

Date: 06/04/21

Docket: E002/M-19-33

Attention Public Utilities Commissioners:

My name is Andrew Butts. I'm the founder of the Green Neighbor Challenge, a non-profit project dedicated to building a national database, webtool, and campaign to empower residents anywhere to find, understand, and sign up for green pricing programs. This idea first came to me four years ago, in the first semester of my Science, Technology, and Environmental Policy master's program. It was in my energy policy class, at the age of 28, that I first discovered my ability, and at least in Minnesota, my right, to sign up for green energy. I enthusiastically did so.

I grew up in Pleasant Prairie, WI right down the road from the Pleasant Prairie Coal Plant -- for a time, the largest generating station in the state. Some of my earliest memories in life are waking up in terror, being unable to breathe, and having to get down the hallway to wake my parents, who would have me lean over the bathtub with a towel over my head, as they ran the hottest water they could, hoping the steam would open my throat well enough that I could even use my rescue inhaler. In these minutes, they had to weigh the wellbeing of their son against the cost of another late night ER visit.

So at the age of 28, when I realized I could get pollution-free electricity each month for far less than the \$25 co-pay I spent monthly on an albuterol inhaler, which I shared with my uninsured roommate and long-time friend, both he and I were excited by the prospect. Sharing this discovery on social media, I had friends all over the place asking, "How can I sign up too?" And so I helped them each research their options, and discovered both how widespread green pricing programs are, and how terribly confusing and hidden they are made to be at the same time. This was the birth of the Green Neighbor Challenge.

I share this to highlight what is at stake, as you make decisions about the details of Minnesotan's right to choose harm-free power.

### **Reframing the Debate**

Numbers don't tell stories -- people do. And having been reading into and researching the Windsource docket for months, including many ignored attempts to get answers from folks at Xcel Energy, I can't help but feel Minnesota residents are being left out of this conversation. And having talked to, and interviewed, and user-tested with hundreds of residents and students about their hopes and fears as it relates to energy, environmental justice, and climate, I will do my level best to represent what I have learned from them.

When I signed up for Windsource, I did not sign up for a "premium energy product." I signed up with the desire to take responsibility for the harms my consumption had placed on others. The benefits, I knew, were far in excess of the cost, even if they didn't accrue to me (6.16 cents/kWh in fact, according to the EPA<sup>1</sup>). And I want to live in a world where fewer children have to live through the experiences I did, and fewer parents would experience the choices mine did. That was my purpose in signing up. Actualizing my hopes for a changed world.

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<sup>1</sup> Using the Midwest high estimate for Onshore Wind at the 3% discount rate.

<https://www.epa.gov/statelocalenergy/estimating-health-benefits-kilowatt-hour-energy-efficiency-and-renewable-energy>

What were the hopes of the legislature, the purposes envisioned for green pricing in the hands of their constituents, when they gave Minnesota residents the right to choose harm-free power in 2001?

Members of the PUC, what are your hopes for this program? What change do you wish it to bring?

My aim in this admittedly long preamble is to hopefully recenter the humans involved in this docket on the larger playing field of energy democracy, before diving into the many technocratic particulars, that can so effectively reduce our vision and appreciation for what is at stake in this set of decisions.

### **Docket M-19-33: A resident's perspective**

My awareness of Docket M-19-33 began last October, not long after receiving a substantial refund on my bill, and a generic letter in the mail from Xcel explaining that Windsource customers were receiving a refund calculated based on usage because “we [Xcel] were able to keep costs lower than the assumptions used to set the price.” I received my refund in two parts, totaling \$103.29, which came as quite a shock, since I knew my net windsorce cost was on the order of a few dollars a month.

While I could pull my most recent month's bill, anytime I tried to pull pdfs for the prior months, I received a message that the website “was undergoing maintenance.” After a week of failed attempts I emailed Xcel's customer service, and received no response. After several more days of trying to access them even on different computers, I wrote a negative review in a pop-up website survey, which seemed to finally get someone's attention. After two weeks of frustration the issue was resolved, but the timing and the limited nature of the malfunction felt suspicious.

Upon finally gaining access to my prior two years of bills, I was able to total my net Windsorce charges for most of the first refund period (Nov '18-Apr '20) and estimated the first five months I no longer had access to by duplicating my Jun '19-Oct '19 Windsorce charges twice. Over the first refund period, my total net Windsorce cost had been approximately \$64.83. And I was being refunded \$103.29. I reached out to others on the Green Neighbor Challenge team and advisory board and learned they too had all received refunds in excess of program costs. The next question was why.

