COMMENTS OF ENERNOC ON
CAISO STRAW PROPOSAL FOR STANDARD CAPACITY PRODUCT

EnerNOC appreciates the opportunity to comment on the CAISO Straw Proposal for Standard Capacity Product (SCP). In particular, EnerNOC will provide some food-for-thought on how to approach demand response (DR) as a SCP resource. At this time, EnerNOC is not submitting a formal proposal, but providing references to other ISOs/RTOs and their approach for handling DR bids for capacity, energy and ancillary services. EnerNOC reserves the right to supplement this submittal with additional comments, or a more formal proposal.

EnerNOC agrees that it is important to establish a SCP with a uniform set of characteristics that will allow buyers and sellers to transact easily and gives confidence to the CAISO. Those characteristics are number of MWs, time period over which the MWs are available and a resource ID number. Capacity that meets the SCP criteria is resource adequacy (RA) compliant and can bid into the capacity, energy and ancillary services markets. Further, EnerNOC acknowledges that the CPUC, through Docket No. R.08-01-0125, will be examining how to count DR resources for RA purposes. Therefore, the actions of the CAISO and the CPUC must be closely coordinated.

In Order 719 issued on October 17, 2008, FERC clearly stated its objective to have DR treated on a comparable basis to other supply resources by eliminating "barrier(s) to the participation of DR in the organized power markets by ensuring comparable treatment of resources."[1] FERC recognized the value of DR to organized energy markets as a resource. FERC also identified some unique characteristics of DR that distinguish it from base-load generation facilities. For example, FERC directed the RTOs/ISOs to "allow DR to specify limits on the duration, frequency and amount of the service in the bids to provide ancillary services—or their bids into the joint energy/ancillary services markets in the co-optimized RTO market."[2] Further, the FERC described these limitations as "comparable to the limits generators may specify on price, quantity, start-up and no-load costs and minimum downtown between starts."[3] By this statement, FERC saw DR limitations on availability as comparable to the limitations generators place on their availability due to operational constraints. The nature of DR is that it is a resource that is available when customers, who would otherwise consume electricity, can reduce their demand, so as to reduce the demand on the system or local area. Customers by and large, however, are not in the business of generating additional capacity for the grid; they must attend to their primary business. Therefore, DR is not available on a 24/7/365 basis. However, it can be an extremely valuable resource for specific timeframes either over the summer months or over the course of the year.

Order 719 also directed the ISOs/RTOs to incorporate several items in consideration of DR participation in the various markets. For example, to remove disincentives for DR by eliminating deviation charges imposed on buyers/LSEs when their real-time demand is

[1] FERC Order 719, Para. 16, Pg 9
[2] FERC Order 719, Para. 81, Pg 43
[3] FERC Order 719, Para. 81, Pg 43

less than forecast due to DR. Further, the Order required the RTOs/ISOs, in conjunction with their stakeholders, to perform an assessment on the technical feasibility of smaller demand response within one year of the order. Allowing for the participation of aggregated retail customers (ARCs) was one more directive from the FERC. Taken together, these directives go toward maximizing DR participation in organized markets, without financial disincentive. Therefore, EnerNOC fully supports the implementation of these directives as part and parcel of moving forward with the SCP.

DR resources can provide short-term operating reserves, in the form of capacity, energy and ancillary services. When DR events are triggered customers respond by reducing their demand below a baseline amount for a specified period of time. Currently in California, DR is conducted through utility programs in which any number of criteria can trigger a DR event, such as, CAISO emergencies, temperature, local constraints, system load, and heat rates. Aggregators, such as EnerNOC, offer DR services to IOU customers under contractual terms that include a pay-for-performance structure. Failure to meet performance targets, which is measured by load dropped below the baseline, will result in the aggregator receiving a reduced or no payment. Therefore, the programs incentives are properly aligned with the desired performance.

Currently in California, DR is not treated on a comparable basis as any other generating resource, in terms of resource adequacy (RA). It is treated as a reduction to system and LSE demand, but not as a resource. DR does not currently bid its capacity into the CAISO market. However, through the directive by Order 719 and the planned upgrades to MRTU, it is the expectation of EnerNOC that perhaps by 2010 the ability to bid DR as a supply resource will be available.

