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Removing Legal Barriers to Building Electrification

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Executive Summary

Achieving California’s ambitious climate goals requires electrifying existing buildings that currently rely on natural gas for services such as heating and cooking. Utilities will eventually need to reduce or terminate natural gas service in portions of their service territories – or reduce those service territories themselves – with electricity service providing a substitute source of energy to heat buildings and power appliances like stoves and water heaters.

This process raises a number of challenging legal and policy questions. In California, section 451 of the Public Utilities Code articulates energy utilities’ “obligation to serve” their customers, requiring that they “furnish and maintain . . . adequate, efficient, just, and reasonable service” for customers in their service territories. Ordinarily, utilities cannot terminate service without providing “adequate” substitute service. And this requirement also grants customers certain due process rights, including adequate notice and an opportunity to be heard prior to service termination.

This paper evaluates the legal issues that the transition from mixed-fuel (natural gas and electric) to all-electric service may raise. Any electrification policy should satisfy these legal requirements and ensure that the transition is equitable. If not well managed, electrification might impose high costs on a dwindling number of natural gas customers, disproportionately impacting low-income individuals who lack the means or the control over their homes to electrify. But with a well-planned process, the transition to all-electric buildings can not only provide important indoor and outdoor air quality benefits but can also be affordable and equitable.

Electrification and The Obligation To Serve. Legal precedent in California has not precisely outlined whether and how utilities can substitute electricity service for natural gas service. It also remains unclear whether the obligation to serve requires utilities to provide natural gas in particular, or to support the end uses (e.g., heating and cooking) that natural gas service enables. But the California Public Utilities Commission’s previous interpretations of this obligation and interpretations of similar provisions in other states provide a general legal roadmap.

Relevant California Public Utilities Commission decisions have considered the convenience of the substitute service, and the particular impacts the substitution may have on vulnerable populations. When courts in other states evaluated substitution of service in the public transit context, they considered the number of people using the existing service, its profitability, the incentives available to smooth the transition, and the substitute service’s reliability, convenience, and impact on particularly reliant or vulnerable populations. Under these

metrics, electricity may be an adequate substitute for natural gas service, but additional regulation or legislation will likely be needed to create legal certainty for utilities and the communities they serve. An incentive structure to reduce the costs of electrification – especially for low-income populations – will likely be crucial to reduce legal risk to utilities and ensure an equitable transition for their customers.

Policy Recommendations. To address the legal uncertainties raised by termination of service, the Legislature could grant the California Public Utilities Commission broad authority to (1) manage the transition, (2) trim natural gas service territories, or (3) approve substitution of electricity service for natural gas service. Alternatively (or in addition), the legislature could clarify that the obligation to serve applies to energy end-uses, not the type of energy that facilitates them.

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Introduction

California is beginning a transition away from the use of natural gas in residential and commercial buildings. As the California Public Utilities Commission (“CPUC”) recognized in a recent order initiating a long-term planning process for the state’s natural gas system, “state and municipal laws concerning greenhouse gas emissions will result in the replacement of gas-fueled technologies and, in turn, reduce the demand for natural gas.” Cal. Pub. Util. Comm., *Order Instituting Rulemaking To Establish Policies, Processes, And Rules To Ensure Safe And Reliable Gas Systems In California And Perform Long-term Gas System Planning 2* (Jan. 16, 2020).¹

In 2019, at least 23 local governments banned natural gas-fueled appliances in residential new construction projects. Building Decarbonization Coalition, *Momentum: Accelerating Building Decarbonization 3* (Dec. 2019).² In coming years, falling costs of rooftop solar installations, electricity storage and electric appliances like heat pumps could accelerate electrification even in areas where it is not required. See National Renewable Energy Laboratory, *Electrification Futures Study: End-Use Technology Cost and Performance Projections Through 2050*, at 41-43 (2017) (projecting heat-pump price declines of 1% or more per year through 2050, with efficiency gains of more than 100% possible).³

As more homeowners and businesses disconnect from the state’s natural gas system, the fixed costs of maintaining that system will increase for those who remain. Those costs are likely to fall disproportionately on low-income individuals and renters. See Gridworks, *California’s Gas System in Transition 1* (2019).⁴ For such groups, the initial investment required to fully electrify may be prohibitive despite the potential long-term economic, air quality, and climate benefits of electrification. In rental units, electrification efforts face a “split incentive” problem: while landlords must pay for the capital costs of upgrades, renters may ultimately reap the rewards in the form of reduced energy bills and improved indoor air quality.⁵

¹ The docket card for this proceeding is available at https://apps.cpuc.ca.gov/apex/f?p=401:56:0::NO:RP,57,RIR:P5_PROCEEDING_SELECT:R2001007.

² Available at http://www.buildingdecarb.org/uploads/3/0/7/3/30734489/fossil_free_buildings_final_jan_13.pdf.

³ Available at <https://www.nrel.gov/docs/fy18osti/70485.pdf>.

⁴ Available at https://gridworks.org/wp-content/uploads/2019/09/CA_Gas_System_in_Transition.pdf.

⁵ This issue emerged in the CPUC’s recent proceeding to implement California Public Utilities Code section 783.5, which seeks to provide disadvantaged communities in the San Joaquin valley dependent on propane and wood stoves with access to electrical and natural gas-powered service. See Cal. Pub. Util. Comm., *Decision Approving San Joaquin Valley Disadvantaged Communities Pilot Projects 4*, 85-86, 156 (Dec. 13, 2018). Renters made up

These potential inequities could be minimized by a carefully managed transition away from natural gas, which could also generate substantial savings for California ratepayers by avoiding investments in infrastructure that will be abandoned prior to the end of its service life. A managed transition might take many forms, but given recent local government actions, one likely approach involves “pruning branches” of the natural gas distribution system. In this scenario, interested communities would elect to discontinue service on certain lower pressure distribution pipelines. A recent study sponsored by the California Energy Commission indicates that such an approach could reduce the magnitude of and delay the onset of significant rate impacts of building decarbonization, while allowing limited supplies of non-fossil (so-called “renewable”) natural gas to be put to its highest value use. Energy and Environmental Economics, *The Challenge of Retail Gas in California’s Low Carbon Future 1* (2020).⁶

Such a managed transition will raise a unique suite of legal issues. Utilities will ultimately need to terminate natural gas service, offering electric service as a substitute. Though natural gas and electric service enable similar activities, such as space heating and cooking, they are not identical services. This raises novel questions as to whether substitution would violate the statutory obligation to serve. In particular, prior to abandonment of infrastructure, a utility would desire certainty that it would not be required to reconnect customers. In addition, local government, utilities, and state regulators would want assurances prior to initiating conversion of a neighborhood to all electric service, that holdouts would not prevent ultimate abandonment of gas distribution infrastructure. Mandatory electrification would also deprive customers of access to natural gas service, raising potential due process concerns. Lastly, a managed transition could present financial challenges: natural gas customers may need to change out gas-powered appliances – such as water heaters, stoves, and ovens – for electric ones, possibly at substantial up-front cost.⁷

This paper analyzes the authority of the CPUC under current law to manage a transition away from natural gas service to existing residential and commercial buildings.⁸ Part I analyzes a utility’s obligation to serve under current California law. Part II considers the Due Process implications of terminating natural gas service to residential buildings. Part III discusses the

about 37 percent of homes in this program’s pilot communities. *Id.* at 14. CPUC addressed this issue via property owner and tenant agreements, and by requiring pilot program administrators to ensure tenants did not experience increased rents or evictions for a five-year period following appliance installations. *Id.* at 4, 86.

