BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

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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	**)**	**PROCEEDING NO. 21A-____EG**

DIRECT TESTIMONY OF KERRY R. KLEMM

ON

BEHALF OF

PUBLIC SERVICE COMPANY OF COLORADO

December 20, 2021

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DIRECT TESTIMONY OF KERRY R. KLEMM

I. INTRODUCTION, QUALIFICATIONS, PURPOSE OF TESTIMONY, AND RECOMMENDATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Kerry Ryan Klemm. My business address is 401 Nicollet Mall, Minneapolis, Minnesota 55401.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT POSITION?

A. I am employed by Xcel Energy Services Inc. ("XES") as Manager, Business Solutions and Results. XES is a wholly owned subsidiary of Xcel Energy Inc. ("Xcel Energy") and provides an array of support services to Public Service Company of Colorado ("Public Service" or the "Company") and the other utility operating company subsidiaries of Xcel Energy on a coordinated basis.[1] I am responsible

[1] The other Xcel Energy operating companies are Northern States Power Company, a Minnesota corporation; Northern States Power Company, a Wisconsin corporation; and Southwestern Public Service Company.

for overseeing the renewable choice programs of Public Service and the other Xcel Energy utility operating companies.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A. I am testifying on behalf of Public Service.

Q. PLEASE SUMMARIZE YOUR RESPONSIBILITIES AND QUALIFICATIONS.

A. As the manager overseeing Xcel Energy's renewable choice programs, I am responsible for managing the strategic planning and implementation of current renewable choice customer solution offerings across the Xcel Energy utility operating companies' eight state footprint. I also lead a team collaborating with other subject matter experts throughout the Xcel Energy operating companies to implement these programs, including distribution engineering, design, construction, transmission, account management, community relations, billing, business systems, accounting, regulatory and other areas that impact the performance of renewable choice programs. A description of my qualifications, duties, and responsibilities is set forth in my Statement of Qualifications at the conclusion of my testimony.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my testimony is to describe the Company's customer choice Renewable Energy ("RE") options under its Solar*Rewards®, Solar*Rewards Community®, and Recycled Energy program offerings. Solar*Rewards is the Company's on-site solar program for customers. The Solar*Rewards Community program provides customers the opportunity to subscribe to a third-party community solar garden ("CSG") not located at the customer's premise. Recycled

Energy offers incentives for customers generating clean energy through the use of waste heat and steam which would otherwise not be used at all.

My Direct Testimony also describes Public Service's newly proposed Solar*Rewards Battery Connect (an on-site program) and off-site solar programs. I also present the Company's revised incentive levels and capacity acquisitions proposed for these program offerings. I clarify or explain changes to operational practices regarding how the Company operates these offerings and the Company's proposed changes to the offerings themselves.

Q. DO YOU SPONSOR ANY SECTIONS OF ATTACHMENTS JWI-1 THROUGH JWI-3?

A. Yes. I sponsor portions of Sections 5 and 6 of Attachment JWI-1, which is Volume 1 of the Company's 2022-2025 Renewable Energy Compliance Plan ("2022-25 RE Plan" or "Plan"), as well as the majority of Attachment JWI-3 (Volume 3 of the Plan) with the exception of two Renewable*Connect® agreements sponsored by Company witness Mr. R. Neil Cowan. Attachment JWI-3 contains pro forma customer and producer contracts related to these programs and documents concerning related requests for proposals ("RFPs").

Q. WHAT RECOMMENDATIONS ARE YOU MAKING IN YOUR DIRECT TESTIMONY?

A. I recommend that the Colorado Public Utilities Commission ("Commission") take the following actions:

- Approve the programs and capacities as summarized in Table KRK-D-1 below and further explained in my testimony;

Table KRK-D-1: Summary of 2022-25 RE Plan Capacities & DER Estimates

Solar Capacity (MW_{AC})	2020-21 RE Plan Annual Avg*	2022	2023	2024	2024	Total 2022-25 RE Plan
Solar*Rewards Small (Retired as Stand Alone in 2022-25)	9.6	0	0	0	0	0
Solar*Rewards Battery Connect (Residential/Sm Commercial)	0	4.3	4.3	4.3	4.3	17.2
Solar*Rewards Income Qualified On-Site Solar (CEO)	0.28	0.25	0.25	0.25	0.25	1
Solar*Rewards Commercial/Industrial (Formerly Medium)	19.2	15	15	15	15	60
Solar*Rewards Income Qualified/ Disproportionately Impacted Communities	N/A	Solar*Rewards Commercial/Industrial Incentive Adder Without Additional Capacity				
Solar*Rewards Large RFP	16	15	15	15	15	60
TOTAL ON-SITE SOLAR*REWARDS	**45.08**	**34.55**	**34.55**	**34.55**	**34.55**	**138.2**
Off-Site Solar	N/A	41	41	0	0	82
Net-Metering Only (Uncapped Estimate)	25.6	47	47	47	47	188
TOTAL CUSTOMER-SITED SOLAR PROJECTIONS	**70.68**	**122.55**	**122.55**	**81.55**	**81.55**	**408.2**
Solar*Rewards Community RFP Max.	60	35	35	35	35	140
Solar*Rewards Community Standard Offer	8	30	30	30	30	120
Company-Offered Income Qualified Solar*Rewards Community	3.2	10	10	10	10	40
TOTAL SOLAR*REWARDS COMMUNITY	**71.2**	**75**	**75**	**75**	**75**	**300**
TOTAL - ALL OFFERINGS IN PLAN	**116.28**	**150.55**	**150.55**	**109.55**	**109.55**	**520.2**
TOTAL DER SOLAR PROJECTION	**141.88**	**197.55**	**197.55**	**156.55**	**156.55**	**708.2**

* 2020-21 RE Plan capacity was approved in MW_{DC}. Units converted to MW_{AC} for ease of comparison against 2022-25 proposed Plan. Table does not include non-DER capacity such as Renewable*Connect.

- Approve the incentive levels as summarized in the tables and explained in the program sections of my testimony;
- Approve the program procedures and details described in each section of my testimony; and
- Approve the associated contract agreements and details in Volume 3 that are described in my testimony.

II. RE PLAN OVERVIEW FOR RETAIL DISTRIBUTED GENERATION

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

A. In this section of my Direct Testimony, I provide an overview of the Company's Retail Distributed Generation ("DG") programs, and its required Retail DG acquisition levels pursuant to Colorado's statutory Renewable Energy Standard ("RES"). I explain that the Company has exceeded and expects to continue exceeding the minimum acquisition levels for Retail DG set forth in the RES statute.

Q. WHAT IS RETAIL DG?

A. The RES statute defines "retail distributed generation" as a renewable energy resource that is located on any property that is owned or leased by the customer within the service territory of the qualifying retail utility and interconnected on the customer's side of the utility meter.[2] Retail DG also includes CSGs, which under Rule 3882(b) can be interconnected onto the distribution or transmission system.[3] As modified by Senate Bill 21-261 ("SB 21-261"), the RES statute now also permits renewable-charged storage systems to be considered eligible energy resources.[4]

Q. WHAT DOES COLORADO LAW REQUIRE WITH RESPECT TO RETAIL DG?

A. Colorado's RES statute requires that in 2020 and years thereafter, Public Service must "generate, or cause to be generated" 30 percent of its retail electricity sales in Colorado from eligible energy resources, with "distributed generation equaling

[2] § 40-2-124(1)(a)(VIII), C.R.S.
[3] § 40-2-127(2)(b)(I)(B), C.R.S.; 4 CCR 723-3-3882(b).
[4] § 40-2-124(1)(a), C.R.S.

at least three percent of its retail electricity sales."[5] Of this amount, the Company must acquire electricity derived from Retail DG equal to one-and-one-half percent of its retail electricity sales.[6]

Q. HOW DO RETAIL DG INSTALLATION TRENDS IN COLORADO COMPARE TO NATIONAL TRENDS?

A. Colorado continues to maintain a leadership position relative to most other states. According to Wood Mackenzie/SEIA's Q3 2021 Solar Market Insight Report, Colorado is in the top 10 states for residential PV and community solar based on cumulative installations during the first half of 2021. Based on 2021 installations to date and normalizing to each state's population, Colorado ranks fifth in both residential and community solar in MW_{DC} per capita and is the only state in the top five of both categories.[7]

Q. PLEASE PROVIDE AN OVERVIEW OF THE COMPANY'S RETAIL DG OFFERINGS, INCLUDING NEW OFFERINGS IN THIS PLAN.

A. Public Service provides several types of Retail DG offerings through its renewable energy interconnection services, Solar*Rewards (on-site solar) incentives, and

[5] § 40-2-124(1)(c)(I)(E), C.R.S. The RES statute defines "Eligible Energy Resources" as "recycled energy, renewable energy resources, and renewable energy storage. In addition, resources using coal mine methane and synthetic gas produced by pyrolysis of municipal solid waste are eligible energy resources if the commission determines that the electricity generated by those resources is greenhouse gas neutral." § 40-2-124(1)(a), C.R.S.

[6] § 40-2-124(1)(c)(II)(A), C.R.S.

[7] Wood Mackenzie/SEIA U.S. Solar Market Insight: Q2 2021 Report available at https://www.woodmac.com/reports/power-markets-u-s-solar-market-insight-q2-2021-501025. According to SEIA, Colorado ranks 14th in overall installed solar capacity (as of the end of Q2 2021), which is ahead of Colorado's population ranking (21st) from the 2020 U.S. Census. Solar Energy Industries Association, Solar State by State, available at https://www.seia.org/states-map.

Solar*Rewards Community offerings, which are designed to provide customers with a variety of renewable energy choices.

In recent years the Solar*Rewards incentive program for customers' on-site solar installations has offered a variety of options for small, medium, large, and income qualified ("IQ") customers, which were filled through a mix of standard offers and competitive bids. The Company's Solar*Rewards Community program makes CSG subscriptions available to customers in its service territory, with carve outs for IQ customers. Consistent with Colorado law and the Commission's Rules, these offerings are available to customers through solar development companies who participate in Solar*Rewards Community through competitive bids and standard offers, and in some cases directly from the Company.

In this Plan, Public Service changes the structure of some Solar*Rewards incentives and is also proposing a new off-site customer solar program and an on-site solar plus storage program called Solar*Rewards Battery Connect. As renewable energy matures as a customer choice, some Retail DG offerings no longer require incentives but continue to be part of the Company's Retail DG portfolio of customer options reflected in this Plan.

Q. HAS THE COMPANY MET COLORADO'S RES REQUIREMENTS TO DATE?

A. Yes. As explained in the Direct Testimonies of Company witnesses Mr. Jack Ihle W. and Ms. Tara Fowler, the Company has acquired the RECs necessary to meet its RES requirement, including the Retail DG requirement, for the years prior to and including 2020; the Company is also on track for its RES requirement compliance for 2021.

Q. IS THE COMPANY RECOMMENDING IT ACQUIRE MORE THAN THE STATUTORY MINIMUM LEVEL OF RETAIL DG IN 2022 THROUGH 2025?

A. Yes. As of December 31, 2020, the Company has acquired a total of 643 MW_{DC} of solar capacity: 384 MW of Solar*Rewards capacity, 151 MW of net-meter only solar capacity, and 108 MW of active Solar*Rewards Community projects. The solar production from this capacity puts the Company on track to significantly exceed its RES compliance requirement for the Retail DG component of Colorado's RES in 2021, or one and one-half percent of Public Service's retail electricity sales. Under the Company's proposals in its 2022-25 RE Plan, the Company will continue to significantly exceed the minimum requirements set forth in the RES.

Q. IS PUBLIC SERVICE PROPOSING CHANGES TO ITS RETAIL DG OFFERINGS FROM THE CURRENT 2020-21 RE PLAN?

A. Yes. The Company believes the changes will provide customers with greater choice and enable participation by a broader range of our customers. The proposed 2022–25 RE Plan is also responsive to recent legislative changes, as well as the Company's 2021 Electric Resource Plan and Clean Energy Plan ("2021 ERP & CEP") in Proceeding No. 21A-0141E.

Q. PLEASE PROVIDE AN OVERVIEW OF RECENT LEGISLATION THAT PROMPTED PUBLIC SERVICE TO ALTER ITS PROGRAM OFFERINGS.

A. As Company witness Mr. Ihle describes, there were several new changes and requirements that heavily influenced this Plan. These changes prompted a review of the Plan's overall portfolio, as well as individual Plan programs. While legislation

and rules impacting individual programs are discussed in various sections of this Plan, Table KRK-D-2 below, excerpted from Mr. Ihle's Direct Testimony, provides a summary of the various enacted legislative bills and their impact on the Plan. The specifics of the Company's proposed retail DG programs are set forth in more detail below later in my Direct Testimony.

Table KRK-D-2: Summary of 2021 Legislative Bills & Plan Impact

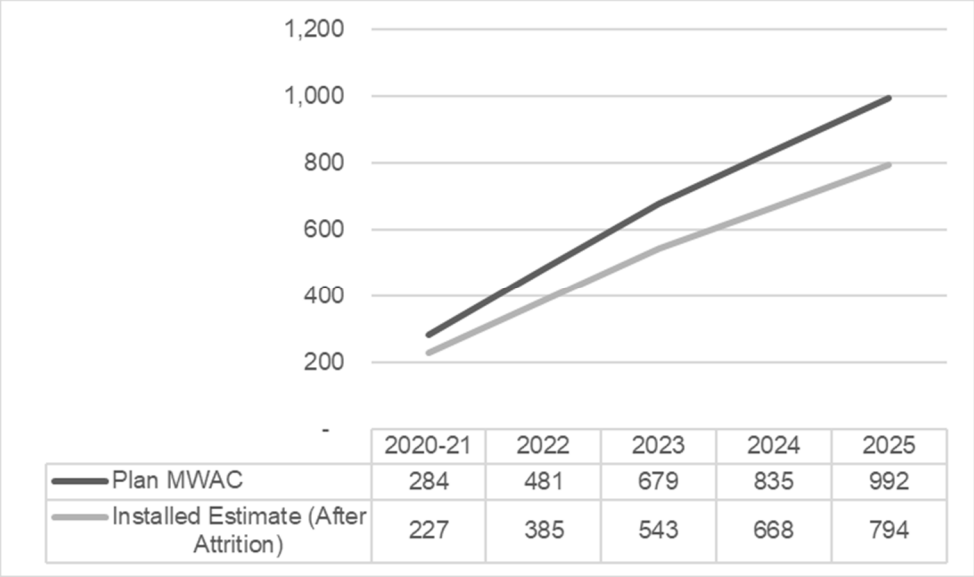
Bill	Change/Requirement	RE Plan Impact
SB 21-261	Off-site solar installations	Yes – proposed in Plan
	200% limit on on-site distributed solar systems	Yes – proposed in Plan
	Standard Offer System Sizing – 1 MW or less	Yes – proposed in Plan
	Energy Storage RESA eligibility	Yes – proposed in Plan
	Multi-Unit Buildings and Tenants	No – rulemaking required
	Meter Collar Adapter	Process implemented in Dec. 2021
	Excess Billing Credits/Donations for IQ customer programs	Yes – proposed in Plan
SB 21-272	40% of Expenditures/Investment to IQ and Disproportionately Impacted Communities	Yes – proposed in Plan
HB 21-1266	RECs and clean energy requirements	Yes
HB 21-1238	Increase Social Cost of Carbon	Yes – avoided carbon benefit calculation adjusted

Q. HOW DOES PUBLIC SERVICE'S PORTFOLIO OF DG PROGRAMS CONTRIBUTE TO THE COMPANY'S PLAN TO ACHIEVE ITS CLEAN ENERGY GOALS?

A. In the Company's 2021 ERP & CEP filing in Proceeding No. 21A-0141E, the Company laid out its plan for achieving these goals. Embedded within this RE Plan is an assumption that 1,158 MW of distributed solar resources will be added

to the Company's system between 2021 and 2030. This Plan anticipates 708 MW_{AC} of DER solar capacity over a four-year period from 2022 to 2025. The Company has assumed approximately 20 percent attrition for Retail DG participation when evaluating capacity needs from this Plan to help ensure sufficient progress toward the Company's 2030 clean energy goal. With this estimated attrition, the Company expects this Plan to result in approximately 567 MW of net installed solar capacity from capacity awarded over the four-year period. When combined with expected net capacity additions from the 2020-21 RE Plan shown in Figure KRK-D-1, this puts Retail DG on a trajectory to meet the targets set forth in the 2021 ERP & CEP.

Figure KRK-D-1: Cumulative MW of DG 2020-2025 RE Plans



	2020-21	2022	2023	2024	2025
Plan MWAC	284	481	679	835	992
Installed Estimate (After Attrition)	227	385	543	668	794

Q. HOW IS PUBLIC SERVICE ALTERING ITS PORTFOLIO OF DG PROGRAMS TO ACHIEVE THESE CAPACITY LEVELS AND TO COMPLY WITH RECENT LEGISLATIVE ENACTMENTS?

A. Public Service has considered the need for its Retail DG programs to meet new legislative requirements regarding IQ and Disproportionately Impacted Community[8] spending, while staying with the limits imposed on RESA spending and satisfying capacity requirements. SB 21-261 directs the Commission to encourage utilities to design rebate offers and other incentive programs that allow consumers of all income levels, particularly IQ customers and Disproportionately Impacted Communities, to obtain the benefits offered by DG and energy storage.[9] The Company's efforts to increase its DG capacity to comply with legislative directives and to ensure spending requirements for IQ customers and Disproportionately Impacted Communities resulted in revised offerings and capacities compared to prior Plans.

Q. WHAT CAPACITIES DOES PUBLIC SERVICE PROPOSE FOR THE 2022-25 RE PLAN?

A. The Company's high-level proposals are shown in Table KRK-D-3. Additional details are reflected in the subsequent section for each program offering.

[8] Senate Bill 21-272 ("SB 21-272") defines a "Disproportionately Impacted Community" as a "community that is in a census block group, as determined in accordance with the most recent United States census, where the proportion of households that are low income is greater than forty percent, the proportion of households that identify as minority is greater than forty percent, or the proportion of households that are housing cost-burdened is greater than forty percent; or is any other community as identified or approved by a state agency," subject to certain requirements. *See* § 40-2-108(3)(d)(II), C.R.S.
[9] *See* § 40-2-124(1)(e)(IV), C.R.S.

Table KRK-D-3: Program Offerings by Capacity MW_{AC}

	Offering	2020-21 RE Plan Annual Avg*	2022	2023	2024	2024	Total 2022-25 RE Plan
On-Site	Net-Metering Only (Uncapped Estimate)	26	47	47	47	47	188
	Solar*Rewards Battery Connect (Residential/Sm Commercial)	0	4.3	4.3	4.3	4.3	17.2
	Solar*Rewards Income Qualified On-Site Solar (CEO)	0.28	0.25	0.25	0.25	0.25	1
	Solar*Rewards Commercial/Industrial (Formerly Medium)	19	15	15	15	15	60
	Solar*Rewards Income Qualified/ Disproportionately Impacted Communities	N/A	Solar*Rewards Commercial/Industrial Incentive Adder Without Additional Capacity				
	Solar*Rewards Large RFP	16	15	15	15	15	60
Off-Site	Off-Site Solar	N/A	41	41	0	0	82
Community Solar	Solar*Rewards Community RFP Max.	60	35	35	35	35	140
	Solar*Rewards Community Standard Offer	8	30	30	30	30	120
	Solar*Rewards Community Company-Offered Income Qualified	3	10	10	10	10	40
Total		**132.28**	**197.55**	**197.55**	**156.55**	**156.55**	**708.2**

Q. PLEASE EXPLAIN HOW PUBLIC SERVICE DETERMINED THE PROPOSED PROGRAM CAPACITY ALLOCATIONS.

A. The Company considered past and current program capacities and recent legislative changes, along with the broader capacity targets to meet legislated targets for clean energy and ERP contributions specifically from DG. The Company believes that the proposed portfolio of programs and corresponding capacities provides certainty to existing programs, while also considering and accommodating new programs (e.g., the off-site program) appropriately.

Off-Site Solar. When contemplating how to partition that capacity among the various programs and program options, the Company first looked at the mandate borne from SB 21-261 for an off-site customer solar program. As explained by Company witness Mr. Ihle in his Direct Testimony, the required

capacity offered for this option is expected to be approximately 41 MW_{AC} each year for the years 2022 and 2023. The Company is proposing 82 MW_{AC} over the course of the Plan.[10]

Solar*Rewards On-Site Solar. The Company anticipates over 120 MW_{AC} of Solar*Rewards capacity (30 MW_{AC} per year) for on-site solar in this Plan through its Solar*Rewards offerings for Commercial and Industrial (or "C&I") customers.[11] The Company proposes to slightly reduce the available capacity for Commercial & Industrial customers for on-site solar projects from the previous Plan's Medium and Large Solar*Rewards due to the addition of the new off-site customer solar option. Solar*Rewards Battery Connect, which includes a standard offer solar incentive for residential or small commercial customers who pair new solar with new storage, will also contribute solar capacity under this Plan, as will the Solar*Rewards Residential IQ On-Site Solar offering being administered by the Colorado Energy Office ("CEO").

Net-Meter Only Solar. Due to the market prevalence of non-incentivized residential and small commercial solar installations, the Company intends to eliminate Solar*Rewards Standard Offer incentives for these customers under this Plan. However, there is a possibility of more on-site solar capacity than projected if the net-meter only offering, which does not include an incentive and has no

[10] The off-site solar DG requirement specifies capacity levels for the 2022 and 2023 RES compliance years only. The exact amount of capacity offered by the off-site program is a derivative of the Company's retail sales. *See* § 40-2-124(1)(e)(I)(E). The proposed annual capacities can be adjusted accordingly as the prior year retail sales are finalized.

