
2014	1.65	0.33
2013	1.9	0.54
2012	1.79	0.56
2011	2.17	0.93
2010	2.47	1.28
2009	2.49	1.53
2008	2.31	1.41
2007	2.79	1.92
2006	2.27	1.73
2005	3.33	2.63

#### **WASTE MANAGEMENT**

# **Waste Management**

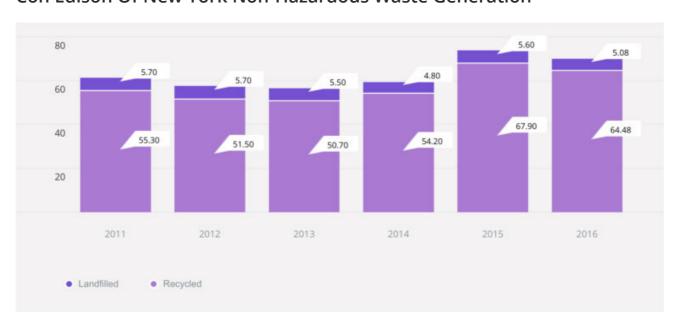
Tons of hazardous waste are captured and shipped by CECONY and O&R each year to licensed commercial waste-handling facilities. Most of this waste is lead-contaminated and comes from cleaning our underground electric facilities, including manholes and transformer vaults. The costs of cleaning these facilities and the amount of hazardous waste generated have been reduced substantially since 1998—the year we launched a program for waste managed by our employees that rendered lead virtually inert and therefore no longer hazardous.

CECONY and O&R recycle or auction for sale tons of non-hazardous waste, including retired fleet vehicles, forklifts, tool carts, old cables, streetlights, reflectors, meters, and paper products. CECONY recycles 93 percent of its non-hazardous waste. O&R's recycling program continues a long-established partnership with Rockland ARC, a local organization that provides support for the mentally disabled. Since 1991, O&R recycling has saved more than one million cubic feet in landfill space.

#### Con Edison of New York Waste (tons)

	2014	2015	2016
Non-hazardous waste generated	58,973	73,462	69,565
Non-hazardous waste recycled	54,190	67,847	64,481
Hazardous waste generated	17,547	11,371	12,070
Remediation waste	545	31	18

#### Con Edison Of New York Non-Hazardous Waste Generation



## Con Edison Of New York Generation by Material Type

Clean Fill	513
• Garbage	82
• Metal	40
• C&D	15
• Wood	6
• Paper	1
<ul> <li>Plastic</li> </ul>	1



SUSTAINABILITY REPORT 2016-2017

SAFETY & ENVIRONMENT

#### **HABITAT & BIODIVERSITY**

# **Habitat & Biodiversity**

We work closely with the New York City Department of Parks and Recreation, an important stakeholder, to protect city trees and enhance parklands. In 2016, we did restoration plantings at two Manhattan parks. We understand that trees are a vital part of New York City's infrastructure. Trees contribute to clean air and water, reduce energy costs, increase property values, and make streets and parks more beautiful. We employ best management practices whenever we work near trees. If a tree is removed because of infrastructure repairs and upgrades, then restitution fees are used to plant a replacement tree.



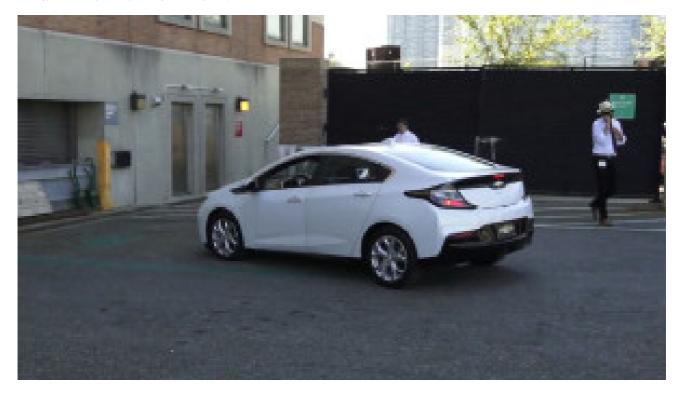
#### **ELECTRIC VEHICLES**

## **Electric Vehicles**

Last July, the White House recognized Con Edison in a press release on public- and private-sector efforts to accelerate the use of electric vehicles. We have been part of the Fleet Electrification Initiative, a national commitment toward electric vehicles, since 2014. As part of the commitment, 5 percent of our total annual vehicle expenditure is spent on plug-in electric vehicles, charging stations, battery-electric vehicles, plug-in hybrid vehicles, and electric power units.

In 2016, we purchased four Chevrolet Volts, two Ford C-Max Energis, seven bucket trucks with a plug-in hybrid system, and compressor vans with a dual battery system. Our fleet contains 237 hybrid vehicles, 28 plug-in cars and bucket trucks, 1,404 vehicles running on biodiesel blends, and 309 vehicles operating on compressed natural gas. In 2017, we plan to purchase another 28 electric vehicles. We're also committed to expanding the use of alternative fuels to power our fleet, and we continue to support new alternative fuel vehicle technology.

We announced a program in April 2017 in which owners of electric vehicles can earn gift cards and get important information on energy efficiency if they charge during off-peak hours.



#### **OIL-TO-GAS CONVERSIONS**

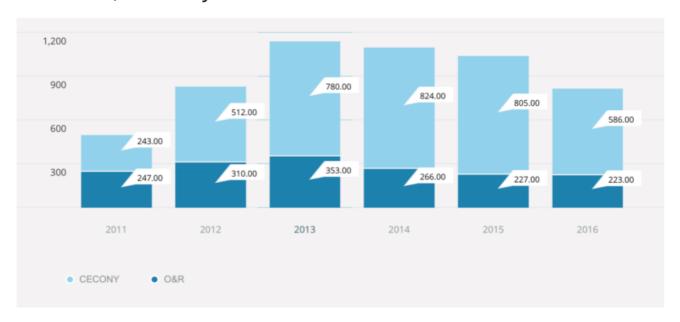
## Oil-to-Gas Conversions

CECONY's Gas Operations ranked Number 1 in the JD Power survey of gas business customers. With 586 heavy heating oil conversions, we exceeded our yearly target by 120. We've handled more than 4,000 such conversions since 2011. We also worked injury- and accident-free in 2016. We assumed responsibility for all home-heating conversions (oil, propane, electric, and wood) in Westchester County, improving the customer experience and encouraging air-quality improvements. A tariff change in a rate case helped to spur our growth in Westchester County.

