BEST LEAST COST SOLUTIONS

A.F. Mensah, Inc.

October 14th, 2015

Best Least Cost Solutions

- Selecting the lowest priced RegD assets and forgoing higher priced ones provides one least cost solution

- However, this is not the only least cost solution

- The market should pick the best least cost solution

- This solution could potentially include higher priced assets

Best Least Cost Solutions

- Currently, RegD assets cannot bid any reasonable price and expect to clear.

- Consider an asset that only wants to operate if the price is higher than $10.

- If they bid $10 in the current market, they will never clear

- But consider the following examples

Consider this Hypothetical Market

Unit	Cost	Performance Score	Effective Size
D1	$0	.85	40%
D2	$10	.95	40%
A1	$20	.9	60%

Assume the tolerance for RegD in this market is 40%, thus one of the above RegD units will clear and one will not

Case 1: The current Market Clearing Engine would select "D1" first given its cost of $0 and then select "A1" to complete the market with a marginal price of $20.

Case 2: Consider then if it had instead selected "D2" in place of "D1". In this case "D2" is selected at $10 and "A1" is selected at $20 to meet the requirement and the marginal price is also $20.

Thus both of these solutions are least cost, so which one is better?

"D1" has a performance score of .85 and "D2" has a performance score of .95. Thus Case 2 is the best least cost solution.

The current MCE will never select Case 2.

This is the perverse incentive provided by the market for RegD to bid 0. A RegD unit can never bid any reasonable cost and expect to clear in the market, even if it is the best performing unit.

Consider this Hypothetical Market

Unit	Cost	Performance Score	Effective Size
D1	$0	.85	40%
D2	$10	.95	40%
A1	$5	.9	60%

Assume the tolerance for RegD in this market is 40%, thus one of the above RegD units will clear and one will not

Case 1: The current Market Clearing Engine would select "D1" first given its cost of $0 and then select "A1" to complete the market with a marginal price of $5.

Case 2: Consider then if it had instead selected "D2" in place of "D1". In this case "D2" is selected at $10 and "A1" is selected at $5 to meet the requirement and the marginal price is $10, set by the RegD asset.

Only Case 1 is least cost, and "D2" was able to price it self out of the market.

Being able to price yourself in and out of a market with bids is one of their fundamental purposes. It allows you to ensure that the reward is worth the cost for operations.

Currently, the market for RegD effectively forces you to bid $0 if you want to clear. This forces you to often provide regulation below cost in hopes of clearing during higher priced hours as well.

A.F. Mensah, Inc.

252 Nassau Street

2nd Floor

Princeton, NJ 08542

115 Stryker Lane

Building 4 – Suite 10

Hillsborough, NJ 08844

www.afmensah.com

Contact Me at

William.gallgher@afmensah.com

908-399-2867