I was excited by the prospect of Windsorce finally reaching a price inversion, as Green Neighbor researchers noticed had already occurred in green pricing programs at utilities like San Diego Gas and Electric<sup>2</sup> and Pacific Gas and Electric.<sup>3</sup> However, others remained skeptical. With the help of one of my board members, I was introduced to the docket system, and we were able to find M-19-33.

Within it, we were quickly able to find part of what we were looking for. The Department of Commerce in a letter dated 5/19/2020 included this chart:

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<sup>2</sup> In 2019, the EcoChoice Credit (\$0.06785) finally eclipsed the falling Renewable Power Rate of \$0.06200 generating a negative “total premium” of (\$0.00437)/kWh:  
<https://www.sdge.com/sites/default/files/EcoChoice%20and%20EcoShare%20Historical%20Rate%20Table%20-%20PDF.PDF>

<sup>3</sup> Using the Solar Choice Calculator, A residential customer using 100 kwh/month can expect an estimated “premium” of -\$1.13/month.  
[https://www.pge.com/en\\_US/residential/solar-and-vehicles/options/solar/solar-choice/rate-calculator.page](https://www.pge.com/en_US/residential/solar-and-vehicles/options/solar/solar-choice/rate-calculator.page)

**Table 1: 2018 and 2019 Actual Windsource Sales, Revenues and Expenses**

		Actual 2018	Actual 2018	Actual 2019	Actual 2019
		with Previous	without Previous	with Previous	without Previous
		Balance	Balance	Balance	Balance
(1)	Windsource Sales (MWh)	189,427	189,427	326,796	326,796
(2)	<b>Windsource Rate (\$/100 kWh)</b>	<b>\$ 3.53</b>	<b>\$ 3.53</b>	<b>\$ 3.53</b>	<b>\$ 3.53</b>
(3)	Windsource Revenues (\$)	\$ 6,686,781	\$ 6,686,781	\$ 11,536,137	\$ 11,536,137
(4)	Windsource Expenses	\$ 4,786,971	\$ 5,490,982	\$ 4,759,622	\$ 6,659,433
(5)	Previous Cumulative Tracker Balance	\$ 704,011	\$ -	\$ 1,899,811	\$ -
(6)	Wind Contract Payments	\$ 3,530,836	\$ 3,530,836	\$ 4,537,873	\$ 4,537,873
(7)	Renewable Energy Credits (REC) Costs	\$ 72,497	\$ 72,497	\$ 84,137	\$ 84,137
(8)	REC-Related Fuel Costs	\$ 2,287,269	\$ 2,287,269	\$ 2,702,147	\$ 2,702,147
(9)	Marketing/Administrative Costs	\$ 38,674	\$ 38,674	\$ 219,400	\$ 219,400
(10)	Avoided Capacity	\$ (438,294)	\$ (438,294)	\$ (884,124)	\$ (884,124)
(11)	Windsource Tracker Balance (\$)	\$ 1,899,810	\$ 1,195,799	\$ 6,776,515	\$ 4,876,704
(12)	<b>Windsource Expenses/Sales (\$/100 kWh)</b>	<b>\$ 2.53</b>	<b>\$ 2.90</b>	<b>\$ 1.46</b>	<b>\$ 2.04</b>
(3)	= (1)*(2)*10, with rounding difference				
(4)	=(6)+(7)+(8)+(9)+(10)-(5)				
(11)	=(3)-(4)				
(12)	=(4)/(1)/10				

Since 2005, Xcel has charged Windsource customers \$0.0353/kWh. This has remained unchanged for 16 years. In the last decade alone, the levelized cost of wind energy has fallen 71% according to Lazard.<sup>4</sup> What the Department of Commerce ably pointed out is that even during 2017, possibly earlier, Windsource administration costs had started falling. With the renegotiation of long term contracts and expansion of wind procurement, the cost of Windsource very rapidly started to reflect the market. In 2019, the actual cost of Windsource administration was \$0.0204, representing a 42% decrease in cost.

This was significant, not only for what was on the page, but crucially, for what was left off the page. In 2019, the actual Fuel Cost Adjustment (FCA) averaged \$0.0253. In 2019, the net cost of Windsource for residential customers should've been -\$0.0049. Xcel was collecting \$1/100kWh block, when it should've been refunding nearly half that amount. This wasn't a small price inversion. This was a huge one. And by the estimates we could gather, only growing larger.

