



**NISource<sup>®</sup>**

**Greenhouse Gas Report**

Last Updated December 2014

# NISOURCE AT A GLANCE

## GAS DISTRIBUTION

- One of the Nation's Largest Natural Gas Distribution Companies Serving More than 3.4 Million Customers
- Established Best-in-Class Platform for Sustainable Earnings Growth Through:
  - Comprehensive Long-Term Infrastructure-Investment Programs
  - Responsive Customer Programs
  - Creative Regulatory Approaches

## ELECTRIC OPERATIONS

- Approximately 460,000 Industrial, Commercial and Residential Electric Customers in a Stable Marketplace
- Environmentally Compliant Fleet of Electric Generation Facilities
- Total Generating Capability of 3,300 Megawatts
- Long-Term Infrastructure Investment Program

## COLUMBIA PIPELINE GROUP

- Approximately 15,000 Mile Network of Interstate Natural Gas Pipelines
- One of the Nation's Largest Underground Market-Area Storage Systems
- Unparalleled Strategic Footprint in the Marcellus and Utica Shale Production Regions
- Deep Inventory of Attractive Investment Opportunities
- Long-Term Pipeline System Modernization Program



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## FORWARD-LOOKING STATEMENT

Some of the statements contained herein contain "forward-looking statements" in addition to historical information, including (1) statements concerning NiSource's plans, objectives, and expenditures and (2) any and all underlying assumptions and other statements that are other than statements of historical fact. There can be no assurance that actual results will not differ materially due to various factors, many of which are beyond the control of NiSource, including, but not limited to dealings with third parties over whom NiSource has no control, the regulatory process, regulatory and legislative changes, the impact of potential new environmental laws or regulations, changes in general economic and capital and commodity market conditions, and the matters identified in the "Risk Factors" Section of NiSource Inc.'s most recent Form 10-K, and subsequent reports on Form 10-Q. Furthermore, historical results may not be indicative of NiSource's future performance.

## NISOURCE GREENHOUSE GAS PROGRAM DESIGN

NiSource is committed to establishing a legacy of sustained economic growth, social responsibility and environmental stewardship reflective of a premier energy company. We have a long history of transparent management and accurate reporting of greenhouse gas (GHG) emissions. Since the early 1990's, when we entered our first voluntary carbon partnership with the United States Environmental Protection Agency (EPA), NiSource has provided reliable, comprehensive and transparent processes to document, report and reduce GHG emissions.

For more than a decade, our commitment to GHG emission reporting and reduction has been guided by the Environmental, Safety and Sustainability (ESS) Committee of the NiSource Board of Directors and implemented across the NiSource companies. The ESS Committee oversees programs, performance and risks relative to environmental, safety and sustainability matters, including our GHG Policy. In 2009, the ESS Committee adopted the NiSource Climate Change Policy. While conducting our business of providing natural gas and electricity to more than 3.8 million customers, NiSource strives to increase

### RECOGNITION

At NiSource, sustainability is about more than just environmental improvement, it is about creating shared value across our businesses and with our customers and other key stakeholders. *This approach is being recognized.*

For the third year in a row, NiSource has been designated as one of the World's Most Ethical Companies by the Ethisphere Institute. Ethisphere is a leading international think-tank dedicated to the creation, advancement and sharing of best practices in business ethics, corporate social responsibility, anti-corruption and sustainability.

NiSource was also named to the Dow Jones Sustainability Index (DJSI) for North America in recognition of the company's sustainable business practices and performance. Of the 140 companies that achieved this distinguished designation, NiSource is one of only three in our industry sector.

efficiency and reduce the carbon intensity<sup>1</sup> of our operations, including by producing and obtaining electricity from sources with lower carbon intensity and reducing methane losses from our natural gas operations. In addition to our internal company efforts, NiSource encourages our customers to use energy wisely by reducing and conserving energy.

NiSource actively strives to reduce its GHG emissions. In 2005, NiSource established a voluntary GHG emission reduction goal of reducing our carbon intensity by 7 percent from 2001 levels by 2012. In 2010, we met that goal, two years early, and continue to make progress.

NiSource has made a significant, long-term commitment to modernizing and growing our energy infrastructure. Planned capital expenditures of \$2.2 billion in 2014 and future plans for nearly \$50 billion in capital expenditures over the next 20-plus years will result in more efficient energy delivery and lower GHG emissions. We are currently developing the next NiSource GHG emission reduction goal that will reflect how our modernization plans result in reduced GHG emissions.

*Recognition, continued:*

NiSource and its affiliated companies were also recognized in Newsweek Magazine's "2012 Green Rankings" of the nation's largest corporations.

The USEPA recognized NiSource's Columbia Gas Transmission as a Natural Gas STAR Transmission Partner of the Year for 2000, 2001, 2004 and 2006. The Natural Gas STAR Program is a flexible, voluntary partnership that encourages oil and natural gas companies to adopt cost-effective technologies and practices that improve operational efficiency and reduce methane emissions. All of the NiSource distribution companies were named Partner of the Year for the Distribution segment in 2004. In 2014, Columbia Gas of Ohio was named Energy Star "Partner of the Year" for the third consecutive year.

These awards demonstrate outstanding performance in reducing methane emissions, identifying and implementing new emission-reducing practices, and supporting Natural Gas STAR Program outreach activities.

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<sup>1</sup> Carbon intensity is the measure of the carbon emissions per unit of electricity generated in a given year.

In addition to making investments that help reduce our GHG emissions, NiSource's utility companies encourage customers to reduce their carbon footprint through our energy efficiency and conservation programs. These programs help customers use less energy, resulting in lower utility bills, reduced strain on energy infrastructure, preservation of natural resources and other environmental benefits.