[11] As I discuss below in Section IV of my Direct Testimony, the Solar*Rewards C&I and Solar*Rewards Large options will each have 15 MW_{AC} of capacity available each year, or 60 MW_{AC} available over the course of the proposed Plan.

capacity cap, exceeds annual projections of 47 MW_{AC} (188 MW_{AC} over the course of this Plan).

Solar*Rewards Battery Connect On-Site Solar Plus Storage. Given current market conditions, as well as continued stakeholder interest in solar plus storage systems, the Company is proposing to introduce a paired battery plus solar program which builds upon the Company's existing Demand Side Management ("DSM") Battery Connect Pilot. The proposed program will be available to both residential and small commercial customers. The Company proposes to offer up to $500,000 in annual up-front storage incentives each year, which will support approximately 340 battery systems and 4 MW_{AC} of storage per year, paired with approximately 4.3 MW_{AC} of solar.

Solar*Rewards Community CSGs. The Company also evaluated the allocation of and total CSG capacity. The Company proposes to triple the CSG Standard Offer capacity compared to the 2020-21 RE Plan. Public Service will make available 75 MW_{AC} of capacity each year in its Solar*Rewards Community program, including through RFPs, the Standard Offer, and the Company's IQ CSGs, for a total of 300 MW_{AC} over the course of the Plan.

Q. HOW DOES PUBLIC SERVICE INTEND TO MEET TARGETED SPENDING REQUIREMENTS FOR IQ CUSTOMERS AND DISPROPORTIONATELY IMPACTED COMMUNITIES?

A. As explained by Company witness Mr. Jack Ihle, this Plan aims to satisfy the requirement to spend at least 40 percent of its RESA funds on programs for IQ customers and Disproportionately Impacted Communities, primarily through a

combination of: (1) adding and adjusting equity-focused program incentives; and (2) continuing and/or expanding specific equity programs that will benefit IQ customer and Disproportionately Impacted Community participation. The Company proposes additional opportunities for IQ customer and Disproportionately Impacted Community participation throughout this Plan.

The Solar*Rewards Residential IQ On-Site Solar offering administered by CEO has approximately $500,000 of annual year-one planned spending that will contribute to this total. A $700,000 IQ and Disproportionately Impacted Community budget for incremental up-front incentives that can be added for Commercial and Industrial systems receiving a Standard Offer incentive also will count toward the spending target for IQ customers and Disproportionately Impacted Communities and will help enable solar installations for qualifying customers.

The Company's dedicated IQ CSGs are eligible only to IQ customers and the planned $876,000 of annual incentive spending will contribute toward this target. In addition, the Company proposes the creation of CSG Standard Offer incentives to significantly incentivize IQ customer and Disproportionately Impacted Community subscription commitments. Carve-out requirements for these locations or commitments will help ensure that these spending goals are met by the CSGs. Based on minimum requirements being met, the Company anticipates at least $1,547,000 of spending from these CSGs.

In total, out of a proposed $7 million of annual year-one costs for this Plan, more than $3.6 million is targeted toward IQ customers and Disproportionately Impacted Communities, which is approximately 52 percent of the planned spend

and achieves the legislated target. It also is likely that incentives not earmarked specifically for IQ customers and Disproportionately Impacted Communities will also benefit these customers, thus further exceeding the targeted spend.

Q. ARE THE COMPANY'S PROPOSED SOLAR CAPACITIES REASONABLE AND IN THE PUBLIC INTEREST?

A. Yes. While there are many potential ways to allocate solar capacity among the various offerings, the Company believes that the proposed capacity levels strike the appropriate balance with customer and solar industry opportunities across the different types of programs while mitigating the cost impact to the RESA and total resource costs. Customer participation across most Company programs is strong and continues to grow, as described in Company witness Mr. Ihle's Direct Testimony. This aligns with the Company's strategy to lead the clean energy transition (and provide customer opportunities to join us in this effort) while keeping bills low for all customers. These proposed capacities also provide a path toward meeting the newly legislated spending requirements for IQ customers and Disproportionately Impacted Communities.

Q. PLEASE PROVIDE AN OVERVIEW OF PUBLIC SERVICE'S PROPOSED RE PLAN COST IMPACTS, INCLUDING INCENTIVES, IN THE 2022-25 RE PLAN.

A. Table KRK-D-4 below summarizes the Company's proposed capacity, incentive, and total resource cost levels for each of its residential and small commercial On-Site and Solar*Rewards offerings. The year-one incentive costs are used to calculate a total spending target for these offerings based on RESA collections

and impacts as well as to calculate the 40 percent minimum spend targeting for IQ customers and Disproportionately Impacted Communities.

The total resource cost calculates the 20-year lifetime incentives plus any additional impacts like estimated bill credits or net metering, and the Total Resource $/kWh normalizes that spending on a per-kWh basis. These numbers are meant to provide transparency into the cost impacts of different offerings to help guide awareness and decision making, but not to provide judgement of the appropriateness of such costs. The Company recognizes that some targets and customer types face more significant barriers, and therefore, they may warrant additional financial and other consideration to help achieve equity and balance the goals of legislation and Commission Rules.

Table KRK-D-4 Estimated Cost Impacts of Retail DG Offerings In the 2022-25 RE Plan

	Offering	Total 2022-25 RE Plan MW_{AC}	Annual Year-One Incentive $	20 Year Total Cost	Total Cost $/kWh	% of Total Cost	% of Total MW	% of Year One Incentives
On-Site	Net-Metering Only (Uncapped Estimate)	188	$0	$645,637,329	$0.11	27%	27%	0%
	Solar*Rewards Battery Connect (Residential/Sm Commercial)	17.2	$567,901	$64,461,043	$0.12	3%	2%	8%
	Solar*Rewards Income Qualified On-Site Solar (CEO)	1	$513,403	$7,256,460	$0.23	0.3%	0.1%	7%
	Solar*Rewards Commercial/Industrial	60	$886,950	$245,063,395	$0.13	10%	8%	23%
	Solar*Rewards Income Qualified/ Disproportionately Impacted Communities	0	$700,000					
	Solar*Rewards Large RFP	60	$788,400	$296,232,899	$0.14	12%	8%	11%
Off-Site	Off-Site Solar	82	$0	$125,217,542	$0.04	5%	12%	0%
Community Solar	Solar*Rewards Community RFP	140	$613,200	$392,448,000	$0.08	16%	20%	9%
	Solar*Rewards Community Standard Offer	120	$2,062,980	$459,374,400	$0.11	19%	17%	29%
	Solar*Rewards Community Company-Offered Income Qualified	40	$876,000	$175,200,000	$0.13	7%	6%	12%
Total		**708.2**	**$7,008,834**	**$2,410,891,069**	**$0.10**			

Q. WHAT ASSUMPTIONS WERE USED IN CALCULATING THE ESTIMATIONS SHOWN IN TABLE KRK-D-4?

A. Year 1 incentive costs are equal to the sum of performance-based incentives, upfront incentives, and annual program incentives. These cost calculations use

proposed 2022-25 RE Plan incentives and capacities, with a mix of customer types or system sizes when options are offered, and an estimated $0.03/kWh maximum for Solar*Rewards Large RFP and $0.01/kWh for Solar*Rewards Community RFP.

Net metering and bill credit costs use current rates with a conservative escalation factor and a mix of customer types typically seen in that program option. 20-year total resource costs are equal to the sum of performance-based incentives, upfront incentives, and annual program incentives, plus bill credit impacts from CSG or net energy metering (where applicable) over the 20-year period.

III. PORTFOLIO-WIDE OPERATIONAL CHANGES

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

A. In this section of my Direct Testimony, I describe changes to the Company's RE Plan programs that apply universally across the entire portfolio. The Company has already implemented some of these changes to the existing programs and will continue to do so in the 2022-25 RE Plan. These modifications generally are the result of recently enacted legislation or changes to Commission Rules. Other changes are proposed to be implemented by the Company on a prospective basis with the commencement of the 2022-25 RE Plan.

Q. PLEASE DESCRIBE THE PROGRAM RULES OR CHANGES THAT THE COMPANY HAS ALREADY APPLIED ACROSS THE PORTFOLIO.

A. The Company has implemented several changes driven by new legislative and regulatory requirements. These changes became effective July 30, 2021, and will continue throughout the 2022-25 RE Plan.

Retail DG capacity limits. SB 21-261 increased the Retail DG capacity limit to 200 percent of the customer's reasonably expected average annual consumption of electricity, and a customer's Retail DG may be located at any properties owned or leased by the customer within the Company's service territory.[12]

Interconnection Rules. The Commission's new Interconnection Rules borne from Proceeding No. 19R-0654E required the Company to make several

[12] § 40-2-124(1)(a)(VIII), C.R.S.

changes.[13] Notably the Rules no longer impose insurance requirements for all inverter-based generation facilities that are less than 1 MW_{AC}.[14]

Q. ARE THERE PROGRAM RULES AND CHANGES PROSPECTIVE IN NATURE WITHIN THE 2022-25 RE PLAN?

A. Yes. Legislative changes from SB 21-261 require the Company to permit customers to donate excess bill credits from on-site systems and unsubscribed energy from CSG subscriptions to low-income energy assistance.[15] Additionally, the Company is also proposing to align the requirements for deposits, deposit forfeiture timing, and construction deadlines across all offerings of similar sizes.

A. <u>Donations of Excess Bill Credits and Unsubscribed Energy</u>

Q. IS THE COMPANY REQUIRED TO PERMIT CUSTOMERS TO DONATE EXCESS BILLING CREDITS FOR THE PURPOSE OF PROVIDING LOW-INCOME ENERGY ASSISTANCE AND BILL REDUCTIONS?

A. Yes. As enacted by SB 21-261 (now codified at § 40-2-124(1)(e)(I)(B), C.R.S.) and implemented through the CSG Rulemaking in Proceeding No. 19R-0608E, customers will be able to contribute their excess bill credits from on-site, off-site, and CSGs to a third-party administrator for the purposes of providing electric bill assistance to IQ customers.[16] In addition, the Company may itself donate unsubscribed energy from CSGs to IQ customers.[17] The Company is required to

[13] *See* 4 CCR 723-3-3850, *et seq.*
[14] *See* 4 CCR 723-3-3853(o)(I).
[15] § 40-2-124(1)(e)(I)(B), C.R.S.
[16] Rule 3881(b) and (c), 4 CCR 723-3-3881(b) and (c).
[17] Rule 3881(g), 4 CCR 723-3-3881(g).

qualify and approve a third party administrator for the purposes of applying the credits to IQ customers.[18]

Q. IS THE COMPANY SEEKING TO PARTNER WITH A THIRD-PARTY ADMINISTRATOR?

A. Yes. The Company has a long-established relationship with Energy Outreach Colorado ("EOC") to help administer energy assistance with IQ customers and expects to leverage this relationship for the purpose of being the third-party administrator. However, the Company is seeking to partner with at least one additional organization that has a proven track record in the area of IQ bill assistance.

Q. ARE THERE ANY OTHER THIRD PARTIES THAT WOULD QUALIFY?

The Company is open to evaluating other organizations. However, any interested organizations should be focused on delivering direct bill assistance to IQ customers.

Q. HOW WILL THE COMPANY DONATE THE EXCESS BILLING CREDITS?

A. There are two types of On-Site solar customers to consider: annual cash-out customers and roll-over customers. For both types of customers, an election will be required to indicate their desire to donate excess bill credits. Once the election is made, the Company will use that election going forward until notified by the customer to end the prior election. The Company will determine the excess of bill credits for the customer's January bill and will remit the donated excess to the

[18] 4 CCR 723-3-3881(b) and (d).

third-party administrator by April of that year. Upon termination of service for all solar customers, it will be the default for the Company to donate excess bill credits after 90 days if the customer does not re-establish service in the Company's Colorado service territory.

For customers participating in the Company's Solar*Rewards Community program, participating customers will be required to make an election to donate excess bill credits, and this election will remain the customer's election until the customer notifies the Company to reverse the election. Donated credits will be made after a customer's April bill. Termination will be similar to that of On-Site customers, with the default being that credits will be donated 90 days after the customer has terminated service and has not re-established service elsewhere in the Company's Colorado service territory.

Q. HOW WILL THE COMPANY REPORT THE RESULTS OF ANNUAL DONATIONS?

A. The Company plans to report, at a minimum, the total amounts of bill credits for On-Site, Off-Site, and CSGs in its annual RES Compliance Report. Other information can be provided as necessary to help explain participation. The Company will require the third-party administrator to provide a report to accompany the Company's reporting.

Q. DOES THE COMPANY EXPECT TO DONATE ANY UNSUBSCRIBED ENERGY FROM CSGS?

A. No. Historically, CSGs have not often been unsubscribed and the CSG operator receives a payment from the Company for the unsubscribed energy at the

Unsubscribed Energy Rate which is the Average Hourly Incremental Cost ("AHIC"). The Company believes the current arrangement of providing that energy to the system is beneficial to all customers and it is not of a significant enough volume to establish additional billing processes to donate this energy. The Company believes that since this unsubscribed energy is monetized, CSG operators could choose to donate their unsubscribed energy payment or kWh credits to IQ subscribers or to a third-party administrator.

B. Deposits, Deposit Forfeiture Timing, Bid Fees, and Construction Deadlines

Q. PLEASE PROVIDE A SUMMARY OF PROPOSED CHANGES TO DEPOSITS, DEPOSIT FORFEITURE TIMING, AND CONSTRUCTION TIMELINES ACROSS THE PORTFOLIO.

A. The Company is proposing several changes to the deposits, deposit forfeiture timing, and construction deadlines for all offerings as summarized in Table KRK-D-5 below. Specifically, the Company proposes to establish a uniform deposit amount of $50/kW$_{AC}$. Projects are expected to be completed 18 months after receipt of an application or the execution of an interconnection agreement ("IA") (each with deposit payment), as applicable. All program participants shall be automatically granted a six-month extension to complete their project (for a total of 24 months); however, forfeiture of deposits will vary by the size of the project.

Table KRK-D-5:
Deposits, Deposit Forfeiture Timing and Construction Deadlines

	Off-site S*RC	S*R Large RFP	S*R C&I	S*R Battery Connect
Deposit	$50 per kW_{AC}			$50 per kW_{AC} of storage
Refundability	100% if completed in allowed timeframe. 75% if withdrawn prior to IA execution unless interconnection costs exceed $150/kW		100% if completed in allowed timeframe	
Substantial Completion Due Date	18-months from IA execution and payment		18-months from application deposit received date	
1st Extension, Due Date, and Deposit Forfeiture	6-month extension granted automatically; Deposit forfeited in daily increments over the first 180 days after 18-months (approx. $0.28 per day, per kW)		Full deposit forfeited one day after 18 months when 6-month extension is automatically applied	
Final Project Due Date	**24 Months** Project subject to cancellation		**24 Months** Project subject to cancellation	

Q. WHAT WERE THE PREVIOUS DEPOSIT AMOUNTS UNDER THE 2020-21 RE PLAN?

A. The deposit amounts were fixed for the Solar*Rewards Small and Medium standard offers at $250 and $1,500, respectively. The Solar*Rewards Large RFP and Solar*Rewards Community RFP deposit amounts were both set at $100/kW, a change from the previous plan. The deposit amounts were discussed in testimony and approved as part of the 2020-21 RE Plan.

Q. WHAT IS PUBLIC SERVICE PROPOSING FOR DEPOSITS IN THIS PLAN?

A. As stated above, the Company is proposing a $50/kW deposit for all offerings in this plan.

Q. WHY IS PUBLIC SERVICE PROPOSING THAT AMOUNT?

A. First, the $50/kW deposit creates uniformity while recognizing size differences. The $50/kW level also balances competing interests, particularly for larger projects. As I discuss in more detail below, Public Service seeks to set a "high bar" for its program applications (including both Standard Offers and RFPs), so that the Company will receive better-quality applications that have high intent to proceed, leading to lower attrition for approved applications and awarded capacity. A higher deposit provides a greater indication that the project applicant can develop and finance the project as proposed.

Industry has also expressed support for a deposit level that is higher than $10/kW; however, feedback and reactions indicated that the $100/kW amount was prohibitively high. Thus, the Company determined that a $50/kW deposit strikes an appropriate balance. Furthermore, as I explain below, if the project is successfully developed or the project encounters certain circumstances that prevent completion of the project, the deposit is refundable to the applicant.

Q. WHAT ADJUSTMENTS ARE BEING PROPOSED TO THE RFP PROGRAM DEPOSITS UNDER SOLAR*REWARDS LARGE RFP AND SOLAR*REWARDS COMMUNITY?

A. The deposit may be refunded if the project is withdrawn from the program and the interconnection queue prior to an applicant's timely signing of an Interconnection Agreement. The deposit refund is limited to 75 percent of the deposit amount, unless the project's indicative cost estimate for interconnection exceeds $150/kW, in which case, the deposit is fully refundable if the project withdraws prior to signing

an Interconnection Agreement. Deposits eligible for refund prior to signing an Interconnection Agreement will be refunded within 90 days of the latter of the applicant's withdrawal and submission of the Deposit Refund Request Form. After an Interconnection Agreement is signed, only Force Majeure events will be considered as cause for potential deposit return if a project is withdrawn.

Otherwise, once a project reaches substantial completion within the program timeline, the application deposit will be refunded within 90 days of the latter of the substantial completion date and the applicant's submission of the Deposit Refund Request Form. If an extension was applied, the deposit would be refunded in accordance with the Extension Policy included in Table KRK-D-5. If no extension were applied the deposit would be refunded in full. Any forfeited deposit dollars will contribute to the RESA balance.

Q. PLEASE EXPLAIN PROPOSED CHANGES TO PROGRAM TIMELINES FOR PROJECT COMPLETION.

A. The Company proposes changing the Solar*Rewards Large RFP and Solar*Rewards Community timelines as reflected in Table KRK-D-5. This adjusted timeline is appropriate given that studies necessary to support the interconnection will now be conducted prior to the start of the project's substantial completion timeline. In the 2020-21 RE Plan, the timeline was longer to account for site moves and associated study timelines. This Plan removes site move options and the study timeframe from the timeline to complete a project. Therefore, this new, adjusted timeline should be sufficient to account for any system upgrades for the interconnection of projects in these programs.

Q. ARE CHANGES BEING PROPOSED TO THE BID FEE FOR PARTICIPATION IN RFPS FOR SOLAR*REWARDS AND SOLAR*REWARDS COMMUNITY?

A. Yes. The Company proposes to change the non-refundable Bid Fee to be scaled by size, following the same Bid Fee scale as used in the Company's ERP solicitation process. Table KRK-D-6 below shows the associated Bid Fees based on the MW size range of bid projects.

Table KRK-D-6

Large RFP Bid Fees MW Range	Bid Fee
>1 to 2 MW	$750
>2 to 5 MW	$1,500
>5 to 10 MW	$3,000
>10 MW	$10,000

C. Conversion of All Plan Capacity from DC to AC

Q. WHAT OTHER CHANGES IS PUBLIC SERVICE PROPOSING OVERALL FOR SOLAR*REWARDS INSTALLATIONS?

A. The Company proposes moving from characterizing capacity as Direct Current ("DC") to Alternating Current ("AC") in this Plan for several reasons. First, as a result of the Commission's CSG rulemaking in Proceeding No. 19R-0608E, CSG capacity must be measured using the facility's AC rating rather than its DC rating.[19] The Commission clarified that CSG capacity allocations are to be filled using AC capacity in the 2020-21 RE Plan and going forward.[20] In order to clarify capacity

[19] *See* Proceeding No. 19R-0608E, Decision No. C20-0482, at ¶¶ 28-38 (mailed date July 9, 2020). The conversion to AC should not be applied retroactively to systems already operating or in the queue at the time of the rulemaking. *Id,* at ¶ 37.
[20] *Id,* at ¶ 38.

levels within this Plan and measure the impact of distributed energy resources ("DER") for the ERP, Public Service determined that providing all capacities in AC is a more consistent and clear approach than having CSGs measured in AC and customer-sited solar DG measured in DC.

Second, this approach also better aligns with the interconnection study process to study what is being put onto the grid in AC rather than what the distributed generation system's potential is to produce in DC. Third, this approach is consistent with the ERP process, and notably the forecast of distributed solar resources that are an input to the ERP process.

Q. WHAT IS THE IMPACT OF EXPRESSING PROGRAM OFFERINGS IN AC CAPACITY?

A. Generally, the Company has estimated that a capacity figure is 20 percent lower when expressed in terms of the project's AC rating rather than its DC rating; however, this differential may be even greater. At first glance, some offerings may appear to have less capacity available when compared to prior Plans. However, after normalizing to the same units, the capacity levels are similar to previous Plans' offerings.

IV. CUSTOMER-SITED AND SOLAR*REWARDS PROPOSALS

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR DIRECT TESTIMONY?

A. In this section of my Direct Testimony, I present issues and topics unique to customer-sited renewable offerings, including the Company's proposals for its On-Site renewable options, including budgets, annual capacity, incentives, and other details. I propose and present Public Service's Solar*Rewards new program designs, changes from the existing Solar*Rewards programs, the new Solar*Rewards Battery Connect offering, and the Off-Site solar offering.

Q. HAS COVID-19 IMPACTED APPLICATION NUMBERS?

A. Figures KRK-D-2 and KRK-D-3 below show that application numbers for on-site solar showed strong growth from 2018 to 2019, followed by a slight decrease from 2019 to 2020. Year 2021 application volumes have rebounded, with the number of net metering only applications for the first three quarters of 2021 exceeding each of the four previous full years (2017 to 2020), and Solar*Rewards applications for the first three quarters of 2021 exceeding each of the three previous full years (2018 to 2020).

