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Washington State Building Code Council
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DELIVERED VIA: sbcc@des.wa.gov

Re: In Support of Recognizing and Incentivizing Advanced Hybrid (Dual-Fuel) Systems in the Proposed Commercial and Residential Energy Code CR102 Rulemaking

Dear Chair Beyreuther and Members of the Washington State Building Code Council:

The Northwest Gas Association ("NWGA") appreciates the opportunity to provide comments regarding the proposed Commercial and Residential Energy Code (CR102). NWGA represents the natural gas utilities serving millions of residential, commercial, industrial, and institutional customers throughout the Pacific Northwest. Our members are deeply committed to improving energy efficiency, reducing emissions, maintaining system reliability, and ensuring that families and businesses continue to have access to affordable, dependable energy.

NWGA has participated constructively in Washington's energy code development process for decades because we believe building energy codes play an essential role in improving the performance of new and existing buildings. Washington has earned a national reputation for adopting building energy standards that consistently achieve significant efficiency improvements while preserving flexibility for builders, engineers, architects, property owners, and consumers.

The current rulemaking presents an opportunity for the Council to continue that tradition. Unfortunately, much of the discussion surrounding this code cycle has framed the future of building energy systems as a choice between electricity and natural gas—as though one technology must inevitably replace the other. That framing increasingly fails to reflect either the realities of the Pacific Northwest's energy system or the direction of technological innovation.

A growing body of work developed by regional utilities, planners, researchers, manufacturers, and the Pacific Northwest National Laboratory demonstrates that the future is not defined by selecting one fuel over another. Rather, it is defined by intelligently integrating both energy systems to maximize efficiency, reliability, affordability, and emissions reductions. The technology that best accomplishes those objectives already exists: It is the advanced hybrid—or dual-fuel—heating system.

NWGA respectfully urges the Council to recognize that hybrid systems represent one of the most promising opportunities available to advance the Legislature's energy-efficiency objectives while simultaneously supporting affordability, consumer choice, electric reliability, and emissions reductions. Rather than discouraging these technologies through the proposed CR-102, the Council should affirmatively encourage their deployment through technology-neutral, performance-based compliance pathways.

The Energy Transition Requires Better Solutions—Not False Choices

The Pacific Northwest is entering one of the most significant periods of energy transition in its history. Electricity demand is projected to grow at a pace not experienced in decades. Transportation is becoming increasingly electrified. Artificial intelligence and cloud computing are driving unprecedented demand for new data centers. Advanced manufacturing, semiconductor fabrication, and industrial electrification are expanding rapidly. Population growth continues throughout Washington, while state policy simultaneously seeks to reduce greenhouse gas emissions across nearly every sector of the economy.

These developments are reshaping the region's energy landscape. Historically, electricity and natural gas systems developed largely independently. Electric utilities planned generation, transmission, and distribution systems. Natural gas utilities planned pipeline and distribution infrastructure. Although the two systems occasionally intersected through gas-fired electric generation, planning remained largely separate. That is no longer the case.

Today, electricity and natural gas function as an increasingly integrated energy ecosystem. Natural gas fuels a substantial portion of dispatchable electric generation. Electric utilities depend upon natural gas infrastructure during periods of high demand and constrained renewable generation. At the same time, direct use of natural gas in homes and businesses substantially reduces winter electric demand by serving millions of space-heating, water-heating, cooking, and industrial loads that otherwise would be supplied by electricity.

The region's two energy systems have become complementary rather than competing. This conclusion is increasingly reflected in the work of regional organizations. The NWGA–PNUCC Gas-Electric Coordination Initiative emphasizes that maintaining reliability in the Pacific Northwest requires coordinated planning between the natural gas and electric sectors as load growth accelerates and the two systems become more interdependent. The initiative notes that future resource adequacy and system resilience depend on recognizing this growing interdependence rather than planning each system in isolation.

This evolution in regional planning has profound implications for building energy policy. If the electric and natural gas systems are increasingly interconnected, then building energy codes should encourage technologies that optimize the use of both systems—not artificially separate them or force one to displace the other.

Hybrid systems accomplish precisely that objective.

Hybrid Heating Systems Advance the Council's Statutory Objectives

The proposed Energy Code largely treats building heating as a choice between all-electric and direct-use natural gas technologies. Regional planning and field experience demonstrate that this binary approach overlooks one of the most promising pathways for simultaneously advancing energy efficiency, affordability, reliability, and emissions reductions: hybrid heating systems.

