



2024 SGA Awards Finalists: ESG

Entry: A Race to the Bottom – Boardwalk's Emissions Reduction Challenge

Your Company: Boardwalk Pipelines

Linking people, ideas and information

The cornerstone of this program is to connect our people and their ideas to our company efforts to reduce emissions by encouraging out of the box thinking, proactive assessments and repairs, and coming up with solutions to drive down emissions across our system. Not only are we witnessing the downward trend of emissions through this program, we're also improving reliability and design. One bridge to connection is having our GHG Task Force review the ideas submitted to determine feasibility and applicability. This engages operations, engineering and construction and our technical services teams. Another connection point is having senior leadership sponsor and promote this program companywide. There are regular updates to evaluate progress and a friendly competition between operating areas for a chance to win a monetary prize and a group luncheon. Boardwalk employees are kept abreast of our emissions reduction initiatives throughout the year and there are mechanisms in place to submit continuous improvement ideas, along with a maintenance capital program dedicated to reducing our carbon footprint.

Name of Your Project / Initiative

A Race to the Bottom - Boardwalk's Emission Reduction Challenge

The solution

In an effort to reduce emissions and reach employees, Boardwalk kicked off its inaugural Emissions Reduction Challenge in the 4th quarter of 2022, which ran through 2023. This challenge was created to foster ideas, reduce emissions and improve reliability across our system. Knowledge sharing, thinking outside of the box and equipping employees with the tools and resources to come up with solutions to proactively reduce emissions were key points of the challenge. With the success of the program in 2023, we brought the challenge back in 2024 with some improvements and more ways for employees to participate. This year's program has 3 challenges: 1) Innovation, 2) Continuous Improvement and 3) Leak Reduction. To date, we've already received over 120 entries and on track to exceed the 178 entries received in 2023!

Pride, accountability, environmental stewardship and recognition are essential components of this challenge – connecting our employees and the environment.

Results of your project / initiative.

The first year of the Emissions Reduction Challenge wrapped in 2023 with 178 entries submitted and 26 operating areas participating. Entries ranged from valve replacements, changes in operating methods, design improvements and more. The determining factor for winning was improved design and organizational value. Petal Gas Storage was named the winning team and was able to reduce their emissions by 56% from 2022 levels. Adding block valves to redirect flow, working with key customers to pull down further than previously done ahead of planned blowdowns, retrained on “How methane emissions are calculated for EPA”, changed power gas actuators to air, and conducting more GHG survey planning meetings throughout the year, were some of the great ideas submitted and implemented by Petal. Although Petal Gas Storage won the challenge, Boardwalk, as a whole, was able to reduce systemwide emissions by ~33% in 2023 from our 2022 numbers. This can be directly attributed to the work operations has done to repair and replace valves, determine optimal operating modes, design changes to eliminate the need to blowdown or redirect flow, working with key customers, and a shift in culture.

Entry: Nicor Gas Smart Neighborhood

Your Company: Entrust Solutions Group nominating Nicor Gas

Linking people, ideas and information

Nicor Gas and Habitat for Humanity believe that owning a home is the pathway to strength, stability and independence. The organizations are teaming up to build two new affordable, net zero communities in Aurora and Northern Fox Valley that exemplify these values.

Name of Your Project / Initiative

Nicor Gas Smart Neighborhoods

The solution

Nicor Gas and Habitat for Humanity believe that owning a home is the pathway to strength, stability and independence. The organizations are teaming up to build two new affordable, net zero communities in Aurora and Northern Fox Valley that exemplify these values.

Situated just outside the Chicago metropolitan area, in beautiful Aurora, IL, the Fox Valley Habitat for Humanity is building a brighter future for eligible families. In the heart of Aurora, IL, these ultra-modern, one story homes feature accessible entrances for residents who need special accommodations for disabilities or wish to stay in their home long-term. Energy efficient appliances and home automation is designed to improve residents' quality of life, while helping manage home expenses and monthly energy costs.

Situated in the picturesque Northern Fox Valley, the new Habitat for Humanity community will offer a charming and energy efficient lifestyle for eligible families. The new community in Northern Fox Valley will offer low income families the freedom from high mortgages and energy bills. The modern homes will feature state-of-the art smart technology designed to help improve homeowners' lifestyle while minimizing their carbon footprint.

Results of your project / initiative.

Leading the Way to a Smarter Energy Future

Nicor Gas is an important leader in the State of Illinois and recognized for its cutting-edge research and development focused on a more affordable and resilient clean energy future.

The new Nicor Gas Smart Neighborhoods™ are designed to be net zero and built with the most efficient building envelope to keep energy bills cost-effective for Habitat families. When talking about smart homes, it is important to think of construction and lifestyle decisions that keep our

energy bills manageable and support more environmentally friendly living. Internet connectivity plays an important role in home automation and integrating more renewable sources of energy that lower the home's carbon footprint. The Nicor Gas Smart Neighborhoods have been designed and built with the most energy efficient building technology materials and smart technologies to allow residents to live a smarter energy lifestyle.

