

**Figure 84: Outages and Deratings by Load Level and Participant Size
June to August, 2014**

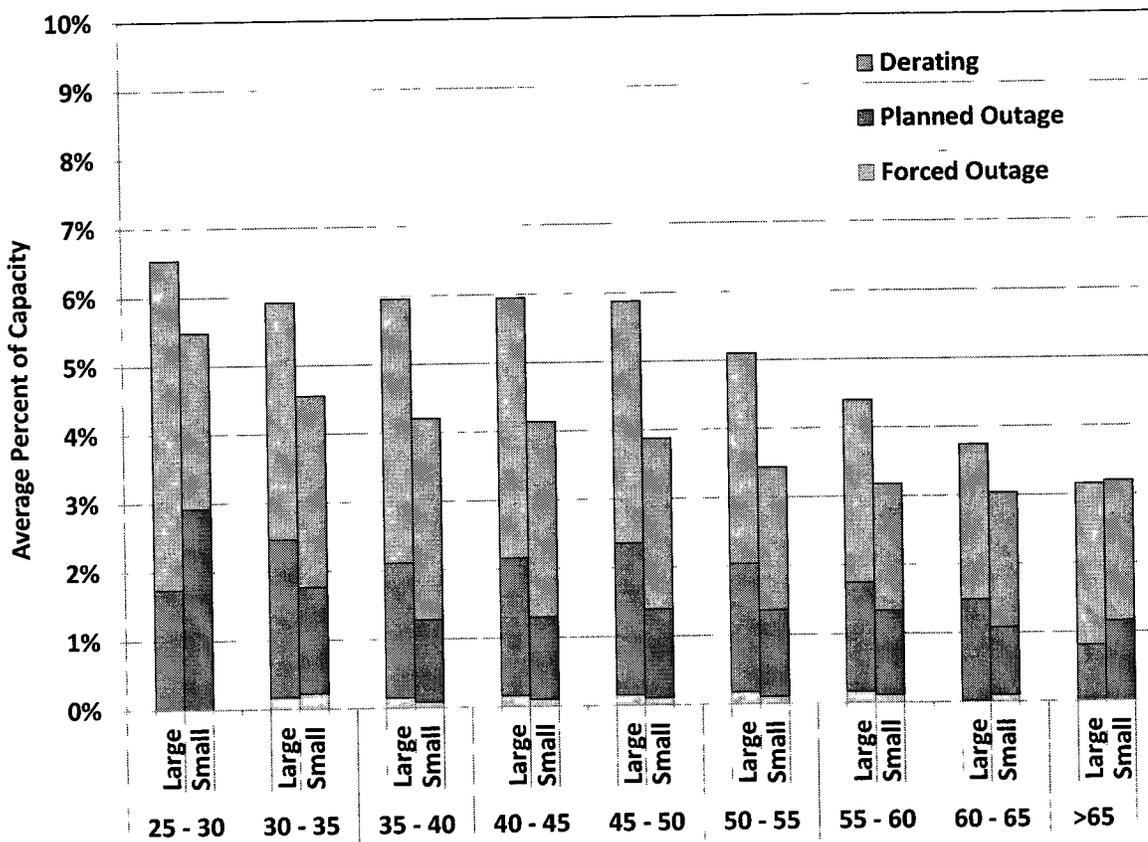


Figure 84 suggests that as demand for electricity increases, all market participants tend to make more capacity available to the market. For large suppliers, the combined short-term derating and forced outage rates decreased from 6.5 percent at low demand levels to approximately 3.2 percent at load levels above 65 GW. These are larger than for small suppliers at all load levels, which at first look may be seen as a competitive concern. However, large supplier outage rates are roughly the same as they were in 2013, whereas small supplier outage rates increased 68 percent. Given the overall low magnitude of outage rates for all suppliers, these results raise no competitiveness concerns.