Some of the questions that will need to be explored relative to how to quantify DR participation in MRTU will include how to measure the resource, how to define the availability, how to define the performance, how to determine the location of the resource, whether or not a resource ID makes sense with DR, how to assess penalties, etc. Many of these same issues are being explored in the CAISO SCP Straw Proposal with regard to other generation resources.

EnerNOC would propose that if the CAISO is entertaining the idea of an annual availability requirement for DR, it explore establishing qualifying capacity levels for DR that are differentiated as between summer, or peak, period and a winter period for several reasons. First, DR is a contractual resource, which means it is available only for as long as the contract is in effect. Customers can leave the DR program or come into the DR program over the course of a year, so annual targets may over or understate available DR capacity. Secondly, some customer's consumption is highly seasonal and can change dramatically from winter to summer. In fact, it may make sense to allow for monthly updates of available DR capacity in a similar manner as the CEC allows for updates in customer load forecasts. For the reasons stated above, a backward-looking DR target, using historical DR load participation, may not be an accurate way to forecast future DR load participation and/or performance.

Several of the eastern ISOs have, or are proposing to include, DR as a RA resource. Some of these markets either currently provide, or are moving toward providing, the ability for DR resources to bid directly into capacity, Day-Ahead and Real-Time energy and ancillary services markets. Still others have developed a standardized capacity product that includes DR, but only for bilateral trading purposes. It is our preference to continue in the direction that the CAISO is moving, which is to provide for the full participation of DR in the integrated capacity, energy and ancillary services markets.

In general, the tariffs (or proposed tariffs) in the eastern ISOs establish a maximum number of events that can be called over a summer period (June-September) and a maximum duration for each event with an expected load drop and penalties for non-performance. The following are examples of how ISOs treat DR resources for purposes of RA. While, EnerNOC is not, at this time, advocating one method over another, it is providing this information to the CAISO for consideration in structuring the DR portion of the SCP.

In PJM, a DR resource must be available year-round but will be dispatched a maximum of 10 times for a maximum duration of 6 hours per event with two hours advance notice. Failure to respond only results in penalties between June and September. Resources are bid into the capacity market auction, which is a one-year period auction run three years in advance.

MISO can call upon DR resource a maximum of 5 times for a maximum duration of 4 hours with 12 hours or less notice. DR does not have the ability to bid directly into the MISO markets. The minimum size for participation is 100 kW and includes interruptible load, direct load control (curtailment) and behind the meter generation. If a resource does not perform at its expected level, the resource is assessed a penalty equal to the cost of the energy needed to replace the deficiency. If a resource does not meet its target twice in one year, it is dropped from the program for the balance of the current year and the following year.

In ISO-NE, DR is the last resource to be dispatched and only when the operating reserves are, or expected to be, depleted within 30 minutes. Therefore, DR is dispatched in real-time unless there is an expectation of depletion of the 30 minute operating reserves and then it is dispatched on a day-ahead basis. ISO-NE is working on their integrated forward market where DR would be able to bid into the forward capacity market and is selected if it clears the descending clock auction. ISO-NE allows for aggregation of DR resources into a portfolio and permits a minimum participation level of 100 kW. Qualified capacity is determined by a simple average of the estimated capacity value of June through August, with the ability to make a monthly or seasonal readjustment. While ISO-NE has not established a maximum number of periods wherein DR would be required to participate in the market, they have done analysis that reflects roughly 100 hours of dispatch.

In summary, EnerNOC appreciates the opportunity to comment on the Straw Proposal SCP as it relates to DR. It is very important to incorporate the directives of the FERC's

Order 719 to allow for the maximum, effective DR participation. This would include eliminating deviation charges for reductions in load in real-time relative to forecast, to allow aggregator participation and to allow for small DR participation. In establishing the qualified capacity, it is probably necessary to distinguish between summer peak periods and other periods of the year. It is also important to allow Aggregators the ability to adjust the qualified capacity relative to historical data to match changes in customer profiles, not unlike the LSEs do in submitting their demand forecasts for RA purposes, which have a month-ahead true-up opportunity in particular months. In terms of penalties for non-performance, as with other generators, financial and or physical means are being considered. It is appropriate to consider these means for DR as well, but EnerNOC does not propose one over the other at this time.