Markets Gateway Demonstration

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Tech Change Forum

January 12, 2026

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Creating a Portfolio

- Portfolios enable participants to manage large amounts of data in desired groups
  - Defined by each user, with unique name to each portfolio
  - No limit to number of portfolios created, or to assets assigned to each portfolio
  - Same asset can be assigned to more than one portfolio
- Things to consider when creating portfolios
  - Geographic location of assets
  - Attribute type
    - if Generation: by steam, nuclear, combined cycle, CT, solar, etc.
    - If Demand: bus pnodes, aggregates, hubs, interfaces

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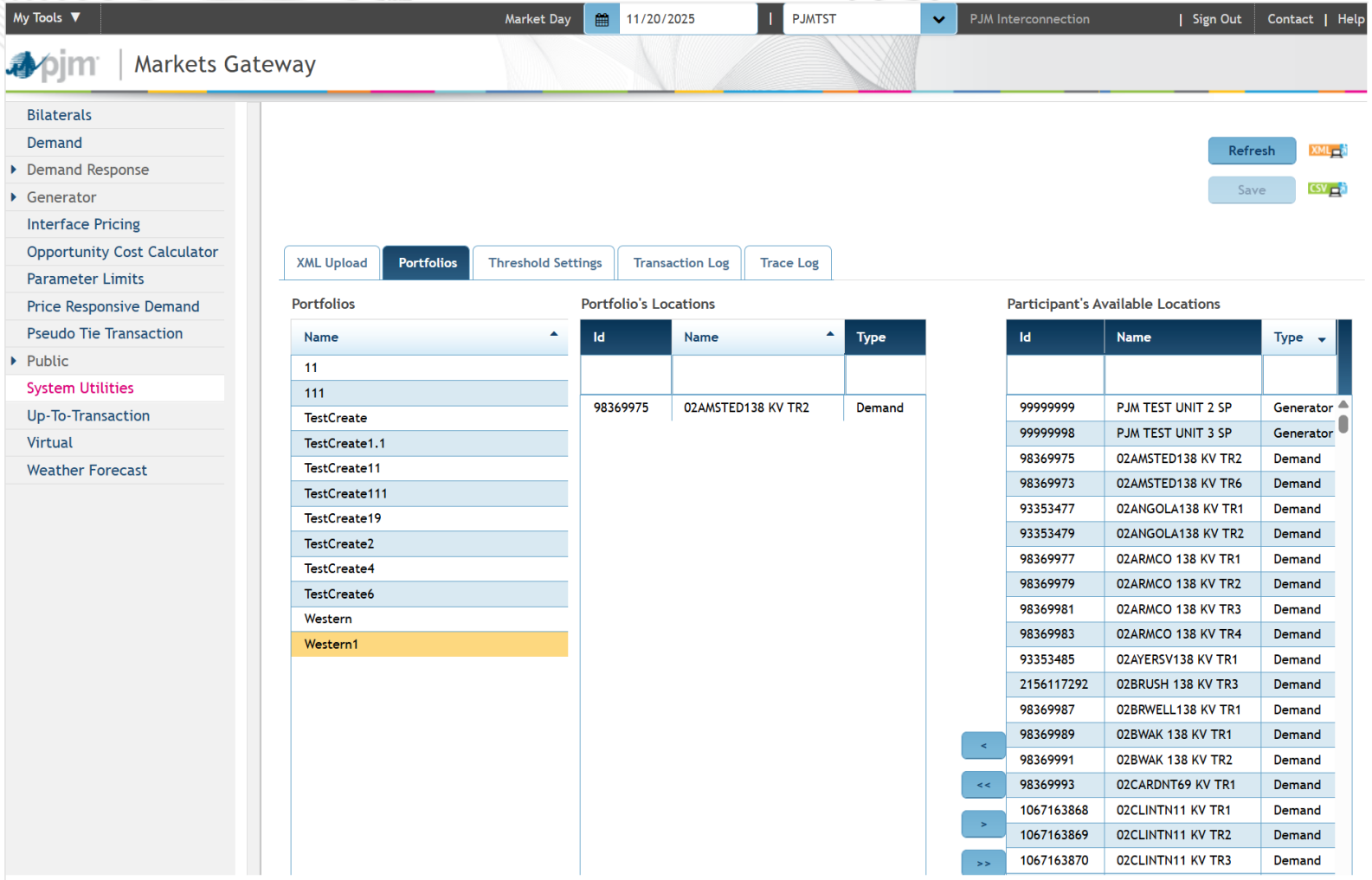
Creating a Portfolio