While adhering to best practices to achieve operational excellence, the Gas Marketing and New Business teams at O&R added 1,339 new customers in 2016. That exceeded our goal of 940 additions. These additions included 223 conversions from oil/propane to cleaner natural gas. Among the factors spurring our growth were a gas conversion rebate program, entitlement changes, and a 15-year economic feasibility analysis, up from 10 years previously.



## Con Edison, Inc. Utility Customer Conversions to Gas

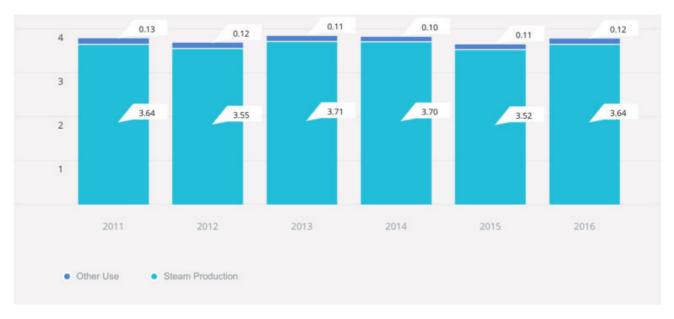


**WATER** 

## Water

We recognize the importance of preserving natural resources. As one of the New York City Department of Environmental Protection's largest water customers, we have ongoing initiatives to minimize our water footprint. Two of our steam generating stations are reducing their water consumption through the implementation of efficiency improvement projects. We have already achieved a savings of 38 million gallons in 2016. We expect similar results in 2017, followed by a savings of more than 295 million gallons per year beginning in 2018.

## Con Edison of New York DEP Municipal Water Use



#### ISO CERTIFICATION

## ISO Certification

The International Organization for Standardization (ISO) was created to provide consistent standards for products, manufacturing processes, and management systems. ISO certification gives stakeholders a means to validate that our company is operating an effective environmental management system. ISO also provides a framework for continual improvement throughout the company. In 2016, CECONY achieved its 14<sup>th</sup> consecutive year of companywide third-party certification of the Environmental Management System (EMS) to ISO 14001.

It is our policy to be a leader in protecting the environment and ensuring the health and safety of our employees and the public. We're committed to:

- improving safety and environmental performance
- strengthening Environment, Health, and Safety (EH&S) compliance
- enhancing relationships with our stakeholders
- identifying and reducing significant EH&S risk potential
- promoting wise and effective use of natural resources

CECONY'S EMS is third-party certified to the ISO 14001:2004 EMS Standard by Intertek Testing Services NA, Inc. CECONY'S chemical laboratory operations are third-party certified to the ISO/IEC 17025:2005, general requirements for the competence of testing and calibration laboratories standard.



OPERATIONAL EXCELLENCE

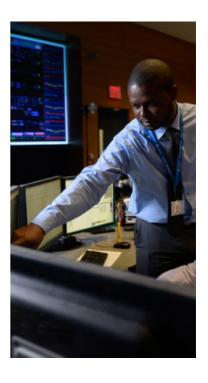
#### PHYSICAL/CYBER SECURITY & DATA PRIVACY

# Physical/Cyber Security & Data Privacy

New technology brings new challenges. We continue to work with local, state, and federal agencies, as well as our colleagues in the energy business, to identify and employ the latest technological tools to protect our customers and our equipment.

The threat of cybercrime has become more acute. Our data-protection efforts include 24/7 monitoring, vulnerability assessments, employee education, regular drills and phishing tests, and close cooperation with government and industry partners. We consistently earn passing grades on audits that assess our cybersecurity and data-protection standards.

Con Edison's Sidney Alvarez spoke with Vice President and Chief Information Officer Manny Cancel about how our company works with local, state, and federal agencies to protect our customers' data and our own data and equipment:



SUSTAINABILITY REPORT 2016-2017

OPERATIONAL EXCELLENCE

#### **ETHICAL BUSINESS PRACTICES**

## **Ethical Business Practices**

Our strong business ethics are founded on the company's values of service, honesty, concern, courtesy, excellence, and teamwork. We are committed to conducting business using the highest ethical standards. How we do business, how we treat our customers and business partners, and how we treat one another all contribute to how we are perceived in the marketplace and, ultimately, to our long-term viability. Our Values in Action Advisor network of 85 employees assists the organization in maintaining a culture of integrity in their departments. We conduct ethics and compliance training for all employees. The Compliance Management team works with organizations throughout the company to build and maintain the infrastructure for our compliance programs.



SUSTAINABILITY REPORT 2016-2017

OPERATIONAL EXCELLENCE

#### **CLIMATE RESILIENCE**

## Climate Resilience

CECONY made a \$1-billion investment to fortify our energy-delivery systems against extreme weather. O&R spent \$11.4 million on storm hardening last year. CECONY upgrades included more resilient cables, poles that can withstand winds up to 110 mph, and flood-proof equipment. For its efforts in restoring power to numerous households and businesses after Superstorm Sandy, CECONY received an Emergency Response Excellence Award in 2016 from Davies Consulting. The enhancements made to its core systems after Sandy have helped to improve efficiency and overall resiliency during major storms while also reducing the environmental impact. The company has fortified perimeter walls, installed gates and floodwalls, and raised critical equipment out of harm's way. It has reinforced flood-prone locations to ensure that power keeps flowing during the most severe floods and customer outages are greatly reduced.

To address future climate change risks, the company is conducting a study to understand the vulnerability of our energy systems to climate change and identify adaptation options to enhance system resiliency. The study will use the latest available climate science to project future weather scenarios for our service territory out to the year 2080. The weather scenario projections will be used to evaluate potential impacts to the company's electric, gas and steam systems. Based on these impacts, we will evaluate adaptation options such as revisions to design standards and operating processes. A risk mitigation plan will then be created with a portfolio of solutions to provide the required resiliency.



OPERATIONAL EXCELLENCE

#### **CORE SYSTEM UPGRADES**

# **Core System Upgrades**

Installation of smart meters as part of the company's Advanced Metering Infrastructure (AMI) began in June. An AMI Operations Center monitors our AMI infrastructure. Installation of our advanced communication networks on Staten Island and in Rockland and Westchester Counties has been ahead of schedule this year. We started the installation of smart meters on the Brooklyn network three months ahead of schedule and are planning to complete the installation of almost half of the Brooklyn network in 2017.

Con Edison's new website and digital customer experience use smart-meter data to give customers more control over their energy usage. New technology in households, including methane and carbon-monoxide detectors, will continue to improve public safety. Our system provides two-way communication that improves integration of existing sites and control of underground network protector switches.

