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Office of Economic Development and International Trade

Maria De Cambra
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Department of Local Affairs

Will Toor
Executive Director
Colorado Energy Office

Dan Gibbs
Executive Director
Department of Natural Resources

CC:

Patty Salazar
Executive Director
Department of Regulatory Agencies

Cindy Schonhaut
Director
Office of the Utility Consumer Advocate

RE: Beneficial Electrification Planning for Colorado

Dear Directors White, Lieberman, Toor, De Cambra, and Gibbs, and Chair Blank,

Colorado is making enormous strides in deploying clean electricity resources and constructing transmission and distribution system assets to serve customers seeking access to affordable electricity to power buildings, electric vehicles, and clean industrial processes. Collectively the State's electric utilities are on a path to reduce greenhouse gas emissions from power generation by over 80% by the end of the decade, and recent progress at the legislature and in the utility planning process is deploying billions of dollars of new infrastructure to serve load, reduce fuel and other costs, advance economic development, and support unprecedented adoption of electric vehicles, heat pumps, and electric industry including oil and gas operations.

The purpose of this letter is to encourage the development of an all-of-government approach to beneficial electrification across Colorado, emphasizing the opportunity to put downward pressure on electricity rates, support clean energy, and further economic success. This letter urges the Colorado PUC, Colorado Energy Office, Office of Economic Development and International Trade, Department of Natural Resources, and Department of Local Affairs to work together to assess load growth pathways, potential impacts of those pathways on electric rates, strategies to maximize the utilization of electricity infrastructure, reduce the cost of new infrastructure, and develop proactive strategies to encourage load growth where it is mutually beneficial to Colorado communities, our environment, and utility customers.

This effort is important to maintaining affordable energy costs for Colorado residents and businesses. Other states that have not carefully managed the electrification transition are seeing large increases in utility rates. For example, in California average electric rates have roughly doubled over the past decade. In contrast, with more dynamic and thoughtful electricity growth, these adverse rate impacts can be greatly mitigated. If the transition is well-managed, lower electricity prices will lead to net cost savings for consumers and businesses by reducing fossil fuel use in buildings and vehicles. Importantly, beneficial electrification insulates customers from price spikes that are common among unregulated energy commodities like natural gas, as the electricity they will consume will increasingly come from fixed price renewable energy. For example the supply constraints from winter storm Uri in 2021 cost Colorado ratepayers nearly $600M in excess natural gas costs. The pairing of beneficial electrification and robust demand response or virtual power plant solutions can benefit individual ratepayers, who can make their loads more flexible, and result in real cost savings for all consumers based on optimized usage of shared electric infrastructure. The impact could be savings of hundreds of dollars per household, per year. If done well, these efforts can continue to incentivize economic growth and investment in Colorado, and provide more transparency and regulatory certainty for everyone living and doing business in Colorado.

<u>The opportunities and challenges of using utility capital spending to grow electric sales</u>

Colorado has a diverse mix of investor-owned, municipal, and cooperative electric utilities, each with unique management, oversight, system needs, economic circumstances, and community expectations. Significant investments in the electricity system over the coming years and decades are critical to enhance the reliability and resilience of the transmission and distribution system, minimize wildfire risk, replace legacy fossil generation with renewable energy, and increase utilization of electric products like high efficiency heat pumps and electric vehicles which can also provide flexible demand through smart charging. How utilities adapt to this new environment, and how customers and developers choose where

and when to build large new electric loads, presents opportunities to minimize total costs to ratepayers by optimizing use of utility assets and spreading costs over more electricity sales.

Beneficial electrification can drive large load growth, and if customer rates are designed to shape customer behavior according to system needs the build out of the electric grid will occur in ways that more tightly control cost through thoughtful siting decisions, well managed demand flexibility and well managed utility capital spending.

