Proposed Changes in eMKT to Reflect Resource Capability

Tier 1 Compensation (MIC)

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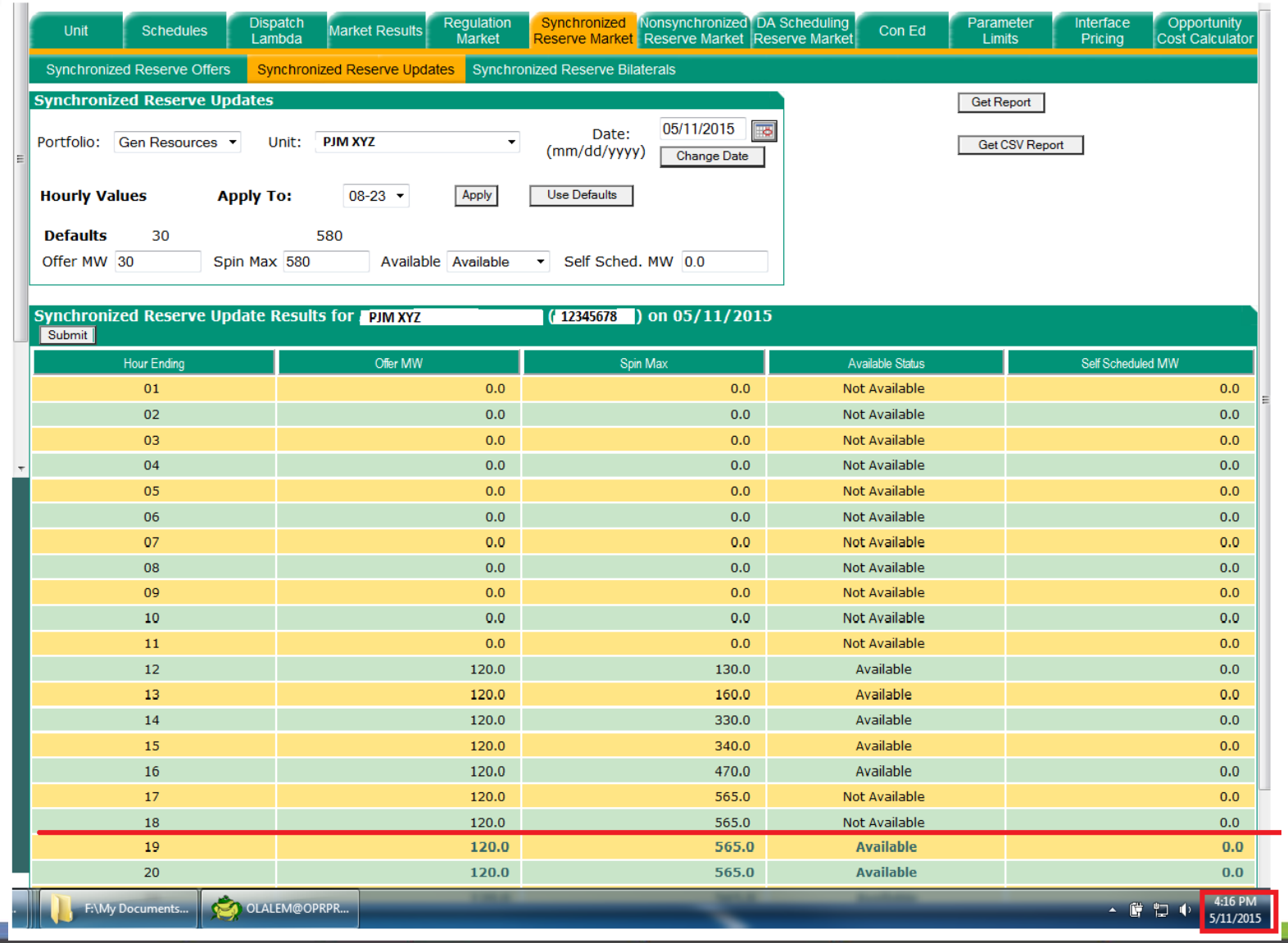
Synchronized Reserve Updates - Today