Figure KRK-D-2:
Solar*Rewards and Net Energy Metering
Applications Received 2017 to Q3 2021

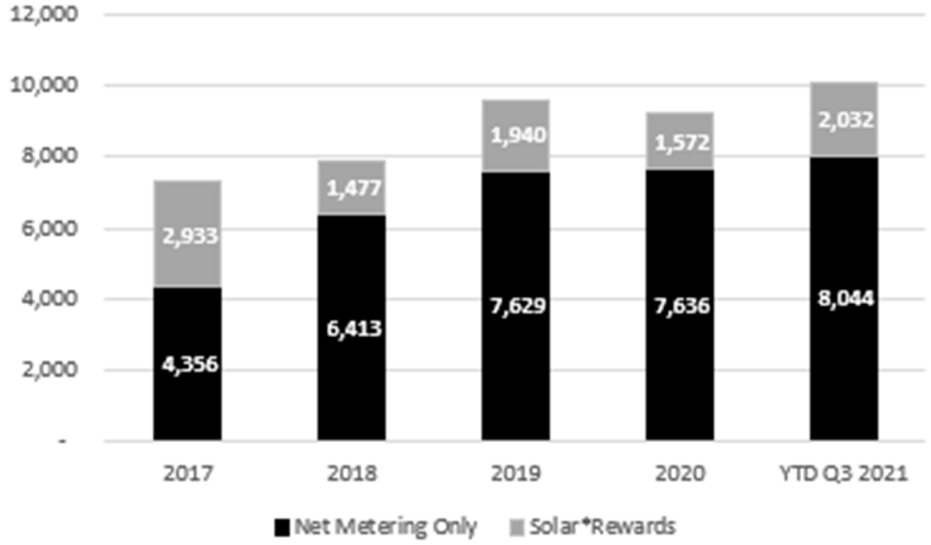
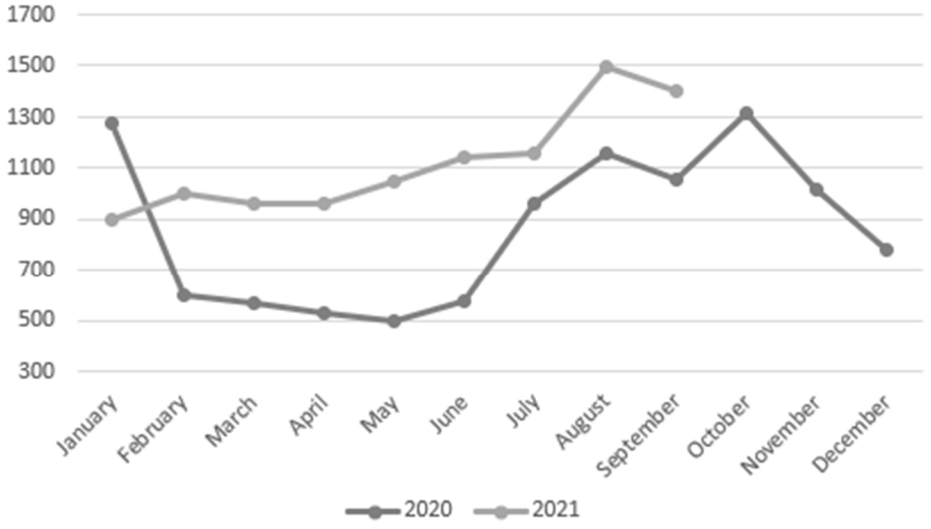


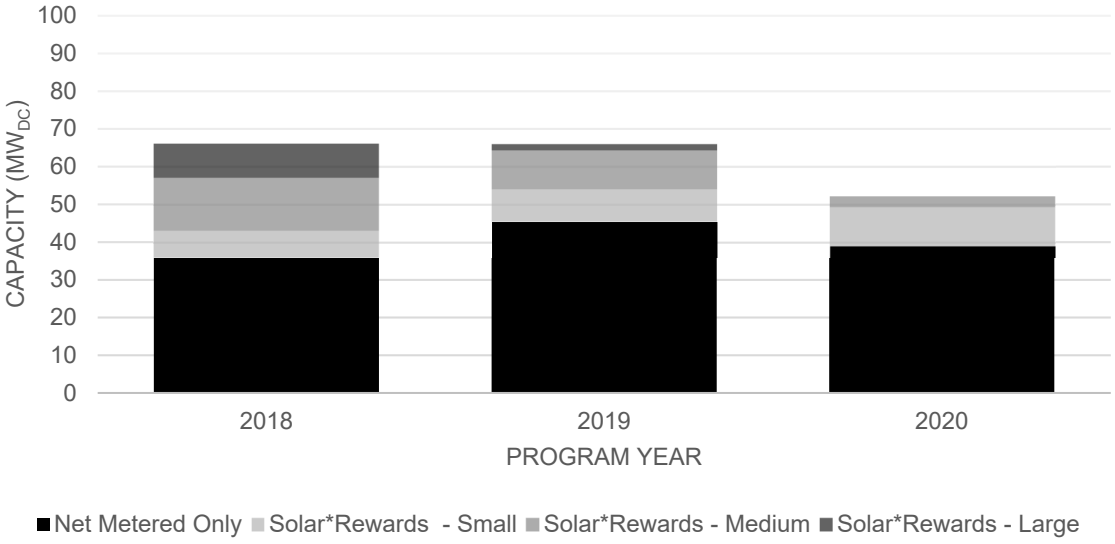
Figure KRK-D-3:
All On-Site Solar Applications Received 2020 vs 2021



Public Service did see a decrease in 2020 program installations (see Figure KRK-D-4 below) amid the COVID-19 pandemic, along with the imposition of tariffs on solar panels and uncertainty concerning the Federal Investment Tax Credit ("ITC"). The decrease in solar DG installations in 2020 was observed primarily during the

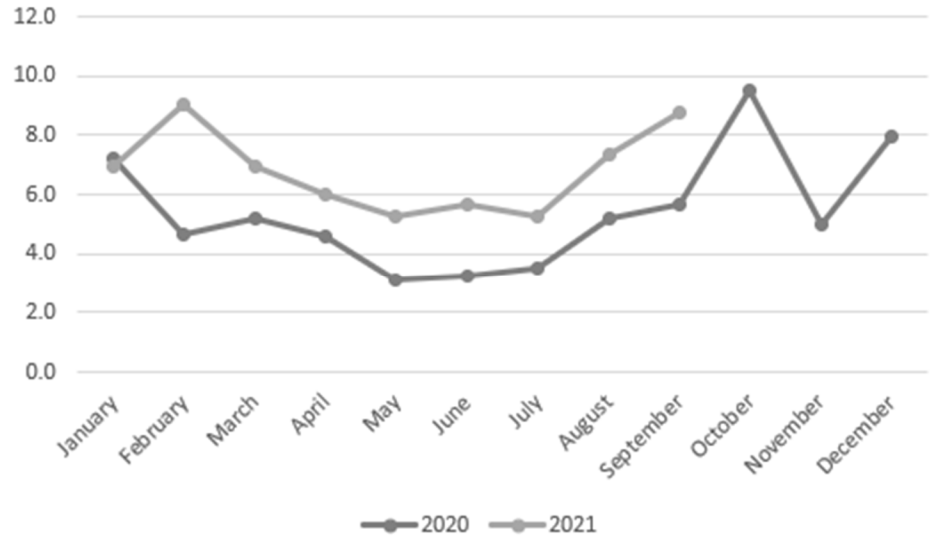
spring and summer seasons. This was likely driven, at least in part, by COVID-19-related impacts and concerns. For example, the industry indicated to the Company that many in-person sales programs and meetings and in-home installations were delayed or suspended due to both customer and crew concerns. These factors, as well as general economic uncertainty caused by COVID-19, likely led to a decrease in market demand.

Figure KRK-D-4:
Incremental Installed Solar by Program Offering Year



Notwithstanding these difficulties, the Company did receive and process solar DG installations in 2020. It also is likely that solar DG facilities awarded to 2020 applications will continue to be installed during 2021, thus increasing the capacity installed from 2020 program year applications. A look at installations by calendar month and year (and regardless of application vintage year), as shown in Figure KRK-D-5 below, shows that 2021 installations have somewhat rebounded and remained above 2020 levels throughout the year.

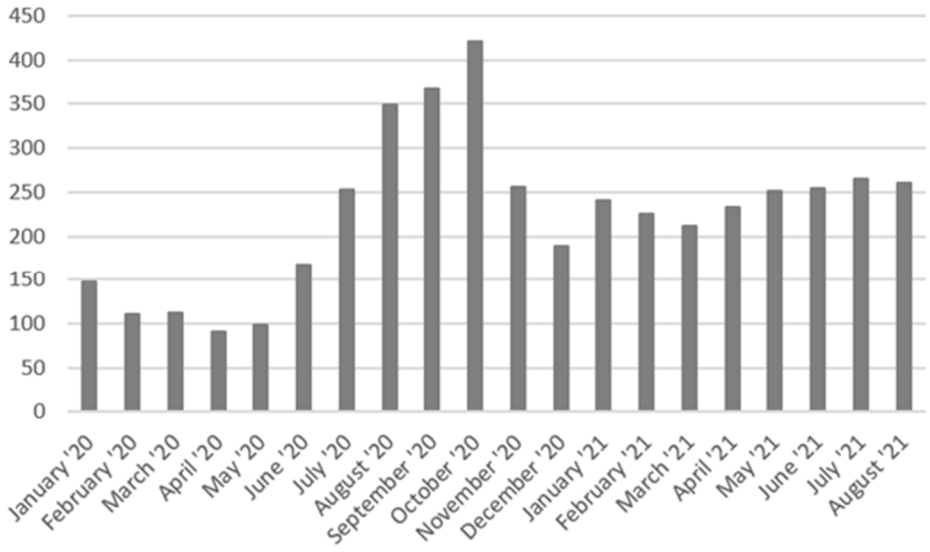
Figure KRK–D-5:
All On-Site MW Installed 2020 vs 2021



Q. DID OTHER CHANGES IN THE SOLAR*REWARDS PROGRAM POTENTIALLY IMPACT SOLAR*REWARDS APPLICATION AND INSTALLATION VOLUMES?

A. Yes. In the 2020-21 RE Plan, the Commission required the Company to cease mandating production meters on systems 10kW and less. The Company successfully implemented that change in June 2020 and uses the National Renewable Energy Laboratory's PVWatts® solar calculator for the Company's data needs and to make the REC incentive payments for these Solar*Rewards participants as required by Rule 3658(f)(X)(D) and (F). The chart below in Figure KRK-D-6 shows the volume of applications received in the Solar*Rewards Small program between January 2020 to August 2021.

Figure KRK-D-6:
Solar*Rewards Small Applications Received



Q. PLEASE PROVIDE AN OVERVIEW OF PUBLIC SERVICE'S PROPOSED SOLAR*REWARDS COST LEVELS, INCLUDING INCENTIVES, IN THE 2022-25 RE PLAN.

A. Table KRK-D-7 below summarizes the Company's proposed capacity and incentives for each of its residential and small commercial On-Site and Solar*Rewards offerings.

Table KRK-D-7: Summary of On-Site Solar Offerings

Offering	Incentives (20-Year Solar PBI Unless Noted)	Solar Capacity (MW_{AC}) 2022	2023	2024	2024	Total 2022-25 RE Plan
Net-Metering Only (Uncapped Estimate)	N/A	47	47	47	47	188
Solar*Rewards Battery Connect (Residential/Sm Commercial)	$125/kW of storage up-front $1250 residential max / customer $2500 sm commercial max / customer 4 MW of storage annual max.	4.3	4.3	4.3	4.3	17.2
	$0.005/kWh solar production					
	$100 annual participation bonus					
Solar*Rewards Income Qualified On-Site Solar (CEO)	≤7 kW $0.034 PBI $2/Watt up-front	0.25	0.25	0.25	0.25	1
Solar*Rewards Commercial/Industrial (Formerly Medium)	Option A (50-250 kW) $0.04/kWh	15	15	15	15	60
	Option B (250-500 kW) $0.0375/kWh					
	Option C (500 kW - 1 MW) $0.035/kWh					
Solar*Rewards Income Qualified/ Disproportionately Impacted Communities	$0.015/W up-front $700,000 annual max.					
Solar*Rewards Large RFP	> 1 MW As bid with PBI max of $0.03/kWh	15	15	15	15	60
Total On-Site Solar*Rewards		34.55	34.55	34.55	34.55	138.20
Total On-Site Retail DG		**81.6**	**81.6**	**81.6**	**81.6**	**326.20**

Q. WHY DOES THE COMPANY PROPOSE TO ELIMINATE THE PERFORMANCE BASED INCENTIVES FROM STANDALONE SOLAR PV FOR RESIDENTIAL AND SMALL COMMERCIAL CUSTOMERS?

A. The Company reviewed the DG options available to its customers, including the total compensation available to them through Performance Based Incentives ("PBIs") and Net Energy Metering only. Public Service determined that Residential and Small Commercial customers, both of whom pay energy only (kWh) rates, have a significant opportunity for financial benefits from Net Energy Metering that are quite different from what is available to Commercial and Industrial customers

who pay demand charges and lower energy (kWh) charges. In other words, net metering is typically more beneficial for Residential and Small Commercial customers whose rates are energy (kWh) only and relatively high compared to customers whose billing structure also includes a demand charge. The Company wanted to address this disparity by aligning incentives with rate classes and rate structures, in addition to system size, to increase solar opportunities for demand-billed Commercial and Industrial customers, while maintaining the beneficial net metering option available for Residential and Small Commercial customers.

Q. WHAT ARE THE COMPANY'S INCENTIVE PROPOSALS FOR SOLAR*REWARDS RESIDENTIAL AND SMALL COMMERCIAL CUSTOMERS?

A. The Company proposes eliminating the prior Plan's $0.005/kWh PBI that was offered for Small standalone PV systems up to 25kW_{DC}, which amounted to approximately $6.50/kW per year. To be clear, participating Solar*Rewards customers that are already enrolled with an incentive will not lose their incentive. Since 2017, the Company has seen more customers foregoing Solar*Rewards PBI incentives to install solar without any direct incentive payments through the "net metering only option," as shown in Figure KRK-D-4 above. While 2020 and 2021 saw a resurgence in Solar*Rewards interest following the removal of the production meter requirement (and associated meter charges) for systems 10 kW_{DC} and less, the Company has determined, based on solar industry input and applications received, that this relatively small benefit is not dispositive to a customer's decision to install solar, and that the market has matured to a point

where solar incentives are no longer necessary for Residential and Small Commercial customers due to the current net metering compensation structure.

A. Net Metering Only

Q. WILL RESIDENTIAL AND SMALL COMMERCIAL CUSTOMERS CONTINUE TO BE ABLE TO TAKE ADVANTAGE OF A NET METERING ONLY OPTION?

A. Yes, Residential and Small Commercial customers will continue to be eligible to take advantage of the Company's net energy metering only offering.

Q. DOES THE COMPANY INTEND TO LIMIT NET-METERED ONLY SYSTEMS AT THE LEVELS INDICATED?

A. No. The Company shows capacity estimates for net-metered only systems based on historical levels for the purposes of showing solar growth without incentives, and for use in estimating Retail DG likely to be installed on Public Service's system. This number is likely to be exceeded in 2021 so the capacity shown is a conservative estimate; it is neither a floor nor a cap.

Q. WITHOUT INCENTIVES, WHAT COST IMPACTS ARE THERE TO NET METERING ONLY SOLAR INSTALLATIONS?

A. Despite net metering only participants not receiving direct incentives through the PBI or upfront incentives, these participants still receive value through net metering. Table KRK-D-8 shows the associated financial benefits that contribute to an overall estimate of total costs of this offering.

Table KRK-D-8: Net Metering Only Estimated Capacity and Cost Impacts

		Solar Capacity (MWAC)					Annual Year-One Incentive $	20 Year Total	
Offering	Incentives (20-Year Solar PBI Unless Noted)	2022	2023	2024	2024	Total 2022-25 RE Plan		Cost	$/kWh
Net-Metering Only (Uncapped Estimate)	N/A	47	47	47	47	188	$0	$645,637,329	$0.11

Q. WILL THERE BE STANDARD OFFER INCENTIVE OPTIONS FOR RESIDENTIAL AND SMALL COMMERCIAL CUSTOMERS IN THE 2022-25 RE PLAN?

A. Yes. Residential and Small Commercial customers installing solar and battery storage can qualify for a new multi-incentive dispatchable solar plus storage option called Solar*Rewards Battery Connect, described immediately below

B. <u>Solar*Rewards Battery Connect</u>

Q. WHY IS THE COMPANY PROPOSING TO TRANSITION ITS SOLAR*REWARDS SMALL OFFERING TO A SOLAR*REWARDS BATTERY CONNECT OFFERING?

A. Based upon recent installation data for net metering only solar systems, the Company has evidence to suggest PBIs are no longer needed to support the continued growth of small solar in the Company's service territory. Further, given observed solar generation output patterns on the Company's system, Public Service is aware that peak output from solar generating facilities is not always aligned with the Company's peak demand. Focusing incentives on solar paired with dispatchable storage aligns with the Company's desire to focus solar incentives, when practical, on resources that can help benefit the grid. Additionally, as battery storage is a more nascent and expensive technology, the

Company believes incentives are better allocated to encourage the growth of solar paired with storage. In addition to the per-kWh solar production incentives, the Company will also provide an incentive for participation in a program that will allow the Company to dispatch customer-sited batteries to provide value to the grid as discussed in greater detail below.

Q. IS ENERGY STORAGE A RENEWABLE ENERGY RESOURCE ELIGIBLE FOR INCENTIVE FUNDING FROM THE RESA FUNDS?

A. Yes. SB 21-261 (now codified at C.R.S. § 40-2-124(1)(a)) now classifies storage as an "eligible energy resource"[21] and thus allows storage resources to be eligible for RESA incentives as long as the storage is only charged by solar. Public Service's offering for these incentives is described below.

Q. DOES THE COMPANY CURRENTLY SUPPORT THE INTERCONNECTION OF BATTERY SYSTEMS?

A. Yes. Pursuant to the Three-Case Settlement in Proceeding Nos. 16AL-0048E, *et al.* (specifically Proceeding No. 16A-0139E for the 2017-19 RE Plan), the interconnection of customer-sited storage systems behind the meter as stand-alone systems or paired with net energy metering eligible renewable generation resources has been permitted for several years.

[21] To be an eligible energy resource, the energy storage system must store energy produced only by renewable energy resources. *See* § 40-2-124(1)(a)(VII.5), C.R.S.

Q. HOW MANY RESIDENTIAL BATTERIES ARE INTERCONNECTED TO THE COMPANY'S DISTRIBUTION SYSTEM CURRENTLY?

A. There are approximately 800 residential storage systems which have been approved and interconnected to the Company's distribution system since 2017. The majority of the systems approved and interconnected operate in a non-export configuration that does not enable the export of energy to the grid. Instead, the electric storage systems enable the customer to consume the stored energy at the customer's residence or business.

Q. PLEASE EXPLAIN HOW THE COMPANY'S SOLAR*REWARDS BATTERY CONNECT PROPOSAL FURTHER SUPPORTS THE GROWTH OF SOLAR AND STORAGE.

A. In addition to the installations the Company has observed organically, the Company is proposing incentives that would support approximately 340 paired solar plus storage systems per year. These battery systems would be required to be 100 percent charged by solar energy systems, with only very occasional deviations allowed due to manufacturer settings for storm (i.e., outage) preparation that are likely to use nominal amounts of grid energy. The proposed incentive structure will include an upfront payment to the participating customer for enrollment in the program, a performance payment for continued participation in the program, as well as a PBI for all kilowatt-hours generated by the solar energy system.

Q. WHAT SOLAR PRODUCTION INCENTIVES IS THE COMPANY PROPOSING FOR ITS SOLAR*REWARDS BATTERY CONNECT PROGRAM?

A. The Company proposes to offer a solar production incentive of $0.005/kWh produced by the solar system (the same incentive paid under the 2020-21 RE Plan standalone Solar*Rewards Small program), paid for 20 years. Residential and Small Commercial customers are eligible for this offer only if their solar systems are paired with a storage system. The Company believes this level of solar incentive and eligibility strikes the proper balance between providing an incentive to participants without unreasonably burdening non-participants. It also helps create a framework under which solar incentives are targeted toward solar that is more beneficial as a generation resource that is available to meet system needs during critical and/or peak periods.

Q. WHAT OTHER INCENTIVES IS THE COMPANY PROPOSING FOR ITS SOLAR*REWARDS BATTERY CONNECT OFFERING?

A. The Company proposes to offer an additional $125/kW of installed storage capacity up to $1250 for Residential customers and $2500 for Small Commercial customers subject to the terms and conditions of continued program participation for a period of the term of this Plan. Only one upfront incentive is allowed per participating customer premise. Additionally, the Company will pay an added performance incentive payment of $100 per year for meeting most of the annual dispatch events. Based on early feedback from the existing DSM Battery Connect Pilot, Solar*Rewards Battery Connect will allow participating customers to opt out

of up of two events per year without being disqualified for the annual $100 incentive.

Q. WHAT BATTERY PERFORMANCE REQUIREMENTS WILL THE CUSTOMER BE REQUIRED TO MEET TO EARN AND RETAIN THE INCENTIVES?

A. The customer must participate in the program by allowing the battery to charge for 24 hours and be discharged by Public Service for up to 60 percent of its storage capacity for up to 40 annual grid events called by Public Service. Grid events could be triggered by capacity, economic or contingency events. If a grid outage occurs, the stored energy is available for the customer's use. If the customer fails to participate in the battery program for at least a year, it must reimburse a prorated portion of the upfront incentive to the RESA. If the customer fails to participate in the battery program for at least five years, Public Service can terminate the agreement, which ends the performance-based incentives (i.e., REC purchases). If the customer has participated for five years, Public Service will continue to purchase RECs from the solar PV system for the 20-year term of the agreement.

Q. WHAT CUSTOMER CLASSES AND EQUIPMENT ARE ELIGIBLE TO PARTICIPATE IN THE SOLAR*REWARDS BATTERY CONNECT PROGRAM?

A. Residential and Small Commercial customers are eligible to participate. Currently, under the existing DSM Battery Connect Pilot, customers must install a Tesla Powerwall II or a SolarEdge inverter with a supported LG Chem battery as these are the vendors whose systems the Company is able to control and dispatch through vendor supported software platforms. Solar*Rewards Battery Connect will continue those requirements. The Company may consider expanding the program

to additional vendors and storage systems. In the long-term, the Company is intending to procure a software platform that would allow it to dispatch batteries and support inverters of multiple different vendors through a single interface.

