MINNESOTA
PUBLIC UTILITIES COMMISSION

Staff Briefing Papers

Meeting Date	August 23, 2018	Agenda Item **2

Company	Northern States Power d/b/a Xcel Energy
Docket No.	**E002/M-12-1278** In the Matter of Petition for Approval of an Amendment to a Renewable Development Fund (RDF) Standard Grant Contract and a Petition Regarding a Change in Scope of a RDF Cycle 4 Grant
Issues	• **What action should the Commission take on Xcel's request to amend an existing RDF grant (EP4-15)?** • **What action should the Commission take on Xcel's request to change the scope of an existing RDF grant (EP4-15)?**

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✓ **Relevant Documents**	**Date**
Xcel Energy, Petition to Approve Grant Amendment	September 22, 2017
Department of Commerce, Division of Energy Resources, Comments	December 21, 2017
Greenway Solar, LLC and Minnesota Renewable Energy Society, Inc., Reply Comments	January 10, 2018
City of Minneapolis, Reply Comments	January 10, 2018
Xcel Energy, Reply Comments	January 10, 2018

Attached Documents
Attachment I: Options Matrix
Attachment II: EP4-15 Quarterly Project Updates

The attached materials are work papers of the Commission Staff. They are intended for use by the Public Utilities Commission and are based upon information already in the record unless noted otherwise.

I. Statement of the Issues

What action should the Commission take on Xcel's request to amend an existing RDF grant (EP4-15)?

What action should the Commission take on Xcel's request to change the scope of an existing RDF grant (EP4-15)?

II. Procedural Background

On November 29, 2012, Xcel Energy filed a notice of intent with the Commission detailing their wish to proceed with the forth funding cycle of its RDF program[1] and approval of a standard grant contract for the RDF projects.[2]

On February 6, 2013, the Commission approved Xcel's request to move forward with the Cycle 4 RDF process and also provided a modified standard grant contract.[3] The order clarified several preference criteria and procedural steps to be utilized when examining proposals.[4] By mid-February, Xcel issued two 4th Cycle RFPs and accepted proposals until April 1, 2013 – one for Energy Production and Research Development proposals and the other for Minnesota institutes of higher education for renewable electric energy research programs.[5]

On July 29, 2013, following the review of the 67 qualified RFPs, Xcel provided their selection of 33 projects: 20 projects with a full recommendation and an additional 13 reserve projects further categorized among tier 1 and tier 2 lists.[6] Xcel requested that the Commission approve its recommendation to grant funding for the 20 projects and 13 reserve projects.

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[1] The RDF program was established in 1994 as a part of an agreement with the State of Minnesota and Northern States Power d/b/a Xcel Energy allowing the utility to store spent nuclear at their Prairie Island and Monticello nuclear facilities. Please see Minn. Stat. § 116C.779 for specific details.

[2] Xcel Energy, Initial Filing at 1 (November 29, 2012) (Docket E-002/M-12-1278).

[3] ORDER APPROVING REQUESTS FOR PROPOSALS AND STANDARD CONTRACTS AS MODIFIED (February 6, 2013) (Docket E-002/M-12-1278).

[4] *Id.* at 4-6.

[5] Xcel Energy, Compliance Filing (February 22, 2013) (Docket E-002/M-12-1278).

[6] Xcel Energy, Selection Report (July 29, 2013) (Docket E-002/M-12-1278).

In response, in its March 11, 2014 order, the Commission approved Xcel's Cycle 4 RDF project requests as set forth in the Company's December 12, 2013 reply comments.[7] At that time, the Commission approved and earmarked any unencumbered RDF funds for projects 1-9 on the reserve list.[8] This resulted in a grant award of $2,661,320 for project number three on the reserve list, EP4-15.[9] At that time, the Company estimated "through the end of 2013 the accumulated funds in the RDF Program have increased to approximately $43 million. Further, the Company now projects that the funds in the RDF Program will accumulate to approximately $49 million by the end of 2014."[10]

In December 2015, Xcel petitioned the Commission for approval to move forward on projects from the reserve list (EP4-36, EP4-44, and RD4-8) following several projects that were at a standstill (EP4-4, EP4-9, EP4-21, and RD4-4).[11] The Commission granted this request on December 21, 2015.[12]

In April 2016, Xcel requested to cancel two projects (EP4-36 and EP4-39) and continue with the three remaining projects on the reserve list (RD4-1, RD4-5, and RD4-7).[13] This was approved in the Commission's April 29, 2016 Notice.[14]

In accordance to the 2013 order that required all grant contracts be filed with the Commission, Xcel filed the grant contract with Minnesota Renewable Energy Society (MRES) for EP4-15. If a grant contract deviates from the standard form contract, the Commission requires the grant contract to be filed with the Department for compliance review. The Department files a compliance letter in the proceeding if there are no issues or brings any identified issues that cannot be resolved to the Commission for review.[15] For contracts that deviate from the standard form, the Company must submit a red-line

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[7] ORDER APPROVING RDF GRANT RECOMMENDATIONS, ESTABLISHING FUNDING PROCEDURES, AND REQUIRING COMPLIANCE FILINGS at 10 (March 11, 2014) (Docket E-002/M-12-1278). Please see order point 2: "The Commission hereby approves Xcel's December 12, 2013 selection of energy production and R&D projects, recommendation for block grant awards to institutions of higher education, and reserve list." Also see Attachment A, B, and C of the order.

[8] *Id.* and Comments by Department of Commerce, Division of Energy Resources at 3 (December 21, 2017).

