

2023 SENATE ENERGY AND NATURAL RESOURCES

SB 2137

2023 SENATE STANDING COMMITTEE MINUTES

Energy and Natural Resources Committee Peace Garden Room, State Capitol

SB 2137
1/19/2023

A BILL for an Act relating to the membership of the energy policy commission.

9:00 AM Chairman Patten called the hearing to order.
Chairman Patten, Senators Magrum, Beard, Boehm, Kannianen, Kessel present.

Discussion Topics:

- Coal, gas, oil, wind
- Renewable energy
- Natural resources
- Solar energy
- Investments
- Lower costs
- Collaboration
- Preservation
- Long term investments
- Risk free investment
- Grid
- Battery backup
- Lignite power

9:03 AM Senator Mark Weber introduced the bill.

9:06 AM Pete Silbernagel, resident of Bismarck ND, testified. #14515

9:14 AM Jamie Zens, McKenzie ND small business owner, testified. #14519

9:16 James Kambeitz, Co-Owner Light Spring Solar, testified. #14478

Additional written testimony:

Jason Ulmer, resident of Bismarck. #14464

Jay Schulte, resident of Bismarck. #14484

9:33 AM Chairman Patten closed the hearing.

Patricia Wilkens, Committee Clerk

2023 SENATE STANDING COMMITTEE MINUTES

Energy and Natural Resources Committee Peace Garden Room, State Capitol

SB 2137
1/19/2023

A BILL relating to the membership of the energy policy commission.

10:05 AM Chairman Patten opened the meeting.

Chairman Patten and Senators Kessel, Kannianen, Boehm, Beard and Magrum are present.

Discussion Topics:

- Public Service Commission
- Powers Lake Project
- Disposal of panels
- Land degradation
- Commission members
- Competition
- Combined renewable energy
- Fossil fuels

10:05 AM Chairman Patten reopened the public hearing.

10:06 Jamie Zins gave oral testimony.

10:10 AM James Kambeitz, Co-Owner, Lights Spring Solar gave oral testimony.

10:11 AM Chairman Patten closed the public hearing.

10:11 AM Chairman Patten closed the meeting.

Rick Schuchard, Committee Clerk

2023 SENATE STANDING COMMITTEE MINUTES

Energy and Natural Resources Committee Peace Garden Room, State Capitol

SB 2137
1/19/2023

A BILL relating to the membership of the energy policy commission.

2:55 PM Chairman Patten called meeting to order.

Chairman Patten, Senators, Magrum, Beard, Boehm, Kannianen, and Kessel present.

Discussion Topics:

- Empowered Commission
- Public Service Commission
- Powers Lake Project
- Disposal of panels
- Land degradation
- Commission members
- Competition
- Combined renewable energy

3:11 PM Senator Magrum moved DO NOT PASS on SB 2137.

3:11 PM Senator Kannianen seconded the motion.

Senators	Vote
Senator Dale Patten	Y
Senator Jeffery J. Magrum	Y
Senator Todd Beard	Y
Senator Keith Boehm	Y
Senator Jordan L. Kannianen	Y
Senator Greg Kessel	Y

Motion passed 6-0-0

Senator Magrum will carry the bill.

3:12 PM Chairman Patten closed the meeting.

Patricia Wilkens, Committee Clerk

REPORT OF STANDING COMMITTEE

SB 2137: Energy and Natural Resources Committee (Sen. Patten, Chairman) recommends **DO NOT PASS** (6 YEAS, 0 NAYS, 0 ABSENT AND NOT VOTING). SB 2137 was placed on the Eleventh order on the calendar. This bill does not affect workforce development.

TESTIMONY

SB 2137

January 19, 2023

Re: Senate Bill No. 2137

Dear Legislators,

My name is Jason Ulmer and I'm a resident of Bismarck, ND.

I'm testifying today in support of Senate Bill No. 2137 which proposes to add a member from the Solar Industry to the ND energy policy commission.

My experience in the solar industry is the result of installing a 100% off-grid power system at a rural business property I own. The off-grid system is one of few, if not the only, 100% off-grid business structures in the State of ND.

The reason for choosing solar energy as opposed to traditional electricity from a local Electric Coop was due to the costs of installing traditional power, and inability to procure easements from neighboring property owners for a traditional power system.