Q. HOW DOES THE PROPOSED SOLAR*REWARDS BATTERY CONNECT PROGRAM RELATE TO THE COMPANY'S EXISTING BATTERY CONNECT PILOT IN DSM?

A. The Battery Connect Pilot currently underway through DSM is expected to be completed in September 2022. The Company views the proposal in this Plan as an opportunity to take early learnings from the DSM Battery Connect Pilot and expand and improve upon them with Solar*Rewards Battery Connect.

Q. WHAT IMPROVEMENTS IS THE COMPANY PROPOSING TO THE EXISTING BATTERY CONNECT PILOT?

A. First, the Company is limiting the program to battery energy storage systems which are 100 percent charged by solar PV. This has two benefits: (1) it encourages adoption of more dispatchable carbon free energy on the distribution system; and (2) it allows the storage system to be classified as "renewable energy storage," thereby making the resource eligible for incentive funding from the RESA. In addition, the Company anticipates transitioning this program to more of a true "pay-for-performance" construct, as opposed to the current DSM Battery Connect Pilot structure where customer event performance is not associated with specific payments. Separately, as noted above, the program today only supports two specific vendors and dispatching these batteries requires the use of two discrete proprietary vendor platforms. The Company believes additional value can be

gained over time by integrating these batteries into a single platform such as a demand response management system ("DRMS") or distributed energy resource management system ("DERMS").

Q. PLEASE DESCRIBE HOW THE COMPANY DETERMINED THE ANNUAL NUMBER OF SYSTEMS FOR SOLAR*REWARDS BATTERY CONNECT.

A. The current DSM Battery Connect Pilot was designed for a maximum of 500 participants, and there currently are approximately 125 participating customers. Based upon those data points, the Company aims to boost the market for batteries by continuing the Solar*Rewards Battery Connect program with a total of approximately 1,400 systems over the four-year Plan. This is in addition to non-incentivized battery customers who may wish to interconnect outside of the Solar*Rewards Battery Connect program, similar to many of the battery customers who are interconnected to our system today.

While Solar*Rewards Battery Connect adds the PBI incentive for the solar resource and a pay-for-performance response incentive for participating in dispatch events, these systems also add value to the system, both from a resource and a learning perspective. For that reason, the Company finds these extra incentive costs to be reasonable at the scale of the proposed program. The Company also considered the cost of the program compared to other first-year-incentive costs for the portfolio.

Q. WHAT IS THE COST IMPACT OF THIS OFFERING DURING THE FIRST YEAR AND OVER THE COURSE OF THE PLAN?

A. At the proposed volume and incentive levels, the first-year incentive cost is approximately $567,000, which is roughly 8 percent of the total first-year incentive spend for the Plan. This strikes an appropriate balance between supporting an emerging technology with potentially strong system benefits while keeping the costs at a reasonable level compared to the rest of the portfolio. For comparison purposes, the first-year incentive costs, along with associated financial benefits that contribute to an overall estimate of total costs of this offering are shown in Table KRK-D-9 below.

Table KRK-D-9: Solar*Rewards Battery Connect Estimated Cost Impacts

		Solar Capacity (MW_{AC})					Annual Year-One Incentive $	20 Year Total	
Offering	Incentives (20-Year Solar PBI Unless Noted)	2022	2023	2024	2024	Total 2022-25 RE Plan		Cost	$/kWh
Solar*Rewards Battery Connect (Residential/Sm Commercial)	$125/kW of storage up-front $1250 residential max / customer $2500 sm commercial max / customer 4 MW of storage annual max.	4.3	4.3	4.3	4.3	17.2	$567,901	$64,461,043	$0.12
	$0.005/kWh solar production								
	$100 annual participation bonus								

C. <u>Solar*Rewards Residential IQ On-Site Solar Offering</u>

Q. DOES PUBLIC SERVICE PROPOSE ANY OTHER SOLAR*REWARDS OFFERINGS FOR RESIDENTIAL CUSTOMERS?

A. Yes, Public Service proposes to continue the Residential IQ On-Site Solar incentive program (formerly known as the CEO Low-Income Rooftop Solar offering) albeit with some minor changes. The Company proposes to retain CEO as the exclusive administrative agent for this offering.

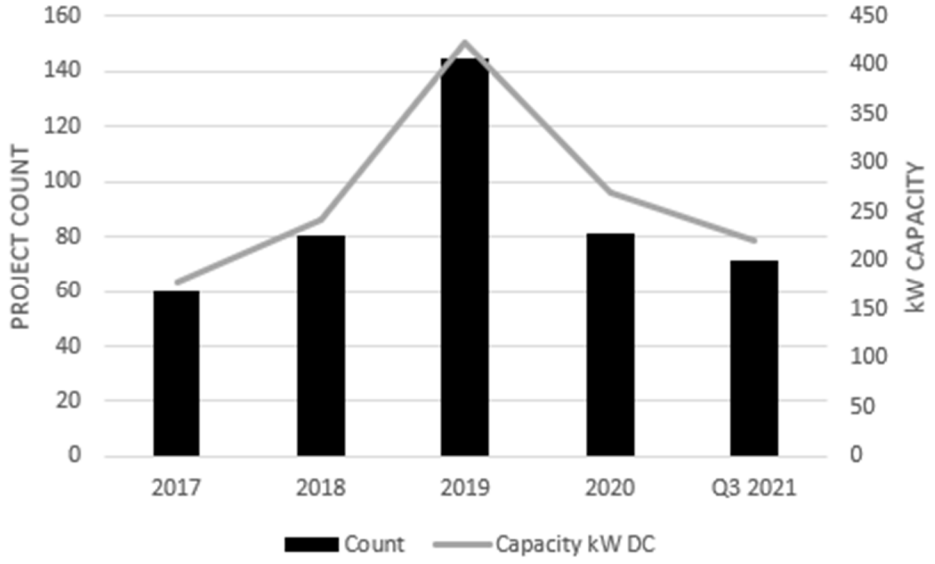
Q. WHAT DOES THE COMPANY PROPOSE FOR THE RESIDENTIAL IQ ON-SITE SOLAR OFFERING?

A. The Company proposes to continue this offering and to adjust the offering capacity to 0.25 MW_{AC}. This is a very slight decrease to the prior annual offering of 0.35 MW_{DC}, which converts roughly to 0.28MW_{AC} per year. The Company proposes adjusting the offering budget to approximately $513,000 per year for each of the four years of the proposed RE Plan, but allowing an increase of size per system to 7 kW_{AC}. This doubles the potential size of solar installations. While this potentially lowers the number of participants served by this offering, it is unusual for this offering's participants to have sufficient load to require this system size. However, in situations where a participating customer has a large enough load, the cost efficiencies of these larger systems are likely to benefit both the participating customer and the program as a whole.

Q. PLEASE DESCRIBE THE PARTICIPATION IN THE CEO IQ PROGRAM DURING PRIOR PLAN PERIODS.

A. The offering has been able to allocate the full capacity allowed by the 2020-21 RE Plan. Overall, the program has served 436 IQ customers with over 1.3 MW of capacity over the past five and a half years. Figure KRK-D-7 below shows project count on the left axis and kW capacity on the right axis.

Figure KRK-D-7: CEO IQ Installed Capacity per Year



Q. DOES THE COMPANY HAVE ANY CONCERNS ABOUT THE CEO IQ PROGRAM?

A. The Company is concerned with the long-term resource cost of $0.23/kWh, making the CEO IQ program the most expensive program in the portfolio. However, Public Service recognizes the challenges faced by IQ direct-billed residential customers, and that there may be greater obstacles to IQ customers being able to participate in a DG program as they may not have the creditworthiness or cash on hand to install or qualify for solar DG programs in other ways. The Company also is cognizant of its need to ensure spending targets are met for IQ customers and Disproportionately Impacted Communities as required by SB 21-272, and this program offers an established path toward that target.

Q. WHAT IS THE COST IMPACT OF THIS OFFERING DURING THE FIRST YEAR AND OVER THE COURSE OF THE PLAN?

A. At the proposed volume and incentive levels, the first-year incentive cost is approximately $513,000, which is roughly 7 percent of the total first-year incentive spend for the Plan. For comparison purposes, the first-year incentive costs, along with associated financial benefits that contribute to an overall estimate of total costs of this offering are shown in Table KRK-D-10 below.

Table KRK-D-10: CEO IQ Program Cost Impacts

		Solar Capacity (MW_{AC})					Annual Year-One Incentive $	20 Year Total	
Offering	Incentives (20-Year Solar PBI Unless Noted)	2022	2023	2024	2024	Total 2022-25 RE Plan		Cost	$/kWh
Solar*Rewards Income Qualified On-Site Solar (CEO)	≤7 kW $0.034 PBI $2/Watt up-front	0.25	0.25	0.25	0.25	1	$513,403	$7,256,460	$0.23

Q. ARE ANY CHANGES FOR SERVING IQ CUSTOMERS EXPECTED OVER THE COURSE OF THE 2022-25 RE PLAN?

A. Public Service is open to collaboration with CEO to explore alternative renewable solutions within its budget estimate that would deliver meaningful bill reductions to direct-billed IQ customers receiving Weatherization Assistance from CEO in different ways that yield a lower net cost per kWh of incremental generation and/or impact a greater number of customers with this amount of budgetary spending. If parties agree on such an approach, and a Commission decision approving the RE Plan directs such collaboration, the Company is open to implementing follow-up actions with CEO, and submitting an appropriate filing with the Commission.

D. Solar*Rewards Commercial and Industrial Proposal

Q. PLEASE PROVIDE AN OVERVIEW OF THE SOLAR*REWARDS COMMERCIAL AND INDUSTRIAL OFFERING CHANGES THE COMPANY IS PROPOSING IN THIS RE PLAN.

A. The Company is proposing to offer 15 MW_{AC} of capacity in the Solar*Rewards Commercial and Industrial (or "C&I") offering for demand-billed customers with some significant adjustments compared to the Medium offering in the 2020-21 RE Plan. The maximum project size for an individual system will increase from 500 kW_{DC} currently to 1 MW_{AC} as a result of the recent legislation and the Company's universal change to measuring systems and capacities by AC rating instead of DC rating. The Company is also proposing tiered incentive levels based on project size: C&I Options A, B, and C and a new IQ incentive adder. The offering is summarized in Table KRK-D-11 below:

Table KRK-D-11:
Solar*Rewards Commercial and Industrial Capacity Options

		Solar Capacity (MW_{AC})				
Offering	**Incentives (20-Year Solar PBI Unless Noted)**	**2022**	**2023**	**2024**	**2024**	**Total 2022-25 RE Plan**
Solar*Rewards Commercial/Industrial	Option A (50-250 kW) $0.04/kWh	15	15	15	15	60
	Option B (250-500 kW) $0.0375/kWh					
	Option C (500 kW - 1 MW) $0.035/kWh					
	Income Qualified/ Disproportionately Impacted Communities Adder $0.015/W Up-front $700,000 Annual Max					

Q. WHAT CHANGES DOES THE COMPANY PROPOSE FOR ITS SOLAR*REWARDS COMMERCIAL AND INDUSTRIAL CAPACITY COMPARED TO THE FORMER MEDIUM OFFERING?

A. The Company proposes reducing the capacity from 24 MW_{DC} annually to 15 MW_{AC} annually to accommodate more than 80 MW in the new Off-Site solar offering over the Plan period. The Company expects the Off-Site solar offering to serve the same category of customers as the previous RE Plan's Medium and Large options as well as CSG subscribers. The Company notes that 15 MW_{AC} is the estimated equivalent of 18 $MW_{DC.}$ Finally, as noted in the earlier discussion of capacity allocation across the DG portfolio, the capacity was balanced to align with expected DG capacity that was filed and approved in the Company's ERP.

Q. PLEASE DESCRIBE THE SOLAR*REWARDS INCENTIVES PROVIDED TO COMMERCIAL AND INDUSTRIAL DEMAND-BILLED CUSTOMERS.

A. Public Service's proposed Solar*Rewards Commercial and Industrial offerings provide PBIs to customers who install On-Site solar facilities, with different incentive levels determined by the solar system size. These payments, which are funded through the RESA, provide additional incentive beyond net metering benefits and some potential demand reduction to help bolster solar installations. Incentives will be paid for 20 years. The Company will retain and retire the RECs produced by these systems to help meet the Company's CEP targets.

Q. WHY IS THE COMPANY PROPOSING TO SPLIT THE SOLAR*REWARDS COMMERCIAL AND INDUSTRIAL OFFERING INTO THREE SIZE CATEGORIES?

A. The Company proposes to split the C&I offering into three size categories to provide incentive flexibility for a variety of customer types with demand charge rates. Under this tiered structure, the Company proposes to provide higher levels of incentives to smaller projects to offset solar installation costs that typically are higher than for larger installations. The Company hopes the proposed tiered incentive structure will create a more level playing field for all size projects in what traditionally had been the Medium option.

Q. WHAT SIZE SYSTEMS ARE ELIGIBLE FOR STANDARD OFFER SOLAR*REWARDS COMMERCIAL AND INDUSTRIAL INCENTIVES?

A. Prior to this RE Plan, the largest size of on-site solar system eligible for a Standard Offer incentive was 500 kW. The Company noticed an opportunity to expand the Standard Offer for systems sized 500 kW to 1 MW and was exploring opportunities for incentivizing these systems even prior to the recent legislative change formalizing that opportunity.[22] While these systems previously could compete for capacity in the Solar*Rewards Large competitive solicitations, even with a carve-out, these projects still struggled to be awarded capacity and the competitive solicitation process was not efficient for these smaller projects. Under the new

[22] *See* § 40-2-124(1)(e)(III), C.R.S. SB 21-261 amended § 40-2-124 such that electric utilities may offer standard offer programs to purchase RECs from on-site customer eligible energy resources 1 MW or less in size.

tiered Commercial and Industrial incentive structure, incentives will stay on par or increase compared to Solar*Rewards Medium offerings in the 2020-21 RE Plan.

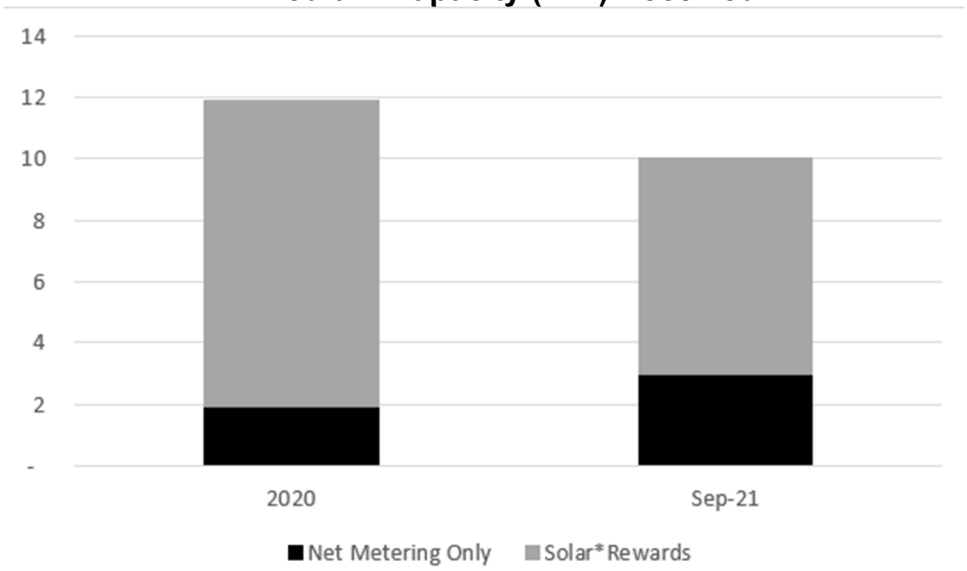
Q. PLEASE DESCRIBE THE COMPANY'S PROPOSED INCENTIVE LEVELS FOR THE THREE C&I OPTIONS OUTLINED ABOVE.

A. The Company proposes the incentive level for C&I Option A (up to 250 kW) to be increased to $0.04/kWh. For C&I Option B (>250 to 500 kW), the Company proposes to leave the incentive level unchanged at $0.0375/kWh. For C&I Option C (>500 kW to 1 MW), the Company would set the incentive to $0.0350/kWh. The incentive for C&I Option A is roughly 14 percent above the incentive for C&I Option C with the goal of providing additional support to offset a higher cost per installed Watt that is likely for projects of this size.

Q. WHAT WAS OFFERED FOR SOLAR*REWARDS MEDIUM IN THE 2020-21 RE PLAN AND HOW DID THAT OFFERING FARE TO SIMILARLY SIZED PROJECTS OPTING TO PROCEED WITHOUT A SOLAR*REWARDS PBI?

A. The 2020 Solar*Rewards Medium program saw less than half of the 24 MW of capacity allocated, and the 2021 program is on the same track. As shown in Figure KRK-D-8 below, close to 30 percent of all capacity in the medium size category came from Net Energy Metering only projects, which demonstrates that some commercial projects are foregoing the PBI incentive all together. The Company believes that some customers in this market segment may forego the PBI in order to retain their RECs.

Figure KRK-D-8:
All Medium Capacity (MW) Received



Q. DOES THE COMPANY PROPOSE TO ESTABLISH SPECIFIC CAPACITY LEVELS FOR EACH SIZE CATEGORY?

A. No. Rather than specifying this level of detail and potentially limiting capacity potential for one size category of the Commercial and Industrial Standard Offer, the Company will allocate capacity in aggregate among the three size options. This allows for greater industry and customer flexibility and eliminates the chance that one size option will sell out while available capacity remains in another. Applications will be accepted, and capacity allocated on a first-come, first-allocated basis until the annual capacity is depleted. There are no specific size targets among the three size options. Unused annual capacity from each year of the Solar*Rewards Commercial and Industrial program for the 2022–25 RE Plan will carry over to the next year of the program but not over RE Plans. Projects in this

offering have 18-months to achieve substantial completion (as defined in the REC Purchase Contract) from the date the application deposit was paid.

Q. DOES THE COMPANY PROPOSE AN ADDITIONAL INCENTIVE FOR IQ CUSTOMERS/DISPROPORTIONATELY IMPACTED COMMUNITIES WITH ITS SOLAR*REWARDS STANDARD OFFER INCENTIVES?

A. Yes. The Company has created an up-front $0.15/kW adder that can be added to any of the Solar*Rewards C&I Option A, B or C Standard Offers. This adder, which would be paid to a qualifying customer enrolling in the Solar*Rewards Commercial and Industrial program, is meant to increase industry interest and help enable customer financing for organizations qualifying as eligible IQ service providers under the Rules[23] or located in areas that qualify for IQ/Disproportionately Impacted Community status. Public Service intends to earmark up to $700,000 in RESA funds annually ($2.8 million in incentive adders over the four-years of the Plan) to support this up-front incentive. Funds will be allocated on first-come, first-allocated basis using the Company's online application portal until funds are depleted.

[23] Rule 3877(g), which applies to CSGs, defines "Eligible low-income service provider" as: (I) a nonprofit or public housing authority operator where at least 60 percent of the residents meet eligibility criteria … and the operator provides verifiable information that these low-income residents are the beneficiaries of the CSG subscription(s); or (II) a non-profit corporation that is able to demonstrate that it provides essential services … primarily to low-income recipients who meet … eligibility criteria." Although this definition does not directly apply to on-site customer solar program such as Solar*Rewards, in the absence of an applicable definition in the Commission's Rules, the Company believes it is appropriate to use the definition from Rule 3877(g) for eligible IQ service providers for purposes of on-site customer solar programs.

Q. PLEASE PROVIDE AN ESTIMATE OF THE OVERALL COST OF THE SOLAR*REWARDS COMMERCIAL AND INDUSTRIAL STANDARD OFFER INCENTIVES.

A. The Company has developed indicative estimates for the cost of the Solar*Rewards Commercial and Industrial Standard Offer incentives, which are shown in Table KRK-D-12 below. These estimates assume an even distribution of enrolled capacity among C&I Solar*Rewards Options A, B and C (size category) Standard Offers.

Table KRK-D-12:
Solar*Rewards® Commercial and Industrial Estimated Costs

		Solar Capacity (MW_{AC})					Annual Year-One Incentive $	20 Year Total	
Offering	Incentives (20-Year Solar PBI Unless Noted)	2022	2023	2024	2024	Total 2022-25 RE Plan		Cost	$/kWh
Solar*Rewards Commercial/Industrial	Option A (50-250 kW) $0.04/kWh Option B (250-500 kW) $0.0375/kWh Option C (500 kW - 1 MW) $0.035/kWh Income Qualified/ Disproportionately Impacted Communities Adder $0.015/W Up-front $700,000 Annual Max	15	15	15	15	60	$886,950	$245,063,395	$0.13

E. <u>Solar*Rewards Large</u>

Q. WHAT CHANGES IS THE COMPANY PROPOSING FOR ITS SOLAR*REWARDS LARGE OPTION?

A. The Company proposes continuing the Large competitive solicitation for this offering with a few adjustments. The proposal allocates 15 MW_{AC} of capacity for the program for projects larger than 1 MW_{AC}. As a result of the overall maximum project size increase of the Standard Offer program, the Company has removed the small carveout for systems greater than 500 kW up to 1.5 MW from the Solar*Rewards Large option. With the proposed Standard Offer size range now up to 1 MW_{AC}, which I discussed above for the C&I Options offerings, there is less

need to carve out capacity for smaller sized projects in this Large program. Further, because these larger projects should offer economies of scale compared to Standard Offer projects, the incentives should not exceed those for smaller sized Standard Offer projects. Therefore, Public Service has implemented a new bid cap of $0.03/kWh for incentives for the Solar*Rewards Large RFP.