While we didn't have access to the same data the Department of Commerce does, we still had access to our own bills and eventually discovered the published Fuel Cost Adjustments on Xcel's website.<sup>5</sup> While wind energy costs continue to fall ~11% a year nationally, the FCA grew 3% (to \$0.0260) in 2020, and is projected to grow an additional 8% (to \$0.0282) in 2021. So when it comes to the consumer experience of Windsource, it should look something a bit more like this:

<sup>4</sup> Page 10, Slide #9, LAZARD'S LEVELIZED COST OF ENERGY ANALYSIS — VERSION 14.0  
<https://www.lazard.com/media/451419/lazards-levelized-cost-of-energy-version-140.pdf>

<sup>5</sup> [https://www.xcelenergy.com/company/rates\\_and\\_regulations/rates/rate\\_riders](https://www.xcelenergy.com/company/rates_and_regulations/rates/rate_riders)

Table 2. Net Residential Windsource Cost Estimates Compared to Published

	2018	2019	2020	2021
Windsorce Expenses/Sales (\$1/100kWh)	\$2.90	\$2.04	\$1.96 <sup>6</sup>	\$1.89 <sup>7</sup>
Fuel Cost Adjustment (\$1/100kWh)	(\$2.39)	(\$2.53)	(\$2.60)	(\$2.82)
<b>Net Residential Windsorce Cost (\$1/100kWh)</b>	<b>\$0.51</b>	<b>(\$0.49)</b>	<b>(\$0.64)</b>	<b>(\$0.93)</b>
<i>Xcel's Public Windsorce Estimate (\$1/100kWh)</i>	<i>\$1.00</i>	<i>\$1.00</i>	<i>\$1.00</i>	<i>\$1.00</i>

Xcel's pricing of Windsorce has not been off by a small matter of degrees, it has been nearly completely inverted. Residents have been paying Xcel for harm-free service that Xcel should have been paying residents to use. Windsorce became a discount service and there was hardly a peep about it in the entire rest of the docket, save a small, ambiguously worded requirement that Xcel include a "discussion" of the FCA in its annual Windsorce filing. There was that, and actually another one much earlier in the docket.

More than a year prior, on March 13th, 2019, the Office of the Attorney General (OAG) seemed to astutely predict the coming epistemological crisis:

*"In addition, setting long-term prices for RC subscriptions creates the possibility that the FCA charge they would not pay may rise above the RC charge in the future. If this happens, the customers on the RC program would pay less than non-participants. All of Xcel's customers would have a financial incentive to transition to RC and away from the existing system. This would unfairly impact customers who attempt to join the program after it is fully subscribed. Moreover, this transition could further concentrate the costs of the FCA on non-participants, which would in turn create an ever-stronger incentive to move to RC. This would create an unsustainable and unfair situation for customers who cannot agree to the long-term contracts that Xcel proposes. The information already presented by Xcel suggests that it is likely that the RC charge could be lower than the FCA in the near future. According to estimates provided by Xcel, the [TRADE SECRET BEGINS]"*

Xcel sidestepped such an important concern by responding:

*"The OAG seeks to upend the design with a recommendation that the program pricing must remain greater than system fuel pricing in perpetuity. It is unclear how such a requirement would be justified especially where future fuel costs are unknown and participants have today opted to subscribe at a modest premium in exchange for a fixed rate renewable energy supply. In addition to these concerns, the Company believes the OAG's suggestion could violate Minn. Stat. § 216B.169..."*

Yet here we are, over two years later, and Xcel now seeks to upend the design with the recommendation that the program pricing must remain greater than system fuel pricing in perpetuity.

<sup>6</sup> Assuming a modest continued -3.8% CAGR based on 2005-2019.

<sup>7</sup> Assuming a modest continued -3.8% CAGR based on 2005-2019.

## Upending Neutrality

Despite the OAG's numerous concerns over the Windsource/Renewable Connect Merger, it was approved in advance of any clear promises on pricing, and prior to the Department of Commerce discovery of extended and substantial over-recovery. Rather than fixing the problem at the source, it was deemed best not to confuse residents with a change in pricing in advance of the merger.