A smarter grid allows us to operate more efficiently and reduce greenhouse gas emissions by making it easier to integrate renewable energy sources into the grid. Improved system operation and outage management will lead to fewer trucks in the field, further reducing greenhouse gas emissions. By adjusting the voltage on the grid through Conservation Voltage Optimization, we anticipate the AMI system will save \$40 million a year in fuel costs. By 2022, we'll have nearly 5 million smart meters in service through an installation plan that ramps up to approximately 5,000 meters a day along with a new wireless communication platform.

CECONY also invested \$1.5 billion in 2017 to fortify its electric delivery systems during the summer. Upgrades and improvements included installations of 18 network transformers and 140 overhead transformers. That equipment can transmit electricity to power about 5,600 homes or 3.7 million iPhones.

## TRANSMISSION PIPE ENHANCEMENT

We are investing \$83 million to accelerate the refurbishment of 7,500 trench feet per year of leak-prone pipes in 2017 and 2018. We refurbished approximately 6,744 trench feet of piping in 2016. We are investing \$5 million in spill cleanups to improve the environment. We expect to make significant progress in research and development to reduce the potential for oil spills. We're also investing in research and development that can replace existing feeders with solid dielectric cable that can be cooled with water or air instead of oil.

Our underground transmission system consists of 660 miles of 69, 138, and 345 kilovolt feeders encased in steel pipe surrounded by high-pressure dielectric fluid (a non-toxic mineral oil). Approximately nine million gallons of dielectric fluid circulate through the system to cool and insulate our feeders. The fluid moves through cooling plants at nominal pressures of 200 pounds per square inch. The conductors inside our steel pipes are wrapped in paper insulation.

We are investing \$97 million by 2019 to accelerate the refurbishment of 7,500 trench feet per year of leak-prone pipes. We refurbished approximately 6,744 trench feet of piping in 2016. We are investing \$5 million in spill cleanups to improve the environment. We're also investing in research and development that can replace existing feeders with solid dielectric cable that can be cooled with water or air instead of oil.

Our leak-detection system is one of the most sophisticated in the world:

- We use online monitoring to check the integrity of our system
- We infuse our oil with a special tracer gas to help us locate leaks
- If significant leaks occur, we remove feeders from service to allow them to be placed on reduced pressure to slow the leak rate, and
- We use full-time patrols to find and repair leaks



To repair leaks, we excavate to uncover the feeder pipes and apply a mechanical clamp to stop the flow. Permanent repairs are complete when a concentric steel barrel is wielded over the clamp and the pipe. To reduce leaks from our transmission feeders, we accelerate repairs to the coating on our pipes.

## RELIABILITY PERFORMANCE

The standards for measuring the reliability of distribution service are the System Average Interruption Frequency Index (SAIFI) and the Customer Average Interruption Duration Index (CAIDI). SAIFI is compiled annually, and the figure represents the number of service interruptions divided by the number of customers served. CAIDI is also compiled annually; it represents the average time to restore service to interrupted customers. The CAIDI figure results from the total customer minutes of interruption divided by the total number of customers affected. For both figures, a low number indicates a better performance.

2016 NUMBERS FOR CECONY (electric)

SAIFI: 0.126

CAIDI: 149.4 minutes

2016 NUMBERS FOR O&R (electric)

SAIFI: 1.056

CAIDI: 101.9 minutes



## **GAS MAIN REPLACEMENT**



In 2016, CECONY replaced over 79 miles of cast-iron and unprotected steel pipe. This replacement rate is the highest ever recorded by our company in a single year. It also meets the 4 percent replacement rate that we targeted in accordance with the EPA's Methane Challenge. The miles of replaced pipes exceed our company's commitment to the New York State Public Service Commission by more than five miles.

Replacement of cast iron and unprotected steel pipe with modern plastic mains or protected steel mains prevented a leakage of 12.8 million of cubic feet of natural gas annually. Methane, the primary element in natural gas, is a major greenhouse gas. Preventing this amount of methane leakage is equivalent to the greenhouse gas emissions associated with driving a vehicle approximately 1,700 miles.

O&R invested approximately \$45 million in its gas infrastructure. It replaced 24 miles of leak-prone pipes, and eliminated all cast-iron pipes in Rockland County.

#### OPERATIONAL EXCELLENCE

#### **SUPPLY CHAIN**

# **Supply Chain**

Supply Chain contributes significantly to our company's sustainability by enhancing safety, purchasing environmentally friendly products, diverting waste from landfills, and supporting small businesses and minority- and women-owned businesses.

In support of our company's commitment to lower greenhouse emissions, Supply Chain awarded more than \$154 million in contracts to help customers convert from oil to cleaner natural gas. In 2016, we initiated a Gold Shovel Program—a safety training and certification program for all our construction vendors involved in digging up streets and doing gas construction work, demonstrating our commitment to safe excavation practices.

Among our other accomplishments in 2016:

- We purchased more than \$8 million of environmentally friendly products—hybrid vehicles, low-carbon fuels, recycled paper, toner, and carpet
- We diverted more than \$9.5 million of waste from landfills by focusing on items such as scrap cable, meters, transformers, and paper
- We reclaimed over 200,000 gallons of oil from the electric system for reuse as a fuel in other industries
- We recruited a minority-owned business that collaborated with our R&D team and
  operations group to develop technology that identifies the release of dielectric fluid
  in manholes throughout our network. This technology lessens the need to open manholes on busy streets, improves
  response time, and reduces the need for flush trucks
- We awarded a \$150 million contract for newly designed large power transformers that are energy efficient and safer (because they run cooler). They also use cleaner-burning biodegradable ester oil, which reduces our greenhouse gas emissions
- We continued our collaboration with a major electrical equipment supplier in a process that has yielded more than 750,000 pounds of reclaimed copper
- We purchased \$292 million in goods and services from women- and minority-owned companies. Including purchases from non-diverse small businesses, we surpassed the \$500 million mark for the first time—an important milestone because small businesses are a major source for creating jobs within our service area

As members of the Electric Utility Sustainable Supply Chain Industry Alliance, we work with the nation's largest energy companies to establish industry standards and guidance for vendors. We helped to develop smart-packaging guidelines that help our vendors create more efficient ways to package and ship products, resulting in cost savings and less harm to the environment.

We regularly review, and enhance as needed, our Supplier Code of Conduct to ensure that it addresses important sustainability issues, which may include but not be limited to human rights, environmental management, responsible procurement and supplier diversity.