Hybrid systems pair a high-efficiency electric heat pump with a high-efficiency natural gas furnace that operates only during the coldest weather, periods of peak electric demand, or when system economics favor fuel switching. Rather than requiring customers to rely exclusively on one energy delivery system, hybrid systems utilize each resource where it performs best.

This approach is increasingly supported by regional technical research.

The Regional Technical Forum (RTF) has documented that actual heat pump performance depends less on equipment ratings than on installation quality, controls, duct conditions, weatherization, commissioning, and homeowner operation. Improper sizing, uncontrolled electric resistance backup, thermostat interactions, and housing characteristics can significantly reduce expected energy savings. The RTF further notes that much of the region's historic savings erosion has resulted from increased electric resistance operation rather than deficiencies in heat pump technology itself. The implication is important.

The question is no longer simply whether a heat pump is installed. The question is whether the overall heating system minimizes electric demand during periods when the regional electric system is most constrained.

Hybrid systems accomplish precisely that objective.

Unlike all-electric systems, hybrid configurations allow the heat pump to operate during moderate outdoor temperatures—where it is most efficient—while relying on a high-efficiency gas furnace during extreme cold events when heat pump efficiency declines, electric resistance backup is more likely to operate, and regional electric demand reaches annual peaks. This operating strategy produces benefits extending beyond the individual building.

Hybrid systems can:

- reduce winter peak electric demand;
- reduce reliance on electric resistance backup heating;
- lower future generation and transmission requirements;
- improve system resilience during prolonged cold weather events;
- maintain customer comfort during extended power system stress; and
- continue reducing greenhouse gas emissions relative to older gas equipment by combining high-efficiency heat pumps with high-efficiency furnaces.

Recent Energy + Environmental Economics (E3) analysis similarly concludes that high levels of building electrification substantially increase winter peak electric demand and require significant investments in generation, transmission, and distribution infrastructure. E3 identifies hybrid electrification pathways as an effective means of reducing peak loads while broader deployment

of clean firm generation technologies continues. The analysis further concludes that while natural-gas-fired generation remains necessary to serve winter electric peaks, hybrid heat pumps can achieve emissions that are comparable to—or lower than—fully electric heating because they reduce reliance on carbon-intensive peak electric generation.

Accordingly, the Council should avoid adopting code provisions that effectively eliminate or discourage hybrid heating systems. Instead, the Energy Code should preserve technology-neutral compliance pathways that allow hybrid systems to contribute to Washington's energy, reliability, affordability, and emissions objectives.

This balanced approach is fully consistent with the Legislature's direction that the Council consider multiple public interests—including energy efficiency, affordability, innovation, technological flexibility, and the broader impacts of its regulations—rather than optimizing a single policy objective in isolation.

Hybrid Systems Better Reflect the Reality of PacNW Weather

Washington's climate makes hybrid technologies particularly compelling. Much of the state experiences long periods during which electric heat pumps operate at exceptional efficiency, punctuated by relatively short but important periods of severe winter weather when heating demand rises dramatically. Those peak winter events place the greatest stress on the electric system, require the largest investments in generation and transmission capacity, and create the highest costs for utilities and ratepayers.

Designing an energy system around these relatively infrequent peak events is enormously expensive. Hybrid systems offer a more efficient alternative. Rather than sizing electric infrastructure to meet every hour of winter heating demand, hybrid systems utilize the existing natural gas delivery network during those limited periods when it provides the greatest value to the regional energy system.

This approach does not diminish the role of electricity. It strengthens it.

By allowing heat pumps to operate during the vast majority of the heating season while strategically utilizing natural gas during peak demand periods, hybrid systems maximize the strengths of both energy systems.

In effect, they transform two independent energy networks into a coordinated resource capable of delivering greater reliability, lower costs, and improved environmental performance than either system could achieve independently.

Regional Research Demonstrates that Hybrid Systems Better Balance Efficiency, Reliability, Affordability and Emissions

The discussion surrounding building electrification often assumes that maximizing electric heating is synonymous with maximizing building efficiency and reducing emissions. While electrification can provide significant benefits in many applications, the extensive work undertaken by regional utilities, planners, and researchers during the past several years demonstrates that the relationship is considerably more nuanced.

Increasingly, the Pacific Northwest's leading energy organizations are reaching a common conclusion: the region's greatest opportunity does not lie in replacing one energy system with another. Rather, it lies in optimizing the interaction between both systems through advanced hybrid technologies.