The new homes will include a number of smart technology features that you may or may not be familiar with. Aside from a smart thermostat, these homes also will include:

Backup power supply in the form of batteries in the garage that can keep the power on during outages

Rooftop solar panels

240 VAC circuits in the garage for EV charging

Smart electrical panel

A home's "building envelope" refers to engineering and building practices that help manage the energy use in a home. This can be related to indoor heating or cooling, insulation, and the thermal barrier of the home. In Illinois, where it can get very cold, using specific products and approaches can help keep energy bills more efficient.

The Nicor Gas Smart Neighborhoods homes have the following features:

Battery storage system

Insulating concrete forms (ICFs)

Spray foam

Energy efficient windows

Heat Recovery Ventilation (HRV) system

LED lighting

<https://ngsmartneighborhoods.com/>

Entry: NiSource Gas Leads ESG Efforts with Measurement-Informed Inventory (MII)

Your Company: Picarro, Inc.

Linking people, ideas and information

NiSource Inc. has been at the forefront of integrating advanced technology to tackle methane emissions in their gas distribution network. The transition to Measurement-Informed Inventory (MII) has transformed the accuracy and effectiveness of reporting and managing emissions. It has proven to be an innovative tool at the center of connecting people and information to drive results.

The move to a MII for reporting purposes can help bring greater accuracy, clarity, and transparency for gas distribution operators, regulators, and the public. The fundamental building blocks of a MII program require strategic alignment among key stakeholders to ensure success. Transitioning to a MII approach demonstrates a substantial leap in connecting a diverse group of stakeholders with comprehensive, actionable data. NiSource brought together operational leads, climate strategists, field service technicians, and industry experts from Picarro to leverage emerging standards such as those published by Veritas One Future and OGMP2.0, aligning on goals of emissions reduction and more accurate reporting. This collaboration resulted in a robust, data-driven framework that enhances regulatory compliance, investor confidence, and overall transparency to stakeholders.

Furthermore, the extensive and detailed data collected across gas networks not only provides an unbiased and defensible measurement-informed inventory but enhances safety programs and asset replacement strategies for utilities. This enables NiSource to exercise proactive asset management, thus reducing emergencies and mitigating odor calls.

In the current regulatory landscape, having a clear understanding of one's emission inventory isn't just good for the environment; it is also good for business. Regulators, environmental groups, and investors are increasingly demanding greater transparency and responsibility in emission management.

Name of Your Project / Initiative

Providing Actional Insights into ESG: Building Measurement Informed Emission Inventories with Network Emissions Quantification

The solution

Transitioning to a Measurement- Informed Inventory (MII) empowers NiSource to manage its emissions inventory effectively and comprehensively. Traditional inventory methods often fall

short in capturing the nuanced features of individual operating systems, resulting in uncertainties in emissions reporting. Leveraging Picarro's emissions360™ platform to create the MII, NiSource can analyze methane concentration data, wind patterns, and natural gas infrastructure details to precisely locate, quantify, and visualize methane emissions. With this tool, NiSource can identify leaks faster and prioritize their repair. By collecting this data at scale over their entire network in Indiana during the 2023 reporting year, NiSource was able to harness the power of network quantification of emissions; powered by emissions360. Achieving these results not only empowers NiSource to make more informative decisions on their system but also has led to a new goal of collecting data on 100% of their remaining systems to achieve an actionable MII for NiSource and its subsidiary companies.

The shift to MII is a game-changer for the industry. The methodology surpasses outdated inventory methods by utilizing vehicle-mounted methane detection to cover entire distribution networks and accurately identify larger leaks for prioritized repair. Integrating this with GIS, ERP, and API platforms ensures scalability. This serves the environment by significantly cutting methane emissions and provides a roadmap for cost-effective, targeted mitigation strategies.

Results of your project / initiative.

The journey to implementing an MII at NiSource was not without challenges, including strategizing the sampling technique for mobile leak surveys, scaling the survey operations, and training personnel for continual program success.

The process of building measurement informed inventories is relatively understood once the data has been received; however substantial obstacles exists to achieve this goal. NiSource had to understand the sampling strategy and proper implementation of mobile leak survey to cover significant territory, and continually train and coordinate personnel to keep the program successful. Feasibility pilots using Picarro's technology stack were conducted across Indiana, Kentucky, Ohio, Pennsylvania, Virginia, and Maryland to assess local conditions and assist in crafting detailed rollout strategies. Once the obstacles of collecting the data have been overcome, the Veritas measurement and reconciliation protocols provide the process for building the MII with ease when covering 100% of the network with Picarro.

NiSource and Picarro have been able to establish a proof of concept ahead of schedule with 2023 measurement data from Indiana and Pennsylvania for Mains, Services, Meter sets and M&R Stations. The results showcase the emissions profile of different systems, standing as a trusted authority to traditional emission factors. This success separates NiSource as an industry leader in understanding methane emissions and enables the company to harness the power to aggressively reduce emissions going forward.

By spotlighting this bold initiative, we hope to present NiSource as an exemplary candidate for the SGA Award for ESG, as it continues as an industry trailblazer on a path toward sustainability and environmental stewardship.