⁶ Available at <https://ww2.energy.ca.gov/2019publications/CEC-500-2019-055/CEC-500-2019-055-F.pdf>

⁷ Such upgrades may also necessitate other alterations within customers’ homes – for example, installing an electric water heater may require space that the original gas water heater did not.

⁸ Though this transition raises important questions about how cost-recovery will function for stranded natural gas assets – and the broader systemic impacts on rates – this paper will not focus on those dynamics.

possibility of substituting electric service for natural gas service, surveying analogous situations in other states and prior CPUC decisions. Part IV considers the implications of the transition for utilities that only provide natural gas service. Finally, Part V provides initial guidance on potential changes to existing law that would facilitate a transition from combined natural gas and electric service to all-electric energy provision.

Part I: The Obligation to Serve

A. Background Context

A critical consideration in managing building decarbonization and the transition away from natural gas is the “obligation to serve.” Originally articulated at common law, the obligation arises from the basic bargain between utilities and the state. *See Montgomery Ward & Co. v. N. Pac. Terminal Co. of Or.*, 128 F. Supp. 475, 490–91 (D. Or. 1953) (describing the common law emergence of the obligation to serve for common carriers); *see also, United Fuel Gas Co. v. R.R. Comm’n of Kentucky*, 278 U.S. 300, 308-309 (1929). In exchange for the grant of a monopoly over utility service in a given territory – in other words a broad exemption from antitrust law - utilities agree to provide service to every customer who wants it at regulated rates. *See id.* (the obligation to serve “does not permit [a utility] to pick and choose to serve only those portions of the territory which it finds most profitable.”).

Today, in California, that obligation is codified in section 451 of the California Public Utilities Code (or “the Code”):

Every public utility shall furnish and maintain such adequate, efficient, just, and reasonable service, instrumentalities, equipment, and facilities, including telephone facilities . . . to promote the safety, health, comfort, and convenience of its patrons, employees, and the public.

Primary responsibility for interpreting and enforcing section 451 lies with the CPUC. The CPUC exercises broad authority over utilities, particularly when it comes to ratesetting. *See Cal. Pub. Util. Code §§ 701, 770.* The CPUC also enjoys deference in its interpretation of section 451 as with other Code provisions, which will not be overruled by reviewing courts as long as the interpretation “bear[s] a reasonable relation to statutory purposes and language.” *Greyhound Lines, Inc. v. Pub. Utilities Comm’n*, 68 Cal. 2d 406, 410-11 (1968).

Because some courts in other states have read utility commissions' authority over abandonment proceedings as a corollary of their ratesetting and regulatory authority, the broad text in sections 701 and 770 likely works in the CPUC's favor in managing a natural gas transition. See *City of Norfolk v. Chesapeake & O. Ry. Co.*, 192 Va. 828, 839 (1951) (“[The] jurisdiction to grant such permission is based upon the same reasons and supported by the same authorities as the power which is as plainly vested in it to prescribe rates and to require facilities to be maintained.”). Thus, the CPUC likely has reasonably broad discretion in its management of the transition.

B. Court Decisions Interpreting Section 451

Despite the importance of section 451 to the regulation of utilities in California, case law interpreting the reach of the “obligation to serve” articulated therein is limited. One recent case provides some brief descriptive dicta describing section 451's application in the natural gas context.

In *S. California Gas Co. v. S. Coast Air Quality Mgmt. Dist.*, a case concerning air pollution regulation, the Court of Appeal commented that “Public Utilities Code 451 requires [SoCalGas] to provide gas services at just and reasonable prices.” 200 Cal. App. 4th 251, 259 (2011), *as modified on denial of reh'g* (Nov. 22, 2011). The court added that “California's Public Utilities Commission comprehensively regulates plaintiff's operations. This regulatory regime requires [SoCalGas] to charge just and reasonable prices and maintain facilities within its geographical service area.” *Id.*

A number of cases discuss the service obligation under section 451 in the context of water or electric service. These cases establish that utilities have to extend service to all paying customers within a designated service territory.⁹ Utilities must also make the necessary improvements and conduct necessary maintenance to the system.

Another California Supreme Court case addressed a utility's duty “to exercise ‘reasonable diligence and care’ to furnish a continuous and sufficient supply of electricity to its customers.” *Langley v. Pac. Gas & Elec. Co.*, 41 Cal. 2d 655, 660 (1953).¹⁰ That case involved a damages

⁹ For instance, in *Citizens Utilities Co. of Cal. v. Superior Court of Santa Cruz Cty.*, the California Supreme Court observed that under section 451 “[a] public utility in the nature of a water company is obligated by law to maintain and extend an adequate water service to all users in the district.” 59 Cal. 2d 805, 811 (1963). (That case involved a condemnation proceeding with facts not applicable here.) The court also noted that a water utility “is required by law. . . to make necessary improvements, additions and betterments to its system.” *Id.*

¹⁰ In addition to California Public Utilities Code section 451, the Court relied on (and quoted) a CPUC rule that no longer appears to be on the books. The duty to exercise “reasonable diligence and care” appears to have survived

claim arising from a power failure that was not caused by the utility. The Court held that the defendant's failure to provide notice of the power failure breached the duty to exercise reasonable care toward the electricity customer.

While these cases collectively suggest that courts are hesitant to release utilities from the obligation to serve, they stop short of providing a rule that can easily be applied in the context of the natural gas transition. The CPUC's previous interpretations of section 451 give the obligation to serve similar weight.

C. CPUC Decisions Interpreting Section 451

To assess whether a utility is breaching its obligation to serve, the CPUC has previously treated the "adequate, just, reasonable, and efficient" language in section 451's statutory language as factors to balance. See *Corona City Council*, 45 CPUC 2d 301 (Aug. 11, 1992), 1992 WL 672667. In *Corona City Council*, SoCalGas had closed twelve branch offices within its service territory, primarily in rural areas. SoCalGas argued that its rural customers could drive to a branch office that was an hour away, and that they could also make use of expanded telephone service. The CPUC held that by closing the branch offices, SoCalGas violated its section 451 obligations. The CPUC concluded that "the distance to be traveled to a branch office cannot alone define an adequate level of service. The number of customers... affected and the frequency of their travel are equally vital factors." *Id.* The CPUC noted that though SoCalGas had not shut off a basic service – like natural gas provision – its failure to provide adequate substitutes essentially led to the same result.