This conclusion has emerged not from policy advocacy, but from engineering analysis, utility demonstration projects, regional resource adequacy studies, and practical experience operating the Northwest's increasingly interconnected energy infrastructure.

The Council should carefully consider these findings because they represent one of the most significant developments in regional energy planning since Washington first adopted modern energy efficiency standards.

The Northwest Energy Efficiency Alliance Is Demonstrating the Promise of Hybrid Technologies

Perhaps the strongest evidence supporting hybrid systems comes from the Northwest Energy Efficiency Alliance (NEEA), an organization whose mission is to accelerate the adoption of energy-efficient technologies throughout the Pacific Northwest.

NEEA's Residential Dual-Fuel HVAC Initiative is particularly noteworthy because it is not sponsored solely by natural gas utilities. Instead, it represents a broad collaboration among electric utilities, natural gas utilities, public utility districts, Energy Trust of Oregon, manufacturers, contractors, and regional energy efficiency organizations. That diversity of participants reflects an emerging recognition that hybrid technologies provide benefits across the entire regional energy system rather than to any single industry segment.

The initiative seeks to answer a practical question that has become increasingly important as heat pump adoption accelerates across the Northwest: **How can the region maximize the efficiency and emissions benefits of heat pumps without unnecessarily increasing winter peak electric demand or requiring billions of dollars in additional electric infrastructure?**

The answer emerging from this work is compelling.

Instead of viewing natural gas and electricity as competing resources, the initiative demonstrates that the two systems can work together in ways that improve outcomes for customers, utilities, and policymakers alike.

The initiative identifies several objectives that advanced hybrid systems can simultaneously advance:

- Improved resource adequacy
- Lower winter peak electric demand
- Greater electric grid resilience
- Improved utilization of existing natural gas infrastructure
- Reduced customer costs
- Lower greenhouse gas emissions

- Enhanced customer comfort and satisfaction
- Improved demand response capabilities
- Better integration of utility planning across both energy systems.

These objectives closely mirror the goals repeatedly identified by the Council during this Energy Code cycle. The significance of this alignment should not be overlooked. Rather than forcing the Council to choose between competing public policy priorities, hybrid technologies demonstrate that multiple objectives can be achieved simultaneously through better engineering.

Hybrid Systems Improve Resource Adequacy by Reducing Winter Peak Demand

One of the most significant challenges facing the Pacific Northwest is not annual electricity consumption—it is **winter peak demand**. Utilities do not construct electric generation, transmission lines, substations, and neighborhood distribution systems based upon average annual energy use. They build those systems to meet the relatively small number of hours each year when electricity demand reaches its maximum.

Those few hours drive billions of dollars in infrastructure investment.

They also determine whether sufficient generating resources exist to maintain reliability during severe winter weather. The Council's proposed Energy Code should therefore carefully consider not only annual energy consumption but also the effect various technologies have upon those critical winter peaks.

Regional planning organizations have repeatedly warned that the Pacific Northwest is entering a period of unprecedented electricity demand growth: 1) Electrification of transportation; 2) Electrification of buildings; 3) Expansion of AI data centers; 4) Advanced manufacturing; and, 5) Population growth.

Each of these trends individually places increasing demands upon the electric system. Collectively, they represent one of the largest resource planning challenges in the Northwest's history. Against this backdrop, technologies that intentionally shift even more demand onto the electric system during its periods of greatest stress deserve careful evaluation.

Hybrid systems offer an elegant engineering solution.

Rather than relying exclusively upon electricity during extreme winter weather, advanced hybrid systems automatically transition to highly efficient natural gas heating during those limited periods when electric demand is highest. The result is not increased annual natural gas consumption. Instead, natural gas is used strategically during relatively few hours each year—precisely when doing so provides the greatest value to the electric system.

The NEEA Dual-Fuel HVAC Initiative recognizes this benefit explicitly, noting that continued deployment of conventional electric resistance backup in conjunction with heat pumps could add approximately **one gigawatt of additional winter peak demand** to the regional electric system. Hybrid technologies offer one of the most practical opportunities to substantially reduce that

additional peak load while preserving the efficiency benefits of heat pumps throughout most of the heating season.

One gigawatt is approximately equivalent to the output of a large utility-scale generating facility. Avoiding or deferring infrastructure of that magnitude represents an extraordinary benefit not only for utilities but also for every customer who ultimately pays for new electric generation, transmission facilities, substations, and distribution upgrades through their monthly utility bills.

