BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

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IN THE MATTER OF ADVICE LETTER NO. 1881-ELECTRIC FILED BY PUBLIC SERVICE COMPANY OF COLORADO TO REVISE ITS COLORADO PUC NO. 8 ELECTRIC TARIFF TO IMPLEMENT THE RESILIENCY SERVICE PROGRAM TARIFF TO BECOME EFFECTIVE APRIL 24, 2022	)	PROCEEDING NO. 22AL-0130E

ANSWER TESTIMONY
OF CATHERINE E. BOIES

ON BEHALF OF
COLORADO SOLAR AND STORAGE ASSOCIATION
AND
SOLAR ENERGY INDUSTRIES ASSOCIATION

August 5, 2022

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I. INTRODUCTION AND QUALIFICATIONS

Q: PLEASE STATE YOUR NAME, CURRENT POSITION, AND BUSINESS ADDRESS.

A: My name is Cathy Boies. I am the Director of Policy for the Colorado Solar and Storage Association ("COSSA"). My business address is 1536 Wynkoop Street, Suite 104, Denver, CO, 80202.

Q: PLEASE SUMMARIZE YOUR PROFESSIONAL AND EDUCATIONAL BACKGROUND.

A: I began my employment at COSSA in January 2021. In my role as Director of Policy, I oversee regulatory affairs for our trade association. I review utility applications, advice letters, and other pleadings, summarizing, analyzing, and communicating key points to COSSA membership. I oversee our association's policy development, working with our outside legal counsel and expert witnesses. Since joining COSSA, I have been involved in electric resource plans, transmission construction applications, rate cases, renewable energy standard compliance plans, as well as Public Utility Commission ("Commission") rulemakings, investigations, and miscellaneous proceedings.

Prior to COSSA, I worked at the Commission as a policy analyst in the Research and Emerging Issues Section. There, I worked closely with the Chair of the Commission at the time on various initiatives, including coal-to-gas conversion, SmartGrid, and National Association of Regulatory Utility Commissioners' engagements. I also worked as the executive assistant to a commissioner at the Public Service Commission of Wisconsin, serving as his policy advisor in contested case proceedings and his liaison to agency staff and the public. I began my career in utility regulation at a Wisconsin law firm, managing a coalition of energy consumers navigating industry deregulation.

I have a master's degree in Environmental Law and Policy from the University of Denver Sturm College of Law, a Master's Degree in Education from Harvard University, and a Bachelor of Arts from Yale University. My resume is attached as Hearing Exhibit 900, Attachment CEB-1.

Q: ON WHOSE BEHALF ARE YOU SUBMITTING TESTIMONY?

A: I am submitting testimony on behalf of COSSA and the Solar Energy Industries Association ("SEIA").

Established in 1989, COSSA is the award-winning nonprofit association leading Colorado's solar and storage industries. Our mission is to expand solar and storage markets and to generate jobs and prosperity for the people of Colorado. We are a 501(c)(6) association representing over 250 companies with thousands of employees.

Founded in 1974, SEIA is a national trade association building a comprehensive vision for the Solar+ Decade through research, education, and advocacy. SEIA is leading the transformation to a clean energy economy, creating the framework for solar to achieve 30% of U.S. electricity generation by 2030. SEIA works with its 1,000 member companies and other strategic partners to fight for policies that create jobs in every community and shape fair market rules that promote competition and the growth of reliable, low-cost solar power.

Q: HAVE YOU TESTIFIED PREVIOUSLY BEFORE THE COLORADO PUBLIC UTILITIES COMMISSION?

A: No.

Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A: The purpose of my testimony is to review and comment on Public Service Company of Colorado's ("Public Service" or "the Company") Resiliency Service Program Tariff ("Resiliency Program"). I discuss the Company's proposed offering, putting it in the context of state policy, regulated monopoly status, and the offerings available in the competitive marketplace. I am the only witness testifying on behalf of COSSA-SEIA.

Q: HOW IS YOUR TESTIMONY ORGANIZED?

A: First, I discuss the proper role of a business that is "affected with the public interest." Second, I review the benefits of competition, the state of the resiliency products and services market, and other lending options currently available in Colorado. Lastly, I identify the advantages the Company enjoys because of its regulated status.

Q: PLEASE PROVIDE YOUR RECOMMENDATIONS REGARDING THE COMPANY'S RESILIENCY PROGRAM.

A: I recommend:

- the Commission deny the Company's Resiliency Program as anti-competitive, an inappropriate extension of regulated operations, and not in the public interest.
- the Commission order a review of the reasonableness of the non-coincident peak demand charge for secondary general ("SG") customers in the Company's upcoming phase II rate case.

II. A BEHIND-THE-METER RESILIENCY SERVICE IS AN INAPPROPRIATE OFFERING FOR A REGULATED UTILITY

Q: WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A: The purpose of this section of my testimony is to summarize the Company's offering in this proposal and put it into a policy context. I review longstanding state policies for regulated utilities; the Commission's more recent statements on competition, customer choice and cost-of-service regulation; and the Company's reliability record as captured in the Quality of Service Plans ("QSPs") required by the Commission.

Q: PLEASE BRIEFLY SUMMARIZE THE COMPANY'S PROPOSED RESILIENCY PROGRAM.

A: The Company seeks approval of a new service and tariff in the Resiliency Program. Public Service states that the purpose of this optional service "is to provide resiliency services to customers through Company ownership and operations of resiliency service assets behind a customer's meter."[1] The Company proposes to own, install, operate, and maintain resiliency assets on a customer's site for a 10-, 15-, or 20-year term. These resiliency assets can include batteries, diesel generation sets, solar panels paired with batteries, and switching and control equipment, among other controls, and are to be installed by vendors selected and approved by the Company.

