

PROPOSED UPDATES TO THE DR AUCTION CLEARING MECHANISM

Demand Response Working Group
Meeting #2

May 30, 2016

Objective

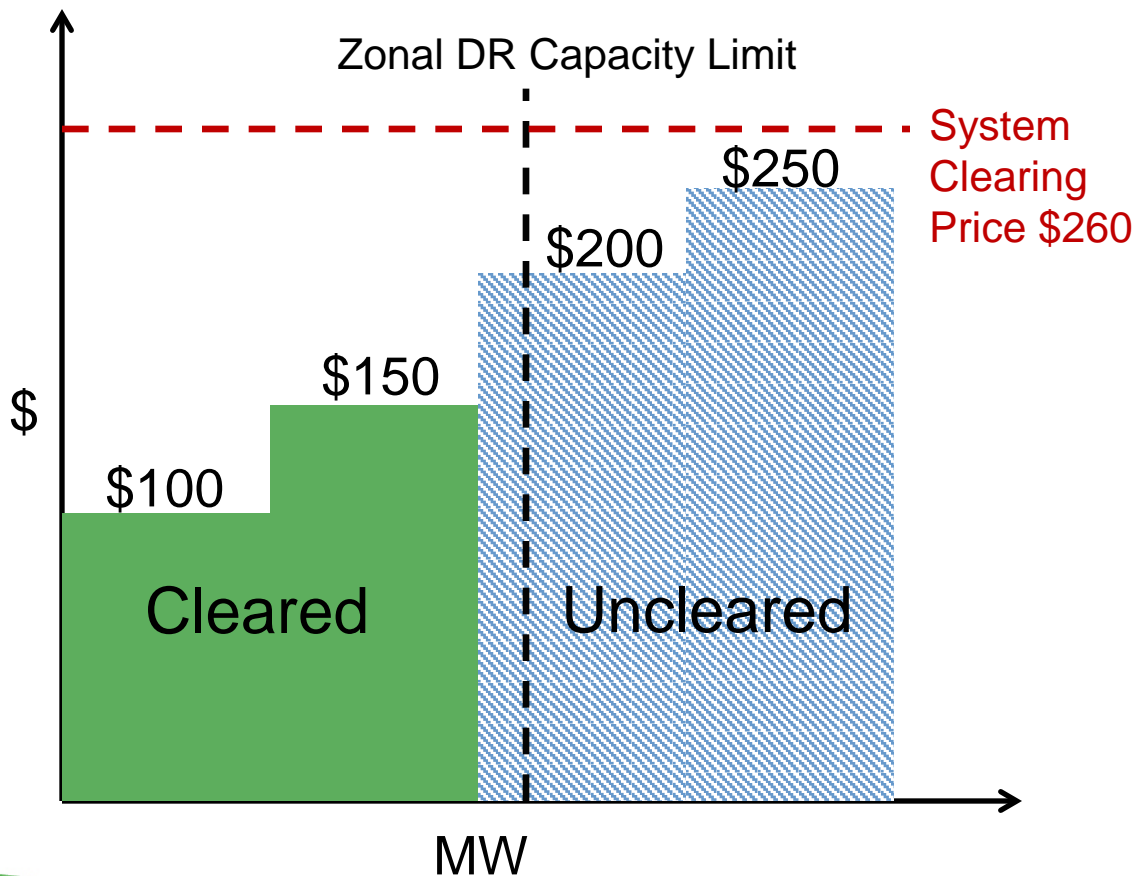
- To review IESO proposals from last meeting on enhancing the DR Auction clearing mechanism
- The IESO proposes to modify the DR Auction clearing mechanism with the following modifications:
 1. Update to the zonal pricing mechanism
 2. Update to the optimization engine

Proposal 1: Zonal Pricing Mechanism

- A zonal price will be set at the lesser of the next higher economic offer price or Ontario-wide price when:
 1. An otherwise economic “Full” offer is not selected due to the zonal limit; OR
 2. The zone clears at exactly at the limit.
- This approach will send a better price signal about supply conditions within the zone when there is oversupply, relative to what can be accommodated
 - Setting the zonal price equal to the system-wide price sends the wrong signal about the availability and cost of DR in the zone
 - Local DR will not be signaled at a higher price when the value of DR in that zone is lower

