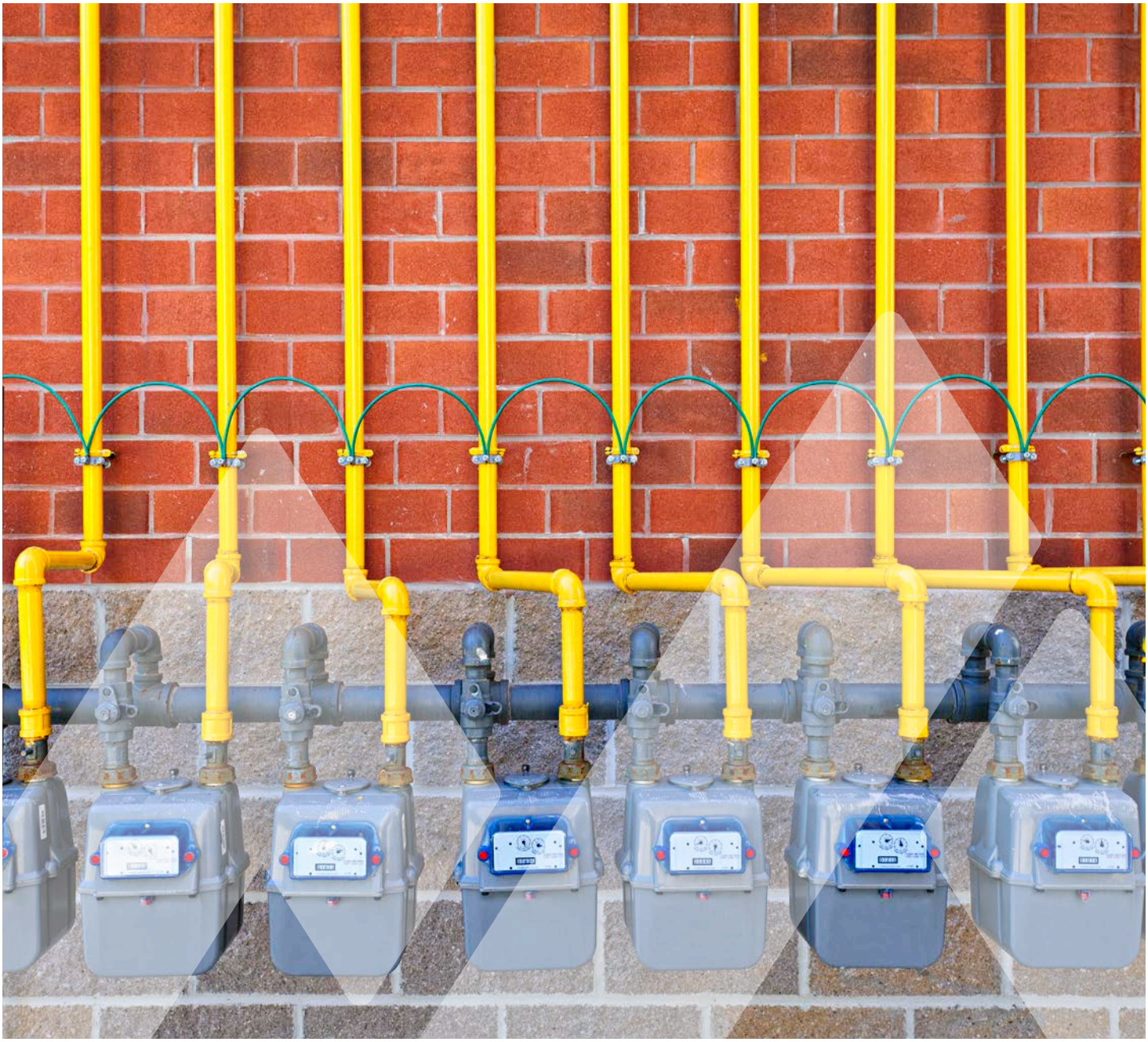
RMI

Overextended

It's Time to Rethink Subsidized Gas Line Extensions



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About RMI

RMI is an independent nonprofit founded in 1982 that transforms global energy systems through market-driven solutions to align with a 1.5°C future and secure a clean, prosperous, zero-carbon future for all. We work in the world's most critical geographies and engage businesses, policymakers, communities, and NGOs to identify and scale energy system interventions that will cut greenhouse gas emissions at least 50 percent by 2030. RMI has offices in Basalt and Boulder, Colorado; New York City; Oakland, California; Washington, D.C.; and Beijing.