The Company proposes this service for small commercial, secondary general, primary, and transmission service customers as an optional offering to "support

[1] Hearing Exhibit 103, Advice Letter No. 1881-Electric Amended, p. 2 (Jun. 8, 2022).

customers that have a need for higher than standard service reliability."[2] Further, the Company also proposes the service to "facilitate investment in customer resiliency and emerging technologies, such as solar and battery storage, because they can play an important role in helping support critical facilities."[3]

The Company proposes to pay for this program primarily through three revenue streams: a preliminary scoping fee of $1,000, a program charge of $80 per month for back-up generation or $450 per month for all other resiliency projects, and a monthly resiliency charge to be determined by each project's capital costs.[4] The Company proposes these fees and charges appear as a dedicated item on monthly bills[5] as a part of the Company's regulated service,[6] and states that non-participating customers will not subsidize the program[7] nor will it include Resiliency Program projects in rate base.[8]

Q: WHAT IS THE CURRENT STATE OF BEHIND-THE-METER NON-RESIDENTIAL STORAGE ON XCEL'S SYSTEM?

A: Of over 200,000 commercial and industrial customers, Xcel currently has eleven non-residential storage systems on its grid for a total of 445 kW capacity.[9]

Q: WHAT DOES THIS SUGGEST TO YOU?

A: It suggests to me that there is opportunity for commercial storage systems and resiliency assets in general in Xcel's service territory. In fact, the Company engaged a market

[2] Hearing Exhibit 102, Direct Testimony of R. Neil Cowan, p. 6. ("Cowan Direct")
[3] Hearing Exhibit 101, Direct Testimony of Emmett R. Romine, p. 10. ("Romine Direct")
[4] Hearing Exhibit 102, Attachment RNC-1, Sheet 120B.
[5] Romine Direct at 17-18.
[6] Hearing Exhibit 900, Attachment CEB-2, Public Service Response to UCA DR 1-5.
[7] Romine Direct at 15.
[8] Cowan Direct at 11.
[9] Hearing Exhibit 900, Attachment CEB-3, Public Service Response to COSSA/SEIA DR 2-8.

research firm to quantify the financial impact of electrical outages across various business sectors at different outage durations.[10] While less than I would have expected, these figures are the lost revenue streams a commercial customer will weigh when considering investing in resiliency assets. The fact that these streams are quantifiable suggests a market opportunity.

Q: IS THE COMPANY PROPOSING ANY STORAGE INCENTIVES FOR THE LARGER CUSTOMER CLASSES IN ITS PENDING 2022-2025 RENEWABLE ENERGY STANDARD PLAN?

A: No, it is not.[11]

Q: MR. ROMINE SUGGESTS THE PROPOSED RESILIENCY ASSETS CAN PLAY A ROLE IN HELPING SUPPORT CRITICAL FACILITIES. WILL THE COMPANY REQUIRE THESE ASSETS TO PROVIDE ANY GRID BENEFITS?

A: No. The Company will not require the resiliency assets to provide grid supportive actions, enroll in the Company's demand response program, [12] nor demonstrate critical facility operations.[13] This is purely a behind-the-meter service to benefit the site customer only. Mr. Romine stated as much, saying that since the participating customer bears all the project costs, "the potential value streams enabled by the assets flow to the participating customer."[14]

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[10] Hearing Exhibit 900, Attachment CEB-4C, Public Service Response to COSSA/SEIA DR 1-20.A1.
[11] Hearing Exhibit 900, Attachment CEB-3, Public Service Response to COSSA/SEIA DR 2-8.
[12] Hearing Exhibit 900, Attachment CEB-5, Public Service Response to COSSA/SEIA DR 1-6.
[13] Hearing Exhibit 900, Attachment CEB-6, Public Service Response to COSSA/SEIA DR 1-9.
[14] Hearing Exhibit 900, Attachment CEB-7, Public Service Response to CPUC DR 7-1.

Q: ACCORDING TO THE COMPANY, WHAT IS THE VALUE OF THEIR RESILIENCY PROGRAM?

A: Public Service states that the Resiliency Program provides "value through the simplification of the design and procurement processes and by providing upfront capital to customers in need of funding."[15]

Q: HOW DO YOU VIEW THIS VALUE PROPOSITION?

A: I see it as wholly inappropriate for a regulated monopoly. While I am not a lawyer, the foundation of Colorado's Public Utilities Law rests with safe and reliable utility service at just and reasonable rates.[16] The bargain in the regulatory compact is that in exchange for exclusive service territory and a dedicated customer base, electric utilities must submit to regulatory oversight to ensure reasonable cost, safety, adequacy, and reliability of electrical service. This is the primary role of the utility as an enterprise "affected with the public interest."[17]

Here, the Company strays far from this core responsibility, offering design, procurement, and financial services for behind-the-meter electrical assets. The Company is proposing to function as an engineering, procurement, and design firm with lending services, a step far removed from the core function of low-cost, reliable electrical service for all customers laid out in Colorado law.

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[15] Hearing Exhibit 900, Attachment CEB-8, Public Service Response to COSSA/SEIA DR 2-6.
[16] *See* §§ 40-1-103, 40-3-101, C.R.S.
[17] Lazar, Jim. *Electricity Regulation in the US: A Guide*, Regulatory Assistance Project, pp. 4-6 (June 2016).

Q: HAS THE COMMISSION ADDRESSED THIS VIEW OF UTILITY SERVICE RECENTLY?

A: Yes, in the recent Investigation into Performance Based Regulation, a Commission-approved report reviewed the history of utilities as natural monopolies and reiterated that the fundamental purpose of utility regulation remains, "to ensure that ratepayers receive reliable service at reasonable rates through a safe system provided by a financially viable utility."[18]

The report highlights the structural pressures occurring in the industry to adapt cost-of-service regulation and notes that in Colorado "the introduction of more competition and more consumer choice into the utility marketplace, within the existing paradigm of cost-of-service regulation, has been the primary approach for driving change in utility business models for the common good."[19]

COSSA agrees with this view of industry change and encourages the Commission to view this Advice Letter through the lens of competition and consumer choice in a cost-of-service paradigm.

