

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF COLORADO

\* \* \* \* \*

IN THE MATTER OF THE )  
APPLICATION OF PUBLIC SERVICE )  
COMPANY OF COLORADO FOR )  
APPROVAL OF ITS 2022-2025 ) PROCEEDING NO. 21A-0625EG  
RENEWABLE ENERGY )  
COMPLIANCE PLAN )  
\_\_\_\_\_ )

**CROSS ANSWER TESTIMONY  
OF MICHAEL N. KRUGER**

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

**August 12, 2022**

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1 **I. Introduction and Qualifications**

2 **Q1. PLEASE STATE FOR THE RECORD YOUR NAME, POSITION, AND**  
3 **BUSINESS ADDRESS.**

4 A1. My name is Michael Kruger. I am the President and CEO of the Colorado Solar  
5 and Storage Association (“COSSA”). My business address is 1536 Wynkoop St,  
6 Suite 104, Denver, CO, 80202.

7 **Q2. ARE YOU THE SAME MICHAEL KRUGER THAT SUBMITTED ANSWER**  
8 **TESTIMONY IN THIS PROCEEDING?**

9 A2. Yes.

10 **Q3. ON WHOSE BEHALF ARE YOU SUBMITTING TESTIMONY?**

11 A3. My testimony is provided on behalf of Intervenors, the Colorado Solar and  
12 Storage Association and the Solar Electric Industries Association (“SEIA”).

13 **Q4. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

14 A4. The purpose of my testimony is to review and comment on the various answer  
15 testimonies that parties submitted regarding the community solar programs in  
16 Public Service Company of Colorado’s (“Public Service” or “the Company”) 2022-  
17 2025 Renewable Energy Compliance Plan (“RE Plan” or “Plan”).

18 **Q5. HOW IS YOUR TESTIMONY ORGANIZED?**

19 A5. I begin by addressing issues other intervenors brought up that I discussed in my  
20 answer testimony. I then turn to issues brought up by other intervenors that I did  
21 not directly address in my answer testimony.

1 **Q6. DOES YOUR FAILURE TO RESPOND TO A PARTICULAR INTERVENOR'S**  
2 **ANSWER TESTIMONY INDICATE SUPPORT FOR THAT PARTY'S**  
3 **POSITIONS?**

4 A6. No. I do not respond to all points raised by all intervenors, and the absence of a  
5 response does not imply adoption or support of those positions.

6

7 **II. Cross Answer Testimony on Issues Discussed in Kruger Answer**  
8 **Testimony**

9 A. *Intervenors' Positions on Public Service-Owned Income-Qualified Community*  
10 *Solar Gardens*

11 **Q9. PLEASE PROVIDE A BRIEF SUMMARY OF COSSA/SEIA'S**  
12 **RECOMMENDATIONS FOR PUBLIC SERVICE'S PROPOSED OWNERSHIP**  
13 **OF INCOME-QUALIFIED ("IQ") COMMUNITY SOLAR GARDENS ("CSGs").**

14 A9. COSSA/SEIA urged the Commission to reject the Company's proposal to expand  
15 Company-owned IQ gardens and instead instruct the Company to pursue build-  
16 own-transfer partnerships with the solar industry

17 **Q10. DID ANY OTHER INTERVENORS DISCUSS PUBLIC SERVICE'S PROPOSED**  
18 **OWNERSHIP OF INCOME-QUALIFIED COMMUNITY SOLAR GARDENS?**

19 A10. Yes. The City of Boulder, through Carolyn Elam's testimony, discussed this  
20 proposal at length. Ms. Elam suggested that "Public Service be prohibited from

1 owning these new income-qualified CSG”<sup>1</sup> due to the poor performance of the  
2 previous CSGs owned by the Company.

3 **Q11. DO YOU AGREE WITH HER ASSESSMENT?**

4 A11. Yes. Ms. Elam has done a wonderful assessment of the failures of the gardens in  
5 providing benefits to income-qualified subscribers. She notes that production at  
6 the Valmont CSG on June 1, 2022 was only 50% of the production reported on  
7 June 1, 2021.<sup>2</sup> She contrasts that with five gardens that are owned and operated  
8 by third parties and that have shown far superior performance.