The CPUC has also interpreted section 451 to require a utility to provide continuous service despite business challenges. In *In Re S. California Edison Co.*, the CPUC held that Southern California Edison and Pacific Gas and Electric had an obligation to continue providing electric service at reasonable rates to all of their customers, despite looming bankruptcy. 206 P.U.R. 4th 141 (Jan. 19, 2001), 2001 WL 314674. The CPUC's decision included a temporary restraining order requiring the utilities "to maintain the status quo so as to avoid further degradation of provision of electric service and to avoid the irreparable harm to the public health and safety that would be caused by further degradation of service." *Id.* The decision affirmed that, under section 451, "PG&E and Edison must continue to provide reliable, safe, and

the CPUC's abrogation of that rule, however. See *Busalacchi v. Arizona Pub. Serv. Co.*, No. 12-CV-00298-H-RBB, 2012 WL 3069948, at *3 (S.D. Cal. July 27, 2012) (discussing *Langley v. Pac. Gas & Elec. Co.*, 41 Cal. 2d 655 (1953)).

adequate service to all Californians at just and reasonable rates, including continuing to enter into and maintain any current and future low-cost contracts to procure power.” *Id.*

Lastly, a 1970s decision by the CPUC interpreted section 451 to require an expensive reconnection of service rather than provision of an alternate energy source. In *In re Cummins*, the CPUC considered a demand by a PG&E customer that the utility restore electric service lines that had been destroyed by a flood. 72 CPUC 451 (Aug. 10, 1971), 1971 WL 26527. The expense of restoring this service greatly outweighed the possible revenue that PG&E would earn – in fact, even before the flood, the customer had used his electric service infrequently. PG&E offered to buy the customer a gasoline-powered generator, which would have been less expensive than reconnecting him to the grid. Nonetheless, the CPUC found that the obligation to serve required reconnecting the customer’s service (and indeed did not even explain why the generator alternative was inadequate).

The *In re Cummins* decision is distinguishable from the transition contemplated in this paper both by the unique fact pattern and by the substitute offered: a gasoline generator is a poor replacement for a grid connection. Nonetheless, like other CPUC decisions and court cases discussing section 451, it reflects a general reluctance to release utilities from the obligation to serve. See Part III.D, below.

D. Territorial Limitation on the Obligation to Serve

The only clear limitation on a utility’s obligation to serve is geographic, as “a public utility may not be compelled to extend its service beyond the territorial limits of its dedication.” *California Water & Tel. Co. v. Pub. Utilities Comm’n*, 51 Cal. 2d 478, 492 (1959).

A utility’s service territory “consists of (1) its filed map of certificated territory, combined with, (2) voluntary extensions undertaken pursuant to Section 1001 of the Public Utilities Code.” *Parker v. Apple Valley Ranchos Water Co.*, 82 CPUC 623 (Sept. 20, 1977), 1977 WL 42807. The Code and case law do not appear to contemplate procedures by which a utility or the CPUC might trim a utility’s service territory. Generally, however, the CPUC’s power over such matters is broad. See, e.g., *In Re Edwards to Be Included in Serv. Area of Cal-Am Water Co.*, 1 CPUC 2d 587 (June 5, 1979) (“This Commission has exclusive jurisdiction to determine the extent of a fixed utility’s dedication of service, and in making such a determination we will be guided by the rule of reasonableness.”). As discussed in Section V, trimming service territory of natural gas utilities thus presents one mechanism by which the CPUC might manage building decarbonization.

Part II: The Due Process “Right to Continued Service”

A. Notice and the Opportunity to be Heard

The statutory obligation to serve under California state law gives rise to a constitutional “right to continued service” for utility customers under the 14th Amendment’s Due Process clause. *Memphis Light, Gas & Water Div. v. Craft*, 436 U.S. 1 (1978). This due process right has historically provided some protection for customers who face a termination of service. Under *Memphis Light*, before canceling service for failure to pay, a utility must provide a customer with adequate notice and an opportunity to be heard. *Id.*

Those protections arise from state law provisions that establish utility service as a protected property interest. In general, government benefits or services constitute property interests subject to due process protections if the recipient has a “legitimate claim of entitlement” to the benefit. *Town of Castle Rock, Colo. v. Gonzales*, 545 U.S. 748, 756 (2005) (quoting *Board of Regents of State Colleges v. Roth*, 408 U.S. 564, 577 (1972)). Such entitlements “are created and their dimensions are defined by existing rules or understandings that stem from an independent source such as state law.” *Id.* But “a benefit is not a protected entitlement if government officials may grant or deny it in their discretion.” *Id.* Applying that rule in the context of a public utility’s obligation to serve, the *Memphis Light* Court commented:

Although the customer's right to continued service is conditioned upon payment of the charges properly due, '[t]he Fourteenth Amendment's protection of property . . . has never been interpreted to safeguard only the rights of undisputed ownership.' Because [the utility] may terminate service only 'for cause,' respondents assert a 'legitimate claim of entitlement' within the protection of the Due Process Clause.

436 U.S. at 11-12 (quoting *Fuentes v. Shevin*, 407 U.S. 67, 86 (1972)). The *Memphis Light* Court held that “the cessation of essential services for any appreciable time works a uniquely final deprivation,” and that customers were therefore entitled to a due process right to be heard prior to any shut off. *Id.*

Federal appellate courts have repeatedly relied on *Memphis Light* to hold that utility service is subject to due process protections. See *Golden v. City of Columbus*, 404 F.3d 950, 956 (6th Cir. 2005) (“It is well settled that the expectation of utility services rises to the level of a ‘legitimate claim of entitlement’ encompassed in the category of property interests protected by the due

process clause.”) (quoting *Mansfield Apartment Owners Ass'n v. City of Mansfield*, 988 F.2d 1469, 1474 (6th Cir. 1993)); *Ransom v. Marrazzo*, 848 F.2d 398, 412 (3d Cir. 1988) (“[O]nce a municipality (or, for that matter, a private utility company establishes a utility for its citizens, a citizen's expectation of receiving that service rises to the level of a property interest cognizable under the Due Process Clause.”); *DiMassimo v. City of Clearwater*, 805 F.2d 1536, 1540 (11th Cir. 1986) (“[T]he cessation of essential services for any appreciable time works a uniquely final deprivation.” (quoting *Memphis Light*, 436 U.S. at 20)).