This report is intended to highlight how our previous, current, and future business activities allow us to actively manage potential risks and opportunities associated with NiSource GHG emissions and climate change issues. Additional information on this and other sustainability topics can be found in the NiSource Sustainability Report available at [www.nisource.com/sustainability](http://www.nisource.com/sustainability).

In 2010, NiSource's Columbia Gas of Virginia began construction of 13.3 miles of pipeline. This expansion, known as the Bear Garden Project, supplies a natural gas combined cycle electric generation plant with low-GHG emission, clean-burning natural gas in a traditional coal power market. The plant now provides enough electricity to power 146,000 homes annually. Throughout the Bear Garden Project, Columbia Gas of Virginia operated in a manner protective of threatened and endangered species and sensitive habitats, implemented full-time environmental-focused inspection and monitoring, used biodegradable matting to reduce erosion and promote native grass growth, planted a wide variety of native plants and wildflowers, and mitigated any environmental impacts. NiSource will continue to enhance the accessibility of cleaner fuel sources similar to the Bear Garden Project in an environmentally responsible way. Since natural gas burns cleaner than other fossil fuels, substituting natural gas for other fossil fuels can help reduce emissions of air pollutants and greenhouse gases.

## NISOURCE GREENHOUSE GAS PROGRAM DEVELOPMENT

Building a more reliable, cleaner, more efficient and affordable energy future is core to NiSource's environmental and sustainability goals. We operate a diverse electric supply portfolio and one of the nation's largest natural gas transportation and delivery systems. We have a balanced plan to grow our business and modernize our infrastructure while reducing our impact on the environment and developing innovative energy-efficiency and conservation measures for our customers. Responsible management, including reporting and reducing GHG emissions, is an important part of our business.

### VOLUNTARY PROGRAMS

NiSource has been involved in a number of voluntary GHG-related programs. Our earliest efforts to identify, track and reduce GHG emissions began with our partnership in the **EPA's Natural Gas STAR Program** in 1993. With more than 20 years of participation and support, NiSource continues to make significant contributions to the Natural Gas STAR Program goals that encourage development of emission-reducing technologies and reporting of voluntary methane<sup>2</sup> emission reductions. In 2005, NiSource contributed to another EPA-sponsored voluntary effort by participating in the **EPA Climate Leaders Program**. NiSource was the first Climate Leaders partner with both natural gas transmission and distribution-affiliate operations to inventory GHG emissions. Although phased out in 2010, the program provided companies with resources to develop and implement long-term GHG management strategies.

In addition to the EPA programs, NiSource also participated in the US Department of Transportation (DOT) **1605(b) Voluntary Reporting of Greenhouse Gases Program**, which was in existence from 2002 through 2007, and was a charter member of the US **Department of Energy (DOE) Climate Challenge**. Further, NiSource's Columbia Pipeline Group initiated an industry-leading program to identify and reduce GHG emissions and certify these reductions through the **Verified Carbon Standard (VCS)**. VCS is a non-profit greenhouse gas accounting program used by projects around the

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<sup>2</sup> Methane (CH<sub>4</sub>) is the second most prevalent greenhouse gas emitted in the United States from human activities. Methane is emitted by natural sources such as wetlands, as well as human activities.

world to verify and issue carbon credits in voluntary markets. When registered, the sale of emission reduction credits may help offset the costs associated with creating additional voluntary GHG reductions.

Between 1993 and 2012 NiSource documented a cumulative reduction of 25 million metric tons of CO<sub>2</sub>e.<sup>3</sup> These reductions in GHG emissions have the same annual environmental benefit as 20 million acres of forest or taking more than 5 million cars off the road for one year.<sup>4</sup> And, we continue to look for new ways to improve our performance and reduce GHG emissions from our operations.

## **OPERATIONAL CHANGES AND ENHANCEMENTS**

### **NiSource Electric Operations**

Northern Indiana Public Service Company (NIPSCO) generates, transmits and distributes electricity to approximately 460,000 customers in northern Indiana. NIPSCO's coal-fired electric generation represents the largest component of the NiSource GHG emission inventory. NIPSCO has diversified its electric operation fleet by retiring certain coal assets, installing natural gas capacity and incorporating wind into its generation portfolio.

For example, in 2001, NiSource made significant reductions in its carbon footprint when NIPSCO ceased operation of its D.H. Mitchell coal-fired electric generation facility. To meet customer demand and supplement energy output, NIPSCO acquired the Sugar Creek natural gas combined-cycle power plant in 2008, which emits approximately 50 percent less CO<sub>2</sub>e per megawatt hour than the D.H. Mitchell facility.

The graph below depicts the net capacity factor<sup>5</sup> of fossil-fuel facilities in NIPSCO's generation fleet. The increased operation of the natural gas-fired Sugar Creek facility is

