ILLINOIS COMMERCE COMMISSION

DOCKET NO. 12-0598

CORRECTED REBUTTAL TESTIMONY

OF

MICHAEL GOGGIN

SUBMITTED ON BEHALF OF:

WIND ON THE WIRES

APRIL 12, 2013

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1. Introduction

Q: Please state your name, job title, and business address.

A: My name is Michael Goggin, and I am the Manager of Transmission Policy for the American Wind Energy Association ("AWEA"). My business address is 1501 M St NW, Suite 1000, Washington DC, 20005.

Q: Are you the same Michael Goggin who previously testified in this proceeding on behalf of Wind on the Wires?

A. Yes

Q: What is the purpose of your rebuttal testimony?

A: The purpose of my rebuttal testimony is to respond to the direct testimony of Ragheb Family witness Dr. Magdi Ragheb.

2. Response to Ragheb Family Witness Dr. Ragheb

Q: Please identify the sections of Dr. Ragheb's testimony to which you are responding.

A: Witness Ragheb states that "The Ragheb Family has identified on the publicly available literature two different concepts for a national electrical grid plan, and the Illinois Rivers Project is clearly not compatible with or a part of any of those plans."[1] In addition, witness Ragheb claims that "The use of HVDC and 765 kV Alternating Current (AC) were not considered…"[2] in the planning process for the Illinois Rivers Project.

Q: Please outline your response.

A: I will explain that the conceptual national transmission maps discussed in the two documents cited by Dr. Ragheb are clearly identified as conceptual in those documents, with lengthy explanations that those maps are not intended to indicate actual transmission routes and that any

[1] Ragheb Family Ex. 1.0 at 20.

number of routes could serve the intended purpose of integrating large quantities of wind energy. If anything, those maps indicate the need for the Illinois Rivers Projects, as they indicate that significant additional transfers of electricity are needed in the area that will be served by the Illinois Rivers Project. Furthermore, the Illinois Rivers project was evaluated through a comprehensive evaluation performed by MISO that considered numerous alternatives, including higher-voltage solutions, and found the Illinois Rivers Project to be the optimal solution for meeting the state renewable portfolio standard requirements in the MISO region. Finally, I will testify that the project does not need to be part of a national electric grid plan to promote the development of an effectively competitive electricity market that operates efficiently, is equitable to all customers, and is the least cost means of satisfying those objectives.

Q: To what two "concepts for a national electrical grid plan" is Dr. Ragheb referring?

A: In his Direct Testimony, Dr. Ragheb refers to a map in a 2007 document prepared by American Electric Power, "Interstate Transmission Vision for Wind Integration," and a map in a document prepared by the U.S. Department Energy, the 2008 "20 Percent Wind Energy by 2030" report. Copies of those maps are included in his testimony as Exhibits 1.6 and 1.7, respectively.

Q: In those two original documents, how are the maps described?

A: Each document contains detailed explanations that each map is a high-level, conceptual, theoretical, and illustrative, and lengthy caveats that each map is not intended to portray the actual routing of transmission lines, and that numerous potential route designs would satisfy the intended objective of integrating large quantities of renewable generation.

[2] Id, at 19.

Specifically, the AEP document contains the following caveats: "This conceptual transmission plan is illustrative and should be treated as such."[3] "There are, however, many possible configurations that could be leveraged to integrate wind and other resources. The goal is merely to present this proposal as one possible scenario to illustrate the potential that exists."[4] "…this is simply one of any number of designs that could be considered…"[5] "In addition, the transmission corridors shown on this diagram are not meant to preclude or replace any proposed projects."[6]

Similarly, the map in the DOE report is directly followed by this caption, which is visible in Ragheb Family Exhibit 1.7: "2030 total between region transfers >= 100 MW (all power classes, onshore and offshore), visually simplified to minimal paths. Arrows originate and terminate at the centroid of the region for visualization purposes; they do not represent physical locations of transmission lines." Moreover, the DOE report notes that the analysis that produced the map was not intended to produce a detailed transmission plan, explaining that "This method, although providing balance in the overall cost assessment, is only a first step. More work must be done in regional transmission planning processes to evaluate the transmission required for the desired portfolio of resources."[7] The DOE map in Ragheb Family Exhibit 1.7 clearly portrays the new transfers between regions as straight lines, and the AEP map in Exhibit 1.6 is largely composed of straight lines, further reinforcing the fact that neither map is intended to portray actual transmission routes.