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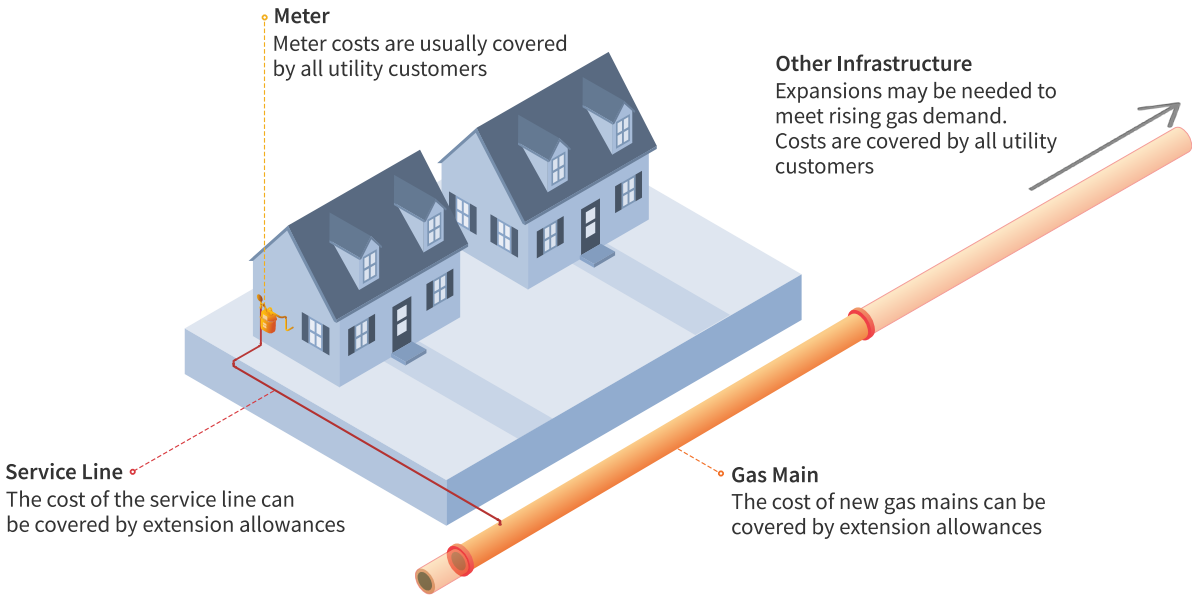
Highlights

- Utilities typically subsidize the cost of extending service to new customers, in a practice known as line extension allowances. Subsidized extensions of natural gas service pass hundreds of millions of dollars in costs to existing customers while expanding the fossil fuel system.
- While these policies made sense in the past, their climate and economic rationale is increasingly challenged by expected reductions in future gas use, the growing costs of maintaining the existing distribution system, and the imperative to phase out fossil fuels.
- Utility regulators should reform line extension allowances to eliminate subsidies for gas, support state climate policies, and reduce the financial burden on existing gas customers.

Exhibit 1

Infrastructure associated with extension allowances



Background

America's local gas distribution systems serve 77 million homes and businesses, delivering 8 trillion cubic feet of natural gas each year, and with it more than 400 million tons of carbon dioxide emissions, plus further climate-warming emissions from methane leakage.[1] These systems are growing—with more than 600,000 new customers added each year—but that trend is completely at odds with state and federal decarbonization goals that require a shift away from gas. Thus, the operational lifetime of new gas infrastructure is increasingly uncertain.[2]

For decades, new customers who want the gas system extended to their building have enjoyed a policy by which their utility covers some or all of the construction costs associated with this gas infrastructure. These policies, generally known as line extension allowances, are common for both electric and gas utilities. They effectively result in existing and future utility customers paying for new customers to join the system, based partly on the expectation that there will be network benefits to adding customers to the system.[i] Utilities do not typically provide clear reports on the total amount spent on gas line extension allowances, making it extremely difficult to track and quantify these costs. Absent central reporting, best-guess estimates by advocates have found numbers in the range of $100 million annually in California and $200 million annually in New York.[3]

The underlying rationale for this practice varies and is described in greater detail later in this report. Typically, it relies on an economic argument either that (a) the new customer will eventually contribute net positive revenue for the utility through their future bills, or (b) individual customers' share of total system costs should remain constant, and accordingly, the allowance amount is set to ensure this fairness. In some cases, other considerations factor in—the presumption that expanded use of gas continues to provide a broader public benefit, for instance.

Several states are actively reconsidering gas line allowances through open proceedings—Washington State recently adjusted its allowances, and Public Utilities Commission staff in California have proposed eliminating gas line allowances entirely. Yet on the whole, these allowance policies have remained despite a series of changes that challenge the wisdom of expanding the gas system and increasing gas usage.

First, as the existing gas distribution system has gotten older, and as high-profile gas leaks and explosions have called attention to safety risks, gas utilities have dramatically ramped up spending on the system, driving up customer costs. This trend can be seen in Exhibit 2.

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i. For a given project, the amount funded by the utility (that is, by all customers) is called the "line extension allowance" or "construction allowance," and the amount funded by the new customers is called the "customer contribution" or sometimes "contribution in aid of construction" (CIAC).