### **What I would most like Xcel to answer: How does a supposedly "neutral" product with nationally decreasing costs go from \$2.04/100kWh in 2019, to \$3.35/100kWh in 2022?**

I can't see most of the data provided as an ordinary resident, but I noticed a few things. Since I'm already getting long in the tooth, and nobody is paying me for my services (not even the Green Neighbor Challenge), I'll try to bullet out a summary from my notes:

- **The PUC should examine why residents get dirty electricity and RECs, while C&I get new clean electricity and RECs.** According to the updated appendices provided by Xcel on May 4th, more than half (51%) of the projected sales for the Month-To-Month (MTM) program are being projected to be met by system fuel with an additional REC procurement. I repeat, MORE THAN HALF, of the projected demand for the green pricing program designed to fulfill the requirements of the oft-cited Minnesota Statute § 216B.169 which grants Minnesota residents the right to purchase harm-free power, is being met by system fuel plus RECs, while the brand new Renewable Connect (R\*C) programs designed specifically for commercial and industrial customers are perfectly balanced relative to their allotted assets over the coming year. It turns out the OAG was wise to be "concerned with *undersubscription*... [and] simultaneously also concerned with *oversubscription*." What is the plan to cover these programmatic shortfalls?
- **The PUC should examine why neutrality costs are being levied against system fuel.** While reducing the MTM offer to a mostly-system-fuel-plus-RECs offer is an indignity most green pricing customers across the country must endure, Xcel Energy also requires MTM subscribers to pay the Fuel Cost Adjustment for system fuel in ADDITION to the neutrality adjustment costs (which are supposed to reflect the costs of integrating and operating additional renewables alongside system assets) among the lesser administrative costs. It's hard to imagine a better way to ensure program pricing remains greater than system fuel pricing in perpetuity.
- **The PUC should understand why Xcel Energy is purposefully picking assets to make the MTM offer more expensive for residents.** This neutrality adjustment arrangement and these cited figures are already ASSUMING that Xcel will be allowed to transfer the Uilk C-BED Wind facility from the system mix to the MTM offer, meaning the projected shortfall being met by "system" assets is actually even greater. Further, Xcel singles out this system asset for addition to the program precisely because it is an old and uneconomical wind asset that is "available at a price point that maintains the Month-to-Month program's premium pricing status relative to the fuel clause." They quite incredibly claim that moving Uilk C-BED to the month-to-month program is in "the public interest." If removing it from the fuel clause is in the "public interest," then it seems to reason that adding it to the commercial programs (standard, high off-peak) would be doubly in the public's interest, since it would then affect no residents. Further, the difference in capacity factors (24% vs 35-37%) across programs seems to say a lot about the quality of the

asset division between their C&I and residential products, but I cannot see anything more than the topline numbers as a member of the public.

- **The PUC should question the preference not to inconvenience commercial customers and reconsider the balance of benefits between commercial and residential subscribers.** One might instead argue that the MTM option is the oldest and most essential program offering, and rather than making the public wait for production to match their demand, it is instead the commercial entities that could best endure delays to the start of long-term contracts designed to mitigate their costs and risks. Perhaps the commercial entities should simply be made to join the MTM offering until Xcel is prepared to meet more than a given month's demand. That would seem to be a prudent option as well. Anything else might be seen as patently disrespectful to the longtime residential subscribers who helped lay the foundation for R\*C.
- **Neutrality adjustment costs seem arbitrary and deserve more scrutiny from the PUC.** This may have been discussed years ago on another docket, but I don't understand why line losses are included in the neutrality charge, since I would think line losses affect all assets on the system, unless these are the line losses incurred above and beyond the amount expected from centralized system resources. Additionally the curtailment figures (3.8%) cited in the neutrality adjustment seem surprisingly high to me, driving up the neutrality adjustment. Interestingly enough, it was brought to my attention that on a separate docket (E999/CI-19-704) the Department of Commerce highlighted that Xcel's wind curtailment increased 765% year over year, possibly as a result of uneconomical must-runs on coal plants. And even though the rate of line losses and curtailment remain the same across R\*C program types, they are allocated substantially different costs/kWh. The calculation of the other four figures in the neutrality adjustment remain equally mysterious, even after reading the many high-level explanations of the neutrality adjustment and talking with several other energy experts engaged in Minnesota energy policy. In my prior experience building complex data models for a large corporation, I became intimately aware of the power of assumptions. Values, judgements, and choices get layered upon one another inside of a black box, and to those on the outside who dare not peer in, it's easy to think pure objective truth is the result. But a good analyst knows that inside "there be dragons." A full detailed accounting of how the neutrality adjustment is calculated would seem to be in the public interest (even if the public would never be privy to such figures), and I suspect would reveal the very wicked nature of complex adaptive systems like our energy system, and the epistemological simplifications made to box it up. As Donella Meadows would say, "expose mental models to the light of day."
- **The PUC should ensure Xcel has a process in place to notify and extend the coming refunds to former Windsource subscribers who no longer have Xcel accounts.** Finally, as a former resident of St Paul and Xcel Windsource subscriber who has been geographically displaced by the pandemic back to Wisconsin, I would like to know from Xcel how exactly they plan to extend refund checks to former Windsource subscribers who no longer live in Xcel territory, and therefore lack online accounts with which to update their address. I would very much like to not miss out on my check, and I am sure there are others who feel the same.