Hybrid Technologies Improve Affordability Through Smarter Use of Existing Infrastructure

One of the Council's statutory responsibilities is to improve building energy efficiency in a manner that remains economically practical. This objective extends beyond the cost of equipment installed inside an individual building. It necessarily includes the broader infrastructure investments required to support those buildings over their entire service lives.

Washington's residents have invested billions of dollars over many decades constructing two highly sophisticated energy delivery systems. The first is an extensive electric generation, transmission, and distribution network. The second is an equally extensive interstate pipeline, local distribution, and underground natural gas delivery system.

Each system represents decades of investment by utilities, ratepayers, private companies, and public institutions. Each possesses unique engineering characteristics. Each performs certain functions exceptionally well.

Hybrid systems recognize the value of these existing public investments.

Instead of abandoning one infrastructure network while dramatically expanding another, hybrid technologies maximize the utilization of both. Electricity is used where it delivers the greatest efficiency. Natural gas is used where it provides the greatest reliability and the lowest incremental system cost.

This integrated approach enables the region to extract greater value from infrastructure that already exists while reducing the need for costly expansion of electric facilities designed solely to meet relatively infrequent winter peak conditions.

From a ratepayer perspective, this matters enormously. Every avoided substation, every deferred transmission project, every postponed transformer upgrade, every generating facility that need not be constructed solely to satisfy a handful of peak winter hours ultimately benefits consumers through lower utility rates. Building codes should encourage technologies that reduce—not increase—long-term infrastructure costs.

Hybrid systems accomplish precisely that objective.

Hybrid Systems Better Reflect the Reality of Customer Needs

Another important lesson emerging from regional demonstration projects is that customers value more than annual energy savings alone.

Homeowners consistently evaluate heating systems based upon comfort, reliability, operating costs, maintenance requirements, resilience during severe weather, and confidence that their systems will continue performing under changing conditions. Businesses evaluate similar factors while also considering operational continuity, employee productivity, customer expectations, and financial risk.

Hybrid systems perform well across all of these measures because they provide flexibility rather than limitation. Instead of requiring customers to depend exclusively upon one energy source regardless of operating conditions, hybrid systems preserve options. That flexibility becomes increasingly valuable as utilities develop sophisticated demand-response programs, time-varying electric rates, renewable natural gas markets, distributed energy resources, and other innovations that will shape the Northwest's future energy landscape.

Rather than locking buildings into a single technology pathway, hybrid systems position buildings to adapt as energy markets continue evolving. That adaptability should be viewed as a public benefit worthy of encouragement through Washington's Energy Code.

The Current CR-102 Proposals Discourage One of the Region's Most Promising Energy Technologies

The Council has consistently expressed its desire to adopt an Energy Code that improves energy efficiency, reduces greenhouse gas emissions, supports innovation, maintains affordability, and enhances system resilience. NWGA supports each of these objectives.

Ironically, however, several provisions within the proposed Commercial and Residential Energy Codes have the unintended consequence of discouraging one of the few technologies capable of advancing all of these goals simultaneously.

Rather than recognizing hybrid systems as a valuable innovation, the current CR-102 frequently treats them as a less desirable alternative to fully electric systems, even where regional engineering analyses demonstrate comparable—or in some cases superior—overall system performance. This represents a missed opportunity.

Instead of allowing innovation to determine the most effective solutions, the proposed code often prescribes preferred technologies through compliance credits, equipment replacement requirements, and infrastructure mandates. In doing so, the proposals risk slowing the deployment of precisely the type of integrated energy systems that regional utilities are actively developing and evaluating.

The Council should reconsider whether its regulatory framework is encouraging innovation—or inadvertently discouraging it.

The Current Code Penalizes Rather Than Rewards Hybrid Systems

One of the clearest examples is found within the Residential Energy Code compliance credit system. Pacific Northwest National Laboratory modeling prepared during this code cycle indicates that a high-efficiency heat pump paired with a natural gas furnace (System Type 4) and a comparable heat pump paired with electric resistance backup (System Type 2) exhibit nearly

identical modeled building energy performance under Washington-specific assumptions. Despite this comparable performance, the proposed Residential Code assigns a significantly greater compliance burden to the hybrid system through an additional 1.5-credit requirement.

