Multi-Hour Block Transaction BPCG Limitation

NYISO Staff Review of Alternative Solutions

Background

External transaction bids supplied by Market Participants (MP) are currently evaluated in SCUC on an hourly basis through an assessment of bid prices versus system costs. The transactions are scheduled for the particular hours when their bid prices are economically attractive and no physical constraints would preclude them. The evaluation of a transaction for a particular hour does not depend on whether that transaction will be scheduled in any preceding or subsequent hour. This approach may complicate the scheduling of multi-hour transactions for some market participants.

Responding to the MP requests, the multi-hour block transaction project will attach a user specified minimum run time characteristic to external transactions in the SCUC. The selection of transactions in SCUC will then take this minimum run time characteristic into account in the least production cost evaluation over the day.

Issue

In most SCUC evaluations, transaction, generation and load schedules will be determined in a competitive environment. Under adverse system conditions, such as high load periods or reserve deficiencies, the SCUC algorithm will attempt to resolve the system conditions regardless of the cost. During these times, transactions with very high hourly costs and long minimum run times may be accepted to resolve a problem that only exists in a few hours. Under the current tariff, external LBMP import transactions scheduled in SCUC may recover a portion of their as bid production costs through Bid Production Cost Guarantees (BPCG). If the current BPCG were applied to Multi-Hour Block transactions, the effective cost of energy scheduled in a particular shortage hour could considerably exceed the \$1000/MW-hr bid cap. Aside from circumventing the bid cap, this outcome would reward market participants offering inflexible schedules for external transactions with higher revenues than market participants offering the same energy with flexible schedules. In addition, because the \$1000/MW-hr bid cap would be applicable in the determination of real-time imbalance prices, application of a bid production cost guarantee to multi-hour block transactions would entail payments for day-ahead schedules that could considerably exceed the financial consequences of failing to deliver that power in real-time.

Potential Solutions

The potential gaming abuse has been discussed between NYISO staff and Market Participants (MP) at several Market Structures Working Group (MSWG) meetings. All parties agree to the need to prevent and protect against market abuses. The constraining of BPCG excesses by the Market Monitoring and Performance (MMP) unit would be inappropriate due to the known existence of the market abuse and the ability to independently engage it. Additionally, established rules provide for a clear and timely financial settlement of the transaction. Initial discussions involved developing a limitation on the BPCG payments made to scheduled transactions to reflect the \$1000/MW-hr bid cap currently in effect. During these discussions some MPs indicated their desire to not be scheduled rather than not paid in full.

Following discussions with MP, the NYISO has reviewed three potential solutions for limiting the gaming opportunities introduced with multi-hour block transactions. Only Multi-Hour LBMP import transactions committed against forecast load are impacted by these proposed solutions. Export and wheel-through transaction are not granted BPCG and thus do not create the same market abuse conditions. Transactions committed during the bid load pass will be eligible for full cost recovery as both load and generation have the capability to enter cost sensitivities during this pass, the selection of transactions will reflect competitive economic merits. Internal NYISO units are also not included as they are subject to market mitigation if they attempt to bid inappropriately high prices. These solutions and their impact on software and the marketplace are:

A) BPCG Limitations. Limit the BPCG payments so as to be consistent with the \$1000/MWhr bid cap. The total daily BPCG for Multi-Hour block LBMP import transactions would be limited to the amount of uplift cost that would raise the total cost/MW-hr of the transaction in the hours in which the transaction is economic, or the maximum hour of LBMP if not economic, to the bid cap. Thus, the BPCG payment would be limited to the amount that would raise payments for energy in the economic hours to \$1000/MW-hr (LBMP + uplift = \$1000/MW-hr.)

The proposal is not intended to limit the ability of competitively selected transaction from recovering their total as bid costs through LBMP and BPCG payments. Additionally, for those transactions that continue to bid in a manner consistent with the current system, by not requiring a minimum run time, the BPCG remains unchanged and will ensure full recovery of their as bid costs. The ability to ensure cost recovery is enhanced with lower bid costs and reduced minimum run time requirements.

B) Final Dispatch BPCG Check. Check for transactions exceeding a threshold level of BPCG revenues during the final bid load redispatch pass of SCUC. The threshold would reflect the BPCG calculation proposed in option A. A transaction with an effective price of greater than \$1000, and therefore not eligible for full cost recovery, would be removed from the solution mix and the remaining units and transactions redispatched to determine schedules and DAM prices.

The intent of this proposal is to identify transactions that have succeeded in violating the bid cap and remove them from the commitment solution to relieve them of any physical or financial obligations. The resulting solution may require increased use of Supplemental Resource Evaluations (SREs) to replace capacity lost due to the transaction removal. Implementation will require development of the uplift calculation within SCUC and the additional software to perform the BPCG check, redispatch and reporting.

C) Iterative SCUC Implementation. Develop iterative logic within SCUC forecast load passes to check for transactions exceeding a threshold level of BPCG revenues. The threshold would reflect the BPCG calculation proposed in option A. A transaction with an effective price of greater than \$1000, and therefore not eligible for full cost recovery, would be removed from the solution mix.

The intent of this proposal is to identify transactions that have succeeded in violating the bid cap and remove them from the commitment solution to relieve them of any physical or financial obligations. Implementation will require development of the iterative logic. This will be complicated by the need to develop an uplift calculation within SCUC and the determination of pricingto use in calculating the uplift. Precise labor estimates have not been developed. However, based on past experience this magnitude of change cannot be completed within the current project timeline. Additionally, the added runtime requirements may result in the need to lengthen the DAM time period.

Summary

Proposals B and C, Final Dispatch BPCG Check and Iterative SCUC Implementation, will require significant additional software development effort to implement. The Iterative SCUC Implementation will require a delay in the delivery date. The Final Dispatch BPCG Check would require additional investigation to determine schedule impact, but is likely to also delay the implementation. Additionally, the Iterative SCUC Implementation could impact the performance of SCUC and require an extension in the DAM time period. The BPCG Limitation proposal involves Billing and Accounting Software and will not impact the SCUC software or performance.

The Final Dispatch BPCG Check and Iterative SCUC Implementation proposals fully absolve MPs of any obligations if their transactions are identified as violating the bid cap, thereby removing any incentive to offer lower priced or more flexible schedules. The BPCG Limitation proposal creates an incentive to offer bwer priced, more flexible schedules through an increased prospect of full cost recovery.

Proposal A, BPCG Limitations, offers an effective means for protecting against market gaming opportunities arising from the introduction of Multi-Hour Block Transactions without impacting the software development schedule.