Applying the *Memphis Light* rule, federal courts have required a “right to be heard in a meaningful way” before water service is disconnected. *Wayt v. Town of Crothersville*, 866 F. Supp. 2d 1008, 1021 (S.D. Ind. 2012). In that case, the defendant, a municipally-owned water utility, shut off the plaintiff’s water without providing her “an opportunity to interpose a formal request to be heard.” *Id.* The Court held that, “[g]iven the potential impact of unfounded decisions resulting from a disconnection of service when no opportunity exists to be heard by the final decisionmaker who is vested with discretion whether to disconnect service, due process requires reasonable protections to be provided.” *Id.*

Likewise, in *Mansfield Apartment Owners*, the 6th Circuit found that the city’s “regulation-mandated notice and hearing rights” for tenants facing a water shut-off comported with the requirements of the Due Process clause. 988 F.2d at 1476. Those rights included a “termination notice [that] is sent to both the tenant and the landlord,” a required hearing if a shut off is contested, and “a right to a hearing to dispute the amount of any charge assessed to” a water account. *Id.* at 1474.

Following from these precedents, a utility that plans to terminate service for failure to pay must:

- Notify customer of potential shut off and “of the availability of a procedure for protesting a proposed termination of utility service as unjustified.” *Memphis Light*, 436 U.S. at 15.
- Provide “some administrative procedure for entertaining customer complaints prior to termination.” *Id.* at 18.

As discussed below, the applicability of similar due process protections in the context of building electrification will depend on the scope of California’s obligation to serve.

B. State Law Basis for the Right to Continued Service

The constitutional “right to continued service” described in *Memphis Light* is conditioned upon existence of a *state law* obligation to serve. See *Memphis Light*, 436 U.S. at 11 (finding that the “for cause” requirement in state law generated “legitimate claim of entitlement” protected by the Due Process Clause). Courts have therefore distinguished *Memphis Light* from situations in which the state law obligation did not attach. See *Southside Tr. v. Town of Fuquay-Varina*, 69 F. App'x 136, 139 (4th Cir. 2003) (holding that because service to customer outside of city limits was purely contractual, it was not required by state law and thus not protected by the Due Process Clause); *Golden*, 404 F.3d at 958 (rejecting Due Process argument because plaintiff did “not rely upon any provisions of Ohio's landlord-tenant law” but instead “rest[ed] her case on the bare assertion that . . . water is ‘an absolute necessity of life.’”).

Thus, understanding the extent of the “right to continuous service” in California requires looking to California law. Relevant provisions in the Code either expressly or implicitly limit a utility’s discretion over the termination of service, including sections 451, 779.1, 779, 328, and 777. See Appendix A, *infra* (describing these provisions in detail).

Collectively, these provisions create a protected entitlement under the Due Process Clause and *Memphis Light*. The termination procedures in section 777 are similar to those considered by the 6th Circuit in *Mansfield Apartment Owners*, 988 F.2d at 147. The provisions strongly suggest that, once gas service is established, a utility or the CPUC may not revoke it “in their discretion.” *Town of Castle Rock*, 545 U.S. at 746.

If natural gas customers are indeed protected by a due process right to continued service, it could greatly complicate a complete transition away from natural gas. While a utility or the CPUC could meet the notice requirements discussed above in a number of ways, it would be more difficult to provide an actual opportunity to be heard. In any such hearing, the customer would need some avenue to restore service. See *Memphis Light*, 436 U.S. at 18 (“[S]ome administrative procedure for entertaining customer complaints prior to termination is required to afford reasonable assurance against erroneous or arbitrary withholding of essential services.”). But under a transition from natural gas, termination of service would be a foregone conclusion; any hearing on the matter would be a mere formality.

Substitution of electric service for natural gas service presents a possible solution to this apparent bind. As discussed in the next section, neither the statutory provisions nor the federal due process cases clearly establish whether the obligation to serve allows such substitution. If the obligation can be satisfied by offering adequate substitute service, the due process

requirements of notice and an opportunity to be heard might not be implicated by a mandatory transition from gas to electric service.

Part III: Electrification as Substitute Service

A. Is the obligation to serve source-specific?

Neither the Code nor the decisions applying it clearly establish whether the obligation to serve (and the concomitant due process right to continued service) is energy-source specific—that is, whether the obligation applies to *natural gas* service in particular. While that would be a straightforward reading of the Code and cases, there is an argument that the service provided by a natural gas utility is not the gas itself, but the ability to heat one’s home and water and to cook. Under this energy-source-agnostic reading of the Code, and under cases discussing substitution of service in other contexts, provision of electric service to replace natural gas service would satisfy the obligation to serve.

Section 451 of the Code does not establish the type of service to which the obligation to serve applies. See Code § 451 (“Every public utility shall furnish and maintain . . . adequate, efficient, just, and reasonable service.”). In general, however, the Code deals with energy sources separately. For example, section 328 of the Code states that “[i]n order to ensure that all core customers of a gas corporation continue to receive safe basic gas service in a competitive market, each existing gas corporation should continue to provide this essential service.” Although the legislature added this provision in the year 2000 as part of the restructuring of the state’s natural gas market, its plain language nonetheless suggests that utilities do not have discretion to replace natural gas service with some other form of energy service.

An early California Supreme Court case likewise states that the obligation specifically requires utilities to supply gas in particular. In *Sawyer v. S. California Gas Co.*, the court discussed “[t]he obligation imposed by law upon a gas company as a public utility to serve all who apply to it for gas without discrimination. . . .” 206 Cal. 366, 372 (1929). *Sawyer* involved an accident caused by a leaking meter accessed by a customer, and so the utility’s obligation to serve was not directly at issue. Moreover, there appear to have been no decisions since *Sawyer* applying that rule. The only recent application of that rule appears in a dissenting opinion in the court of appeals: “The Gas Company is obligated to provide gas to [plaintiff]. . . .” *Radford Ventures, LLC v. S. California Gas Co.*, No. G047982, 2014 WL 950247, at *8 (Cal. Ct. App. Mar. 12, 2014) (citing *Sawyer*, 206 Cal. 372 (1929)). And that case, like *Sawyer*, did not concern the extent of the utility’s obligation to serve, but instead involved a narrow property law question concerning the installation of meters.

On at least one occasion, the CPUC itself has held that provision of an alternate source of energy does not release a utility from the obligation to serve. As discussed in Section II, above, the CPUC's 1971 decision in *In re Cummins* rejected a proposal by a utility to provide a diesel generator to a customer whose electric service had been cut off by a flood. 72 CPUC 451 (Aug. 10, 1971), 1971 WL 26527. Although the CPUC refused to release the utility from its obligation to serve, it did so with no discussion of the proposed alternative. Nonetheless, it is worth noting that the utility's proposal to provide the customer with a diesel generator did not represent alternative *service* (which involves a continuing relationship) so much as a means of limiting the disruption caused by a *termination* of service.

