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BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN

Application of Northern States Power Company, a Wisconsin Corporation, for Approval of Parallel Generation Tariff Modifications and Avoided Costs	4220-TE-109

SURREBUTTAL TESTIMONY OF DIVITA BHANDARI ON BEHALF OF RENEW WISCONSIN, INC.

I. INTRODUCTION

Q. Please state your name, title, and employer.

A. My name is Divita Bhandari and I am a Senior Associate with Synapse Energy Economics, Incorporated (Synapse). My business address is 485 Massachusetts Avenue, Suite 3, Cambridge, Massachusetts 02139.

Q. Are you the same Divita Bhandari that provided direct testimony in this proceeding?

A. Yes.

Q. What is the purpose of your surrebuttal testimony?

A. I will respond to the rebuttal testimony offered by witnesses Mr. Drew Siebenaler and Mr. Tyrel Zich from Northern States Power Company (NSPW). My surrebuttal testimony addresses claims made by Mssrs. Siebanaler and Zich regarding transmission and capacity costs, and their associated credit structures.

II. AVOIDED TRANSMISSION COSTS

Q. How do you respond to Mssrs. Zich and Siebenaler's concerns that there is inherent uncertainty and imprecision in setting avoided transmission costs?

A. While I agree that avoided cost calculations generally involve some degree of uncertainty and that precise valuation may be difficult, this should not prevent NSPW from estimating avoided transmission costs within a reasonable range of certainty based on marginal load growth related transmission investments as I have proposed in my direct testimony. In fact, it is my understanding that the Commission asked NSPW to model its avoided costs including avoided transmission costs in its Investigation of Parallel Generation Purchase Rates. NSPW did not do so in advance of filing its application. And while Mr. Siebenaler acknowledges that the Company "could conduct an analysis like that proposed by RENEW," it appears the Company has still not attempted to do so. Instead, the company continues to rely on an unsubstantiated value that is based on embedded costs for its avoided transmission value proposal.

Q. Does any potential uncertainty or imprecision associated with setting avoided transmission costs justify the Company's embedded cost approach?

A. No. The Company's claims of uncertainty and complexity do not justify the Company's proposal of using 50 percent embedded transmission cost. The Company suggests that "there is not enough evidence to justify deviating from the current use of 50 percent embedded transmission cost," but to my knowledge the Commission has not previously approved an avoided transmission cost value for parallel generation resources in NSPW's service territory, so there is no question

of "deviating" from that value. The Company should base its avoided transmission costs on marginal investments since these best represents the costs of transmission going forward. As indicated in my direct testimony, the embedded transmission costs are historical and sunk costs. The use of embedded costs would be inconsistent with the other avoided costs including avoided energy and avoided capacity which are also based on marginal costs.

Q. How do you respond to Mr. Zich's concerns that avoided transmission costs are not driven by peak hours and that limiting the avoided transmission costs to load growth projects is not justifiable?

A. My analysis is limited to load growth projects since there is a direct relationship between the avoided load from distributed energy resources and avoided load growth related transmission investments. If NSPW has identified additional categories of future avoidable investments separate from load growth-related investments, then the Company should justify its rationale for including these categories and make according adjustments to avoided transmission costs in future analysis to account for these categories of invesments. However, all such costs that would be included in the avoided transmission cost analysis should be marginal costs, i.e., forward looking costs based on prospective investments and should not be embedded transmission costs as currently proposed by NSPW.

In a simiar vein, Mr. Zich states that it is "conceivable" that a QF generating during non-peak hours may avoid costs depending on its location and therefore recommends that the transmission credit be applied during all hours. While that is indeed conceivable, load growth-related investments (which are

driven by peak load) continue to be the key driver for transmission investments that can be avoided by distributed energy resources and provide a reasonable approximation of avoided transmission costs. Therefore, I continue to recommend that the transmission credit be applied during peak hours.

III. AVOIDED LOSSES

Q. How do you respond to Mr. Siebenaler's proposal that a single marginal distribution and transmission loss factor for all generation types regardless of where they are located is less reasonable than utilizing average loss factors for avoided transmission costs?

A. I disagree. Mr. Siebenaler has indicated that the extent of losses depends on numerous factors and based on the fact that there is a wide diversity in utilization (i.e., NSP system peaks do not necessarily coincide with the distribution feeder utilization peaks), the losses tend to be highly dependent on location. Mr. Siebenaler also indicates that as the Company moves towards generation from load centers to renewable generation where it is most cost effective, the losses are dependent on the location and magnitude of generation rather than the location and magnitude of demand (Rebuttal-NSPW-Siebenaler-5).

Mr. Siebenaler's argument does not justify the use of average loss factors. Marginal losses reflect the losses from an incremental unit of demand on the system. While I agree that marginal losses will differ by location, it is more reasonable to use a standard systemwide *marginal* loss value than to use a systemwide *average* loss value because distributed generation resources avoid the marginal unit of demand on the system. Marginal losses will always be higher

than average loss factors irrespective of location and other factors. The marginal loss factors that I have proposed in direct testimony are based on NSPW's proposed average loss factors (Direct-RENEW-Bhandari-33). In addition, as indicated earlier, all of the other avoided cost components are based on marginal inputs (i.e., energy and capacity). If one accepts NSPW's average losses, then it would create a methodological inconsistency.

Q. How do you respond to NSPW's concerns regarding RENEW's proposed methodology for application of marginal losses for avoided energy?

A. Mr. Siebenaler has suggested that marginal losses are already included in the MISO's LMP by way of the Marginal Loss Component (MLC). I agree that LMPs calculated by MISO do include marginal losses. However, the marginal losses are not always included in LMP forecasts produced through different models. The decision to include marginal losses as an adder to the resulting energy prices is highly dependent on how the LMP forecasts were conducted and the modeling inputs, modeling tools and temporal granularity of the modeling used in developing the forecasts. The bottom line however, is that marginal losses do result in avoided energy costs, and therefore it is imperative that these be accounted for in the resulting LMPs.

IV. AVOIDED CAPACITY COSTS

Q. How do you respond to Mr. Zich's suggestion that NSPW's Surplus Capacity Credit (SCC) be used as an avoided capacity cost instead of MISO's CONE?

A. I understand the Company's position to be that MISO's CONE is "overly general" and does not represent an individual utility's avoided capacity costs. However,

CONE is a vetted, well-understood, transparent and publicly available capacity cost referent. In contrast, it is not clear that the costs that underlie the Company's proposed Surplus Capacity Credit are representative of the Company's capacity costs, or whether that value represents an isolated occurrence that may not represent the forward going cost of capacity that the Company can acquire in the future. The Company has not demonstrated its long-term marginal capacity cost based on generic resources that the Company could procure, if needed, in quantities large enough to meet potential future capacity needs. In particular, the Company has not demonstrated that the proposed avoided capacity cost is not an outlier due to factors such as land availability, transmission connection, and other factors.

As an additional matter, it is not clear to me how the Company proposes to update its avoided capacity value under its Surplus Capacity Credit methodology, and whether the updated values would be easily ascertainable by third parties (in contrast with MISO's CONE, which is widely-understood and easily ascertainable). Given that the MISO CONE value undergoes stakeholder review and critique and is developed by MISO in its role as the RTO and the balancing authority responsible for ensuring resource adequacy in NSPW's service territory, I continue to recommend that MISO's CONE value be used to establish NSPW's avoided capacity cost.

Q. Does this conclude your testimony?

A. Yes, it does.