3. Evaluation of Potential Economic Withholding

To complement the prior analysis of physical withholding, this subsection evaluates potential economic withholding by calculating an “output gap.” The output gap is defined as the quantity of energy that is not being produced by in-service capacity even though the in-service capacity is

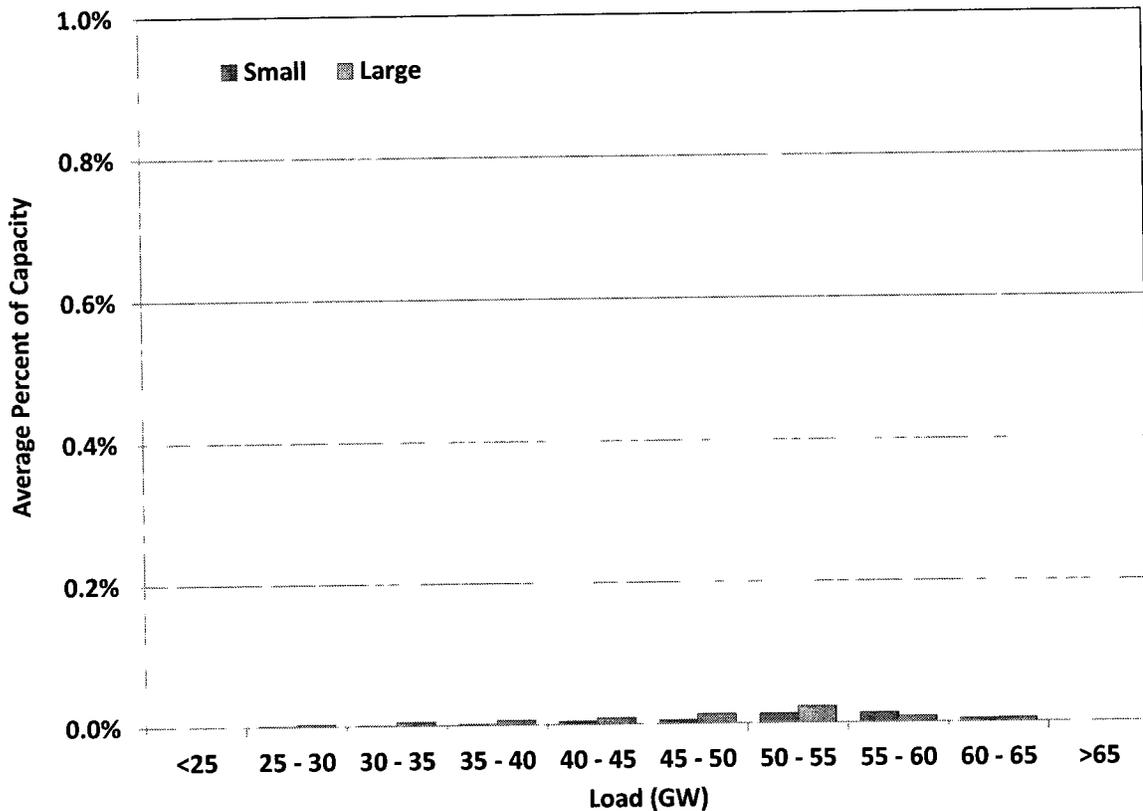
economic by a substantial margin given the real-time energy price. A participant can economically withhold resources, as measured by the output gap, by raising its energy offers so as not to be dispatched.

Resources are considered for inclusion in the output gap when they are committed and producing at less than full output. Energy not produced from committed resources is included in the output gap if the real-time energy price exceeds by at least \$50 per MWh that unit's mitigated offer cap, which serves as an estimate of the marginal production cost of energy from that resource.

Before presenting the results of the Output Gap analysis, a description of the two-step aspect of ERCOT's dispatch software is required. In the first step, the dispatch software calculates output levels (Base Points) and associated locational marginal prices using the participants' offer curves and only considering transmission constraints that have been deemed competitive. These "reference prices" at each generator location are compared with that generator's mitigated offer cap, and the higher of the two is used to formulate the offer curve to be used for that generator in the second step in the dispatch process. The resulting mitigated offer curve is used by the dispatch software to determine the final output levels for each generator, taking all transmission constraints into consideration.

If a market participant has sufficient market power, it might raise its offer in such a way to increase the reference price in the first step. Although in the second step the offer appears to be mitigated, the market participant has still influenced the market price. This output gap is measured by the difference between the capacity level on a generator's original offer curve at the first step reference price and the capacity level on the generator's cost curve at the first step reference price. However, this output gap is only indicative because no output instructions are sent based on the first step. It is only used to screen out whether a market participant is withholding in a manner that may influence the reference price.