9 **Q12. MS. ELAM SUGGESTS THAT INSTEAD OF PUBLIC SERVICE OWNING ANY**  
10 **GARDENS, THAT THE COMMISSION ADD A MINIMUM OF 40 MEGAWATTS**  
11 **OF INCOME-QUALIFIED GARDENS. DO YOU SUPPORT THAT PROPOSAL?**

12 A12. I do not. I worry that the cost for 40 megawatts of projects fully dedicated to IQ  
13 subscribers might strain the “renewable energy standard adjustment” (“RESA”)  
14 and therefore require reducing or eliminating other important programs also  
15 supported by the RESA. In my answer testimony, I suggested that each garden  
16 include 10% of IQ subscribers and that the Commission set a total budget for  
17 incentives to encourage the participation of additional IQ subscribers.

18 **Q13. DID ANY OTHER INTERVENOR DISCUSS PUBLIC SERVICE’S PROPOSED**  
19 **OWNERSHIP OF INCOME-QUALIFIED COMMUNITY SOLAR GARDENS?**

20 A13. Yes. William Dalton, on behalf of the Staff of the Colorado Public Utilities  
21 Commission, proposed allowing Public Service rate-base its Company-owned IQ

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<sup>1</sup> Hearing Exhibit 501, Answer Testimony of Carolyn Elam, at 6.

<sup>2</sup> *Id.* at 7.

1 CSGs and earn additional incentives through performance incentive metrics  
2 (“PIMs”) on these Company-owned IQ CSGs.<sup>3</sup>

3 **Q14. WHAT IS YOUR RESPONSE TO STAFF’S PROPOSAL?**

4 A14. As I demonstrated in my answer testimony, industry can build and operate these  
5 projects more effectively than the Company and at a lower incentive. While I am  
6 not an attorney and offer no opinion on whether rate basing the cost of these  
7 projects is consistent with the law, to the extent the Commission chooses to do  
8 so, it should require Public Service to rate base the costs of the build-own-  
9 transfer partnership proposed in my answer testimony for Company-owned IQ  
10 CSGs.

11  
12 *B. Intervenors’ Positions on Improving the IQ Subscriber Experience*

13 **Q13. CAN YOU BRIEFLY DESCRIBE COSSA/SEIA’S RECOMMENDATIONS**  
14 **REGARDING IMPROVING THE IQ SUBSCRIBER EXPERIENCE?**

15 A13. COSSA/SEIA did not make a specific recommendation regarding IQ subscribers,  
16 but we did address consolidated billing in my answer testimony. We did note on  
17 several occasions the value to the customer in simplifying the billing process,  
18 especially the IQ community. If Public Service was to offer consolidated billing for  
19 third-party subscribers, it should increase customer savings and potentially allow  
20 the commission to have a much better insight into the savings IQ customers are  
21 receiving.

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<sup>3</sup> Hearing Exhibit 400, Answer Testimony of Staff Witness William J. Dalton, at 39-44.

1 **Q14. DID ANY OTHER INTERVENORS DISCUSS CONSOLIDATED BILLING IN**  
2 **THEIR ANSWER TESTIMONY?**

3 A14. Yes. The City and County of Denver in Jonathan Rogers' testimony states,  
4 "providing this guarantee would be significantly easier to manage if the Company  
5 offered consolidated billing services for privately operated CSGs in the same  
6 fashion that it does through the Company-owned IQ gardens. Both as a customer  
7 and a developer, Denver would appreciate having the option available to procure  
8 services from the Company to consolidate billing for CSG subscriptions through  
9 the Company's billing management system."<sup>4</sup> COSSA/SEIA agree with this  
10 position and believe that all would benefit through a consolidated billing offering  
11 from the Company for IQ customers.

12 **Q15. DO INTERVENORS SUGGEST OTHER WAYS TO IMPROVE THE IQ**  
13 **CUSTOMER EXPERIENCE AND TO REMOVE BARRIERS TO ENTRY?**

14 A15. Yes. Ms. Shield's offers multiple suggestions like the elimination of the  
15 Subscriber Agency Agreement and Energy Outreach Colorado retaining data  
16 consent forms.<sup>5</sup> She notes that it can take up to two months to get an IQ  
17 subscriber enrolled due to these paperwork requirements.<sup>6</sup> COSSA/SEIA  
18 suggest that every effort should be made to streamline the process for IQ  
19 subscribers, including adopting the recommendations in Ms. Shield's answer  
20 testimony.

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<sup>4</sup> Hearing Exhibit 600, Answer Testimony of Jonathan Rogers, at 17.