Closed

- Hourly update page is locked 2 hrs. ahead of the operating hour;
- ASO for Hour Ending 18 (17 – 18) runs at 1600;
- The only change after ASO case approval is the “Not Available”
  - “Not Available” status can be communicated only on the phone to PJM dispatcher

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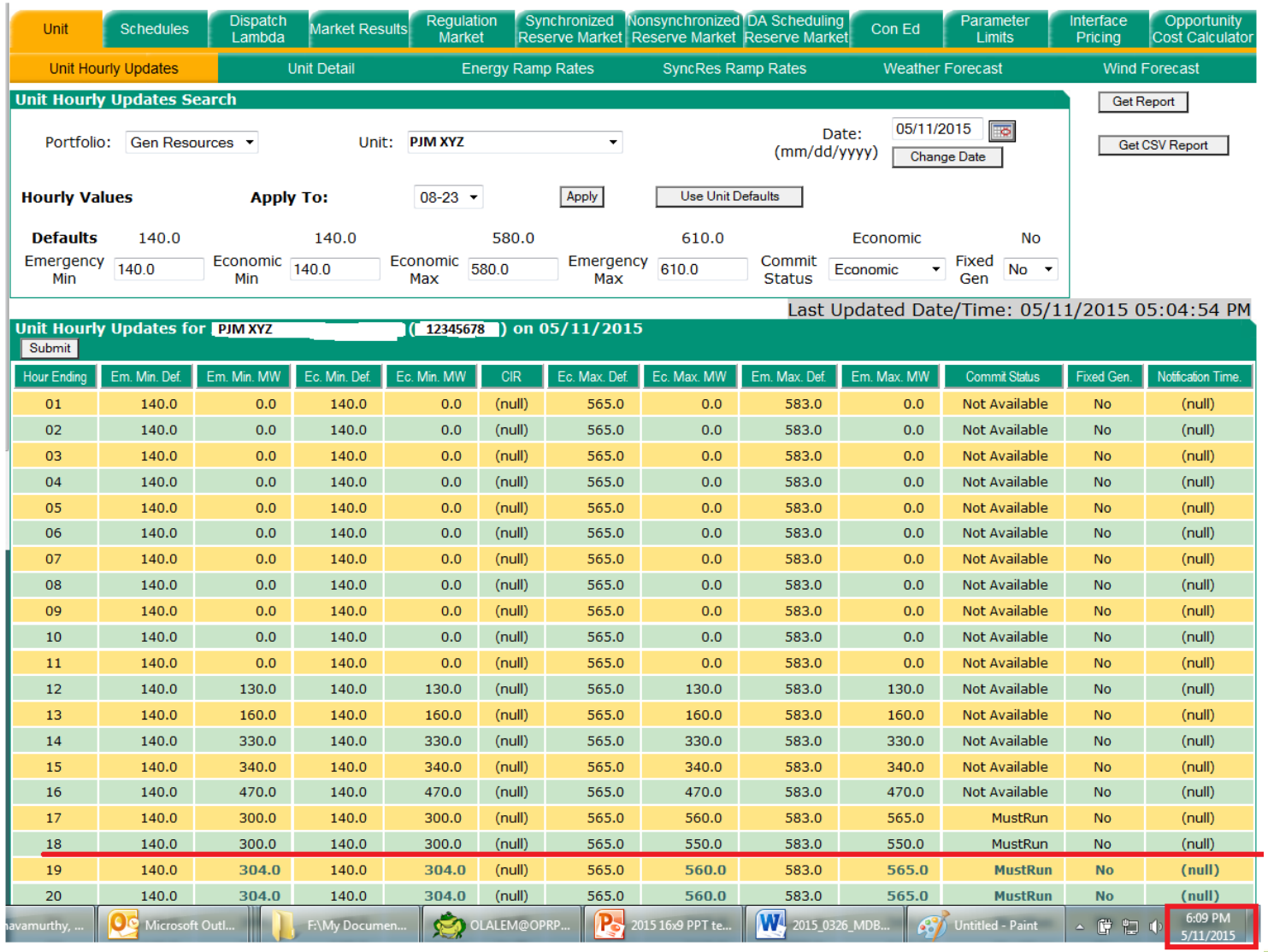
Synchronized Reserve Updates - Proposed