[9] Comments by Department of Commerce, Division of Energy Resources at 3 (December 21, 2017).

[10] Xcel Energy, Letter Re: Availability of RDF Funding at 1 (January 21, 2014).

[11] Comments by Department of Commerce, Division of Energy Resources at 3 (December 21, 2017).

[12] NOTICE OF APPROVAL TO CANCEL PROJECTS AND FUND OTHER PROJECTS (December 21, 2015).

[13] Xcel Energy, Request to Discontinue Contract Negotiations (April 6, 2016) (Docket E-002/M-12-1278).

[14] NOTICE OF COMMENT PERIOD (April 29, 2016) and Comments by Department of Commerce, Division of Energy Resources at 3 (December 21, 2017).

[15] *Id.*

version for compliance review. As MRES' contract was a standard contract, it was filed for informational purposes and approved by the Commission.[16]

From May 2016 to May 2017, to comply with the Commission's June 28 order in Docket 05-109[17], Xcel filed three no-cost contract amendments that were all regarding the replacement of the Project Manager and their name and contact information in Exhibit D of the RDF grant.[18]

On September 22, 2017, Xcel filed a petition requesting a change of scope and amendments to the contract with MRES, a Cycle 4 RDF project, EP4-15.

III. Project Background

As part of Xcel's 2013 Cycle 4 Requests for Proposals under the RDF program, the MRES was awarded and received an RDF grant contract, EP4-15. At that time, the summary and goals of the project were described as:[19]

> **Executive Summary**
> The Minnesota Renewable Energy Society ("MRES") will install not more than 1,000 kilowatts of direct-current (kW_{DC}) solar capacity with the development of Community Solar Gardens located within Xcel Energy's Minnesota service area. At a minimum, one facility will be installed within a rural setting and one facility will be installed within an urban setting.
>
> A Solar Garden is a form of solar facility tenure in which a specified piece of the solar array is individually owned. Power produced by designated panels is associated with the individual ownership whereby the facility is controlled by the association of owners that jointly represent ownership of the whole. A Community Solar Garden provides the opportunity for those who do not have appropriate space for a solar array on their home or business to actively participate in a renewable energy initiative. Participants will receive an on-bill credit reflecting the kWh energy produced from their portion of the facility. MRES intends to sell all energy generated to Xcel Energy through a Power Purchase Agreement.
>
> The project's total cost is $3,966,420. RDF grant funds will be applied to the capital costs of the project and result in a long-term energy production facility.

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[16] ORDER APPROVING GRANT CONTRACTS AND REQUIRING COMPLIANCE FILING (August 12, 2015).

[17] ORDER SETTING RIDER, APPROVING CONTRACT AMENDMENTS AND PROCESS FOR FTUURE AMENDMENTS, AND REQUIRING CONTINUED REPORTING (June 28, 2005) (Docket No. E-002/M-05-109).

[18] Comments by Department of Commerce, Division of Energy Resources at 4 (December 21, 2017).

[19] *Id*.

> **Goals**
> The goal of the Solar Project is to install 1,000 kW_{DC} PV [photovoltaic] capacity and demonstrate the concept of collective ownership as a way to increase the penetration of solar renewable electric production in Minnesota.

These projects were planned to be the first large-scale CSG in Minnesota. It is important to note that while the EP4-15 proposal was written, reviewed, and program implementation commenced, the Legislature passed the 2013 Omnibus Energy Act and the state's CSG statute, §216B.1641, was not yet introduced.

The RDF Standard Grant Contract was signed and effective as of February 17, 2015 and by July of the same year, MRES had selected the urban and rural locations for the CSG projects.[20] However, it was determined that in order to receive interim financing for the projects, the solar PV equipment would need to be owned by a third party to take advantage of tax equity benefits.[21] This unique ownership structure – where the contractor (MRES) would design, build, and operate the PV system, but a third-party (financier) would own the PV equipment – would require a change to the language of the Standard Grant Contract. This modification was reviewed and approved by the RDF advisory group in August of 2017.[22] "The Company and MRES negotiated modifications to the Standard Grant Contract to accommodate the third-party ownership aspect of the project and also negotiated several special conditions to clarify that although the third party financer would own the PV equipment, *only MRES has any rights under the negotiated grant contract* (emphasis added)."[23]

The second item that was contemplated as project implementation continued was the initially proposed pricing structure using a bill credit mechanism and the development of a 15-year Purchase Power Agreement (PPA) with MRES.

At this juncture, four years had passed since the initial proposal and, while it was intended to be a project on which to learn and grow, Xcel simultaneously proceeded with the development of their now established CSG program. Therefore, the parties concluded that creating a second somewhat duplicative program and tariff as the 2013 proposal outlines would be costly, administratively and regulatory burdensome, and potentially confusing to Xcel CSG subscribers and ratepayers.[24]

If the contract is amended so that the two solar gardens use the CSG tariff rather than the PPA there is a cost difference. Therefore, Xcel proposed to reduce MRES' grant award to "reflect that the bill credits in the solar garden program are higher than the

[20] Xcel Energy, Petition at 4 (September 22, 2017).

[21] *Id.*

[22] *Id.*

[23] *Id.* at 5.

[24] *Id.* at 6-7.