Example 1

Zone X Offers



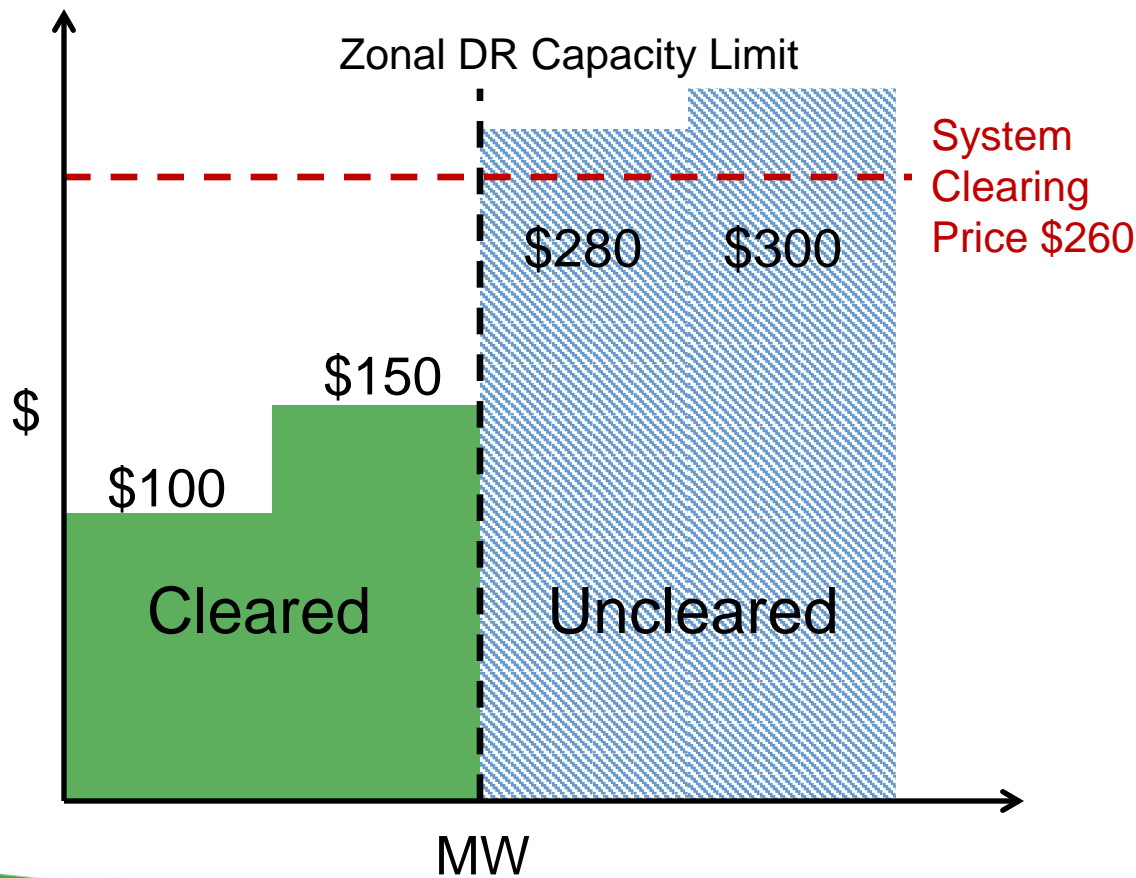
Assumptions:

- All offers are “Full”

Under the current clearing rules, Zone X clears at \$260. Under the proposed zonal clearing rules, Zone X will clear at \$200 because the next offer would have been selected but for the Zonal DR Capacity Limit.