Q: HOW DO YOU APPLY THAT VIEW TO THIS RESILIENCY PROGRAM FILING?

A: The services the Company proposes here, primarily procurement and financial services, is anti-competitive and improper for a regulated utility. As I will further detail in my testimony, a competitive marketplace for resiliency products and services and a state-

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[18] Proceeding No. 19M-0661EG, *Investigation into Performance Based Regulation in Colorado § 40-3-117, C.R.S. Report*, p. 15 (Nov. 30, 2020).
[19] *Id.* at 9.

supported clean energy lending institution already exists in Colorado. Further, the Company enjoys numerous advantages from its regulated operations that it will unfairly leverage into behind-the-meter services to benefit select customers if the Commission approves this filing. Allowing the Company to enter the behind-the-meter resiliency products and services market will have a destructive impact on competition, undermine the tempering price pressure of the open market, and ultimately reduce consumer choices.

Q: THE COMPANY STATES IT IS OFFERING THIS SERVICE TO CUSTOMERS THAT SEEK A HIGHER THAN STANDARD SERVICE RELIABILITY.[20] HOW DO YOU RESPOND?

A: Under the public interest mantle, the Commission began monitoring the Company's electric service reliability as early as 1995 through QSPs.[21] The purpose of the QSP is "to provide Public Service with incentive to maintain the reliability"[22] of its system; QSPs set performance thresholds and penalties, in the form of bill credits, if the Company fails to maintain service. Thus, Commission oversight has long addressed reliability.

And the Company has done an excellent job meeting the QSP reliability metrics. Over the past ten years, the Company has earned a 99.984% average reliability rating.[23]

Q: GIVEN THIS STRONG RELIABILITY RATING, WHAT DOES THAT SUGGEST TO YOU?

A: A 99.984% reliability rating suggests to me that this offering is not really about reliability but rather about offering premium products and services to select customers as a form of

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[20] Romine Direct at 9.
[21] *See* Proceeding No. 95A-531EG.
[22] Proceeding No. 12A-778EG, Decision No. R13-0734, ¶ 2, p. 2 (Jun. 18, 2013).
[23] Hearing Exhibit 900, Attachment CEB-9, Public Service Response to COSSA/SEIA DR 2-2.A1.

enhanced customer service. This strikes me as patently anti-competitive and outside the proper role of the regulated utility.

Q: WHY DO YOU SAY SELECT CUSTOMERS?

A: The Company states that this Resiliency Program will provide "limited value to customers with a desire for less complex, less expensive resiliency assets…"[24] By extension, then, the Company appears to be seeking customers with complex operations and expensive electrical needs for this offering.

The flat monthly program fee also leads me to this conclusion. $450 per month is a substantial sum for many small operations; and it is not scaled to system size. A flat fee preferences large users who will benefit from economies of scale. This suggests a select set of customers who can afford more expensive assets.

Q: THE COMPANY ALSO SUGGESTS A PART OF THE VALUE OF THIS SERVICE IS TRANSPARENT PRICING FOR CUSTOMERS. HOW DO YOU RESPOND?

A: In discovery, Mr. Romine stated that customers "will know at the outset of the project what they can expect to pay" for Public Service's Resiliency Program "whereas payment terms will be defined only after a full project and customer credit review from traditional [lenders]."[25] This contradicts the Company's statements elsewhere that general payment terms are outlined in the project planning stages and full project costs are communicated much later in the Design and Engineering phase, three to 24 months down the road.[26]

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[24] Hearing Exhibit 900, Attachment CEB-10, Public Service Response to COSSA/SEIA DR 1-21.
[25] Hearing Exhibit 900, Attachment CEB-11, Public Service Response to WRA DR 3-1.
[26] Hearing Exhibit 101, Attachment ERR-4, Figure 1: Customer Journey, p. 1.

Indeed, Mr. Romine says customers "get a sense of full project cost" only in the Design and Engineering phase.[27] Thus, I find the suggestion that the Company is uniquely positioned to offer transparent pricing inaccurate.

Q: PLEASE SUMMARIZE YOUR VIEW OF THE MARKET AND CUSTOMER BASE THE COMPANY IS TARGETING IN THIS OFFERING.

A: Based on the Company's statements, the Resiliency Program offers design, procurement, and financial services to customers with complex operations who seek more expensive resiliency assets despite a ten-year system reliability rating of 99.98%. This is a voluntary offering for select customers at higher price points serviced through regulated operations. This has the appearance of cherry picking to me and is not appropriate for an enterprise "affected with the public interest."

[27] Hearing Exhibit 900, Attachment CEB-12, Public Service Response to CPUC 1-4.

III. THE COMPANY'S ENTRANCE INTO BEHIND-THE-METER RESILIENCY PRODUCTS AND SERVICES WILL UNDERMINE MARKET FORCES, LIMIT COMPETITION, AND REDUCE CUSTOMER CHOICE

Q: WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A: The purpose of this section of my testimony is to explain the impact the Company's entrance into behind-the-meter resiliency products and services for large customers will have on competition, prices, innovation, and ultimately, customer choice. I also discuss the size of the competitive market and suggest a state-sanctioned lending institution is the proper venue for clean energy projects in need of financing.

Q: WHY DO YOU VIEW THIS OFFERING AS UNDERMINING MARKET FORCES?

A: The invisible hand of the competitive market serves to keep prices low, foster innovation, and reward customer service. The resiliency assets at issue here are not off-the-shelf products. These are complex solutions that require creativity and innovation at reasonable cost. Market forces are vital to both keep prices in check and customer options plentiful. Here, the Company in essence proposes to act as a general contractor, subcontracting installation and maintenance work to a small group of vendors. This gate-keeping function will limit options and depress innovation. Ultimately, this will result in fewer providers and less pressure to keep prices low. To return to the Commission's observations in the Performance Based Regulation investigation, competition and more customer choice are the drivers of marketplace change. We have yet to fully understand the capabilities of storage; allowing a monopoly utility to enter behind-the-meter resiliency products and services will inhibit rather than facilitate storage deployment.