- Change Synchronized Reserve Updates page to behave similar to Unit Hourly Updates
  - ➢ Accept updates until the end of operating hour;
- Inflexible Tier2 committed in ASO are locked with resource parameters used in clearing;
- RTSCED will be able to use latest parameters from eMKT that reflects current capability of the resource in estimating Tier 1 MW and clearing flexible Tier 2 MW

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Summary Effect of Proposed Changes

- Opening up Synchronized Reserve Update page
  - Will allow Market Participant to accurately reflect resource capability in real-time via eMKT;
  - Will allow RTSCED to correctly evaluate Tier1 MW based on resource capability as submitted;
  - Will allow changes that affect ONLY reserve calculation and procurement;

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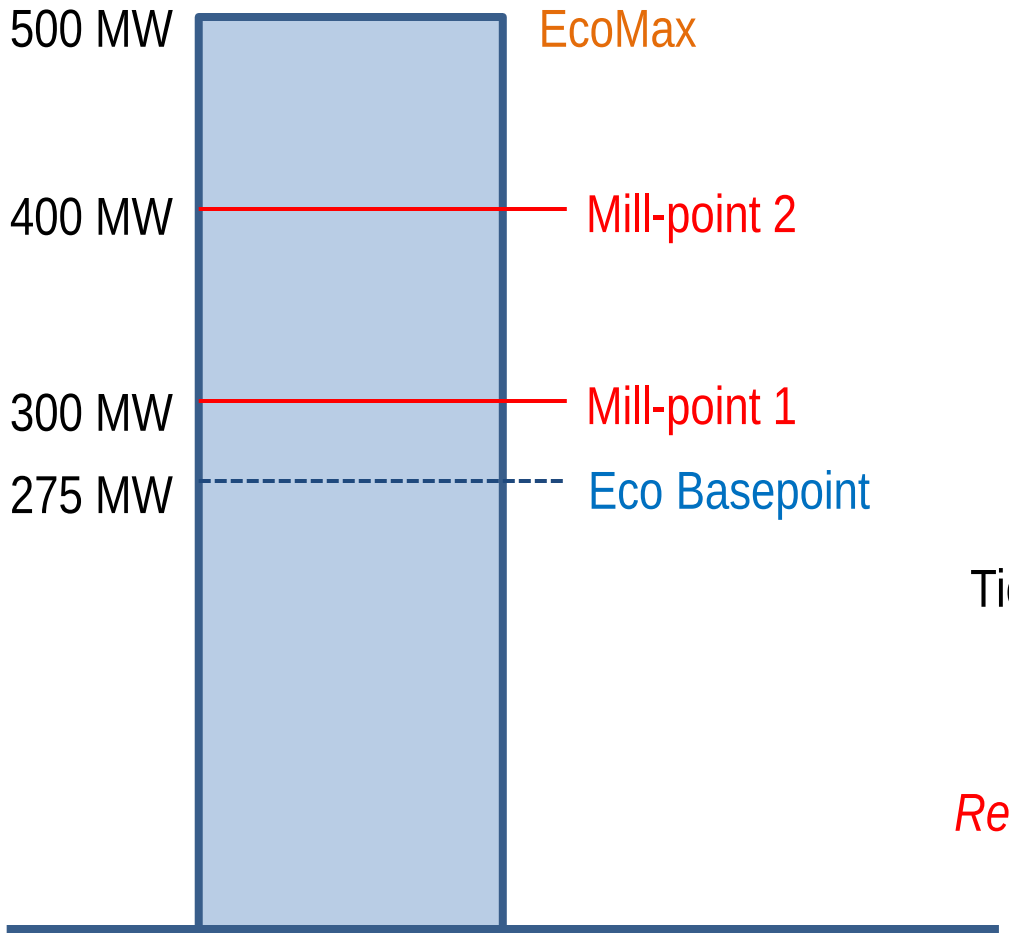
Example 1 – Modeling Mill-points on a Unit with Physical Limitation



