

2021 SENATE INDUSTRY, BUSINESS AND LABOR

SB 2295

2021 SENATE STANDING COMMITTEE MINUTES

Industry, Business and Labor Committee Fort Union Room, State Capitol

SB 2295
2/3/2021 AM

relating to net metering of electricity

9:34 AM

Chair Klein opened the hearing at 9:34 a.m. All members present. Senators Klein, Larsen, Burckhard, Vedaa, Kreun, and Marcellais.

Discussion Topics:

- Carbon emission
- Energy sources
- Utility payments

Senator Piepkorn introduced the bill and testified in support and submitted testimony #5204 [9:34].

Edmund Gruchalla testified in support and submitted testimony #4958 [9:37].

Paul Jensen, Citizen Local Energy Action Network testified in support and submitted testimony #5053 [9:42].

Scott Skokos, Dakota Resource Council testified in support and submitted testimony #5057 [9:50].

Michael Graalum Grassroots Development testified in support and submitted testimony #5064 [10:07].

James Kambeitz testified in support and submitted testimony #5113 [10:11].

Zac Smith, NDAREC testified in opposition and submitted testimony #5173 [10:20].

Brian Kroshus, Public Service Commissioner testified neutral and submitted testimony #5191 [10:32].

Paul Matthys, VP of Member and Energy Services testified in opposition and submitted testimony #5207 [10:39].

Carlee Mcleod, President of Utility Shareholders of North Dakota testified in opposition and submitted testimony #4926 [10:47].

Ryan Warner, Lightspring, LLC testified neutral and submitted testimony #5093 [10:52].

Additional written testimony: 4950, 4960, 5070, 5082, 5089, 5105.

Chair Klein ended the hearing at 11:02 a.m.

Isabella Grotberg, Committee Clerk

NORTH DAKOTA SENATE

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**Senator Merrill Piepkorn**

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COMMITTEES:
Finance and Taxation
Energy and Natural Resources

February 3rd, 2021

Mr. Chairman and Committee members; I'm Senator Merrill Piepkorn, representing north Fargo's District 44. I'm here to introduce Senate Bill 2295, regarding the net metering of electricity. In a nutshell, and others who will follow me will explain it in detail...but in a nutshell, net metering is a billing mechanism that allows consumers who own their own power generation system, rooftop solar for example, to dispatch back into the electrical grid any excess power they cannot use, and be compensated for that by the power provider. Several other states have net metering policies in place, and they may vary significantly from state-to-state. Perhaps it is time to not just allow net metering, but to encourage the process. There are several people who have either submitted written testimony and others who are queued up to testify in favor of the bill. Before I return to my committee meeting next door, there are just a few terms I'd like to point out.

Refer to SB 2295

So if it's all right with you, I'll step aside making room for the experts in the field. Thank you for your time.

SB2295

February 3, 2021

Testimony: Ed Gruchalla

Good Morning Mr. Chairmen and Members of the Industry Business and Labor Committee

I am here to testify in support of SB2295. This bill will change the direction of Energy production in ND. It will also give the Citizens of the State the right to choose where their electricity comes from. If an individual decides to build her own electricity production facility, she should be free to do so. We pride ourselves in our freedoms in this State.

I live very close to Moorhead, MN so I see what has happened there. Several years ago their electricity provider decided to try wind power. They asked their citizens if they would be willing to pay extra for their power. Enough citizens signed up to enable their Moorhead Public Utility to build 2 wind towers on the north side of Moorhead. They were paid for in a few years. Some years later they decided to ask their citizens the same question about solar. Again Moorhead citizens signed up to allow them to build one. Since that time, there has been such a demand for solar that they have built 10 more arrays.

Some friends of ours that live by Alexandria, MN decided to put up a 10kw solar array at their farmstead last summer and are very pleased with the results. Their Co-Op worked with them and charges them a total of \$50 per month to be connected to the grid. This allows them to be repaid at the retail rate if they over produce. They will pay for their system in 9 years. After that their investment will pay them an income. If this same project was in ND it would take over 30 years to get a return on investment, because the Utility only has to pay them avoided cost or about 2 cents.

ND ranks dead last in solar electricity produced by State. Why? Are we clinging to the past when the only choice we had was coal fired plants? Carbon forms of power production will soon be obsolete. We need to move into the 21st century. The rest of the country and even the world is rapidly changing to renewables. Why? Because the citizens demand it. There are few new Coal fired plants being built because the large Banks will not finance them. They can see the future.

Utility companies were contacted regarding this bill and asked for their input. They refused. We would like to work with them to make a law that everyone agrees to.

Climate change is real, Elvis is dead, and the earth is round.

ND's last ditch effort to cling to the past is Project Tundra. Co2 sequestration doesn't pencil out. If it did the Coal companies would borrow from a Bank or finance it themselves. Instead they are attempting a back door deal to get taxpayer dollars to finance another Government boondoggle. Projects like this have been attempted in Canada, Texas and else where in the World. They didn't work!

When a carbon tax is implemented products that use carbon will increase in cost. This will make ND products (even Ag products) cost more and reduce their value.

The bridge fuel is natural gas. We should be converting coal plants to gas. This process would cut emissions greatly and help us transition to a renewable energy future.

This concluded my testimony and I will stand for any questions.

Ed Gruchalla

Fargo

I am providing testimony in support of the Bill SB2295.

Our State and Country is facing a future where carbon-based energy will be penalized domestically and internationally, due to high carbon emissions from our power generation. Carbon taxes will become unavoidable for all farm and industrial products when used nationally, but in particular when exported internationally. Soybeans, Corn, and beets will soon be measured on their carbon contribution, and we shall not additionally jeopardize our future competitiveness and businesses by choosing obsolete energy sources. Farms and property owners shall have the freedom to offset their emissions profile by selling local energy produced at a reasonable rate into the distribution network. One way to mitigate our risky position on goods and services from North Dakota, is to invite private investment with clean energy sources such as solar and wind, thereby minimizing the overall carbon emissions from electricity produced by fossil power plants. This will additionally provide for overall improved energy resiliency and a truly private public partnership in our state. Electrical stability issues will be supported by Natural Gas Power generation until adequate and cost-effective battery solutions are available. Sun and wind sources are the gifts of creation and should not be squandered when these sources are less harmful and competitive technologically is available.

The costliest power will be that of lignite and coal fired power plants due to their high carbon intensity. No amount of flue gas cleaning and carbon sequestration can outweigh the switch to renewables when supported by natural gas combined cycle power plants. It is a fool's errand to invest further in CO2 sequestration when we have a much less carbon intensive energy source beneath our feet.

In North Dakota we are blessed with ample natural gas supplies and the ability of having 50-60 % less carbon emissions*) as compared to other fossil fuels generation when burned. We therefore encourage to develop a plan eliminating coal and lignite over a planned timeline, replacing that energy with Renewables, supported by Natural Gas power generation.

The SB2295 net metering Bill is a first step towards a less risky future for our farms, businesses, and property owners in North Dakota.

*) <https://www.power-eng.com/coal/eia-gas-fired-combined-cycle-now-generates-more-u-s-power-than-coal/>

Testimony of Dakota Resource Council
Senate Bill 2295
Feb. 3rd, 2021

Chairman Jerry Klein & members of the committee, my name is Scott Skokos and I am testifying on behalf of Dakota Resource Council and our members. Thank you for allowing me to testify today. I stand here today in support of SB 2295.

Dakota Resource Council (DRC) is a non-partisan grassroots group of landowners, ranchers, farmers, and other citizens. We have members involved in all types of energy production. SB 2295 creates a pathway for landowners to engage in energy generation on their properties. SB 2295 provides a mechanism for those that install wind or solar on their land to have their energy bills reduced excess energy they produce that goes back into the grid.

Utilities are often scared of net-metering because they think it will allow too many customers to sell back into the grid. SB 2295 is not like that because it only allows for customers to produce enough energy to reduce their own energy bills. Anything additional is not profit for the customer but will carry over to the next month for their bill. Anything produced in excess of what is used in a twelve-month period will not carry over. On page 5, lines 6-10 it outlines this caveat. "At the end of each twelve - month rolling period, any accumulated unused kilowatt-hour credit must be eliminated and may not be applied against any future kilowatt-hour usage. The customer will not receive any compensation for unused kilowatt-hour credit created and unused more than twelve months prior." This removes the fear that utilities need protection from net-metering, but also allows for landowners to reduce their electric bills by producing their own energy. Individuals will not be able to become their own utility.

We have several members who are farmers and ranchers, who were not able to make it today, who have expressed to DRC that they would like to utilize solar or wind energy to lower their farm/ranch operation costs. We all know that farming/ranching can be an expensive, and sometimes financially unforgiving, pursuit. North Dakota should give landowners (farmers and ranchers) the opportunity to cut costs by passing SB 2295. Our members have been frustrated that their friends and landowners in other states have been able to utilize net-metering to cut costs, but they can't here in North Dakota. We get a lot of questions asking why that is, which is why we are supporting SB 2295. We want our farmers/ranchers to be able to compete financially with producers in other states. It is unfair to hold them back as many states around the country allow for this practice. We want our producers to have every chance to succeed and cutting costs through net-metering is one way to help. Solar and wind on individual properties, does have the adding renewable energy generation which will help to mitigate the effects of climate change. Climate change is already having a negative impact on ND farmers and ranchers.

Net-metering will also increase the speed of return-on-investment for those families who have elected to put solar on their homes. SB 2295 would support their freedom and right to choose to put solar on their homes, with a fair and efficient billing mechanism for their contribution to the grid. These people want freedom and the opportunity to be more self-sufficient by reducing the cost of their energy bills. Many families in ND are dealing with high energy bills, more now since the COVID-19 pandemic. Adopting a net-metering program, as proposed in SB 2295, in North Dakota would help those who have already installed solar, but it would also help those who may have wanted to install, but have not been in a financial circumstance to be able to afford solar that has a 20+ year, return on investment in ND. We want citizens of North Dakota to not be limited in their options because of where they live. There should be equal opportunities for self-sufficiency provided by policies like net-metering in North Dakota.

Net-metering, as proposed in SB 2295, is not necessarily something all utilities are opposed to either, as some companies have already opted to offer some type of net-metering or net-billing. Montana-Dakota Utilities Co. (MDU), which serves parts of ND, has already begun offering net-metering in Montana and Wyoming.¹ MDU would likely offer it to customers in ND if we had the policies in place for them to do so and according to some of our members who have solar in ND, MDU is already offering a similar billing process to net-metering.

There is a lot of talk this year about how ND needs to move towards a cleaner and more sustainable energy future as evidenced by other proposed bills. Net-metering is one way to do that and net-metering will actually benefit individuals in North Dakota. SB 2295 provides an incentive to help landowners and families that want to produce their own energy to be more self-reliant.

I urge the committee to support SB 2295 and recommend a DO PASS on SB 2295.

¹ <https://www.montana-dakota.com/energy-efficiency/renewable-solar-energy/>

Solar Photovoltaic Power in North Dakota

A market oriented solution to enable small scale commercial Solar PV generation in North Dakota

Michael James Graalum

1/31/2021

Grassroots Development

Citizens Local Energy Action Network (CLEAN)

There are several important differences between the governing arrangements for privately owned Solar Photovoltaic (SPV) arrays in North Dakota and Minnesota. These differences have caused North Dakota to trail Minnesota significantly in its rate of solar adoption, despite North Dakota having a more favorable physical environment for SPV development. This paper will detail the differences in policy between these states and several others regionally and nationally, demonstrate their quantitative effects on solar viability, and to demonstrate the long term effects of these policy differences on the residents of the state. Before delving in to the details on policy, it is important to survey the state of the industry both globally and in each state, the relative quality of the solar resources available, the nature of the economics, and SPV's ability to fit to the demands of each state.

Since the mid-2000's, when the development of the solar PV manufacturing industry become a topic of strategic national importance, the economics of solar PV have improved at an unprecedented rate. This improvement has come from many facets of the technologies themselves and the broader industry. First, the technology and operational scale for the refinement of silicon has improved, reducing material costs, while increasing the quality of silicon being used in panels. This and other advances in material science have decreased panel cost while increasing the yield of solar energy converted to electrical current. High-end monocrystalline panels now have efficiencies in excess of 22%, compared to yields in the low teens a generation ago, and efficiencies in the high teens is common for mass market grades. Inverters, which convert the Direct Current (DC) current produced by panels into the Alternating Current (AC) used by most electrical implements, have seen advances in design and durability, and the vast increase in production has improved economics there as well. A wide variety of mounting units have proliferated to utilize the improved panels. Distribution and installation networks have increased vastly in scale and scope. New legal mechanisms to aid the financing and management of arrays have been created and proliferated. The net result is an enormous decline in the cost of installed solar, and a solar industry producing orders of magnitude more power than the experts expected a decade ago.

Levelized Cost of Energy (LCOE) estimates, like those from Lazard, if anything overstate the cost of power from SPV. With SPV most of the costs of operation are upfront, in materials and installation, and requires little in operation costs beside insurance and land maintenance. 'Hurdle rates' used in financial analysis significantly warp the analysis for solar versus other technologies, placing little economic value on potentially decades of low maintenance operation and undervaluing the high late-life upkeep costs of other technologies.