Figure 85: Incremental Output Gap by Load Level and Participant Size – Step 1

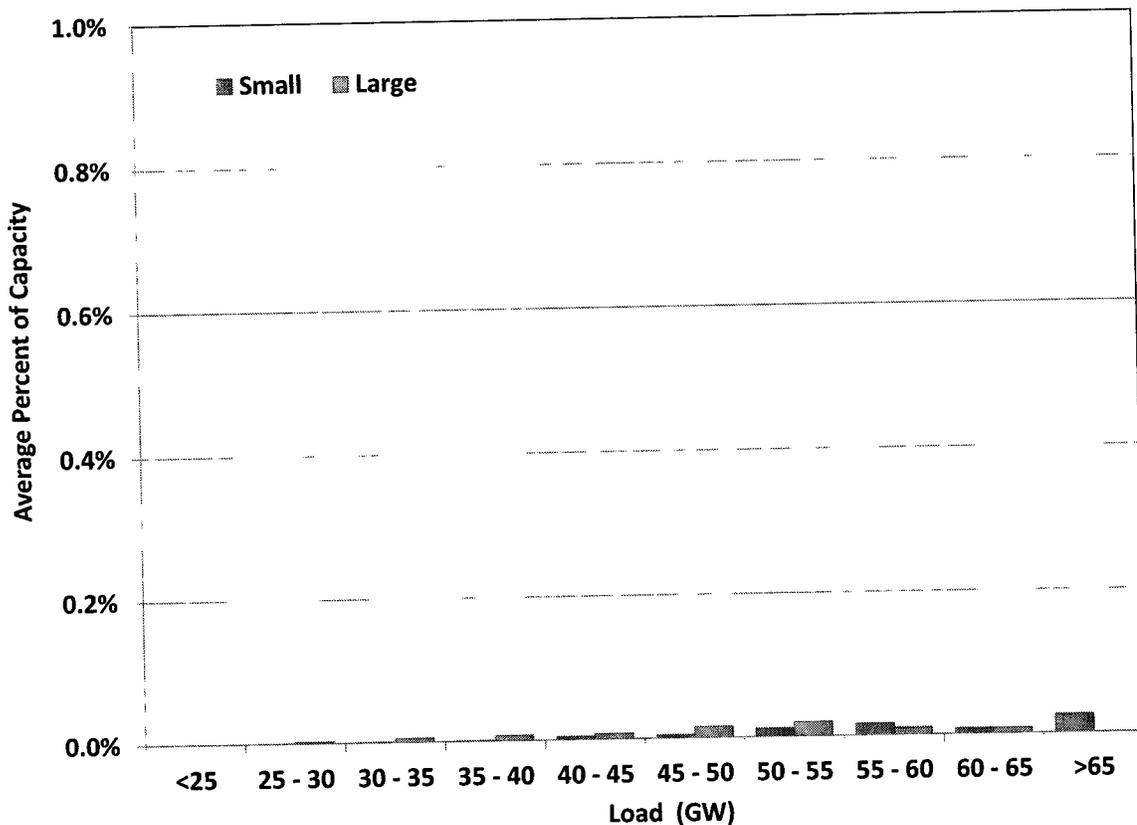


The results of the analysis shown in Figure 85 indicate barely detectable quantities of capacity being potentially economical withheld.

Figure 86 shows the ultimate output gap, measured by the difference between a unit's operating level and the output level had the unit been competitively offered to the market. In the second step of the dispatch, the after-mitigation offer curve is used to determine dispatch instructions and locational prices. As previously illustrated, even though the offer curve is mitigated there is still the potential for the mitigated offer curve to be increased as a result of a high first-step reference price being influenced by a market participant raising prices.

Similar to the previous analysis, Figure 86 shows very small quantities of capacity that would be considered part of this output gap.

Figure 86: Incremental Output Gap by Load Level and Participant Size – Step 2



The output gap of several of the largest suppliers were also examined for year 2014, and unlike the findings in 2013, found to be consistently low for all suppliers across all load levels.