At least one due process case in another state has taken a source-agnostic view of the obligation to serve. Considering the scope of the due process right to continued service based on Minnesota's obligation to serve, that state's Supreme Court has held that there is no right to any particular "method of delivery." *Smith v. City of Owatonna*, 450 N.W.2d 309, 311–12 (Minn. 1990). In that case, the City-defendant had required the homeowner-plaintiffs to replace their low-pressure service lines with high-pressure lines at their own expense. The court held that the defendant "is not terminating gas service to plaintiffs' properties or refusing service. Rather it is implementing a change in the method of delivery of that service." *Id.*

B. Substitution of Service Generally

While natural gas specific case law regarding substitution of service is sparse, Courts and utilities commissions in other states have often allowed substitution of one type of service for another. Though most of these decisions are in contexts which differ dramatically from the transition we consider here, they nonetheless provide helpful parameters for determining the viability of substituting electric service for natural gas service.

When evaluating the adequacy of a substitute service, commissions across the country have historically considered conversion costs to the consumer, the rates charged for the new service, whether the new company is dependable and financially stable, and the convenience of the new service. See *The Duty of a Public Utility to Render Adequate Service: Its Scope and Enforcement*, 62 Colum. L. Rev. 312, 320 (1962).

A number of transportation-related cases from other states suggest that service may be abandoned in favor of a substitute when the number of people using the original service is minimal and the costs of maintaining it are high. In *City of Norfolk v. Chesapeake & O. Ry. Co.*, 192 Va. 828, 841 (1951), the utility replaced ferry boats with busses, which saved the utility \$200,000 per year, because the number of passengers on the ferry route had decreased substantially. City of Norfolk sued to maintain the ferry route. The court noted that an average

of 12.8 people used the ferry per trip, since more people were driving and using buses. The court found that the obligation to serve allowed the utility to substitute a less pleasant form of service, stating: "It is doubtless true . . . that the ferry service provides a nice, short boat trip, and at times it is very enjoyable. The record in this case discloses however that it is an extremely expensive luxury paid for by appellee, and the commission was compelled to be just before it could be generous." *Id.* When and where gas service is not cost-efficient, possibly including air pollution and climate externalities, similar logic may extend to replacing gas stoves with electric ones.

Similarly, in *City of Princeton v. Pub. Serv. Comm'n*, 268 Wis. 542 (1955), the state commission authorized the railroad service to stop operating on certain lines, when only 12,457 passengers rode the train per year and one of every 3.3 people riding the train had a car. While there was no parallel alternative service, the state commission allowed the utility to substitute bus service for train service. The court held that the primary matter for determination was whether public convenience and necessity requires a continuance of the service. Other transportation cases from that era reached similar conclusions. See *Safford Chamber of Commerce v. Corp. Comm'n*, 81 Ariz. 226, 228 (1956); *Application of Cent. R. Co. of N. J.*, 41 N.J. Super. 495, 500 (App. Div. 1956).

Decisions by the CPUC suggest that convenience is also an important consideration in determining the validity of substitutes – though these decisions typically involve situations easily distinguishable from any proposal to replace gas service with electric service. In *Higginbotham v. Pacific Bell Telephone Co.*, the CPUC rejected a telephone company's proposal to "substitute a less accurate and less convenient means of obtaining local toll pricing information." No. 01-03-028, 2002 WL 31015205 (Aug. 22, 2002). This decision involved informational white pages listings posted by the telephone company, and not the telephone company's core service. Nonetheless, the CPUC's decision relied on Code section 451 for the rule that "every public utility shall furnish and maintain such adequate, efficient, just, and reasonable service." The CPUC found that substituting a less-convenient and error-prone informational system was unreasonable under this provision. *Corona City Council*, discussed in Section I, above, likewise found that the inconvenience to customers was an important consideration. 45 CPUC 2d 301 (Aug. 11, 1992), 1992 WL 672667. In that determination, the CPUC held that SoCalGas violated its section 451 obligations when it closed twelve branch offices because it had not provided adequate substitutes for the closed offices, and it had not considered "[t]he number of customers [] affected and the frequency of their travel." *Id.*

C. The Importance of Community Preference and Equity

Community preferences have been important in other processes to shift communities from one energy source to another. In its implementation of California Public Utilities Code section 783.5, the CPUC gave significant weight to community preferences in selecting pilot energy access projects.¹¹ See Cal. Pub. Util. Comm., *Decision Approving San Joaquin Valley Disadvantaged Communities Pilot Projects*, 63-64 (Dec. 13, 2018)¹² (finding that a community’s “clearly stated preference for electrification” should not be ignored, and accordingly approving the least-cost electricity pilot); *id.* at 36-37 (requiring PG&E to offer certain communities the choice of natural gas or electricity). The CPUC also incorporated a mechanism for continuous community feedback. *Id.* at 12. Similarly, understanding and accounting for community preferences in electrifying existing buildings would align with the emphasis on consumer convenience in both judicial and administrative precedent.

Offering carefully crafted incentives for electrification can simultaneously honor community preferences and facilitate California’s ambitious climate goals, ensuring cost is not a barrier for both communities that already wish to electrify and individuals within them.¹³ Programs that leverage bulk purchasing of electric appliances, provide bill protections, and facilitate owner-tenant agreements to alleviate split incentives could be appropriate in some circumstances to help realize community preferences for electrification. See, e.g., Cal. Pub. Util. Comm., *Decision Approving San Joaquin Valley Disadvantaged Communities Pilot Projects*, 4, 77-78, 85, 104 (Dec. 13, 2018) (leveraging these mechanisms to achieve equitable energy access at low cost to communities and utilities).

D. Substituting Electric Service for Natural Gas in California

Assuming California courts evaluate the transition as courts have treated abandonment cases in other states, electric heating and stoves may well be considered an adequate substitute for gas

¹¹ Because this proceeding involved facilitating community transitions from a non-utility fuel (propane or wood) to a utility fuel (natural gas or electricity), it implicated different legal questions than electrification of building functions and appliances powered by natural gas.

¹² Available at <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M252/K052/252052725.PDF>

¹³ The CPUC’s fuel substitution procedures may be relevant to designing these programs. See Fuel Substitution in Energy Efficiency, Cal. Pub. Util. Comm., <https://www.cpuc.ca.gov/General.aspx?id=6442463306> (last visited Mar. 30, 2020).

service under section 451. Factual findings that electrification would create inconvenience, added costs, and risks to reliability might inhibit such a conclusion. But even inconvenient or costly substitution will be more defensible if only a few individuals are transitioned involuntarily. Likewise, subsidies to limit the adverse impacts of electrification on vulnerable populations will reduce legal risk.¹⁴

1. Inconvenience, Cost and Risks to Reliability

In general, a customer's preference for an existing service – in isolation – is not enough to render a substitute service inadequate. *See City of Norfolk*, 192 Va. 828, 841 (ferry service might be more enjoyable, but that did not make bus service an inadequate substitute); *but see City of Princeton*, 268 Wis. 542 (public “preference” for public transit was generally important in determining what service was required, though not dispositive). So here, if customers find substitute electric service harder to cook with (for example), or less convenient for the layout of their homes, these views are likely not sufficient for service to fall short of section 451's requirements.