## Conclusion

While I take extensive issue with the many particulars of Xcel's current pricing proposal, I hope it can also be seen that the particulars circle their way back to bigger, more uncomfortable questions about the purpose of having a mandatory green pricing option in the first place.

Is the purpose of green pricing to give life to our hopes, that a small group of thoughtful, committed citizens can indeed change the world? Is it to accelerate the construction of sustainable and harm-reducing sources of energy? Or is it just a cup and ball game, which serves mainly to reorganize assets, redistribute money from idealists to the general ratepayer base, while contributing a small portion as a demand signal to the national REC markets? Whatever it is, I don't doubt acts of redistribution are involved, whether they be economic, ecological, or political, which makes neutrality more illusory the tighter you grasp.

I can tell you my purpose in writing this commentary is in protecting the power of residents to make real change in our energy system, and collectively reduce the very real harms fossil-fuel extraction and combustion have brought to our communities and our planet.

My goal is not to ensure program prices are made to be less than system fuel, but I do believe energy economics plus common sense fairness principles have or will make that the inevitable result. And in the world in which that is the case, I can think of no better way to accelerate an energy transition than to allow customers to save money and switch en masse.

Nevertheless, it is entirely unclear to me how neutrality is being maintained or determined when the cost of administering the month-to-month green pricing option for residents is projected to increase more than 70% year-over-year, even as the cost of wind and solar continue to fall. Neutrality does not even seem to be a useful or measurable framing in what is self-evidently a complex, interconnected, and non-linear system. I suggest instead of ensuring neutrality, the PUC should ask: **What purpose would the PUC like to ensure green pricing serves? What purpose does Xcel want green pricing to serve? What purpose did the legislature imbue into statute on behalf of the constituents they represent?**

As a holding company owning utilities and other ventures across several states, Xcel Energy wishes to be a leader, and be seen as a leader in the energy transition among utilities. Xcel Energy had the opportunity to lower the price of Windsource and sound the battle horns to its customers that they could sign up for renewable energy for a discount or no cost to make real the promise of accelerating the energy transition. It would've completely undermined the threat Xcel Energy feels from expanding community solar options. But that's not what happened. Instead they want the cost of energy and integration to magically go up so as to avoid any such admission. And they've put no plan in place to acquire the production needed to fully cover the MTM program, let alone prepare for its continued expansion.

This to me raises a most critical question: If renewables truly are the cheapest form of energy around, and the new assets being acquired for the standard and high off-peak programs threatened to undercut the fuel cost adjustment back in 2019, why are we still entertaining an IRP process calling for the acquisition of a fossil gas plant? The OAG raised the concern of how the approval of assets outside the IRP process could silo the decision-making process leading to a suboptimal result, and in response Xcel Energy retorted, "The OAG implies that the Commission's authority is somehow degraded in this process. The Company respectfully disagrees, as the Commission maintains the same oversight and approval authority over the forthcoming resource contracts as it does with all other resource acquisitions." This concern still rings true to me. Divide and conquer.

The decision that the PUC makes, will set not only the operating conditions for Xcel, but set an example for an entire industry on the edge of a marginal price revolution. More price inversions are coming, and reshuffling the asset pool or refiguring the underlying assumptions in neutrality adjustments is merely a delay of the inevitable. **And delays now, create consequences over decades and generations.**

My gratitude goes out to the Public Utilities Commissioners for enduring my lengthy comment, and for all the Department of Commerce and OAG analysts looking out for us ordinary residents.

Sincerely,

Andrew Butts