111 Woodmere Road, Suite 190, Folsom, CA 95630
Office: 916-608-9060 Fax: 916-608-9861

COMMENTS OF 8MINUTENERGY RENEWABLES ON CAISO GENERATION INTERCONNECTION PROCEDURES: DELIVERABILITY REQUIREMENTS FOR CLUSTERS 1 AND 2 – REVISED DISCUSSION PAPER – JANUARY 10, 2012

8minutenergy Renewables, Inc. (8me) appreciates the opportunity to submit these comments on the CAISO's ***Generation Interconnection Procedures: Deliverability Requirements for Cluster 1 and 2- Revised Discussion Paper as revised January 10, 2012***. We commend CAISO staff for removing expensive Delivery Network Upgrades from Cluster 1 and 2 projects and consider it a step in the right direction. We strongly believe that removing the 500 kV upgrades would not adversely affect the deliverability of Cluster 1 and 2 projects specifically projects located in the San Diego Gas and Electric (SDG&E) service territory for the reasons discussed in the following.

Clusters 1 and 2 Projects

As mentioned earlier, our comments mainly focus on Clusters 1 and 2 projects located in SDG&E service area and concerns such as identifying and selecting study groups for renewable projects meaning project clustering process for delivery network upgrade identifications, applying consistent NERC, WECC and CAISO planning criteria across TPP and GIP assessments, and finally recognition of existing reliability problems in renewable energy deliverability assessments.

Grouping Desert area consisting of CA, AZ, CFE, and NV grids (South West USA) penalizes projects far removed from contingencies close to overloaded facility. For example, there are approximately 3,000 MW of renewable projects in the San Diego South and Imperial CREZes in Serial Group to Cluster 2 which is identified as the amount of fully deliverable generation with Sunrise Powerlink project in service. Sunrise Powerlink project (Imperial Valley-Suncrest 500 kV line) was recommended by the ISO and subsequently approved by CPUC to accommodate 1900 MW of renewable generation West of the Imperial Valley substation. The original ISO C1/C2 phase II report seems to have ignored the purpose of Sunrise Powerlink project and assigned hundreds of millions of dollars of the cost of 500 kV SCE service are upgrades to these projects in the SDG&E system. Those 500 kV upgrades are meant to mitigate

Category C contingencies and cannot be justified from any technical standard. Other points below will explain that point.

Victorville – Lugo overload problem is an existing reliability problem and CAISO uses existing operating procedure No. 6610 (SCE'S SOB T-135) as a mitigation plan. Please see CAISO 2011/2012 Reliability Assessment Final Study Results report Study area SCE East of Lugo – Summer Peak Page 1). This overload has been identified in 2010/11 CAISO Congestion assessment as well. It worth noting that a Category C contingency in NERC criteria doesn't distinguish whether two elements on outage are on the same tower, same corridor, or on different locations in the system and therefore there are no opportunities to misinterpret Category C contingency and its performance requirements by planning staff. The usual practice for performance requirements of Category C contingency is to use low cost alternatives in mitigating Category C related problems such as operating procedure, SPS, etc. which is evident in numerous mitigation solutions proposed by CAISO in its 2011/20122 TPP report for reliability upgrades in its TPP assessments.

Recommendations:

1. Clustering of projects in a group should be based on CREZes in close geographical proximity. For example, projects located in San Diego South, and Imperial Valley CREZes could be grouped in one Group, SCE Eastern bulk system with sizable generation projects could be on its own in a separate group for identifying Delivery Network Upgrades.

2. A close coordination of TPP and Generation Delivery assessments are needed to avoid different mitigation solutions proposed by both assessments approaches for the same contingency conditions.

3. Existing reliability problems should be mitigated by reliability upgrades covered by TAC recovery rather than identified as cost of Delivery Network Upgrades assigned to generation developers.

Clusters 3 and 4 Projects

Our recommendations would be to utilize the same approach proposed by CAISO for Clusters 1 and 2 in identifying the Delivery Network Upgrades for projects in Cluster 3 and 4 and identify the upgrades as policy driven projects covered by TAC recovery. It's also recommended that CAISO would coordinate with TPP assessments for GIP analysis of Clusters 3 and 4 to come up with cost effective short lead time upgrades which would facilitate quick interconnection of renewable projects with the CAISO grid. As in

the case of Clusters 1 and 2 projects, projects in Clusters 3 and 4 would be assigned 100$ deliverability in their GIA.

Net Qualifying Capacity (NQC) Assignment of Serial Group to Cluster 4 Projects

8me would recommend that CAISO would not apply “new generation” definition to assign long term NQC for projects in Serial Group to Cluster 4 as these projects would have 100% TPP based deliverability. CAISO needs to provide a clear definition of “new generation” for projects in Cluster 5 and beyond in assessing NQC annually.

Best Regards,

Martin Hermann, CEO
8minutenergy Renewables, LLC
mhermann@8minutenergy.com