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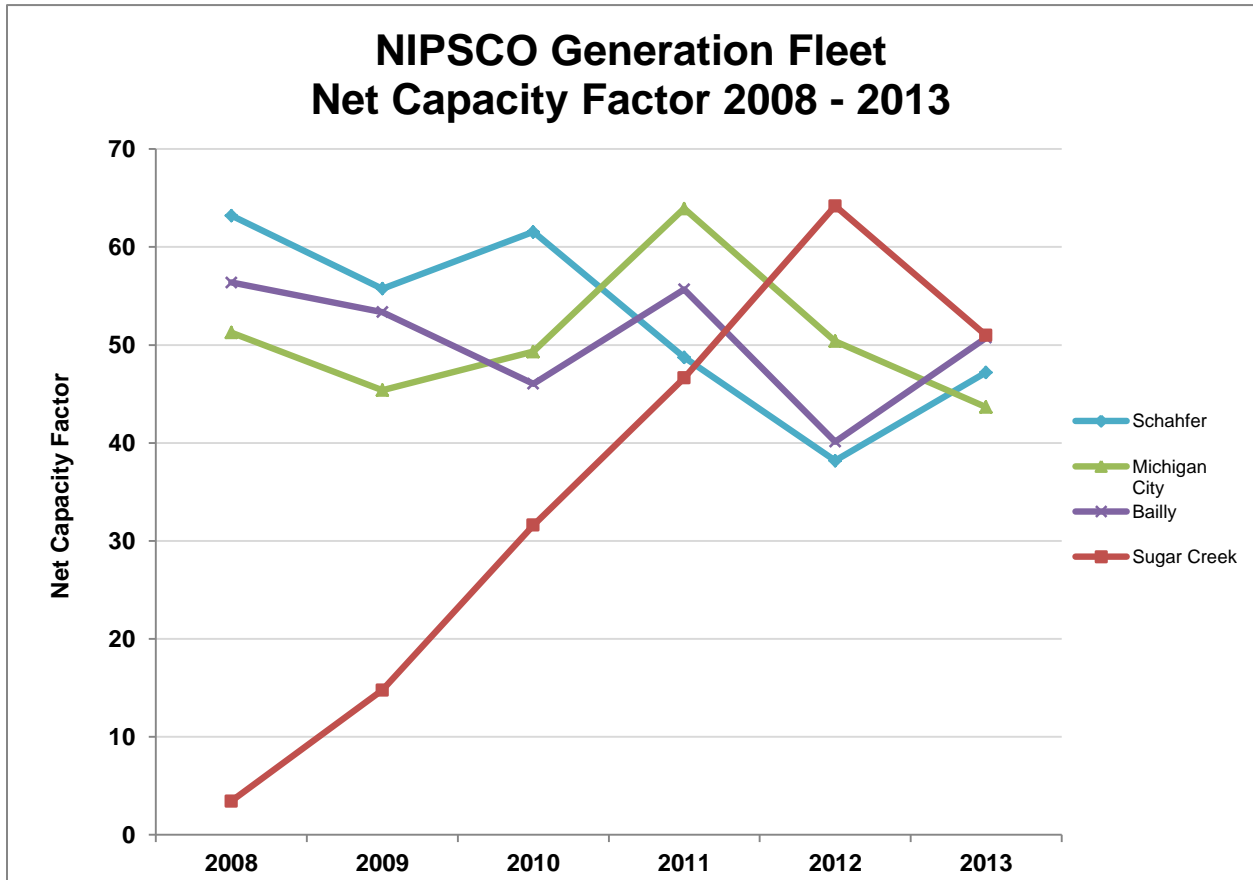
<sup>3</sup> CO<sub>2</sub>e is a measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP). The CO<sub>2</sub>e for gas is derived by multiplying the tons of the gas by the associated GWP.

<sup>4</sup> Calculations based on EPA's forest carbon sequestration emission factor of 1.22 metric tons CO<sub>2</sub>/acre/year and light-duty vehicle emission factor of 4.75 metric tons CO<sub>2</sub>e/vehicle/year. Source: <http://www.epa.gov/cleanenergy/energy-resources/refs.html>

<sup>5</sup> The net capacity factor of a power plant is the ratio of the net electricity generated, for the time considered, to the energy that could have been generated at continuous full-power operation during the same period.



dramatic compared to the three coal-fired generating facilities. The lower cost of natural gas is reflected in the increased net capacity factor for Sugar Creek.



### NiSource Natural Gas Operations

NiSource’s natural gas distribution companies provide natural gas to approximately 3.4 million residential, commercial and industrial customers via nearly 60,000 miles of pipeline and related facilities in seven states: Ohio, Pennsylvania, Virginia, Kentucky, Maryland, Indiana and Massachusetts. Additionally, our Columbia Pipeline Group (CPG) companies transport natural gas for local utilities, industries, producers and other customers across 16 states and the District of Columbia through a network of about 15,000 miles of interstate natural gas pipelines. For the foreseeable future, NiSource has a proactive investment plan to modernize and grow our infrastructure to improve reliability and system integrity. A critical component of the modernization plan is to replace aging pipe. NiSource estimates this investment will avoid approximately 65



metric tons of CO<sub>2</sub>e per year for every mile of distribution pipe replaced. In 2013, we replaced nearly 360 miles of distribution pipeline, resulting in an estimated 23,000 metric ton reduction in CO<sub>2</sub>e emissions.

### **CUSTOMER-FOCUSED SOLUTIONS REDUCING GHG EMISSIONS**

NiSource provides ongoing electric and natural gas energy efficiency programs through NIPSCO and natural gas efficiency programs through our six Columbia Gas Distribution companies (NGD). These programs result in reduced GHG emissions and lower energy bills for our customers. Our electric efficiency programs include residential lighting, home energy audits, low-income weatherization, commercial and industrial incentives, energy efficiency audits for schools, appliance recycling programs, new construction rebates, residential efficiency rebates and customized energy usage reports for residential customers. NIPSCO's total spend for its electric efficiency programs was \$23.3 million in 2013. These efficiency programs resulted in net savings of 174,000,000 kWh in 2013.