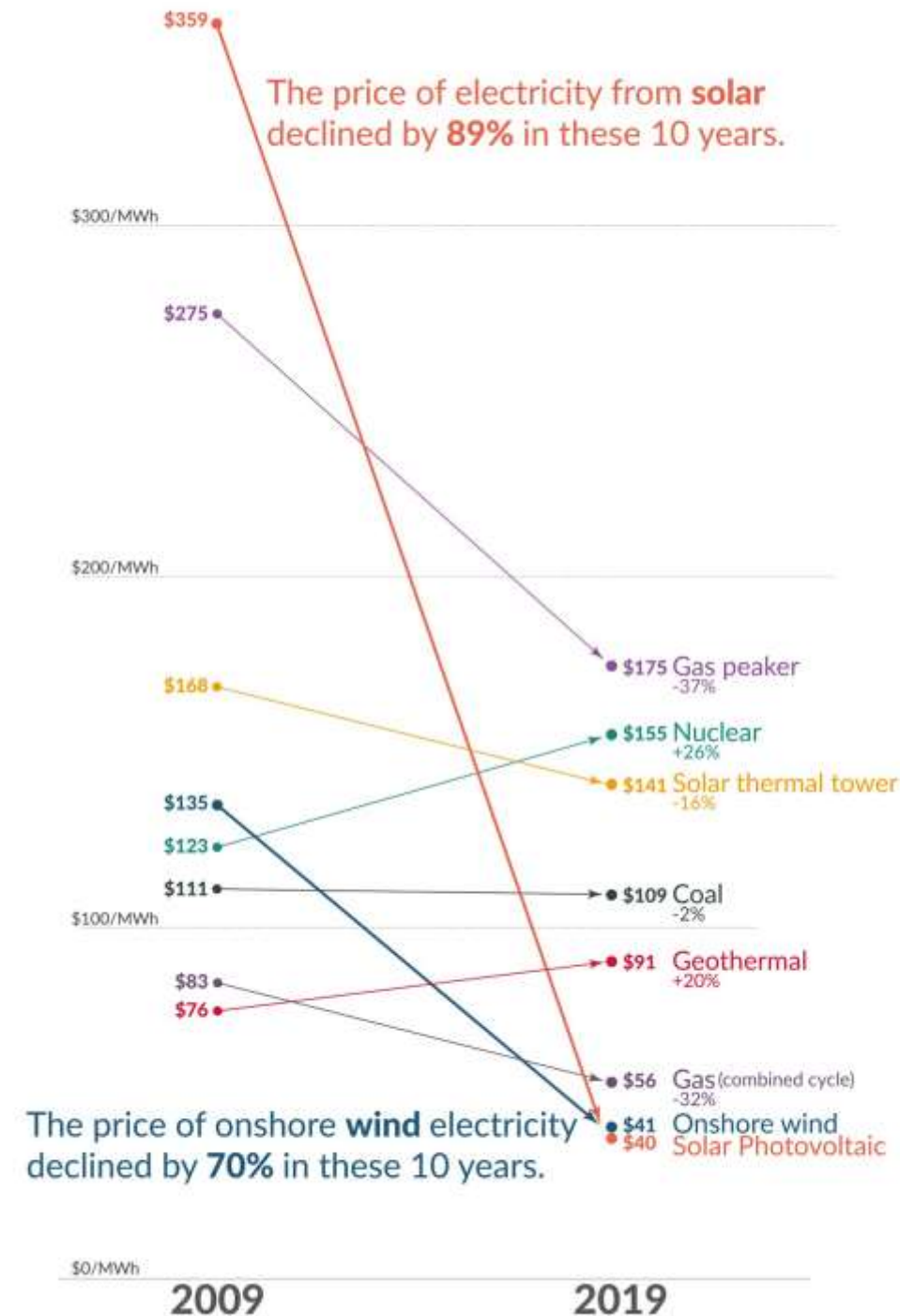
A comparison to the rental housing market is apt. In a strong market, the clearing rate for market rate rentals is the construction cost of new units, and this is independent of whether an individual unit is still paying debt. Thus, once the debt on the building is repaid, its profitability can be very high, and buildings typically vastly outlast their debt financing instruments. Like a building, an array will need insurance, and will require a new inverter about as often as a home needs a new furnace. Like a rental property, a solar array is a durably long lasting, revenue generating asset, but will lower maintenance costs.

Mass usage of solar power however will require significant improvements in energy storage technology capacity, as the sun only shines for portions of the day. Storage technology has also improved in recent years due to economies of scale in production and distribution of lithium based batteries. A number of alternate battery technologies are in various stages of development which could offer dramatic decreases in cost and improvements in lifespan and energy storage density.

The price of electricity from new power plants

Our World
in Data

Electricity prices are expressed in 'levelized costs of energy' (LCOE). LCOE captures the cost of building the power plant itself as well as the ongoing costs for fuel and operating the power plant over its lifetime.

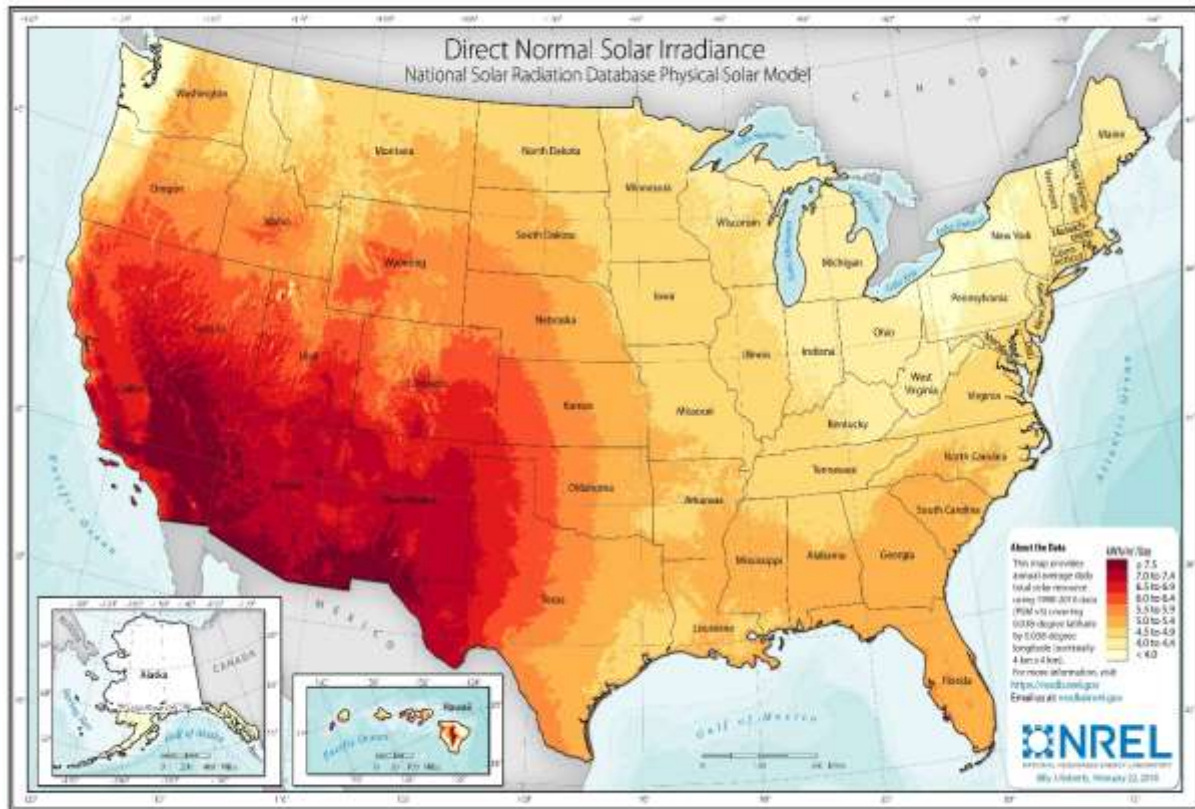


Data: Lazard Levelized Cost of Energy Analysis, Version 13.0

OurWorldinData.org - Research and data to make progress against the world's largest problems.

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by the author Max Roser.

North Dakota has superior solar potential to Minnesota, with particularly good potential in the south and west in oil and coal country. This region already has the infrastructure to transmit electricity to Minnesota as a result of its existing coal and natural gas generation industry, including an HVDC line. As a rule, both North Dakota and Minnesota have better solar potential going south and west.



Despite this, the rate of SPV adoption in North Dakota is significantly behind that of Minnesota, or for that matter virtually every other state in the union. Minnesota in fact leads several regional states in its percentage of power from solar sources, and this is led by investor-owned generation. Utility solar production capacity in the state in 2019 was a mere 2.3 MW, compared to 892 MW from private investors. Net-metered solar arrays add 86 MW of solar generation capacity. The scale of investment in solar compared to its neighboring states, all with better natural amenity, shows the scale of the policy differences between the states.

These policies also effect who owns the solar generation capacity, and thus the returns. In New York most of the generation capacity is small and mid-sized net-metered arrays, while in Minnesota and North Carolina private investors own a majority of the capacity. These policy differences are stark, and as this report will later demonstrate, these policy differences have major economic consequences.

Table 1: Solar Generation and Capacity for Regional and Selected States									
	ND	SD	MN	MT	NE	MI	NY	NC	AZ
Total Electricity Production (MWh)	41,147,324	14,506,647	59,379,390	27,797,079	37,297,615	116,701,343	131,603,289	131,173,861	113,551,987
Total Solar Generation Except Net Metering (MWh)	0	1,829	1,248,833	29,393	31,706	142,961	523,640	7,451,338	4,486,377
Total Solar Capacity (MW)	0.392	1.666	980.8	37.2	30.9	230.958	2,000.7	4,609.0	3,356.9
Utility Owned Solar Capacity (MW)	0	0	2.3	0	2.6	62.5	0	309.0	300.8
Investor-Owned Solar Facility (MW)	0	1.0	892.3	17.0	20.7	102.0	482.5	4,168.8	1,564.5
Net Metered SPV Capacity (MW)	0.392	0.666	86.163	20.242	7.562	66.458	1,518.199	131.195	1491.562

Net metering is the core state policy for the promotion of small scale independently owned solar arrays. Under net metering, the owner is connected to the electricity utility, and draws from the power grid as needed, and returns any surplus generation to the grid. The owner pays or is paid for their net usage of electricity. There is some controversy here, as net-metering opponents accuse solar panel owners of not paying for their share of grid operation and forcing other utility customers to subsidize their panels and profits with other's rates.

There is some truth to this, as utilities use their retail rates to maintain the electrical lines that connect users to the powergrid. However, if solar power producers were to simply reduce their consumption by a similar amount, other customers would still have to make up for the loss of revenue. Even in Minnesota, home to some of the richest rewards for net metered customers, net metered solar generation is only 9% of total solar capacity and a mere 0.2% of total power generation. This means that there is very little real cost to a generic retail electricity customer through this mechanism. Furthermore, the specifics of the net metering policy differ between states, varying by the rate of compensation for surplus generation, the period of accounting, the maximum size of a connected array, and often with different rules for investor and cooperatively owned utilities. Other states are less generous, offering average cost or 'avoided cost' rates or even complete seizure of surplus generation at the end of the billing period, as in New York or Montana.

Aside from the major federal tax benefits and granting programs, states have been free to adopt a wide variety of policy to encourage the construction of SPV generation capacity. These sets of policies can be categorized as demand side or supply side interventions. Minnesota is a good example of a state that has taken a demand side approach. Policy in the state encouraged construction of new arrays with the promise of rich revenue rewards, primarily through its net metering policy, which is generous compared with many of its peers. Minnesota offers full retail net metering, meaning that any surplus generation by the array owner must be reimbursed at the retail rate. The 40 kW maximum net-metered capacity is also well above average. Additionally, the state strongly encourages offsite net-metered Community Solar Gardens, which allows for net metered customers to take advantage of the economies of scale of a larger array, as if it were on their own property. Minnesota's policies are designed to create mid-scale distributed generation, and profits for small investors.

Other states have taken a different approach. New York, Montana, and others focused on supply side incentives to encourage investment, while limiting net-metering to the array owner's personal usage, with surplus power at the end of the net metering period being surrendered to the utility. New York gives farms (100 kW) and industrial operations (2 MW) higher net metering limits than homes and businesses (25kW), in order to enable operators to take advantage of federal tax credits and grants to the scale of their needs. In both these states and many others, there are modest tax credits (generally \$1000 or less) that benefit the installation of smaller rooftop arrays, rather than the larger, revenue generating arrays encouraged by Minnesota, North Carolina and other states. This has been successful, and both these states have extensive small scale generation. Both also give support to utility scale generation as well, while leaving out the middle-scale arrays.