[3] American Electric Power, "Interstate Transmission Vision for Wind Integration," at 2 (2007), *available at* http://www.awea.org/documents/issues/upload/windtransmissionvisionwhitepaper.pdf.
[4] Id.
[5] Id., at 6.
[6] Id., at 4-5.
[7] U.S. Department of Energy, "20 Percent Wind Energy by 2030," 2008, page 95, available at http://20percentwind.org/report/Chapter4_Transmission_and_Integration_into_the_US_Electric_System.pdf .

Q: How does the original context of those two maps affect the arguments made by Dr. Ragheb?

A: Both maps were originally presented with explicit caveats that they were conceptual, not intended to describe actual transmission routes, and that numerous potential transmission solutions could meet the same objective of integrating new wind energy resources. As a result, there is no logical support for Dr. Ragheb's argument that because the Illinois Rivers Project was not part of those conceptual maps, the Illinois Rivers Project is not "part of a national plan for wind power conveyance" and therefore should be rejected.

As explained at length in my Direct Testimony, the Illinois Rivers Project and the whole portfolio of Multi-Value Projects resulted from a MISO transmission planning process, including the Regional Generation Outlet Study, that was focused on developing the optimal transmission plans for most cost-effectively integrating the wind energy resources needed to meet the Renewable Portfolio Standard requirements of the states in the MISO region. In light of the planning process that produced the Illinois Rivers Project, as well as the large body of evidence describing wind supply and renewable demand[8] presented in my direct testimony, Dr. Ragheb's insinuation that the Illinois Rivers Project is not intended to interconnect new wind generation is simply untenable. Regardless, Dr. Ragheb offers no argument as to why the Illinois Rivers Project must be part of a national electric grid plan for it to promote the development of an effectively competitive electricity market that operates efficiently, is equitable to all customers, and is the least cost means of satisfying those objectives.

[8] Wind on the Wires Ex. 1.0, Direct Testimony of Michael Goggin, at 2-14.

Q: What do the two maps cited by Dr. Ragheb indicate about the transmission needs in the region and the relative locations of wind energy supply and electricity demand?

A: If anything, the two maps cited by Dr. Ragheb are further indication that the Illinois Rivers Project is necessary to interconnect new renewable generation and that the Illinois Rivers Project promotes the development of an effectively competitive electricity market that operates efficiently, is equitable to all customers, and is the least cost means of satisfying those objectives. Both the DOE map in Ragheb Family Exhibit 1.7 and the AEP map in Exhibit 1.6 indicate that there is a significant need for new transmission to move wind energy into Illinois, as indicated by at least two conceptual lines entering Illinois from the west in each map. The DOE map in Exhibit 1.7 also contains two additional conceptual lines that appear to terminate at Illinois's western border with Missouri, and two lines that connect southern Illinois with Kentucky, providing further evidence of the significant need for west to east transmission capacity. Moreover, one of the two conceptual lines indicated in the AEP map appears to have an eastern terminus that is identical to that of the Illinois Rivers Project, and a western terminus that is located only somewhat south of the planned western terminus for the Illinois Rivers Project.

Q: What is your response to the claim by Dr. Ragheb that "The use of HVDC and 765 kV Alternating Current (AC) were not considered…"[9] in the planning process for the Illinois Rivers Project?

A: In fact, the use of HVDC transmission and 765 kV AC transmission was considered as part of the MISO RGOS analysis, with 5 out of 13 RGOS

[9] Ragheb Family Ex. 1.0, at page 19.

planning scenarios including 765 transmission,[10] and MISO also noting that HVDC options were included in the RGOS and RGOS II planning processes.[11] The use of 765 kV AC transmission was in fact chosen as the optimal solution for one of the MVP lines, the Reynolds to Greentown line in northern Indiana.[12]

Q: Does this conclude your testimony?

A: Yes.

[10] MISO MTEP 2009, at 227, *available at* https://www.midwestiso.org/Library/Repository/Study/MTEP/MTEP09/MTEP09%20Report.pdf .
[11] Id., at 229.
[12] MISO MVP report, at 37, *available at* https://www.misoenergy.org/Library/Repository/Study/Candidate%20MVP%20Analysis/MVP%20Portfolio%20Analysis%20Full%20Report.pdf .