

Fixed Curtailment Fee and DSI Non-Take-or-Pay Option

There are two products that allow a DSI to reduce load and avoid the full take-or-pay charges. Under the Fixed Curtailment Fee product, the DSI pays a fixed fee of 4.95 mills per kilowatt-hour for the amount of energy curtailed. Under the DSI Non-Take-or-Pay Option, the DSI pays a premium of 0.46 mills per kilowatt-hour on energy taken. Under this product, the DSI can curtail due to changes in plant operations without further charge and without a take-or-pay obligation.

The study assumed that a total of 1,000 megawatts (MW) of DSI load would subscribe to either the Fixed Curtailment Fee product or the DSI Non-Take-or-Pay Option. The study also assumed that the probability of plant curtailment in the first year of the rate period was zero percent, increasing by 5 percent each year to 20 percent in the last year of the rate period. To determine lost revenues, the study assumed that 1,000 MW was curtailed each month. The difference in revenues between sales of the 1,000 MW to the DSIs and sales in the alternative market was calculated. This difference was multiplied by the probability of curtailment during that year. These assumptions are identical for both products (because the probability of curtailment in the first year is zero, there are no lost revenues for the first year).

Cost of Fixed Curtailment Fee Product

The study assumed no curtailment in the first year of the rate period. During the second through fifth years, the study assumed that BPA would resell 40 percent of the curtailed energy as surplus firm energy and the rest as nonfirm energy. The study further assumed that for May through July of each year, BPA would be unable to obtain the full price for surplus firm energy. Therefore, it assumed that the price for the surplus firm sales during these months equaled one-half of the surplus firm price plus one-half of the nonfirm price. Nonfirm prices were based on the nonfirm sales equations as applied in the full Load Shaping analysis, and surplus firm prices were based on the average purchase price of surplus firm energy from the Full Load Shaping analysis.

For each month, two numbers were derived: first, the product of the amount of energy assumed to be sold as nonfirm energy and the difference between the IP rate and the monthly nonfirm sales price; and second, the product of the amount of energy assumed to be sold as surplus firm energy and the difference between the IP rate and the monthly surplus firm sales price (the adjusted price of surplus firm for May through July was used, as described above). The sum of these two numbers is the reduction in revenues for that month because of the curtailment. This procedure was followed for each month of each year in the rate period. The monthly values were summed to derive the annual cost of the product for each of the 5 years. For each year, the annual cost was divided by the expected curtailment in megawatt-hours (MWh) for that year. The resulting annual values were then reduced to present value and leveled to derive five-year costs per MWh of curtailment. This cost is \$4.95 per MWh (equivalent to mills per kilowatt-hour). See Table K, column N, row 9.

Cost of DSI Non-Take-or-Pay Option

For this product, the same assumptions were made regarding the sale of curtailed energy. In this case, however, the customer remains responsible for its transmission demand and use-of-facilities charges. Therefore, all resale prices were compared to the IP rate minus these charges, rather than to the IP rate as a whole. Except for this difference, the analysis was the same as that used for the Fixed Curtailment Fee product. The expected non-take-or-pay load for each year was assumed to be the subscription amount of 1,000 MW minus the expected quantity of curtailment for that year. Annual costs were derived, reduced to present value and levelized to derive five-year costs of \$0.46 per MWh (equivalent to mills per kilowatthour) of non-take-or-pay energy. See Table K, column N, row 8.