Second, even as the impacts of climate change have become clearer and more severe, the expansion of the US gas system means that greenhouse gas emissions from the buildings sector have remained flat or increased. That is, while buildings have become more efficient, the growing number of buildings burning gas—due to oil-to-gas conversions as well as population growth—counteracts these benefits.[4]

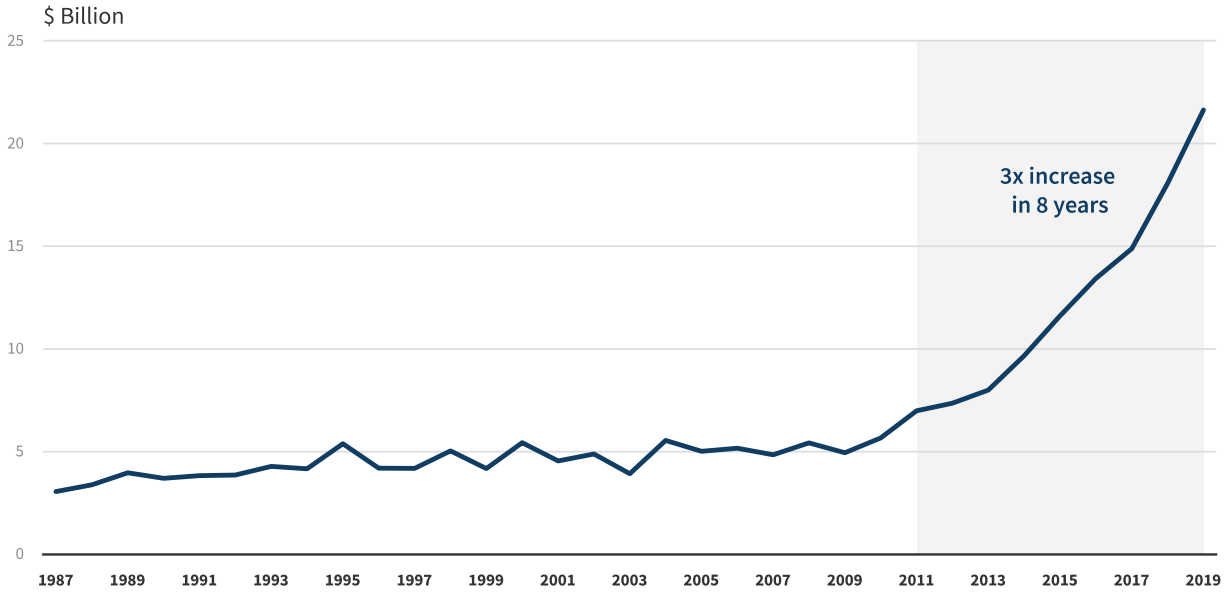
And third, new policies have emerged to cut these emissions and encourage fuel switching away from gas to the electricity system for residential and commercial buildings, leading to projections of dramatically reduced gas use in the future. This trend could make it more difficult for utilities to cover the fixed costs of the gas system, especially if those costs are rising and the system is expanding while the customer base shrinks.[5]

Taken together, this shifting context upends the rationale for the widespread practice of utilities bearing the costs of constructing gas lines to new buildings and new customers, and then passing these costs on to ratepayers for decades to come. Gas line extensions, as they exist today, are no longer supported by a sound economic justification and are ripe for reform, both to protect customers from financial risk and to support climate and public health goals. In the remainder of this report, we will expand on the typical rationale for gas line extension allowances, describe how a changing context undermines this rationale, and offer recommendations for reform.

Exhibit 2

Utility spending on the gas distribution system has grown rapidly in recent years

US gas utility distribution system construction expenditures, 1987-2019



Source: American Gas Association, **https://www.aga.org/research/data/construction-expenditures/**

Why Gas Line Extension Allowances Exist

Gas line extension allowances have historically been justified by economic arguments that sharing system-expansion costs between existing and new customers is fair, along with the presumption that expanded gas service provides a public benefit. There is no single standard for determining fair cost sharing between existing and new customers, but we highlight two examples below. Detailed examples of how these policies work in practice can be found in the Appendix.

Economic Rationale: Revenue-Based

Construction allowances are often calculated via a revenue-based rationale, based on the expectation that new customers' bill payments will eventually cover and then exceed the cost of the line extension that brings them onto the system. The formulas determining these allowance amounts can incorporate the expected volume of gas the new customer will use over many years, and therefore the expected revenue via the customer's bills. Part of the logic is that the revenues collected by new customers will put downward pressure on the rates for all customers. That is, the fixed costs of maintaining the system will be spread across more customers, thereby lowering rates. Utilities that have used a revenue-based approach include Avista Utilities in Washington State and Pacific Gas and Electric in California.[6]

Determining an allowance based on expected revenue involves some combination of variables tied to the expected gas consumption of the new building, such as:

- **Years of expected life:** once gas service is established, the customer is expected to use gas at the same volume for decades. In some cases, the customer is expected to use gas in perpetuity.
- **Square footage:** the size of the building will dictate the heating load.
- **Number and type of appliances:** some utilities allocate a specific allowance for each appliance, with different amounts based on the expected usage of a furnace, water heater, clothes dryer, and stove.
- **Adjustment factors:** these factors are designed to reflect the portion of revenues that supports infrastructure investment, as opposed to gas commodity costs, utility administration, maintenance costs, etc.

