BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Application of PacifiCorp For Approval of Power Purchase Agreement Between PacifiCorp and Spanish Fork Park 2, LLC	)))	Docket No. 06-035-76
In the Matter of the Petition of Wasatch Wind, LLC, for Approval of a Contract for the Sale of Capacity and Energy from Their Proposed QF Facilities	))))	Docket No. 06-035-42

Direct Testimony of

Abdinasir M. Abdulle, Ph.D

Division of Public Utilities

January 12, 2007

Q: Please state your name, business address, and employer for the record.

A: My name is Dr. Abdinasir M. Abdulle; my business address is 160 East 300 South, Salt Lake City, Utah 84114; I am employed by the Utah Division of Public Utilities ("Division").

Q: On whose behalf are you testifying in these proceedings?

A: I am testifying on behalf of the Division.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to address the issue of the line loss associated with Spanish Fork Park 2.

Q. Is there a line loss associated with wind QF Resources?

A. Yes. Line loss is a physical reality whenever electric energy flows in a conductor. The extent of the line loss depends on a number of factors including, but not limited to, the distance the power is moved, the capacity of the transmission lines and the ambient temperature. The existence of line loss is independent of the contractual arrangements (firm contracts or non-firm contracts) or intermittence of the power flow from the generator.

Q. What distance is relevant in determining the line loss associated with wind QF resources?

A. It depends on the load the wind QF resource is expected to serve. If the wind QF resource is serving system load, then the relevant distance should be from the metering point to the nearest load center. If it is expected to serve a specific load center, then the relevant distance is from the metering point to that particular load center. In our case, the resource in question is a system resource and serves system load, so the relevant distance should be from the metering point to the nearest load center.

Q. How should line loss costs or benefits be incorporated into the wind QF resource pricing?

A. When electric power from a wind QF flows in the system, either another resource or purchase is backed down or power equal to the amount provided by the wind QF resource is sold. Ideally, in either case the line loss associated with the wind QF resource should be compared with the line loss associated with any of the above options. If the line loss associated with the wind QF resource is less or more than the line loss associated with any of the above options, then the price for the wind QF resource must be increased or decreased accordingly.

Q. How does this apply to the current case?

A. It does not. Determining the exact line loss associated with a specific QF is problematic at best. For example, determining which resource is backed down or which sale incurred as a result of the QF coming online in each and every hour will be extremely difficult. For this and other reasons, the Commission, in Docket No. 03-035-14, ordered that for

> [W]ind QFs up to the Company's IRP target megawatt level of wind resource. The Company's most recent executed wind contract from its Renewable RFP will serve as the proxy against which project specific adjustments are made to produce an indicative price for wind QFs in Utah.

Therefore, adjustments for line loss should be based on a comparison between the line loss associated with Spanish Fork Wind Park 2 and the line loss associated with the proxy plant (Wolverine Creek Wind Farm).

Q. In comparing the line loss associated with Spanish Fork and Wolverine, what distance should be considered for a line loss calculation for the Spanish Fork Park 2 and Wolverine Creek Wind Farm?

A. As I indicated earlier, the appropriate distance for line loss calculation for any QF is the distance between the metering point and the nearest load centers. As is shown Exhibit 1 (based on Rocky Mountain responses to Wasatch Wind data requests 1.6, 1.13, 2.1, and 4.1), a MW from Wolverine Creek will have to travel on average 5.8 miles from the delivery point to reach a distribution circuit where it would be consumed. Whereas a MW from Spanish Fork Park 2 will have to travel on average 9.83 miles from the delivery point to reach a distribution circuit where it would be consumed.

Q. What are the line loss adjustments or credits in Wolverine Creek's case?

A. There are no line loss adjustments considered for Wolverine Creek.

Q. Since there is a difference in the distance between the metering and the nearest load center between Spanish Fork Park 2 and the proxy resource, should line loss adjustments be considered for Spanish Fork Park 2?

A. No. my above analysis does not justify line loss credit fro Spanish Fork Park 2. In fact it suggests just the opposite. However, I don't think that the difference in line loss (no analysis was made to estimate the line loss difference) would be large enough to justify the time and costs associated with a complete line loss study.