SUSTAINABILITY REPORT 2016-2017

OPERATIONAL EXCELLENCE

#### **GOVERNANCE**

## Governance

Experience has taught us that the combination of a solid financial foundation, operational excellence, the highest ethical standards, and the utmost regard for our employees and the people and communities we serve are the bedrock qualities of a successful company.

Since its inception in 1995 as a standing Committee of the Company's Board of Directors, the Environment, Health & Safety Committee of the Board of Directors has met at least four times a year to oversee the Company's EH&S efforts relating to the protection of the environment, sustainability, and the health and safety of Company employees and the public. The EH&S vice president, together with senior management, is responsible for developing strategic goals and programs to ensure compliance and support the Company's commitment to and continued work to achieve EH&S excellence.

Part of senior management's commitment to EH&S includes independent oversight. The Office of the Corporate Ombudsman, reporting directly to the Chairman, provides employees with an independent office to which they may confidentially report suspected violations of our Code of Conduct including ethical, legal, or EH&S concerns.

Our Environment, Health & Safety Review Board ("EH&S Review Board") consists of outside consultants who are independent attorneys. The EH&S Review Board reports directly to the chairman. The role of the EH&S Review Board is to review the Company's management of both regulatory and internal requirements and assess whether its implementation is consistent with the Company's commitment to strive for excellence.

SUSTAINABILITY REPORT 2016-2017

CUSTOMER & COMMUNITY

#### STAKEHOLDER ENGAGEMENT & COLLABORATION

# Stakeholder Engagement & Collaboration

Con Edison works closely with communities to ensure our company's operational mission is understood and accessible in the communities we serve. For example, we work with local community groups including business improvement districts, chambers of commerce, and local development corporations to inform them about programs such as energy efficiency programs and how to do business with Con Edison.

## **POLICY & REGULATORY IMPACT**

CECONY and O&R steadfastly support New York State's clean energy policies and goals, including plans to reduce GHG emissions 40 percent from 1990 levels by 2030, get 50 percent of our energy from renewable resources by 2030, and increase energy efficiency in buildings 23 percent by 2030.

We work in partnership with our customers, various third parties, and other energy companies to seek innovative ways to achieve clean energy goals. We take pride in our ability to act quickly and responsibly to meet our customers' needs.

We are working to establish a value-based compensation structure for distributed energy resources that will eventually replace net metering in New York, while continuing to encourage solar and other distributed energy installations. We formed the Solar Progress Partnership to work collaboratively with solar developers in the New York regulatory process.

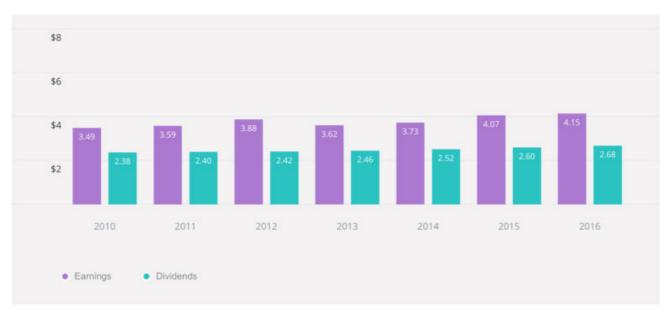
## **SHAREHOLDERS**

We are the longest listed company on the New York Stock Exchange and we have increased dividends to our shareholders for 43 consecutive years.

The company expects its adjusted earnings for 2017 to be in the range of \$3.95 to \$4.15 per share. We expect to meet our 2017 capital requirements through internally generated funds and the issuance of securities. Our plans include the issuance of between \$1,000 million and \$1,800 million of long-term debt, most of which would be at the utilities, and the issuance of additional debt secured by our renewable electric-production projects. Our plans also include the issuance of up to \$350 million of common equity under our dividend reinvestment, employee stock purchase, and long-term incentive plans.

For more information, refer to our Shareholder Services (https://www.conedison.com/en/investors/shareholder-services).

## Con Edison, Inc. Earnings and Dividends



## STRATEGIC PARTNERSHIPS

#### Materials for the Arts

Con Edison supports Materials for the Arts Education Center in Queens, which offers programs to educate teachers, students, and the public on the merits of creatively reusing materials. Programs include professional development, field trips, in-school residencies, and art-activity booths at community events.

#### GrowNYC

We support Project Farmhouse, a center for sustainability and education in New York City and the site for GrowNYC programs on environmental issues through the lens of food, horticulture, arts, recycling, cooking, and community education. The site includes a hydroponic wall—a grow wall with moving trays designed to rotate plants so they all get the ideal amount of water, fertilizer, and light.

#### Bronx River Alliance

We have long supported the Bronx River Alliance and its work to engage volunteers for the reclamation of the Bronx River Corridor. Con Edison's capital gift helped provide lead funding for a new facility, River House. River House includes a boat house for dozens of canoes and kayaks, a nature classroom, and a multipurpose community room. It also features green design elements including a geothermal heating and cooling system, solar panels, and shaded greenery.

#### Rockland Farm Alliance

O&R supports the Rockland Farm Alliance's Agricultural Education Program, an interactive educational program for local students who participate in all aspects of the farm including soil preparation, seeding, irrigation, and harvesting. The students also explore the environmental and nutritional benefits of organic farming and learn where food comes from, as well as the relationship between fresh healthy food and nutrition. The final piece for the students is learning the importance of protecting natural resources and open space in their community.

SUSTAINABILITY REPORT 2016-2017

CUSTOMER & COMMUNITY **ENERGY** 

#### **ENERGY EFFICIENCY, RENEWABLES & DISTRIBUTED**

# Energy Efficiency, Renewables & Distributed Energy

As part of our commitment to alternative forms of energy, including large-scale battery storage, CEBs invested \$2.5 billion in renewable-resource projects in 16 states. Con Edison Development began operation of a 2-megawatt, 8-megawatt-hour battery storage system at one of its solar facilities in California. Renewable sources, such as solar and wind, produce energy when the sun is shining or the wind is blowing. That means the value of batteries to store power when it is produced, and deliver power when it is needed, is especially important to the electricity grid in terms of ensuring reliability and reducing peak demand.

Twenty four percent of electricity used by O&R customers was generated from renewable-energy resources. We continue to make our customers aware of energy-efficiency improvements that will help them save money on their bills and give them more control over their energy usage. We work regularly with customers and regulators to test new models for the distribution of energy.