[cost of the] PPA."[25] Xcel's process in reducing the grant award considered the net present value (NPV) of energy sold under the PPA given the initial project cost of $4,036,420 and the average PPA price of $0.0837 kWh over 15 years, which amounts to $825,326. Comparatively, Xcel calculated the 25-year CSG tariff coupled with the ARR-pricing structure[26] averages to $0.16605 per kWh and a NPV of $2,203,607. The difference between the NPV of the PPA from the CSG is what Xcel proposed to reduce the grant award, $1,378,281. The remaining – $1,283,039 – is MRES' reduced grant amount now proposed for EP4-15 using the CSG tariff. Please see table 1.0.

Xcel also looked that the Total Resource Cost (TRC) from the initial proposal and compared it to what they are proposing now. TRC is a levelized cost of energy that takes the total project cost of developing the energy production portion of the project and the energy price proposed net of Xcel Energy's avoided energy costs:

Total Project Cost of Developing the Energy + Energy Price Proposed - Xcel's Avoided Cost = TRC

The TRC for MRES' 2013 proposal is calculated to be $0.2597 per kWh and the TRC for the CSG proposal would be $0.1820 per kWh. The decrease in TRC is due to the longer term of the CSG program as the PPA is 10 years shorter.[27]

Table 1.0 Comparing Pricing Structures

	PPA	**CSG**
Length	15 years	25 years
Cost per kWh	$0.0837 kWh	$0.16605 kWh
NPV	$825,326	$2,203,607
TRC	$0.2597 kWh	$0.1820 kWh
Grant Amount	$2,661,320	$1,283,039

Following this analysis, Xcel negotiated the reduced grant award of $1,283,039 with MRES, who agreed, and who was also supportive of having a project that focused on low income subscribers.

Due to the nearly $1.4 million in cost savings by using the CSG tariff and still fulfilling project requirements, Xcel proposed to expand the project scope to use the saved $1.4 million towards a third low income CSG up to 700 kW_{DC} with the City of Minneapolis.[28] "The total capacity of MRES' project is limited due to the "not to exceed" RDF contract

[25] Xcel Energy, Petition at 6 (September 22, 2017).

[26] Applicable Retail Rate (ARR) or CSG bill credit rate is set – recalculated – each year and filed as a compliance filing with the Commission on February 1st. The ARR received depends on the type of customer (residential, small general service, or general service) and the size of the garden. It applies only to CSG's deemed complete on or before December 31, 2016. The rate calculated by Xcel has some assumptions that were not provided.

[27] Xcel Energy, Petition at 6 (September 22, 2017).

[28] *Id.* at 7.

requirement and the 1,000 kW_{DC} approved by the Commission for the Project in March 2014."[29] The City has been supportive since 2013 when it filed a letter for the original proposal and also provided supporting comments in this docket.[30]

Xcel mentioned that due to timing of this third project and deadlines, it would have to use the Value of Solar (VOS) pricing and not ARR.[31] Should the Commission approve the increased scope of the MRES project, the Company intends to make a compliance filing with a contract amendment that increases the capacity MRES will install and the grant amount.[32]

Since Xcel is not requesting an adjustment to the 2017 RDF rate rider factor, there is no change to Xcel's revenue and any increase to the grant amount that would be approved would still be within the grant amount approved by the Commission back in March of 2014.[33]

IV. Party Comments

A. Department of Commerce, Division of Energy Resources

The Department of Commerce, Division of Energy Resources (DOC or the Department) provided comments on December 21, 2017. Following a thorough review of the proceeding leading up to the Petition, including quarterly project updates from MRES, DOC analyzed MRES' original proposal and intent of the 2013 RDF RFP.

The DOC does not have concerns regarding Xcel's proposed change of ownership of the PV equipment and agreed that the Commission has previously approved similar changes, there were a few concerns regarding equity, which the DOC addressed by way of offering a new option.[34] Those concerns are the two proposed additional changes by Xcel:

> (1) reduction of the Project's RDF grant amount with an increase in the \$/MWh price to be paid by Xcel's ratepayers for power produced by the revised project, and
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> (2) expansion of the Project to include a third CSG with an increase in the \$/MWh price to be paid by Xcel's ratepayers. Both of these

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[29] *Id.*

[30] Please see Attachment A of Xcel's Petition for the City of Minneapolis' 2013 letter of support (PDF page 85-86).

[31] Xcel Energy, Petition at 8 (September 22, 2017).

[32] *Id.* Please also see Attachment C of Xcel's Petition for an example of the updated Milestones, Deliverables and Allowed Grant Payments and Budget that would be filed (PDF page 136-141).

[33] Xcel Energy, Petition at 10 (September 22, 2017).

[34] Comments by Department of Commerce, Division of Energy Resources at 7-8 (December 21, 2017).

> options are inconsistent with the RFP and the conditions under which the Project was selected.[35]

To alleviate these concerns, the DOC offered another option, Option 1, for Commission consideration alongside those described by Xcel in the initial petition:

> **Option 1** – The original EP4-15 RDF grant contract is modified to:
> (1) allow the solar PV equipment to be owned by a third-party to take advantage of the tax equity benefits, and
> (2) account for the reduced total Project cost from $3,966,420 to $1,819,452 (a $2.1 million reduction) as provided in the instant filing by Xcel with a corresponding reduction in the grant award from $2,661,320 to $514,352.
> (The revised total project cost of $1,819,452 - $1,305,100 MRES' proposed contribution in the original grant contract = $514,352.)
>
> **Option 2** – The revised EP4-15 RDF grant contract, which allows the solar PV equipment to be owned by a third-party and increases the $/MWh price to be paid by Xcel's ratepayers, is amended to expand the Project to include a third CSG.
> (Third party ownership of the PV, the Company uses their CSG tariff and a third CSG in Minneapolis.)
>
> **Option 3** – The revised EP4-15 RDF grant contract which allows the solar PV equipment to be owned by a third-party, reduces the Project's RDF grant amount from $2,661,320 to $1,283,097 and increases the $/MWh price to be paid by Xcel's ratepayers.[36]
> (Third party ownership of the PV, the Company uses the PPA and two solar arrays.)