Example 2

Zone Y Offers



Assumptions:

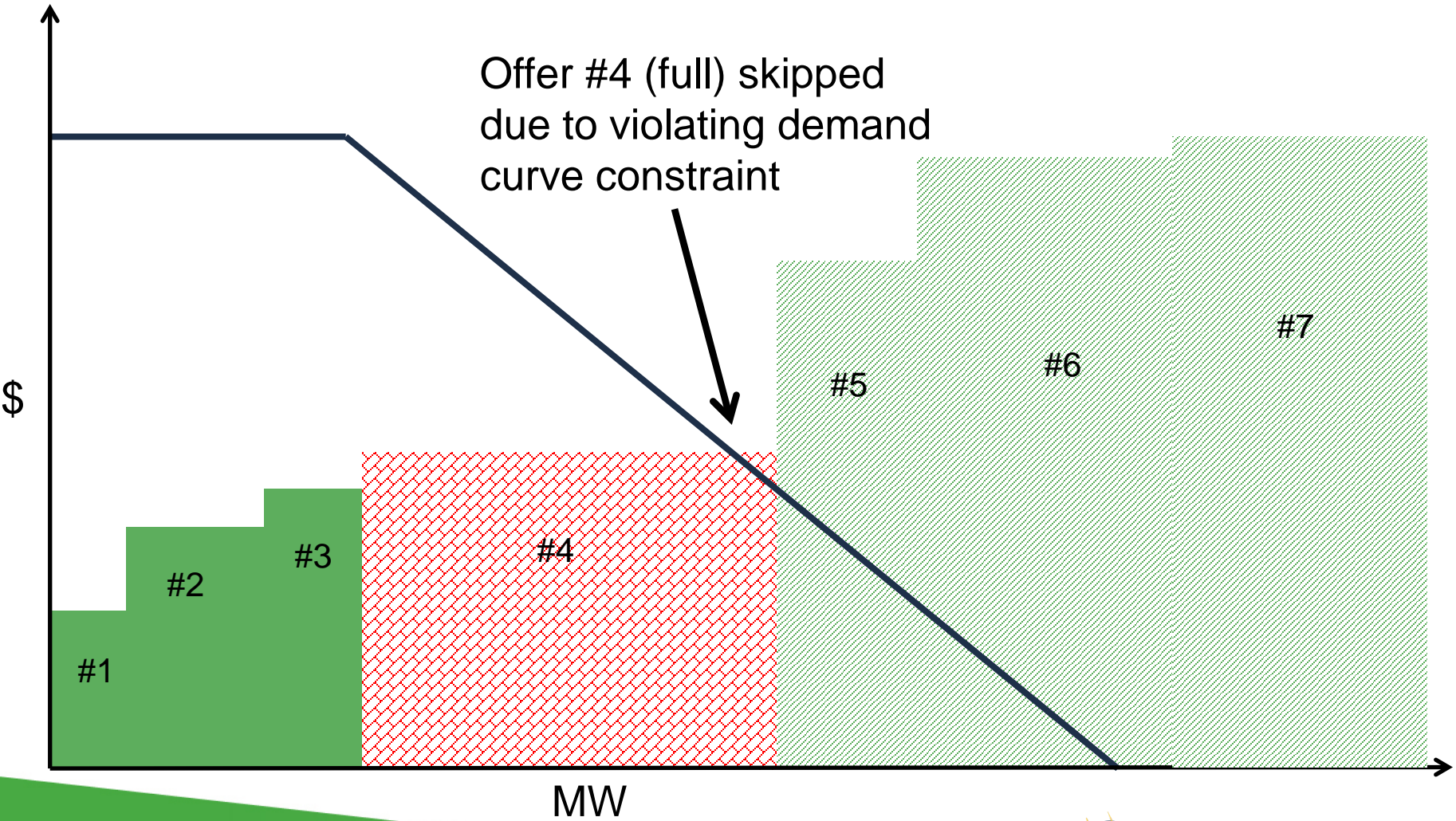
- All offers are “Full”

Under the current zonal clearing rules, Zone Y will clear at \$150, since the Zonal DR Capacity Limit was exactly reached. Under the proposed clearing rules, Zone Y will clear at \$260 because the next offer would not have been selected.