Q: THE COMPANY STATES IT IS NOT PROPOSING TO ENCROACH ON THE COMPETITIVE MARKET BUT RATHER EXPAND OPPORTUNITIES FOR LOCAL VENDORS. HOW DO YOU RESPOND?

A: I see encroachment as exactly what will happen if the Commission approves this Advice Letter. The Company will leverage its significant resources from regulated operations to eclipse what a competitive provider might be able to provide. From this significant advantage, the Company will control the market, undermining that invisible hand. Prices, innovation, and faster deployment will all be negatively impacted, ultimately slowing the growth of this market.

Q: MR. ROMINE SUGGESTS THAT THIS RESILIENCY PROGRAM WILL PROVIDE A MUTUALLY BENEFICIAL PARTNERSHIP BETWEEN LOCAL SUPPLIERS AND THE COMPANY.[28] YOU DO NOT AGREE?

A: I do not. The Company intends to serve as the primary contractor for this offering, subcontracting work to a limited set of would-be providers selected by the Company. By default, this means even these select few providers are losing out on a portion of the profits from the work. This is not mutually beneficial.

Q: HOW WILL CUSTOMER CHOICE BE NEGATIVELY IMPACTED?

A: I see customer choice impacted both in the short and long term. In the short-term, the Company proposes pre-selecting a list of vendors through a competitive bidding

[28] Romine Direct at 15.

process.[29] The Company intends 6 to 10 vendors for this preferred list and suggests that part of the value of the service is a simple and efficient customer experience.[30] Instead of efficiency, I see this shortlist as a gating function controlled by the Company.

In the longer term, a preferred vendor list will detract competitive providers from entering the market. This will reduce the number of potential providers in this space and ultimately slow innovation and weaken the pressure to keep prices low.

Q: FROM A CUSTOMER PERSPECTIVE, ISN'T EASE OF EXPERIENCE COMPELLING?

A: We should be careful not to substitute ease for long-term gain. We have not fully capitalized on the capabilities of storage. This market needs many providers to induce creativity and problem-solving. We must be careful not to select expediency over longer-term innovation and a robust market environment.

Q: IS THERE CURRENTLY A MARKET FOR COMPETITIVE PROVIDERS?

A: Yes, the Company recognizes there are dozens of prominent players for backup power and energy storage systems nationally.[31] At the state level, COSSA has over one hundred members that could provide resiliency products and services for some aspect of the skill set Public Service identifies.[32]

Q: WHAT DOES THIS SUGGEST TO YOU?

A: This suggests to me that the Company's pre-selected list will narrow customer choice both in the short and long term. Providing an easy customer experience through a

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[29] Romine Direct at 14.
[30] Hearing Exhibit 900, Attachment CEB-13, Public Service Response to UCA DR 1-10.
[31] *Id.*
[32] *See* COSSA's Directory.

shortlist of preferred vendors will be destructive to competitive forces – by limiting access in the short run and by forcing competitors out of the market in the long run. Ultimately, this undermines the market forces necessary to drive innovation and reasonable cost.

Q: AND WHAT ABOUT THE FINANCING SERVICE? WHAT OPTIONS CURRENTLY EXIST IN THE STATE FOR CLEAN ENERGY FINANCING?

A: In addition to numerous private lenders, Colorado also has the Colorado Clean Energy Fund ("CCEF"), created by former Governor John Hickenlooper as the state's non-profit "Green Bank".[33] The purpose of CCEF is "to identify barriers to financing clean energy projects, bridge the gap between clean energy projects and traditional capital providers, and drive demand for these solutions…".[34] In June 2021, the General Assembly approved a $30M grant to CCEF,[35] a legislative signal that this clean energy financing service is open for business. CCEF offers numerous financial products specifically targeting commercial customers looking to install clean energy projects such as the resiliency assets offered in this filing.[36]

Q: PLEASE ELABORATE.

A: The Company states that a "lack of capital was frequently cited [by customers] as a barrier to implementation of resiliency solutions."[37] CCEF exists precisely to address these barriers. With a mandate to finance and deploy clean energy solutions and a recent

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[33] *See* https://coalitionforgreencapital.com/colorado-announces-green-bank/.
[34] *See* https://www.cocleanenergyfund.com/story.
[35] SB21-230, codified at § 24-38.5-102.4(3)(a)(I), C.R.S.
[36] Hearing Exhibit 900, Attachment CEB-14, *CCEF Product Portfolio - Commercial Loans*.
[37] Hearing Exhibit 900, Attachment CEB-15, Public Service Response to CPUC DR 2-1.

cash infusion, CCEF is the more appropriate vehicle to provide financing services. The Company's entrance into resiliency financing services will encroach on the mission of Colorado's Green Bank.

Q: HOW DOES CCEF'S LOAN PRODUCT OFFERING COMPARE TO THE COMPANY'S FINANCING TERMS?

A: A key metric for any customer searching for a loan is the interest rate. The Company proposes carrying costs of 15.02%, 12.14%, and 10.73% for terms of 10-, 15-, or 20-years.[38] These carrying costs should be thought of as "all-in" costs that include both principal and interest for the loan as well as taxes and Company profits. Holding all other inputs constant, I was able to back out an interest rate for comparison. I found that the Company's terms would be approximately equal to an 8.17%, 8.64%, and 8.71% interest rate for the respective contract terms.[39]

This is significantly higher than the 5-7% interest rate offered by CCEF. CCEF can offer below market rates specifically because of its status as a non-profit investment fund to fill in market gaps. Setting aside the question of whether it is appropriate for the Company to be offering such financing services in the first place, the General Assembly has already addressed financing barriers through the creation of CCEF.

