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RE: Resource Adequacy Under SMD

In order to insure reliable electric service, the electric system not only needs adequate transmission infrastructure but also enough generating capacity to meet the peak load plus an additional amount of generating capacity to meet planned and unplanned outages of generating equipment, long lead times for the construction of additional generating capacity and transmission infrastructure. The NOPR recognizes the need for resource adequacy because all of the customers within an interconnection are interdependent and a shortage on one part of the system can cause problems and high prices over the entire system (¶458). By establishing a resource adequacy criteria based on after the fact results along with sufficient penalties for failure to meet the resource adequacy criteria would help create a more robust energy market and a reliable system. Missouri River Energy Services® (“MRES®”) supports a well-defined resource adequacy requirement. This letter outlines what MRES considers to be the minimum standards for a resource adequacy requirement.

The necessary elements to a resource adequacy requirement include:

1. There needs to be a minimum resource adequacy standard, which all LSE must meet.
2. All capacity and demand-side resources that are to be used by an LSE to meet its resource adequacy standard must meet the accreditation rules as established by the regional reliability organization.
3. All LSEs must report, both before the fact and after the fact, their load and accredited capability.
4. Penalties should be assessed at the time of the LSE’s individual peak if that LSE fails to meet its resource adequacy requirement, not the system peak.
5. The ITP needs audit rights to the LSE’s data so that it can insure that the reliability criteria is being met and assess penalties, if necessary.
6. There needs to be a deliverability requirement.

A. Resource Adequacy Standard

Resource adequacy needs should be allocated to load-serving entities based on each LSE’s actual loads, not forecasted future loads (¶498, ¶499). The reason is that the forecasts are always wrong, and sometimes hugely wrong. Under retail competition, not only is there the traditional

uncertainty about what the whole power system's load might be, but also there is the much larger uncertainty about the future retail market shares of each LSE. (§523) Basing LSEs' resource requirements on forecasts will induce LSEs to under-forecast loads and over-forecast resource additions, will burden some LSEs with paying for resources to serve loads that never materialize, and will allow some LSEs with unexpectedly high loads to pay less than their fair share. Actual loads provide a very exact measure of what the loads of an LSE are.

LSE should be obligated to have enough generating capacity and demand-side resources to meet their monthly peak load plus their resource adequacy obligations at the time of the LSE's peak demand. Any penalties that are assessed to an LSE should be based on that LSE's actual performance and not tied in any way to the system as a whole. If each LSE is obligated to meet its peak load obligations plus a resource adequacy amount at the time of each LSE individual peak, then by definition the region in total will have reserves at least as great as the resource adequacy requirement, provided that the LSEs meet their individual obligations.

The Standard Market Design has suggested a resource adequacy requirement. (§473) The minimum standard for resource adequacy as proposed in the Standard Market Design is 12%. (§493) A resource adequacy standard should be established by the regional reliability organizations.

There should be no resource adequacy requirement before the end of the first planning horizon period. (§525) Because the end of the first period should be timed to coincide with the amount of time required to build generation, having a resource adequacy requirement prior to the end of the first planning horizon cannot improve resource adequacy.

The ITPs should not be in the business of procuring resources on behalf of the market participants. (§539) If the ITPs were to undertake this task, it would create a host of problems. For example, who would pay the cost if an ITP decides that an LSE is not going to meet its resource adequacy obligations and goes out in the market and purchases the necessary capacity on behalf of this LSE, but it turns out that the LSE had adequate resources to meet its obligations?

B. Accreditation Rules

An LSE should be required to have an adequate amount of generating capability and demand-side resources to meet its peak load and resource adequacy obligations. These obligations can only be met with accredited resources. Accredited resources to meet the system load and provide the required amount of reserves is necessary to assure the maximum degree of service reliability. This generating capability and demand-side resources must be accounted for in a uniform manner, which assures the use of consistently attainable values for planning and operating the system.

The specific criteria that each type of resource must meet should be developed by the regional reliability organizations. Different criteria could be developed for different types of resources. For example, the Mid-Continent Area Power Pool ("MAPP") has established accreditation

criteria for nuclear, thermal, hydro and intermittent resources, such as wind, solar and run-of-river hydro. The accredited capability of a resource can vary by time of day and time of the year.

Demand-side resources can be accounted for in one of two ways. In one case, demand-side resources can be deployed at the time of the LSE's peak. By dispatching the demand-side resources in this fashion, the LSE is taking full advantage of these resources. Since all penalties should be based on the actual load of the LSE at the time of the LSE's peak, deploying the demand-side resources at the time of peak automatically reduces the LSE's peak and consequently reduces the LSE's resource adequacy obligations.

The second way in which demand-side resources can be accounted for is through an adjustment to an LSE's peak demand. For example, the regional reliability organization could establish testing criteria for demand-side resources. Based on the test results, an LSE would be allowed to reduce its actual peak demand by the amount of capacity based on the test results of its demand-side resources. This second method allows an LSE to serve the load that could be served by these demand-side resources when market conditions are favorable to do so and allow the demand-side resources to serve the load when market conditions are not favorable. MAPP has actually implemented this second method through Schedule L of its Restated Agreement.

In all cases each LSE must have enough accredited resources every month to meet its monthly peak obligations.