Subsidies that make substitute service more affordable have previously been important in courts' reasoning. *See Application of Cent. R. Co. of N. J.*, 41 N.J. Super. 495, 502-503 (App. Div. 1956) (the cost of the existing Lincoln Transit bus service was slightly higher than railroad prices, but substitution was still permissible, partly because Lincoln Transit was considering reduced fares for that route). Accordingly, providing a mechanism to limit electrification costs for consumers may be a critical way to create greater legal certainty.

If electrification creates substantial inconveniences for customers – for example, due to the hassle and expense of installing new electric appliances – it could conflict with CPUC precedent. The CPUC has previously found that a substitute fails to satisfy section 451 when it creates both delay and error-prone service for customers, with only economic benefits to the utility and no other “compelling reason” for replacing the previous service. *See Higginbotham*, 2002 WL 31015205; *Corona City Council*, 1992 WL 672667. Continued power shut-offs to ensure public safety during periods of high wildfire risk may make these cases more apposite: a fair argument could be made that electricity service may be less reliable than the gas service it would replace. *See, e.g., PG&E's Role in Sonoma Fire Questioned As Power Outage Frustrations Grow*, Wash.

¹⁴ The CPUC currently possesses power under section 761 of the Code to “fix” any “rules, practices, equipment, appliances, facilities, or methods” that it finds to be unjust or unreasonable. It can do so, by among other things, ordering a utility to furnish a commodity or render a service. *See generally Southern. Pac. Co. v. Public Utilities Commission*, 41 Cal. 2d 354 (1953) (upholding CPUC's order that passenger train operator substitute modernized railway cars for antiquated ones). Under this authority, the CPUC could theoretically order a utility to subsidize electrification. But section 761 has never been used in such a sweeping manner, and such an unprecedented exercise of authority would face serious legal challenges.

Post (Oct. 29, 2019), <https://www.washingtonpost.com/business/2019/10/29/pges-role-sonoma-fire-questioned-anger-around-power-outages-spreads/> (describing power shutoffs).

The inconvenience of installing an electric appliance will be significant in some instances. Indeed, this inconvenience may even exceed the inconvenience of driving for hours to get service at a branch office, described in *Corona City Council*. But incentives that smooth the installation process – particularly for vulnerable customers – would distinguish electrification from earlier CPUC precedent rejecting substitute service. Offering propane service at a premium might also sharpen that distinction.

2. Number of People Affected

The weightiest factor in many decisions considering abandonment of utility service is the number of individuals who use the existing service. Courts have allowed abandonment when usage is very low. *See City of Norfolk*, 192 Va. 828 at 841 (an average of 12.5 people used the ferry per trip, because many people had transitioned to busses and cars); *City of Princeton*, 268 Wis. 542 at 423 (the train served 12,457 people per year, where there was an average of 1 car for every 3.3 passengers, so driving was a ready alternative); *Application of Cent. R. Co. of N. J.*, 41 N.J. Super 495 at 502 (only five commuters regularly used the service); *Safford Chamber of Commerce*, 81 Ariz. 226 at 230 (only 9,223 passengers used the train service in one year, with only one person each way on average between certain stations). This service was often localized. So, by analogy, if only a small number of households were still receiving natural gas service in a certain locality, termination might be justified.¹⁵

One approach to ensure that abandonment of natural gas systems does not run afoul of these precedents would be to provide strong and geographically targeted incentives for early electrification. Then, when only a few individuals remain, the CPUC will have a much stronger case for transitioning the remaining customers from gas service to electric service on a mandatory basis. This might resolve a “holdout” problem, especially since parties who might otherwise have trouble affording the transition would have an ample opportunity to avail themselves of the incentive problems.

This structure would also align with cost-causation principles, since the cost of maintaining natural gas infrastructure – reflected in rising rates for a decreasing number of individuals still using natural gas service – would fall specifically on those who opt into continued gas service

¹⁵ *Corona City Council* may be problematic precedent here, as it explicitly states that “the fact that the majority of customers [can use a service] does not justify a decision to deny [the service at issue] to a minority.” 1992 WL 672667. But because *Corona City Council* focused largely on the equity implications of SoCalGas’s decision, a more equitable approach to transitioning away from natural gas – e.g., subsidies for disadvantaged customers – could limit its applicability. *Id.*

rather than on the public generally. See *Midwest ISO Transmission Owners v. FERC*, 373 F.3d 1361, 1368 (D.C. Cir. 2004) (courts “evaluate compliance with [cost-causation] by comparing the costs assessed against a party to the burdens imposed or benefits drawn by that party”); *K N Energy, Inc. v. FERC*, 968 F.2d 1295, 1300 (D.C. Cir. 1992) (“[I]t has been traditionally required that all approved rates reflect to some degree the costs actually caused by the customer who must pay them.”); cf. *id.* at 1302 (extending energy infrastructure to serve new customers may be permissible under cost-causation principles if “those facilities are potentially useful to existing customers,” on the basis that “all customers enjoy the benefits” of the entire system) (internal citations and quotation marks omitted).

3. Protecting Vulnerable Populations

Subsidies or other support for substituting services – particularly for vulnerable populations – will be important in the transition and may reduce legal risk.¹⁶ Equity concerns permeate many abandonment and obligation-to-serve decisions.¹⁷ If the economic costs of the natural gas transition fall on low-income communities, renters, or the elderly, equity considerations may motivate the CPUC or a reviewing court to hold mandatory electrification in violation of section 451. *Corona City Council*, for instance, particularly emphasized the disproportionate impact of closing branch offices on elderly and minority customers, especially those in rural areas. 1992 WL 672667. Without subsidies for conversion of appliances, electrification would likewise have a disproportionate impact on these same vulnerable populations. Indeed, even if electrification is cost-effective for these populations in the long run, the initial cost of installing electric appliances might be prohibitive.

This problem could be avoided by provision of adequate economic incentives, minimizing the cost of the transition for the most vulnerable customers. Customers in vulnerable populations

¹⁶ Importantly, robust implementation of California’s climate goals (which will entail shifting away from using natural gas in buildings) is also an important way of protecting vulnerable populations, since these communities typically bear the brunt of climate shocks and impacts. See generally Seth B. Shonkoff et al., *The Climate Gap: Environmental Health and Equity Implications of Climate Change and Mitigation Policies in California - A Review of the Literature*, 109 *Climatic Change* 485 (2011). Other CPUC proceedings involving electrification have noted that reductions in greenhouse gas emissions are important benefits to quantify in cost-benefit evaluations. See Cal. Pub. Util. Comm., *Decision Approving San Joaquin Valley Disadvantaged Communities Pilot Projects*, 154 (Dec. 13, 2018) (reduction in greenhouse emissions is a quantifiable benefit of certain pilot programs).