[38] Hearing Exhibit 102, Attachment RNC-1, Sheet 120C.
[39] Hearing Exhibit 900, Executable Attachment CEB-16, CEB Workpaper.

Q: IF THE COMPANY'S RATES ARE HIGHER, HOW IS PUBLIC SERVICE'S OFFERING A COMPETITIVE THREAT?

A: I had to back out the interest rate for this Resiliency Program to make an apples-to-apples comparison. Since carrying costs are not a recognized term in the financial community, I question if prospective customers will take the time to compare terms critically. Additionally, as I will discuss in the next section, Public Service has significant advantages because of its regulated operations that do not make for a level playing field.

Q: PLEASE SUMMARIZE YOUR CONCERNS FOR COMPETITION AND CUSTOMER CHOICE WITH THIS OFFERING.

A: I am concerned that allowing the Company to enter this market trades short-term expediency and customer service for the longer-term health of the market, product innovation, and reasonable cost. The Company's influence will be destructive to market forces, turning away vendors not on a pre-selection list, and undermining pressures to keep prices low. In the long-term, this will reduce innovation and limit deployment. At a time when we need to deploy storage both quickly and creatively, installing Public Service as a gatekeeper will undermine the healthy development of this market.

IV. THE COMPANY HAS SIGNIFICANT INTERCONNECTION, CUSTOMER RELATIONS, AND DESIGN ADVANTAGES AS A RESULT OF ITS REGULATED STATUS THAT MAKE THIS OFFERING ANTI-COMPETITIVE

Q: WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A: The Commission has stated a preference for competition and customer choice within the cost-of-service paradigm. The Company has significant advantages because of its regulated operations that it can leverage in this resiliency offering that make it anti-competitive. In this section, I detail these advantages, including in interconnection experience, customer relations, and system design.

Q: IN INTRODUCING THIS PROGRAM, WHAT DOES THE COMPANY HAVE TO SAY ABOUT A LEVEL PLAYING FIELD FOR COMPETITIVE PROVIDERS?

A: The Company states that "nothing prevent[s] a competitive provider from offering the same service to customers at a lower price or under different terms."[40]

Q: WHAT IS YOUR REACTION TO THIS STATEMENT?

A: I disagree. The Company's entrance into behind-the-meter resiliency products and services raises public interest concerns given a regulated monopoly's ability to exert unfair competitive advantages over competitive providers. These advantages include access to capital, marketing opportunities to a captive customer base, immediate access to confidential customer usage data, and interconnection decisions informed by hosting

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[40] Cowan Direct at 6.

capacity data. As I will detail below, competitive providers do not oversee interconnection approval, do not enjoy the same access and regular communication channels with customers that the Company does, nor have they benefitted from ratepayer funded resiliency projects in the past as the Company has.

Q: HOW IS INTERCONNECTION AN UNFAIR ADVANTAGE?

A: The Company, of course, manages the interconnection process for its distribution system. It possesses the location and utilization data for each of its substations and feeders.[41] In this filing, the Company touts that the Resiliency Program will offer a "seamless customer experience" for interconnection and permitting.[42] Without question, this is an advantage not available to competitors. No other provider can approve its own interconnection application.

Q: WHAT ARE COMPETITIVE PROVIDERS' EXPERIENCES WITH INTERCONNECTION TO THE COMPANY'S DISTRIBUTION SYSTEM?

A: Competitive providers have experienced interconnection delays and rejections by the Company, resulting in lost revenue and lapsed business opportunities for developers. In a decision last year, the Commission concluded that COSSA-member, SunShare, LLC ("SunShare"), experienced significant interconnection delays and difficulties obtaining site moves from the Company.[43] As a result, the Commission ordered an increase in the bid prices to five of SunShare's projects,[44] essentially a penalty to Public Service for the

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[41] *See* Proceeding No. 22A-0189E, Confidential Attachment DSA-2, Assessment of the Existing Distribution System.
[42] Hearing Exhibit 101, Attachment ERR-4, p. 3.
[43] Proceeding No. 20D-0262E, Decision No. C21-0102, ¶ 40, p. 17 (Feb. 25, 2021).
[44] *Id.* at ¶ 45, p. 19.

interconnection delays. SunShare filed a similar complaint again this year, which the Commission dismissed on procedural grounds.[45]

Additionally, in an interconnection investigation partially stemming from SunShare's experience, Commission Staff found the stakeholder process for interconnection at Public Service "can be improved," that interconnection staff attrition at investor-owned utilities causes disruptions, and that Public Service "can be much better" about success rates for installer/developer interconnection applications.[46]

Given these significant interconnection barriers for competitive providers, it is particularly ironic that the Company touts a "seamless customer experience" for interconnection here when Company-owned assets are in question.

Q: YOU MENTION CUSTOMER RELATIONS AS ANOTHER ADVANTAGE FOR THE COMPANY AS A RESULT OF ITS REGULATED STATUS. PLEASE EXPLAIN.

A: Here, too, the Company has significant advantages because of its regulated operations that are unavailable to a potential competitor. These advantages include access to customer data, customer interactions, communications, and on-bill financing.

First, as required by regulation, Public Service maintains detailed energy usage data for each of its customers.[47] Given that Public Service proposes that this Resiliency Program remain within its regulated operations, account managers, who will offer this

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[45] Proceeding No. 22D-0287E, Decision No. C22-0400, ¶ 8, p. 4 (Jun. 29, 2022). The Commission dismissed SunShare's petition for procedural reasons, making no substantive ruling on SunShare's claims.
[46] Staff Report, Proceeding No. 21I-0321E, *In the Matter of the Investigation into the Interconnection of Distributed Energy Resources*, pp. 4-5 (Dec. 29, 2021).
[47] Commission Rule 3026.

service, have access to detailed customer energy profiles. Such information is available to a competitive provider only after customer consent and completion of a series of release forms. This process can take days, if not weeks. In fact, Commission Rules expressly forbid Public Service from releasing customer usage data to third parties until such consent forms are in place.[48] This amounts to an extensive customer relations database that would require a significant financial investment by a competitive provider to generate. This gives the Company an immediate advantage when selling resiliency services.