Other common programs that have been used around the country include the trade of Renewable Energy Credits and Solar renewable Energy Credits, Property Assessed Clean Energy (PACE) programs, low-interest loan and grant programs, statewide generation quotas, and incentives for equipment sales taxes, property taxes, and generation taxes.

No state followed exclusively a supply or demand side platform, with Minnesota having small supply side programs and New York having a reasonable demand side program. In the early phases of the solar boom, many states had strong pieces from both platforms, including various rates of net metering, production bounties, grant programs, tax credits and a variety of other policies. As production and logistics have improved, these states have moderated their incentives to conform to supply and demand. Many early adopting states built phase-outs for many public benefits into the law, and have since reached those phase-outs, and federal benefits are in the process of phase out.

There are several states, mostly major oil and coal producers, which have solar policies that seem to be designed to prevent the adoption of SPV at all, including both Dakotas. These states offer neither meaningful supply side support nor any plausible means to generate revenue from the arrays. Even utility-scale generation has been stymied by state and utility policy.

Table 2: Selected State Policies				
	Net Metering	Net Metering %	Net Metering Max Size	REC's Belong to:
Minnesota	Yes	100	40 kw	Generator
North Dakota	Utility Customers	Avoided Cost	100 kw	End User
Nebraska	Yes	Avoided Cost	25 kw	Generator
South Dakota	not required	-	-	-
Montana	not required	0% after annual net	50 kw	-
Michigan	Yes	retail under 20kw, average cost of generation to 150 kw	150 kw	Generator
New York	Yes	voided cost or forfeited	25kw Residential, 100 KW farm, 2 MW commercial	No Trading
North Carolina	yes	0% after annual net	1 MW	Utility
Arizona	yes	avoided cost of total production	125% of annual load	Customers

North Dakota has a very generous maximum net-metered array size, 100 kW. This is 4 times the size of the typical 25 kW and 2.5 times the maximum array size in Minnesota. Under North Dakota's variation of net metering, at the end of each month, any surplus power is reimbursed at the 'voided cost' rate, which is generally around 20% of the retail electricity rate. This is only available to customers of investor owned utilities, and is not mandated by law for members of the state's power cooperatives, who include many of the farmers and landholders most able to take advantage of their natural resource. Cooperatives must allow connection under current policy, but are reported to require all generated power be sold to the cooperative at the lowest wholesale rate before selling it back at the retail rate. Generators in North Dakota only receive the renewable energy credits for the share of power they use themselves, the remainder are forfeited to the utility. This low compensation rate and seizure of rights is a critical reason for the lack of solar adoption in the state, and have been the primary targets of criticism from advocates.

Advocates have a point, as not all policy in the state is bad. The state has adequate easement regulations, a property tax exemption, renewable energy credits exist, and unlike South Dakota it at least has a net-metering policy, and the capacity limit is very high compared to other states. There are a number of ways that the state can go about accelerating its solar adoption, and these proposals will be detailed and analyzed in turn, followed by the author's recommendation. The effect on the financials of several different scales of array by each of these policy changes will be demonstrated.

Over the last several years advocates have favored the implementation of a net metering regulation that would be effectively identical to the state of Minnesota, with a high maximum generation capacity and full retail net metering. There should be no doubt that this would be extremely lucrative for investors in the state, particularly the south and west. This policy could provide such a strong incentive that it could significantly distort local power markets very quickly in the rural west, while being only modestly effective in the populous and comparatively dimmer northeast. Others have advocated a compromise rate, such as a percentage of the retail rate, an alternate calculation of 'avoided cost', or the average wholesale rate paid by the utility. These might still be too much to avoid over-saturation in the rural southwest, while not being adequate to drive small scale generation in the populous east.

The example of New York and many other states can serve as inspiration, the net-metering rate should be governed separately by region in the state, with the rate declining in each region as SPV production climbs as a share of electrical consumption. This is not a suitable solution for the western portion of the state however, who will still face significant limits on their capacity to generate in the most productive region of the state.

The other policy change most commonly critiqued is the treatment of renewable energy credits, which are in most cases forfeited to the utilities, and otherwise difficult to trade. The law should return these credits to the generator and ease their trade through creation of a formal marketplace. This would significantly improve the ability of investors to monetize a SPV investment, especially in the circumstances of a reduced Net-Metering reimbursement rate. For similar justification, the electrical generation tax exemption should be extended to apply to all scales of production.

These policies mostly favor larger scale generation, while not adequately encouraging the small scale rooftop generation common in cities or for smaller use, such as a cabin or garage, or grid-independent uses. Several states have offered small cash grants, on the order of \$500-\$1000, in order to encourage this smaller localized generation. Low interest loans and PACE programs have also been a common means to enable home and business owners to install larger capacity arrays with less money down, and Community Solar has been very successful when combined with net-metering.

While it has only been alluded to thus far, the primary support programs for SPV generation are federal programs, and are primarily represented by three primary policies. First, tax credit programs credit a fraction of the cost of the array toward future tax bills, whether personal or corporate. A Solar Photovoltaic array contracted in 2021 will receive a 22% tax credit. On a \$100k array, this would count \$22k toward future tax bills. This credit will decline to 10% for arrays contracted in 2022 or after. A corporate owned array will also allow its value to be depreciated across 5 years and a non-taxable expense. Finally, there are several federal grant programs, including but not limited to a 25% rural energy grant from the USDA, which will be used representatively in this analysis.

Grassroots Proposal

Recognizing the differences between the requirements of cooperatives and for-profit entities, and the differences in power demand and generation capacity, the author recommends the following proposals for Solar Photovoltaic Generation be adopted by the state.

Renewable Energy Credits

That all renewable energy credits should belong to the generator. For-profit entities must track and buy renewable energy credits from their customers at the average market rate unless the customer opts out. Cooperatives must track renewable energy credits for their members and sell them on their behalf. The state and utilities must assure that North Dakota's renewable energy credits are cross compliant with other state markets to ensure strong demand for their RECs. For cooperative members, this alone could shift the margin on many projects, as will be demonstrated later on.

Net Metering

That Net metering rules should vary by region, utility type, and whether for-profit or cooperative/municipal. For-profit utilities must pay the retail rate on net-metered generation up to 40kW capacity, and must net meter farms up to 100 kW and industrial operations up to 1 MW, with reimbursement for these at the average wholesale rate across the net-metered billing period. This is a simple, straightforward, and fair, and in most cases will limit array size to the needs of the building or for small scale revenue. It also places Xcel Energy's North Dakota customers on a similar playing field to those in their primary markets of Minnesota and Colorado, rather than allowing Xcel to use Fargo to subsidize clean energy elsewhere.

Cooperatives operate differently than for-profit entities, and here as elsewhere should have a different set of rules to match to suit that method of ownership's liabilities and advantages. To begin with, the state must mandate that cooperatives offer net metering to all customers. There is no viable mechanism to enable small and medium scale adoption without such a policy. This path should be twofold, one path for those looking to offset their own use, and another for those looking for a large-scale revenue generation investment.

The scale of the array in the case of an off-set user will be limited to the lessor of 25kw or perhaps 100% or 125% their own annual consumption, as to prevent this from being a measurable burden on the rest of the members. For farm and industrial operations these could be limited at 100 kW and 1 MW as before, or 100% of minimum monthly consumption, in order to allow these operations to participate in a scale proportionate to their needs. As discussed before, setting net metering reimbursement rates regionally by their share of electricity consumption makes a lot of sense for the state. Beginning with the retail rate, this can fall to the average wholesale rate for all generation or a market determined rate as production increases, again a fair system that benefits that allows members their energy independence and resiliency, while benefiting the entire state by allowing more of our native electrical generation to be exported.

North Dakota's cooperative utility landscape allows a means for a market determined rate for those interested in investor scale solar photovoltaic generation. The cooperative model that exists to service its member's electrical needs should also service its member's revenue-generation needs. As mentioned before, cooperatives should be required to track and sell their member's renewable energy credits on their behalf. From this it is not an insurmountable step to market their generation itself. This aspect of the

cooperative would effectively operate as a distributed solar array. An ambitious cooperative could even incorporate maintenance and installation services to guarantee members competitive prices and regular service. Revenue after expenses would be returned to generators in proportion to their generation. Ownership of arrays under the arrangement would be limited to North Dakota residents and registered farms, or otherwise be limited under net-metering rules as a market rate option.

Such a scheme would allow cooperative members to profit from their investment in SPV generation at a fair market value without burdening their fellow members with the costs of subsidy, and create jobs to manage and market this resource within the cooperative. As our analysis will show, this framework has the potential to create a lucrative, low cost export commodity from distributed small-investor solar photovoltaics. In order to fast track the development of the industry, the Bank of North Dakota should be required to open a lending window open to North Dakota farmers, ranchers, and other residents.

Table 3: Proposed Net-Metering Reimbursement Schedule					
	Array Size	Restriction's	Opening Reimbursement Rate	Final Reimbursement Rate	RECs
Cooperative	100% of annual consumption, or 25kw	none	Retail	Retail	Owned by Generator, sold by co-op on their behalf
	100 kW	Farm	Retail	Average Wholesale	
	1000 kW	Industrial	Average Wholesale	Avoided Cost	
	unlimited	None	Market	Market	
For profit	40 kW	None	Retail	Retail	Bought by utility at market rate
	100 kW	Farm	Average Wholesale	Average Wholesale	
	1000 kW	Industrial	Average Wholesale	Average Wholesale	

Associated Policies

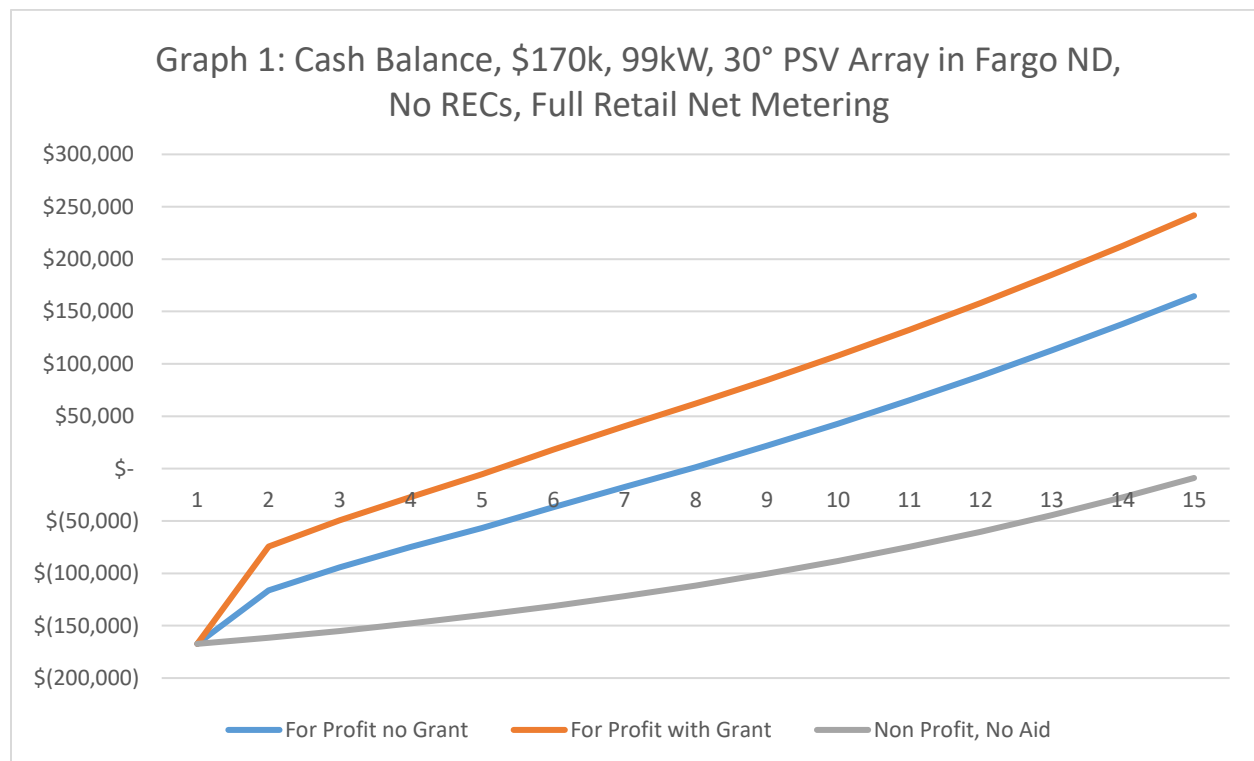
That North Dakota's net-metering regulations should be expanded to include Community Solar Gardens, and the state should adopt a Property Accessed Clean Energy program as an option. These programs combined would allow new housing developments to be built with a share of a community solar garden attached to each lot, financed and repaid through special assessments. This would allow North Dakota homeowners to take advantage of utility scale pricing on generation equipment and ties any debt from the purchase of the array to the property rather than the purchaser.