<sup>5</sup> Hearing Exhibit 701, Answer Testimony of Kim Shields, at 11.

<sup>6</sup> *Id.* at 13.

1 C. *Intervenors' Positions on Community Solar Garden Capacity*

2 **Q16. CAN YOU BRIEFLY DESCRIBE COSSA/SEIA'S RECOMMENDATIONS FOR**  
3 **TOTAL CAPACITY AVAILABLE IN THIS RE PLAN?**

4 A16. COSSA/SEIA recommend that the Commission set the total capacity as a  
5 minimum of 1% of annual retail electric sales (~150 MWac) for each of the four  
6 years of the Plan, with a maximum of 1.5% of annual retail electric sales (~220  
7 MWac) for each of the four years of the Plan. We also recommend that 90% of  
8 that be offered via a standard offer upon approval of the plan. The remaining  
9 10% should be offered via a request for proposals ("RFP") 12 months prior to the  
10 conclusion of the approved RE plan.

11 **Q17. DID ANY OTHER INTERVENORS DISCUSS TOTAL CAPACITY**  
12 **ALLOCATIONS IN THEIR ANSWER TESTIMONY?**

13 A17. Many of the intervenors discussed the total capacity and several suggested  
14 adopting the capacity amounts offered by Public Service. However, the Utilities  
15 Consumer Advocate suggested that the "Company use the 35MW to 75MW  
16 range in its bid proposals as a measure of prudence...As a result, the RFP  
17 should clearly allow bidders to bid within a range of CSG capacity, which may be  
18 lower than the 75 MW amount."<sup>7</sup>

19 **Q18. WHAT IS YOUR REACTION TO THIS PROPOSAL?**

20 A18. I'm not sure how this would work. For example, would the Company get to decide  
21 what is prudent? In the 2020-2021 RES plan, Public Service felt that the 2021

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<sup>7</sup> Hearing Exhibit 200, Answer Testimony of Chris Neil, at 8.



1 bids were not prudent and filed a motion to rebid. However, the Commission  
2 disagreed and ordered the RFP bids to be awarded per the original RFP scoring  
3 criteria. I don't have any confidence the same thing wouldn't happen year over  
4 year.

5 Moreover, it is not appropriate for Public Service, or any other party to this  
6 proceeding to decide what amount of CSG capacity is or isn't prudent. That is a  
7 decision that lies solely with the Commissioners.

8 Mr. Neil's concern about the pricing is legitimate. Even with the promise of  
9 an extended ITC under the Inflation Reduction Act, the costs within the solar  
10 industry have risen and show limited signs of abating during the term of this RE  
11 plan. However, the solution is to not lean further into the RFP where the  
12 outcomes are unknown and the costs uncertain. The Commission would be  
13 better served by setting a clear standard offer for the vast majority of the  
14 capacity. This would ensure fiscal certainty for the RESA, ratepayers and the  
15 community solar developers.

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17 *D. Intervenors' Positions on Cost of Community Solar Gardens*

18 **Q19. BRIEFLY DESCRIBE COSSA/SEIA'S PROPOSAL REGARDING COMMUNITY**  
19 **SOLAR COSTS AND HOW THEY RELATE TO LARGE-SCALE SOLAR**  
20 **DEVELOPMENT**

21 A19. In my Answer testimony, I noted that "the Commission should recognize that  
22 Community Solar Gardens are not small utility-scale projects. By statute they are

1 to be considered onsite generation and serve a fundamentally different purpose,  
2 with public policy goals that are not asked of utility-scale projects.”<sup>8</sup>

3 **Q20. DID ANY OTHER INTERVENORS DISCUSS COMMUNITY SOLAR COSTS IN**  
4 **THEIR ANSWER TESTIMONY?**

5 A20. Yes. Mr. Neil discussed the issue of cost at length in his testimony. He asserts  
6 that the “cost of CSG should be only reasonably more than alternatives like  
7 utility-scale solar” and uses a single example of a 200 MW project located in  
8 Pueblo County as his data point.<sup>9</sup> That single project has a bid price of  
9 \$19.50/MWh. He then contrasts that with his calculation that CSG costs over  
10 \$117/MWh per the RFP and \$137.18/MWh per the Standard Offer in 2021.<sup>10</sup>  
11 While Mr. Neil does not put forth proposals in his answer testimony about what  
12 he’d like done, he does imply that the Public Service proposal for adders on the  
13 standard offer are too high.