Secondly, the Company states it will primarily rely on area and account managers "to communicate with customers about opportunities to participate."[49] These managers are funded through regulated operations, and although the Company offers that it will isolate and separately bill managers' time spent on the Resiliency Program, customer knowledge is not separated in the heads of these managers.[50] In fact, the Company states its account managers often communicate weekly with many of their assigned customers.[51] The managers will know which customers track their bills closely, which express interest in ways to manage their energy usage, and which seek out additional programs. Indeed, the Company offers an "individualized approach" to reach out to eligible customers and states that it has held preliminary discussions with "several customers to gauge customer interest prior to filing this proposal."[52] Further, the

[48] Commission Rule 3032.
[49] Romine Direct at 21.
[50] Hearing Exhibit 900, Attachment CEB-17, Public Service Response to COSSA/SEIA DR 2-4.
[51] Hearing Exhibit 900, Attachment CEB-18, Public Service Response to COSSA-SEIA DR 3-3.
[52] Romine Direct at 21.

Company admits that these account managers and other program staff will receive incentives for enrolling projects in the Resiliency Program, potentially as high as $28,000 per project.[53] Again, this insider sales knowledge and access is an unfair advantage the Company has as a result of its regulated operations.

Q: DO YOU SEE HINTS OF THIS ALREADY PLAYING OUT?

A: Yes, as a part of this Advice Letter filing, the Company submitted letters of support from a handful of large institutions, including the City of Denver's Climate Action Office, University of Colorado-Boulder, and the Denver International Airport.[54] These letters use remarkably similar language while emphasizing the strategic importance of each institution's critical infrastructure. In discovery, the Company admits to soliciting these institutions and drafting language for the support letters.[55] Public Service has used early customer access as a result of its regulated operations to seek support for what should be a competitive offering.

Q: YOU ALSO MENTION COMMUNICATIONS. HOW IS THIS AN UNFAIR COMPETTIVE ADVANTAGE FOR THE COMPANY?

A: The Company states it may market the Resiliency Program through channels "customers expect to use" when seeking information about products and services offered by the Company.[56] On further questioning, Public Service explained this includes direct email marketing, employee relationships, social media, and search engine optimization.[57]

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[53] Hearing Exhibit 900, Attachment CEB-19, Public Service Response to CPUC DR 8-3.
[54] Hearing Exhibit 101, Attachment ERR-2.
[55] Hearing Exhibit 900, Attachment CEB-20, Public Service Response to CPUC DR 2-2.
[56] Romine Direct at 21.
[57] Hearing Exhibit 900, Attachment CEB-21, Public Service Response to COSSA/SEIA DR 1-19.

These are familiar channels to customers by fact of receiving monthly statements from the Company. No competitive provider has that kind of customer visibility and contact frequency.

Q: WILL PUBLIC SERVICE ALLOW THIRD-PARTY INSERTS IN THEIR MONTHLY STATEMENTS?

A: It is my understanding that the Company will not allow third parties to add inserts to the monthly utility bill. Many COSSA members would be willing to pay for this service. This is another example of how the Company uses its regulated status to obstruct competition.

Q: WHAT ABOUT ACCESS TO MARKET RESEARCH?

A: In confidential exhibits, the Company provided detailed market research studies and reports that are likely cost-prohibitive for many competitive providers.[58] These studies were funded through Demand-Side Management funds from Minnesota and Colorado operations, an advantage from regulated operations that is not available to competitive providers.[59] These studies amount to an unfair subsidy of utility market research with ratepayer funds.

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[58] Hearing Exhibit 900, Attachment CEB-22C, Public Service Response to CPUC 2-1.A1; Hearing Exhibit 900, Attachment CEB-23C, Public Service Response to CPUC 2-1.A2; Hearing Exhibit 900, Attachment CEB-4C, Public Service Response to COSSA/SEIA DR 1-20.A1.
[59] Hearing Exhibit 900, Attachment CEB-24, COSSA/SEIA 3-1.

Q: YOU ALSO MENTION ON-BILL FINANCING? HOW IS THIS ANTI-COMPETITVE?

A: The Company proposes to finance the Resiliency Program through charges on a participating customer's bill.[60] Adding a line or two to a standing communication is a much lower threshold than generating a completely new billing process and regular statement as a competitive provider would have to do.

Q: WILL THE COMPANY PROVIDE THIS SAME ON-BILL FINANCING ARRANGEMENT TO COMPETITIVE PROVIDERS?

A: No, the Company has stated it will not.[61] This is a clear example of a regulated benefit that competitive providers will not enjoy.

Q: HAS THE COMMISSION RULED IN THE PAST ABOUT A LEVEL PLAYING FIELD IN REGARD TO CUSTOMER INFORMATION AND MARKETING?

A: Yes, when considering the Company's Solar*Connect Program in 2014, a Company-owned solar offering for retail customers, the Commission found that, "Public Service has access to customer information and other marketing advantages because of its status as the regulated monopoly utility."[62] For a host of reasons including these advantages, the Commission denied the Solar*Connect program.

The same customer access and marketing advantages exist here. Company account managers using an individualized approach via familiarized communication

[60] Cowan Direct at 11.
[61] Hearing Exhibit 900, Attachment CEB-25, Public Service Response to COSSA/SEIA DR 1-16.
[62] Proceeding Nos. 14A-0302E and 14A-0301E, Decision No. C14-1485, ¶ 36, p. 11 (Dec. 16, 2014).

channels with financing charges provided on monthly utility bills do not constitute a level playing field.

Q: WHAT SYSTEM DESIGN ADVANTAGES DOES THE COMPANY HAVE AS A RESULT OF ITS REGULATED STATUS?