## **ENERGY EFFICIENCY & DEMAND RESPONSE**

Customers who chose energy-saving HVAC, lighting, building management systems, and other equipment received \$40.8 million in incentives from us in 2016. O&R customers purchased 649 six-packs of LED lights the Monday after Thanksgiving (a.k.a., Cyber Monday)—the highest single-day sales for a specific product since the O&R online store went live in January 2016.

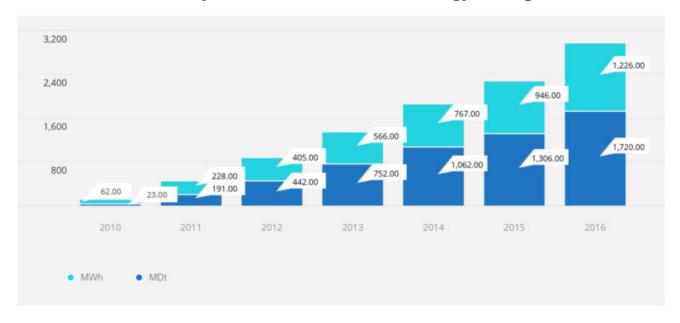
Technology is giving households and businesses new ways to reduce their energy use, and we're in the forefront in helping customers get more value for their money while protecting the environment. For example, upgrades made by customers last year through our energy efficiency programs reduced electrical usage by 160,200 megawatt hours and saved 266,500 dekatherms of gas—that's equivalent to taking more than 23,000 cars off the road.

In addition, Con Edison has filed innovative proposals to better manage natural gas use and to help meet the growing heating needs of its customers, including doubling the size of the program that pays building owners for conservation measures. The proposals would put New Yorkers on a path toward a cleaner energy future, with reductions in carbon emissions and more renewable energy options that achieve goals in both the short term and potentially through 2050. More information on the proposals can be found <a href="https://www.coned.com/en/about-conedison/media/news/20171003/new-ways-to-meet-growing-natural-gas-customer-needs">https://www.coned.com/en/about-conedison/media/news/20171003/new-ways-to-meet-growing-natural-gas-customer-needs</a>).

Meanwhile, our crews continue to lay the groundwork for the introduction of smart meters, installing nearly 200 access-point and relay devices on utility poles along our AMI network. Most meters will communicate first with a neighboring meter or relay device. Since the meters can talk to each other, a meter can pass on information from other meters. Data will be sent to an access point, connected to Con Edison or Orange & Rockland centralized data systems, allowing vital information to be reported quickly and minimizing the potential loss of data.



## Con Edison, Inc. Utility Customer Cumulative Energy Savings



## **REV PROJECTS**

Con Edison continues to take a leading role in making distributed energy resources (DERs) available to customers. Our Brooklyn-Queens Demand Management project aligns very nicely with New York's REV initiative. Instead of spending \$1.2 billion to build a substation to serve Brooklyn and Queens, we issued an RFI that provided alternative forms of energy. We awarded contracts and procured smart thermostats, lighting controls, batteries, and other distributed energy resources to meet the demands of customers during the peak period of 4:00 p.m. to midnight while easing the burden on our substations.



## **RENEWABLES**

Con Edison is warmed by the news that New York City residents and businesses are using the power of the sun to generate more than 110 megawatts of clean, renewable energy. That's enough energy to power over 16,000 homes. At O&R, the number of solar projects increased for the 10<sup>th</sup> consecutive year—to 5,395 in 2016. O&R implemented a community net metering program, intended to allow customers who cannot install rooftop solar to participate.

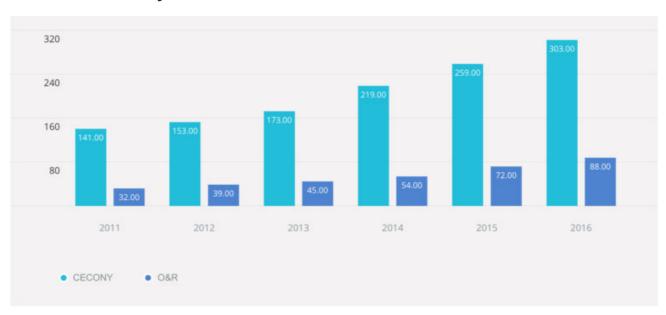
For the past decade, CECONY and O&R along with Sustainable CUNY (at the City University of New York), government agencies, and other parties have encouraged residents and businesses to consider solar to reduce their energy bills and protect the environment. CECONY and O&R want clean energy, including solar, to be available to customers of all income levels, whether they live in a house or an apartment. We advocate policies that ensure funding for the kind of robust grid that makes solar energy possible.

We completed more than 12,500 solar installations in our service territory by the end of 2016. We make the interconnection quick and easy for customers who choose solar. For example, we don't require an engineering review for systems under 25 kilowatts. We even installed solar panels on a roof of our headquarters building in Manhattan. The 200 panels generate 40 kilowatts of energy.

In 2018, we will begin making renewable energy available to low-income customers by placing solar panels on company roofs and grounds. The New York Public Service Commission says our innovative solar program "is filling a niche that hasn't been fully served in the state."

We are also a member of the Solar Progress Partnership, a group of six New York State energy companies and four leading solar companies. The partnership wants solar energy to continue to develop in a way that is fair to all customers and that provides sufficient funding for a reliable grid.

### **Cumulative Utility Customer MW Installation**



## LARGE SCALE BATTERY STORAGE

This year Con Edison will be installing a novel 800 kilowatt-hour portable emergency generator using lithium batteries at a company facility for testing and evaluation. We have also developed two new utility-scale distributed battery storage projects this year totaling 8 megawatt hours. These projects will test new business models for economically deploying distributed storage on the system, either through a customer-sited, aggregated model or mobile battery trailer. The projects are expected to be in service in summer 2018 and January 2019, respectively. Each project will provide distribution relief and reduce network peak demand that may have otherwise been served by diesel mobile generators or peak-power generation facilities. Additionally, O&R is in the planning stages of a demonstration project that would support the deployment of large scale battery storage.

Con Edison has taken the lead in addressing concerns around battery safety working closely with the Fire Department of New York (FDNY), battery technology developers, and the New York State Energy Research and Development Authority (NYSERDA) on a battery safety testing program. Con Edison and NYSERDA partnered on an effort to better characterize battery hazards and suppression agent performance through burn tests by an independent lab as well as tests by Con Edison at FDNY's training facility. New response procedures and permitting requirements are under development as a result of this testing program. We will continue to work with the FDNY, battery technology vendors, and NYSERDA on this effort.