The Department noted that only Option 1 is consistent with the RFP process where the project cost correlates with MRES' bid price, i.e. proposed pricing of the project in response to the RFP,[37] while Options 2 and 3 increase the project cost by at least 75 percent if compared to the bid price.[38] Additionally, the Department reminded parties that MRES requested the original grant amount as it had "internal financing and co-funding resources available" and also wished

[35] Comments by Department of Commerce, Division of Energy Resources at 7 (December 21, 2017).

[36] *Id.* at 8.

[37] *Id.*

[38] DOC noted that under Option 2, Xcel did not identify a proposed grant amount, but requested adding up to $1.4 million to its Option 3 proposed grant amount (see Xcel's Petition on PDF pages 8–9). However, Xcel's proposed budget (including total project costs and grant amount) under Option 2 (see Xcel's Petition on PDF page 137) is identical to its proposed budget under Option 3 (see Xcel's Petition on PDF page 41).

"to limit its contribution so the project would result in a successful $0.07 energy rate":[39]

> The grant requested by MRES is used to directly lower the cost of the solar panels to result in a successful program with the $0.07 energy rate. These dollars offset the expenses associated with the project allowing this project to offer Xcel this discounted rate for the power.

Since the MRES grant was designed with this $0.07 energy rate and MRES acknowledged internal resources, the Department declared the grant amount should be consistent with the $2.1 million reduction. The Department asked Parties to respond to this proposed Option and requested Xcel to justify why the grant amount should not be limited to $514,352 with an unchanged MRES contribution of $1,305,100.[40]

The DOC assessed the other proposals brought forth by Xcel:

Option 2 – Under this option, EP4-15 RDF grant contract would be amended to allow the solar PV equipment to be owned by a third-party and would also expand the Project to include a third CSG, which would increase the $/MWh price to be paid by Xcel's ratepayers.[41] The project's cost, however, is higher than the price that MRES's bid in the RFP process. The Department then recalls that RDF bidders were made aware that "the lower their price, the greater benefit to their overall evaluated score"[42] and that bidders were bound to their pricing should their project be selected.[43]

To not only preserve the integrity of the RFP process, but to also save money for Xcel ratepayers, the Department recommended rejecting Option 2.

Option 3 – Under this option, the EP4-15 RDF grant contract would be amended to allow the solar PV equipment to be owned by a third-party and would increase the $/MWh price to be paid by Xcel's ratepayers under the CSG program.

The Department stated "Xcel's ratepayers are not made whole for this proposed change even with its proposed reduction of the grant award ($2,661,320-$1,283,097 or $1,378,223) to reflect the increase in the net present value of the

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[39] Comments by Department of Commerce, Division of Energy Resources at 9 (December 21, 2017) and Please see MRES's April 1, 2013 4th cycle RDF pricing proposal, which is attached to Xcel's September 22, 2017 EP4-15 revised grant contract filing at PDF page 82 - 4.3.1 Energy Pricing.

[40] Comments by Department of Commerce, Division of Energy Resources at 10 (December 21, 2017).

[41] *Id.*

[42] Xcel Energy, Compliance Filing, Request for Proposals and Standard Grant Contract at 53 (February 13, 2013).

[43] *Id.* and also see *Id.* at 66.

energy sold under the CSG program ($1,378,281, about $1.4 million) compared to the use of the proposed bid PPA price."[44]

Additionally, the Department pointed out "Xcel's calculation of its proposed revised grant award of $1,283,097 assumes that the total cost of the Project did not change. However, the total cost of the Project did change … decreasing from an estimated $3,966,420 to $1,819,452, or a $2.1 million reduction."[45] Therefore, Xcel's ratepayers' contribution would have been, at most, the revised total project cost of $1,819,452, not the Commission-approved grant award of $2,661,320.[46] It is then deduced that the $2.1 million cost reduction with the $1.4 million increase in Xcel's ratepayers' payments using the CSG tariff, Xcel's proposed reduction of the grant award should be reduced further to $0, not from $2,661,320 to $1,283,097.[47] Moreover, even if the total cost of EP4-15 did not change, Option 3 would penalize Xcel's ratepayers twice: once for the $1.4 million increase in payments through the CSG tariff when compared to the bid price and secondly since Xcel's obligations under the RDF would not decrease by that same amount.[48] These are reasons the Department recommended rejecting Option 3.

Taking up the issue of amending the standard grant contract, the Department acknowledged that Commission approval for previous contract amendments has occurred and came only after Xcel identified agreements that the contractor would put in place to protect Xcel's ratepayers from any risk of project failure.[49] Therefore, the Department requested that Xcel provide such assurances for this case in reply comments. That is, any agreement that MRES would provide to help protect Xcel's ratepayers from the risk of project failure.[50] DOC shared a table on page 12 of it comments that compared all three proposals, which is included below.

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[44] Comments by Department of Commerce, Division of Energy Resources at 11 (December 21, 2017).

[45] *Id.*

[46] *Id.*

[47] *Id.*

[48] *Id.*

[49] *Id.* at 9.