I have come to find that solar power is a viable source of energy in ND. The solar energy production results are much better during the summertime when ND experiences more daylight hours than in the wintertime when daylight hours are minimal. Therefore, I wouldn't solely rely on solar power as my only source of power during the winter months and recommend supplementing solar power with traditional energy sources, or a standby propane generator in my particular off-grid situation.

The solar panels produce energy which is then stored in 56KW/h battery system which generally holds 2-3 days of ordinary electrical usage when there is minimal sunlight to generate power. To date the propane generator has not been needed in the summer months due to longer daylight hours providing sufficient power. The generator has only been needed to supplement power in the winter months.

In the wintertime, the propane generator supplements the solar production and runs for about 1 hour to fully charge the battery for another 2-3 days when there is minimal sunlight producing on the solar panels or if it's snowing. A larger battery system could provide more hours/days of energy and is on my list for a potential solar expansion project in the future. The addition of more battery storage capacity would reduce the frequency of times the propane generator is needed to run in the winter.

When taking my off-grid example and applying it to a traditional grid-connected home, a person can see the implications for large scale conventional use. In a conventional grid-connected home, a homeowner could expect to experience reduced reliance on traditional energy sources in the summertime due to their solar production and battery storage. Any excess electricity could then be sold back onto the grid depending on each homeowner's power usage needs. Then in wintertime, the homeowner would rely mainly on traditional grid-power for most of their needs.

Further discussion is needed on selling the power generated by homeowner solar panels back onto the grid. I've not had personal experience with selling power onto the grid but have heard of frustration from others who've attempted to sell solar power back onto the grid in ND.

Having a member from the solar industry on the energy policy commission is the first step in making solar power relevant in the State of ND. Without a member on the commission ND will continue to fall behind other States in the industry. There are major negative implications of not having a solar representative on the commission which extends beyond power generation itself. There are also the lost opportunities for manufacturing and mining of natural resources in our State for production of solar panels and battery systems.

In summary, solar power is relevant in North Dakota when combined with traditional power sources. I don't see solar as the one-and-only answer going forward, we will absolutely need a majority of traditional power sources/fossil fuels in the energy mix. However, solar energy can allow us to reduce our reliance and amount of usage of traditional power sources/fossil fuels so that our fossil fuels can be leveraged further into the future. Solar energy can also provide jobs in manufacturing/mining/installation among other occupations here in our State.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Jason Ulmer', with a long horizontal flourish extending to the right.

Jason Ulmer

18 January 2023

Mr. Chairman and members of the Senate Committee on Natural Resources:

My name is James Kambeitz. I am the Co-founder of Lightspring Solar in Bismarck, and I'm here to testify in support of SB 2137, which will help protect North Dakota residents and businesses in this quickly growing energy economy, and will also help the State achieve its economic objectives.

Lightspring Solar has installed some of the largest solar systems in the state, which can be seen on colleges, businesses, farms, shops and homes. Examples of our installations are found here in Bismarck and Mandan, at the Wahpeton State College of Science, United Tribes Technical College, NHS College in New Town, on the large PRx Manufacturing Factory in Fargo, on NC Builders in Rugby, on an elder's land in Standing Rock, on oil company owners' properties in MHA Nation, and all the way from Burke County near the Canadian Border to Coal Country in Hazen-Beulah. In the past 5 years we have seen that solar is coming to ND - and not just coming, it is already here. Solar is the fastest growing job sector on the planet, increasing again "by 700,000 new jobs in 2021, to nearly 13 million jobs," according to the United Nations reports (22 Sept. 2022). Now we need to be proactive and keep up by getting someone on the energy policy commission in our state.

It has been forecast that North Dakota will need an addition 5,000-6,000MW of additional generation within the next decade. Dozens of out-of-state solar companies are currently buying up land leases across North Dakota and hoping to take their profits out of state. But, as a 4th generation North Dakotan, I started a solar company so that we North Dakotans could install solar and keep our money in the state.