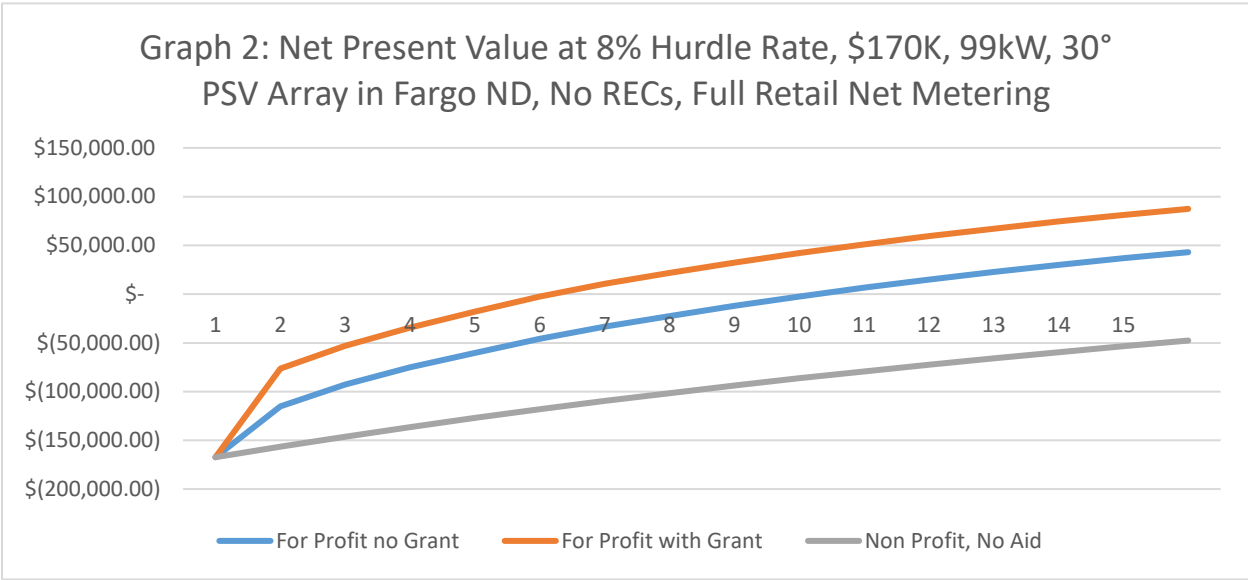
In addition to these policies, North Dakota would do well to encourage small scale rooftop generation. Montana and others have had significant success with small scale subsidies in the form of refundable tax credits. When combined with Federal tax programs and grants, small rooftop arrays can affordably offset local power needs without severely warping energy markets. The Bank of North Dakota should be mandated to provide low or no-interest loans, with small down payment for qualified installations, and should also have staff assigned to assist in applications for grant money. This would allow the state to rapidly build out its infrastructure with little risk to the Bank, as they would be purchasing a durable asset whose revenue could easily be garnished. The Bank, Legacy Fund, and Industrial Commission could grant-finance the creation the commercial SPV management operations within the electric cooperatives and coordinate a deliberate buildout of a midsized, North Dakotan-owned for profit generation. All the proposals and regulations won't accomplish a thing without execution.

Analysis of Policies

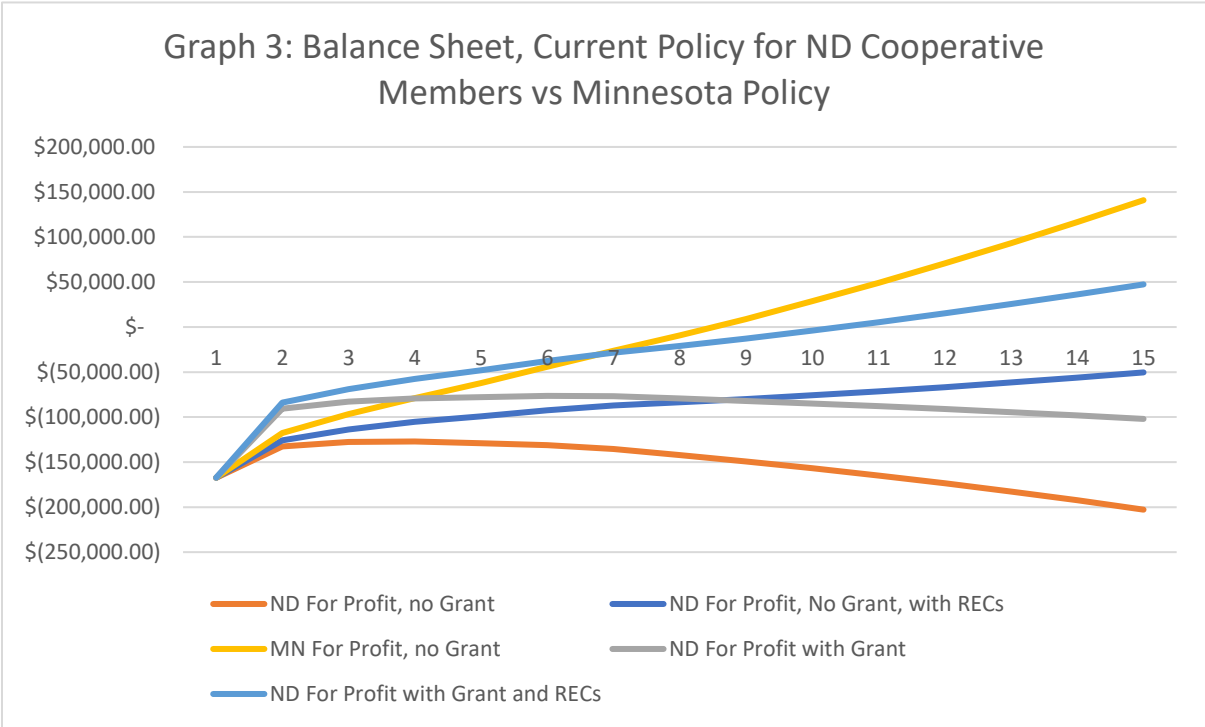
For the following analysis, a 99 kW solar array was designed to represent the case of a large farm-sized array. Equipment include three hundred and twelve 325W Canadian Solar panels, three SMA 33kW Tripower inverters, and a 30° Unirac Groundmount mounting system, which were quoted from a regional wholesaler, along with a local bid for delivered concrete, and a labor bid from a local contractor at \$35/hr and per diem, among other costs, including generous profit for the installer. Calculations for Minnesota assume that that state has retail net metering to 100kW rather than 40 kW. Prices for Renewable Energy Credits, wholesale electricity, and solar generation are sourced from publicly available data. The array was calculated to cost \$170,000 dollars.

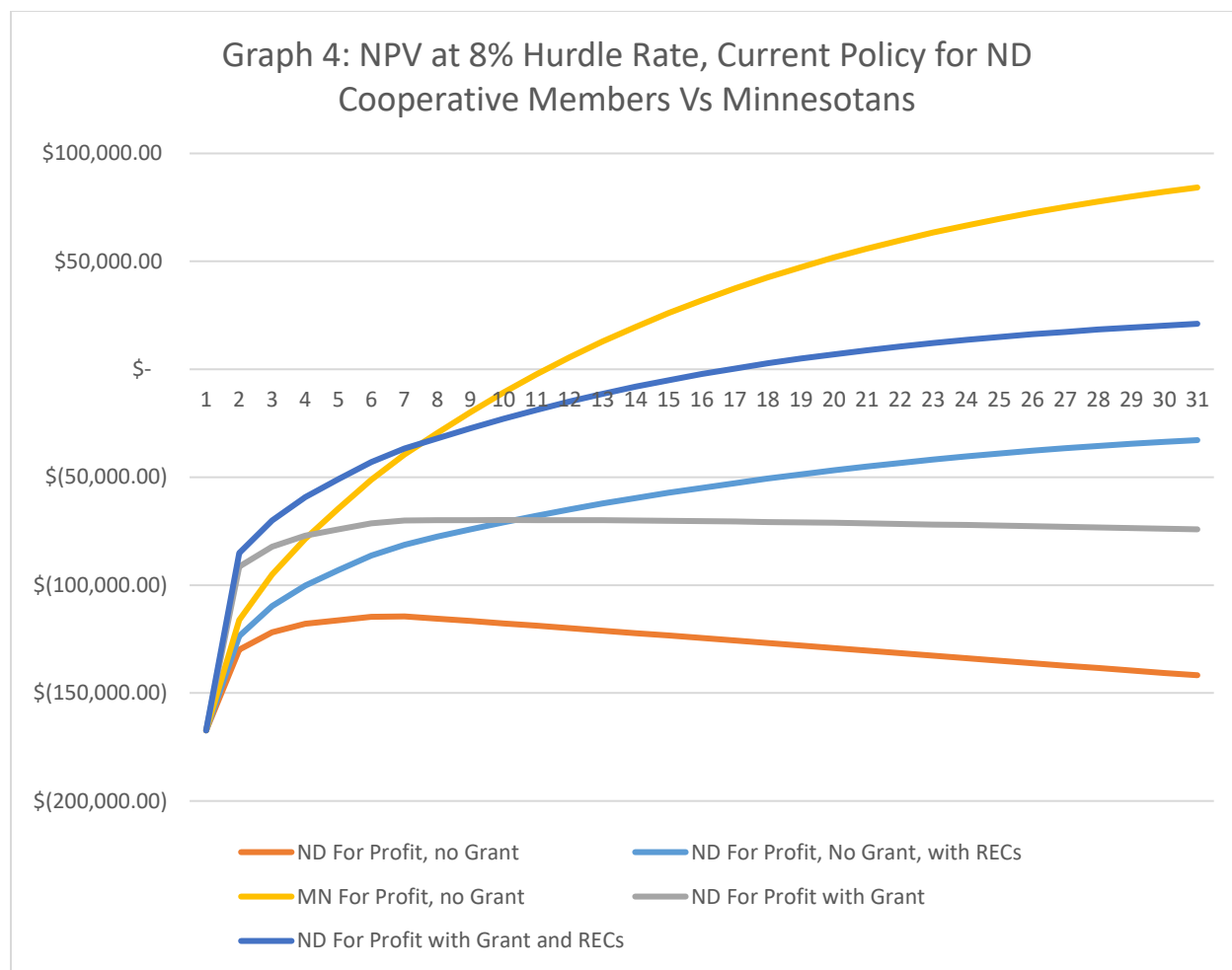
Graphs 1 and 2 show the degree to which federal policy drives the economics on solar photovoltaic generation, and assumes full retail reimbursement. Nonprofits cannot debt finance solar photovoltaics and generate a meaningful cost savings without aid, which is more limited than business or personal assistance. For this reason non-profit ownership will be excluded from further analysis. It is worth noting that this method of public assistance, as with wind power, only benefits for-profit or personal ownership, meaning that non-profit electric cooperatives cannot take advantage of tax credits for utility scale production, and must work with private investors to develop solar arrays effectively.



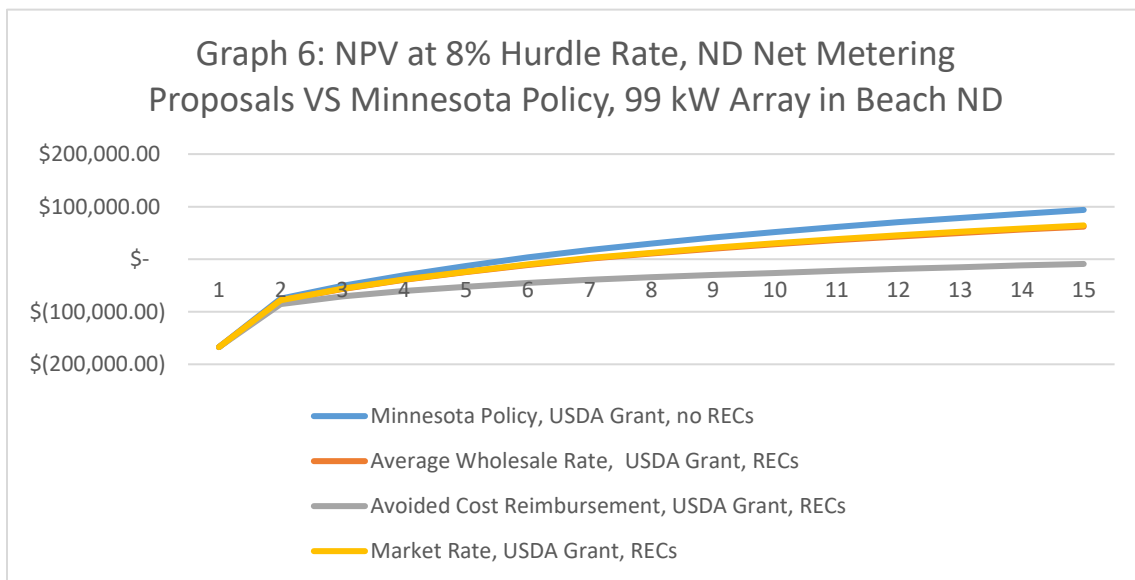
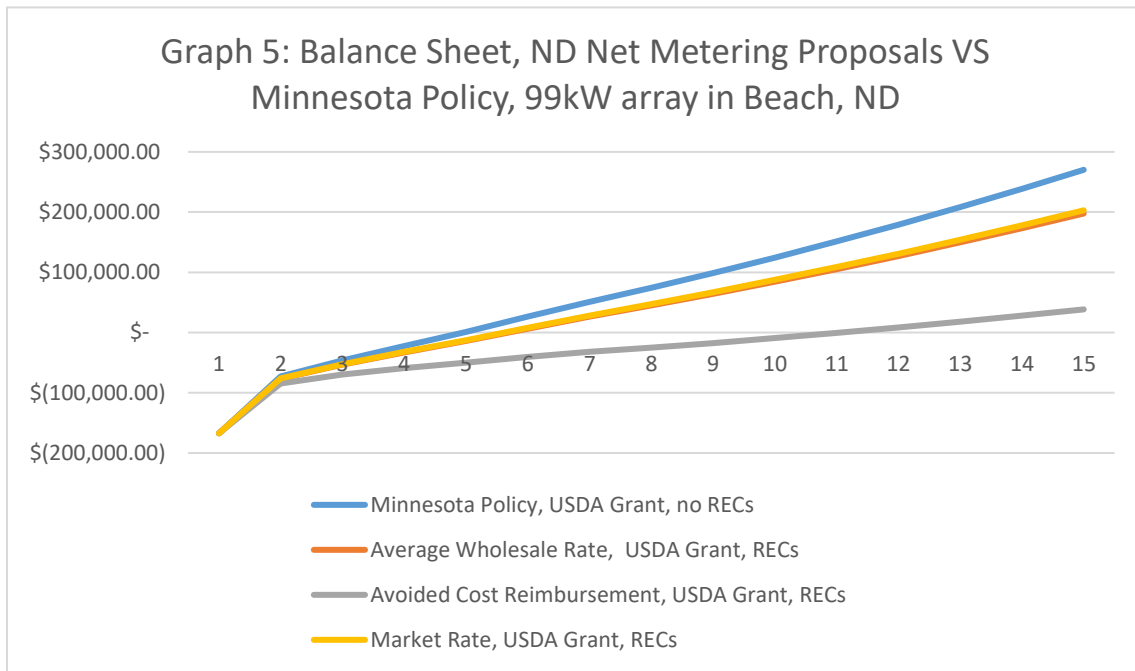


