



Driftless Area Land Conservancy

Cardinal-Hickory Creek Technical Experts' Testimony Summations

(Quoted directly from testimonies unless noted otherwise. Emphasis, bolding and underlining, added.)

KERINIA CUSICK

Co-Founder and President of the Center for Renewables Integration.

"The Applicants have not thoroughly and rigorously evaluated alternatives to the Cardinal-Hickory Creek (CHC) transmission line project (nor did they) attempt to design a Non-Transmission Alternative (NTA) to fulfill even the Applicants' own stated transmission needs."

"The Applicants failed to evaluate proven, non-wires based solutions such as power electronics, energy storage, solar, and load control, and energy efficiency and demand response approaches in effective combinations to augment the performance of the existing transmission infrastructure."

"Therefore, **the Public Service Commission should reject this application** so that the Applicants can conduct a fair analysis to develop a portfolio of solutions—termed Alternative Transmission Solutions (ATSs)—that may be able to meet the current transmission need."

"The **Application is fundamentally flawed** and does not meet the Applicants' burden to demonstrate that the CHC project is the highest priority energy option that is cost effective and technologically feasible."

JON WELLINGHOFF

CEO of Grid Policy, Former Chair and Commissioner of the Federal Energy Regulatory Com. (FERC) 2006 – 2013

"There is not sufficient evidence of record for this Commission **to definitively conclude that the Cardinal-Hickory Creek (CHC) transmission line project is the highest priority energy option** that is also cost effective and technically feasible as required by Wisconsin law."

"This Commission should direct the Applicants to develop technically feasible least cost Alternative Transmission Solutions (ATS) that are properly and fully formulated and optimized. Once the ATSs are formulated, their total estimated costs should be compared to the updated total projected costs of the CHC transmission line project rather than simply the allocated Wisconsin share in order to achieve a true apples-to-apples comparison of cost effectiveness of alternative project options."

"Approving this Application now without having a proper comparable analysis of the alternatives would potentially result in adopting a suboptimal alternative."

"There is no near term reliability need that would require proceeding with the proposed CHC transmission line project now without conducting the full and fair ATS analysis."

MIHIR DESU

Strategen Consulting, Expert in energy storage technologies and markets, distributed energy resources, and grid edge policy

“The Applicants’ benefit-cost assessment for the Cardinal-Hickory Creek (CHC) transmission line project **is flawed in several respects** and **does not support the Applicants’ conclusion** that the CHC transmission line is needed to provide Wisconsin customers with more reliable energy, more affordable energy, and more renewable energy.”

“The Applicants fail to produce a realistic simulation of the system if the CHC line is not constructed, as they do not allow their model the flexibility to include the construction of additional in-state resources. This methodological flaw increases the modeled energy savings for the CHC transmission line and suppresses the modeled energy savings for its alternatives.”

“Second, the results from the Applicants’ production cost model are highly sensitive to slight changes in the input assumptions. The purported **benefits (are) not high enough to guarantee** that the CHC transmission line will have **positive net benefits** if the assumptions used in the model are slightly violated.”

“Finally, the Applicants’ **data does not support their claim** that the CHC transmission line will necessarily lead to more renewable energy for Wisconsin customers. The generation schedules under the different alternative interventions modeled by the applicants reveals that the **CHC transmission line will carry a significant amount of fossil fuel generated MWh**, and not just renewable energy.”

“(In conclusion,) the **Applicants’ benefit-cost assessment is unreliable** and does not persuasively support the Applicants’ claim that the CHC transmission line project would result in benefits to Wisconsin.”

RAO KONIDENA

President of Rakon Energy LLC, 15 years of experience (8 years in management) at the Mid-Continent Independent System Operator (MISO)

“There is no reliability threat to Wisconsin if the Commission denies the Application and orders the Applicants to rerun their models using updated assumptions and develop an alternative transmission solution. (Midcontinent Independent System Operator) MISO operating guides will be followed in the interim to ensure that there is no reliability threat posed by a delay.”

“(Additionally), **the importance of the CHC project in increasing the transfer capacity... is likely overstated**. The Applicants have included only one 30 MW utility scale solar in their calculations. This vastly understates the potential for utility scale solar already in development in Wisconsin. (Recent solar) projects amount to nearly 700 MW of new utility scale solar in Wisconsin. Applicants did not model this 700 MW nor have they considered the approximately 4,500 MW of solar in Wisconsin under ‘Active’ study status as of March 2019. This failure to model large amounts of utility solar is important to the transfer capacity.”

“(Much of the approximately 4,500 MW potential) will interconnect and that will “free up” more transfer capacity on existing transmission lines in Wisconsin. The Applicants have not studied these changed circumstances. The Applicants’ NTA of 30 MW of solar does not reflect what is actually occurring with solar development in Wisconsin.”

“The Commission should deny the Application and require Applicants to include the latest utility scale solar in Wisconsin and reasonable projections of future Wisconsin-based solar development in MISO economic models when re-running their analysis.”