Unit Parameters

EcoMax = 500 MW

Mill-point 1 at 300 MW takes 20 minutes

Mill-point 2 at 400 MW takes 20 minutes

Ramp Rate = 5 MW/Min

No SpinMax value entered

Exception to allow EcoMax > SpinMax

Tier 1 MW Estimate = min (EcoMax – EcoBP, 10 * RampRate)

= min (500 – 275, 10 * 5) = 50 MW

Realistically 50 MW of Tier 1 is not achievable in 10 minutes due to mill-point

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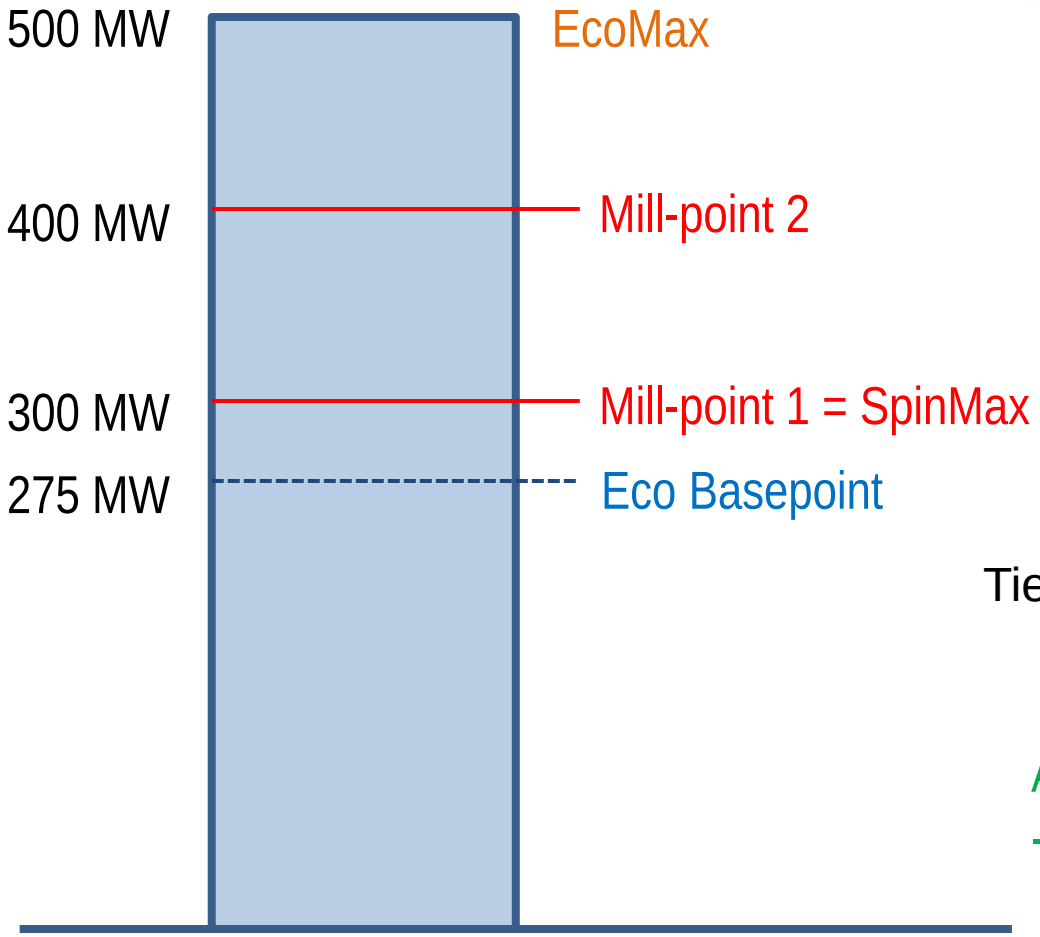
Example 2 – Using SpinMax to Model Mill-points on a Unit with Physical Limitation



Unit Parameters

EcoMax = 500 MW

Mill-point at 300 MW takes 20 minutes

Mill-point at 400 MW takes 20 minutes

Ramp Rate = 5 MW/Min

Mill-point1 = SpinMax = 300 MW

Exception to allow EcoMax > SpinMax

Tier 1 MW Estimate = min (SpinMax – EcoBP, 10 * RampRate)