14 **Q21. DO YOU AGREE WITH MR. NEIL’S ANALYSIS?**

15 A21. No, I do not. Mr. Neil adds in the subscriber bill credit as a cost, in addition to the  
16 RFP bid price. Since CSGs are deemed in statute as being onsite, the only  
17 reasonable comparison is to onsite net metering and not to large-scale solar  
18 solicitations. On this specific analysis, Mr. Neil has selected the 2021 CSG  
19 solicitation, which was an outlier from previous RFP responses due to the highly  
20 incentivized nature of the selection criteria. Solar developers were awarded

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<sup>8</sup> Hearing Exhibit 901, Answer Testimony of Michael N. Kruger, Rev. 1, at 26.

<sup>9</sup> Hearing Exhibit 200, Answer Testimony of Chris Neil, at 11-12.

<sup>10</sup> *Id.* at 12.

1 maximum points if they donated the entire subscription to IQ subscribers. That  
2 removed one revenue stream normally available to a solar developer to lower  
3 overall costs. Finally, Mr. Neil only provides the gross cost. If he were looking for  
4 a net cost, that subtracted the avoided cost value (\$64.49/MWh in 2021), the  
5 overall cost would have been much lower. Mr. Lucas goes into more detail on  
6 the Company's avoided cost rates in his testimony.<sup>11</sup>

7 Additionally, Mr. Neil treats the large-scale solar installation from a 2017  
8 solicitation as analogous to one from 2021. Many things have changed in the  
9 world and solar industry in those intervening years, including increased panel,  
10 labor, financing, and interconnection costs.

11 Finally, CSGs are just fundamentally different solar products. Large-scale  
12 installations have a single off-taker, require limited administrative burden after the  
13 project is completed, don't require sales and marketing teams, don't have to  
14 adhere to Commission rules regarding off-takers or provide immediate bill  
15 savings.

16 While Mr. Neil's exercise is interesting, it only highlights the need to have  
17 both solar products available in the market as each is better suited for different  
18 policy outcomes.

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<sup>11</sup> Hearing Exhibit 900, Answer Testimony of Kevin M. Lucas, Rev. 2, at 33-35.

1 E. Staff's Positions on REC treatment for Community Solar Gardens

2 **Q22. CAN YOU BRIEFLY DESCRIBE COSSA/SEIA'S RECOMMENDATION FOR**  
3 **HOW RENEWABLE ENERGY CREDITS ("RECs") SHOULD BE TREATED?**

4 A22. Consistent with the rule that at least one standard offer must enable subscribers  
5 to keep their RECs, COSSA/SEIA stated that RECs should be available to  
6 subscribers and therefore it would likely be most efficient to assign them to the  
7 subscriber organization. If Public Service would like those RECs, they should  
8 purchase them from the subscriber organizations at a standard REC purchase  
9 price. In cases where developers bid on capacity (i.e. the RFP), Public Service  
10 purchases the RECs from the subscriber organization as part of the bid price.  
11 COSSA/SEIA also believes that negative RECs should be disallowed.

12 **Q23. DID ANY OTHER INTERVENORS DISCUSS THE TREATMENT OF**  
13 **RENEWABLE ENERGY CREDITS IN THEIR ANSWER TESTIMONY?**

14 A.23. Yes, Mr. Dalton, on behalf of the Staff of the Colorado Public Utilities  
15 Commission, says, "Staff recommends allowing CSG bidders to offer to pay a  
16 CSG Resource Fee with the fee collect [sic] upfront and treated as an upfront  
17 REC payment and deposited into the RESA account to provide additional funding  
18 for eligible energy resources."<sup>12</sup> According to Mr. Dalton this would "reinforce that  
19 CSGs are energy generation resources with energy compensation at  
20 subscribers' bill credit rate, and not exclusively REC acquisition programs."<sup>13</sup>

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<sup>12</sup> Hearing Exhibit 400, Answer Testimony of Staff Witness William J. Dalton, at 55.