System Utilities > Portfolios – Used to view existing portfolios and to create, update and delete portfolios.

- Select the desired portfolio in the left **Portfolios** pane
- The list of resources assigned to the Portfolio will then display in the middle **Portfolio's Locations** pane which will display the resources assigned to the portfolio along with the resource type such as *Generator* or *Demand*
- To add/remove a portfolio, right-click in the **Portfolios** pane and select "Create" or "Remove"
- To add/remove a location to a portfolio, search the **Participant's Available Locations** pane and use the left arrow to add from this pane or the right arrow to remove from the **Portfolio's Location** pane
- Click "Save" to finalize any changes



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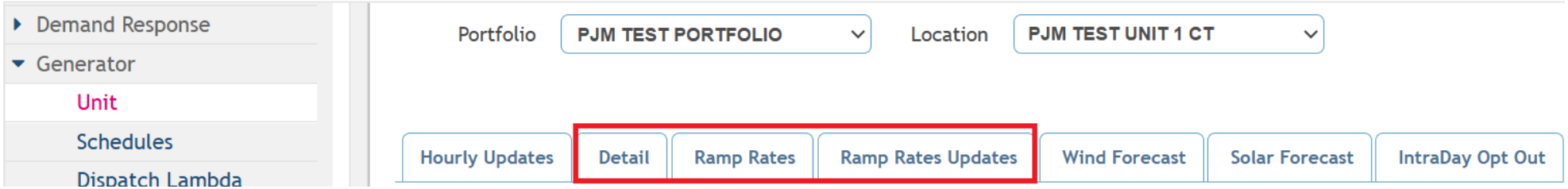
Managing Unit Data

- Generator data is defined on a unit-basis and schedule-basis. Data defined on a unit basis includes unit ownership information, operating limits, ramp rates, CT weather curve data, availability status and Startup and No Load prices for priced-based units.



- Generator > Unit > **Detail** tab
  - Default Commit Status, Ramp Rate, Synch & Secondary Max, Economic & Emergency MW limits, Regulation MW limits, Condenser data, Parameter limits (Runtimes, Startup & Notification times, etc.)
- Generator > Unit > **Ramp Rates** tab [*Daily*] / **Ramp Rates Updates** tab [*Hourly*]
  - Daily ramp rate in MW/min & Hourly ramp rate in MW/min, respectively