Research conducted by the Colorado PUC finds that carefully planned utility investment combined with well-managed load growth and asset siting are among the most powerful tools we have to minimize electricity rates over the coming decades. Fundamentally, many of the investments that are needed are relatively fixed, regardless of the growth in electric sales (especially if the demand is flexible and well managed). Therefore, growing load through electrification will spread these fixed costs over more use, exerting downward pressure on rates.

Sustained lower customer rates that remain at or below the national average save consumers money on electrification strategies to heat and cool homes and businesses, clean up emissions from the oil and gas sector, advance new technologies in the manufacturing of goods, make driving less expensive as electric vehicle use grows, and promote investment in emerging industries. Affordable electricity rates promote growth across our state, increase Colorado's competitiveness as a location in which companies will expand their operations, increase local tax revenues, and can support our efforts to achieve affordable housing and reliable, clean public transportation options like buses and rail.

A wide variety of sources[1] acknowledge that beneficial electrification can provide system-wide benefits including reducing utility costs and customer rates. We have made great efforts in this area ranging from initial efforts at reforming distribution system planning at the PUC to strategies to streamline the development of transmission infrastructure through the Colorado Electric Transmission Authority; new regulations to encourage electrification of oil and gas operations; coordinated planning strategies like clean heat and transportation electrification plans, as well as numerous grant, tax credit, and technical assistance programs for federal funding in areas ranging from building electrification to public EV fast charging to industrial decarbonization.

My administration is also working on the development of a new, comprehensive tool that can not only help guide interested customers in accessing energy rebates and incentives, but streamline their applications for local, state, federal, and utility programs to continue accelerating adoption.

The challenge of beneficial electrification is presenting itself in real time. By way of example: in its most recent earnings call, Xcel Energy said that it has a pipeline of 6.7 GW of new data center projects across its 8-state service territory and that it will likely need large amounts of new generation and transmission to serve this load.[2] To put this in perspective, the entire Xcel Energy coincident retail peak demand in Colorado is under 7 GW.

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[1] For example, NRDC, ICF, Esource, ACEEE.

[2] See earnings call quote from Xcel Energy CEO, Bob Frenzel, Utility Dive, at August 5, 2024 (https://www.utilitydive.com/news/xcel-energy-data-center-meta-wildfire-earnings/723239/)

This new potential load is creating large fluctuations in longer-term demand forecasting and capital budgeting processes. It is unclear how much of this load will materialize in Colorado, where it will be located, and when it plans to come online.

In terms of reducing the economic impacts to ratepayers of a new large load, like a data center, the most obvious approach is to make sure that the incremental revenue from the new customer exceeds the marginal cost of serving that customer. This is the current statutory requirement for new large loads to obtain discounted rates in Colorado.[3] The problem with this static analysis is that there is uncertainty associated with the cost of new generation, the need for new transmission caused by the customer, and the role of the customer in causing these new generation and transmission costs. This approach is also highly reactive, responding to individual requests from developers for energization rights, limiting the state's ability to proactively shape when, where, and how these projects are built.

A static marginal cost analysis also does not account for optimizing opportunities like tariffed demand response, interruptible loads, energy efficiency, and behind the meter generation and storage.[4] The reality is that many of Colorado's programs are currently rule-bound and inflexible, and thus poorly suited to encourage flexibilities to drive new value from these large new loads.

Finally, from an economic development perspective, siting large new loads near retiring coal plants or in other economically disadvantaged areas can provide employment, tax base, and economic activity in communities that are otherwise struggling and already have transmission infrastructure.

Considerations for New Load for Developers and Owners

From the perspective of a developer, the siting of large new loads for industry, data centers, oil and gas operations, and other projects benefits from a predictable set of services including access to fiber optic backbone, reliable and affordable power, an educated workforce in a reasonably attractive community, developable land, and basic infrastructure such as roads and utilities, and, where applicable, timely permits for behind-the-meter and back-up power generation and storage.[5]

Among these services, however, access to reliable and affordable power is increasingly near the top of the list in a constrained system and when new investments are needed. At the same time, speed-to market – the ability to build a new facility with access to affordable and reliable power in a timely and predictable way – seems to be critically important for developers and owners.