<sup>13</sup> *Id.*

1 **Q24. HOW DO YOU REACT TO THAT SUGGESTION?**

2 A24. It is strange to me that the subscriber organization, if assigned by the subscriber,  
3 would pay anything to Public Service for the REC. Staff seems to suggest that  
4 this may be a solution should a developer wish to bid a negative REC, which  
5 Staff supports as a concept, in lieu of giving the REC to Public Service. However,  
6 the proposal for the fee to be “paid upfront based on expected generation  
7 provided over the twenty-year life of [sic] CSG contract”<sup>14</sup> does not take into  
8 account the net present value of money and how much additional capital will be  
9 required for developers to provide a lump sum at the beginning of the producer  
10 agreement. This would further drive up costs for CSG developers and  
11 subscribers. I do not believe the Staff suggestion is workable and should be  
12 rejected.

13

14 **III. Cross Answer Testimony on Issues Not Discussed in Kruger Answer**  
15 **Testimony**

16 A. *City and County of Denver’s Recommendation on the Community Solar*  
17 *Garden Bill Credit*

18 **Q25. WHAT DOES THE CITY AND COUNTY OF DENVER IDENTIFY AS A**  
19 **PROBLEM WITH THE CURRENT CSG PROGRAM?**

20 A25. Mr. Rogers notes that the “divergence of the value of the SRCS bill credit from  
21 the cost of a CSG subscription threatens the financial stability of the CSG

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<sup>14</sup> *Id.*

1 market.”<sup>15</sup> He points out “a trend in which the percentage of customers rates  
2 associated with transmission, distribution, and DSM is increasing while the  
3 percentage of customer rates associated with energy are decreasing.”<sup>16</sup> This is  
4 resulting in CSG subscriptions becoming a premium energy product, even as  
5 subscribers look to hedge their future energy costs.

6 **Q26. WHAT DOES MR. ROGERS’ SUGGEST TO STOP THIS EROSION OF**  
7 **VALUE?**

8 A26. Mr. Rogers suggests that the “SRCS Bill Credit could be fixed at the value in  
9 effect at the time the CSG subscription became active.”<sup>17</sup> His reasoning is that  
10 “early adopters are not to be effectively punished for their subscriptions.”<sup>18</sup>

11 **Q27. WHAT DO YOU THINK OF THIS PROPOSAL?**

12 A27. COSSA/SEIA supports this proposal. We have previously offered a similar  
13 solution to the erosion of the value of the bill credit for early adopters.  
14 Additionally, the annual change in the CSG bill credit makes it very difficult for  
15 CSG developers to adequately project their revenue. Given that they cannot  
16 predict their future revenue via the bill credit, they have to make up the value  
17 elsewhere, either via the subscription rate or a higher bid in the CSG RFP. In  
18 keeping with COSSA/SEIA’s effort to provide financial certainty through this four-  
19 year plan, we suggest Mr. Rogers’ proposal be adopted.

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<sup>15</sup> Hearing Exhibit 600, Answer Testimony of Jonathan Rogers, at 8.

<sup>16</sup> *Id.*

<sup>17</sup> *Id.* at 11.

<sup>18</sup> *Id.*

1 **Q28. DOES THIS CONCLUDE YOUR TESTIMONY?**

2 A28. Yes, it does.

**BEFORE THE PUBLIC COMMISSION  
OF THE STATE OF COLORADO**

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PROCEEDING NO. 21A-0625EG

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IN THE MATTER OF THE APPLICATION OF PUBLIC SERVICE COMPANY OF  
COLORADO FOR APPROVAL OF ITS 2022-2025 RENEWABLE ENERGY  
COMPLIANCE PLAN.

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**AFFIDAVIT OF MICHAEL N. KRUGER  
ON BEHALF OF THE COLORADO SOLAR AND STORAGE ASSOCIATION AND  
THE SOLAR ENERGY INDUSTRIES ASSOCIATION**

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I, Michael N. Kruger, being duly sworn, state that the Cross Answer Testimony was prepared by me or under my supervision, control, and direction; that the Testimony and attachments are true and correct to the best of my information, knowledge, and belief; and that I would give the same testimony orally and would present the same attachments if asked under oath.

Signed in Denver, CO this 12<sup>th</sup> day of August 2022.

*/s/ Michael N. Kruger*

Michael N. Kruger  
President and CEO  
COSSA



**CERTIFICATE OF SERVICE**

I hereby certify that on this 12<sup>th</sup> day of August 2022, a copy of the foregoing **Cross Answer Testimony of Michael N. Kruger on behalf of the Colorado Solar and Storage Association and the Solar Energy Industries Association** was filed and served upon all participants in Proceeding No. 21A-0625EG through the Colorado Public Utilities Commission E-filing system.

/s/ Alicia Zaloga

Alicia Zaloga