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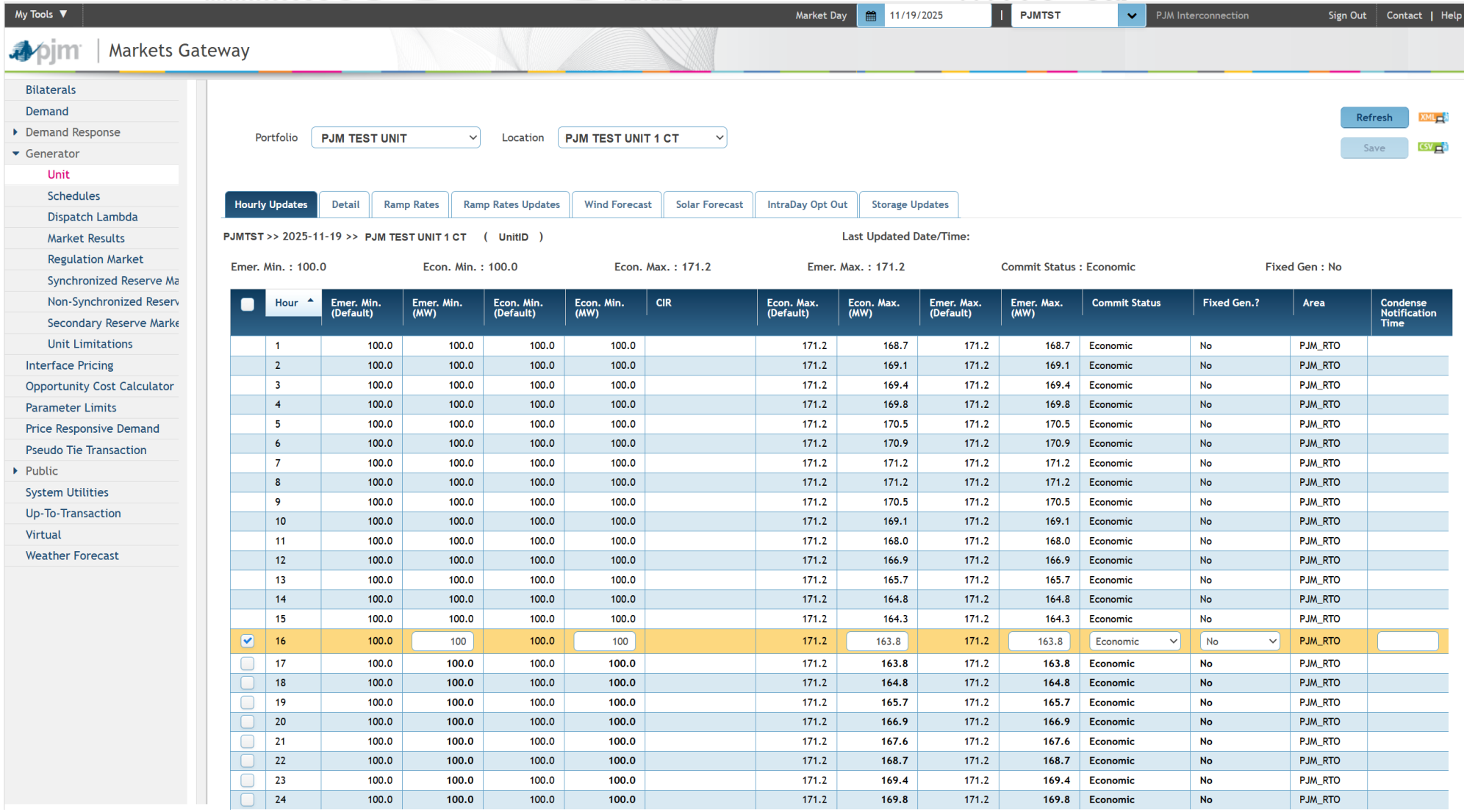
Managing Unit Data

Generator > Hourly Updates – Used to submit hourly Emergency/Eco Min/Max MW levels and commit status.

- Select the desired hour and edit data as desired
- This page is designed for real-time operational updates. For current operating day, edits can be made for next available hour up to T minus 65 minutes (editable hours will be selectable and in bold)