NIPSCO's gas efficiency programs include appliance and new construction rebates, low income weatherization, retrofits, multi-family direct install, elementary education, employee education, customer education and home audit programs, among others. NIPSCO's total spend for its natural gas efficiency programs was \$6.2 million in 2013. These efficiency programs resulted in net savings of 3,059,091 therms in 2013. Additionally, our natural gas efficiency programs in Kentucky, Maryland, Massachusetts, Ohio, Pennsylvania, and Virginia saved customers 853,635 thousand cubic feet of natural gas in 2013. NiSource continues to pursue complementary strategies to help customers save money on their energy bills through reduced energy usage and other assistance initiatives.

For example:

- In the 2012/2013 heating season, NiSource customers received approximately \$50 million in federal assistance through the Low-Income Home Energy Assistance Program (LIHEAP). In addition to participating in LIHEAP Action Day, NiSource further advocated for federal funding and programs to support

energy efficiency initiatives directed to low-income customers at a White House-sponsored event.

- Complementary to federal assistance programs, NiSource companies offer their own assistance programs for those in need, including weatherization programs to reduce overall bills, rebates and special payment programs, among various other initiatives. Customers are also urged to call us to discuss any financial hardships they are experiencing and review available options. Through these supplemental programs, NiSource offered about \$2.8 million in support to its customers.
- One innovative assistance program introduced by Pennsylvania employees was a "Clean and Tune" event, where employee volunteers and contractors provided free heating equipment services to 44 elderly and disabled customers. Each volunteer partnered with a different contractor to inspect customers' systems in preparation for colder temperatures.
- Columbia Gas of Kentucky introduced an appliance rebate program in 2010, which offers up to a \$400 rebate on high-efficiency natural gas space and water heating equipment. Nearly \$600,000 in rebates were awarded in 2011.
- Columbia Gas of Massachusetts worked with Smith College on a retrofit of the school's central heating plant in Northampton, Mass. The plant installed a "drum heater" that greatly reduced energy costs. The projected energy savings over the life of the drum heater are equivalent to the energy required to heat almost 200 homes for an entire year.
- Columbia Gas of Pennsylvania partnered with the Fayette County Redevelopment Authority to promote our energy audit and rebate programs. Through a federal grant awarded to the county to promote energy efficiency, we provided no-cost energy audits to income-eligible participants, which allowed additional funding to be used for energy conservation measures. Of the 64 audits performed, 29 customers installed the recommended measures, providing about \$200,000 in benefits to those customers in the first year.
- NIPSCO introduced new energy-savings programs for our electric customers, including instant savings on compact fluorescent light bulbs, appliance recycling,

and commercial and industrial (C&I) efficiency incentives. C&I customers represent the largest segment of NIPSCO's customer base, with the greatest potential for making significant impacts on GHG-emission reductions. Our C&I programs offer financial incentives for completion of cost-effective energy projects involving the installation of new, high-efficiency equipment or systems at existing facilities. NIPSCO also partnered with Energizing Indiana to offer rebate programs for prescriptive electric energy-efficient measures at C&I facilities. Finally, our C&I New Construction Electric Incentive Programs provide financial incentives to construct new facilities, complete additions to, or major renovation projects at, existing facilities that include the installation of new, energy-efficient equipment or systems.

NiSource actively engages customers and other key stakeholders with innovative, sustainable solutions. One example is NIPSCO's Green Power Program, which allows customers to designate 25, 50 or 100 percent of their monthly electric usage to be attributable to power generated in the Midwest by renewable energy sources. Commercial and industrial customers have the ability to designate 5 or 10 percent to renewable energy sources. In addition to supporting Indiana's goal to promote renewable and homegrown energy, the Green Power Program reflects NiSource's mission to support clean, modern, and affordable energy.

NIPSCO also provides innovative energy solutions to our customers through distributed generation programs such as NIPSCO's renewable Feed-In Tariff (FIT) program. The renewable FIT program allows customers to connect up to 5 megawatts (MW) of solar, wind or bio-mass generation sources to our power grid and sell the electricity generated back to the company. For example, Bio Town Ag, a biomass generation facility located in Reynolds, Ind., connected to the NIPSCO power grid in 2011 and is now delivering electricity to the distribution system.

In addition to the FIT, NIPSCO's Net Metering program allows customers to generate up to 100 kilowatts (kW) of their own renewable energy from solar, wind or hydroelectric sources. Net metering is the measurement of the difference between the electricity that

is supplied by NIPSCO to an eligible net metering customer and the electricity that is supplied back to NIPSCO by an eligible net metering customer. Production is measured on a kilowatt per-hour (kWh) basis and customers receive a credit on their monthly bill for each kWh provided to NIPSCO. Between NIPSCO's Net Metering and FIT programs, in 2013, nearly 50,000 megawatt hours were generated by renewable sources – enough to power approximately 6,000 homes per year.

Another innovative customer program is NIPSCO's IN-Charge At Home Electric Vehicle (EV) program.<sup>6</sup> This program helps improve the cost effectiveness and convenience of installing in-home electric vehicle charging stations. The program encourages our customers to invest in EVs and reduces transportation-sourced GHGs, thereby improving local air quality and reducing reliance on foreign oil. NIPSCO customers who own a plug-in EV may be eligible for a credit of up to \$1,650 for the installation of an in-home charging station and free charging between the hours of 10 p.m. and 6 a.m. NIPSCO's EV program also tracks the amount of energy needed to power these EV charging stations and purchases renewable energy credits (RECs) to cover electricity used to power EVs, which enhances the carbon neutrality of the program. As of June 30, 2014, 122 residential charging stations have been installed. Assuming one car per charging station, this program is reducing transportation emissions by approximately 580 metric tons of GHGs per year.<sup>7</sup>

More information on NiSource's customer-focused programs may be found in the [NiSource Sustainability Report](#) and Appendix A of this report.

