Summary of Dynamic Net Benefits Options	
Option 1	Option 2
Attempt to develop a solution using known optimization techniques that have not been applied to the solution of the dispatch problem in commercial software.	Attempt to develop new solution concepts that might permit a faster and better unit commitment and dispatch solutions.
1. Would attempt to develop a solution to the unit commitment and dispatch problem that applies a NBT utilizing known optimization techniques 2. Methodology : • In theory, a non-linear constraint using the current production cost minimization objective function, or • Replace current production cost minimization objective function with a load or billing unit effect cost minimization objective function for demand response activation.	1. Team with Academic and/or industry research • Attempt to develop new solution concepts and new software. 2. Approach would focus additional research specifically on the unit commitment aspects of the problem. • Explore the consequences of applying multiple benefits tests to different choice variables with the same optimization problem, prior to attempting to develop unit commitment and dispatch software for application in the NYISO markets.
Option 3	Option 4
Apply an ad hoc solution approach, using existing software solution methods, to evaluate NBT based on making all demand response bids available for dispatch versus no demand response bids available for dispatch.	Apply an ad hoc approach to utilize existing software solution methods to permit application of the NBT to groups of demand response bids to avoid the all or nothing outcome of option 3.
1. Three part process (in simplest form): • Solve the dispatch without activating demand response, calculate clearing prices, and then • Solve the dispatch again, activating all demand response that would be economic to dispatch, then recalculate clearing prices. • Then apply net benefits test to select dispatch. 2. Assumes NBT would only take account of net payments by remaining load based on the energy price. 3. Demand response would only be dispatched if the net benefits test were satisfied. 4. Difficult to implement in 24 hour optimization framework of day-ahead market. Alternative implementation methods in day-ahead market include: • "Hour-by-Hour" • "All-or-Nothing" • "Combined"	1. Iterative approach in which SCUC and RTD would be solved for each incremental level of demand response schedule/dispatch would be infeasible. 2. DR bids could be grouped by bid price for evaluation against the NBT. 3. Complex to apply on congested system, since DR at different locations will have different impacts on clearing prices, grouping bids by price to apply the NBT would not yield accurate results. Could perhaps be applied to bids in broad locations: e.g. Zone K; Zone J, other south of PV; Rest of State would require on the order of more than 17 solutions, implementation would have to be based on parallel processing in real-time; • Even parallel processing would not make this workable to apply to individual hours of day-ahead market and unit commitment. • Additional compromises would be necessary to implement.