Hour	Emer. Min. (Default)	Emer. Min. (MW)	Econ. Min. (Default)	Econ. Min. (MW)	CIR	Econ. Max. (Default)	Econ. Max. (MW)	Emer. Max. (Default)	Emer. Max. (MW)	Commit Status	Fixed Gen.?	Area	Condense Notification Time
1	100.0	100.0	100.0	100.0		171.2	168.7	171.2	168.7	Economic	No	PJM_RTO	
2	100.0	100.0	100.0	100.0		171.2	169.1	171.2	169.1	Economic	No	PJM_RTO	
3	100.0	100.0	100.0	100.0		171.2	169.4	171.2	169.4	Economic	No	PJM_RTO	
4	100.0	100.0	100.0	100.0		171.2	169.8	171.2	169.8	Economic	No	PJM_RTO	
5	100.0	100.0	100.0	100.0		171.2	170.5	171.2	170.5	Economic	No	PJM_RTO	
6	100.0	100.0	100.0	100.0		171.2	170.9	171.2	170.9	Economic	No	PJM_RTO	
7	100.0	100.0	100.0	100.0		171.2	171.2	171.2	171.2	Economic	No	PJM_RTO	
8	100.0	100.0	100.0	100.0		171.2	171.2	171.2	171.2	Economic	No	PJM_RTO	
9	100.0	100.0	100.0	100.0		171.2	170.5	171.2	170.5	Economic	No	PJM_RTO	
10	100.0	100.0	100.0	100.0		171.2	169.1	171.2	169.1	Economic	No	PJM_RTO	
11	100.0	100.0	100.0	100.0		171.2	168.0	171.2	168.0	Economic	No	PJM_RTO	
12	100.0	100.0	100.0	100.0		171.2	166.9	171.2	166.9	Economic	No	PJM_RTO	
13	100.0	100.0	100.0	100.0		171.2	165.7	171.2	165.7	Economic	No	PJM_RTO	
14	100.0	100.0	100.0	100.0		171.2	164.8	171.2	164.8	Economic	No	PJM_RTO	
15	100.0	100.0	100.0	100.0		171.2	164.3	171.2	164.3	Economic	No	PJM_RTO	
16	100.0	100	100.0	100		171.2	163.8	171.2	163.8	Economic	No	PJM_RTO	
17	100.0	**100.0**	100.0	**100.0**		171.2	**163.8**	171.2	**163.8**	**Economic**	**No**	PJM_RTO	
18	100.0	**100.0**	100.0	**100.0**		171.2	**164.8**	171.2	**164.8**	**Economic**	**No**	PJM_RTO	
19	100.0	**100.0**	100.0	**100.0**		171.2	**165.7**	171.2	**165.7**	**Economic**	**No**	PJM_RTO	
20	100.0	**100.0**	100.0	**100.0**		171.2	**166.9**	171.2	**166.9**	**Economic**	**No**	PJM_RTO	
21	100.0	**100.0**	100.0	**100.0**		171.2	**167.6**	171.2	**167.6**	**Economic**	**No**	PJM_RTO	
22	100.0	**100.0**	100.0	**100.0**		171.2	**168.7**	171.2	**168.7**	**Economic**	**No**	PJM_RTO	
23	100.0	**100.0**	100.0	**100.0**		171.2	**169.4**	171.2	**169.4**	**Economic**	**No**	PJM_RTO	
24	100.0	**100.0**	100.0	**100.0**		171.2	**169.8**	171.2	**169.8**	**Economic**	**No**	PJM_RTO	