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[3] See House Bill 18-1271 (40-3-104.3(5)-(8). This statute allows electric utilities to offer new qualifying industrial and commercial customer an economic development rate (EDR) so long as the offered rate is above the marginal cost to serve the customer but below the normal tariff rate that reflects the full embedded system cost.

[4] See Riot Press Release, https://www.riotplatforms.com/riot-responds-to-recent-inquiries-regarding-its-power-strategy/ e, where Riot Platforms, Inc. was awarded over $7M in ERCOT's demand response program and sold $25M of pre-purchased energy to its energy provider during a single event, while purchasing power through a long-term power purchase agreement where it was not required to pay for the new capacity required to serve its demand.

[5] See, e.g., https://www.7x24exchange.org/7x24-news/data-centerschoosing-an-optimal-site-location/#:~:text=Data%20center%20site%20location%20experts,construction%20at%20a%20reasonable%20cost.

This speed-to-market problem is exacerbated by the fact that a developer often does not know beforehand where the best spot to interconnect to the existing system as this information is either unknown or not public. As a result, the developer may need to spend significant capital to acquire land and other development rights before it has a clear answer on interconnection and energization and whether there is affordable and reliable power available, either now or in a reasonable timeframe.

Toward a Proactive "Whole-of-State" Approach to Attracting and Siting New or Expanded Electric Loads

Given these opportunities and challenges, this letter strongly urges a proactive whole-of-state approach where sites in Colorado are identified and preliminary early-stage development occurs as led and shaped by a consortium of state government entities (the Governor's Office, PUC, CEO, DOLA, OEDIT), local cities and counties, and utilities. The goal of this effort would be to offer developers and owners a comprehensive and attractive package that meets their needs in a clear and predictable way and to do so in a way that optimizes the location around factors that can aid in reducing costs across the utility system.

For example, working with the utilities, local government, and private sector developers, the State could develop pre-construction hubs that provide early engagement and planning for access to fiber optic backbone, developable land, water, clean heating options, and affordable and reliable power in a timely and fixed cost manner to meet the needs of new load owners and developers. This could be done with funding from the regulated utility system. Experience around the country suggests that developers and owners of large new loads like to build in clusters or hubs.[6]

Other utilities have started to go down this path. Commonwealth Edison in Chicago led an effort to identify 10-15 sites that had potentially existing transmission and interconnection availability in its service territory. Although this was a relatively early-stage effort, and without even providing all the other required development items that is being proposed in this letter, this one simple transmission and energization screening step seems to have provided substantial value to developers and helped catalyze investment in Illinois.[7]

Similar opportunities likely exist in parts of Colorado where coal plants are retiring and across just transition communities. In addition to creating economic development benefits where they may be most needed, this approach also takes advantage of tax credits in the Inflation Reduction Act that reward building new generation by retiring coal plants. This proactive cluster approach also may create an opportunity to develop targeted distributed energy resources and creative tariff designs to encourage flexible demand and minimize overall infrastructure costs. As a general matter, driving load growth, if it triggers the need for new electricity generation, also can bring down costs for all ratepayers when new generation comes online at a lower marginal cost than pre-existing legacy assets. This is especially true when those new resources interconnect into existing transmission previously used by retiring fossil fuel generators.

For the state of Colorado, this proactive whole-of-state approach would enable us to shape load growth in Colorado in a way that evolves our energy system in a more optimal manner for all customers; more flexibly takes advantage of the benefits of these new loads outside the rigid tariff structure, and

[6] Examples of these hubs or clusters include Loudon County in Dominion service territory that has since expanded throughout northern Virginia; Umatilla Cooperative in Oregon; and Encore in Dallas, TX.