Economic Rationale: Embedded Cost

In some cases, the primary objective of a line extension allowance is to ensure fairness, such that no customer subsidizes another customer. As a proxy metric for fairness, some utilities seek to hold constant the existing infrastructure investment on behalf of each customer, such that no new customer subsidizes an existing customer. In practice, this can mean calculating the average amount of existing investment in the rate base per customer and providing that same amount to the new customer. Although not

explicitly based on future revenue calculations, these allowances commonly still rely on the expectation of permanent gas service, in which the new customer will contribute to the costs of the gas system through their bills. Examples of utilities taking this approach include Xcel Energy Colorado and gas utilities in Wisconsin, where embedded cost is detailed in statute.[7]

Public Benefits Rationale

Gas line allowances make it easier to expand access to gas, with the implicit and often explicit belief that gas use itself serves a public good. Historically, line extension allowances, combined with the obligation to serve customers, have supported universal access to gas and ensured that gas utilities do not restrict service to more profitable customers or those in White or upper-class neighborhoods. Over the past decade, state governments and utilities have frequently justified generous line extension policies on the basis that gas has lower emissions and/or lower cost than the alternatives. These assumptions no longer hold, given the emergence of lower-emissions electric heating solutions, greater awareness of methane leakage, and recent volatility in gas prices.[8]

Yet many states have clearly stated their goal to expand gas, often through oil-to-gas conversions. In 2013, Connecticut's Public Utilities Regulatory Authority approved a gas expansion program for nearly 300,000 new customers,[9] in accordance with the state's Energy Strategy, noting "the emerging opportunity provided by shale gas for a lower-cost, less-polluting, and domestically available (and thus more reliable) foundation for society's energy needs."[10] In 2012, the New York Public Service Commission (PSC) opened a proceeding focused on gas expansion, asserting benefits of natural gas in terms of price, emissions, low-income household access, economic development, and reliability. In that proceeding, National Grid stated that it is "good public policy to provide entitlements even though some of the costs may be socialized because all customers benefit from the expansion of gas."[11] In August 2021, Illinois Governor JB Pritzker signed a bill intended to extend gas service to a rural community by allowing the gas utility to provide up to 250% of its normal gas line extension allowance.[12]

At a nationwide level, in 2017, the National Association of Regulatory Utility Commissions convened a task force focused on education to "bring the benefits of natural gas as an energy source to more consumers," detailing the many gas expansion programs in states across the country.[13] Over the past decade, dozens of states have approved gas expansion plans for utilities, sometimes even offering incentives to utilities for system expansion or approving incentives to customers switching to gas service. The American Gas Association (AGA) boasts that a new gas customer is added every minute of every day.[14]

Other Approaches

Another method, though less common, provides a set number of feet of gas pipeline, regardless of the expected usage of that building. For example, New York's statute provides a "100-foot rule," requiring utilities to pay for 100 feet of pipeline per new customer. This approach can result in under-recovery of costs, as the cost of construction may—and often does—outweigh the expected revenue from that customer.[15] Additionally, this kind of policy often requires the utility to pay for the footage no matter the per-foot installed cost; some installations may be vastly more expensive and less economic than others.

In all cases, when the cost of constructing the main and service extensions exceeds the allowance (or the length of extension exceeds the utility's obligation to provide free footage), customers are required to

pay the difference. Depending on the utility, this amount might be paid up front or applied as a monthly surcharge on the new customer's bill. Some utilities also allow for some or all of a customer's contribution to the cost of the main extension to be refunded if additional customers hook up to the extension within a given period of time (typically between 5 and 10 years).[ii] Other costs that new customers may cause, such as the cost of their gas meters or new pipelines and capacity infrastructure built to match rising demand, are usually covered by the utility and excluded from these calculations.[16]

Water Utility Extension Policies

While both gas and electric utilities tend to apply a similar rationale to their line extension allowance policies, water utilities have quite different approaches to allocating extension costs, offering an informative comparison of alternate philosophies for cost allocation.

As regulated monopoly utilities, water and gas systems have some economic similarities. Both utilities share principles of fair rate design and have high fixed capital costs for infrastructure with variable operating costs. Both water and gas have generally been considered public goods and necessities. However, unlike water or electricity, gas exclusively serves uses in buildings that could be met through other technologies or resources. Still, gas utilities incentivize system expansion by lowering the up-front costs of gas service to new customers (via line extension allowances, utility advance programs, and refund structures), whereas water utilities typically place much of the capital burden of system expansion on new customers.

Water utilities do not typically provide construction allowances, and many also charge system development charges (SDCs, also known as system development fees, or SDFs) for new hookups. For many water utilities, the economic rationale for new customer fees is a goal of keeping rates constant across new and old customers (i.e., using these fees to keep certain capital expenditures out of the rate base), and this parity across existing and new customers is valued more highly than lowering the up-front costs to new customers. These charges are meant to account for the benefits new customers receive from the capital investment that has already occurred in the water system. While this helps keep rates stable, it creates a positive feedback loop for smaller utilities with small rate bases that must therefore continue to charge SDCs in order to keep rates flat.