From a building performance perspective, this distinction is difficult to reconcile. If two systems achieve substantially equivalent energy outcomes, yet one is assigned a higher compliance obligation solely because it incorporates highly efficient natural gas equipment, the Code is no longer functioning exclusively as a performance standard. Instead, it begins to influence technology selection independent of demonstrated building energy performance.

That approach is inconsistent with the principles that have historically guided Washington's Energy Code. Performance-based codes should reward measurable outcomes. They should not penalize technologies that achieve those outcomes through a different combination of energy resources. Similarly, several proposed commercial provisions impose additional compliance burdens on projects that retain natural gas equipment as part of otherwise highly efficient building systems. Replacement requirements for HVAC equipment and service water heating, revised efficiency credits, and electric-readiness provisions collectively increase the cost and complexity of integrated systems while making all-electric designs comparatively easier to achieve.

Viewed independently, each proposal may appear incremental. Viewed collectively, however, they establish a regulatory preference that discourages the very technologies regional utility research increasingly identifies as providing substantial system-wide benefits.

Building Codes Should Encourage Outcomes Rather Than Prescribe Technologies

Washington's Energy Code has traditionally been respected because it established ambitious performance objectives while leaving room for engineering innovation. Architects, engineers, builders, and manufacturers were challenged to achieve better building performance—not instructed which technology they must use.

That distinction has been one of the Code's greatest strengths.

Throughout this rulemaking, however, increasing emphasis has been placed on encouraging particular technologies rather than maximizing overall building performance.

Hybrid systems illustrate why this distinction matters.

- A modern dual-fuel system may reduce annual energy consumption.
- It may lower greenhouse gas emissions.
- It may improve customer comfort.
- It may reduce winter electric demand.
- It may defer expensive electric infrastructure investments.
- It may improve regional resource adequacy.
- It may enhance resilience during extreme weather.

Few technologies simultaneously achieve so many public policy objectives.

Yet under the current proposals, these systems often receive less favorable treatment than technologies that address only a portion of those objectives.

The Council should instead embrace a broader definition of building performance—one that recognizes buildings do not operate in isolation but as components of an increasingly interconnected regional energy system.

Building performance should include consideration of peak electric demand, infrastructure utilization, resilience, operational flexibility, and life-cycle system impacts alongside traditional measures of annual energy consumption.

Hybrid Systems Better Support Regional Resource Planning

One of the most significant developments during this code cycle has been the growing convergence between utility planning and building energy policy. Historically, building codes focused almost exclusively on reducing annual site energy use.

Today, utilities face a more complex challenge. They must simultaneously:

- meet rapidly increasing electricity demand;
- maintain reliability during extreme weather;
- integrate variable renewable resources;
- expand transmission capacity;
- accommodate rapid growth in data centers and advanced manufacturing;
- control costs for customers.

These challenges cannot be solved solely through greater building efficiency. They require smarter interaction between buildings and the regional energy system.

Hybrid technologies provide precisely that interaction.

Unlike conventional heating systems that operate independently of broader utility conditions, advanced hybrid systems can respond dynamically to changing electric system needs. During periods of abundant electric generation, heat pumps may provide nearly all heating requirements. During periods of constrained electric capacity, intelligent controls can shift heating load to the natural gas system, reducing electric demand precisely when that demand imposes the greatest stress upon the regional grid.

This capability effectively transforms individual buildings into flexible energy resources. Rather than contributing to winter peak demand, buildings become active participants in maintaining regional reliability. As utility demand-response programs continue evolving, these capabilities will become even more valuable.

Hybrid systems therefore should be viewed not merely as efficient HVAC equipment but as foundational technologies supporting the modern, integrated energy system envisioned by many regional planners.

Washington Has an Opportunity to Lead Nationally

Washington has long been recognized as a national leader in building energy efficiency. The next generation of leadership need not be defined by choosing between electricity and natural gas.

Instead, Washington can become the national leader in integrated building energy systems. Few states possess the unique combination of assets found in the Pacific Northwest:

- abundant hydroelectric resources;
- expanding renewable generation;
- an extensive natural gas delivery network;
- sophisticated electric utilities;
- nationally recognized energy research institutions;
- innovative utility partnerships;
- advanced market transformation organizations.

Together, these resources create an unparalleled opportunity to demonstrate how integrated technologies can achieve multiple public policy objectives simultaneously. The work already underway by NEEA, Clark Public Utilities, NW Natural, and numerous regional partners demonstrates that this future is not theoretical—it is already being tested in Washington communities.