CUSTOMER & COMMUNITY

#### **TALENT ATTRACTION, DEVELOPMENT & RETENTION**

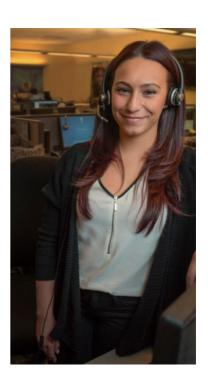
# Talent Attraction, Development & Retention

We launched a career management resource center in 2016 that is interactive, user-friendly, and dynamic while meeting our employees' needs. This online platform is designed to increase employee awareness of the processes, tools, and resources available for career management.

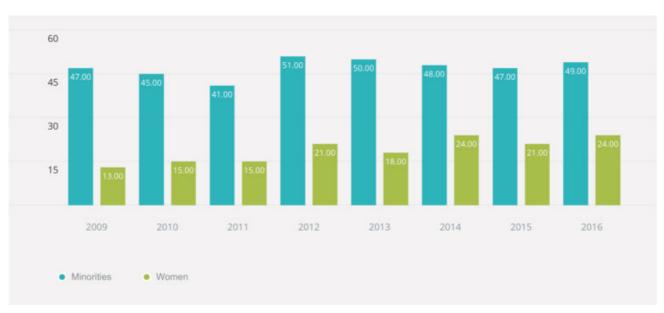
We remain committed to helping employees plan and achieve their professional goals. We offer coaching, career counseling, and workshops to employees on topics such as interviewing skills, resume writing, effective communication, and conflict management. Sessions offered include Development Plan Workshop, Managing Workplace Conflict, Situational Leadership, Leadership Challenge, and Business Academy.

Our three formal mentoring programs—Executive, Corporate, and Women in Nontraditional Careers—continue to support the development of a diverse and inclusive workplace. Our tuition-aid program reimburses eligible employees who seek higher education to enhance their careers. Employees may qualify for up to 100 percent reimbursement of tuition costs after earning a degree. In 2016, 607 employees participated in the tuition-aid program. Of the 607, sixty percent were minorities and thirty-nine percent were women.

Our Leadership Academy for Supervisors continues to prepare supervisors for their critical role as frontline leaders. The Academy's core curriculum covers essential skills in leadership, ranging from coaching to managing workplace conflict, as well as corporate-wide training requirements related to safety, compliance, and diversity and inclusion. As of June 2017, 420 employees were enrolled and over 100 have completed the program.



## Con Edison, Inc. Minorities and Women in the Workplace



SUSTAINABILITY REPORT 2016-2017

**CUSTOMER & COMMUNITY** 

#### **WORKFORCE DIVERSITY & INCLUSION**

# **Workforce Diversity & Inclusion**

We continued our corporate strategy for diversity and inclusion in 2016. Our focus is to strengthen inclusion by engaging employees at all levels of the company. The diversity of our 15,000 employees continues to be essential to our success. We remain committed to providing our employees with a workplace that fosters a culture of inclusion, equity, and respect for all. Equal employment opportunities, affirmative action, and diversity and inclusion are fundamental principles at our company. Our commitment to these principles is as vital as our mission of providing energy services to customers safely, reliably, and efficiently. Diversity and inclusion empower us all to see more clearly, think more broadly, and engage more fully as we evolve, innovate, and imagine the future ahead.

Hispanic Network magazine named us to its Best of the Best list of the nation's top companies. Latina Style selected us as one of the 50 best companies for Latinas for the twelfth year. We earned a place on Black Enterprise magazine's list of the top 40 companies for diversity. DiversityInc has recognized us as a top energy company for hiring, training, and promoting a diverse workplace.

To learn more, read our <u>2016 Diversity & Inclusion Report</u> (https://www.coned.com/-/media/files/coned/documents/about-us/diversity/diversity-report-2016.pdf).

**CUSTOMER & COMMUNITY** 

#### TRAINING & PROFESSIONAL DEVELOPMENT

# **Training & Professional Development**

Achieving a diverse culture starts with attracting and recruiting a broad range of candidates who represent the diverse communities we serve. We seek talent from a variety of sources:

- the Internet
- targeted job fairs
- partnerships with academic institutions
- professional industry associations
- the military
- specialty firms and other organizations

Our recruitment efforts continued to support our efforts to foster an inclusive workforce. Of the 1,134 employees hired in 2016, 50 percent were minorities and 28 percent were women. Minorities accounted for 49 percent of all promotions in 2016. Twenty-four percent of those promoted were women. The percentage of minorities working as general managers, directors, and above was 30 percent; women also comprised 30 percent of those employed as general managers, directors, and above.



CECONY employees participated in more than 731,000 hours of skills-based training in the past year. O&R employees had 46,000 hours of skills-based training in 2016. O&R launched three schools to teach linespersons in 2016, with four more planned in 2017. O&R has seen a 65-percent increase in the number of skills-based courses offered locally in the past three years.

Partnerships with colleges and universities allow us to tap into the next generation of employees—those who will help us lead and grow, and develop innovative and creative solutions for our customers. In 2016, CECONY recruited 34 management associates into the Growth Opportunities for Leadership Development program, of which 47 percent were minorities and 50 percent were women.

Con Edison's 2016 training and professional development initiatives reflect our commitment to attracting and recruiting the best talent as well as continuing the development of our most valuable asset – our people. In January 2017, Con Edison, in partnership with the Center for Energy Workforce Development (CEWD), National Grid, Soldier for Life, and Jefferson Community College, started the Natural Gas Boot Camp for the northeast region—the first of its kind. The boot camp includes eight weeks of training, both instructor-led and hands-on, to help prepare transitioning veterans for entry-level mechanic positions that would meet anticipated hiring needs over the next five years in Gas Operations. This program has been recognized by CEWD as a major accomplishment for the New York State Troops to Energy Jobs consortium.

In 2016, we also launched a summer internship program with Energy Tech High School, a partnership with National Grid, the New York City Board of Education, and LaGuardia Community College in which students can obtain college credits and have an opportunity to attend LaGuardia to pursue an associate's degree in Electrical Engineering or Mechanical Engineering while learning the skills needed for hard-to-fill technical positions. This is our first internship program since Energy Tech High School opened in September 2013.

**CUSTOMER & COMMUNITY** 

#### **VOLUNTEERISM**

# Volunteerism

Enhancing the fabric of our communities is not only what we do, it's who we are. We provide financial support, in-kind contributions, and board service to hundreds of nonprofits dedicated to the arts, environmental stewardship, community, civics, and education.