Both approaches to allocating the costs of system expansion—construction allowances and SDCs—involve trade-offs in what regulators and utilities consider to be fair and in the public interest.

ii. For example, Xcel's refund policy for gas main extensions in Colorado allows for refunds up to the full amount of the customer's contribution based on the number of additional customers that connect to that main extension within 10 years of its construction. Specifically, the tariff sheet states: "For each additional Permanent Service customer connected directly to a gas Distribution Main Extension under an Extension Agreement upon which there is unrefunded Construction Payment remaining, Company will recalculate the extension considering the costs of any additional facilities and considering the Construction Allowance provided by such additional customer or customers, as well as appropriate sharing of Construction Payment requirements among all customers to be served by the gas Distribution Main Extension."
(See p. 191 at **https://www.xcelenergy.com/staticfiles/xe/PDF/Regulatory/psco_gas_entire_tariff.pdf**.)

Changing Context Challenges the Rationale

Both the economic and public benefits rationales for gas line extension allowances assume permanent gas use at today's volumes—but this is at odds with climate policies, improved electric heating technologies, and shifting market trends. Furthermore, gas construction allowances pose a direct barrier to electrification, which is a critical climate strategy. Additionally, there is growing recognition that widespread gas combustion poses major risks to the global climate and to public health.[iii]

Context and Expectations for Future Gas Use Have Changed

Gas line extension policies are based on outdated and risky assumptions of a future with consistent or growing gas usage. Climate plans in states across the country clearly demonstrate that a shift away from gas use in buildings is a key component of the most cost-effective decarbonization pathways. Several states have already enacted policies that call for a substantial decline in gas consumption, such as:

- Colorado's Greenhouse Gas Roadmap shows a 94% reduction in gas usage in residential and commercial sectors by 2050.[17]
- Massachusetts states that "electrification of space and water heating is a low-risk, cost-effective strategy for decarbonizing the majority of buildings," and "the use of gas for building heat must start to decline in the near term."[18]
- Maryland's Greenhouse Gas Reduction Act Plan shows the residential building sector dominated by electric heat pumps by 2050.[19]
- New Jersey's Energy Master Plan requires a transition plan for a fully electrified building sector.[20]
- New York's Climate Action Council found that all mitigation scenarios that meet the requirements of the Community Protection and Climate Leadership Act rely on "more rapid and widespread end-use electrification and efficiency."[21]

These policies and plans, and others like them across the country, make clear that meeting climate goals will require vast changes to the way gas is used in buildings today.

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iii. For more on the air quality and health impacts of gas use, see the report ***Gas Stoves: Health and Air Quality Impacts and Solutions***.

While hydrogen and other alternative fuels may be used in specific applications, overall gas use is likely to decline dramatically through both expanded energy efficiency and electrification. The supply of alternative fuels such as renewable natural gas (RNG), or methane-rich gas captured from decomposing organic matter, simply cannot meet the needs of the end uses currently served by gas at anywhere near today's volumes. The optimistic scenario from the American Gas Foundation (AGF) and ICF International finds that potential RNG supply would meet only 12% of current US gas demand by 2040. This limited supply would come with high costs of $7–$20 per MMBtu for RNG, compared with $2–$4 for fossil gas in 2020 and $5–$6 during the late 2021 gas price spike at the time of this report's writing.[22]

Natural Resources Defense Council's assessment of the ecologically sound supply of RNG is about half the AGF's estimate, just 3%–7% of current US gas demand.[23] Given these constraints—in addition to questions about life-cycle carbon emissions from alternative fuels—it is clear that a decarbonized future will require major declines in gas consumption, through both efficiency and electrification.

Instead of reflecting this declining trajectory of gas consumption, line extension calculations implicitly assume new buildings will use gas far into the future. For most of its gas utilities, Washington State has used a "perpetual net present value" calculation, assuming new gas customers will provide revenue forever.[iv] Xcel Energy in Colorado requires "permanent service … where sufficient revenue to support the necessary investment is assured."[24]

In addition to a decline in the number of gas customers, the average customer's annual gas consumption is also likely to decrease over time, but extension policy assumes consumption will remain constant. In fact, gas use per household is already declining due to higher-efficiency gas appliances, better envelope sealing and insulation, and other efficiency measures.[25] Some gas utilities are initiating strategies for partial electrification,[26] in which customers would maintain gas service but consume much less gas. These strategies would undermine many of the calculations of future revenues from new gas customers.

Existing gas line extension policies across the country result in significant expenditure to expand the system. Yet given the expected changes in gas demand, utilities may not recover this expense through new revenues, which would require additional rate increases and pose financial risk to utility customers. Basing capital expenditures on the flawed assumption that households will continue to use a constant amount of gas every year, for decades to come, is a risky fantasy.