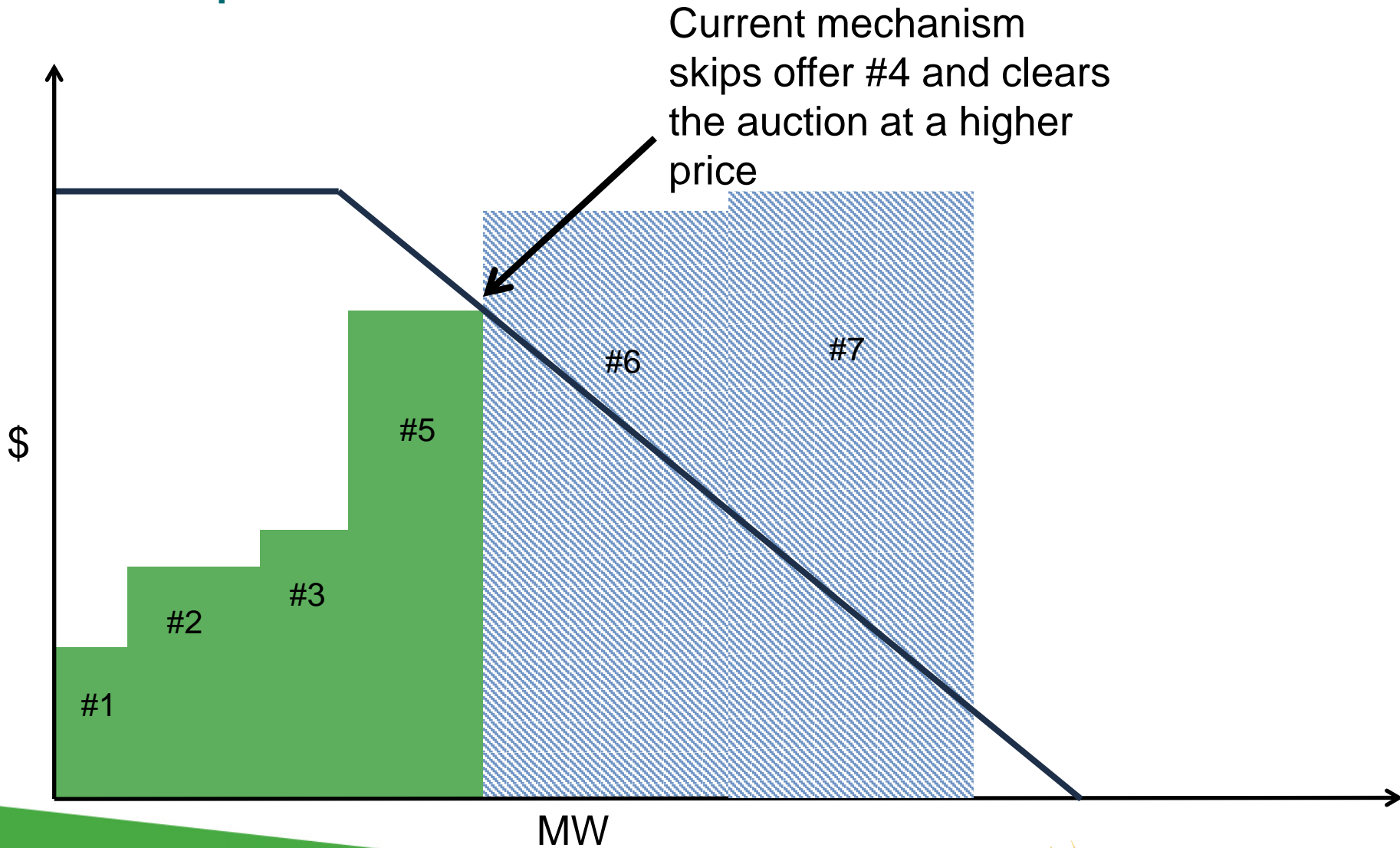
Proposal 2: Optimization Engine

- The IESO proposes to clear a “full” offer that crosses the demand curve ONLY IF accepting that offer improves the objective function
 - Proposal favours accepting a low-cost full offer with “overhang” rather than selecting next offer at higher price that fits within the demand curve constraint
 - Offer would only be accepted if its surplus gain exceeds its surplus reduction
- This approach is a best practice that has been adopted in other capacity auction mechanisms, such as PJM and ISO-NE