Q. IS THERE A STANDARD OFFER OR OTHER CAP ON INCENTIVES FOR THE SOLAR*REWARDS LARGE OPTION?

A. Public Service is not proposing a set an incentive for the Solar*Rewards Large option, which would make the Large option similar to the Standard Offer. However, the Company is proposing a bid cap for the Large option of $0.03/kWh. This is $0.005/kWh lower than the incentive level for the largest tier incentive for the Commercial and Industrial Standard Offer. Solar industry data shows that projects in the Large RFP size category have economies of scale that lead to lower installation costs than projects in the Standard Offer categories and should require lower incentive levels. The incentive cap appropriately balances the encouragement of large customers to participate in the program with the need to protect all customers from paying for incentives that are too high through the RESA.

Q. HOW DOES THE CAPACITY PROPOSAL IN THIS RE PLAN COMPARE TO THE 2020-21 RE PLAN?

A. The prior Plan capacity offering was approved at 20 MW_{DC} per year, and this Plan proposal is for 15 MW_{AC} per year, effectively reducing the offered capacity by 1 MW_{AC} per year after accounting for the conversion from DC to AC.

Q. PLEASE EXPLAIN WHY THE COMPANY REDUCED THE LEVEL OF CAPACITY RECOMMENDED FOR THE SOLAR*REWARDS LARGE OFFERING.

A. As noted earlier in my testimony, the Company believes that the slight reduction in the Large Offering will be adequately offset by the introduction of more than 80 MW of additional Off-Site solar program capacity over the course of the RE Plan.

Q. DOES THE COMPANY PROPOSE ANY RESTRICTIONS ON THE SIZE OF PROJECTS THAT CAN BE BID INTO THE SOLAR*REWARDS LARGE COMPETITIVE SOLICITATIONS?

A. Individual systems may be sized to not exceed 200 percent of the customer's reasonably expected annual electric consumption; however, the Company proposes to incentivize Solar*Rewards Large RFP bids up to the first 100 percent of their reasonably expected annual energy use. If a Solar*Rewards Large RFP customer wishes to install a system that exceeds 100 percent of annual usage, the Company would allow that through the use of two production meters: one for the Solar*Rewards Large RFP award up to 100 percent of annual usage, and another for the net-metered only capacity for production beyond 100 percent of annual usage. While customers are allowed to install systems estimated to produce up to 200 percent of their expected annual energy use, there is no requirement to incentivize them with Solar*Rewards incentives at this oversized level. To enable a larger number of Solar*Rewards award recipients, the Company proposes limiting this option to align with actual usage. However, no other restriction on the size of the project bid into the program will be imposed.

Q. WILL UNSUBSCRIBED CAPACITY FROM A GIVEN YEAR BE ROLLED OVER TO SUBSEQUENT YEARS?

A. Yes. The Company proposes to continue to roll any unallocated or withdrawn capacity from one year into the following year within the RE Plan. At the end of the 2022-25 RE Plan, however, any unused capacity will expire.

Q. WHAT REGULATORY OVERSIGHT DOES THE COMPANY PROPOSE FOR VETTING AWARDS?

A. Similar to the 2020-21 RE Plan, the Company will continue to review bids and evaluation criteria with the Commission Trial Staff ("Staff") prior to finalizing awards. The Company will continue to file an informational Notice with the Commission within 30 days following the bid deadline that includes average bid price, number, and capacity of bids received and number of bidders. This Notice will be filed with the Commission within the RE Plan docket and will be publicly available.

Q. WHAT AWARD CRITERIA DOES THE COMPANY INTEND TO USE FOR AWARDING COMPETITIVE SOLICITATION BIDS?

A. The Company is proposing to continue using the scoring criteria most recently approved by the Commission in Proceeding No. 19A-0369E to evaluate and award bids. These details are listed within the Evaluation Process and Assumptions section of the Request for Proposal document included in Volume 3 of the Company's 2022-2025 RE Plan (Attachment JWI-3). The scoring criteria includes the evaluation of economics, community-based projects, and supplemental characteristics on a 100-point scale with a chance to earn bonus points.

Q. HAS THE COMPANY INCLUDED A COPY OF THE RFP FOR THE LARGE OFFERING IN THIS RE PLAN?

A. Yes, a copy of the proposed RFP is included in Volume 3 of the Company's 2022-2025 RE Plan (Attachment JWI-3).

Q. PLEASE PROVIDE AN ESTIMATE OF THE OVERALL COST OF THE SOLAR*REWARDS LARGE RFP INCENTIVES.

A. The Company has developed indicative estimates for the cost of the Solar*Rewards Large RFP incentives, which are shown in Table KRK-D-13 below. These estimates assume the maximum incentive level of $0.03/kWh, though actual bids may be lower making this offering more cost-efficient than shown.

Table KRK-D-13:
Solar*Rewards Large RFP Estimated Costs

		Solar Capacity (MW_{AC})					Annual Year-One Incentive $	20 Year Total	
Offering	Incentives (20-Year Solar PBI Unless Noted)	2022	2023	2024	2024	Total 2022-25 RE Plan		Cost	$/kWh
Solar*Rewards Large RFP	> 1 MW As bid with PBI max of $0.03/kWh	15	15	15	15	60	$788,400	$296,232,899	$0.14

F. Off-Site Solar Proposal

Q. PLEASE PROVIDE AN OVERVIEW OF THE NEW OFF-SITE SOLAR OFFERING.

A. The Off-Site Solar program was enacted under SB 21-261 to allow individual customers to locate solar facilities at one or more premise(s) located within Public Service's service territory and provide virtual net metering credits to their other premise(s) under the same account that are non-contiguous properties. As described by Company witness Mr. Jack Ihle, the capacity available for this offering will be approximately 41 MW_{AC} annually in 2022 and 2023, with any unallocated

or cancelled capacity carrying forward into the remaining years of this Plan.[24] SB 21-261 only specifies capacity levels for off-site solar offerings for 2022 and 2023.[25]

Q. ARE THERE ANY SIZE LIMITS TO THE OFF-SITE SOLAR INSTALLATIONS?

A. Yes. The following size limits apply to Off-Site Solar:

(1) The size of any single-meter off-site installation (only one off-site solar installation location of the same customer account) may not exceed 500 kW.

(2) The size of any multi-meter off-site installation (such as an individual customer with multiple off-site solar installation locations of the same customer account) may not exceed 300 kW per meter.[26]

Q. HOW WILL PUBLIC SERVICE CALCULATE THE VIRTUAL NET METERING CREDITS FOR THESE CUSTOMERS?

A. The enabling legislation, SB 21-261, directs the utility to provide the customer with an off-site solar installation a net metering credit minus a "reasonable charge, as determined by the Commission, to cover the utility's costs of delivering" the electricity from the retail distributed generation and administering the off-site net metering credits.[27] The legislation also states that the reasonable charge shall be fixed for the term of the interconnection agreement related to the off-site solar DG

[24] The capacity available is determined statutorily as one quarter of one percent of retail sales from the preceding year. Therefore, slight variations may be possible in 2022 based upon the Company's actual retail sales for 2021. *See* § 40-2-124(1)(e)(I)(E), C.R.S.
[25] *See* § 40-2-124(1)(e)(I)(E), C.R.S.
[26] *See* § 40-2-124(1)(j)(VI)(B), C.R.S.
[27] *See* § 40-2-124(1)(e)(I)(C), C.R.S.

and shall be determined by a utility tariff filing which may be updated annually. Company witness Mr. Alexander G. Trowbridge's Direct Testimony provides the Company's recommendations and details concerning the calculations for deriving the "reasonable charge."

Public Service's Solar*Rewards Community program calculates, and the Commission approves, a bill credit annually for CSGs. Public Service intends to use this process to determine the "reasonable charge" to apply against the net metering bill credit amount applied to off-site solar. While there will be additional administrative costs to enable this offering, Public Service anticipates this approach will create efficiencies. While the Company does not anticipate significant ongoing administrative costs associated with the off-site offering, it will track set-up and ongoing administrative costs, and proportionally allocate them retrospectively to participating customers on an annual basis based on capacity. Any funds collected will be deposited into the RESA.

Q. SB 21-261 PROVIDES THAT FOR THE OFF-SITE SOLAR OFFERING, THE CUSTOMER MAY CHOOSE TO RETAIN THE RECS FROM THE OFF-SITE SOLAR FACILITY OR SELL THE RECS TO THE UTILITY. HOW DOES PUBLIC SERVICE PROPOSE TO PRICE THESE OPTIONS?

A. Public Service proposes to treat RECs under the off-site program similar to the Company's net-meter only option, where the REC is available for the customer to retire or assign at their discretion. Currently, Public Service has ample RECs for its compliance needs, so there is no compliance or other economic value to the Company associated with these RECs. Furthermore, HB 21-1266 allows the

Company to count electricity generated by retail distributed generation where RECs are retained by customers toward the Company's Clean Energy Plan compliance, further diminishing the value of these RECs to the Company. Based upon the Company's current compliance obligations, if the customer desires to sell their RECs to Public Service, Public Service will pay the customer $0.00/kWh for the REC. As Mr. Ihle mentions in his Direct Testimony, this also benefits customers as they pay into the RESA and ensures RESA funds are prudently spent.

Q. WILL PUBLIC SERVICE REQUIRE A DEPOSIT FOR OFF-SITE SOLAR CAPACITY?

A. Yes. A deposit will be required similar to other DG resources. The $50/kW deposit shall be subject to the same terms as the Solar*Rewards Large RFP deposit. This helps ensure that only viable projects that intend to proceed with interconnection reserve capacity.

Q. WILL PUBLIC SERVICE ALLOW OFF-SITE FACILITIES TO MOVE CAPACITY RESERVATIONS?

A. Similar to other options that reserve capacity under this Plan, Public Service will not allow site moves among off-site solar locations after capacity is reserved. This helps ensure that highly vetted applications reserve capacity that could otherwise be made available to other customers.

G. On-Site Multi-Unit Property Solar Program

Q. HOW WILL THE COMPANY ADDRESS OFFERINGS FOR ON-SITE SOLAR DG FACILITIES FOR MULTI-UNIT PROPERTIES?

A. SB 21-261 directs the Commission to promulgate Rules allowing a single Retail DG resource to provide net metering credits to multiple, individually metered accounts on a multi-unit property without requiring the DG resource to be physically interconnected with each individual meter.[28] This rulemaking is anticipated to conclude by the end of 2022. At that point, the Company proposes to file a Motion before the Commission to address RE Plan offerings if necessary.

[28] *See* § 40-2-124(1)(j)(I), C.R.S.

V. SOLAR*REWARDS COMMUNITY

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

A. In this section of my Direct Testimony, I provide an overview of Public Service's Solar*Rewards Community program. I explain the regulatory framework for the program, the growth the program has experienced over time, issues resolved in the 2022-25 RE Plan, and present the Company's Solar*Rewards Community proposals for this Plan.

There are three types of CSGs developed under the Solar*Rewards Community program: third-party developed CSGs whose bids are selected by the Company through an RFP process; third-party developed CSGs whose applications are received (and who receive capacity) through the Company's Standard Offer; and Company-owned CSGs available to IQ customers.

A. Colorado's CSG Regulatory Framework

Q. PLEASE PROVIDE A GENERAL OVERVIEW OF COLORADO'S REGULATORY CSG FRAMEWORK.

A. Public Service's CSG offerings are largely governed by Colorado law (§ 40-2-127, C.R.S.), the Commission's Rules (Rules 3875 - 3883), and policy determinations made by the Commission in approving RES Plans. The Company implements § 40-2-127, C.R.S. pertaining to CSGs through the Solar*Rewards Community program.

Solar developers who participate in the program and the subscription arrangements with Public Service's customers are not regulated by the Commission. Importantly, subscription agreements between solar developers and

Public Service's customers, which can last up to 20 years in correlation with the life of the CSG, are not regulated nor are the prices subscribers pay or risks associated with their subscription agreements. Unlike a regulated public utility, the profits, financial risks, and business operations of CSG developers are not subject to Commission regulation.[29]

Q. PLEASE DESCRIBE SOME OF THE POLICY CHANGES TO THE SOLAR*REWARDS COMMUNITY PROGRAM OVER THE COURSE OF THE 2020-21 RE PLAN.

A. In addition to the overall changes broadly impacting the entire portfolio of DG programs, during the period of the 2020-21 RE Plan, the Company saw several legislative and Commission Rule changes that altered the CSG landscape in Colorado. In 2019, House Bill 19-1003 ("HB 19-1003"), commonly referred to as the Community Solar Gardens Modernization Act, significantly altered the CSG program by:

- Increasing the maximum size of a CSG from 2 MW to 5 MW, with a Commission option to increase the maximum size per CSG to 10 MW after July 1, 2023;
- Removing the contiguous county rule, which required subscribers to be in the same or an adjacent county to the CSG; and,
- Assigning the Commission to determine conditions under which a subscriber may choose to retain or sell their RECs.

CSG rule revision efforts at the Commission were already underway in Proceeding No. 19R-0608E for Rules 3875 – 3883 when HB 19-1003 was enacted,

[29] *See* § 40-2-127(4), C.R.S.

with the new CSG rules were approved by the Commission on August 28, 2020. CSG rule changes included:

- Additional details for implementing the Legislative changes noted above;
- Removal of the DSM component from the CSG bill credit;[30]
- Change from identifying CSG capacity by DC rating to AC rating, a change that effectively increases the CSG's maximum potential capacity (and associated output) by 20 percent or more;
- The utility's acquisition plan shall include a proposed method for requiring CSG subscriber organizations to verify that the organization will sell and maintain CSG subscriptions to achieve the result that at least 50 percent of the established minimum aggregate new CSG purchases correspond to residential, small commercial, agricultural, and eligible low-income CSG subscribers, and eligible low-income service providers. The utility's acquisition plan shall explain how it will use a combination of one or more competitive solicitations and one or more standard offers to meet these subscriber requirements; and,
- Rules allowing for contribution of a subscriber's CSG bill credits to authorized third-party administrators approved by the utility for the purpose of providing energy assistance to IQ customers and bill reductions within the utility's service territory.

While the Interconnection Rules were also under consideration over the course of the 2020-21 RE Plan, those changes were less impactful to projects currently going through the interconnection process and largely serve to clarify and stabilize the interconnection process rather than causing confusion or delay.

[30] As of the date of this RE Plan filing, judicial review of this Rule is currently pending before the Denver District Court.

B. Capacity and Incentives Overview

Q. PLEASE PROVIDE AN OVERVIEW OF PUBLIC SERVICE'S PROPOSED SOLAR*REWARDS COMMUNITY CAPACITY AND COST LEVELS, INCLUDING INCENTIVES, IN THE 2022-25 RE PLAN.

A. Public Service proposes to offer 75 MW_{AC} of CSG capacity to be awarded each year through Solar*Rewards Community. Incentives paid per kWh of energy produced vary by option in the program and characteristics of the garden's subscribers and attributes. A summary of Public Service's proposed incentives and system sizes (in MW_{AC}) is provided in Table KRK-D-14 below:

Table KRK-D-14: Proposed Solar*Rewards Community Capacity, Incentives, and Estimated Costs

		Solar Capacity (MW_{AC})					Annual	20 Year Total	
Offering	Incentives (20-Year Solar PBI Unless Noted) Can be stacked	2022	2023	2024	2024	Total 2022-25 RE Plan	Year-One Incentive $ Estimate	Cost	$/kWh
S*RC RFP	As bid in RFP including optional REC adjustment	35	35	35	35	140	$613,200	$392,448,000	$0.08
Standard Offer ≤ 2 MW	≤1 MW 0.01 IQ / DIC with ≥30% net subscriber savings 0.035 Residential Direct Billed Subscriber 0.015 Community Redevelopment 0.005 REC Adjustment -0.01 Range -0.01 to 0.065	30	30	30	30	120	$2,062,980	$459,374,400	$0.11
Xcel Energy Income Qualified CSGs	100% Income Qualified Direct-Billed Residential with ≥30% net subscriber savings plus planned labor agreement	10	10	10	10	40	$876,000	$175,200,000	$0.13
Total Solar*Rewards Community		**75**	**75**	**75**	**75**	**300**	**$3,552,180**	**$1,027,022,400**	**$0.10**

Q. WHAT ASSUMPTIONS DID THE COMPANY USE IN DEVELOPING THESE ESTIMATES?

A. The Company assumed an average incentive of $0.01/kWh for RFP CSGs, and a 20 percent capacity factor to calculate production. Bill credits assume a mix of subscriber types and associated bill credits. Standard Offer estimates assume the following adders: 50 percent less than or equal to 1 MW, 75 percent

IQ/Disproportionately Impacted Community, 50 percent Residential Direct Billed, 10 percent Community Redevelopment, and 0 percent REC adjustment for the customer keeping the REC. These assumptions are for illustrative purposes only and actual project commitments will drive the actual incentive and 20-year costs.

Company-owned CSGs were assumed to receive the same incentives as Standard Offer projects, and use 100 percent residential subscribers in its calculation of incentives and bill credits.

Q. HOW DID THE COMPANY DETERMINE ITS PROPOSED CAPACITY LEVELS FOR CSG IN THIS PLAN?

A. As noted in Section IV above, the ERP assumptions for DG capacity between 2021 and 2030, combined with a 20 percent attrition assumption, drove the overall offering size of this RE Plan. Allowing for a wide variety of customer and industry program options, the cost impacts of various options and the need to meet or exceed IQ/Disproportionately Impacted Community spending targets helped define capacity targets for the various offerings.

Q. IS PUBLIC SERVICE REDUCING CSG CAPACITY COMPARED TO THE ANNUAL CAPACITY APPROVED IN THE 2020-21 RE PLAN?

A. No. As I explained earlier in my Direct Testimony, the Commission's decision regarding the 2020-21 RE Plan included annual maximum capacities for CSG

offerings measured in MW_{DC}.[31] This RE Plan proposes capacities measured in MW_{AC}, which for estimation purposes the Company assumes to be identified as a figure that is approximately 80 percent of the equivalent MW_{DC} rating capacity figure, though the variance can be even greater due to over-sizing of solar facilities to optimize output over a longer period of time or weather variations. AC capacity measurements allow for greater CSG sizing flexibility and larger individual systems within program size limits.

CSG Rules approved after the 2020-21 RE Plan changed the measurement of CSG capacity levels from DC to AC, and as a result, capacity releases after that date were sized in MW_{AC}, resulting in an approximately 20 percent or higher increase to the MW_{DC} compared to what was approved in that Plan. This Plan provides nearly identical capacity in MW_{AC} compared to the maximum of the prior approved Plan. The CSG capacity in this Plan also greatly exceeds the required minimum of the prior Plan.

Q. IS PUBLIC SERVICE PROPOSING A MINIMUM CAPACITY TO AWARD OVER THE COURSE OF THIS PLAN?

A. Yes, the Company proposes a minimum capacity of 30 MW_{AC} of Standard Offer CSG capacity. However, the Company historically has offered and awarded the full amount of available capacity, knowing that an estimated 10 to 20 percent

[31] Decision No. C20-0482, adopting AC ratings for identifying CSG capacity levels, was issued on July 9, 2020 in Proceeding No. 19R-0608E, *after* the Commission's decisions on exceptions and addressing applications for rehearing, reargument, or reconsideration were issued in Proceeding No. 19A-0369E (addressing the Company's 2020-21 RE Plan). *See* Decision No. C20-0289 (mailed date April 28, 2020), Decision No. C20-0431 (mailed date June 10, 2020). However, due to the Commission's Rule changes, the Company began reporting capacities in AC in 2020. *See* Decision No. C20-0482, at ¶¶ 35-38.

attrition may occur. The Company aims to reduce attrition through new business requirements for all CSG applications under this Plan. These new requirements, which I discuss in more detail below and refer to as a "high bar" for applications, will help to ensure that CSG developers that are able to bring their projects online will be awarded CSG capacity.

Q. WHAT FACTORS DID THE COMPANY CONSIDER IN ESTABLISHING CAPACITY LEVELS AMONG ITS CSG OFFERINGS?

A. The Company considered several factors when determining the allocation between Standard Offer and CSG RFP including maintaining a competitive bidding process that the Company believes provides economic discipline through the RFP and industry feedback and discussions. The Company also believes the RFP allows solar developers to bid projects at prices that reflect a wide variety of changing market conditions that are likely to occur over the course of this Plan, including those described below.

Q. HAS PUBLIC SERVICE INCREASED THE STANDARD OFFER TO OFFER MORE CAPACITY IN THIS 2022-25 PLAN?

A. Yes. Over the course of the 2020-21 RE Plan, the Company has conferred with stakeholders and heard a strong desire for substantial growth in the Standard Offer program including increasing the capacity, system size eligibility, and potential incentives compared to prior years. In addition, the solar industry has communicated to the Company that it prefers to complete the early pre-application development planning with certainty that the incentive levels will be viable, and capacity will be available. To accommodate these interests, the Company

proposes a substantial increase in both project size and offering capacity without eliminating the market-based pricing diligence of the RFP offer. By increasing the preparation requirements for Standard Offer projects, which I discuss later in my Direct Testimony, the Company and industry anticipate fewer applicants with better-vetted project awards that are more likely to be placed in service.

Q. WHAT ARE SOME OF THE CONCERNS OF OFFERING MORE CAPACITY THROUGH THE STANDARD OFFER?

A. While the Company recognizes the benefits of certainty of incentive amounts associated with a Standard Offer when planning CSG projects, the Company also recognizes inherent complexities with the Standard Offer model that make it problematic for a larger-scale implementation at this time. For example, it is difficult to accurately reflect changing market conditions in a Standard Offer model. If the incentives are set too high, the available capacity will sell out in seconds or minutes, and Public Service's customers for the next 20 years will pay the resulting incentives that are higher than economically necessary when combined with subscription revenues to enable these projects. If the utility sets incentives too low, the capacity will go unfulfilled or awarded projects could struggle to maintain viability if market conditions change.