Line Extension Allowances Distort the True Costs of the System

By shifting costs onto existing ratepayers, developers of new buildings are not responsible for the true cost of construction. If developers were faced with the full cost of gas service—including several thousand dollars that are usually subsidized—they would be more likely to build all-electric. Line extension allowances create a situation in which developers do not have incentive to guard against the risks that gas customers may face down the line. That is, the decision makers in building design (e.g., developers, builders, and engineers) choose the option cheapest for them, while other gas system customers bear the up-front costs and the risk of escalating future costs on a transitioning gas system.

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iv. On October 29, 2021, the Washington Utilities and Transportation Commission issued a decision in Proceeding No. UG-210729 directing Avista, Cascade, and Puget Sound Energy to file revised line extension allowances. The new allowances will be calculated using a modified perpetual net present value calculation with an updated discount timeframe of seven years.

Current line extension policies create an uneven playing field for end-use technologies that don't use gas, such as ground-source and air-source heat pumps and induction stoves. The money currently spent on gas lines could instead be spent on cleaner alternatives that do not run the risk of burdening future customers with the cost of underutilized assets.

Line extension allowances can also encourage developers to make inefficient decisions. Consider a new commercial building, where all-electric construction would require additional infrastructure, such as a larger transformer. Currently, that additional cost, especially compared to a gas line offered for free or at low cost, could incent a developer to instead build with both gas and electricity. An expanded electric allowance that covered more costly electric service infrastructure, or otherwise offset the cost of all-electric buildings, would put the technologies on more even footing.

Expanding Gas Service No Longer Provides Public Benefit

Fundamentally, gas usage must decline to meet targets for zero or net-zero emissions across the US economy. Continuing to burn gas in homes and businesses is in direct opposition to this goal, because of its contribution to greenhouse gas emissions and the viability of electrification as an alternative.

Expanded gas use also contributes to direct emissions of methane via leaks. Given the extremely high global warming potential of methane, the UN Environment Programme clearly states that "reducing human-caused methane emissions is one of the most cost-effective strategies to rapidly reduce the rate of warming and contribute significantly to global efforts to limit temperature rise to 1.5°C."[27] Additionally, the alternatives to gas equipment, from heat pumps to electric and induction cooking, reduce human health harms caused by indoor air pollution from gas combustion.[28]

As discussed in the previous section, many states have highlighted that gas demand will need to fall dramatically in coming years to meet climate goals. Some utilities are beginning to clearly state that gas use will decline. In New York, Rochester Gas & Electric and National Grid's upstate business have agreed in joint proposals to stop further increases in gas sales, and to stop promoting oil-to-gas conversions.[29] Central Hudson has committed to reducing its gas sales.[30] ConEdison recently released a request for proposals for non-pipe alternatives to replacing leak-prone pipes. Alternatives to continued gas infrastructure investment (for example, electrification and demand flexibility) would allow for strategic pipe abandonment.[31]

Further, expanding gas service poses several important equity risks. As electrification becomes more prominent, there is a real risk of a utility "death spiral" where wealthier customers leave the gas system, leaving lower-income and renting populations responsible for paying for existing gas infrastructure.

Recommendations

Given the changing economic landscape and shifting societal priorities, the rationale for utility gas line extension allowances is no longer justified. In response, we offer three key recommendations:

1. **End or reform gas line extension allowances:** Given the economic risks that declining gas consumption will undermine new customer revenues over time, states have a strong basis for reforming line extension allowances. Additionally, the increased risk of stranded costs associated with expanding gas infrastructure and the growing recognition of the climate and health hazards posed by expanded gas use provide further reason to move away from these policies. At minimum, this necessitates a recalculation of allowance values with a diminished view of future gas sales and revenues. A stronger and more straightforward solution would be to eliminate the practice altogether. Leading states may also consider a model inspired by water utilities, in which new customers pay a system access fee that directly supports energy affordability for existing customers during gas system decarbonization.

2. **Expand electric line extension allowances for carbon-free buildings:** While the changing context challenges the rationale for gas line extension allowances, electricity service continues to be a necessity for all customers. A shift from new construction with gas to all-electric buildings is emerging as both a necessary climate strategy and an opportunity to eliminate the human health impacts of indoor fossil fuel combustion.[32] All-electric buildings will consume more electricity than their mixed-fuel counterparts and deliver greater revenue to electric utilities over time, but they are usually not eligible for any greater electric line extension allowances. Regulators can reform electric line extension policies to offer a higher allowance for all-electric buildings, in recognition both of their greater revenue contribution and their role in supporting climate policies. Such a policy was recently introduced for Portland General Electric when the Oregon Public Utility Commission approved a higher allowance for all-electric customers.[33]

   Notably, solely eliminating gas allowances creates the specific risk of increasing costs of construction for new affordable housing or other socially desirable construction and reducing the number of new units built. Expanding electric allowances and other all-electric incentives can support affordability and level the playing field. Pilot data suggests that there is minimal to no additional cost for all-electric multifamily buildings for affordable housing.[34]

3. **Evaluate the potential for line extension allowances to support new carbon-free energy services:** In some contexts, gas utilities might build and operate shared geothermal heating loops. This strategy is being piloted in Massachusetts by Eversource Energy and HEET, through the GeoMicroDistrict model, where utilities' district geothermal infrastructure delivers heating and cooling to multiple customers.[35] If regulators find it in the public interest to expand this model, it will need its own category of line extension policy and enabling regulation.

