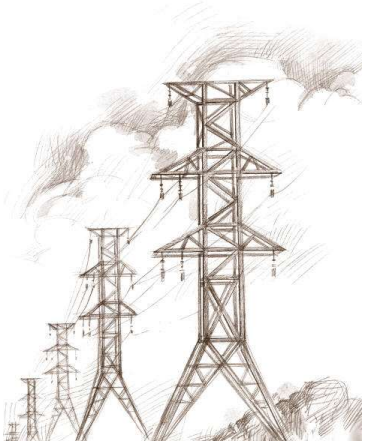
SIERRA CLUB **IOWA CHAPTER**

A Robust Electric Grid Supports Distributed Generation and Utility Generation

Iowa has a large potential for utility-scale wind and solar as well as a large potential for distributed generation. Iowa has enough renewable energy potential to power the homes and businesses in the state with enough left over to send to customers outside of the states.



Over the years, as Iowa's population has shifted from rural areas to cities, as wind farms have been built, and as Iowans have begun installing solar panels and wind turbines on their property, it has become obvious that improvements are needed to ensure that the transmission and distribution lines are capable of bringing electrical energy to the customers. Transmission lines are the large electrical lines that carry power long distances. Distribution lines are the lower voltage lines that run to homes and businesses. Together the transmission lines and distribution lines form a network called the grid.

A robust electric grid must be present to ensure reliability, to connect the market participants, and to provide for regional markets outside of Iowa. The improvements include:

- New large transmission lines are needed to connect large wind farms to the grid. Transmission construction has not kept pace with the construction of wind farms. Due to inadequate line capacity to carry the electricity, some of the wind turbines must be shut down for a period of time, a process called curtailment. At the same time, some planned wind farms cannot be constructed because of inadequate transmission lines. The most wind potential is in northwest and north central Iowa, yet these areas are where additional transmission lines are needed.
- Transmission lines need to be improved so that Iowans can benefit from access to renewable energy. Iowans want to be able to use the non-polluting wind and solar energy and to transition from coal and nuclear power. A state policy that concentrates on selling Iowa's renewable energy out-of-state and relies on fossil fuels and nuclear power for Iowans is an unjust policy. Iowans should not be forced to rely on electricity that leaves behind pollution, health risks, and long-term waste issues.
- Transmission and distribution lines should offer fair access to all Iowans. The small producer should have access to the grid as well as the large wind farm owners.
- At the same time the small producer should be paid fairly for the renewable energy that is delivered to the grid, with a contract setting the price. This is called a feed-in tariff. Today most small producers are not given a contract by their utility company or are offered extremely low rates. Currently the utility-scale wind farms are given a contract and a set price by the utility buying the power. It is unjust when big wind farms owned by out of state investors take profits out of state all the while the local small wind owner can't get a fair price for his wind. In fact some utility companies are requiring that owners of small renewable energy sources sell all of their renewable energy to the utility at a price called avoided cost (which is significantly below wholesale cost) and as the same time purchase all of the power they use at retail cost, a methodology called net billing.
- Iowa's natural resources need to be protected from the impacts of transmission and distribution lines. Clearly transmission lines have a larger effect than distribution lines. Natural areas significant flyways for birds and bats should be avoided. Likewise recreation areas, including bike trails, should be avoided.
- Increasing the voltage carried by existing transmission lines is preferable to building new transmission lines.

Iowans will benefit from a long-term investment in new distribution and transmission lines and in upgrading the aging grid. It is crucial for future renewable energy development in Iowa that investment in transmission and distribution lines keep pace with increases in distributed generation, medium-scale community renewable energy projects, and utility-scale renewable energy generation.

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