¹⁷ *Corona City Council* focused largely on how SoCalGas’ decision to close certain branch offices – based largely on the political desirability of certain offices – disadvantaged the elderly, minority groups, and rural communities. This effect largely drove CPUC’s finding that this decision violated section 451. 1992 WL 672667. Likewise, a weighty factor in favor of abandonment of service in *Safford Chamber of Commerce* was that residents on the local Indian reservation – the primary users of train service – had been offered bus service that could serve as a complete substitute, with the agreement that residents on the reservation buying cheaper train tickets would be able to use those train tickets to ride the bus. 81 Ariz. at 230.

or communities could receive financial support covering the cost of appliance replacements and home renovations. Similar programs presently exist to support energy efficiency upgrades in low-income households, including the CPUC's Energy Savings Assistance Program and the Department of Community Services and Development's Low-Income Weatherization Program. See California Public Utilities Commission, Energy Savings Assistance Program, <https://www.cpuc.ca.gov/esap/> (last visited Oct. 1, 2020); California Department of Community Services & Development, Low-Income Weatherization Program, <https://www.csd.ca.gov/Pages/Low-Income-Weatherization-Program.aspx> (last visited Oct. 1, 2020). Future modifications to these programs might target assistance towards electrification of areas with upcoming gas distribution system maintenance upgrades, thereby avoiding costs while supporting the transition to all-electric buildings.

Part IV: Single-Fuel Utilities and Limitations on Applicability of Substitution Case Law

A. Single Fuel Utilities

An underlying assumption in the above discussion of substitution is that a utility will have the means of substituting electric service for natural gas service. While this assumption holds true in much of California, the territory served by SoCalGas faces a different set of circumstances. Because SoCalGas is a single fuel utility – it only provides natural gas service – it will be impossible for SoCalGas to transition customers away from natural gas without transferring service to another utility.

Such a service transfer may run afoul of the obligation to serve. Under section 451 of the Code, the obligation to serve applies to the utility itself. There is no suggestion in the Code that a utility may be released from its obligation if it can find another utility to assume responsibility for its customers.

On the other hand, in many of the abandonment cases discussed in Part III, above, the utility that provided the original service *arranged* the substitute service – but did not provide that service itself. See *City of Princeton v. Pub. Serv. Comm'n*, 268 Wis. 542 (1955). Rather, the original utility reached an agreement with another service provider to provide substitute service. See, e.g., *City of Norfolk v. Chesapeake & O. Ry. Co.*, 192 Va. 828, 830 (1951) (railroad contracted with Greyhound to provide substitute bus service for ferry service); *Safford Chamber of Commerce v. Corp. Comm'n*, 81 Ariz. 226, 230 (1956) (arrangement with Greyhound provided substitute bus service for railroad service).

Applying a similar approach here, SoCalGas – or more likely the CPUC – could arrange for an electric utility within its service territory to provide substitute electric service. So long as customers in SoCalGas’s territory continued receiving equivalent service through their electric utility, the obligation to serve would be satisfied. Under current law, this approach would be hindered by legal uncertainty arising from the obligation to serve. This uncertainty could be resolved by an amendment to the Code empowering utilities to make such arrangements with the acquiescence of the CPUC, as discussed in Part V, below.

B. The Profitability of Natural Gas

A core difference between previous abandonment proceedings and the natural gas context is the continued profitability of natural gas service. Because it is still profitable to provide natural gas service, previous abandonment and substitution case law may not be applicable.

Typically, abandonment proceedings occur when a utility wishes to stop providing a service because it is no longer profitable. *See, e.g., City of Norfolk*, 192 Va. at 832 (more than \$200,000 annually could be saved by substituting bus service for obsolete ferry service); *City of Princeton*, 268 Wis. at 546 (annual losses from continuing train service of \$43,000 to \$83,237); *Safford Chamber of Commerce*, 81 Ariz. at 228-29 (annual losses from continuing train service were approximately \$77,000).¹⁸

The level of granularity at which courts evaluate economic losses has varied. Courts have sometimes considered whether the company as a whole is experiencing losses due to the operation of certain services, and sometimes considered whether the specific service at issue (e.g., operation of a certain train line) is causing losses to the company. *Compare Safford Chamber of Commerce*, 81 Ariz. 226 (considering whether the company as a whole was operating at a loss) (citing *City of Princeton*, 268 Wis. 542) *with Application of Central R. Co. of N.J.*, 41 N.J. Sup. 495, 501 (App. Div. 1956) (considering the “cost of providing the service”).

Natural gas is currently profitable as an independent business line in California. For example, SoCalGas had \$641 million in earnings in 2019 (despite continued costs from the Aliso Canyon

¹⁸ These losses are bigger than they seem, given the relative value of a dollar in the 1950s. In addition, substantial economic losses for a utility can create due process concerns. *See, e.g., The Duty of a Public Utility to Render Adequate Service: Its Scope and Enforcement*, 62 Colum. L. Rev. 312, 320 (1962)). That likely factors into why courts are reluctant to require continued service at a loss. *But see In Re S. California Edison Co.*, 206 P.U.R. 4th 141 (Jan. 19, 2001), 2001 WL 314674 (requiring utility to continue providing service despite looming bankruptcy caused by the California Energy Crisis).

natural gas leak in 2015). Sempra Energy, 2019 Annual Report, at 60 (2019).¹⁹ In the longer term, however, natural gas profits may decline as electrification accelerates. And in the near term, providing natural gas to certain areas is likely to become unprofitable as customers disconnect from the natural gas grid.

In addition to undermining the applicability of abandonment precedents, profitability may give rise to a viable Fifth Amendment takings claim by a utility, particularly with regard to single-fuel utilities like SoCalGas. In general, the Constitution requires just compensation for takings of utility investments that are “used and useful.” *Duquesne Light Co. v. Barasch*, 488 U.S. 299, 302 (1989). That does not amount to a constitutional guarantee of profitability for such investments. See *Fed. Power Comm’n v. Hope Nat. Gas Co.*, 320 U.S. 591, 606 (1944). But a regulation that “jeopardize[s] the financial integrity” of a utility by, for instance, driving down the value of its assets could necessitate just compensation. *Duquesne Light*, 488 U.S. at 312. See also *In re Permian Basin Area Rate Cases*, 390 U.S. 747, 792 (1968). On the other hand, applicability of these precedents to a situation where state policy – climate goals in particular – mandate a transition away from fossil fuels, is uncertain.

But under a well-managed transition, such takings claims would have little basis. First, under the so-called “pruning the branches” approach, utilities and the CPUC could prioritize transitioning unprofitable areas of the gas distribution system. In areas where the revenue from gas customers is insufficient to cover costs of maintaining the grid, utilities could save money by transitioning the remaining customers to electric service. Second, a well-managed transition will provide gas utilities with sufficient notice of the possibility of customer loss and declining revenue. Utilities will have an opportunity to adjust their investment strategy accordingly, and will thus fairly bear the risk for any investments that do not yield a return. See *Duquesne Light*, 488 U.S. at 308–09 (“To the extent utilities’ investments turn out to be bad ones (such as plants that are canceled and so never used and useful to the public), the utilities suffer because the investments have no fair value and so justify no return.”).