The Path Forward

The changes needed to align line extension policies with climate goals and customer interests could be initiated through different channels, and the best path forward will likely vary by state. Avenues for reform may be led by legislatures or regulators. Lawmakers may pass new laws to alter gas line extension policy or direct their state utility commissions to take action. In states like New York or Wisconsin, where gas line extension is written into statute, legislative change will be required. Or public utility commissions (PUCs)—who are tasked with ensuring safe, reliable, and affordable energy services—can amend their rules or instruct utilities to change their line extension policies. Because state utility commissions are increasingly tasked with addressing climate issues as part of their decision-making, eliminating or changing gas line extension allowances often fits within the existing mandate of PUCs.

Changing gas line extension policies represents a clear near-term action; while the transition to a clean, affordable building sector will require funding as well as many other policy and program changes, utilities and PUCs can act now. Gas line policies as they stand today pose significant financial risk to utility customers and exacerbate the challenge of decarbonizing the built environment. In practice, they act as an obscure fossil fuel subsidy and perpetuate a system that contributes significantly to climate change. Both climate urgency and financial prudence require reform of this niche but important policy.

Additional strategies for building decarbonization can be found in our 2020 report, ***Regulatory Solutions for Building Decarbonization: Tools for Commissions and Other Government Agencies,*** as well as our 2021 report, ***Decarbonizing Homes: Improving Health in Low-Income Communities through Beneficial Electrification***.[36]

Appendix: Case Studies

Line extension policies vary broadly from state to state. Some states, like New York, have specific and broad statutory requirements that determine how gas line extension policy is implemented. Other states, like California, require utilities to use a specific equation when calculating their allowances. Still others, like Colorado, have a universal framework that requires utilities to balance cost allocation between new and existing customers, but each utility applies to the Public Utilities Commission (PUC) for approval of its own method of calculation. In order to demonstrate a variety of approaches, we examine gas line extension policies in four states.

California

Current structure/practice: Revenue-based rationale

- Utilities are required by statute to provide access to service at reasonable cost.
- The California Public Utilities Commissions (CPUC) requires gas line extension allowances to be calculated based on the additional revenue the utility expects to receive as a result of each gas appliance installed by the new customer.
- Under current policies, allowances range from $1,700 to $2,700 for residential customers.
- For nonresidential customers, utilities calculate allowances on a case-by-case basis, using the same formula used to derive the standardized residential allowances.
- A recent staff proposal in the CPUC's Building Decarbonization Rulemaking docket (R.19-01-011) recommended eliminating allowances and other incentives for gas line extensions to encourage all-electric new construction.[37]

What can key actors do to modify current practice?

Legislature: State lawmakers could pass a bill requiring the CPUC to act (e.g., via a rulemaking) to align gas line extension policies with California's climate goals.

Public Utilities Commission: The CPUC could act in line with the staff proposal to eliminate gas line allowances and reform electric line extension policies to lower the up-front costs of building electrification. In addition to docket R.19-01-011, the ongoing gas planning proceeding (R.20-01-007) focuses on gas policy and planning and also implicates gas line extensions.

Utilities: In the absence of state action, utilities could propose eliminating gas line allowances of their own accord based on an argument that providing line extension allowances is no longer a reasonable use of ratepayer dollars.

Washington State

Current structure/practice: Revenue-based rationale

- Until recently, the Washington Utilities and Transportation Commission (UTC) has allowed three out of four gas utilities to calculate line extension allowances using a method that assumes new customers will remain on the gas system indefinitely, called the perpetual net present value (PNPV) method. (The other gas utility uses a formula based on expected usage.)

- Under existing policies, allowances for these three utilities range from $3,500 to $4,600 for new residential customers.

- Allowances for nonresidential rate classes vary from utility to utility; some calculate allowances on a dollars-per-therm (estimated annual usage) basis, whereas others use a simple cost cap.[v]

- The UTC issued a decision in October 2021 directing gas utilities to file revised line extension allowances based on a modified PNPV with an updated discount timeframe of seven years, which will result in allowances of roughly $2,000. [38, vi]

What can key actors do to modify current practice?

Legislature: State lawmakers could pass a bill to eliminate gas line extension allowances.

Utilities and Transportation Commission: The UTC could unilaterally eliminate gas line extension allowances by determining, among other things, that facilitating expansion of the gas system is no longer a reasonable use of ratepayer dollars. In September 2021, the UTC chair opened a docket to "consider whether natural gas utilities should continue to use the perpetual net present value methodology to calculate natural gas line extension allowances" (UTC Docket UG-210729). While commissioners have thus far declined to completely eliminate allowances for gas line extensions, they indicated that this issue would likely be discussed at greater length in the UTC's broader decarbonization docket, U-210553.