A: In addition to over a century of experience building and operating the electrical grid in its service territory, the Company has two recent experiences with resiliency projects, both funded by ratepayers. The first is the Panasonic Project, launched in 2017, and the second is the Community Resiliency Initiative, approved in 2020.

Q: PLEASE DESCRIBE THE PANASONIC PROJECT. WHAT WAS THE PURPOSE AND OUTCOME OF THIS PROJECT?

A: The Panasonic Project was part of a suite of battery storage pilot projects undertaken by the Company in Denver's Stapleton area.[63] The intent of the Panasonic Project was to expand the Company's understanding of: 1) a battery system's capability to help manage the impacts of high solar penetration on the distribution system, and 2) the use of islanding and microgrid equipment.[64] The project included a 1.2 MW solar carport, a 1 MW lithium-ion battery system, controls to operate the battery system, and islanding switch. The Company paid for the battery systems, controls, and islanding switch through rate base,[65] and these assets are operating on the Company's side of the meter.[66] During implementation, the project experienced several challenges, including delays due

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[63] Recently renamed as Central Park.
[64] Proceeding No. 15A-0847E, *Final and Comprehensive Report on the Panasonic and Stapleton Pilot Projects Under the Innovative Clean Technology Program*, pp. 3-4 (Jul. 31, 2020). ("Panasonic Final Report")
[65] Hearing Exhibit 900, Attachment CEB-26, Public Service Response to COSSA/SEIA DR 1-12.
[66] Hearing Exhibit 900, Attachment CEB-27, Public Service Response to WRA DR 3-9.

to cyber security reviews and repeated inaccuracies for test settings.[67] Nonetheless, the Panasonic Project was fully commissioned in late 2017.[68]

Q: WHY IS THIS RELEVANT TO THIS PROCEEDING?

A: The Company states that it gained "valuable engineering, design, and project management experience" from the Panasonic Project.[69] However, this was a ratepayer funded exercise meant to help manage renewable integration on the distribution system. To then leverage this publicly funded experience for design work for individual customers is a violation of the basic principles of the utility compact. Select large customers should not be the beneficiary of a ratepayer funded effort.

Q: PLEASE DESCRIBE THE SECOND EXPERIENCE, THE COMMUNITY RESILIENCY INITIATIVE. WHAT WAS THE INTENT AND OUTCOME OF THIS PROJECT?

A: The Community Resiliency Initiative ("CRI") was born out of legislation from 2018, the Energy Storage Procurement Act.[70] This legislation authorized the Company to file applications for rate-based energy storage systems up to 15 MWs total capacity, with the express purpose that the installations should provide systemic benefits, such as improved reliability, reduction of peak demand, and deferral or avoidance of utility investment.[71] Thus, a system-wide benefit was a requirement for the CRI projects.

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[67] Panasonic Final Report, pp. 28-31.
[68] Hearing Exhibit 900, Attachment CEB-26, Public Service Response to COSSA/SEIA DR 1-12.
[69] Hearing Exhibit 900, Attachment CEB-28, Public Service Response to COSSA/SEIA DR CPUC 1-8.
[70] HB18-1270, codified at § 40-2-201 *et seq.,* C.R.S.
[71] § 40-2-203 (2), C.R.S.

In a settlement agreement approved in the fall of 2020, the Commission approved seven projects, totaling 6 MWs in capacity, all of which provide significant community benefits.[72] For example, one is to support electrical service to the transit system at Denver International Airport, another is for an emergency shelter in Alamosa, and yet another for a homeless shelter in Denver. Here again the Company gained significant resiliency design and engineering experience funded by ratepayers.

Q: WHAT IS THE STATUS OF THE CRI PROJECTS?

A: Six projects are still in progress, and all were to be in service by the end of 2021.[73] As of June 2022, none of them are yet operational, with many nearly two years behind schedule.[74] The Company attributes these delays to the COVID-19 outbreak, supply chain issues, and design and permitting challenges.[75]

Q: SO WHAT? WHY DO YOU HIGHLIGHT THE PANASONIC PROJECT AND CRI PROJECTS HERE?

A: The Company points to both projects as experiences it will draw from in its design work for the Resiliency Program. As both efforts were ratepayer funded, they provided experience that should be put to the advantage of all ratepayers. Leveraging them into a voluntary behind-the-meter service offering for select customers violates the fundamental principles of the regulatory compact.

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[72] Proceeding No. 19A-0225E, Decision No. R20-0732, pp. 12-14 (Oct. 15, 2020).
[73] Hearing Exhibit 900, Attachment CEB-29, Public Service Response to COSSA/SEIA DR 1-13. The Summit Middle School project was dropped due to technical reasons.
[74] *Id.*
[75] *Id.*

Q: IN WHAT OTHER WAYS IS THE COMPANY IMPROPERLY PROPOSING TO LEVERAGE ITS DESIGN EXPERIENCE?

A: Even more objectionable, the Company offers to discount its upfront design work. The Company proposes a Preliminary Scoping Fee as a flat $1,000 charge to cover "early scoping and design work which is then used to inform detailed Design and Engineering work" if the customer decides to move forward with the project.[76]

In discovery, the Company admits, "the value of scoping study exceeds $1,000."[77] I interpret this to mean the Company is using the scoping study as an enticement for customers, discounting the initial service to generate business. In sum, the Company proposes to use its resiliency design experience gained from ratepayer funded efforts to discount initial design work for select customers, all through the course of regulated operations. This is anti-competitive on its face.

Q: WHAT ABOUT THE COMPANY'S PROGRAM IN WISCONSIN? GIVEN YOUR STATEMENTS ABOVE ABOUT UNFAIR ADVANTAGES, WHY DID THE WISCONSIN COMMISSION APPROVE A SIMILAR PROGRAM THERE?