Market conditions, including policy changes, that have recently changed or developed or that appear uncertain for the course of this Plan and have the potential to impact CSG pricing requirements include but are not limited to:

- Legislative changes to the maximum CSG size change from 2 MW_{DC} to 5 MW_{AC}, increasing to 10 MW_{AC} after July 2023;

- CSG Rule change requiring 50 percent of subscribed capacity to come from Residential, Agricultural, Small Commercial, or IQ subscribers;

- Currently scheduled step-down of Federal ITC from 26 percent currently to 22 percent in 2023 and 10 percent in 2024 and beyond, with Federal legislation proposed to extend the current rate for 10 years (however this also could be increased and extended as currently proposed in Federal Legislation);

- Predicted long-term decreases in the installed costs of solar;

- Supply chain issues that currently have the potential to increase pricing;

- Labor availability and pricing issues that continue to evolve along with the pandemic and other business factors.

A competitive solicitation puts developers in control of aligning total compensation (subscription revenues plus RFP bid) amid these and other potential pricing changes over time, and provides for market-based pricing adjustments each year in the RFP processes as developers put forth their best price and package to meet the RFP's scoring criteria. We believe the balanced mix of competitive solicitation and standard offer CSG programming can provide advantages from both types of offerings.

C. Operational Changes to the CSG Program

Q. HOW DOES PUBLIC SERVICE INTEND TO ENSURE THAT AT LEAST 50 PERCENT OF CSG CAPACITY IS SUBSCRIBED BY RESIDENTIAL, AGRICULTURAL, SMALL COMMERCIAL OR IQ CUSTOMERS?

A. Rules 3876 and 3882(a)(I) adopted by the Commission in Proceeding No. 19R-0608E require that at least 50 percent of CSG capacity be subscribed by these customer groups. The Company determined that the most fair and effective way

to ensure compliance is to apply this requirement to each individual CSG. This helps ensure that an individual CSG does not have a substantial cost advantage by subscribing the minimum number of subscribers and focusing only on institutional or corporate subscriptions without additional subscriber commitments. The Company conferred with stakeholders during the preparation for the 2021 CSG RFP, which also put forward this requirement, and there was no opposition to the Company's Motion to Modify the 2021 CSG RFP Bid Criteria.

Q. HOW DOES THE COMPANY INTEND THAT CSGS CONTRIBUTE TO THE REQUIREMENT THAT AT LEAST 40 PERCENT OF PROGRAM INCENTIVE SPENDING BE FOCUSED ON IQ CUSTOMERS OR DISPROPORTIONATELY IMPACTED COMMUNITIES?

A. At this time, the spending requirement begins in 2022 in advance of official Commission rulemaking on how Disproportionately Impacted Communities are defined or accounted for on a community or individual basis. Likewise, only individual income qualifications are clearly set forth by legislation, while community-level accounting is not yet known. For that reason, the Company focused its initial Standard Offer incentives on individual IQ subscribers, with different compensation for residential direct-billed subscribers than for institutions serving IQ customers. While incentive adders may make it more attractive for CSG developers to seek out IQ customer participation, the Company also will set a capacity target of 75 percent of Standard Offer capacity for IQ or Disproportionately Impacted Community subscribers. This will help ensure that spending targets are met while also ensuring that substantial subscriber benefits are delivered.

Q. HOW IS THE COMPANY PROPOSING TO TREAT RECS FOR CSGS IN THIS RE PLAN?

A. As mentioned above, Proceeding No. 19R-0608E and HB 19-1003 altered CSG benefits such that subscribing customers have an option to retain their CSG RECs for their own personal value or benefit. Previously, all RECs from CSGs interconnected to Public Service were used or retired by the Company as part of a single energy and REC transaction.

Q. WHAT IS A REC AND WHY IS IT IMPORTANT TO CUSTOMERS?

A. RECs are a commonly accepted accounting mechanism representing the legal property rights for the renewable attributes of renewable electricity generation. RECs may be used by entities or people, including our customers, in reaching clean-energy or other sustainability goals. If the REC is registered in the customer's name, the customer is considered the owner of the renewable energy claims for that energy. There is Federal Trade Commission and Department of Energy guidance for customers on how RECs drive the legitimacy of sustainability claims. For customers who wish to make public claims or account for their own sustainability efforts, RECs are often used as the accounting mechanism for these claims.

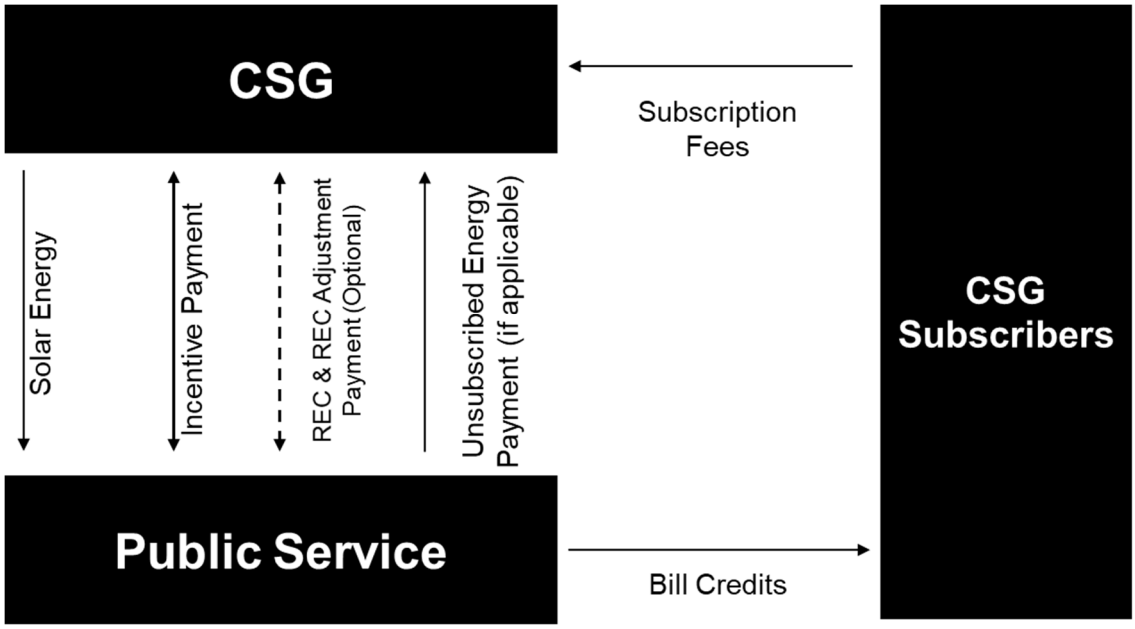
Q. HOW WILL THE COMPANY IMPLEMENT THE OPTION FOR SUBSCRIBING CUSTOMERS TO RETAIN RECS FOR CSGS?

A. As described by Company witness Mr. Jack W. Ihle, the Company will institute a customer REC adjustment to account for the customer value of RECs for applicable CSG subscribers. To date, CSGs have sold all energy and RECs to the

Company for a single price. To implement the flexibility and choice for customers who choose to retain their RECs consistent with Rule 3882, the Company proposes to set a separate price for the REC component alone. The REC price will be equal to the then-current price for customer purchases of RECs from renewable projects in Public Service's service territory under the Renewable*Connect Month-to-Month program and will be locked in for the term of the CSG.

For CSGs that offer customers the ability to retain the REC, this adjustment for REC retention will then be netted against the incentive provided to the CSG for energy. For CSGs that provide energy and RECs to Public Service, the total incentive provided by the Company is the simple sum of the REC and energy incentive. This approach will result in a fair and consistent compensation structure between CSGs that sell RECs to the Company and those that elect to have subscribers keep the RECs. This current REC adjustment of $0.01/kWh (based on the proposed pricing for Renewable*Connect Month-to-Month) of CSG production will be applied to the incentive for the CSG as a whole for CSGs that opt for subscribers to have RECs retired in their names. CSGs that choose to have Public Service retain RECs for its use will not be assessed the REC adjustment. Figure KRK-D-9 below shows how the fees and energy flow in the Solar*Rewards Community program. Dotted lines indicate options charges and REC movement.

Figure KRK-D-9



Q. WILL CUSTOMERS RECEIVE A DIFFERENT BILL CREDIT AMOUNT DEPENDING ON WHETHER THEIR SUBSCRIBED CSG INCUDES RIGHTS TO RECS?

A. No. Subscribers will receive the full bill credit amount based on their applicable rate class.

Q. HOW WILL PUBLIC SERVICE APPLY THE REC ADJUSTMENT?

A. Public Service will apply the REC adjustment by netting it against any incentives received. If the CSG is receiving a positive incentive payment in excess of the REC adjustment, the REC will be subtracted from the incentive amount. If the CSG incentive payment is equal to the REC adjustment, then incentive amount minus the REC adjustment will be $0. If the incentive amount is less than the REC adjustment, the REC adjustment amount will be combined with the incentive amount, and the CSG operator will be charged the combined amount.

Q. HOW WILL PUBLIC SERVICE ENSURE THAT ANY SUBSCRIBER OR OTHER CSG COMMITMENTS ARE MET?

A. Public Service will check for compliance prior to the start of the CSG contract, and then periodically using then-current subscriber data. In the Producer Agreement, Public Service reserves the right to also perform random compliance checks. Where practical, Public Service will use application portal capabilities to identify or prevent non-compliant subscriptions on an ongoing basis.

Q. HOW WILL PUBLIC SERVICE RESPOND IF A CSG FAILS TO MEET ITS SUBSCRIBER OR OTHER CONTRACTED COMMITMENTS?

A. If a CSG fails to meet subscriber or other commitments of its CSG contract, Public Service historically has treated the portion not meeting subscriber commitments as unsubscribed energy. However, to date there have not been non-compliant subscriptions associated with that energy. Under this Plan, the increased prevalence of subscriber commitments to comply with Rules 3876 and 3882(a)(I), increases the potential for unmet CSG-level subscriber commitments. This also creates the potential for subscriber impacts, even non-compliant subscribers are not able to individually comply with and might not even be aware of CSG-level subscriber commitments. To prevent those subscriber impacts, Public Service proposes the following changes:

- Upon becoming aware of CSG non-compliance with CSG contract requirements, including subscriber commitments, Public Service will notify the CSG's current primary application manager and allow 30-days for the garden to correct any failure to meet contracted terms.

- Subscribers always receive the full bill credit amount associated with their applicable rate class.

- If the CSG developer or operator fails to meet its subscriber or other CSG contractual commitments, the CSG shall have net compensation for the entire CSG in alignment with the unsubscribed energy rate combined with the REC adjustment (if applicable) for that CSG.

- RECs shall continue to be retired as assigned for that CSG, with the exception that RECs for unsubscribed energy shall be retired in Public Service's name and used as contribution for the CRP regardless of any REC adjustment that may be applicable to the CSG. This is to strongly motivate CSGs to always meet the subscriber and other commitments under which they were granted CSG awards.

Q. HOW WILL PUBLIC SERVICE BILL CSGS FOR THESE CHARGES?

A. If the contractual breach is not cured within the allowed timeframe, the entire CSG will be charged the difference between the CSG's subscriber bill credits and incentives with any applicable customer REC adjustment such that the sum of all of these charges and credits equal the then-current unsubscribed energy rate for the entire garden.

Q. HAS PUBLIC SERVICE EXPERIENCED ANY CHALLENGES IMPLEMENTING THE SOLAR*REWARDS COMMUNITY PROGRAM OVER THE COURSE OF THE 2020-21 RE PLAN?

A. Yes. First, an abundance of solar DG capacity has sought to come online in recent years through the Solar*Rewards Community program. Due to procedural delays, 96 MW_{DC} of CSG capacity was awarded from RFPs between Q2 2018 and Q2 2019, followed by an additional 75 MW_{AC} of CSG capacity awarded in 2020. Altogether this led to more than 170 MW of capacity awarded in less than two

years, more than tripling the capacity awarded throughout the entire prior history of the program.

Interconnection challenges have continued into 2021 due to the dynamics of increasing acquisitions from RFPs, solar developer preferences in certain geographic areas, and inherent distribution capacity constraints. Public Service has worked extensively with the industry since mid-2020 to provide additional information, studies and time while removing site move limits and fees for existing awards, as awarded projects struggled to find sites. At the same time, implementation of 2019 legislation increased the maximum size of individual CSGs, which allows for greater economies of scale but also may lead to more significant interconnection impacts per CSG.

The Company has also observed increased lag time from award to commercial operation of CSGs. This trend has been identified in prior RE Plans and has continued in the 2020-21 Plan as projects move sites to seek optimal interconnections for development. The COVID-19 pandemic and supply chain issues are also contributing to this trend.

Q. WHAT SOLAR*REWARDS COMMUNITY CHANGES DOES PUBLIC SERVICE PROPOSE FOR CSG APPLICATIONS TO HELP REDUCE LAG TIME AND ATTRITION UNDER THIS RE PLAN?

A. Public Service proposes a “high bar” for incoming applications across the program options. The proposed modifications include new deposit and refund policies as indicated in Section III(B) of my testimony, the removal of post-application site moves, and the introduction of a waitlist to backfill withdrawn projects. These new

proposals are in direct response to the feedback Public Service has received in stakeholder workgroups and individual industry meetings.

Q. WHY IS PUBLIC SERVICE PROPOSING THESE CHANGES?

A. The Company and industry stakeholders share a belief that changes are warranted to ensure high quality, well-vetted projects can participate in the Solar*Rewards Community program and that CSG projects selected for participation are actually developed and brought online so that customers and the Company will benefit from the CSGs.

Q. WHAT OTHER PROCESSES FOR AWARDING STANDARD OFFER CAPACITY DID THE COMPANY CONSIDER?

A. The Company briefly considered moving to a lottery process, but realized through stakeholder consultation that a random lottery process creates a disincentive for developers to fully vet projects, given that they have no control of being awarded capacity and the award of capacity has no relationship with the amount of project work performed by the developer. Therefore, the Company is proposing to increase the requirements to be eligible for Standard Offer effectively "raising the bar." These requirements are similar to and build upon requirements for the 2021 CSG RFP, and the Company proposes a common set of application requirements across the Solar*Rewards Community program, which I address below.

Q. WHAT ARE SOME BENEFITS OF THESE NEW CSG APPLICATION REQUIREMENTS?

A. The intent and anticipated benefits of these changes is to ensure that incoming applications have a high likelihood of successfully reaching commercial operation

and providing the intended solar generation resources within the program's allowed timeline. Eliminating site moves will ensure developers well vet a project before submitting an application, and the waitlist will help ensure that capacity awarded to projects that do withdraw can then be awarded to another project.

Q. WHAT DOES THE COMPANY PROPOSE TO REQUIRE A CSG DEVELOPER TO INCLUDE IN ITS APPLICATION?

A. After considerable discussion with solar industry representatives, the Company proposes to require the following attributes for a CSG developer to submit a project application for award consideration:

- **Proof of Site Control** – either proof of lease (or similar) option or executed agreement for the CSG site.

- **Permitting Viability** – Public Service will collaborate with stakeholders to create a standard form to be signed by permitting authority representatives attesting that at a minimum, pre-permit application meeting(s) have occurred and that there is a viable path to necessary permits for the proposed CSG. This form must be signed by the applicant and permitting authority representative(s), and submitted at the time of application. The permitting authority may be a state or local (e.g., municipal, city, county) government agency.

- **Site Viability** - Demonstrated proof of steps taken to "de-risk" the project site. Steps to de-risk a site can include (but are not limited to) the following: constraints analysis, environmental site assessment, geotechnical report, survey, title commitment, etc.

- **Project Viability** – Demonstrated proof of steps taken to evaluate project costs and incorporate them into the bid price. Proof of project viability can include estimated property taxes for the life of the project, permitting costs and viability based on existing land use code, etc. (e.g., demonstrated knowledge of interconnection cost estimates that are included in bid price, local renewable energy property tax, permitting viability, etc.). This also may contain pricing variance percentages for materials and labor that are able to be accommodated within the bid price.

- A pre-application data request ("PADR") report must be requested and show potential viability for the application's requested capacity. The Company is open to considering other forms of technical interconnection due diligence prior to a developer or customer submitting a formal interconnection application.

- The deposit for the application must be paid at the time of application in under the terms included in Section III(B) of my testimony. Any forfeited deposits will be assigned to the RESA balance.

Q. WHAT HAPPENS IF A PROJECT FAILS TO MEET THIS HIGH BAR FOR APPLICATION?

A. Project applications that do not meet this bar will be rejected. For the Standard Offer, the application will be rejected and not awarded capacity, but a new application may be submitted for consideration based on Standard Offer capacity available at that time. For the RFP, if projects do not meet the application requirements, they will be rejected with no opportunity for consideration in the RFP. For either RFP or Standard Offer awards, if a project fails to timely meet post-award requirements, it will be cancelled, and the capacity will be awarded to the next project on the waitlist (if applicable).

Q. IS A WAITLIST PROCESS NEW TO SOLAR*REWARDS COMMUNITY?

A. No. A waitlist policy was introduced and approved as the back-up bid option for RFP capacity in the 2020-21 RE Plan. If projects were withdrawn or failed to meet award requirements within 6 months of the RFP's original awards, back-up bids were awarded and subject to the same timelines as other bids regarding fulfilling award requirements and completion. At this time, only the 2020 RFP has completed the back-up bid cycle. For that RFP, the Company notified back-up bids of their status. However, no awards withdrew within the six-month allotted

timeline, so back-up bidders were informed that the window for back-up bids had closed.

In addition, the Company implemented a waitlist process for the 2021 CSG RFP. It is unclear at this time whether a waitlist be will invoked as the Company is currently evaluating 2021 CSG RFP bids. The Company developed the 2021 CSG RFP waitlist process in collaboration with the industry.

Q. IS THE COMPANY PROPOSING TO ADD A WAITLIST PROCESS TO ITS STANDARD OFFER PROGRAM IN THE 2022-25 RE PLAN?

A. Yes. The Company is proposing to include a Standard Offer waitlist process for this RE Plan. The wait list process is as follows:

Table KRK-D-15: Standard Offer Waitlist Process

Waitlist size	Match the capacity available to be awarded in that offering for that Plan year.
Waitlist order	For RFP awards, the waitlist will be ordered based on RFP scoring, with the highest non-awarded score first on the wait list. For the Standard Offer, the waitlist will be based on the timestamp of submittal of a completed application. Standard Offer projects qualifying for the IQ/ Disproportionately Impacted Community capacity target will be held on a separate wait list than other Standard Offer applications.
Waitlist window	For the RFP, the waitlist will be maintained until 90 days prior to the issuance of new capacity for the subsequent Plan year. For the Standard Offer, the waitlist will be used until 90 days before the end of the Plan year.
Waitlist notifications	The Company will notify all waitlisted applicants of their placement on the waitlist via email. The Company will publish a public waitlist updated monthly, with a separate waitlist for RFP and Standard Offer projects. The Company will notify waitlist applicants prior to the closing of the waitlist window.
Waitlist prices and project attributes	The incentives for waitlisted projects and any associated subscriber, location or attribute commitments may not be changed after initial application and placement on the waitlist.
Transferability	Waitlist positions are not transferrable.

Q. HOW WILL PUBLIC SERVICE ADDRESS THE CHANGE IN MAXIMUM CSG SIZE FROM 5 MW_{AC} TO 10 MW_{AC} WHEN ALLOWED STARTING IN JULY 2023?

A. Because CSG applications prior to this time are locked in terms of size, location, and material considerations at the time of award, only applications submitted, and capacity offered after July 2023 will be allowed to be sized at the new limits. To be true to the award conditions offered at the time of award, prior awards will not be allowed to up-size to the new size limit. If a project was awarded capacity at a certain size, it will only be allowed to interconnect at that size or smaller.

Q. WILL CO-LOCATION LIMITS CHANGE TO ACCOMMODATE THE DOUBLING OF CAPACITY FOR INDIVIDUAL PROJECTS?

A. Yes. Starting in July 2023, all prior co-location limits will double in capacity to accommodate the new size limitations and associated increases in other potential location size limits.

Q. WILL STANDARD OFFER SIZE ALLOWANCES CHANGE IN JULY 2023?

A. No. Public Service is proposing to double the project size maximum for Standard Offer CSGs at the start of this Plan rather than waiting until July 2023.

Q. WHY IS THE COMPANY PROPOSING TO CONTINUE USING COMPETITIVE BIDDING FOR A LARGE PORTION OF ITS SOLAR*REWARDS COMMUNITY CAPACITY?

A. As noted above, use of an annual RFP enables market-based pricing that reflects the convergence of a multitude of program, industry, financial and customer conditions that are likely to change over the course of the RE Plan. An annual re-set of the incentives needed to support CSG development amid these changing conditions ensures that CSGs have the funding needed to address these changes while also ensuring that Public Service is not paying above market price for these solar resources.

Q. WHY IS THE STANDARD OFFER APPROACH BEING EXPANDED TO OFFER NEARLY AS MUCH CAPACITY AS THE RFP OPTION?

A. While Public Service believes that the RFP serves as a meaningful economic index which can help inform the pricing for Standard Offer projects, the Company has had ample experience with its own IQ Solar*Rewards Community offering to make

it comfortable expanding the Standard Offer to 30 MW_{AC} of capacity each year (a 275 percent increase from the prior approved Plan) with the requirement that individual projects are less than or equal to 2 MW_{AC} in size, an increase from 500 kW. The scale of these projects is in line with the historical size limits of CSGs prior to 2020, and the Company's own CSG offerings, making the Company comfortable setting a fixed Standard Offer incentive price. The Company's own experience as a CSG operator has also informed the Company's calculation of the fixed incentive levels, aligning with the Company's own CSG costs and the benefits the CSGs have delivered to its subscribers.

