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

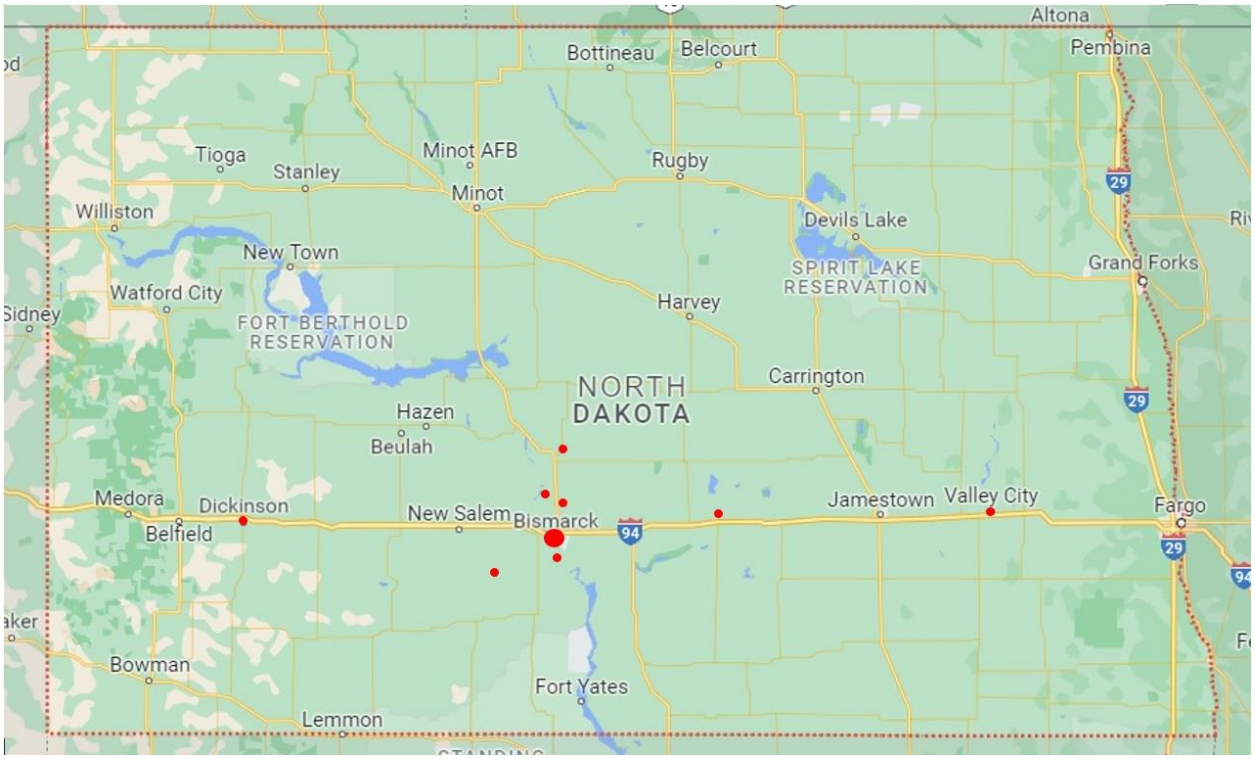
Innovative Energy Alliance: Manages KEM, Mor-Gran-Sou, Roughrider, and Slope Electric Cooperative

- 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 makes 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.