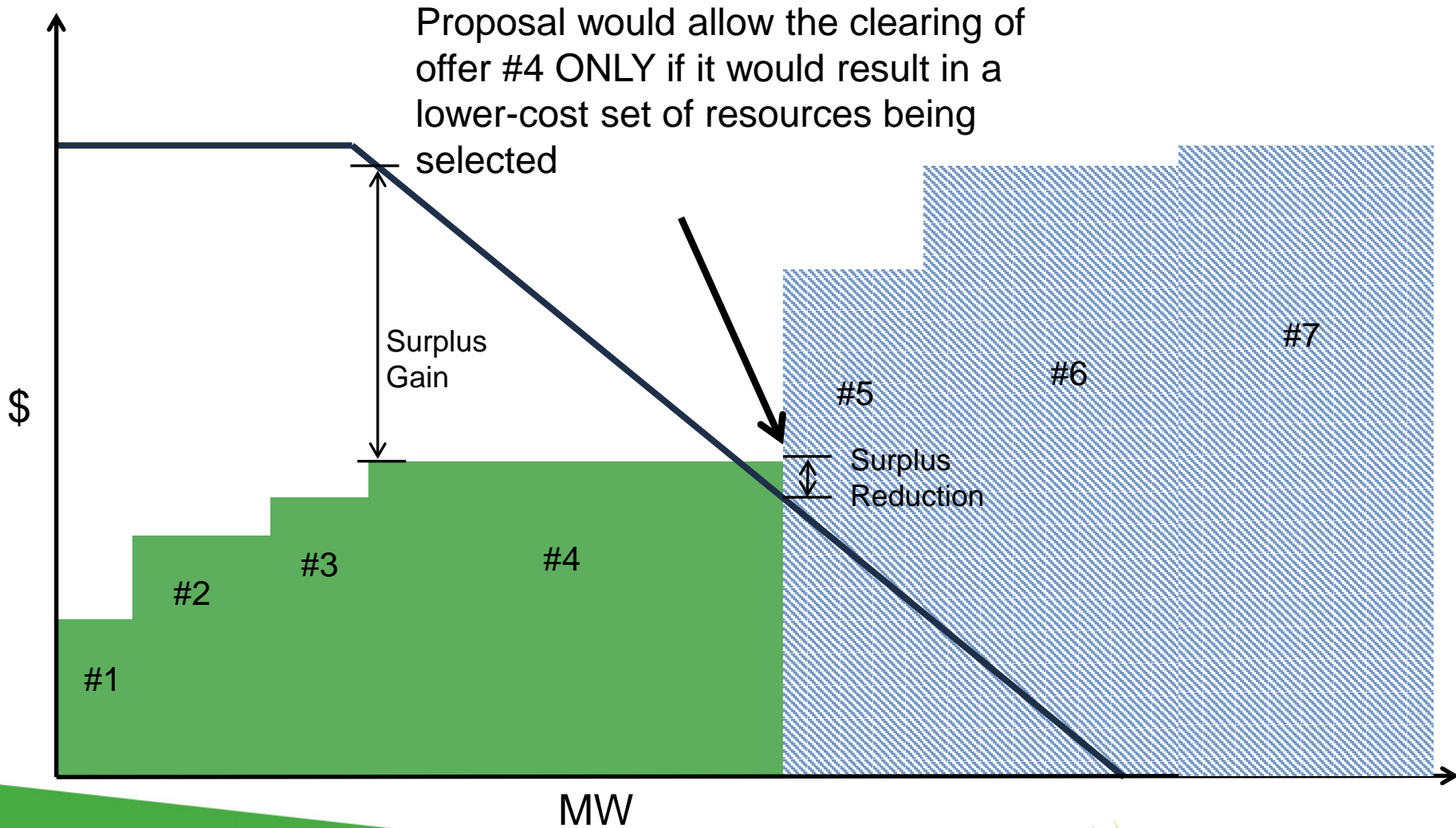
Example



Example



Example



Next Steps

- The IESO believes the two proposed updates to the DR Auction clearing mechanism will result in a more optimal and more intuitive pricing outcome
- There was no stakeholder feedback received on the two proposals
- The IESO will implement these proposals into the DR Auction clearing mechanism for the next DR Auction in December 2016