Q. WHY IS THE STANDARD OFFER OPTION MORE FOCUSED ON IQ CUSTOMERS AND DISPROPORTIONATELY IMPACTED COMMUNITIES THAN THE RFP OPTION?

A. Starting with the 2022-25 RE Plan, the Company is required by SB 21-272 to spend at least 40 percent of its RESA funds on programs for IQ customers and Disproportionately Impacted Communities.[32] Because of the Company's experience with IQ CSGs, the Company is confident of the incentive levels needed to successfully deliver substantial subscriber benefits to IQ customers and is incorporating these incentive levels into the Standard Offer programs. While Disproportionately Impacted Communities and associated qualification criteria are not yet specifically defined, the proposed Standard Offer incentive structure provides flexibility to also meet those requirements once they are created. The

[32] *See* § 40-2-124(1)(g)(I)(D), C.R.S.

Standard Offer's ability to provide development certainty of incentive levels for these more complex subscriber and facility requirements has the potential to help the industry build strong applications for these projects' unique needs over a longer period of time.

Conversely, the RFP in this RE Plan is focused on more straightforward capacity acquisitions for larger projects that are more likely to see cost efficiencies through their significant economies of scale, tax incentive benefits, and experienced developer practices.

D. Solar*Rewards Community RFP Proposals

Q. PLEASE BRIEFLY SUMMARIZE THE SOLAR*REWARDS COMMUNITY RFP OFFERING UNDER THE PREVIOUS 2020-21 RE PLAN.

A. The 2020-21 RE Plan included an annual RFP minimum of 35 MW_{DC} and a maximum of 75 MW_{DC}. In 2020, new CSG Rules converted CSG capacities from DC to AC calculations, which led to a further increase in available CSG capacities during 2020 and 2021.[33] Public Service worked with stakeholders to adjust RFP scoring criteria and pre-screen several areas to introduce interconnection viability as a new scoring criterion to aid developers in siting CSGs. The scoring adjustment was reviewed with Staff and then filed for Commission approval prior the release of the RFPs.

[33] Proceeding No. 19R-0608E, Decision No. C20-0482 (mailed date July 9, 2020), at ¶¶ 35-38.

The 2020 RFP was released in October 2021 and resulted in 10 developer bidders submitting a total of 85 bids and 362.6 MW of capacity, as reported in a December 16, 2020, post-bid Notice filing.

Of this capacity, the Company targeted 10 percent (or 7.5 MW) for low-income subscribers and 25 percent (or 18.75 MW) for residential subscribers. The Company also focused awards to meet the 50 percent residential, agricultural, or low-income subscriber requirements of Rule 3882(a)(I) that was in place at the time of the RFP. The maximum 75 MW of capacity was awarded with more than 50 MW of dedicated residential capacity and more than 8 MW of dedicated low-income capacity.

Q. WHAT IS THE STATUS OF THESE AWARDS TODAY?

A. While these awards are in various stages of the development lifecycle, most are sited and proceeding through the study or design process, and roughly 25 percent have received interconnection agreements as of November 2021. No 2020 RFP awards have been withdrawn, though several have gone through one or more site moves.

Q. PLEASE PROVIDE AN OVERVIEW OF THE PROPOSED SOLAR*REWARDS COMMUNITY RFP OFFERING AND CHANGES THE COMPANY IS PROPOSING.

A. The Company will offer 35 MW_{AC} of Solar*Rewards Community capacity annually via an RFP. Individual projects can be sized up to 5 MW_{AC}, and up to 10 MW_{AC} after July 2023. The requirements for application and subscriber commitments were described earlier in this testimony.

Q. PLEASE DESCRIBE THE DEFAULT CRITERIA UNDER WHICH WINNING CSG BIDS WILL BE SCORED AND AWARDED.

A. Since 2020, the Company has sought stakeholder input on bid evaluation criteria through stakeholder workgroup meetings and targeted feedback sessions. This process has largely been successful in meeting a wide variety of stakeholder needs, but as mentioned earlier, the weighted average winning bid price has risen as the RFP scoring criteria has recently emphasized factors other than the economics of the bids. With the Standard Offer increasing in size and imposition of special CSG requirements, the Company intends to decrease the emphasis on subscriber requirements for CSG RFPs and re-focus the emphasis for CSG RFPs on economics and the viability of the project. Baseline subscriber commitments of 50 percent Residential, Agricultural, Small Commercial, or Income Qualified will still apply for all CSGs, but additional scoring points for unique subscriber models will decrease compared to the 2020 and 2021 RFPs.

In Table KRK-D-16, the Company proposes the following CSG RFP scoring for the 2022-25 RE Plan period:

Table KRK-D-16: Proposed 2022-2025 CSG RFP Scoring

Criteria	2021 RFP Scoring	2022-2025 RFP Scoring
Economic	40	60
Preparedness	20	0
Subscriber Mix (additional subscriber commitments)	20	0
Community Benefits	10	20
Developer Experience	5	10
Supplemental Characteristics	5	10
Subscriber Mix – Low Income (Bonus Points)	20	0

Q. HOW WILL THE COMPANY SCORE SOLAR AND STORAGE CSG BIDS IN THE RFPS UNDER THIS RE PLAN?

A. The Company anticipates specifically piloting up to 10 MW of paired solar and storage CSGs as a carve-out target portion of the RFP capacity during the latter half of this RE Plan. The Company will work with stakeholders to create awareness and solicit input, as well as confer on any necessary scoring changes prior to the launch of impacted RFPs. Prior to this point, the Company will not differentiate RFP scoring for solar and storage bids.

Q. DOES THE COMPANY ANTICIPATE $0 OR NEGATIVE BIDS FOR ENERGY AND RECS IN THE SOLAR*REWARDS COMMUNITY RFP UNDER THIS PLAN?

A. Yes. With a confluence of changing market conditions, CSG rules and subscriber requirements could lead to increased average winning bid prices, and the Company believes it could continue to receive some winning bids that are close to or below zero. The total compensation for CSG projects consists of tax benefits,

subscriber revenues, incentive payments (from the Company), and potential grants or other funding sources. Even with the 50 percent Residential, Agricultural, Small Commercial, or Income Qualified subscriber bid requirements and bids near or below $0, it is possible that the other compensation sources for CSG projects will continue to be sufficient to support the successful development of CSGs. Changing the maximum CSG size from 1.6 MW_{AC} to 5 MW_{AC} in 2020, and 10 MW_{AC} after July 2023 presents an opportunity for substantial cost savings that could lead to very competitive bids, especially when combined with a potential extension of a 26 percent or higher Federal ITC.

Q. WHY IS THE COMPANY PROPOSING TO CONTINUE USING COMPETITIVE BIDDING FOR A SIGNIFICANT PORTION OF ITS SOLAR*REWARDS COMMUNITY CAPACITY?

A. The Company believes that the competitive solicitation process creates an economic driver which ensures that the Company can select resources with reasonable cost discipline. This type of economic discipline extends beyond Solar*Rewards Community to other Company resource acquisitions processes, including, but not limited to the competitive “All Source” solicitation used in the Commission established ERP process that has led to a strong bidding market and cost benefits for Colorado customers.

Q. WILL SUBSCRIBERS TO RFP CSGS BE ALLOWED TO KEEP THE RECS OR RETIRE THEM IN THEIR NAME?

A. Yes. Rule 3882(c) provides that for competitive solicitations, the CSG owner will state in its proposed contract with the utility whether the RECs will be retained by

CSG subscribers or ownership of the RECs will be transferred to the utility. Compensation may differ if CSG subscribers keep the RECs generated by the CSG. This is the justification for offering a different price for bundled (e.g., energy plus RECs), and unbundled (e.g., energy only) as explained earlier in my testimony.

CSG applicants will specify the proposed REC treatment for the entire CSG in the RFP response, and incorporate the Company's later application of any customer REC adjustment into the bid price. The Company will calculate the final incentive amount net of the bid amount and REC retention adjustment in the final Producer Agreement.

For CSGs that choose to transfer RECs to Public Service, similar to prior RFPs, the Company will retire the RECs from RFP CSGs in the Company's name. These RECs are then used for Company's RES compliance, or if excess RECs are available, they contribute to the Company's "CRP", which all customers then can use in calculations toward their own sustainability goals. As system carbon-free energy is anticipated to increase dramatically over the course of this Plan, the Company expects that customers will be increasingly interested in using the Company's CRP in their calculations as a cost-efficient way to meet their own carbon-free energy targets.

E. Solar*Rewards Community Standard Offer Proposals

Q. HOW IS THE SOLAR*REWARDS COMMUNITY STANDARD OFFER DIFFERENT FROM THE RFP PROCESS?

A. Under the RFP process, Public Service solicits CSG capacity through the RFP. As discussed above, the Company selects which CSG developers will be awarded CSG capacity based on established scoring criteria covering various factors. The incentives paid to the CSGs are based on the CSG developers' bids. By contrast, capacity available to CSGs under the Standard Offer has traditionally been offered on a first-come, first-allocated basis, without the use of scoring criteria. Incentives paid to CSGs are "standard" in that the Company pays (or makes available) the same incentives to all participating CSGs. CSG developers do not "bid" a proposed incentive payment for the Standard Offer.

Q. IS PUBLIC SERVICE PROPOSING OTHER CHANGES TO THE SOLAR*REWARDS COMMUNITY STANDARD OFFER?

A. Yes. In light of the observed trends, Public Service recommends the following adjustments to further build up the Standard Offering as a substantial portion of the Solar*Rewards Community program:

- Baseline Incentives: Set a $0.00 baseline incentive for the Standard Offer. Previously the baseline incentive was set at the weighted average winning bid price from the most recent Solar*Rewards Community program RFP. This caused a delay in the Standard Offer release each year until RFP awards were known. Also, as RFP project sizes have grown from a 2 MW to 5 MW maximum, and will continue to grow under this Plan, RFP resources can experience different economics and development issues that make them less suitable as a baseline for the smaller Standard Offer projects with more robust subscriber commitments. The proposed $0.00 baseline incentive reflects the

availability of incentive adders for CSGs that meet various criteria established by Colorado law or Commission regulation.

- Incentive Adders: Adjust the menu of incentive adders to accommodate new legislation and subscriber requirements and introduce new community benefit adders. The new adder menu can be stacked, meaning the same CSG can qualify for and receive multiple stacked adders. Table KRK-D-17 compares the baseline incentive and adders from the 2020-21 RE Plan with the proposed baseline incentive and adders for the 2022-25 RE Plan. The use of adders in conjunction with a $0.00 baseline incentive enables the Company to comply the requirement to predictably spend at least 40 percent of its RESA funds on programs with substantial subscriber benefits for IQ customers and Disproportionately Impacted Communities.[34]

Table KRK-D-17: Standard Offer CSG Adders Per kWh Across RE Plans

2020-21 RE Plan	2022-25 RE Plan
Baseline: Weighted Average Winning RFP Bid (could be positive or negative)	Baseline $0.00
$0.02 Standard Offer ≤1 MW	$0.01 ≤ 1 MW or $0.00 >1 MW ≤ 2 MW
$0.02 Direct-billed residential IQ subscribers	$0.035 IQ or Disproportionately Impacted Community with at least 30% net bill savings
	$0.015 Residential direct-billed customer
	$0.005 Community redevelopment projects
$0.04 Maximum adder value	$0.065 Maximum adder value

- IQ and Disproportionately Impacted Communities. Set a 75 percent capacity target for CSGs that are 100 percent dedicated to meet IQ or Disproportionately Impacted Community commitments.

[34] *See* § 40-2-124(1)(g)(I)(D), C.R.S.

- Project Size Eligibility. Increase the per-project eligible size from 1 MW_{AC} to 2 MW_{AC}. This change will increase flexibility for projects that are smaller than the program maximum while preserving a size differentiation between Standard Offer and RFP projects.

Q. PLEASE EXPLAIN EACH PROPOSED STANDARD OFFER INCENTIVE ADDER.

A. The adders are as follows:

- CSGs no larger than 1 MW. The $0.01/kWh adder for CSGs ≤ 1 MW recognizes that smaller CSGs may not be able to take advantage of economies of scale that benefit larger CSGs. The adder eligibility accounts for all CSG capacity at the CSG's location under the co-location rules for the program. For example, a 2 MW location cannot be split into two separate 1 MW CSGs for the purpose of adder eligibility.

- The $0.035/kWh IQ / Disproportionately Impacted Community adder is for CSGs or subscribers that qualify under Commission Rules or Legislation. Initially, the Company will focus on IQ eligibility as that is all that is sufficiently defined at the time of the filing of the Plan, but Public Service intends to follow Commission Rule requirements as they change over the course of this Plan.

- The $0.015/kWh residential direct-billed adder is for individual Residential Xcel Energy customer-subscribers, rather than large corporate, municipal, or institutional subscribers that might serve residential customers as master-metered tenants.

The $0.005/kWh community redevelopment adder is for projects facing development challenges in converting former industrial sites that require special treatment or construction to become suitable for solar development. Examples may include former landfills, manufacturing sites, or other locations that require abatement or demolition prior to solar construction.

Q. HOW WILL THE COMPANY APPLY THE STANDARD OFFER ADDERS?

A. The CSG developer-applicant will indicate upon application any CSG commitments, including those that are associated with adders. Public Service will then calculate an average incentive per kWh of production that will apply to the entire garden. This, along with the CSG commitments and REC retention selection and associated adjustment, will be memorialized in the CSG's Producer Agreement. This enables accurate depiction in the Producer Agreement as well as in the tariff sheet calculations for the individual CSG. This also enables allocation of the 75 percent IQ/Disproportionately Impacted Community capacity target for Standard Offer CSGs.

Q. CAN STANDARD OFFER CSGS RECEIVE AN UP-FRONT PAYMENT OF INCENTIVES IN LIEU OF THE CSG'S PBI?

A. No. In the past, Standard Offer and IQ CSGs could opt to receive their PBI paid out over 20 years based on actual kWh production, or to calculate the net present value ("NPV") of the production at vintage-year Standard Offer incentive rates or IQ Standard Offer incentive rates paid over 20 years using average production factors and an annual 0.05 percent degradation rate, at the Company's weighted average cost of capital ("WACC"). This lump-sum payment previously was payable after the garden reached full commercial operation.

In this Plan, the Company is proposing to discontinue that option for third-party CSGs. This is due to the increase in eligible Standard Offer CSG capacity that could lead to excessive first-year expenses beyond what the RESA can absorb. It also increases the risk of substantial capacity not continuing for the full

life of the CSG contract, as the PBI will already have been received by the CSG. Depending on CSG ownership and legal status later in the CSGs projected lifetime, it could become complex or unviable to recover a pro-rated portion of those previously paid incentives.

Q. HOW WILL THE 75 PERCENT IQ/DISPROPORTIONATELY IMPACTED COMMUNITY TARGET WORK?

A. Public Service will allocate 75 percent of Standard Offer capacity (22.5 MW) to projects 100 percent dedicated to these requirements as defined by legislation and Commission Rules. The remaining 25 percent of Standard Offer capacity (7.5 MW) will be awarded on a first-applied, first-awarded basis to projects that do not need to identify as IQ- or Disproportionately Impacted Community-eligible but would also not be prohibited from doing so for all or a portion of the CSG.

F. Solar*Rewards Community Company-Offered IQ CSGs with Labor Collaboration

Q. PLEASE DESCRIBE THE PROGRESS OF THE COMPANY-OFFERED SOLAR*REWARDS COMMUNITY IQ PROGRAM TO DATE.

A. To date, Public Service has installed 6 MW of Company-owned CSGs focusing exclusively on IQ subscribers. The 6 MW are composed of one 2 MW garden located within the City and County of Denver at the Arapahoe Generating Station and two 2 MW gardens in Boulder County at the Valmont Generating Station. The two Boulder gardens began producing subscriber credits on May 1 and June 1, 2021, while the Denver garden began producing subscriber credits on July 1, 2021.

Q. DOES THE COMPANY PLAN TO DEVELOP ADDITIONAL IQ CSGS?

A. The Company is now developing an additional 8 MW of Company-owned CSGs as approved within the 2020-21 RE Plan. The Company has chosen the preferred location to construct the CSGs and published the RFP for the developer. At the time of this filing, the RFP review is ongoing.

Q. HOW DOES PUBLIC SERVICE PLAN TO EXPAND THE COMPANY-OFFERED SOLAR*REWARDS COMMUNITY IQ PROGRAM UNDER THIS PLAN?

A. Public Service proposes to make available up to 10 MW_{AC} of IQ CSG capacity annually, for a total capacity expansion of 40 MW_{AC}.

Q. WILL PUBLIC SERVICE TARGET IQ CUSTOMERS FOR THIS EXPANSION?

A. Yes. Similar to the 14 MW of Company-owned CSGs previously approved within the 2017-19 and 2020-21 RE Plans, this expansion will be fully dedicated to Company IQ customers. The Company believes this model offers an efficient method to provide this customer segment with both greater access to renewable energy options and an opportunity for substantial bill savings.

Q. WHAT IS THE MAXIMUM CAPACITY FOR PROPOSED COMPANY-OWNED IQ CSGS?

A. CSGs may be up to 5 MW_{AC} in 2022 and up to 10 MW_{AC} after July 2023.

Q. WHAT INCENTIVES WILL BE APPLIED TO THIS OFFERING?

A. The incentives for this offering will follow the Standard Offer incentive adders. Incentives will be paid to Public Service to offset the cost of building and operating the gardens.

Q. WHY IS PUBLIC SERVICE PROPOSING TO PERMIT A LARGER CAPACITY FOR INDIVIDUAL COMPANY-OFFERED IQ CSGS THAN FOR OTHER STANDARD OFFER CSGS, YET RECEIVE THE SAME INCENTIVE LEVELS?

A. Company-offered IQ CSGs are unique from other CSGs in several ways that warrant this special consideration:

- They are fully regulated, such that all costs and pricing are transparently shared with Staff prior to finalizing subscriber fees and net subscriber savings;

- Any additional savings possible based on actual bill credits and incentives compared to actual costs will be passed along as increased subscriber net savings. The 30 percent net savings commitment is therefore a floor and not a ceiling for the savings subscribers will receive. Costs and savings estimates will be transparently shared with Staff prior to any annual subscriber pricing adjustments. These are the only regulated CSGs in Public Service's portfolio with such a regulatory commitment; and,

- The Company commits to a collaborative labor partnership that will help transition labor union members into the clean-energy transition. This regulated commitment is unique to these CSGs, and the Company is not aware of other CSGs that have made this commitment.

These unique attributes warrant different size allowances since any economic benefits of larger facility sizes will go directly to fund additional costs caused by these commitments, and any extra savings possible will go directly back to subscribers as increased net bill savings.

Q. WHAT ARE THE EXPECTED PRODUCTION AND SUBSCRIBER BENEFITS FOR THESE CSGS?

A. Public Service's estimates for these metrics are noted in Table KRK-D-18 below.

Table KRK-D-18: Expected Metrics for Company-Offered IQ CSGs

	Capacity (MW)	Estimated Annual kWh	Year One Est. Net Subscriber Savings (30%)	20 Year Est. Net Subscriber Savings
Annual Capacity	10	17,520,000	$394,000	$7,884,000
Full Plan Capacity	40	70,080,000	$1,576,800	$31,536,000

Q. HOW WILL THE COMPANY CALCULATE THE SUBSCRIPTION CHARGE FOR THESE CSGS?

A. Subscription charges are calculated by totaling all program-related costs, including construction costs, O&M, program administration, land costs, insurance, and depreciation, over the 20-year lifespan of the offering. The total program cost is then divided by the estimated lifetime production of the CSGs, thereby setting a $/kWh cost. This $/kWh cost is the subscription charge. The goal of the subscription charge is to fully account for all program-related charges within said charge, so that all program charges are recovered by the CSG subscribers.

Q. WILL THE COMPANY UPDATE THE SUBSCRIBER CHARGE?

A. Yes. The subscription charge will be set by Public Service annually for the following year through an Advice Letter, after the bill credit is approved for that calendar year. The bill credit is common to all CSG subscribers of a rate class and is updated annually through an Advice Letter.

Q. HOW DOES THE COMPANY INTEND TO OBTAIN SUBSCRIBERS?

A. The Company will continue to partner with EOC to enroll IQ customers in the program and manage subscriptions. As the offering grows under this Plan, the

Company will explore adding contracted subscriber agencies who also specialize in offering customer energy programs for eligible direct-billed IQ customers, such as CEO, provided it is efficient to do so.

Q. HOW IS THE COMPANY'S COMMITMENT TO AT LEAST 30 PERCENT NET SUBSCRIBER SAVINGS CALCULATED AND HOW WILL THE COMPANY DETERMINE IF SAVINGS HIGHER THAN 30 PERCENT ARE POSSIBLE?

A. The subscriber savings is simply the difference between the subscriber's bill credit and the subscriber's subscription fees. While the subscriber credit is applicable to all CSGs, the Company will set the subscriber charge after the contract is awarded to the solar developer and final projects costs are known. If total program costs are lower than initially anticipated, the subscriber charge will be lowered as necessary to cover these updated costs, leading to a higher net savings for participants.

Q. HOW WILL INCENTIVES BE PAID?

A. Incentives will be paid up-front upon achieving commercial operation. The Company believes this is reasonable because, unlike other CSGs, the Company-offered CSGs are fully regulated, and the Commission has transparency into and oversight of these CSGs, their finances, and their operational performance. Therefore, there is no operational risk that the CSGs will not continue to produce or be held accountable for pre-paid incentives if the CSG underperforms or ceases operation prior to the conclusion of the CSG contracts. Since any cost savings in the construction and operation of these CSGs goes directly to subscribers as increased net savings on their energy bill, making this resource as cost-efficient as

possible through up-front payment of incentives is both affordable to the RESA and in the public interest.