[50] *Id.*

Table 1.1 Department of Commerce Cost Comparisons

	RDF grant amount	Cost Sharing	Total Project Cost	Start Date	End Date
1. Grant Application (GA)	$ 2,661,320	$ 1,375,100	$ 4,036,420		
2. Grant Contract (GC)	$ 2,661,320	$ 1,305,100	$ 3,966,420	17-Feb-15	17-May-17
3. Revised GC (Option 3)	$ 1,283,097	$ 536,355	$ 1,819,452	17-Feb-15	?
4. Option 1	$ 514,352	$ 1,305,100	$ 1,819,452	17-Feb-15	?
5. Options 2 and 3	$ -	$ 1,819,452	$ 1,819,452	17-Feb-15	
1. Source: Xcel's February 19, 2015 EP4-15 standard grant contract filing at 42 of 74 in 12-1278.					
2. Source: Xcel's February 19, 2015 EP4-15 standard grant contract filing at 30 of 74 in 12-1278.					
3. Source: Xcel's September 22, 2017 EP4-15 revised grant contract filing at 41 of 146 in 12-1278.					
4. RDF grant amount is the difference between the total cost of the Project and MRES initial cost sharing					

Finally, the Department offered the following guidance if the Commission was to move forward on any of the options provided by Xcel:[51]

> The proposed approach
> (i) uses equity funds to reduce project costs,
> (ii) reflects a reduction in costs for solar equipment for the benefit of NSP ratepayers and increases energy production relative to the original proposal,
> (iii) directs benefits specifically to low-income subscribers and expands the ability to assist low-income customers by adding a third project, and
> (iv) avoids the loss of the RDF funds altogether if the project fails; all while meeting a cost structure which is ratepayer-neutral relative to the original RDF proposal.

B. Greenway Solar, LLC and Minnesota Renewable Energy Society, Inc.

On January 10, 2017, Mr. Jeffrey C. Paulson provided comments on behalf of MRES and Greenway Solar, LLC (Greenway). Greenway is the third-party partner developing and constructing the project should this Petition be granted. Mr. Paulson expressed a partnership between MRES and Greenway starting in 2016 that would "allow them to still provide CSG research and energy production to NSP and utilize the federal tax credits for solar equipment to maximize the viability of the projects."[52]

Greenway, as the project partner, wished to address the Department's concerns expressed in their December 21, 2017 comments. A number of circumstances beyond their control have occurred since their 2013 proposal to Xcel:

- New CSG Legislation and CSG Program Implementation
  - 2013 legislation that mandated a CSG program and implemented by Xcel and approved by the Commission in 2014 - 2015. This has

[51] Comments by Department of Commerce, Division of Energy Resources at 4-5 (January 4, 2018).

[52] Reply Comments by MRES and Greenway Solar, LLC at 2 (January 10, 2018).

become a highly detailed program, including a tariffed subscription and bill credit mechanism with benefits for subscribers. There are now hundreds of MW of CSGs have been built.[53]
  - The Commission and parties to the CSG proceedings identified low-income customers' access to CSG subscriptions as an issue of concern. The need for additional data specific to barriers confronting low-income customers with respect to CSG accessibility has been identified.[54]
- Partnership Changes
  - The original project partner chose to not move forward and a new financial partner was needed to take advantage of the available tax credits and benefits.[55]
- Solar Equipment
  - Costs for solar equipment has dropped substantially affecting the project budget, even taking into account the possible tariffs. [56]
- RDF Legislation
  - Recent legislation substantially modified the RDF program. Now, uncommitted RDF funds must be captured and transferred to a new account at the State of Minnesota; however, grantees in previous RDF cycles, such as EP4-15, would not need to be transferred provided the project proceeds.

Greenway and MRES continued project development as regulatory matters were resolved. They provided a status report of the project on pages 5 to 6 of their comments and included: site selection, CSG applications, lengthy interconnection application, CSG subscriptions, project costs, and expected kWh output.

The parties responded to the Department's concerns regarding any agreements that will protect Xcel's ratepayers should the project fail:

> Greenway will own the Projects and be responsible for operating and maintaining them. Agreements between Greenway and MRES will obligate Greenway in this respect. Obviously, Greenway has its own incentives for ensuring the Projects work properly.
>
> Grant funds are not provided to MRES until each project is completed. See proposed Grant Contract at 30-31, Exhibit C (milestones and deliverables). Greenway assumes all risk of development, construction and completion until that time. **If a**

[53] Reply Comments by MRES and Greenway Solar, LLC at 3 (January 10, 2018).

[54] *Id.*

[55] *Id.*

[56] *Id.* at 4.

> **Project fails prior to that time, no grant funds are disbursed, and ratepayers are not at risk** (emphasis added).
>
> Following completion, Greenway remains responsible to MRES to the same extent as MRES is responsible to NSP [Xcel Energy] for meeting any Grant Contract requirements and is at risk for recovery of grant funds by NSP to the same extent as MRES. [57]

Moreover, it is also a condition of the grant to provide this acknowledgement and agreement to Xcel. Greenway and MRES pointed to Exhibit G of Xcel's Petition, the proposed Grant Contract, on PDF pages 47-49.[58]

Greenway maintains that project failure is further reduced and project completion is more assured when third party ownership is present, making this arrangement better for Xcel's customers. Ratepayers will not see any diminished ability to recover grant funds if and when a project is owned by a third party. "If Greenway uses a tax investor, as expected, or any project lender, those parties will insist in their respective investment and lending documents that Greenway fully comply with all requirements of the Grant Contract."[59]

The parties wished to respond the Department's comments regarding the integrity of the RDF process and the method taken to modify the grant fund amount.