Part V: Proposed Legislative Strategies for a Smooth Transition

Even if a transition to all electric buildings is possible under current law, utilities may be reluctant to abandon gas distribution service out of concern that they might eventually be

¹⁹ Available at https://www.sempra.com/sites/default/files/content/files/node-page/file-list/2020/sempra_energy_2019_annual_report.pdf

compelled to reinstate service at great cost. Similarly, regulators may seek certainty that the path taken is consistent with state policy direction aimed at achieving greenhouse gas emissions targets. Given the number of parties whose investments depend on clarity, and the magnitude of those investments, legal certainty is important for reducing risk and hence cost. A number of legislative clarifications could ensure that utilities can substitute electric service for gas service without violating the obligation to serve. These clarifications include:

- 1. Add a Code section that provides the CPUC with clear authority to manage the transition from gas.**

Under current law, there is legal uncertainty as to the circumstances in which utilities and the CPUC can manage the shift of customers from natural gas to electric-only service. One approach to resolving that uncertainty would empower the CPUC to manage the transition away from natural gas. This could take the form of a new provision of the Code providing the CPUC with broad policymaking power to manage the transition. For example:

The Commission shall implement a set of procedures for managing the effects of building decarbonization in California on natural gas service and rates. These procedures must ensure just and reasonable service while supporting building decarbonization efforts at the state and local level. These procedures may include a mechanism for transitioning customers and regions from mixed natural gas and electric service to all-electric service.

- 2. Amend the Code to allow the CPUC to change the service area of a particular utility.**

As noted in Part I, the Code does not clearly state how and when the CPUC may amend or reduce the service territory of a utility. Such authority arguably already rests with the CPUC, which could use that power to shift the service territory of a utility in which the obligation to serve applies. This would enable the CPUC to gradually shrink the number of customers that gas utilities are obligated to serve, which could then receive substitute electric service (the so-called “pruning the branches” approach). This would also help to create finality for the abandoning utility, which otherwise might fear that a customer who had electrified, or a subsequent purchaser of the property, might later request gas service at considerable cost.

However, an additional Code provision that expressly addresses the CPUC’s authority over a utility’s service territory would provide a stronger legal basis for such an approach. Such a provision might read:

The Commission may implement a set of procedures to reduce the service territory of a particular utility, provided that adequate substitute service is

available to all utility customers to support the existing end-uses of the utility service, either by that utility or by another utility.

3. Legislative amendment permitting provision of either natural gas or comparable electric service.

As discussed in Parts I and II, above, section 451 of the Code creates some ambiguity as to whether the obligation to serve applies specifically to natural gas service or could be construed more broadly to obligate service of either natural gas or electricity. A number of possible revisions to the Code might clarify that ambiguity. For example, an additional code provision might read:

When applied to a utility that provides natural gas service, Section 451 is satisfied when customers within the utility's service territory are able to maintain their existing end-uses at a level that is adequate, reasonable, just, and efficient.

Another approach would empower the CPUC to approve substitute utility service that would satisfy the obligation to serve.

The Commission may institute a process to substitute one means of utility service for another substantially equivalent means of service. A service shall be considered substantially equivalent if the Commission determines that it supports substantially equivalent end uses by consumers. Such end uses need not be identical to be considered substantially equivalent.

These sample amendments would not on their own jumpstart a managed transition from natural gas. But they would remove barriers by providing legal clarity such that utilities, the CPUC, local governments and California residents could better prepare for such a transition in coming years.

Conclusion

The transition away from natural gas in California presents a challenge and an opportunity. As more homeowners and businesses forgo natural gas connections in favor of fully electrified buildings, maintaining existing natural gas infrastructure will become increasingly expensive for those who remain on the system.

If properly implemented, building decarbonization could provide substantial benefits to Californians. Decarbonization will lead to cleaner indoor air and more green jobs, all while

helping California meet its climate targets. But shepherding an equitable transition will require planning and dedicated assistance to some residents: while wealthier homeowners will be able to afford the investments necessary to electrify heating and cooking appliances, renters and middle-class Californians may not have such options.

By carefully managing the natural gas transition, California could capture the benefits of building decarbonization and avoid the potential pitfalls and inequities. A managed transition would facilitate equal access to the benefits of fully electrified buildings. Likewise, a managed transition would avoid burdening any subset of energy consumers with the spiraling costs of natural gas infrastructure. A managed transition could also avoid, or at least minimize, the additional burden of stranded assets.

The legal obstacles to a well-managed transition are real but not insurmountable. Under current law, the CPUC already enjoys some authority to guide such a transition. But certain provisions of the Code may cast doubt on the CPUC's authority to work with communities and their utilities as they shift away from natural gas. Clarification of the scope of the CPUC's authority would provide the CPUC, utilities, and other stakeholders with the legal certainty they need. Similarly, clarification of the utilities' obligation to serve would allow utilities to independently create electrification programs without facing legal risk.

As the transition from natural gas accelerates, the policy decisions California faces will grow more difficult. But by acting now, the state could remove barriers to a smoother, more equitable path toward building decarbonization in California.

Appendix A: California Public Utilities Code Provisions Relevant to Termination of Service

Section	Title	Relevant provisions
451	Just and reasonable charges, service, and rules	Requires every public utility to “furnish and maintain such adequate, efficient, just, and reasonable service, instrumentalities, equipment, and facilities . . . as are necessary to promote the safety, health, comfort, and convenience of its patrons, employees, and the public.”
328	Legislative findings and declarations; essential gas service	<p>“In order to ensure that all core customers of a gas corporation continue to receive safe basic gas service in a competitive market, each existing gas corporation should continue to provide this essential service.”</p> <p><i>Note that this provision was implemented as part of a restructuring of the natural gas market; it did not specifically contemplate a utility’s obligation to serve.</i></p>
777	Individually metered residential service in a detached single-family dwelling, multiunit residential structure, mobilehome park, or labor camp; written notice of termination for nonpayments	Requires utilities to “make every good faith effort to inform the residential occupants” of rental units of impending termination of service for nonpayment.
779	Termination of residential service for nonpayment of delinquent account; notice; time; complaint or investigation of dispute; amortization of delinquency	Creates dispute, review, and appeal process utilities must follow prior to termination of service for nonpayment.
779.1	Period allowed for payment; notice of delinquency; contact with resident or notice prior to termination; third-party notification for elders or dependent adults; contents of notice	Requires utilities to “make a reasonable attempt to contact an adult person resident at the premises of the customer” prior to termination of service for nonpayment.