Q. WILL SUBSCRIBING CUSTOMERS BE ALLOWED TO RETAIN RECS OR HAVE THEM RETIRED IN THEIR NAME?

A. As part of this offering, the Company will retire RECs in its name on behalf of all customers. The Company aims to provide maximum net bill savings to these IQ direct-billed residential subscribers and recognizes that this comes at a high incentive cost paid by all customers through RESA contributions. It also creates administrative efficiency when participating subscribers have common contract terms. Participating customers who value RECs and need them for their own sustainability goals have an option to participate in Renewable*Connect Month-to-Month at the same price to the customer REC adjustment that applies to CSG Standard Offer and CSG RFP projects where subscribers retain the RECs. Renewable*Connect Month-to-Month also provides contractual flexibility that might be more beneficial to subscribing customers rather than including this factor in their CSG subscription.

Q. WHAT IS THE LABOR COLLABORATION REQUIREMENT AND HOW IS THAT UNIQUE FROM OTHER CSG JOB TRAINING EFFORTS?

A. Public Service will develop the IQ CSGs using a collaborative labor partnership under a Project Labor Agreement ("PLA"), which the Company believes is a positive opportunity for trade laborers in Colorado to gain valuable experience in constructing solar facilities. This aligns with the approach the Company took for the 8 MW of Company-owned CSGs approved within the 2020-21 RE Plan.

VI. RECYCLED ENERGY

Q. IS THE RECYCLED ENERGY PROGRAM A NEW OFFERING IN THIS RE PLAN?

A. No. The Company's Recycled Energy program is an established program that offers customers an option to generate clean energy through the use of waste heat and steam which would otherwise not be used at all. Although Recycled Energy is not a renewable energy resource by definition under the Commission's Rules, and therefore does not produce RECs, it is an eligible energy resource, and generation of energy from a Recycled Energy generator can be used to meet Colorado's RES under § 40-2-124, C.R.S.

Q. IS THE COMPANY PROPOSING CHANGES TO THE RECYCLED ENERGY PROGRAM?

A. No. The Company will continue to work with its account management team and CEO to drive awareness of Recycled Energy incentives and analysis services provided by CEO.

VII. VOLUME 3 UPDATES

Q. WHAT IS THE PURPOSE OF THIS SECTION IN YOUR TESTIMONY?

A. In this section of my Direct Testimony, I provide an overview of the agreements included in Volume 3 of the 2022-25 RE Plan (Attachment JWI-3), and provide an overview of the updates the Company has made to some of these agreements since its 2020-21 RE Plan.

Q. PLEASE PROVIDE AN OVERVIEW OF THE DOCUMENTS CONTAINED IN VOLUME 3.

A. Rule 3657 directs the Company to (among other things) file with the Commission:

- Proposed RFP including any standard contracts the investor owned QRU plans to use as part of a competitive acquisition process; and,
- Application forms, standard agreements, and general procedures for the investor owned QRU's SRO programs under Rule 3658 and for the interconnection of renewable energy resources pursuant to rule 3667 (now Rules 3850-3859).

Consistent with past practice, the Company has included these agreements in Volume 3 of its 2022-25 RE Plan (Attachment JWI-3). The three types of agreements contained in Volume 3 that Public Service filed in its 2020-21 RE Plan include Public Service's:

- Solar*Rewards REC Purchase Contract ("REC Agreement"), including the low-income version;
- Solar*Rewards Community Producer Agreement ("Producer Agreement"); and,
- Distributed Energy Resource Interconnection Agreement ("Interconnection Agreement").

The following list are the new agreements contained in Volume 3:

- Renewable*Connect 2.0 Subscriber Agreement;
- Renewable*Connect Community Program Agreement;
- Solar*Rewards Battery*Connect Agreement;
- Solar*Rewards Large RFP;
- Solar*Rewards Community RFP; and,
- Host Acknowledgement.

Q. WHAT UPDATES HAS PUBLIC SERVICE MADE TO VOLUME 3 SINCE THE 2020-21 RE PLAN?

A. Public Service has made three types of changes to its form REC Agreement, Producer Agreement, and Interconnection Agreement.

First, Public Service has made updates to address legislative and regulatory changes. For example, Public Service incorporated the new 200 percent sizing and off-site renewable statutory provisions enacted by SB 21-261, rule changes allowing CSGs to elect for subscribers to keep the RECs for subscribed energy to implement HB 19-1003, the obligation under Rule 3882 to require subscriber organizations to verify that 50 percent of CSG sales will correspond to certain customer classes, and rule changes related to insurance requirements in the Interconnection Agreement.

Second, Public Service has made updates for programmatic changes. For example, Public Service has made changes to the form agreements to implement the simplified and standardized deposits, due dates, and extension policies.

Third, Public Service has made certain changes to be responsive to contractual issues raised by customers in the application and agreement execution

process. The most significant of these changes is that Public Service has responded to concerns from customers about entering into three-way agreements by restructuring its three-way REC Agreement and three-way Interconnection Agreement into bilateral agreements with a Host Acknowledgement.

Finally, the new agreements are being included because they correspond to new program offerings in this 2022-25 RE Plan (Solar*Rewards Battery Connect, Renewable*Connect 2.0, and Renewable*Connect Community). Company witness Mr. Cowan discusses the Renewable*Connect agreements in his Direct Testimony.

Q. HOW DOES THE UPDATED REC PURCHASE CONTRACT ADDRESS THE NEW SIZING AND OFF-SITE RENEWABLE PROVISIONS OF SB 21-261?

A. SB 21-261 primarily affects the REC Agreement by setting the allowable size for a solar facility. Therefore, the REC Agreement attaches an addendum listing the host properties that are to be used for the calculation of 200 percent of the retail customer's expected annual electricity use at all owned or leased properties for sizing purposes. The REC Agreement does not address net metering from off-site solar, which will be governed by Public Service's net metering tariff.

Q. HOW DOES THE PRODUCER AGREEMENT ADDRESS THE OPTION FOR CSG SUBSCRIBER ORGANIZATIONS TO ELECT FOR SUBSCRIBERS TO KEEP THE RECS?

A. The Producer Agreement states whether the subscriber organization has elected for subscribers to keep the RECs for subscribed energy. If so, then the price under the Producer Agreement is the unbundled energy rate for subscribed energy. If

the subscriber organization elects to sell RECs to Public Service, the price under the Producer Agreement is the bundled energy and REC rate for subscribed energy. All RECs attributable to unsubscribed energy will always be sold to Public Service, so the payment rate for unsubscribed energy is the bundled energy and REC rate.

Q. HOW DOES THE PRODUCER AGREEMENT ADDRESS THE REQUIREMENT THAT SUBSCRIBER ORGANIZATIONS SELL 50 PERCENT OF CSG SUBSCRIPTIONS TO RESIDENTIAL, AGRICULTURAL, SMALL COMMERCIAL, AGRICULTURAL, LOW-INCOME SUBSCRIBER, AND LOW-INCOME SERVICE PROVIDER CUSTOMERS?

A. Under the Producer Agreement, the subscriber organization commits to a specific subscriber mix, which includes the 50 percent commitment under Rule 3882, as well as any additional voluntary commitments made by the subscriber organization in its standard offer application or RFP bid. If the subscriber organization fails to meet its subscriber mix commitments, the subscribers keep their bill credits and RECs (if the subscriber organization made an election for subscribers to keep them). However, Public Service pays the subscriber organization the unsubscribed energy rate, minus the bill credit amount and (if applicable based on the REC election) minus the REC price, which is the REC price under Public Service's Renewable*Connect programs applicable as of the date of the Producer Agreement.

Q. WHAT CONCERNS HAVE CUSTOMERS RAISED ABOUT THREE-WAY AGREEMENTS?

A. Where a third party owns and operates a solar PV system on a retail customer's property, Public Service previously required the third party and the retail customer to enter into a three-way interconnection agreement, and, if selling RECs to Public Service, a three-way REC Agreement. Most provisions in the three-way agreements were inapplicable to the retail customer, and customers expressed concerns about reviewing, understanding, and incurring potential liability under those three-way agreements.

Q. HOW DOES THE NEW STRUCTURE OF A BILATERAL AGREEMENT WITH THE SYSTEM OWNER AND A HOST ACKNOWLEDGEMENT ADDRESS THESE CUSTOMER CONCERNS?

A. If the retail electric customer is not the owner of the solar PV system, it will not have to review the operational, technical, and legal aspects of the Interconnection Agreement and REC Agreement. Instead, the retail customer will only need to review and enter into a short, approximately two-page, Host Acknowledgement.

Q. HOW DOES THE NEW STRUCTURE OF A BILATERAL AGREEMENT WITH THE SYSTEM OWNER AND A HOST ACKNOWLEDGEMENT WORK?

A. Public Service will enter into the Interconnection Agreement and REC Agreement (if applicable) with the owner or authorized operator of the solar PV system (or solar and battery system). If the system is owned by the retail customer, then the retail customer is the party to the Interconnection Agreement and REC Agreement. If the system is owned by a third party, then the retail customer is the "Host" and

provides a Host Acknowledgement to Public Service. The Host Acknowledgement provides assurance to Public Service that the third-party system owner or operator is authorized by the Host, has access to the Host's property and is operating the system on behalf of the Host retail customer. The Host also agrees to inform Public Service of any change in the third-party owner/operator.

Q. WHAT ARE THE MAIN PROVISIONS OF THE SOLAR*REWARDS BATTERY CONNECT AGREEMENT?

A. The Solar*Rewards Battery Connect Agreement combines the elements of a REC Agreement (for ongoing performance-based incentives through purchase of RECs) and an upfront incentive for the battery installation. Under the agreement, the customer must participate in the program by allowing the battery to charge for 24 hours and be discharged by Public Service for up to 60 percent of its storage capacity for up to 40 annual grid events called by Public Service. If a grid outage occurs, the stored energy is available for the customer's use. If the customer fails to participate in the battery program for at least a year, it must reimburse a prorated portion of the upfront incentive to the RESA. If the customer fails to participate in the battery program for at least five years, Public Service can terminate the agreement, which ends the performance-based incentives (i.e., REC purchases). If the customer has participated for five years, Public Service will continue to purchase RECs from the solar PV system for the 20-year term of the agreement.

VIII. MOTION TO EXTEND THE 2020-21 RE PLAN

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

A. In this section of my Direct Testimony, I describe the impact of the Company's proposal to extend the 2020-21 RE Plan in Proceeding No. 19A-0369E until the Company commences implementation of its 2022–25 RE Plan and the associated impacts to customer choice renewable energy programs.

Q. WHY IS AN EXTENSION OF THE 2020-21 RE PLAN NECESSARY?

A. The 2020-21 RE Plan will expire at the end of 2021. However, given the timing of the filing of the Company's Application in this proceeding, there will not be a final Commission decision on the 2022-25 RE Plan, and Public Service would not have an effective RE Plan in place starting in 2022. To address this gap, the Company has filed a Motion to Extend its 2020-21 RE Plan in Proceeding No. 19A-0369E ("Motion").

Q. WHY IS THE COMPANY FILING ITS APPLICATION SO LATE IN THE YEAR?

A. The Company is filing its Application for the 2022-25 RE Plan late in the year in order to propose implementation of a number of new and modified programs, as well as be responsive to the 2021 legislative session, which resulted in a number of proposed and enacted bills that will impact the Company's RES compliance and associated programming. These factors in turn impacted the development of Public Service's programs for the 2022-25 RE Plan.

Q. WHAT IS THE PROPOSED DURATION OF THE EXTENSION?

A. As stated within the Company's Motion for Extension filed in Proceeding No. 19A-0369E, Public Service proposes to extend the 2020-21 RE Plan until the start of

the 2022-25 RE Plan (i.e., a final Commission decision in this Proceeding). The extension would expire the day before the effective date of the 2022-25 RE Plan.

Q. WILL THE EXTENSION REQUIRE PUBLIC SERVICE TO PAUSE THE IMPLEMENTATION OF ANY OF ITS RE PLAN PROGRAMS?

A. No. For most programs, the Company proposes to continue the implementation of the existing program on an uninterrupted basis during the extension subject to the currently effective terms and conditions. Any modifications to the programs proposed in the Company's Application for the new 2022-25 RE Plan would take effect with the commencement of that Plan.

For programs that have enrollment capacities where availability might be impacted by the delayed implementation of the 2022-25 RE Plan, the Company made specific proposals for the period from the beginning of 2022 through commencement of the 2022-25 RE Plan, which I discuss in more detail below. Practically speaking, the extension proposal should only impact the Solar*Rewards Small option, Solar*Rewards Medium option, and Low-Income On-Site Solar offering. However, in the unlikely event that the 2022-25 RE Plan is not implemented before October 31, 2022, Solar*Rewards Large and Solar*Rewards Community solicitations or standard offerings will also move forward according to an additional process, which I discuss below.

Q. PLEASE EXPLAIN HOW THE COMPANY PROPOSES TO IMPLEMENT THE SOLAR*REWARDS SMALL OPTION DURING THE EXTENSION PERIOD.

A. The Company proposes to make additional enrollments in the Solar*Rewards Small option available during the extension period on a monthly pro rata basis.

During the 2020-21 RE Plan, 12 MW of capacity was available for Solar*Rewards Small each year. At the beginning of each month of the extension period, the Company will make available 1 MW of additional capacity. Any unused capacity at the end of each month of the extension period will roll forward to the next month of the extension period. Any unused capacity remaining at the end of the extension period will expire upon implementation of the 2022-25 RE Plan.

As I explained earlier in my Direct Testimony, the current Solar*Rewards Small program is proposed to be discontinued with the 2022-25 RE Plan. The Company is seeking to make a new program available for customers that seek to install a small on-site solar facility under the proposed Solar*Rewards Battery Connect program, which would be implemented upon commencement of the 2022-25 RE Plan. Unused annual capacity from each year of the Solar*Rewards Battery Connect for the 2022-25 RE Plan will carry over to the next year of the program, so no 2022-25 program capacity would be lost through the shortened 2022 program year. In addition, the existing net metering program remains available to customers who wish to install on-site solar.

Participants in the existing Solar*Rewards Small program will continue their participation uninterrupted.

Q. PLEASE EXPLAIN HOW THE COMPANY PROPOSES TO IMPLEMENT THE SOLAR*REWARDS MEDIUM OPTION DURING THE EXTENSION PERIOD.

A. Public Service proposes to rollover any unused capacity from program year 2021 into program year 2022. Public Service also proposes to make additional enrollments in the Solar*Rewards Medium option available during the extension

period on a monthly pro rata basis. During the 2020-21 RE Plan, 24 MW of capacity was available for Solar*Rewards Medium each year. At the beginning of each month of the extension period, the Company will make available 2 MW of additional capacity. Any unused capacity at the end of each month of the extension period will roll forward to the next month of the extension period. Any unused capacity remaining at the end of the extension period will expire upon implementation of the 2022-25 RE Plan.

As I described earlier in my Direct Testimony, the Company proposes several modifications to its Solar*Rewards Medium program (under the updated name of Solar*Rewards Commercial and Industrial, or Solar*Rewards C&I) that would be implemented with the commencement of the 2022-25 RE Plan. Unused annual capacity from each year of the Solar*Rewards Commercial and Industrial program for the 2022-25 RE Plan will carry over to the next year of the program, so no 2022-25 program capacity would be lost through the shortened 2022 program year.

Participants in the existing Solar*Rewards Medium program will continue their participation uninterrupted.

Q. PLEASE EXPLAIN HOW THE COMPANY PROPOSES TO IMPLEMENT THE LOW-INCOME ON-SITE SOLAR OFFERING DURING THE EXTENSION PERIOD.

A. Public Service proposes to continue enrollments for the CEO-delivered Low-Income On-Site Solar offering during the extension period, with such enrollments to apply to the capacity limits determined for 2022 for the 2022-25 RE Plan. The

2020-21 Low-Income On-Site Solar capacity was fully enrolled, and the Company expects this level of interest to continue.

Although the Company proposes some modifications to the Low-Income On-Site Solar offering in the Application (including a slight name change to Residential IQ On-Site Solar), the Company believes the most straightforward implementation would be for CEO to continue to enroll customers under the existing terms and conditions of the program during the extension period, and then apply the capacity of the enrollments to the capacity allocation for 2022, as approved by the Commission, upon commencement of the 2022-25 RE Plan. The remaining available capacity would be available for enrollment for the remainder of 2022 under the 2022-25 RE Plan. Unused annual capacity from each year of the Residential IQ On-Site Solar offering for the 2022-25 RE Plan will carry over to the next year of the program, so no 2022-2025 program capacity would be lost through the shortened 2022 program year.

Participants in the existing Low-Income On-Site Solar offering will continue their participation uninterrupted.

Q. DID PUBLIC SERVICE HAVE AN EXTENSION PROPOSAL FOR ITS OTHER RE PLAN PROGRAMS?

A. Not specifically. As I said earlier, the Company expects the extension to have little or no impact on the implementation of its other programs. For the other Solar*Rewards and Solar*Rewards Community programs, Public Service solicits participation through competitive solicitations (RFP processes) that are held annually or through Standard Offers for a set amount of capacity with the Standard

Offer window opening on a specified date for each year's capacity. Public Service intends to conduct any RFPs for 2022 capacity after the effective date of the 2022-25 RE Plan under the rules and for the capacity level approved in this proceeding. Similarly, Public Service proposes to open any Standard Offer windows for 2022 capacity after the effective date of the 2022-25 RE Plan under the Rules and for the capacity level approved in this proceeding. To the extent there is Standard Offer capacity still available from any 2021 Standard Offer programs, Public Service proposes to keep the standard offer open during the extension period (until filled). Participants in the existing programs will continue their participation uninterrupted.

However, through the conferral process the Company is aware that some stakeholders have concerns with the potential timing of the Company's 2022 Solar*Rewards Large and Solar*Rewards Community solicitations/offering[35] if a final decision in the 2022-25 RE Plan is not issued in time for the Company to issue such solicitations/offering before the end of 2022. Accordingly, if it appears that a final decision is not likely to issue in the 2022-25 RES Plan in time for the Company to conduct its Solar*Rewards Large and Solar*Rewards Community solicitations/offering by October 31, 2022, Public Service will: (1) confer with interested parties, and (2) file a second motion for extension (or other appropriate filing) with the Commission that would enable the Company to issue the

[35] This includes the Solar*Rewards Community RFP and Standard Offer.

solicitations/offering on or before October 31, 2022 at the capacity levels approved in the 2020-21 RE Plan.

For the Renewable*Connect and Windsource® programs, the Company proposes to continue the existing programs during the extension period without any specific implementation activities. Renewable*Connect is currently fully subscribed, and enrollment is closed. Participation in Windsource is not capped and new participants may enroll during the extension period. Customers participating in the existing Renewable*Connect and Windsource programs will continue their participation uninterrupted. The Application proposes to re-organize the existing Renewable*Connect branding and offer new programs under the Renewable*Connect branding umbrella (including a modified and renamed Windsource) upon commencement of the 2022-25 RE Plan.

Q. HAS THE COMMISSION PREVIOUSLY GRANTED A SIMILAR EXTENSION?

A. Yes. In Decision No. C14-1505, issued in Proceeding No. 13A-0836E, the Commission granted an "extension" of the 2014 RE Plan, which at that time, would have been effective June 2016 through December 2016, so that the next RE Plan would start in 2017.[36] Similarly, by Decision No. R19-0807-I in Proceeding No. 19A-0369E, the 2017-19 RE Plan was extended through the First Quarter of 2020 because it was not possible for a final Commission decision to issue before the

[36] Proceeding No. 13A-0836E, Decision No. C14-1505, at ¶ 32-33 (mailed date Dec. 26, 2014) (finding that, "in the absence of new information or a change in circumstances . . . a RES Plan filing that would apply to six months or less would be an inefficient use of the parties' and the Commission's resources"). The Commission subsequently vacated a previously established requirement (which had been reached in Settlement) for the Company to file a 2015-16 RE Plan, since the 2014 RE Plan had been extended. *See* Proceeding No. 14V-0188E, Decision No. C15-0021 at ¶ 3, Ordering ¶ 1 (mailed date Jan. 8, 2015).

end of 2019, and it was likely that Public Service would not have an effective RE Plan in place during the First Quarter of 2020.[37]

Q. IS THE REQUESTED EXTENSION IN THE PUBLIC INTEREST?

A. Yes. Granting the extension will provide continuity and certainty for customers, other stakeholders, the Company, and the Commission.

[37] *See* Proceeding No. 19A-0369E, Decision No. R19-0807-I (mailed date Oct. 1, 2019).

IX. CONCLUSION

Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

A. I recommend that the Commission approve all of the Company's 2022-25 RE Plan program proposals as outlined within my testimony as they are reasonable and in the public interest.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

Statement of Qualifications

Kerry R. Klemm

I work in the Customer Solutions organization of Xcel Energy where we develop, manage and market programs in support of our Demand-Side Management ("DSM"), load management, time-based rates and renewable energy portfolios. My specific title is Manager, Customer Choice and Renewable Programs, which includes responsibility for the Company's current wind, solar, and other renewable energy choice programs. I have worked at Xcel Energy and Northern States Power Company for more than 25 years and have held a variety of individual and leadership roles in the Company's Corporate Communications, DSM Marketing, and Product Development areas prior to my current role. I have a Bachelor's of Administration degree from the University of St. Thomas in St. Paul, Minnesota.

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

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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	)))))))	**PROCEEDING NO. 21A-___EG**

AFFIDAVIT OF KERRY R. KLEMM
ON BEHALF OF PUBLIC SERVICE COMPANY OF COLORADO

I, Kerry R. Klemm, being duly sworn, state that the Direct Testimony were prepared by me or under my supervision, control, and direction; that the Direct Testimony 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.

Dated at Minneapolis, Minnesota, this 16th day of 12 2021.

Kerry R. Klemm
Manager, Business Solutions and Results

Subscribed and sworn to before me this 16th day of 12, 2021

Notary Public

CLAUDIA L. CARRASCO
NOTARY PUBLIC - MINNESOTA
MY COMM. EXPIRES 01/31/2022

My Commission expires 01/31/2022