Utilities: Gas utilities could apply to the UTC for approval to reduce or eliminate their gas line extension allowances.

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v. Cascade's tariff has a $14,746 cost cap for commercial allowances: **https://www.cngc.com/wp-content/uploads/PDFs/Rates-Tariffs/Washington/2021_tariffs/8-Extension-of-Distribution-Facilities-Rule.pdf**.

vi. $2,000 is approximately how high allowances were prior to the implementation of the original PNPV method in the 2010s.

New York

Current structure/practice: Revenue-based rationale

- Utilities are statutorily required by Public Service Law, Section 31, to provide at least 100 feet of pipeline to new residential customers, free of charge.[vii]
- The New York Public Service Commission (PSC) has allowed utilities to expand this entitlement to provide new gas heating customers up to 100 feet of main plus 100 feet of service line extension for free.
- Utilities have testified in prior proceedings that these extensions are typically not revenue-justified.
- Policies for nonresidential customers vary but generally provide up to 100 feet of pipeline for free (some utilities do not provide free footage for dual-fuel nonresidential customers).[viii]

What can key actors do to modify current practice?

Legislature: Lawmakers would need to modify Public Service Law. Both the obligation to serve and the requirement to provide up to 100 feet of pipe for free require legislative amendment in order for other actors to align line extension policies with the state's climate laws.

Public Service Commission: Absent legislative action, the PSC could roll back its expansion of Public Service Law language to allow at most 100 feet of free pipeline. The PSC could also increase electric allowances to incentivize (and increase universal access to) efficient electric heating.

Utilities: Gas utilities can limit their gas line extension policies to the exact statutory language (i.e., providing exactly 100 feet for free). Utilities could also report the costs of the line extensions to support their assertions that these extensions are not revenue-justified, and they could argue for the modification of both gas and electric allowances to support electrification.

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vii. New York's Public Service Law, Section 31, specifically states: "In the case of any application for service to a building which is not supplied with electricity or gas, a utility corporation or municipality shall be obligated to provide service to such a building, provided however, that the commission may require applicants for service to buildings located in excess of one hundred feet from gas or electric transmission lines to pay or agree in writing to pay material and installation costs relating to the applicant's proportion of the pipe, conduit, duct or wire, or other facilities to be installed."
See **https://codes.findlaw.com/ny/public-service-law/pbs-sect-31.html**.

viii. For example, Brooklyn Union Gas (d/b/a National Grid) does not have an explicit policy for dual-fuel nonresidential customers. Note that "dual-fuel" in this context refers to customers whose gas end uses (typically generators) can be operated using a fuel other than gas (such as fuel oil).

Colorado

Current structure/practice: Embedded-cost rationale[ix]

- Utilities are required by statute to publish their line extension policies, including "provisions addressing steps to ameliorate the rate and service impact upon existing customers."[39]
- Utilities' allowances are based on an "average embedded cost" formula that approximates a new customer's contribution to sharing the fixed costs of the existing gas system.
- Allowances for new residential customers typically range from $550 to $1,400.[x]
- Policies for new commercial customers vary, but utilities tend to provide roughly $1,500 allowances for service lines and calculate allowances for main extensions on a case-by-case basis.[xi]

What can key actors do to modify current practice?

Legislature: Lawmakers could either eliminate gas line extension allowances outright or direct the PUC to modify its rules.

Public Utilities Commission: The Colorado PUC could eliminate gas line extension allowances or amend its rules governing line extension policies. Of note, the PUC recently listed gas line extension policies among the gas rules that may need to be modified in alignment with recent legislation and Colorado's climate goals.[xii]

Utilities: Modifications to utilities' methods of calculating line extension allowances are subject to PUC approval, which is based on the Commission's assessment of whether the allowances allocate costs fairly between existing and new customers. Utilities could apply to eliminate line extension allowances based on an argument that any amount of allowance does not allocate costs fairly among existing and new customers.

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ix. Colorado's largest gas utility (Public Service Company of Colorado, d/b/a Xcel Energy) uses an embedded-cost rationale; other gas utilities in the state use different methods of calculating line extension allowances.

x. The Mountain Division of Colorado Natural Gas provides allowances of up to $7,335.

xi. Xcel's policy can be found on page 236 (Tariff Sheet No. R87) of its tariff sheets: https://www.xcelenergy.com/staticfiles/xe/PDF/Regulatory/psco_gas_entire_tariff.pdf.

xii. See Decision No. C21-0516 in Proceeding No. 21M-0395G and Decision No. C21-0610 in Proceeding No. 21R-0449G. Decision C21-0610 proposes to amend Colorado's gas rules for line extensions by requiring that line extension policies adhere to the "principle that the full incremental cost associated with new development and growth shall be borne generally by the customers that cause those incremental costs" and that such policies must align with the state's greenhouse gas emissions reduction goals.

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