The difference in policy between cooperative members in North Dakota and residents of Minnesota is quite stark, as shown in Graphs 3 and 4 for our 99kW array. Even without changing metering policy, granting Renewable Energy Credits to the generator shifts the economics significantly, however not enough to make up for a much lower reimbursement rate on generation.

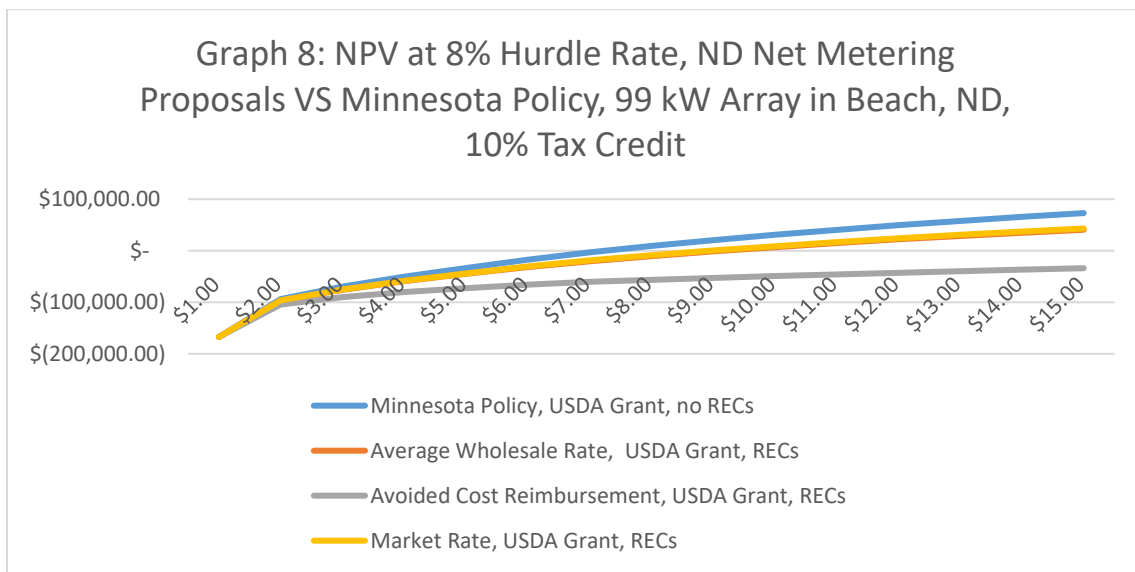
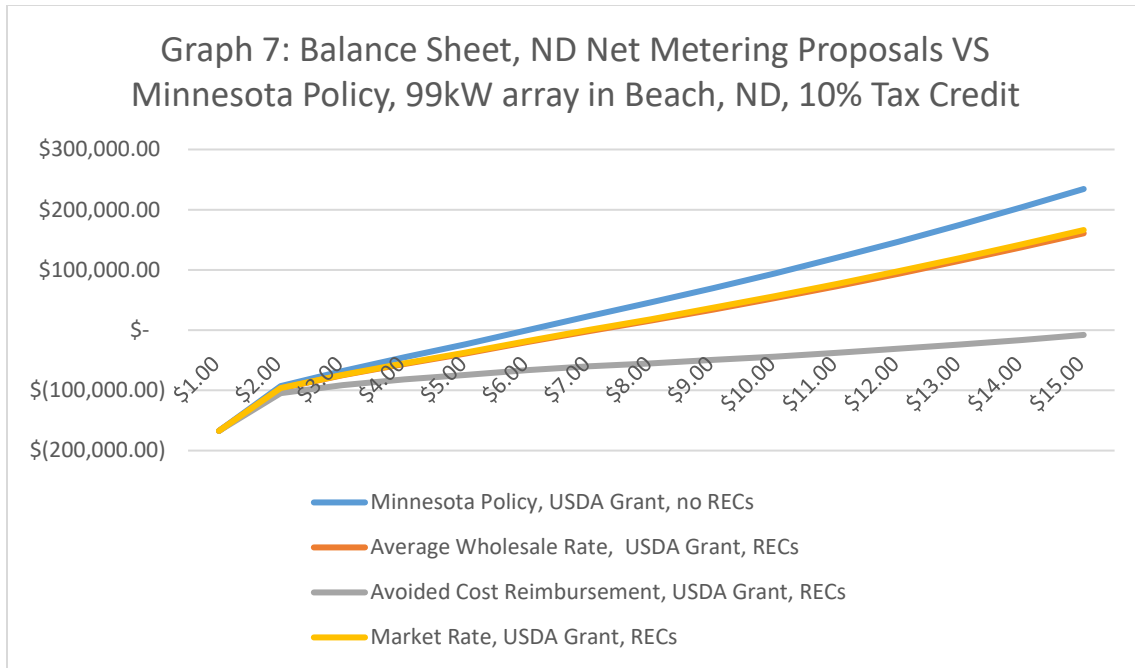




Under this paper’s proposal, net metered generation will be subject to a series of declining prices with increased net metering. In Graphs 5 and 6, these prices are combined with RECs and are compared to the policy platform of Minnesota. The location is changed to Beach, North Dakota for the same array as before. The southwestern portion of the state has the best potential for for-profit solar development, whose potential revenue schemes have been described. These graphs show that medium scale generation can quickly repay investments and be a large revenue source for landholders. It is perhaps worth noting that much of the cost of construction of the SPV is labor and equipment, and many landholders have the skills and equipment to do much of this labor themselves. As mentioned before, the cooperative itself could do construction and maintenance of arrays, which would remove profit taking and ensure the quality of installation and components. The combination of a market rate for generation and renewable energy credits makes cooperatively managed solar power a major winner for the state and its residents.



Perhaps the strongest argument against this proposal lies in the fact that federal tax credits will be permanently reduced from 22% to 10% at the start of 2022, and that the state and utility will not be able to act quickly enough to take advantage of these critical benefits. Aside from the ugly hopelessness and defeatism embodied in this position, it also isn't true for the rural user, and certainly not in the southwest of the state. In Graphs 7 and 8 we see the economics with a 10% tax credit for energy investments, rather than the 22% rate for solar investments which expires at the end of the year. While payback times are slightly longer, an array will repay itself in 6-8 years and continue to generate revenue for decades.



The data make clear that cooperatively managing distributed, medium scale solar arrays is a viable industry in North Dakota. With the imminent and ongoing decline and collapse of much of the fossil fuel industry on which the western portion of the state depends, it is essential that North Dakota further diversify its energy generation mixture and develop this potential export commodity. With low down payment financing and low rates, the Bank of North Dakota could finance a distributed investment in a marketable commodity with little direct cost, creating jobs and revenue for the state, with little risk to anyone involved and the potential for large, lucrative investments for North Dakotans. Table 4 shows the net benefit for the state should 500 residents each build a 100 kW array and participate in the program. Even at the small scale of 50 MW, there is plenty of revenue from which pay the staff needed to run this program.

Table 4: Distributed Generation Plan, centered on Beach, ND				
	MWh/year	Electricity \$/Year	REC \$/Year	Total \$/Year
100 kW array	183.2	\$ 11,250	\$ 7,329	\$ 18,580
50 MW distributed generation	91,615.0	\$ 5,625,161	\$ 3,664,600	\$ 9,289,761

These reforms aren't going to save the environment, aren't going to kill the fossil fuel industry, they will barely effect the North Dakota electrical market. What they will do is finally allow North Dakota residents to participate fully in the national market for renewable energy, and to have a greater degree of energy independence, and to do so in a market mechanism rather than a regulatory regime. This paper shows that as a concept, North Dakota can participate in the renewable energy revolution without placing a burden on other utility members, ensuring liberty for all utility members.

EIA State Electricity Profiles 2019 <https://www.eia.gov/state/analysis.php?sid=ND>

DSIRE: Database of State Incentives for Renewables & Efficiency <https://www.dsireusa.org/>

PVWatts, Solar Energy Industries Association <https://www.seia.org/>

PV Magazine “Utility scale solar power as cheap as 70¢ per watt and still falling” 12/20/2019

SB 2295 Net-Metering Bill
Testimony In Support Of

3 February 2021

Dear Members of the Committee:

As a North Dakotan I value my property rights, freedom to choose my sources of energy and local ownership of energy generation, which is why I support policies such as net-metering that allow the property owner to produce and control their own energy, and receive a fair rate for the energy they produce.

It is the 21st century, and I believe we all deserve the choice to generate and consume renewable energy, not just those who are very rich. But currently, unless an average person is lucky enough to have a service provider that offers net-metering or net-billing, it is very hard to make that choice. Here is a list of reasons net-metering makes sense for North Dakotans:

1. Net-metering and initiatives like Minnesota's community solar garden initiative get more of our citizens involved in our local economy, and strengthen ND communities - as the money we spend on energy doesn't leave our state, like it does with many centralized utility power generation models that large out-of-state generators benefit from more often than ND generators
2. ND has the potential to be 12th to 13th in solar production, however, we are last of all 50 states in solar production; therefore, we can draw a few conclusions from this: First, it is not physical limitations preventing solar production in ND, but rather, lack of healthy state solar policies. Second, we can change this by re-imagining our energy policies
3. With the large fluctuations in fossil fuel prices, ND needs to better diversify its energy portfolio & not put all its eggs in one basket
4. There is a lot of solar (and wind) forecast to come to ND this decade, and unless we have reasonable policies that allow people to sell the energy they produce for a fair price, we will most likely have large out of state companies building and profiting off our resources.
5. Adding net-metering increases citizens' involvement in energy production and therefore strengthens the grid and offers grid resiliency
6. Net metering encourages citizens to get involved with energy production

COMMON MYTH:

There are many myths and half-truths you hear repeated in ND. One of which is, "large scale generation is most profitable and therefore favored; whereas, small scale generation is expensive and will cause everyone's energy prices to rise if utilities purchase this at retail cost, so we need to discourage average citizens from connecting their smaller renewable energy systems."

TRUTH:

Large scale solar can generate cheaper electricity, but only if it can be used right where it's generated. Whereas, the costs small systems offset are higher, as is their relative benefit. Much energy is lost in transmission with large scale generation. In addition, every megawatt of solar installed adds \$2.5 million and 20 construction jobs to the local economy, and according to The Institute for Local Self Reliance (ILSR) "in its 25-year lifetime, a locally owned solar project will redirect an additional \$5.4million of electricity spending back into local pockets." For wind, local ownership returns as much as three times more jobs and three times greater local benefits as non-local ownership."

TYPICAL EXAMPLE OF THIS MYTH PROPAGATED LOCALLY:

A Local Utility's Representative claimed in an article recently that the community solar garden initiative (small scale solar) costs their residential customers more money than utility scale energy: The report says energy from a solar garden costs them between \$110 to \$125 per megawatt hour, while a larger utility-scale solar project costs about \$40 for the same power. One reason is because solar gardens are still smaller than utility-scale solar and are more expensive to build. On average, each residential customer pays about \$36-a-year extra to subsidize the program, the Utility Representative claimed.

