Net load - March 31 28,000 26,000 24,000 22,000 2012 20,000 (actual) 2013 (actual) 18,000 2014 ramp need 16,000 2015 ~13,000 MW 2016 in three hours 14,000 2017 12,000 over generation 10,000 risk 12am 6am 9am 12pm 3pm 9pm 6pm

Figure 1

The duck chart also illustrates the growing concern regarding over-generation on the system, when more electricity is supplied than the CAISO needs to satisfy real-time electricity requirements. The CAISO experiences over-generation as it prepares to meet the two daily upward ramps that occur in the morning and in the late afternoon, when output from non-dispatchable/must-take resources increases supply in times of low electricity need, typically in the nighttime hours. This flexible resource adequacy capacity proposal is not specifically designed to address the over-generation concern. However, as the duck chart demonstrates, the potential for over-generation will continue to grow. As this occurs, the CAISO will consider the need for flexible capacity to address over-generation in future initiatives.

Hour

2. Renewable Portfolio Standards

California has adopted a renewable portfolio standard requirement of 33 percent by 2020. Successfully integrating the resources required to achieve California's renewable portfolio standard creates the need for a resource adequacy flexible capacity requirement. In particular, sufficient flexible capacity must be available to the CAISO to address the added variability and unpredictability created by variable energy resources.