North Dakotans have told us they don't trust many out of state salespeople and want the security of working with local companies they can meet face to face and trust. Some county officials don't trust these out-of-state solar farm developers and so in some cases they have passed ordinances to ban solar development all together. This is not the answer. Solar is a mature industry, that has been tried and tested to be safe for decades, following National Electric Code, State Electric Code, Fire Code, Local Building Codes and extensive safety measures. There is nothing scary about solar, except its newness and local unfamiliarity in our state. There is a clear need for government communication, coordination, and solar education/training. Our local professionals should be consulted like other industries are. Solar energy needs a seat at the policy-making table for the sake of our citizens, the state, and our local economy. I believe this bill can lead us toward a more informed state in regards to solar energy.

Solar Policy - If done wrong (the way many of the large out of state solar farms are currently planning it) could be counterproductive to ND's energy development efforts - and existing sources of generation - clogging up the already overloaded transmission lines. If done the right way, as we have learned through 5 years of conversations with industry and the public here in North Dakota, solar can strengthen the grid, and offer much resiliency.

I believe solar needs to be done by North Dakotans who understand the idiosyncrasies and nuances of North Dakota and our infrastructure. This bill would provide a voice for solar, which is critical for our state to gain the informed perspective we need to set ND energy policy that serves the state's objectives of: increasing industrial development, advancing high paying jobs, and generating tax revenue. In other words, passing SB 2137 is another path to thriving as an all-of-the-above energy state.

Thank you,

James Kambeitz
Lightspring Solar, Co-founder

jim@lightspring.io

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Mr. Chairman and members of the Senate Committee on Natural Resources, my name is Jay Schulte, I reside in Bismarck, and I am here to testify today in support of Senate Bill 2137. I am a licensed professional electrical engineer with a graduate degree in renewable energy technologies. Throughout my career, I have always gravitated towards power generation and the many types of technologies behind generating electrical power. In 2014, I formed a solar installation business, Innovative Renewables, to try help North Dakota catch up to the rest of the country in adopting solar power as a viable source of energy. As you can imagine, it wasn't always the easiest sales pitch being in the heart of coal and oil country where electricity rates are among some of the lowest in the United States. At the time, I was content installing 1 or 2 solar systems a year as a side business.

About 2 to 3 years ago, inquiries about solar installations began to pick up and it finally seemed like North Dakota was ready to adopt solar power as another major contributor to its energy portfolio. I completed 3 solar installations early in the summer of 2021 and decided it was time to leave my engineering job at Basin Electric Power Cooperative to pursue installing solar power full time. It wasn't easy venturing out on my own, but it was something I was truly excited about. Everything was lined up and I thought I would hit the ground running. Unfortunately, the part I wasn't prepared for were the obstacles I would encounter before a project could even begin.

Prior to installing solar power at a site, the electric utility provider needs to approve the design and sign off on an interconnection agreement. Throughout North Dakota, these interconnection agreements vary significantly from one electric utility provider to the next. The interconnection agreements often created a hurdle that was difficult to overcome and made investing in solar power less appealing. Some interconnection agreements were the opposite and made investing in solar power a sound investment from both an economical and reliability standpoint. Below are several key points from different interconnection agreements offered by electric utility providers throughout the state.

Capital Electric Cooperative

- Time of Use program that benefits solar systems utilizing battery packs
- Creating a demand credit program for selling power to the grid during peak demand periods
- Electric heat rates are maintained if solar does not back feed electric heat meter
- Buyback rate of ~\$0.03/kWh for excess generation

McLean Electric Cooperative

- Base rate increase from \$41 to \$63 for sites with solar installations
- Electric heat rates are NOT maintained if solar is installed on site

Mountrail-Williams Electric Cooperative

- A \$10 Administrative Charge is added to sites with solar installations
- Electric heat rates are NOT maintained if solar is installed on site
- Buyback rate of ~\$0.06/kWh for excess generation