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<sup>6</sup> This program is being offered as part of a Supplemental Environmental Project under the NIPSCO New Source Review NOV settlement.

<sup>7</sup> Calculation based on USEPA's light-duty vehicle emission factor of 4.75 metric tons CO<sub>2</sub>e/vehicle/year. Source: <<http://www.epa.gov/cleanenergy/energy-resources/refs.html>>

## NISOURCE GREENHOUSE GAS FUTURE OUTLOOK

Our goal at NiSource is to become the Premier Regulated Energy Company in North America through building sustainable value for our stakeholders, providing customer-focused energy solutions, continuing our ongoing infrastructure investment-driven growth and ensuring strong financial management. NiSource has developed a strategic framework that will not only build and grow our business, but also manage our GHG emissions in a way that meets our ongoing commitment to further reduce the carbon intensity of our operations. Our strategic approach has a balanced plan with an enhanced long-term growth strategy, centered on an inventory of nearly \$50 billion in infrastructure modernization and growth investment opportunities spanning the company's natural gas and electric operations. The projects include:

- **Approximately \$12-15 billion in Gas Transmission and Storage infrastructure investment opportunities**, including a foundational, industry-leading pipeline modernization program and a variety of transformational growth projects leveraging the company's strong asset base in the Utica and Marcellus Shale production areas. Headquartered in Houston, Texas, NiSource's Columbia Pipeline Group (CPG) companies own and operate approximately 15,000 miles of strategically located natural gas pipelines, integrated with one of the largest underground storage systems in North America. Approximately 1.3 trillion cubic feet of natural gas flows through our pipeline and storage systems each year, providing competitively priced, clean energy for millions of homes, businesses and industries. Over the next four years, CPG's modernization enhancements are projected to reduce CO<sub>2</sub>e emissions by an estimated 38,000 metric tons annually. CPG's long-term modernization program is expected to continue for the next 10-15 years. In addition to other environmental advantages, natural gas, on an energy equivalent basis, emits 50 percent less CO<sub>2</sub> than coal when combusted and 30 percent less CO<sub>2</sub> than oil, making it the best fossil fuel source available to reduce greenhouse gas emissions.

- **Approximately \$20 billion in Gas Distribution infrastructure investments**, furthering the company’s well-established infrastructure programs to modernize and replace our gas distribution systems, in tandem with development of new customer programs and regulatory initiatives. NiSource’s local gas distribution companies serve approximately 3.4 million customers in seven states via approximately 58,000 miles of pipeline and related facilities. In total, our gas distribution modernization program is expected to reduce CO<sub>2</sub>e emissions by an average of 27,000 metric tons per year over the next six years.
- **Approximately \$10 billion in investments in electric operations**, including environmental enhancements, electric transmission and distribution system improvements, and generation facility upgrades. NIPSCO recently began operating the first phase of an emissions-control system at its R.M. Schahfer Generating Station in Wheatfield, Ind. The technology, known as a “scrubber,” is one of three installations to be completed on NIPSCO’s coal-fired generating stations by the end of 2016, investments totaling about \$750 million. These investments are closely tied to meeting air quality standards established by the EPA.

NIPSCO also is making significant investments in the electric distribution and transmission infrastructure in northern Indiana. For the first time in more than 30 years, NIPSCO is constructing an electric transmission line that will span more than 100 miles, increasing the accessibility of wind energy generated in Indiana into traditionally coal-dependent regions of the Midwest. This project, called the Reynolds-Topeka Electric System Improvement Project, is a roughly \$270 million capital investment that is projected to increase service reliability and market access to renewable energy sources across 11 states. NIPSCO’s Reynolds-Topeka transmission line will also aid in meeting the Renewable Portfolio Standard<sup>8</sup> (RPS) target of 10 percent renewables in Indiana by 2025.

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<sup>8</sup> In May 2011, Indiana enacted SB 251, creating the Clean Energy Portfolio Standard (CPS). The program sets a voluntary goal of 10 percent clean energy by 2025, based on the amount of electricity supplied by the utility in 2010.

## **NISOURCE GREENHOUSE GAS EMISSION INVENTORY**

NiSource's GHG Emission Inventory is calculated using the methodology from EPA's Mandatory Greenhouse Gas Reporting Rule (40 CFR Part 98) and incorporates components of the GHG Protocol<sup>9</sup> Corporate Accounting and Reporting Standard, developed by the World Resources Institute (WRI) and World Business Council (WBC) for Sustainable Development, to expand our inventory for more complete emissions coverage.

### **EPA PART 98 MANDATORY GREENHOUSE GAS REPORTING RULE**

The EPA published the Mandatory Greenhouse Gas Reporting Rule on October 30, 2009. Implementation of the rule is referred to as the Greenhouse Gas Reporting Program (GHGRP). Although NiSource had been tracking and publically reporting our GHG emissions for more than a decade, the EPA developed industry-standard reporting requirements for the first time through the GHGRP. The GHGRP inventory covers only a portion of the sources and data provided by the NiSource GHG Inventory, and is therefore a subset of our more comprehensive self-disclosed inventory (provided in the NiSource Greenhouse Gas Report, the NiSource Sustainability Report and other voluntary reports). The EPA makes GHGRP reporting data available to the public through its interactive [Data Publication Tool](#).

### **GHG EMISSION CALCULATION METHODS**

As noted above, NiSource companies report GHG emissions under the Greenhouse Gas Protocol "control" approach, including Scope 1, Scope 2, and identified Scope 3 emissions.<sup>10</sup> Therefore, NiSource companies report virtually all GHG emissions

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The Indiana Utility Regulatory Commission (IURC) adopted emergency rules (RM #11-05) for the CPS in December 2011. Final rules were adopted in June 2012, effective July 9, 2012.