= min (300 – 275, 10 * 5) = **25 MW**

A more realistic Tier 1 MW estimate when physical limitation is modeled - SpinMax used to model mill-point

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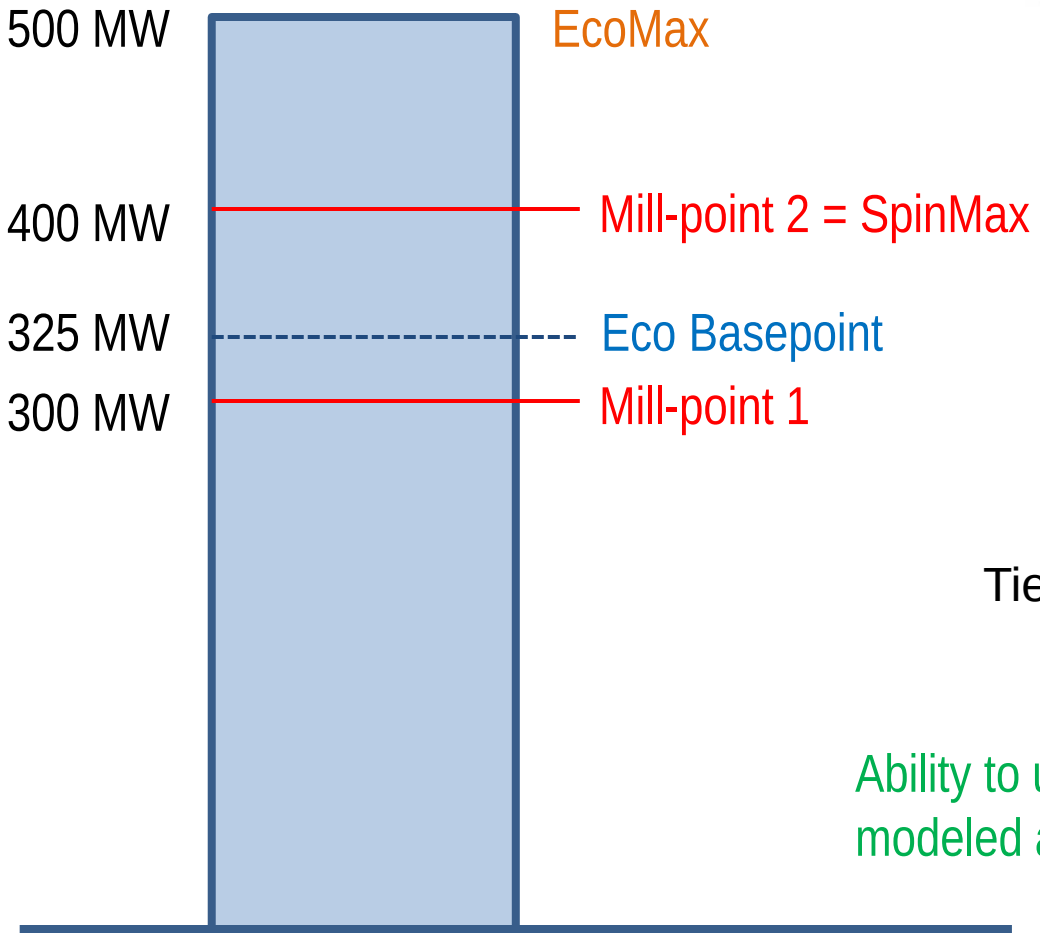
Example 3 – Using SpinMax to Model Mill-points on a Unit with Physical Limitation



Unit Parameters

EcoMax = 500 MW

Mill-point 1 at 300 MW takes 20 minutes

Mill-point 2 at 400 MW takes 20 minutes

Ramp Rate = 5 MW/Min

Mill-point 2 = SpinMax = 400 MW ---- *SpinMax updated to 400 MW*

Exception to allow EcoMax > SpinMax

Tier 1 MW Estimate = min (SpinMax – EcoBP, 10 * RampRate)

= min (400 – 325, 10 * 5) = **50 MW**

Ability to update SpinMax intra hourly allows unit's capability to be more accurately modeled as it approaches and passes each mill-points

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