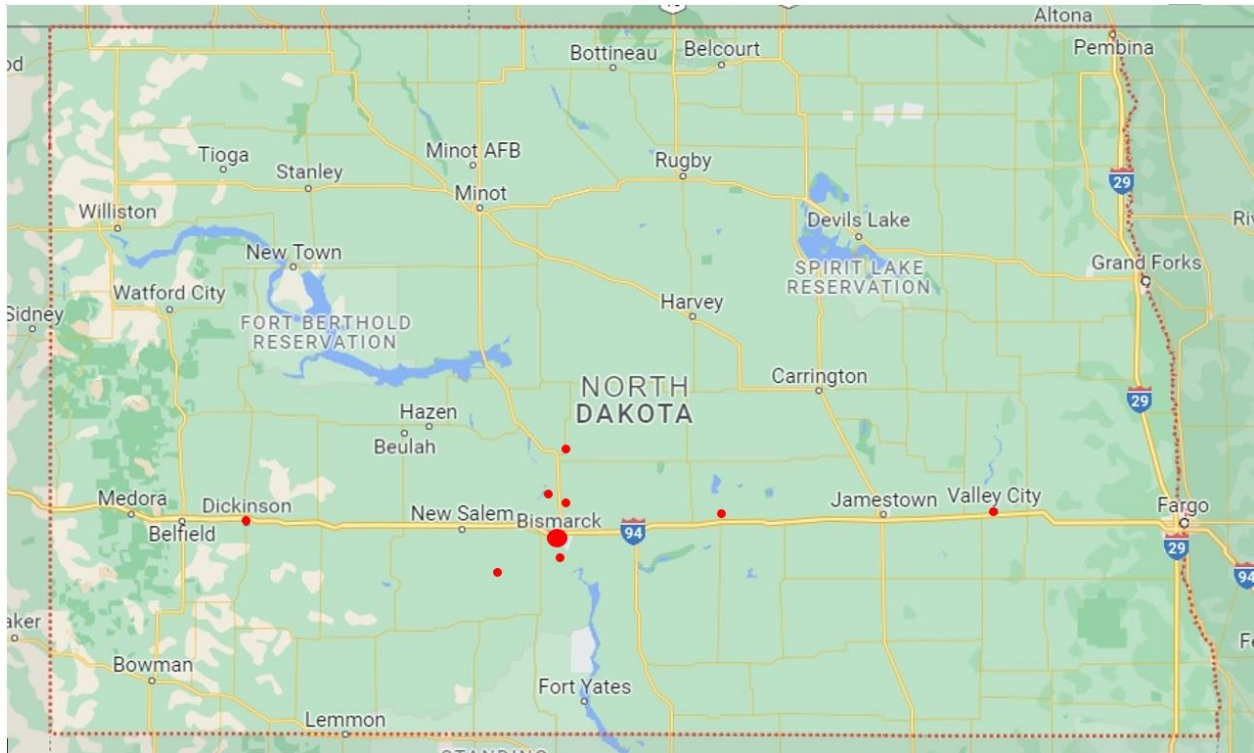
Innovative Energy Alliance: Manages KEM, Mor-Gran-Sou, Roughrider, and Slope Electric Cooperative

- Electric heat rates are maintained if solar does not back feed electric heat meter
- Solar installations are limited to 10kW in size

Some of the bullet points listed above made potential solar projects a poor investment for the end user. At the end of the day, making an investment in solar power needs to make sense economically. The Inflation Reduction Act, which passed in August of 2022, extended the 30% solar tax credit for both residential and commercial installations through 2032. If there was ever a time to invest in solar power, it is now.

Homeowners Associations (HOA), housing committees, ordinances, and covenants also created hurdles along the way. On several different occasions, I had potential projects abruptly come to a halt after HOA's informed us that they would not allow solar installations in their neighborhood. The latest number of states that have solar access laws, I believe, is 26. Solar access laws allow anyone to invest in solar even if their neighborhood or community does not allow solar installs.

Below is an overview of locations where I have installed solar power around the state.



Whether it's residential or commercial, rural or urban, on-grid or off-grid, solar power can benefit a wide variety of applications. Prior to venturing out on my own, I spent 5 and a half years as an electrical engineer at Basin Electric Power Cooperative and the approach to power production at Basin Electric was 'All In'. The 'All In' approach meant investing in a diverse portfolio of fuel for power production. Those fuels included coal, natural gas, oil, hydro, and wind. In 2022, solar power was also added to Basin Electric's portfolio and several more solar farms are in the development phases. It has taken some time for solar to catch on in North Dakota, but I believe we are at point where solar is an economically viable solution to meet our state's growing energy needs.

Mr. Chairman and members of the committee, by placing of member of the solar industry on the EmPower Commission we can begin to unlock the potential that solar power has to offer for the great state of North Dakota. Thank you for your time and your service. I stand for any questions.