Employees at CECONY and O&R donate their own time and resources through our volunteer program to give back to the communities we serve. During 2016, CECONY and O&R employees volunteered more than 12,000 hours of their own time at over 250 events. Whether it's volunteering at a soup kitchen, cleaning up parks, planting and pruning trees, mentoring students, serving disadvantaged people, rehabilitating homes for veterans, career coaching, or any number of other activities, the happiness, fulfillment, and renewed energy our employees experience is priceless. A dedicated employee engagement platform that lists volunteering events makes it easy for employees, as well as retirees and their families, to give back.



SUSTAINABILITY REPORT 2016-2017

DATA SNAPSHOT

#### **COMPANY OVERVIEW**

### **COMPANY OVERVIEW**

Consolidated Edison, Inc., is one of the nation's largest investor-owned energy-delivery companies, with approximately \$12 billion in annual revenues and \$49 billion in assets. For more than 180 years, we have served the world's most dynamic and demanding marketplace—metropolitan New York. We provide a wide range of energy-related products and services to our customers through our regulated energy companies and our competitive energy businesses.

#### CONSOLIDATED EDISON COMPANY OF NEW YORK, INC. (CECONY)

CECONY is a regulated utility providing electric, gas, and steam service in New York City and Westchester County, New York. CECONY provides electric service to approximately 3.4 million customers in all of New York City (except a part of Queens) and most of Westchester County, an approximately 660 square mile service area with a population of more than nine million. CECONY delivers gas to approximately 1.1 million customers in Manhattan, the Bronx, parts of Queens and most of Westchester County. CECONY operates the largest steam distribution system in the United States by producing and delivering approximately 19,979 MMlb of steam annually to approximately 1,649 customers in parts of Manhattan.

#### ORANGE AND ROCKLAND UTILITIES, INC. (0&R)

O&R is a regulated utility serving customers in a 1,300-square-mile area in southeastern New York State and northern New Jersey. O&R and its utility subsidiary, Rockland Electric Company (RECO) provide electric service to approximately 0.3 million customers in southeastern New York and northern New Jersey and O&R delivers gas to over 0.1 million customers in southeastern New York.

#### CON EDISON CLEAN ENERGY BUSINESSES, INC. (CEB)

CEB develops, owns, and operates renewable and energy infrastructure projects and provides energy-related products and services to wholesale and retail customers through its subsidiaries Consolidated Edison Development, Inc. (Con Edison Development), Consolidated Edison Energy, Inc. (Con Edison Energy) and Consolidated Edison Solutions, Inc. (Con Edison Solutions).

#### CON EDISON TRANSMISSION, INC. (CET)

CET invests in electric transmission facilities and natural gas pipeline and storage facilities through its subsidiaries Consolidated Edison Transmission, LLC (CET Electric) and Con Edison Gas Pipeline and Storage, LLC (CET Gas).

# **Revenue by Business**





# **BOARD OF DIRECTORS**

### **Board of Directors**

	Audit Committee	Corporate Governance and Nominating Committee	Environment, Health and Safety Committee	Executive Committee	Finance Committee	Management Development and Compensation Committee	Operations Oversight Committee
Vincent Calarco	Chair	×		×		×	
George Campbell, Jr.		×		×		Chair	×
Michael J. Del Giudice	×	Chair and Lead Director		×		×	
Ellen V. Futter			Chair				×
John F. Killian	×	×				×	
John McAvoy				Chair			
Armando J. Olivera			×		×		×
Michael W. Ranger	×				×		Chair
Linda S. Sanford		×	×		×		
L. Frederick Sutherland	×				Chair	×	

DATA SNAPSHOT **OUR BUSINESS** 

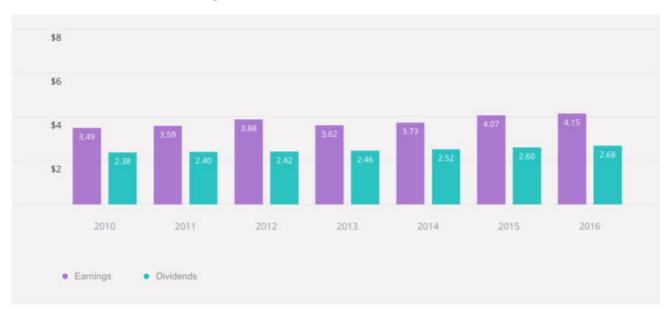
# **OUR BUSINESS**

# **Financial Highlights**

	2013	2014	2015	2016
Operating revenues	\$12,354	\$12,919	\$12,554	\$12,075
Net income for common stock	\$1,062	\$1,092	\$1,193	\$1,245
Basic earnings per common share	\$3.62	\$3.73	\$4.07	\$4.15
Dividends per share	\$2.46	\$2.52	\$2.60	\$2.68
Dividend payout ratio	68%	68%	64%	65%
Average common shares outstanding	292.9	292.9	293	300.4
Total assets	\$40,647	\$44,377	\$45,642	\$48,225
Capital expenditures	\$2,648	\$2,721	\$3,418	\$5,235
Common equity ratio	53.9%	52.1%	52.1%	49.3%
Return on equity	8.9%	8.8%	9.3%	9.1%
Market capitalization	\$16,200	\$19,300	\$18,800	\$22,100
Stock price per share (year end)	\$55.28	\$66.01	\$64.27	\$73.68
Dividend yield (year end)	4.5%	3.8%	4.0%	3.6%
Total shareholder return	3.8%	24.8%	1.4%	18.9%

### **SHAREHOLDERS**

# Con Edison, Inc. Earnings and Dividends



# WORKFORCE DEVELOPMENT

# **Training**

2015	2016	
490,257	604,173	
164,519	173,182	
781,649	777,355	
129	97	
594	607	
	490,257 164,519 781,649	490,257 604,173 164,519 173,182 781,649 777,355