CORRECTING THIS MYTH:

There are a couple reasons this PR is inaccurate and misleading:

- They count the costs of the community solar garden initiative without comparing them with any of the benefits. For example, this Utility will count the whole of \$125/MWh from community solar as a new cost, despite the fact that community solar is also avoiding ratepayers having to pay for coal, nuclear or gas fuel, power plants, and transmission lines, and the Utility will not include any of those avoided savings in its calculation.
- These benefits can be quite substantial, and can actually be disproportionately higher than the costs. For example, MN also has a Value of Solar process that calculates all of the ways that building solar energy avoids customers costs, eg. the costs customers do not have to pay for coal or gas fuel, and the avoided need to build new power plants and transmission lines. In MN, these calculations, which are run by the Utility based on a methodology approved by the state Public Utilities Commission, have usually come in between \$120/MWh and \$130/MWh. In other words, all ratepayers are saving \$120-\$130 per MWh generated from community solar, and paying \$110-\$125 per MWh, which works out to between \$20/MWh net savings to \$5/MWh net costs for ratepayers. The Utility Representative is dramatically distorting the picture by talking about the costs to ratepayers as extra but not accounting for the savings to ratepayers.
- The Utility Representative is comparing apples to oranges when comparing these costs to utility scale solar at \$40. Utility scale solar costs do not include the costs of expensive new transmission to move that energy from where it is produced to where it is used. Additionally, utility scale solar creates more line losses by relying on transmission, and because it is concentrated in one place, creates a much higher variability than the same amount of distributed solar, meaning that it requires expensive back-up generators. Institute for Local Self-Reliance has some really good analysis debunking the idea that large scale clean energy is cheaper when you look at the whole picture: <https://ilsr.org/is-bigger-best-in-renewable-energy-rerelease/>

Whether one examines net-metering, or similar community solar garden initiatives that function in a similar way (fostering local community-owned renewable energy), right now it is critical we examine our energy policies and consider the big picture, which is that we have an opportunity to create policies that can help our state - or lose out on millions of dollars for our local economy. Whether we realize it or not, many of our current policies and attitudes toward energy are preventing local North Dakotans from participating in small scale renewables and encouraging large scale out-of-state generators operating in our state. Ultimately, this weakens our communities and results in millions of dollars leaving our state. The math could not be clearer.

If we compare ND to Minnesota we see a very different approach to net-metering. One that combined with their community solar garden initiative, has made Minnesota solar leaders, having completed 5,800 solar installations, 882MW AC solar power capacity, and 4,602 people employed in the MN solar industry (according to Minnesota Dept of Commerce).

To conclude, if Minnesota and many states can offer net-metering and still profit, then so can ND utilities. And, in fact, many of our ND utilities and cooperatives, such as Cass County Electric Cooperative, Roughrider and MDU (only to name a few), have a form of net-billing, wherein the customer as generator gets to average and swap out kilowatt for kilowatt. If these cooperatives and utilities can do it, why can't all do the same? - We can. Because we know the energy economy of the future is in renewables, so let us enact policies, such as net-metering, and allow NDakotans to take a more active role in their energy sovereignty and we can all win. Distributed Energy Resources (DERs) create a more stable and resilient grid for utilities as well as economic benefits that make them valuable for our local economy.

Thank you for considering my testimony,

James Kambeitz
Bismarck, ND

ND
Living

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North Dakota Association of Rural Electric Cooperatives

201 Nygren Drive NW • P.O. Box 727 • Mandan, ND 58554-0727

February 3, 2021

To: Senate Industry, Business and Labor Committee – Senator Jerry Klein, chairman

RE: Opposition of SB 2295

From: Zac Smith, communications and government relations director, NDAREC

Chairman Klein and members of the Senate Industry, Business and Labor committee, my name is Zac Smith, and I am testifying on behalf of the North Dakota Association of Rural Electric Cooperatives in opposition to SB 2295. We oppose this bill for two primary reasons. The first is philosophical and the second is economic.

The philosophical reason is that we believe that local, democratically elected co-op boards of directors are better equipped than the Public Service Commission (PSC) to make decisions on electrical rate issues, such as net metering. While our electric co-ops are subject to some limited PSC jurisdiction to settle territorial complaints and approve siting of high voltage transmission lines, for example, co-op boards have always had the right and responsibility to set rates and terms of service for their customers. See NDCC 49-02-01.1. The reason for this is simple. Our customers are the owners of our cooperatives. These member-owners democratically elect directors to manage their cooperative. In fact, our 16-member distribution cooperatives together elect a total of 136 directors, almost as many legislators who serve in this Legislative Assembly. These directors, who are themselves electric co-op customers, understand the needs and wishes of the cooperative membership. If they don't, like legislators, they don't get re-elected.

Since our cooperatives operate on a not-for-profit basis, electric rates are set just to cover costs and provide a small margin for operating capital. These margins are later returned to members as the financial condition of the cooperative permits. Not only are co-op boards close to the membership, but they are knowledgeable about ratemaking principles. If the board or membership thinks it is a good idea to provide net metering, members can influence the

management of the cooperative at a local level. Senate Bill 2295, however, seemingly would put the ratemaking, specifically as it relates to net metering, under the jurisdiction of the Public Service Commission. Rather than allowing the local board to tailor policy to the needs of their specific cooperative, SB 2295 would throw 16 North Dakota electric distribution cooperatives under the ratemaking authority of the Public Service Commission. A commission which, up to this point, has never played any role in designing the rates of any one of these cooperatives.

In fact, many of our member cooperatives already have policies related to net metering. After my testimony, you will hear Paul Matthys, Vice President of Member & Energy Services for Cass County Electric Cooperative, provide testimony about what his electric cooperative is doing to address net metering without a state mandate. Our cooperatives developed policies, not only because of customer requests for net metering, but because of amendments to the Public Utility Regulatory Policy Act (PURPA), passed as part of the Energy Policy Act of 2005, which required state public utility commissions and large non-jurisdictional cooperatives, to consider whether net metering would advance certain goals of PURPA. These goals include: 1) conservation of energy supplied by utilities, 2) optimal efficiency of electric utility facilities, and 3) equitable rates for electric consumers. The point I want to make is simply this: each local co-op board is in the best position to determine what is efficient, fair and equitable for all of its members. SB 2295 seeks to have the Legislature determine just what may be financially advantageous to a select group of members; specifically, those members who have the financial ability to install large distributed generation units that will likely far exceed their own energy requirements.

That brings me to the second reason we oppose SB 2295, which is economics. What this bill proposes to do is establish an obligation for utilities to pay for excess distributed generation, such as solar or wind energy. This is being requested without regard to whether or not this makes any economic sense in a given situation. Electricity is used at the same time it is generated. Net metering assumes electricity can be stored and used later, but without battery storage, this is not true. Basically, the bill encourages the development of alternate energy resources that could potentially supply a large amount of energy our electric cooperatives may

not need, dump it into the electrical grid when it may not be needed, and compensate for that energy at prices well above market rates. The wholesale market produces hour-by-hour prices that provide generators, renewable and non-renewable alike, and consumers with important price signals that reflect real-time values. Energy produced and compensated through net metering, by contrast, is compensated on a basis that lacks foundation in either market or cost. Whatever compensation the Public Service Commission would set via SB 2295 would be out of market because it is a flat price, regardless of when it is produced or, for that matter, fails to reflect that the sources listed in SB 2295 may produce absolutely nothing many hours of the day. Thus, not only are net metering customers not paying their fair share of fixed costs, they are, by the operation of net metering, actually taking revenues away from the entity that provides the service. This sets up a situation where most electric customers would pay more for electricity, so a few favored customers could receive an unjustified benefit. Net metering customers have their electricity costs cross-subsidized by their neighbors who completely rely on the grid. Such a result is socially regressive, as it effectively transfers wealth from the less affluent cooperative member to the more affluent cooperative member who can afford to install their own generation.

I should point out that SB 2295 would have its greatest impact on electric cooperatives, as we serve most of the rural geography of the state, where larger distributed wind, solar, and other types of generation units allowed by SB 2295 would likely be located and where the distribution infrastructure is further spread out. Mandated net metering, which does not value the distribution system and infrastructure used to deliver power, further undervalues and underfunds the distribution system of a cooperative that must travel further and greater distances between meters.

In conclusion, it is our belief that our co-op boards of directors, which are charged by law with the responsibility to manage the business and financial affairs of their co-ops, should continue to be responsible for establishing policies that are fair and serve the best interests of their members. We believe that an individual co-op board, in its discretion, may choose to allow net metering under certain terms and conditions, or choose not to allow net metering.

That decision, like all other rate and service decisions, should be left to the elected board members of each co-op to determine based on local conditions, needs and the laws of economics.

NDAREC and its members urge a DO NOT PASS on SB 2295. That concludes my testimony. I would be happy to try to answer any questions you may have.

Senate Bill 2295

Presented by: **Brian Kroshus, Commissioner
Public Service Commission**

Before: **Senate Industry, Business and Labor Committee
The Honorable Jerry Klein, Chairman**

Date: **February 3, 2021**

TESTIMONY

Mr. Chairman and committee members, I am Commissioner Brian Kroshus. I am here on behalf of the North Dakota Public Service Commission to provide some background information on SB 2295 so the committee can better understand the status of net billing in the State of North Dakota, and issues to consider.

In the early 80s, the Public Service Commission promulgated rules that addressed qualifying facilities and cogeneration for investor-owned utilities (IOUs). These administrative rules have been a structure with which the commission have implemented utility power purchases and net energy billing. Currently, all three of North Dakota's regulated electric utilities have an approved net energy billing tariff.

SB 2295 establishes a statutory framework for net-metering that, in many ways, is consistent with what is already occurring in admin rules with our state's investor-owned utilities. However, there are some notable differences that I will point out:

SB 2295 requires the PSC to determine cost benefit of an electric provider's net metering program. In large part, the Commission already considers the cost and benefits, and ratemaking structure as it applies to IOUs when it evaluates tariffs, but this would extend its evaluation to rural electrical cooperatives as well.

Although the Commission's jurisdiction does result in some ancillary regulation of cooperatives in areas such as siting and electrical safety, this would require the Commission to delve deeper into areas in which the Commission does not currently have jurisdiction.

In administrative rule, an IOU pays the avoided cost for energy production in excess of consumption on a monthly basis. SB 2295 allows the producer to get kWh credits at the retail rate.

SB 2295 provides that metering costs if other than a standard kWh meter must be determined by the PSC after notice and opportunity for hearing. The customer pays a maximum of 25% of metering equipment cost. The language also appears to provide that an electric provider may not require an interconnection agreement that results in additional burden to the generating customer. This may result in costs being passed on to other customers.

This is not the case under the Commission's administrative rules. The Commission's administrative rules provide that the customer should pay for the meter and interconnection costs and these costs should not be borne by other ratepayers.

For just a couple clean-up items, 49-20.2-05(5) provides a confusing explanation regarding carbon credits and renewable energy credits (RECs) and how they are associated with distributed power generation and retained by interconnected power generators. This terminology is confusing and should be clarified as to the intent of the attributes of any carbon credits and RECs. Also, throughout the bill, it is stated that the Commission shall provide notice of its

proposed action and an opportunity for public comment. This confuses procedures and it may be beneficial to change the terminology to “notice of opportunity for hearing and comment.”

Mr. Chairman, this concludes my testimony. Thank you for the opportunity to present this information. I will be happy to answer any questions.



Testimony in opposition to SB 2295
Paul Matthys – VP of Member and Energy Services
Cass County Electric Cooperative
Fargo, ND

Before the North Dakota Senate Industry, Business, and Labor Committee
February 3, 2021

Mr. Chairman and the Senate Industry, Business, and Labor Committee members, my name is Paul Matthys, and I serve as the Vice President of Member and Energy Services at Cass County Electric Cooperative headquartered in Fargo, ND. Thank you for this opportunity to appear in opposition to SB 2295.

NET metering is an accounting or billing process that allows consumers who generate some or all of their power to offset what they purchase from their cooperative or utility, regardless of the time of day it was generated or used. If someone's solar system generates electricity and their home does not use it, the cooperative or utility buys the excess energy at retail rates (under a NET metering policy).

The retail rates of the electric utility include fixed costs which consists of transmission and distribution power lines, transformers, power poles, and system maintenance. All of these components (and many more) are required to bring power to your home. When a utility company is mandated to pay a retail rate for energy produced by the consumer back to the grid, that consumer is ultimately using the grid for free, and other consumers are footing the bill. NET metering essentially provides a retail rate for self-generated electricity, reducing that consumer's contribution to help pay for the electric grid.

The electric utility grid is not a battery, and it is not possible to store energy on it. Electricity is consumed or used at the same time it is generated or produced. NET metering presumes electricity can be stored and used later – this is not true.