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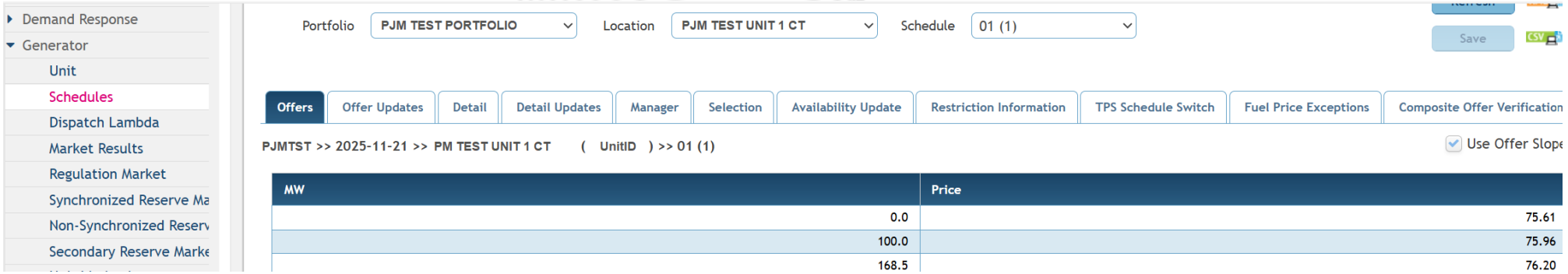
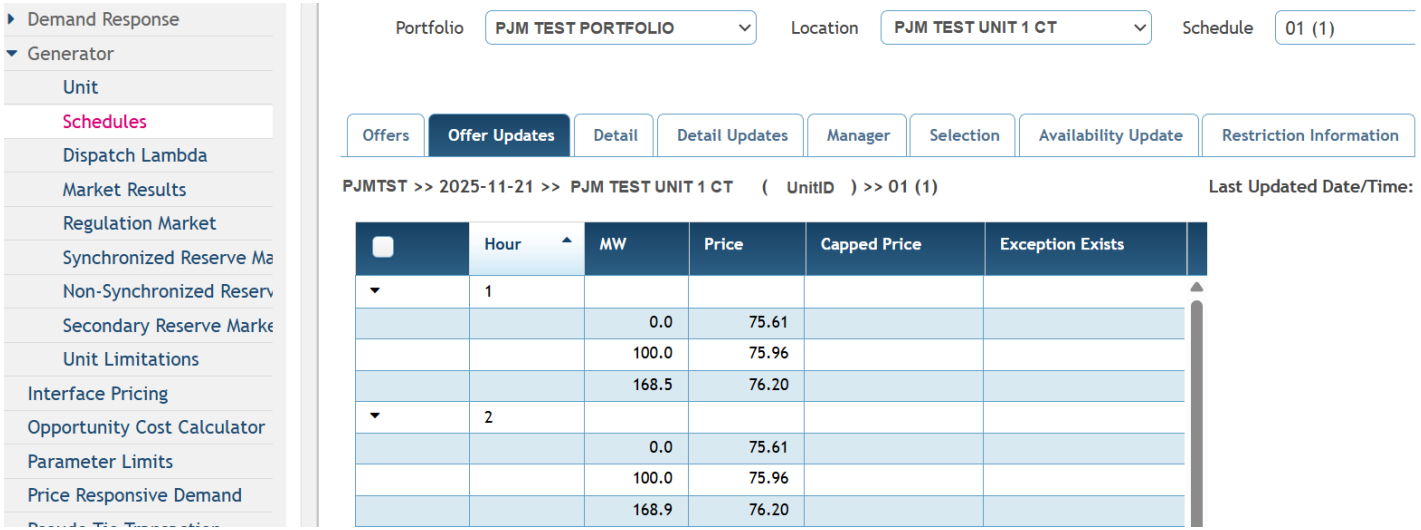
Creating a Generator Offer

- Generator > Schedules > **Offer** tab



- Generator > Schedules > **Offer Updates** tab



Notes

- Hourly Offer Updates will override the Daily Offer curve for a given hour.
- A Daily Offer is required in order to place an hourly offer update
- Resource must be opted in to IDO (default) in order to submit hourly updates.
- Segmented offers must be monotonically increasing

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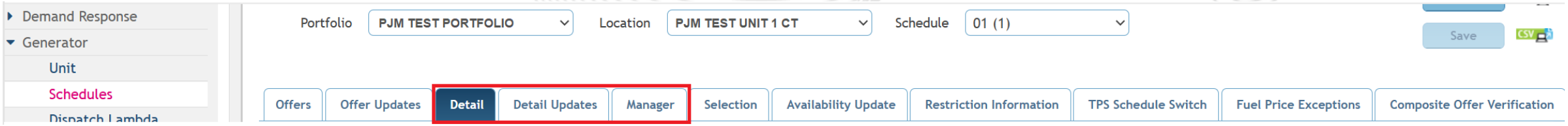
Creating a Generator Offer



- Generator > Schedules > **Detail** tab (unit parameters defined on a schedule-basis)
  - Startup & No-Load costs, Hot/Intermediate/Cold Notification times, Startup limits, Emergency & Eco Min/Max MW limits, Daily starts, & Runtime/Downtime limits
- Generator > Schedules > **Detail Updates** tab
  - Hourly update values for Cold/Intermediate/Hot Startup costs, No-Load costs, Min Runtime, Notification Time & Commitment Status
- Generator > Schedules > **Manager** tab
  - Used to create types of schedules. Schedules are limited to 12 cost-based schedules, 1 price-based schedule, and 1 price-PLS schedule.