Mr. Chairman and members of the Senate Committee on Natural Resources, my name is Pete Silbernagel, I reside in Bismarck, and I am here to testify today in support of Senate Bill 2137.

In 2007, the North Dakota Legislature formalized energy policy and created the 16-member EmPower Commission. This group is charged with developing comprehensive energy policy recommendations for the state's diverse and growing energy industry. The commission is made up of representatives from the various state's energy industries and was meant to bring differing interests together for the good of our state and nation.

In looking back over these past 25 years the EmPower commission, along with the Executive Branch and Legislative Branch have done an outstanding job developing our energy resources. These assets include coal, oil, gas, hydro, wind, ethanol, biodiesel and transmission. Since 2007 North Dakota has become a leader in providing affordable, reliable and sustainable energy for our nation. The EmPower commission has been instrumental in all of these efforts to leverage our energy resources. There are many in this room today that played a role in the EmPower Commission since it's inception. My thanks to each of you.

However, in spite of all of our state's energy development successes there remains one untapped and under developed resource in our state....solar power. I will never suggest or recommend that solar should replace any of our existing sources of energy as we strive to meet our state's and our nation's growing energy demands. I would suggest that solar can be another arrow in our quiver. Solar can help us meet our growing appetite for energy and it can enhance our states position as a leader in energy production. There is a growing interest in developing the solar industry by the residents of this state. There are numerous examples of this enthusiasm and I have a few photos to illustrate this growing demand.

--Rural pasture wells powered by solar can be found across the state in great numbers. There certainly are hundreds and there may be a thousand or more. Solar power is a cost effective means for the ranchers of North Dakota.



--Residential installations are occurring in many communities. This system is located just a few blocks from my home in Bismarck.



--Apartment buildings equipped with solar generation are appearing in several of our metro areas. Again, located here in Bismarck.



--Commercial projects have been completed successfully in various communities across the state. I believe Starion Bank has solar installed at all their bank locations.



--Even the oil and gas industry has found applications for solar. This is a picture of the Dakota Access Pipeline pumping station located one and a half miles from my cabin. Notice the solar panels powering a battery pack for emergency lighting in case the power goes out? Imagine it, solar as a backup to when the grid goes down.



--There is growing activity in potential large scale solar generation projects. I am aware of several projects that are being researched at this time. More are on the horizon.

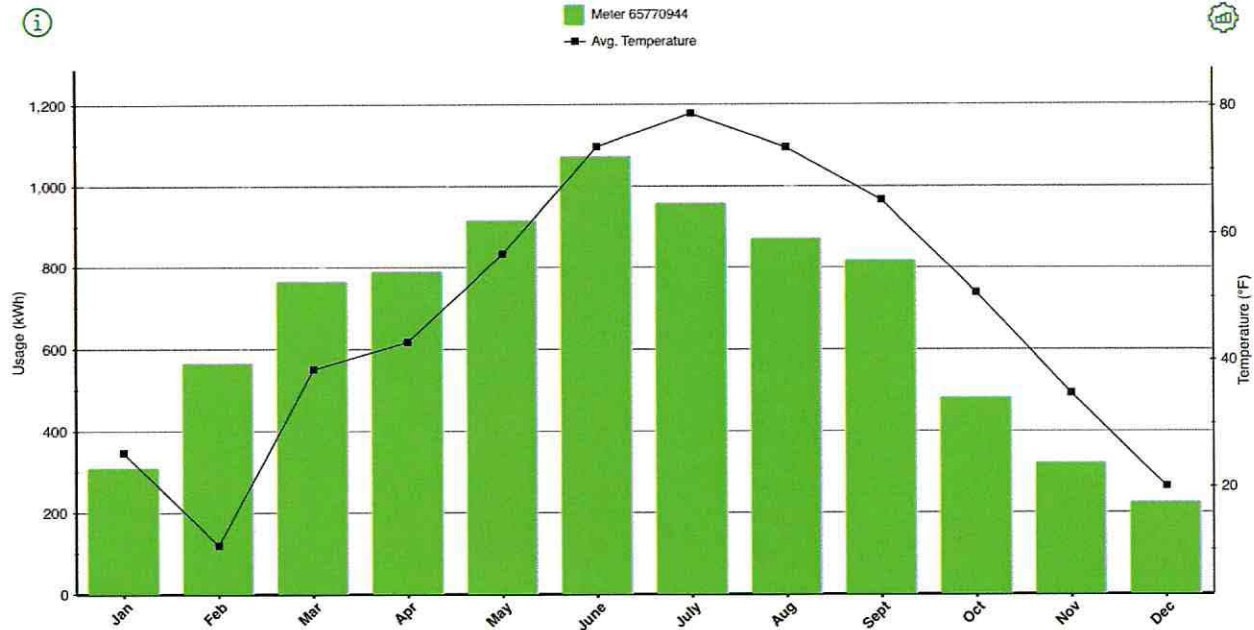
The interest in solar is alive in North Dakota and the drumbeat will only grow louder in the months and years to come. Simply put, solar has it's place in meeting our state's and nation's energy needs.