Cass County Electric's Board of Directors did adopt a NET metering policy under the federal Energy Policy Act of 2005. The policy contained some limitations to protect both the Cooperative's financial well-being and its physical well-being. One limitation was to cap the aggregate amount of NET metering at a capacity equal to one-tenth of 1% of the highest non-coincidental peak. In 2011, the limit was met, and the NET metering policy was closed.

Cass County Electric, however, didn't close the door to member-owned renewable systems. We opened a program called NET billing. NET billing has almost all of the same features as NET metering, except the ability or idea to "bank" excess energy produced by member-owned renewable systems (e.g., solar). NET billing encourages members to "right-size" their renewable energy system for their use. NET billing allows members to install a renewable energy system of their own, and the Cooperative will buy back the excess energy.

In summary, NET metering is not suitable for an electric cooperative or its member-owners as a whole. NET metering benefits only those that have renewable energy systems that have NET metering. Cass County Electric Cooperative opposes SB 2295 as an unnecessary intrusion into local governance, and we urge your DO NOT PASS recommendation.

Senate Bill 2295
Testimony in opposition
Industry, Business, and Labor Committee, Chairman Klein
Carlee McLeod, president, USND

Chairman Klein, members of the committee, I am Carlee McLeod, President of the Utility Shareholders of North Dakota (USND), and I come before you to testify in opposition to this bill on behalf of my members, including ALLETE, Xcel Energy, Otter Tail Power Company and Montana-Dakota Utilities.

While we understand the desire of a customer-generator to maximize the worth of his or her generation, the simple fact is that the cost of electricity is comprised of many factors that the customer-generator does not bear, including the cost of fuel, capital costs of the generator, transmission system, distribution system, and administrative costs of metering and billing.

Each investor-owned utility goes through a regulatory process to show the costs of its electricity and justify the rate it may charge customers. The regulatory process aims at keeping the rate paid by each customer as low as possible and fairly assessed across the customer base.

Requiring a utility to pay a customer-generator anything more than the avoided cost of electricity requires other customers to subsidize the difference between the two electricity sources. We believe that is blatantly unfair to all non-generating customers. We strongly object to this unfair proposition.

Further, while nothing forces a customer to use any amount of electricity available from a utility, this bill holds a utility captive to take the electricity a customer can produce, potentially at a rate higher than a utility would pay if allowed to purchase alternative sources.

In closing, this bill is unnecessary, as administrative rules promulgated and enforced by the Public Service Commission already provide for net metering programs which strike an appropriate balance between customer-generator concerns and the general good of the non-generating consumer.

For these reasons, we oppose this bill.



February 3rd, 2021

Re: SB 2295 Neutral Testimony

NET METERING IN NORTH DAKOTA

Chairman Klein and members of the committee, my name is Ryan Warner. I am co-owner of a local solar development company headquartered in Bismarck. I am here today to provide neutral testimony on SB 2295, share an overview of our state's current net metering regulations, and provide some context as you weigh the decision before you.

"Net metering" is a billing procedure that allows small scale electricity producers who are interconnected and providing surplus power to the grid to offset the cost of power they consume. Currently, North Dakota statutory guidance on net metering is provided by ND Century Code 69-09-07-09.3, which states "Qualifying facilities with a design capacity of one hundred kilowatts or less are entitled to net energy billing where the output from the qualifying facility reverses the electric meter used to measure sales from the electric utility to the qualifying facility." In other words, this law entitles producers to a one-for-one credit for all energy they provide to the grid, provided they are no bigger than 100 kW. This law only applies to "electric public utilities," which are defined in ND Century Code 49-03-01.5.2 as "privately owned supplier[s] of electricity offering to supply or supplying electricity to the general public."

There are three privately owned utilities operating in North Dakota – MDU, Ottertail, and Xcel energy. These operate predominantly in the western, central, and eastern parts of the states respectively.

North Dakota is also home to 18 rural electric cooperatives operating predominantly in the more rural areas of North Dakota. These companies are not currently under any net metering regulation.

A HODGEPODGE OF REGULATORY ENVIRONMENTS

Given the relative brevity of North Dakota's current net metering regulation, as well as a highly fragmented service territory map of privately and cooperatively owned electric service providers crisscrossing the state, net metering policy in North Dakota varies greatly.

Some utilities provide net metering as calculated on a monthly basis, some provide net metering as calculated on a yearly basis; some provide net metering without a cap on the amount of kW eligible for net metering, some provide it with a cap; and some do not provide net metering at all and instead provide reimbursement at their "avoided cost".

As a small business owner developing solar across North Dakota over the last 3 years, I have become somewhat of an expert on net metering. Right now, we have a major hodgepodge of regulation in this area, one that negatively impacts both consumers and businesses.

Let me provide a few examples of how this hodgepodge of regulation adversely affects customers and businesses.

As a part of the service we provide to potential customers, we perform return on investment analysis on every project proposal. Given the way the regulatory environment shifts across the state, these analyses are often custom-created after careful consideration and communication with the utility. This creates high customer acquisition costs.

Also, not only do the specifics of each utility's net metering policy greatly affect the return on investment, they also dictate the best way to optimize system performance as a function of return on investment. For example, if a utility has a net metering policy that creates a credit for credit arrangement, we will take the customer's yearly consumption average, match it to the appropriate solar photovoltaic (PV) array, and use microinverters to turn the direct current (DC) solar electricity into grid-ready alternating current (AC) electricity and then wire everything to export energy directly to the grid. However, if the utility does not have a net metering policy, and instead only provides "avoided cost" reimbursement for energy exported to the grid, then we will do a more detailed analysis of monthly consumption and specific electric load profiles so we can best match month to month consumption with month to month production and create the most appropriate PV array. Once that is finished, then we wire it up with a hybrid central inverter to intelligently control and route the energy in the most economically optimized fashion. Hybrid inverters allow a customer to consume their own electricity onsite, but can also export electricity when production exceeds onsite consumption. This optionality gives each non-net metered customer the most optimized return on investment because it limits export to the grid to only those times when they are over-producing. Given that "avoided cost" is a mere fraction of the retail rate, customers are incentivized to only produce what they can consume onsite.

As a matter of public policy and economic policy, it is well-understood that lawmakers should strive to create easy-to-understand and universally applicable law when possible. SB 2295 achieves this end – it simply clarifies the main features of the current net metering regulations across the entire state, applies them to all electric providers, and levels the playing field for everyone. Especially in the case of privately-owned utilities, there is no substantial difference between current law and SB 2295.

ELECTRICITY PROVIDER CONCERNS

Electricity providers have brought up concerns about this bill; namely, that it will unfairly

shift grid and line maintenance costs from producers to non-producers. As they put it, net metering requires non-generating customers to “subsidize the difference between the two sources of electricity”. This argument does not present a full or accurate picture of what actually happens when distributed energy is fed back into the grid.

To create an accurate picture of how distributed energy interacts with the grid, we need to first engage in a thought experiment. Imagine a customer installs a 10kW solar photovoltaic rooftop system. This system will produce approximately \$1100 in electricity offset annually over a 25 year lifespan. In situations when the customer overproduces relative their onsite consumption, excess electricity is exported to the grid after running through a state-of-the-art inverter that maintains ideal voltage and power quality when the electricity touches the grid. After reaching the grid, the power travels downstream to the nearest meter, where it is consumed by that customer’s neighbor.

Electricity providers try to make the argument that solar producers are shifting grid and line maintenance costs to non-solar producers but what they aren’t telling you is that solar producers only use a tiny fracture of the grid - the amount of line required to get to their neighbor’s house - to export to the grid. In fact, as more and more people self-generate, this behavior drives less overall grid usage, and ends up lowering overall grid maintenance requirements in the process.

Further, feeding electricity back into the grid also provides needed grid services, especially in rural parts of North Dakota that end up being on the wrong end of a service line. This is because the farthest outposts on any electrical grid require the utility to send enough excess energy from the feeder station to account for line loss and maintain proper voltage and power quality all the way to the end of the line. Feeding solar energy back into the grid at these locations can actually lower the amount of overall energy that the utility is required to send from the feeder line; and in the process make it easier for those utilities to maintain power quality to all their rural customers on that same line.

Utilities have presented scenarios where net metering *might* hypothetically shift costs to non-generating customers. Given that North Dakota already has net metering in certain areas like Bismarck and Fargo, it would seem easy to provide evidence of such cost-shifting. After all, the current net metering regulation has been in place for over 20 years, which is ample time to test this hypothetical “cost shift”. Not only that, over 40 other states in the country have similar net metering laws. If there was evidence of cost shifting, I think we would have heard about it at this hearing. However, there is no evidence. This is because it is not happening.

To understand why the cost shifting hasn’t happened, we need to understand a little about utility billing practices. Now, bills are often hard to understand, and often have up to 20 different line items, but simply stated retail rates are really composed of three main components - wholesale power rate, peak demand charges, and profit margin. For residential customers, demand charges are included as a percentage of their overall rate; for commercial customers, demand charges are carved out and assessed on a monthly

basis with a separate (and much larger) demand charge rate. As a result, commercial customers typically have a lower hourly kWh rate; but with much higher overall electricity costs.

Now, going back to our 10 kW rooftop solar system customer - his overall offset of electricity amounts to around \$1100 in annual retail electricity sales. In practical terms, when he exports energy, this shifts utility behavior in several small ways. First, it lowers wholesale power requirements. These agreements include ranges of purchase options, and simply result in less wholesale commerce. Second, depending on time of production and the overall real time electricity consumption on the grid, distributed energy can shave peak demand and offset expensive real time power pool purchases. Third, as end user electricity requirements are lessened by an influx of customer-generated energy, the utility benefits from avoided energy generation, avoided generation capacity, avoided transmission capacity costs and avoided line losses, among many other measures that end up reducing overall utility costs.

Of course, utilities may respond to these facts by saying that “cost shift” hasn’t been empirically validated because the market penetration for distributed generation is too low. As more and more people self-generate, the argument goes, they will begin to create more and more opportunities for “cost shift”.

Now, nobody can predict the future, especially when considering so many macro and micro economic variables but the fact is electric providers already have a mechanism to capture cost-shifting among different classes of customers - it’s called a meter fee. The meter fee represents the true cost of being “grid connected”. Whether a customer uses 1 kWh or 1000 kWh, the meter fee is the same and it is there to capture the cost of being connected. If utilities are truly worried about fairly spreading infrastructure costs evenly across their network of customers, then they can simply adjust the meter fee as needed.

THE MICRO AND MACROECONOMICS OF SELF GENERATION

Setting aside for a moment the concerns of the utility, and the concerns of a small solar developer like me, and the concerns over climate change, I would like to conclude by speaking about the micro and macroeconomics at play in North Dakota, and also include a way to make SB 2295 better.

As we all know, North Dakota is a world leader in the production of energy resources, from the Bakken oil patch to our lignite reserves and all the way to the wind farms that are increasingly dotting our horizon. We do a great job producing power, and we’ve been doing it for a long time.

However, all these opportunities have been developed and funded by outside capital. So, while North Dakota gets jobs and collects taxes, the real substantial economic activity leaves the state, year after year. In this regard, North Dakota is much like a third world

country, we exist primarily for outsiders to come in and exploit our natural resources and take the majority of the wealth away.

Personally speaking I feel that *people* are North Dakota's greatest natural resource. And the real opportunity here with SB 2295 isn't necessarily about getting more distributed renewable energy on the grid, or even about climate change, it's about setting up an pathway that allows regular people to *own* their energy production, and do it in a way that keeps all that wealth and economic activity within the borders of our state.

Already, there are large out-of-state solar development companies coming to our state and offering local farmers solar development lease options to develop utility scale solar projects on their land. Just like oil and wind developers before them, these developers are taking on outside investment dollars to develop multi-million dollar utility scale installations in North Dakota, with the idea of selling their electricity on the wholesale power market and exporting their profits to Florida, California, or New York state.

But, unlike oil and wind, we have a way to incentivize small local investment in solar - and it sits before you right now in the form of SB 2295.

As such, there are two paths in front of us as North Dakotans - we can let solar development run the same course as oil and wind, and allow all that economic activity to escape the state like we always have; or we can set a new path of energy sovereignty.

To illustrate the two paths before us, I will share two anecdotes. The first comes from Turtle Mountain Community College. With the help of a 660 kW wind turbine, geothermal wells, state-of-the-art building automation and optimization techniques, and a credit-for-credit net metering arrangement with OtterTail Power, Turtle Mountain Community College is 99% sustained by renewable resources. With these implementations and with the net metering arrangement with OtterTail Power, the college has been able to shave over \$100,000 annually from its building operational costs, and has subsequently reinvested those savings into student services and further infrastructure upgrades. This is a great North Dakota story about self-reliance and energy independence.

The other anecdote comes from Cody Two Bears in Cannon Ball. Cody's non profit organization - Indigenize Energy - partnered with GivePower in 2018 to build a 300 kW solar installation west of Cannon Ball, North Dakota. The money generated by the installation is used to fund the local community center in Cannon Ball.