The Council should ensure that Washington's Energy Code encourages this innovation rather than unintentionally slowing it. Doing so would position Washington not only as a leader in energy efficiency, but as the national model for integrating electric and natural gas systems to improve affordability, reliability, resilience, and environmental performance.

Recommended Revisions to the CR-102 and a Vision for Washington's Energy Future

The Council now has an opportunity to take an important step forward in building energy policy. Rather than adopting an Energy Code that unintentionally favors one energy source over another, the Council can establish a new framework that rewards measurable performance, encourages technological innovation, strengthens regional reliability, and better aligns building codes with the realities of the Pacific Northwest's integrated energy system.

The recommendations below are intended to accomplish that objective. They do not ask the Council to slow progress toward greater building efficiency or emissions reductions. Instead, they ask the Council to recognize that advanced hybrid technologies represent one of the most effective tools currently available to achieve those goals while also improving affordability, resilience, and electric system reliability.

The Energy Code Should Reward Performance Rather Than Fuel Choice

The cornerstone of Washington's Energy Code has always been its emphasis on measurable building performance. This principle should remain unchanged. Rather than assigning compliance advantages or disadvantages based upon the fuel serving a particular appliance, the Code should evaluate whether a building achieves the desired energy performance outcomes.

If two systems deliver substantially equivalent building performance, comparable emissions reductions, and equivalent occupant comfort, the Code should not favor one simply because it uses a different energy source. This principle is especially important as building technologies continue to evolve.

Advanced controls, demand-response capabilities, thermal storage, renewable natural gas, hydrogen blending, distributed generation, and artificial intelligence are rapidly changing how buildings interact with the energy system. Future innovations are likely to blur the traditional distinctions between electric and natural gas technologies even further.

Technology-neutral performance standards create space for that innovation. Technology-specific mandates often limit it. Washington's Energy Code should continue encouraging innovation rather than prescribing technological outcomes.

The Council Should Recognize Hybrid Systems as a Preferred Compliance Pathway

The Northwest Gas Association respectfully recommends that the Council explicitly recognize advanced hybrid HVAC and water-heating systems as an approved high-performance compliance pathway within both the Residential and Commercial Energy Codes.

Hybrid technologies should not be treated as an exception requiring additional justification. They should be recognized as an emerging best practice.

Specifically, the Council should:

- Remove compliance penalties currently associated with advanced dual-fuel HVAC systems where modeled building performance is substantially equivalent to all-electric alternatives.
- Restore technology-neutral compliance credits that reward demonstrated building performance rather than appliance fuel selection.
- Recognize advanced hybrid controls as an energy-efficiency measure eligible for compliance credit.
- Allow optimized hybrid HVAC and water-heating systems to satisfy replacement requirements without unnecessary additional compliance obligations.
- Recognize demand-responsive hybrid technologies as contributing to overall building energy performance.

In other words, **the Council should preserve and encourage hybrid heating pathways that combine high-efficiency heat pumps with high-efficiency gas furnaces. Hybrid systems provide an important bridge technology that reduces emissions while minimizing winter peak electric demand, reducing reliance on electric resistance backup heating, and supporting regional resource adequacy. Until sufficient clean firm electric generation and transmission resources are available, hybrid systems represent one of the most practical means of balancing decarbonization with reliability, affordability, and customer resilience.**

These changes would maintain the Council's energy-efficiency objectives while allowing continued innovation in one of the most promising areas of building technology.

The Council Should Encourage Smart Energy Management

One of the most exciting developments occurring within the building industry is the emergence of intelligent energy management systems. Future hybrid systems will no longer operate using fixed outdoor temperature "changeover" points.

Instead, advanced controllers will increasingly optimize operation based upon multiple dynamic inputs including:

- outdoor temperature;
- indoor comfort requirements;
- hourly electric prices;
- natural gas prices;
- carbon intensity of the electric grid;
- renewable generation availability;
- utility demand-response requests;
- regional resource adequacy conditions;
- customer preferences.

These systems transform buildings from passive energy consumers into active participants in maintaining regional energy reliability. Such capabilities directly support many of the objectives discussed throughout the Council's code development process. The Energy Code should encourage these innovations rather than unintentionally discouraging them through technology-specific compliance pathways.

