

NON-PIPELINE ALTERNATIVES (NPAs)

NPAs: WHAT ARE THEY?

Non-pipeline alternatives (NPAs), also called non-pipeline solutions (NPSs), are activities or investments that delay, reduce, or avoid the need to build or upgrade traditional natural gas infrastructure such as pipelines, storage, and peaking resources. You can think of NPAs as the gas system equivalent of non-wires alternatives (NWA). As with NWA, there are non-pipeline alternatives on both the demand side and supply side of the gas system.

DEMAND-SIDE SOLUTIONS	SUPPLY-SIDE SOLUTIONS
Targeted Demand Response	On-system Renewable Natural Gas
Targeted Energy Efficiency	
Heat Pumps	On-system Liquefied Natural Gas (LNG) Peaking Storage
Thermal Storage	Compressed and Liquefied Natural Gas Trucking (Virtual Pipelines)
Other Electrification & Fuel Switching	
Behavior Change & Market Transformation	LNG Liquefaction Port Terminals

Source: What can we learn from New York's non-pipeline solutions ruling? ICF International, March 18, 2019

NPAs provide alternatives to traditional capital investment in the gas system, which can reduce system costs, emissions, and improve overall reliability.

NPAs include a broad range of activities with different costs and benefits. Public Utility Commissions (PUCs) should provide a clear framework for implementing NPAs in alignment with decarbonization, consumer protection, and other state goals.

PUC FRAMEWORK FOR IMPLEMENTING NPAS

- ⚡ Use a technology-neutral, competitive solicitation process (e.g. Request for Proposals) to identify innovative solutions that require minimal capital investment in traditional infrastructure
- ⚡ Design project solicitations around specific system needs (e.g. location, load size and duration)
- ⚡ Encourage procurement of multiple solutions to meet system needs if they yield greater net benefits
- ⚡ Establish a robust benefit cost analysis (BCA) methodology to assess proposals (e.g. guiding principles established in the National Standard Practice Manual¹)
- ⚡ Require bidders to include detailed assessment of factors like community and environmental impacts, risks, barriers and challenges, and non-energy benefits (e.g. benefits to low-income customers) associated with the proposed NPAs
- ⚡ Set verification milestones for NPAs, including possible fees for underperformance
- ⚡ Consider implementing a shared-savings mechanism that allows gas utilities to retain some of the savings associated with NPAs

CASE STUDIES

Consolidated Edison: Using NPAs to alleviate severe supply constraints

In 2019, the Consolidated Edison Company of New York, Inc. (ConEd) issued a temporary moratorium on natural gas hook-ups in part of its service territory due to supply constraints and limited ability to meet customer demand during winter peak load conditions.² To continue to serve its customers affected by the moratorium, the utility applied to the New York Public Service Commission (PSC) for a package of demand- and supply-side solutions. The PSC ultimately approved a package of \$222.6M of demand-side NPAs consisting of efficiency and electrification efforts.³

Consolidated Edison: Using NPAs to reduce winter peak load

ConEd has used competitive solicitations to implement NPAs for several years. On January 31, 2020, it issued a request for information (RFI) on Non-Pipeline Solutions to Provide Peak Period Natural Gas System Relief designed to meet a very specific system need: relief for 24 consecutive hours for at least five days per winter season, including three consecutive days of the coldest days of the year.⁴ With the solicitation, ConEd also sought to use NPAs to reduce local greenhouse gas emissions. The RFI encompassed a broad range of eligible projects, including targeted energy efficiency and demand response; measures converting existing gas heating and new construction to efficient electrification; and local renewable natural gas, power-to-gas, and hydrogen blending projects. All proposals were required to include a detailed assessment of environmental and community impacts, risks, and barriers associated with implementation.

NYSEG: Using NPAs to avoid traditional infrastructure

On July 29, 2022, New York State Electric & Gas (NYSEG) issued a Request for Proposals (RFP)⁵ for resources to avoid the need to construct a planned distribution system reinforcement project in the Canandaigua area, which would involve installing approximately 8,700 linear feet of gas pipeline. Instead, NYSEG seeks to implement NPAs to sustain reliable service where the existing distribution is near capacity. NYSEG's RFP is fuel neutral. It encompasses electric/geothermal heat pumps and other forms of electrification; incremental natural gas energy efficiency and demand response resources; and introduction of renewable natural gas, compressed natural gas, and liquefied natural gas. Proposals will be evaluated based on their reliability, economic and environmental impacts using NYSEG's Benefit-Cost Analysis methodology.

The European Union: Responding to natural gas supply disruption

On July 20, 2022, the European Union (EU) adopted its European Gas Demand Reduction Plan or “Save Gas for a Safe Winter Plan” in anticipation of further natural gas supply disruption from Russia.⁶ The plan recommends demand- and supply-side measures to help member states achieve a goal of 15% reduction in natural gas demand from August 1, 2022 through March 31, 2023. Key recommendations include:

- ⚡ Fuel switching: replacing natural gas with clean fuels where possible, especially in the industrial power and heat sectors
- ⚡ Behavior change: mandatory heating/cooling reductions in public buildings and encouraged reductions in all other buildings
- ⚡ Market transformation: financial incentives for industrial fuel switching/reduced consumption and interruptible contracts for industrial customers

Though they are not traditional “NPAs,” the European Gas Demand Reduction Plan avoids the need to substitute Russian gas imports with other imported gas, thus avoiding the need for any related infrastructure or resources to transport, store, and deliver that gas. Notably, the EU recognizes that these recommendations are among the most expedient ways to respond to a dramatic reduction in natural gas supply.

¹ National Energy Screening Project, 2020, https://www.nationalenergyscreeningproject.org/wp-content/uploads/2020/08/NSPM-DERs_08-24-2020.pdf.

² Consolidated Edison Company of New York, Inc., 2019, <https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=16-00254&CaseSearch=Search>. See ‘Notice of Temporary Moratorium’ dated 01/17/2019.

³ New York Public Service Commission, 2019, https://powersuite.aee.net/dockets/ny-17-02100-17-g-0606/filings/9558574?version=beta&filing_search_id=1226436&document_id=163613018

⁴ Consolidated Edison Company of New York, Inc., 2020, <https://cdne-dcxprod-sitecore.azureedge.net/-/media/files/coned/documents/business-partners/business-opportunities/non-pipes/non-pipeline-solutions-to-provide-peak-period-natural-gas-system-relief-rfi.pdf?rev=8fd33f7c7a6f413a80591426743de5e8&hash=B0CACDFE2774912E831980BA13573A56>.

⁵ New York State Electric & Gas, 2022, https://www.peakload.org/index.php?option=com_content&view=article&id=1314:nyseg-rfp-for-innovative-solutions&catid=29:latest-news&Itemid=334.

⁶ European Commission, 2022, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022DC0360&qid=1658479881117-document2>.

INTERESTED IN LEARNING MORE?

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