<sup>9</sup> The Greenhouse Gas Protocol (GHG Protocol) is the most widely used international accounting tool for government and business leaders to understand, quantify, and manage greenhouse gas emissions. The GHG Protocol, a decade-long partnership between the World Resources Institute and the World Business Council for Sustainable Development, is working with businesses, governments, and environmental groups around the world to build a new generation of credible and effective programs for tackling climate change.

<sup>10</sup> Scope 1: All direct GHG emissions from sources that are owned or controlled by the reporting entity.  
Scope 2: Indirect GHG emissions from consumption of purchased electricity, heat or steam.



resulting from company operations and include Scope 3 emissions related to purchased power from third parties. For the purpose of reporting GHG emissions, “control” is defined as the ability to introduce and implement operational policy, having operational control, or having majority interest in the entity.

Given the nature of our operations, the following GHGs were included in our Emissions Inventory: carbon dioxide (CO<sub>2</sub>), nitrous oxide (N<sub>2</sub>O), and methane (CH<sub>4</sub>) from the natural gas transmission, storage and distribution facilities; CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub> from electric generating plants; sulfur hexafluoride (SF<sub>6</sub>) from electric power transmission and distribution operations; and CO<sub>2</sub> from natural gas supply.

NIPSCO’s electric generation operations are responsible for approximately 65 percent of the NiSource GHG Emission Inventory. As an integral component of complying with EPA requirements, all of the electric-generating units are equipped with continuous emissions monitors (CEMs) that directly measure CO<sub>2</sub> emissions. CEMs are required to be operated in accordance with the EPA’s Title IV Acid Rain Program, including the strict regulatory requirements governing monitoring activity, found in Federal Regulation 40 CFR Part 75. The Acid Rain Part 75 monitoring program requirements are designed to generate accurate data for use in the EPA’s Clean Air Markets Division emission trading programs.

Approximately 70 percent of the NiSource GHG Emission Inventory was collected and submitted to the EPA using EPA-approved methods, with the majority of emissions directly measured with continuous emissions monitoring equipment that meets EPA-approved QA/QC standards. NiSource invests approximately \$2 million every year to collect, validate, and verify our GHG and other air emissions. This level of high-quality data management helps confirm our commitment to providing timely reporting and transparency in climate-related activities.

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Scope 3: Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities (e.g. T&D losses) not covered in Scope 2, outsourced activities, waste disposal, etc.

## MANAGING GREENHOUSE GAS RISKS AND OPPORTUNITIES

Our integrated system of environmental programs allows us to track, monitor and document greenhouse gas risks and opportunities. Our strong environmental programs help ensure environmental compliance in an effective and efficient manner, and also reduce environmental risks to the company.

NIPSCO's diverse electric generation portfolio includes both traditional and renewable electric generation sources. These sources include natural gas, coal, wind and hydroelectric power. As NIPSCO diversifies its future generation mix with lower GHG-intensity electric generation, the company is subject to less risk from carbon dioxide emissions regulation. However, NIPSCO must also maintain reliable and affordably-priced electricity. NIPSCO strikes a balance between these risks by assessing and implementing, when available, competitively-priced forms of lower carbon-intensity supply, providing energy efficiency programs to reduce customer utility bills, and offering customer programs such as the Green Power Program, Net Metering, and FIT.

Additionally, NiSource is closely managing challenges associated with an aging infrastructure. Assuming an average lifespan for coal-fired power plants of 60 years, NiSource is planning for the future with a clear understanding of how GHG and other environmental regulations will impact our ability to continue to serve our customers with reliable and affordable energy. The expanding domestic supply of natural gas, combined with its low cost and positive environmental attributes will continue to influence NiSource's decision making. With approximately two thirds of NiSource's existing operations solidly connected to the natural gas industry, an investment plan that includes approximately \$30 billion in system modernization and growth projects, infrastructure and customer programs, and an industry-leading regulated platform, NiSource is well positioned for the future.

# NISOURCE GREENHOUSE GAS DATA TABLES

## NISOURCE 2013 GHG EMISSIONS BY ACTIVITY

Emission Source	CH <sub>4</sub> (tonne/year)	CO <sub>2</sub> (tonne/year)	N <sub>2</sub> O (tonne/year)	SF <sub>6</sub> (tonne/year)	TOTAL		Uncertainty
					CO <sub>2</sub> e (tonne/year)	CO <sub>2</sub> e (lbs/year)	
Gas Distribution Fugitive & Vented	53,769.5	0.0	0.00	0.00	1,344,238.6	2,963,538,715	336,060
Gas Distribution Combustion	0.0	63,667.9	0.00	0.00	63,667.9	140,363,800	15,917
Gas Transmission Combustion	12.3	650,518.7	1.23	0.00	651,191.1	1,435,630,532	32,560
Gas Transmission Fugitive & Vented	88,935.4	585.6	0.00	0.00	2,223,971.6	4,903,018,069	555,993
Storage Combustion	4.7	250,369.6	0.47	0.00	250,628.4	552,541,076	12,531
Storage Fugitive & Vented	7,121.8	149.7	0.00	0.00	178,194.1	392,850,741	44,549
Indirect Mobile	1.5	44,959.4	1.22	0.00	45,361.7	100,005,411	2,268
Indirect Electric	1.2	75,420.7	1.23	0.00	75,817.6	167,149,135	18,954
Electric Compressors	2.1	169,542.5	2.84	0.00	170,439.7	375,755,270	17,044
Building Natural Gas	0.3	15,643.0	0.03	0.00	15,659.1	34,522,482	3,915
LNG/LPG	13.9	3,035.0	0.00	0.00	3,382.1	7,456,272	507
Electrical Generation	1,438.7	14,328,909.8	208.41	0.00	14,426,984.0	31,806,055,222	360,675
Purchased Power	37.6	2,553,917.5	42.40	0.00	2,567,492.8	5,660,352,624	128,375
SF <sub>6</sub>	0.0	0.0	0.00	0.17	3,982.4	8,779,596	40
<b>Total</b>	<b>151,339.1</b>	<b>18,156,719.4</b>	<b>257.8243</b>	<b>0.1747</b>	<b>22,021,011.0</b>	<b>48,548,018,946</b>	<b>1,529,387</b>
CDP Scope 1	151,296.36	15,297,236.35	210.11	0.17	19,146,240.11	42,210,234,023	1,358,831
CDP Scope 1 CO <sub>2</sub> e	3,782,409.11	15,297,236.35	62,612.29	3,982.36	19,146,240.11	42,210,234,023	
CDP Scope 2	5.11	305,565.56	5.32	0.00	307,278.12	677,432,298.14	42,181.23
CDP Scope 3	37.62	2,553,917.53	42.40	0.00	2,567,492.76	5,660,352,623.96	128,374.64