Future Code Development Should Better Integrate Gas and Electric Planning

The discussions occurring within the Pacific Northwest increasingly demonstrate that energy planning can no longer occur in separate silos. Electric utilities, natural gas utilities, regional planners, and research organizations now recognize that reliability depends upon coordinated planning across both systems.

The NWGA-PNUCC Gas-Electric Coordination Initiative emphasizes precisely this point, concluding that growing interdependence between the electric and natural gas systems requires enhanced coordination, shared planning, and investment in both infrastructures to maintain affordability and reliability as regional demand grows.

Similarly, regional forecasts project substantial growth in electricity demand while warning that resource adequacy will remain a significant challenge if planned resources are delayed or fail to materialize. The initiative also notes that both the electric and natural gas delivery systems face increasing constraints during peak demand events, reinforcing the need for coordinated planning rather than policies that shift additional demand to one system without accounting for broader system impacts. Washington's Energy Code should reflect this evolving understanding.

Future code development should incorporate broader evaluation of:

- regional electric capacity impacts;
- winter peak demand;
- resource adequacy;
- infrastructure utilization;
- customer affordability;
- resilience;
- integrated gas-electric planning.

Annual site energy use remains an important metric. It should no longer be the only metric.

Washington Has an Opportunity to Become the National Model

The next generation of leadership should not be measured solely by how rapidly buildings electrify. Rather, it should be measured by how intelligently the State integrates multiple energy resources to achieve the best outcomes for consumers, businesses, utilities, and the environment.

The Pacific Northwest possesses unique advantages. It has one of the cleanest electric systems in North America. It possesses an extensive natural gas delivery network. It benefits from nationally recognized research institutions, sophisticated utilities, innovative technology developers, and a long history of regional collaboration.

Few regions are better positioned to demonstrate how integrated energy systems can achieve superior results.

The Council has the opportunity to embrace that leadership. By encouraging advanced hybrid technologies, Washington can become the national example of how engineering innovation—not technology mandates—can simultaneously improve:

- energy efficiency;
- emissions performance;
- affordability;
- consumer choice;
- grid resilience;
- resource adequacy;
- infrastructure utilization;
- long-term system reliability.

This approach reflects the realities of the Northwest's energy future rather than the assumptions of its past.

Conclusion

Throughout this rulemaking, the Council has sought to balance multiple important public policy objectives. The Northwest Gas Association respectfully submits that advanced hybrid technologies offer one of the few solutions capable of advancing nearly all of those objectives simultaneously:

- They improve annual building efficiency.
- They reduce greenhouse gas emissions.
- They preserve consumer choice.
- They lower customer costs.
- They improve comfort.
- They reduce winter peak electric demand.
- They enhance electric reliability.
- They strengthen regional resource adequacy.
- They maximize utilization of existing public infrastructure.
- Perhaps most importantly, they embody precisely the type of technological innovation that Washington's Energy Code has historically encouraged.

Rather than viewing natural gas and electricity as competing energy systems, hybrid technologies recognize that the Pacific Northwest's future depends upon the intelligent coordination of both.

That conclusion is increasingly shared by regional utilities, planners, researchers, and energy organizations. Demonstration projects led by NEEA, Clark Public Utilities, NW Natural, and other regional partners are showing that advanced dual-fuel systems can provide meaningful benefits to consumers while supporting broader grid and resource adequacy objectives. The proposed CR-102 should reflect this emerging regional consensus.

Accordingly, NWGA respectfully requests that the State Building Code Council:

1. **Recognize advanced hybrid HVAC and water-heating systems as preferred high-performance technologies within the Energy Code.**
2. **Remove compliance provisions that unnecessarily disadvantage hybrid systems where equivalent building energy performance can be demonstrated.**
3. **Maintain technology-neutral performance standards that encourage innovation rather than prescribing fuel choices.**
4. **Incorporate consideration of regional resource adequacy, peak electric demand, resilience, and integrated gas-electric planning into future code development.**
5. **Direct future PNNL Technical Advisory Group work to develop objective performance metrics and compliance pathways for advanced hybrid technologies and intelligent controls.**

NWGA appreciates the tremendous effort devoted by the Council, Council staff, the Technical Advisory Groups, Pacific Northwest National Laboratory, and the many stakeholders participating in this rulemaking. We remain committed to working collaboratively with the Council to develop an Energy Code that advances efficiency while preserving affordability, reliability, innovation, and consumer choice for generations to come.

Respectfully submitted,

Kelly Fukai
Chief Executive Officer
Northwest Gas Association