Noting that the RDF advisory group approved the amended grant contract, Greenway and MRES are unclear of the Department's reasoning for thinking the changes from the original MRES proposal would be unfair to the 2013 proposers. "The causes for any changes here are intervening events beyond the control of MRES and Greenway, not some discretionary modification to game the RDF system, and the corresponding Grant Contract modifications are designed to preserve and enhance the benefits of the original proposal, not substitute a new proposal."[60]

If the proposal before the Commission is rejected and RDF funds are not utilized, Greenway and MRES believe the funds would not be used for another proposal given the recent changes to the RDF statute.[61] "Rejecting the proposal to protect some rigid procedural process which is no longer applicable may hurt ratepayers, not help them."[62]

[57] Reply Comments by MRES and Greenway Solar, LLC at 6 (January 10, 2018).

[58] *Id.* at 7.

[59] *Id.*

[60] *Id.*

[61] *Id.*

[62] *Id.*

The parties disagree with the Department's judgment that the "proposal is materially changed" from the 2013 proposal due, in part, to "the use of the existing NSP CSG system rather than original proposed bill credit pricing."[63] MRES discussed a bill credit system in the 2013 proposal and "specifically stated that bill credits would be provided to subscribers through a process to be developed with NSP and approved by the PUC."[64] Given that new legislation was imminent, MRES also declared in that proposal that modifications might be necessary to match whatever legislation was subsequently enacted for CSGs.[65] All of this has been incorporated into the new amendments and since "there is no deviation from the original proposal," there can be "no violation of the integrity of the RDF process which merits rejecting the Grant Contract as proposed."[66]

Next, Greenway and MRES addressed the Department's assertion that the "net effect of using ARR-valued bill credits will be negative to ratepayers relative to a bill credit valued at a $0.07/kWh starting point as originally proposed by MRES."[67] In fact, the parties state there are considerable savings from using the established CSG process over the creation of a bill credit system and a correlating tariff.

The proposed amendment does not increase ratepayer costs as the Department notes. "Once a new estimated project budget was developed and shared with NSP, and use of the ARR rates for bill credits selected, NSP undertook to specifically calculate a revised grant amount that would be neutral in its effect on ratepayers; the proposed new grant amount of $1.283 million is derived from that specific calculation for neutrality."[68]

Greenway and MRES contemplated the Department's proposed Option 1 to decrease MRES' grant amount to $514,352, among other modifications. "DOC's proposal will either make the Projects no longer viable as proposed or force the elimination of subscription price reductions that would otherwise benefit low-income customers."[69] A grant reduction may directly affect the subscription pricing and could effectively "eliminate any meaningful benefits," including metrics on whether low-income customers are more willing to participate at lower subscription costs and higher net benefit levels.

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[63] Reply Comments by MRES and Greenway Solar, LLC at 7 (January 10, 2018).

[64] *Id.*

[65] *Id.*

[66] *Id.* at 8.

[67] *Id.* at 8.

[68] *Id.* at 8.

[69] *Id.* at 9.

Finally, MRES and Greenway echoed their support to add the third CSG project with the City of Minneapolis. "[S]uch a project would be viable and offer benefits comparable to those hoped for from the existing MRES Projects." Given that the third project is in the very early stages and no site work has begun, they could not provide a schedule as requested by the Department. They estimated that interconnection studies could be completed by mid-2019, with final design in the fall and construction could begin in spring of 2020.[70]

C. City of Minneapolis

Comments supporting Xcel's proposal were provided by Mr. Mark Ruff, Chief Financial Officer for the City of Minneapolis, on January 10, 2018. Mr. Ruff explained that the "goal of the new community solar garden in the East Phillips Neighborhood of Minneapolis is to significantly reduce the utility costs for low-income households in one of the most concentrated areas of poverty in our city."[71] Serving 50 to 70 low-income households, this "garden will be subject to the Bill Credit as outlined in the VOS portion of the Solar*Rewards Community Program tariff" and was calculated to save approximately 25% on monthly invoices.[72] It is mentioned that the cost effectiveness of the garden is "severely impacted by the reduction in the bill credit from the 2016 Retail Rate calculation to the VOS."[73] The third solar array is estimated by Mr. Ruff to save 47% on invoices for the low-income households it serves.[74]

The City of Minneapolis requested to apply the remaining RDF funds from the original grant to this new project, creating two solar gardens in Minneapolis.

D. Xcel Reply Comments

Xcel submitted reply comments on January 10, 2018 that addressed the Department's questions and also provided further details about their proposal to use the CSG program tariff and redirect the savings so they may partner with the City of Minneapolis for a third low-income CSG.

This proposal is considered unique as it will serve only eligible low income subscribers. Therefore, Xcel stated, it is within the public interest to expand the project scope to support state goals of growing solar in low income communities. The Company would also be positioned to evaluate both the economics of a low income project and the values of a public-private partnership model, as MRES will be working alongside the City of Minneapolis.[75]

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[70] Reply Comments by MRES and Greenway Solar at 10 (January 10, 2018).

[71] Reply Comments by City of Minneapolis at 1 (January 10, 2018).

[72] *Id.*

[73] *Id.*

[74] *Id.*

[75] Reply Comments by Xcel Energy at 7 (January 10, 2018).