# Diversity

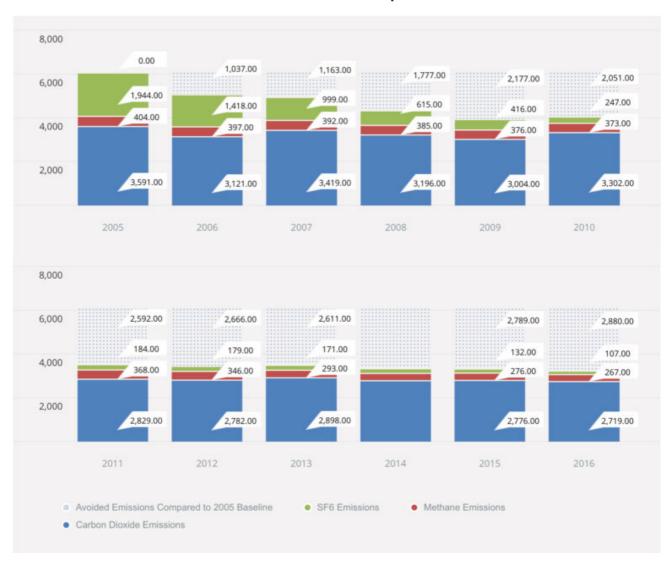
	2013	2014	2015	2016
Total workforce	14,653	14,601	14,805	14,941
Minorities in the workforce	6,639	6,733	6,890	7,025
Minority share	45%	46%	47%	47%
Women in the workforce	2,942	2,920	3,009	3,063
Women share	20%	20%	20%	21%
Officer positions	59	57	59	57
Minorities in officer positions	15	18	21	19
Minority officer share	26%	32%	36%	33%
Women in officer positions	16	14	15	15
Women officer share	27%	25%	25%	26%

DATA SNAPSHOT

#### **ENVIRONMENTAL PERFORMANCE**

# **ENVIRONMENTAL PERFORMANCE**

### Con Edison, Inc. Direct GHG Emissions - Scope 1



Scope 1: Direct greenhouse gas emissions from CEI owned or controlled sources (e.g., steam-generating stations)

### Con Edison, Inc. GreenHouse Gas Emissions (Pie Chart)



### **INDIRECT EMISSIONS**

Indirect emissions - Scope 2	U
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(million metric tons CO2e)	m

Other indirect emissions or Scope 3 total (million metric tons CO2e)

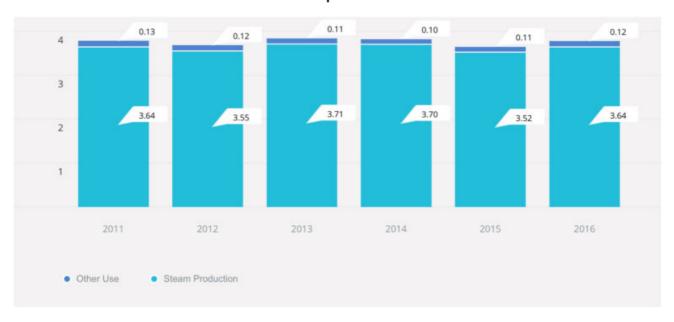
2016	1.32	41.1
2015	1.32	41.8
2014	1.09	40.9
2013	1.19	N/A
2012	1.11	N/A
2011	1.51	N/A
2010	1.37	N/A
2009	1.42	N/A

Scope 2: Indirect greenhouse gas emissions associated with delivering products to customers (e.g., electrical transmission losses)

Scope 3: Indirect greenhouse gas emissions associated with customers using CEI products (e.g., customers' use of delivered gas)

### **WATER**

# Con Edison of New York DEP Municipal Water Use



# **Water Quality**

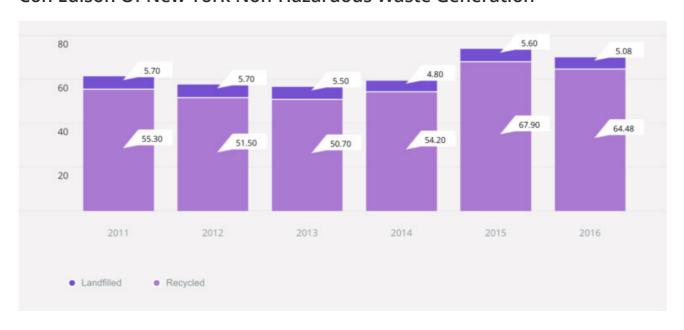
	2014	2015	2016	
SPDES exceedances	1	3	1	

### CON EDISON OF NEW YORK ENVIRONMENTAL RELEASES

	2014	2015	2016
Dielectric fluid released to environment (gallons)	43,439	27,669	76,253
Reportable oil spills	569	678	796
Reportable-quantity chemical spills	30	34	39

# **RESOURCE CONSERVATION**

### Con Edison Of New York Non-Hazardous Waste Generation



### Con Edison of New York Waste

	2014	2015	2016
Non-hazardous waste generated	58,973	73,462	69,565
Non-hazardous waste recycled	54,190	67,847	64,481
Hazardous waste generated	17,547	11,371	12,070
Remediation waste	545	31	18

# Con Edison of New York energy consumption

	2014	2015	2016	
Facility electric consumption	313,785	326,033	280,746	
Facility gas consumption	158,037	153,028	133,122	

DATA SNAPSHOT

#### STAKEHOLDER ENGAGEMENT

### STAKEHOLDER ENGAGEMENT

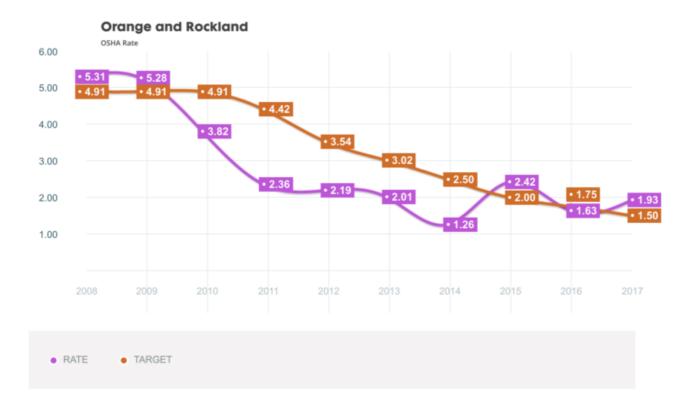
### **OSHA Rate**

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Con Edison of New York Rate	3.02	3.25	2.49	1.91	1.28	1.25	1.31	1.40	1.18
Con Edison of New York Target	3.39	3.29	2.91	2.56	2.21	1.86	1.50	1.40	1.30
Orange and Rockland Rate	5.31	5.28	3.82	2.36	2.19	2.01	1.26	2.42	1.63
Orange and Rockland Target	4.91	4.91	4.91	4.42	3.54	3.02	2.5	2	1.75

### Con Edison of New York



# Orange and Rockland



### **CORPORATE CULTURE**

Openness, fairness and trust

Cost consciousness

**Enhancing stakeholder relationships** 

### **SUPPLIER DIVERSITY**

	2013	2014	2015	2016
Green spend	> \$3 million	> \$3 million	\$6.9 million	> \$8 million
Minority / women-owned supplier spend	> \$288 million	> \$286 million	\$280 million	\$292 million