Three years ago, I installed a small solar system at my cabin west of Linton. My motivation was quite simple. I wanted to reduce my electric bill. I wasn't trying to save the planet, go off the grid or charge a vehicle. I simply wanted to lower my energy costs. After three years I can tell you the project has been a success and the payback on my investment should be about ten or eleven years. As the cost of electricity increases the payback could be even sooner.



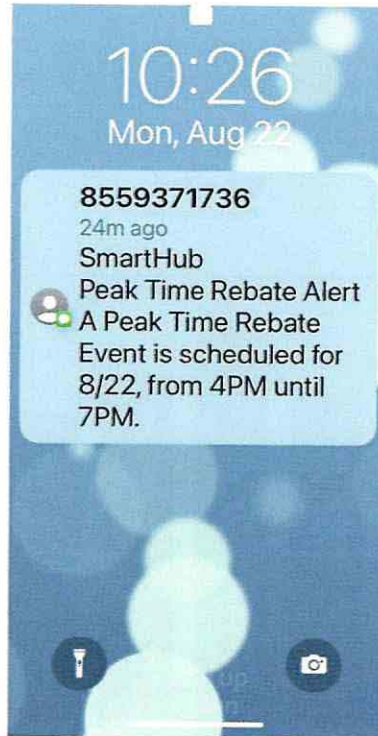
This chart illustrates the monthly production of my system. As you can see output is lower in the winter months and peaks in the summer months. This production curve is emblematic of any solar installation in our state.

BILLED USAGE — 2021



Peak solar supply coincides with the peak power demand of the summer months. I receive Peak Alerts on my phone numerous times throughout the summer at the same time I am selling my excess energy to Kem Electric. In effect I am supplying electricity at a time when the need is greatest.

Capital Electric Peak Alerts



By virtually all metrics, in the United States, North Dakota is at the bottom of the barrel in utilization of one of our greatest natural resources, solar energy. I have read the Empower ND Commission Energy Plan for 2022 and I can support most of the initiatives spelled out in the plan. However, the plan sorely lacks any clear initiatives or strategies to put our state on a path of solar energy development.

Mr. Chairman and members of the committee by placing a member on the Empower Commission from the solar industry we can begin to integrate solar into the energy mix of our state's energy palette. Giving the solar industry a seat at the table does not give them an unfair advantage or a favorable subsidy. The solar industry is only seeking equal treatment. This bill would give solar a voice with coal, oil, gas, wind, ethanol, biodiesel, and hydro. It's often been said in this great building that "We don't pick winners and losers." By passing SB2137 you would ensure that this is the case in the energy arena.

Thank you for your time. I would also like to sincerely thank you for your service. I stand for any questions.

Hello, my name is Jamie Zins.

I am a small business owner in the town of McKenzie ND. A little over a year ago, I invested in a solar panel project for my business, to capture the suns free energy and help subsidize my usage of electricity from the grid. This investment is expected to yield a 100% return in 8-10 years. My investment will lighten the load on the electrical grid by utilizing our suns free energy. If this can benefit me

from a business perspective,
I feel solar energy can be
an asset for the residents of
ND in more ways than one. To
help in these efforts and be a
voice for the solar energy industry,
I feel it would be a great
benefit for our state to have
a person representing the solar
industry on the Em Power
commission. I am in support
of the senate bill in question
Thank you.