Another distinct characteristic highlighted by Xcel is the proposed amendment - to use the existing CSG tariff instead of a PPA - will provide significant savings of $1.4 million yet still meet project goals, which is a very rare opportunity.[76] Additionally, there are no other viable projects from the reserve list of Cycle 4, so the proposal before the Commission remains the single prospect to use the funds as part of the Cycle 4 RDF funding.[77]

Xcel took the opportunity to respond to each option proposed by the Department.

Option #1 – allow third party ownership, decrease the grant amount to MRES, two 500 kW$_{DC}$ solar arrays, Xcel and MRES to enter into a PPA, and the creation of a new CSG program tariff.

Xcel does not support the Department's option #1. Adding another CSG program tariff for the 1 MW solar garden would not only be "administratively burdensome,"[78] but "creating a second program when the CSG program is so mature would likely prompt confusion among parties and the market, and questions to the Company, MRES, and potentially other subscribers."[79]

In order to implement this option, the Company would have to negotiate PPA terms with MRES as well as a new contract for the reduced grant amount of $514,352 from the proposed $1,283,029. Both of these require returning to the Commission for review and approval.[80]

Regarding the grant reduction, Xcel assumed the Department's goal was to keep the cost sharing levels the same as the initial proposals. With agreement that these are considered as part of the RDF evaluation process, but never looked at in isolation, Xcel suggested that an improved metric would be TRC since it examines the overall cost-effectiveness of a project and is more heavily relied upon. Moreover, Xcel "believes looking at the cost sharing levels in isolation is not consistent with how other RDF projects have been evaluated in the past."[81]

Xcel used the TRC as a baseline metric in comparing MRES' initial 2013 proposal to the one before the Commission. "The Company compared the TRC because that is the metric used when Cycle 4 energy production projects were initially evaluated (as opposed to its overall project cost or other financial metrics) and

[76] Reply Comments by Xcel Energy at 3-4 (January 10, 2018).

[77] *Id.* at 3.

[78] *Id.*

[79] *Id.* at 5.

[80] *Id.* at 4.

[81] *Id.* at 5.

accounted for thirty percent of a project's technical score."[82] Their analysis presented a lower TRC than MRES' original proposal.

Option # 2 – third party ownership of the solar PV, increase grant amount to add a third, low-income solar array with the City of Minneapolis, and the existing CSG tariff would be used for the three solar arrays.

Xcel is supportive of the Department's option # 2 as it is what they initially proposed.

"This alternative does not seek to create a new solar garden program when the Company's robust CSG program already exists … it uses the existing structure and pricing of the CSG program, which has been approved by the Commission."[83] Moreover, the use of CSG energy pricing provides an opportunity for Xcel to increase the installed capacity of the RDF project. The third solar array fills a void as the existing CSG pricing structure has had historical trouble reaching low income communities due to "risks associated with credit scores, subscriber mobility, and subscriber acquisition costs."[84]

The Company adopted the Department's concerns regarding cost sharing and also spoke to the differences in how they and the Department analyzed the proposal. The Company evaluated the energy costs over time through the use of Net Present Value (NPV) of generated power, which accounted for the higher energy price[85] and longer contract period as would occur with the CSG program.[86] "The Company used the NPV of energy produced as the basis for determining the level of grant funding included in the First Amended and Restated Contract rather than a cost-sharing approach," as favored and used by the Department.[87] Xcel highlighted that cost sharing is only one of several factors the independent evaluator considers during the evaluation and scoring of RDF grants.

The Company also explored another evaluation through the use of TRC to further examine their proposal. TRC is "a scoring component that accounted for thirty percent of a RDF grantee's technical score, and was calculated to evaluate and quantify the cost effectiveness of a proposal and impact to ratepayers."[88] This evaluation, as Xcel believes, is a "better determination of value to the ratepayers

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[82] Reply Comments by Xcel Energy at 3 (January 10, 2018).

[83] *Id.* at 6.

[84] *Id.*

[85] The CSG program cost ($.16605 per kWh) is higher than the PPA with MRES (average of $.0837 per kWh). The PPA would be 15 years; the CSG program is 25 years.

[86] Reply Comments by Xcel Energy at 6 (January 10, 2018).

[87] *Id.*

[88] Reply Comments by Xcel Energy at 6 (January 10, 2018).

since it includes the long-term cost of power generated."[89] The TRC for MRES' original RFP was $0.2597/kWh compared to this proposal's TRC of $0.1820/kWh.[90]

Option # 3 – third party ownership of the solar pv and a reduction of the RDF grant amount by using the existing CSG tariff for the two solar arrays.

Xcel understands that expanding access to renewable energy to low income utility customers is an important policy goal for the state and the third MRES-City of Minneapolis solar array is one of few models emerging to address this goal.[91]

"The Company appreciates that this request to expand the scope of a RDF project in this manner is unusual ... the Company believes MRES proposal to create another low income solar garden in Minneapolis is an innovative proposal, and therefore prefers the Department's Option #2, over Department Option #3."[92]

Xcel consulted MRES on the Department's proposals and incorporated their concerns:

1. There is an assumption made that the third-party investor would agree to the change in financing
2. The grant reduction proposed doesn't take into consideration milestones that have already been met
3. The PPA that would be used in lieu of the CSG pricing isn't reflective of current pricing, but five years old.[93]

At the Department's request, the Company outlined a few ratepayer protections that have been built into the third party contract:

> First, Section 3 only allows for Contractor to be reimbursed for "actual and allowable expenses incurred in accordance with Exhibit C." This section continues and requires that the total amount of reimbursable expenses shall only be the maximum of either the Contractor's total actual and allowable costs or the amount stated in Exhibit C, "whichever is less." Exhibit C further identifies the milestones that must be met before any reimbursement of expended funds are provided. Most notably, the milestones are aligned to require the completion and commissioning of a facility before any RDF funds are disbursed. If the project

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[89] Reply Comments by Xcel Energy at 7 (January 10, 2018).