A: The Wisconsin Commission has approved a similar resiliency offering, although as a pilot capped at 30 MW.[78] Interestingly, in the decision to approve this pilot, the Wisconsin Commission imposed a cap "to safeguard against unforeseen consequences stemming from unfettered project development."[79] The Wisconsin Commission saw a

[76] Hearing Exhibit 102, Attachment RNC-1, Sheet 120B.
[77] Hearing Exhibit 900, Attachment CEB-30, Public Service Response to CPUC 2-9.
[78] Hearing Exhibit 90, Attachment CEB-31, Public Service Response to COSSA/SEIA DR 3-11.
[79] Wisconsin Docket No. 4220-TE-106, *Application of Northern States Power Company-Wisconsin, as an Electric Public Utility, for Approval of a Resiliency Service Pilot, Final Decision*, p. 6 (Jul. 26, 2021).

need to tread cautiously. Additionally, no signed contracts are yet in place for this pilot,[80] so lessons learned are few.

Broadly, however, Wisconsin's approval does not provide much insight for this Proceeding because third-party financed distributed energy resources are subject to utility regulation in Wisconsin.[81] This puts such a freeze on competition, that in effect, eliminates a marketplace for solar and storage third party providers in Wisconsin. The Company's Wisconsin affiliate is, for all practical purposes, the *only* option for a customer looking to install a third-party financed distributed energy system. Solar and storage companies are challenging this policy in several cases before the Wisconsin Public Service Commission, but the effect is a competitive marketplace for third party distributed energy systems simply does not exist in Wisconsin.[82]

In contrast, Colorado, of course, allows third-party financed distributed energy resources. Thus, Wisconsin's environment is not analogous to Colorado's and approval in that jurisdiction should not be instructive here.

Q: PLEASE SUMMARIZE THE WAYS IN WHICH THIS RESILIENCY PROGRAM IS ANTI-COMPETITIVE.

A: Public Service manages the interconnection process for its distribution systems and is uniquely situated to grant preference to its own applications. The Company has access to customer usage data, communication channels, on-bill financing, and marketing

[80] Hearing Exhibit 900, Attachment CEB-32, Public Service Response to CPUC DR 2-3.
[81] Wis Stats. § 196.495 and *see* Docket No. 9300-DR-104, Staff Memo, *Appeal of Denial of Application for Interconnection, Request for Contested Case Hearing, and Petition for Declaratory Ruling of Eagle Point Solar, LLC and Eagle Point Energy 6, LLC* (Jan. 14, 2022).
[82] *See* Docket Nos. 9300-DR-104, 9300-DR-105, and 9300-DR-106.

advantages that competitive providers will not be able to replicate. And Public Service has gained storage and microgrid design experience through ratepayer funded projects meant to benefit the public good. I find the Company's statement that "nothing prevents a competitive provider from offering the same service" hollow. Competitive providers cannot have a level playing field if the Commission authorizes the Company to enter this behind-the-meter resiliency market.

Q: IF A COMPANY RESILIENCY PROGRAM IS NOT THE RIGHT APPROACH, WHAT DO YOU RECOMMEND?

A: Returning to one of my earlier observations, the Company has eleven non-residential storage systems out of a commercial customer base of over 200,000. This represents a rounding error. I suspect numbers would be similar for the other types of resiliency equipment the Company proposes here. Instead of approving this Resiliency Program, I recommend the Commission return to the consideration of demand charges in the Company's SG rate.

If the Commission is looking to expand storage opportunities for commercial customers, it should reconsider the non-coincident peak demand billing component in the SG rate. COSSA has long identified this demand charge as an impediment to large customers attempting to track and manage their electricity use.[83] Further, the Commission recently recognized that this rate may not reflect actual cost causation and may be at odds with state policy goals.[84]

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[83] *See e.g.*, Proceeding 17A-0797E, *Answer Testimony and Attachments of Kevin Lucas*, p. 28 (Mar. 28, 2018); Proceeding 19A-0369E, *Answer Testimony and Attachments of Kevin Lucas*, p. 49 (Oct. 23, 2019).
[84] Proceeding No. 20AL-0432E, Decision No. C21-0536, ¶ 21, pp. 9-10 (Sep. 2, 2021).

While this is not a rate case, it is relevant here because managing energy consumption is a primary use case for storage and control equipment. With a time-of-use based demand charge, customers may be more likely to identify the benefits of behind-the-meter storage and control assets and, therefore, more likely to invest. I recognize the Commission has urged the Company to investigate appropriate peak time periods and time-of-use components for various rate schedules in its upcoming phase II rate case.[85] In this rate case, I recommend a particular focus on the reasonableness of the non-coincident peak demand charge for SG customers.

Q: PLEASE SUMMARIZE YOUR VIEW OF THE COMPANY'S IMPACT ON THE MARKET AND CUSTOMER CHOICE IF THIS PROGRAM IS APPROVED.

A: Over a hundred competitive providers for resiliency products and services are currently operating in the state, and CCEF exists specifically to address market barriers for clean energy project financing. A monopoly extending design and financing services into behind-the-meter assets through regulated operations will distort market forces and have a destructive impact on innovation, cost, and customer options. This destructive force will ultimately limit, not expand, deployment.

[85] Proceeding No. 22AL-0143E, Decision No. C22-0398, ¶ 5, p. 2 (Jun. 30, 2022).

V. CONCLUSIONS AND RECOMMENDATIONS

Q: GIVEN THE ANTI-COMPETITIVE AND MARKET DESTABLIZING FORCES YOU IDENTIFY IN YOUR TESTIMONY, WHAT DO YOU RECOMMEND?

A: First, I recommend the Commission deny the Company's Resiliency Program as anti-competitive, an inappropriate extension of regulated operations, and not in the public interest.

Second, I recommend the Commission order a review of the reasonableness of the non-coincident peak demand charge for SG customers in the Company's upcoming phase II rate case.

Q: DOES THIS CONCLUDE YOUR TESTIMONY?

A: Yes, it does.