Now, unlike the net metering arrangement that Turtle Mountain Community College enjoys up in Belcourt, Cody's local electricity provider - Mor-Gran-Sou - only reimburses self-generation at its "avoided cost" rate, which is approximately 1/7th of the local retail rate. Incidentally, even though it is one of the poorest counties in the entire country, Sioux county has by far the highest electricity rate in North Dakota. So, instead of potentially offsetting \$70,000 of his community's electrical costs per year, Cody had to settle for

compensation at the avoided cost of the electricity he produces, to the tune of roughly \$10,000 per year.

These stories take on vastly different endings depending on the net metering policy in place. With a state-wide universal net metering policy, there will be more stories like the one in Turtle Mountain. Regular people and small business owners in rural parts of North Dakota will be able to take a meaningful ownership share in their future, and create their own economic freedom.

An Improvement to SB 2295

Of course, laws and regulations should try to balance all perspectives and create win-wins for every segment of society. One way SB 2295 could be improved from the utility point of view is to include a mechanism to allow them to incentivize their customers to provide peak demand reduction.

As it stands now, over 60% of a distribution utility's costs are eaten up with demand charges assessed by their wholesale power provider or from purchases made in the real time power pool during peak demand. Distributed energy resources like solar PV and battery storage can be optimized to deploy energy during these periods of peak demand. As such, I have submitted an amendment to SB 2295 that would allow electric providers to provide two-for-one credits to producers, where each kWh that is provided to the utility during a period of peak demand is credited back to the producer as the equivalent of two (2) kWh. Please see the appendix of my written testimony to read the amendment language.

This concludes my testimony. Thank you for your time. I will take any questions you might have.

APPENDIX - AMENDMENT TO SB 2295

49-20.2-03

4. Notwithstanding the requirements stated in subsections 1-3, each electric provider may compensate any customer in their territory for any kilowatt hour provided to the electric provider during a period of that electric provider's peak demand with a credit equivalent to two (2) kilowatt hours. Credits created in this manner shall never expire but may be converted to legal tender based on the average kilowatt hour price charged by the electric provider over the preceding 12 month billing period. Conversion of kilowatt credit hours created in this manner can be converted to legal tender by unilateral consent of the customer or electric provider.

**BASIN ELECTRIC
POWER COOPERATIVE**A Touchstone Energy® Cooperative 

Bill Number	Name	Lobbyist #	Support	Oppose	Neutral
SB 2295	Jean Schafer, Basin Electric	8		X	

We oppose this bill and would reiterate the testimony provided by the ND Rural Electric Association.

January 29, 2021

To Whom It May Concern,

This letter is in support of the Bill SB2295 for multiple reasons. The 2 big reasons are jobs and the way current utilities pay for local utilities ends up double charging transmission and distribution fees for any local energy produced that touches the grid. What is so disturbing about the second big reason is local energy has no inherent transmission and negligible distribution so why are these fees attached to local people's energy? This is extremely unfair to the people of North Dakota.

According to the January 2017 DOE US Energy and Employment report (See Table 1, Page 29) when it comes to generating electricity solar has more jobs than coal, natural gas, wind, and nuclear combined. Yet North Dakota probably still ranks last in the nation as it has for many years when it comes to solar energy production, likely still under 1MW for the entire state. A huge advantage of solar is it can be generated across the entire state with decent production, so every community can benefit from its use, even urban areas. It is truly unfortunate that our state has missed out on the biggest job producer from solar installations because it pays some of the lowest rates in the nation for its energy.

The 2 utilities that service Fargo offer some of the worst rates in the nation when it comes to paying people for generating local energy. This happens because basically the utilities arbitrarily charge transmission and distribution fees to the local energy producer for every kWh touching the grid. These fees add up to approximately 75% of the value of the local kWh produced. With one utility the local producer gets 2.4 cents/kWh with the utility keeping the remaining 7.6 cents/kWh out of 10, the second utility the local producer gets 2.8 cents/kWh with the utility keeping the remaining 8.2 cents/kWh out of 11. The utilities then charge the local consumer the same transmission and generation fees on the same energy a second time. Double charging fees on the same energy to two different North Dakotans is clearly unfair. What makes it even worse is local energy at the level suggested in the bill is generated grid ready to go having the right voltage and frequency. Local energy bypasses the transmission process that upscales the voltages, moves it a long distance, then downscales the voltages. Yet this transmission fee is attached to local solar energy even though there is no transmission process. Local energy at the level of the bill also has negligible distribution costs travelling especially urban areas very short distances when it is used by neighbors, as my solar energy generated never leaves my block with someone always using it. The consequence is the local producer spends all the money on building the local energy generation system with the local utility spending nothing on the system, but for any energy touching the grid the local utilities in Fargo keep an astounding 75% of the overall energy value. This relationship is extremely unfair to the people of North Dakota. A real-life example of this is last year my company, Community Electrification, has an opportunity to potentially build a solar panel system from \$60 000 donated to the local YWCA women's shelter. Unfortunately, Covid prevented the project from happening. Had it actually been built with the current payback by Fargo utilities the YWCA depending on how much energy it used immediately without going to the grid would get ~\$60 000 over 30 years of generation, but the local utility would get the remaining ~\$60 000 of the total \$120 000 economic value in the time period from the donation without spending a dime. The local utility according to its yearly reports to investors is doing very well financially.

Here is a summary of all the positive aspects of local energy production especially solar that are being lost because of the low rates utilities pay for local energy:

- 1) Local solar energy is fabulous for directly handling long-term energy loads at an individual level.
- 2) Local energy production is designed to save people in North Dakota money from their energy bills.
- 3) Local energy is the cheapest form of energy having no transmission costs and very little if any distribution costs. Local energy is generated at the right voltage and frequency making it the best form of energy because it is always used in our community.
- 4) The 2 small residential solar projects accomplished in Fargo in 2019 involved 4 local companies working together with 10 local people directly working on the installations, strongly promoting local jobs.

- 5) Local clean energy when generated doesn't hurt or kill people especially our children from toxic pollution & doesn't harm the environment.
- 6) Local solar energy in comparison to other forms of energy has no significant down time.
- 7) In an emergency, our community would want as much local energy production as possible.

In conclusion, I have personal issues selling solar panels to people in North Dakota when I know the utilities are basically giving the worse prices in the country for their energy by double charging transmission and distribution fees on the people's energy when there is no transmission and negligible distribution with the people's energy. My company is more likely to do local energy projects in Moorhead and the surrounding area in Minnesota that gives their people full value for their energy. It is no wonder the utilities like to keep things the same when they invest nothing a project and keep 75% of the value for energy that goes on the grid. I voluntarily asked one local utility to return to giving local producers full value for their energy. The local utility presented completely false information having nothing to do with solar energy on why doing so was bad for the utility, then after showing them their big mistake told me nothing I could say would change things. Leaving it up to the utilities is not a good strategy. There are people in our state wanting to do local energy projects but when they find out how things financially work with their utility the vast majority quickly lose interest. Really the people of North Dakota suffer the most because of this as it is simply not economically viable to generate their own energy or they are missing out on well-paying local energy jobs.

Sincerely,

Dr. John Bagu

Dr. John Bagu
President, Community Electrification

Chairman Klein and members of the committee,

I am requesting support of SB 2295. North Dakota needs an all above energy strategy. SB 2295 will create more jobs for installing rooftop solar panels. Currently there are very few solar installers in the state and that is due to the poor return on any excess power generated from rooftop arrays. SB 2295 addresses the issue without allowing someone to install a system that far exceeds their energy use.

Producing energy where it is needed also provides reliability. In the event of an extreme weather event, rooftop solar arrays will provide some energy during the day if power lines are down. The past year had shown us that the more resilient we can make our communities the better it is for everyone.

For these reasons I ask that you support SB 2295.

Thank you for your consideration,

Jay Mosbrucker

West Fargo

Dear Senate IBL Committee Members:

Thank you for the opportunity to speak to the necessity of Net Metering. Net Metering is an opportunity for the North Dakota citizens to use a natural resource of our state for the benefit of the consumer and the electrical service provider.

The citizens who would participate in a Net Metering plan will be able to provide his/her own self-produced electrical power to reduce his/her power costs. The power provider will have their power supplemented. This will reduce the need for more power plants and more complex and costly transmission lines. The self-produced power is available and the excess power produced can be sold back to the power company, reducing the citizen's power costs.

Net Metering is a win for the North Dakota citizen and a win for the power companies.

As the price of electric service increases, it is wise to look to solutions of which Net Metering is a most simple and direct solution.

Honorable members of the North Dakota Senate Committee for Industry, Business, and Labor:

I am humbled to have this opportunity to submit written testimony in favor of SB2295, relating to net metering of electricity.

The state of North Dakota prides itself as a state where self-reliance is granted a place of high esteem. As we confront the specter of environmental changes forced on us by greenhouse gas (GHG) emissions, many North Dakotans are looking for methods of reducing our own GHG footprint. Of executing some self-reliance and power for ourselves, both helping our ecosystem and our households in the same step. One of the primary areas of interest in the search to lower our emissions is our electric use, and home solar is the easiest and most dramatic option to address this need for change. Unlike some states, who early net metering programs seemed to give a distinct advantage to consumers, Bill No 2295 seems to present a fair split in both costs, and keenly, only allowing credits to roll for 12 months, at the end of which any outstanding credit would be eliminated and the cycle reset. While I would love for all residential and small business electric use to be decentralized long-term, this bill represents an outstanding transitional method to bridge us from traditional electric sources to personal solar generation.

I know that, if passed, I would be amongst many residents that would spur local spending as I would likely look for contractors to install solar within the next 36-48 months. As more consumers likely opt into home solar, the benefits will potentially grow beyond their immediate households. Solar power generation and sharing by consumers, distributed by the utility at fair market rates, will enhance the reliability of the grid and result in economic benefits including the obvious – installation services – and the less visibly tangible, such as cleaner air. Additionally, local solar installations (both rooftop and community, which should also be encouraged) will help North Dakota avoid reliance on neighboring states for electrical generation capacity as the nation shifts its energy strategy.

Thank you for your attention on this testimony, and for what I hope is strong support of this critical and future oriented bill. If my duties permit, I will attempt to log into the call the hearing to provide additional oral testimony.

V/r,

Patrick E. Sommer
Delegate, International Dark Sky Association
Member, Red River Valley Climate Action
Resident of District 27, Fargo, North Dakota
Sommer182@gmail.com
701-552-2393

2 February 2021

TESTIMONY IN FAVOR OF NET-METERING BILL: SB2295

As a North Dakotan, who has worked as a solar installer on over 400 solar photovoltaic installations, I am strongly in favor of net-metering.

I worked as a solar installer and licensed electrician in the State of Colorado for 4 years. I went to school for renewable energy and have made this my career. A year ago I returned to my home town of Grand Forks, ND, and have continued installing solar here with other colleagues here at home and in the Bismarck area. It is very challenging to work in renewable energy here in ND because, quite frankly, our policies are inhibiting our citizens from participating in clean energy. In fact, all states receive grades for their solar policies from various energy experts, and consistently, ND receives an "F" for it's poor solar - and even anti-solar - policies at a state level. Such as the Annual State Rankings Report from Alternative Energy HQ. We are dead last in solar production, despite the fact that we have such enormous solar potential. North Dakota is rated very high in days of sunlight and solar energy potential of the 50 states, so there is no reason for us to be behind everyone - other than our lack of solar-friendly policies. Minnesota has on average much better solar buyback rates and net-metering is more widespread, and as a result, Minnesota has over 4,000 people working in the solar industry.

There is no reason we can not diversify our state's energy economy. We now have an opportunity to change this by creating fair policies that give our citizens the chance to generate clean energy and receive fair compensation when those electrons are fed back into the grid. This bill is one step in the right direction - and long overdue.

Thank you for your consideration.

Kyle Leake

2021 SENATE STANDING COMMITTEE MINUTES

Industry, Business and Labor Committee Fort Union Room, State Capitol

SB 2295
2/3/2021 PM

relating to net metering of electricity

2:56 PM

Chair Klein opened the meeting at 2:56 p.m. All members were present. Senators Klein, Larsen, Burckhard, Vedaa, Kreun, and Marcellais.

Discussion Topics:

- Additional electric costs

Senator Vedaa moved a DO NOT PASS [15:03].

Senator Kreun seconded the motion [15:04].

[15:04]

Senators	Vote
Senator Jerry Klein	Y
Senator Doug Larsen	Y
Senator Randy A. Burckhard	Y
Senator Curt Kreun	Y
Senator Richard Marcellais	N
Senator Shawn Vedaa	Y

Motion passed: 5-1-0

Senator Burckhard will carry the bill [15:05].

Chair Klein ended the hearing at 3:05 p.m.

Isabella Grotberg, Committee Clerk

REPORT OF STANDING COMMITTEE

SB 2295: Industry, Business and Labor Committee (Sen. Klein, Chairman) recommends **DO NOT PASS** (5 YEAS, 1 NAY, 0 ABSENT AND NOT VOTING). SB 2295 was placed on the Eleventh order on the calendar.