## NISOURCE 2013 GHG EMISSIONS BY COMPANY

NiSource Subsidiary	CH <sub>4</sub> tonne/year	CO <sub>2</sub> tonne/year	N <sub>2</sub> O tonne/year	SF <sub>6</sub> tonne/year	TOTAL	
					CO <sub>2</sub> e tonne/year	CO <sub>2</sub> e tonne/year
Columbia Gas of Kentucky	2,712.70	6,588.1	0.074	0.0	74,427.6	
Columbia Gas of Maryland	782.10	2,392.5	0.036	0.0	21,955.8	
Columbia Gas of Massachusetts	7,669.55	9,856.6	0.117	0.0	201,630.2	
Columbia Gas of Ohio	22,152.26	38,783.2	0.401	0.0	592,709.2	
Columbia Gas of Pennsylvania	9,568.66	14,199.8	0.143	0.0	253,459.0	
Columbia Gas of Virginia	3,167.28	18,512.9	0.162	0.0	97,743.4	
Columbia Gas Transmission	85,857.74	900,008.8	4.656	0.0	3,047,839.7	
Columbia Gulf Transmission	8,997.85	199,486.5	0.428	0.0	424,560.4	
Crossroads Pipeline	537.62	32.8	0.001	0.0	13,473.6	
Midstream	0.00	86.1	0.002	0.0	86.9	
NIPSCO	9,893.1	16,956,814.9	251.653	0.1747	17,283,117.7	
NiSource Corporate	0.23	9,957.1	0.150	0.0	10,007.5	
<b>NiSource Total</b>	<b>151,339.10</b>	<b>18,156,719.4</b>	<b>257.8244</b>	<b>0.1747</b>	<b>22,021,011.0</b>	

## HISTORICAL ELECTRIC EMISSIONS INTENSITY – USING SAR GWPS

Year	2013	2012	2011	2010	2009	2008	2007	2006	2005
Generation Emissions (tonnes CO <sub>2</sub> e)	14,426,984	12,681,846	15,340,748	16,110,206	15,103,475	16,694,553	16,922,899	16,435,774	18,365,425
Purchased Emissions (tonnes CO <sub>2</sub> e)	2,567,493	2,900,331	1,577,737	1,206,705	1,343,924	2,459,491	2,922,043	2,052,102	1,254,567
Total Emissions (tonnes CO <sub>2</sub> e)	16,994,477	15,582,177	16,918,485	17,316,911	16,447,399	19,154,044	19,844,943	18,487,876	19,619,992
Generated Electricity (MWhrs)	14,153,145	13,282,610	15,390,784	15,534,957	14,155,803	15,031,937	14,858,227	14,738,309	16,805,533
Purchased Electricity (MWhrs)	3,738,713	4,243,034	2,524,088	1,966,457	1,868,702	3,226,863	3,833,773	2,692,394	1,611,704
Total MWhrs	17,891,858	17,525,644	17,914,872	17,501,414	16,024,505	18,258,800	18,692,000	17,430,703	18,417,237
Electrical Intensity (tonnes CO <sub>2</sub> e/MWhr)	0.9498	0.8891	0.9444	0.9895	1.0264	1.0490	1.0617	1.0607	1.0653
Electrical Intensity (lbs CO <sub>2</sub> e/MWhr)	2,094	1,960	2,082	2,181	2,263	2,313	2,341	2,338	2,349

## NISOURCE 2013 GHG EMISSIONS BY ACTIVITY

	Tonnes CO <sub>2</sub> e	% of Emissions
SF <sub>6</sub> Emissions	3,982	0.02%
Electrical Generation (excluding Purchased Power)	14,426,984	65.51%
Purchased Power	2,567,493	11.66%
Indirect Emissions	307,278	1.40%
Gas Transmission (combustion)	901,819	4.10%
Gas Transmission (fugitive and vented)	2,402,166	10.91%
Gas Distribution	1,411,289	6.41%
<b>TOTAL:</b>	<b>22,021,011</b>	<b>100.00%</b>