[7] See ComEd Multi-Year Integrated Grid Plan, Docket 23-0055, Ex. 5.01, pg. 39.

proactively locates economic development where it is most useful. By giving developers what they primarily need – speed to market and affordable and reliable power in a clear, and predictable way – the state may be able to negotiate directly with developers seeking access to sites (potentially avoiding those entities developing sites on speculation).

This approach stands in stark contrast to the status quo where developers play potential sites against each other in a series of confidential negotiations with potentially self-interested utilities with limited public oversight. Said another way, there is an opportunity in Colorado to invest a few millions or tens of millions (which could be potentially be supported in part by the regulated utility system) in ways that could allow the state to better plan for and shape billions or tens of billions of dollars of new loads and utility investment to lower rates for all customers, fund a more optimal build-out of our energy infrastructure, and support economic development where it can have the largest impact.

Critically, these efforts should also work to address the housing challenges and opportunities in Colorado for building more multi-family and mixed use housing, as well as expanding transit-oriented communities. A hub approach does not need to only focus on greenfield development, but could also integrate with in-fill and brownfield development by making more transparent opportunities for proactive infrastructure upgrades in existing communities to facilitate electrification of buildings and transportation systems where people live and work. Additional growth in flexible loads like electric vehicle charging and building heating and cooling offers the potential to further increase electricity throughput in the times and places where it is most cost-effective, and optimize overall infrastructure investment in the transmission and distribution system.

<u>Advancing beneficial electrification for Colorado</u>

Therefore, I call on:

- The Colorado PUC to evaluate multiple load growth pathways, assuming baseline growth in industrial electrification, oil and gas electrification, and building and transportation electrification consistent with the state's 2024 Greenhouse Gas Pollution Reduction Roadmap 2.0. The analysis should inform the impact on rates for PUC-jurisdictional utilities through at least 2040 resulting from well-coordinated utility planning, optimal load siting, and disciplined capital management versus a business as usual case that risks overspending on utility infrastructure in an uncoordinated manner. I expect this analysis to be completed no later than June 2025.
- The Colorado PUC, in consultation with the Colorado Energy Office and with advice from the Office of Economic Development and International Trade, to evaluate no later than June 2025 the impact of both new, unanticipated potential loads like data centers, as well as an electrification growth scenario exceeding the Greenhouse Gas Roadmap pathways, including the range of impacts on investor-owned utility customer rates and affordability.
- The Colorado PUC, with the Colorado Energy Office, Department of Local Affairs, Department of Natural Resources, and the Office of Economic Development and International Trade, to establish load growth metrics of success no later than June 2025 across accelerated deployment of electric vehicles, building electrification, new transmission and generation assets, oil and gas electrification, and industrial decarbonization to evaluate the potential impact of this growth on rates and to align state programs, funding, and plans and goals to be consistent with pathways that minimize electricity rates and maximize customer savings and reduction of air pollution.

- The Colorado PUC, with the Colorado Energy Office, Department of Local Affairs, and the Office of Economic Development and International Trade, in coordination with Colorado's electric utilities and local governments, to evaluate and report back to my office on policy recommendations no later than August 2025 to achieve high electric load growth at affordable cost and with maximum benefits to Colorado consumers and businesses conscientious of community benefits, job creation, minimizing electricity rates, and reducing pollution. These policies should streamline construction of new loads to be located in places that minimize costs and maximize use of existing infrastructure, policies that encourage new loads to be flexible and minimize impact on peak demand, and strategies to site new generation and storage to limit system cost and incentivize the use of otherwise curtailed renewable energy.
- My policy advisor on climate and energy will coordinate this effort for my office, with support from our operations, policy, and legislative teams.

Together we can continue to build an affordable Colorado in the transition to these new technologies to power our 21st century economy and deliver critical investments in our communities for a just, clean, affordable, and resilient electricity future.

Sincerely,

Jared Polis
Governor
State of Colorado