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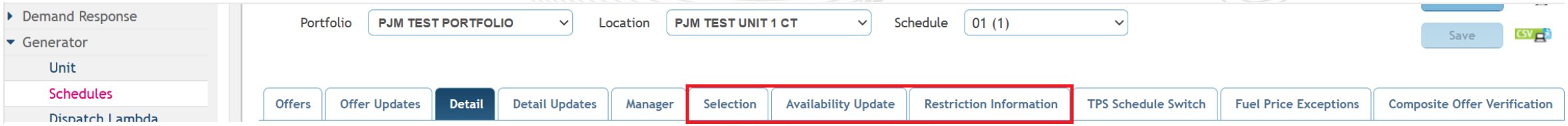
Creating a Generator Offer



- Generator > Schedules > **Selection** tab
  - Used to select availability of created schedules as well as Daily Startup/No-Load costs
- Generator > Schedules > **Availability Update** tab
  - Used to communicate the intention of operating as cost-based in real time and updating schedule availability in real time
- Generator > Schedules > **Restriction Information** tab
  - Used to communicate restrictions (operational, pipeline, etc.) that may limit run time and dual fuel availability parameters (Note: this information not used in Day-Ahead clearing engine)

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Markets Gateway Offer Functionality

- Markets Gateway User Interface offer functionality is consistent across different resource/offer types
  - Generators, demand bids, regulation offers, synchronized reserve offers, non-synchronized reserve offers, secondary reserve offers
- Consists of a daily segmented price/MW offer and/or hourly updates for segmented price/MW offer(s)

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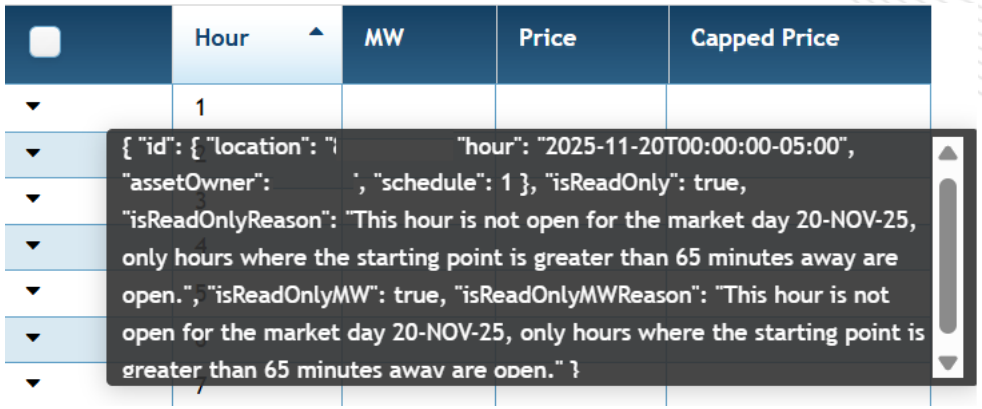
User Interface Tool Tips



- A tool tip will pop-up when curser is hovering over a given field
  - i.e. when hovering your cursor over the checkmark column to the left of the Hour column for a past hour on the current operating day, the following tool tip will display, indicating that the selected hour is not editable due to being an expired hour (…*only hours where the starting point is greater than 65 minutes away are open*…)
  - Similarly, a more straightforward tool tip response is provided when hovering over the Hour column itself for a past hour