C. Reporting Requirements

Once per month, each LSE should fill out a form stating what accredited capability it used to meet its peak demand and resource adequacy obligations in the prior month. Once each year a LSE would fill out another form showing what accredited capability it would use to meet its peak demand and resource adequacy obligations for the next three to five years. In order to insure that there was no double counting of resources, ITPs would have to coordinate the reporting requirements.

D. Penalties for Failing to Meet Resource Adequacy Standards

The penalty as proposed in the NOPR is neither adequate nor logical to insure reliable operations for generating capacity. The penalty only applies to an LSE when operating reserves of the entire system fall below a certain minimum amount and the LSE that was determined to be short of capacity three years earlier, is currently buying power in the spot market. (§529) As already noted above the penalty should be based on actual loads and resources at the time of an LSE's peak. Any other method will encourage market participants to under forecast their loads and over forecast their resources.

Operating reserves (Schedules 5 and 6 in the OATT) are often times confused with resource adequacy. The NOPR makes this same mistake. (§530) For example, the NOPR calls for a minimum resource adequacy obligation of 12%. However, operating reserves in MAPP, the reliability council in which MRES operates, are approximately 4% of peak demand. If penalties are never assessed until operating reserves drop below a certain minimum amount, then the

resource adequacy criteria will become meaningless. Since operating reserves represent about 4% of peak load in MAPP, under the SMD NOPR no penalties would apply in the MAPP region until the MAPP region dropped below the 4% operating reserves. In this situation, an LSE would have little or no financial incentive to meet the resource adequacy test. This will encourage LSEs to maintain less than the required resource adequacy obligations.

It should be noted that operating reserves could be a subset of the resource adequacy obligations. Both operating reserves and the resource adequacy obligations are generating capability in excess of peak load. The purpose of operating reserves is to meet short-term reliability needs while the purpose of resource adequacy obligations is to meet unexpected situations such as an unexpected long-term outages of generating equipment. The technical requirements for operating reserves are different than resource adequacy obligations. For example, operating reserves have quick response criteria while it is not necessary for resource adequacy obligations to meet these same criteria. Since both resource adequacy obligations and operating reserves are capacity in excess of peak demand, any generating equipment that is capable of meeting both the resource adequacy obligations and operating reserve criteria should be allowed to meet both sets of criteria and not be additive.

The penalty as proposed in the NOPR is inadequate and should apply to capacity shortages not energy shortages. The goal of the long-term resource adequacy is to have adequate electric generating resources. (§457) To insure that adequate capacity is built, the penalty should be applied to those LSEs who fail to build or contract for adequate capacity or demand-side resources. To accomplish this goal, the penalties should be applied to capacity shortages.

The penalty needs to be high enough so that the cost of owning a generating plant or implementing a demand response resource is lower than the cost of the penalty. Therefore, the penalty should be about two times the cost of ownership. This price would result in a penalty of about \$100,000/MW, if the penalty were assessed on an annual basis or half that amount if the penalty were assessed on a seasonal basis. Since a firm typically has only one annual peak, it makes sense to have an annual penalty. Penalties should be assessed irrespective of the other system conditions and the penalties should be assessed based on actual load and capability of the LSE. The penalty should only be assessed once per period even though an LSE could fail its resource adequacy multiple times within the period.

E. Audit Rights

The ITP must have complete access to all of the LSE's data. If the ITP suspects that an LSE is either under reporting its load or over reporting its generation, it must have access to the LSE's data so that the ITP can insure a reliable system is being maintained.

E. Deliverability Requirement

MRES believes that there needs to be a deliverability requirement. However, the deliverability requirement of the resource adequacy requirement contemplated in the NOPR is logically inconsistent with the whole LMP system. The deliverability requirement says that the participant has to know in advance how they will deliver their resource's power to their load (§506); but the

LMP system says that the customer can get all of the service that they want if they are willing to pay the market price of congestion. (§144) The deliverability requirement should mean that the generation should be deliverable to the market place and not necessarily to a particular load. There may be circumstances, such as a load or generation pocket, where a generator needs to demonstrate deliverability to a particular load but these circumstances should be determined on a regional basis.

The deliverability requirement should also extend to demand-side resources. The NOPR currently treats demand-side resources different than generating capacity. An LSE must demonstrate that the generation it is using to supply its resource adequacy obligations has firm transmission to its load (§506). However, that same requirement is not placed on demand response resources. This position discriminates against generation supply and in favor of demand response options and has the potential of reducing the benefits of the resource adequacy requirements. For example, deploying demand-side resources in a generator pocket could merely cause the generation in that pocket to reduce its output by an equivalent amount in order to maintain a secure system.

F. Other Issues

Verifiable and enforceable demand response programs should count as “capacity” available to meet an LSE’s resource adequacy obligations. Verifiable and enforceable demand response programs, such as interruptible load and other customer load management programs, that are available to reduce peak load in a timely manner should be included as part of an LSE’s resource adequacy obligations. Verification of demand response programs to assure peak load reduction should be accomplished through detailed written procedures that contain specific requirements for the timely reduction of specific load, periodic testing, auditing and reporting.

The resource adequacy requirement as contemplated in the Standard Market Design NOPR is a reliability requirement. For this reason, all the standards necessary to implement this requirement should be developed by NERC and the regional reliability organizations. NERC in conjunction with the regional reliability organizations have the expertise to develop the necessary reliability criteria.

Sincerely,



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