[90] *Id.*

[91] *Id.*

[92] *Id.*

[93] *Id.* at 5.

fails and no facilities are completed or commissioned, no RDF funds will be disbursed under either the Grant Contract or the proposed First Amended and Restated Grant Contract.[94]

V. Staff Analysis

It appears there are no concerns among the parties with third party ownership of the solar PV equipment, but DOC should confirm that the ratepayer protections established in the contracts were satisfactory to them.

The Commission approved the EP4-15 project and grant in March of 2014. The effect of using the CSG tariff as Xcel proposes reduces the need of the RDF funds encumbered to fulfil EP4-15 grant contract as it saves $1,378,281. The RDF Advisory Group supports and has approved the grant contract modifications. If the Commission were to also approve the use of the CSG tariff, then it may either decrease the grant amount or apply the savings to another CSG low income project, which expands the scope of EP4-15.

If the whole Petition is approved, ratepayers will pay for the increased energy cost and a third CSG. All three CSGs are for low income subscribers. Until recently there have been few solutions to address equity and low subscribership for low income and multifamily households. Here there is one of two opportunities for the low income ratepayers who, with fewer resources, have been paying part of the costs of other CSG programs for years, but are less likely to be able to participate in a conventional CSG.[95]

Another consideration is whether the Commission wishes to encourage innovation and programmatic savings, as MRES and Xcel were possibly striving for in this instance. Xcel is applying an existing program (the CSG tariff) to a five-year-old grant and their attempt seems to optimize an incongruent and outdated grant proposal. Greenway also shared that as the project stood in early January 2018, it was actually over budget by $348,000, but they are not seeking an adjustment to the proposed amended grant contract and are, instead, absorbing the costs.[96]

Risk to ratepayers for these projects are low since all payments are tied to installation and commissioning of the solar arrays.[97] Greenway also underscored the extra certainty and program success they provide as a third party developer.

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[94] Reply Comments by Xcel Energy at 8 (January 10, 2018) and Xcel Energy, Petition at 95 (September 22, 2017) for Section 3 – PAYMENTS TO CONTACTOR.

[95] The second opportunity being Xcel's low income CSG pilot program.

[96] Correction to Reply Comments by MRES and Greenway Solar, LLC (January 12, 2018).

[97] Xcel Energy, Petition at 10 (September 22, 2017).

Given the 2017 statutory changes with regard to RDF administration, the treatment of the funds earmarked for this project but not expended is not completely clear. Issues related to the treatment of such funds has been raised in Docket 17-712, which is scheduled for the Commission's agenda meeting of August 16, 2018. The result of that meeting may provide more clarity on this question. Regardless of what might happen to the unused RDF funds, a third CSG should be approved if it is a good project and not approved if it is not.

If the added ratepayer costs of a third CSG causes heartburn, then staff would suggest approving the use of CSG program tariff, but rejecting the CSG with the City of Minneapolis. Staff sees the efficiencies and cost savings with both using the CSG tariff and replicating the CSG program, but there could be better programs suited for the low income community. The lessons learned in these proposed CSG programs may be the same or very similar to those that will be found in the Company's three-year pilot program for low income customers. The Rehabilitation and Efficiency: Neighborhood Energy Works (RENEWs) was recently approved in March of 2018, with an extensive set of reporting requirements due April of 2019.[98] The purpose behind those robust reports was because at the agenda meeting, Xcel pointed out (and the Commission agreed) that before additional low income CSGs were to be developed by Xcel, understanding how a low income solar garden was effective in aiding low income customers was necessary before the Commission would approve additional low income gardens. Staff suggests sticking to the Commission's original plan of waiting for those reports before deciding on the menu of other resources and options that may prove to be more cost-effective. The Commission is encouraging this effort, but appears to be in the early stages of learning.

[DECISION OPTIONS ARE ON NEXT PAGE]

[98] ORDER APPROVING PILOT PROGRAM WITH CONDITIONS, PUC Docket No. E-002/M-17-527 at 13 (March 6, 2018).

VI. Decision Options

A. What action will the Commission make on the Company's request to amend the existing RDF grant contract?

Choose One:

1. Approve the modifications to the RDF grant contract that would allow third party ownership of the solar photovoltaics. (*Xcel, MRES/Greenway, The Department*)

2. Deny the modifications to the RDF grant contract that would allow third party ownership of the solar photovoltaics.

Choose One:

3. Approve the amendment that would allow Xcel to use the Company's Community Solar Garden Tariff for the solar arrays rather than a PPA. (*Xcel, MRES/Greenway*)

4. Deny the amendment that would allow Xcel to use the Company's Community Solar Garden Tariff for the solar arrays rather than a PPA. (The *Department*)

5. Make some other finding.

B. What action will the Commission make on the Company's request to change the scope of the existing RDF Cycle 4, EP4-15 grant?

6. Approve the change of scope for RDF Cycle 4, EP4-15 to allow a third CSG with the City of Minneapolis (*Xcel, MRES/Greenway, City of Minneapolis*)

7. Deny the change of scope for RDF Cycle 4, EP4-15 to allow a third CSG with the City of Minneapolis. (*The Department*)

8. Make some other finding