## NISOURCE DIRECT AND INDIRECT GHG EMISSIONS

### Direct and Indirect GHG Emission (Tonnes CO<sub>2</sub>e)

Emissions Source	2001 Baseline	2007	2008	2009	2010	2011	2012	2013
CPG Combustion	2,032,649	1,707,341	1,672,086	1,643,419	1,467,803	1,279,304	1,005,920	901,820
CPG Fugitive & Vented*	3,954,557	3,434,945	3,881,965	3,472,620	3,473,055	2,357,960	2,738,252	2,402,166
Gas Distribution - includes combustion, vented and fugitive and LNG/LPG	1,498,862	1,616,464	1,582,589	1,397,537	1,287,271	1,268,920	1,271,720	1,411,289
Electric Generation	17,599,959	16,919,229	16,763,056	15,103,475	16,110,206	15,340,748	12,681,846	14,426,984
Purchased Power - Increase over baseline due to ceased operations at DHMGS	362,773	2,992,073	2,459,491	1,310,733	1,206,705	1,577,737	2,900,331	2,567,493
SF <sub>6</sub> Emissions	125,593	55,485	82,311	49,651	29,877	39,255	17,657	3,982
Mobile Emissions	24,071	22,372	47,773	35,075	36,790	37,956	43,119	45,362
Building Energy - Natural Gas Heating ***						16,876	15,949	15,659
Indirect Electric **	130,564	121,206	112,713	93,521	100,210	186,448	206,265	246,257
<b>Total</b>	<b>25,729,028</b>	<b>26,869,115</b>	<b>26,601,984</b>	<b>23,106,031</b>	<b>23,711,917</b>	<b>22,105,204</b>	<b>20,881,059</b>	<b>22,021,011</b>

\* 2011 value decreased through use of more accurate emission factors for M&R stations, valves, pipeline and components.

\*\*2011 value increased due to improved emission factors and the inclusion of electric compression data

\*\*\*New category to accurately identify natural gas combusted for building heating as a direct GHG emission. Previously coupled with building energy electric and

## APPENDIX A

### DISTRIBUTION COMPANY CUSTOMER ENERGY EFFICIENCY PROGRAMS

- Columbia Gas of Kentucky: <https://www.columbiagasky.com/en/ways-to-save/what-you-can-do>
- Columbia Gas of Maryland: <http://www.columbiagasmd.com/ways-to-save>
- Columbia Gas of Massachusetts: <https://www.columbiagasma.com/en/ways-to-save>
- Columbia Gas of Ohio: <https://www.columbiagasohio.com/ways-to-save>
- Columbia Gas of Pennsylvania: <http://www.columbiagaspa.com/ways-to-save>
- Columbia Gas of Virginia: <http://www.columbiagaspa.com/ways-to-save>
- NIPSCO Customer Programs: <https://www.nipsco.com/save-energy>

### SELECT PROGRAM HIGHLIGHTS

#### **Residential Lighting**

- A retail buy-down program aimed at promoting the use of ENERGY STAR qualified lighting.

#### **Home Energy Assessment (HEA)**

- A walk through assessment of a customer's insulation, ducts and HVAC systems. A detailed report summarizing findings and suggesting weatherization measures is provided to the customer. Direct installation of CFLs, water-saving showerheads and aerators is provided. The HEA is provided at no cost to the customer.

#### **Income Qualified Weatherization (IQW)**

- A complete home assessment including blower door-directed duct sealing and installation of insulation (currently electrically heated homes only). Direct installation of CFLs, hot water pipe wrap, electric water heater wrap, low-flow showerheads and aerators. There is no cost to the customer for this program.

### **School Education Program**

- An educational outreach program focused on energy efficiency principles aimed at 5th and 6th grade students. Take-home kits containing direct install measures are provided to students for installation at their homes. Students return “scantron” sheets allowing quantification of energy savings.

### **Home Weatherization Program**

- Customers receiving a HEA are eligible for this program in which NIPSCO subsidizes a portion of the cost to upgrade shell measures including insulation and duct sealing.

### **New Construction Program**

- Program designed to encourage builders to utilize energy efficient practices by providing a cash-back rebate based on HERS ratings and installation of energy-efficient HVAC equipment.

### **Energy Efficiency Rebate Program**

- Provides cash-back rebates designed to cover a portion of the costs to upgrade to energy efficient products, thereby increasing their market penetration.

### **Multi-Family Direct Install Program**

- Direct installation of energy-saving measures, CFLs, low-flow faucets and aerators in multi-family housing complexes and mobile homes.

### **Appliance Recycling Program**

- Customers are provided a cash incentive to encourage participation in this environmentally responsible program to recycle working refrigerators and freezers. Appliances are picked up and removed from the customer’s home at no charge.

### **Air Conditioner Cycling Program**

- A direct load control program for residential and small commercial customers. Customer AC units are cycled during high demand system peaks to decrease electric demand. Customers are given a bill credit during the summer months for their participation.

### **Commercial & Industrial Custom Electric Incentive Program**

- Under this program, Commercial and Industrial customers planning to upgrade or invest in a new energy efficiency project(s) will receive a rebate based on the amount of kilowatt hours (kWh) estimated to be saved by the installation of the new equipment or systems.

### **Commercial & Industrial New Construction Electric Incentive Program**

- Under this program, Commercial and Industrial customers planning to construct, renovate, or build an addition to a new building incorporating energy efficient technology will receive an incentive based on the amount of kilowatt hours (kWh) estimated to be saved during the first year through installation of the new equipment or systems.

### **Small Business Direct Install Program**

- NIPSCO's Small Business Direct Install Program provides energy-saving LED lighting, showerheads and faucet aerators all at no cost to our customers.<sup>11</sup>

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<sup>11</sup> This program is available to any business or non-profit organization served under NIPSCO electric tariffs 620, 621, 622, 623 and with a metered demand of less than 200 kW per year.



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