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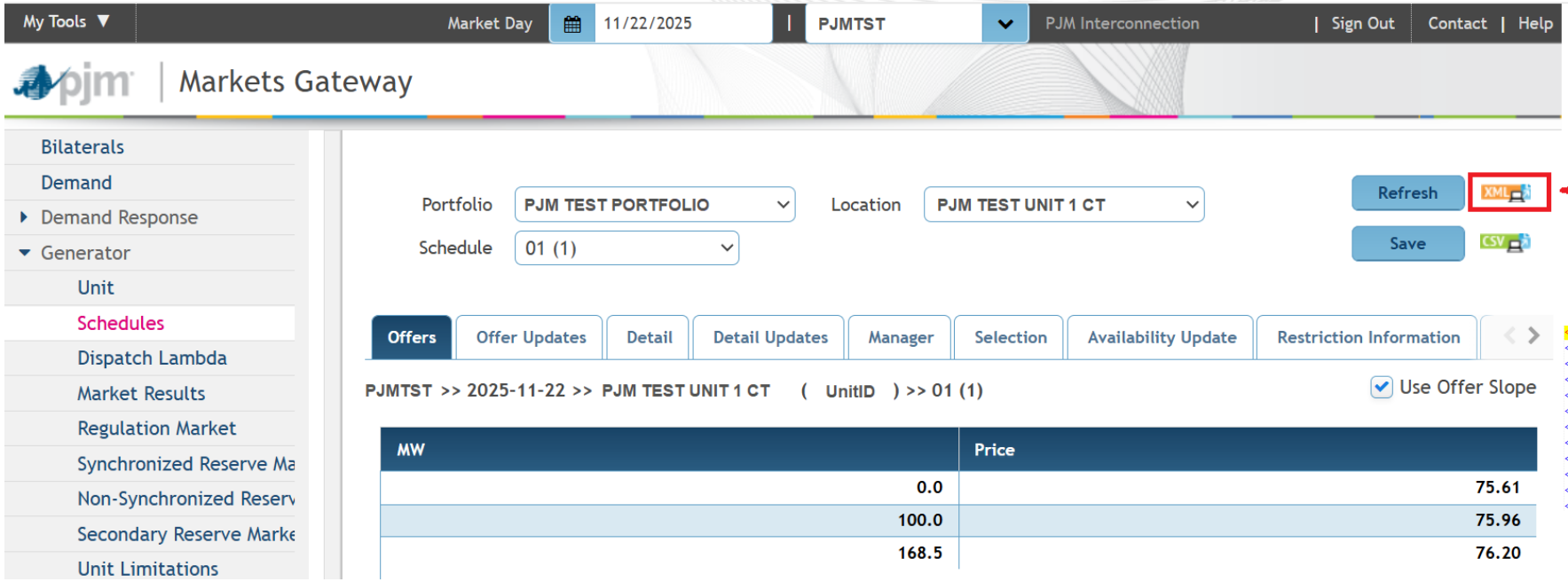
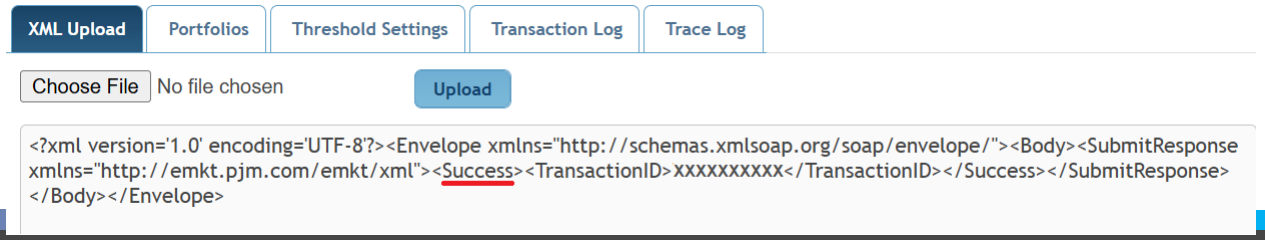
XML Functionality

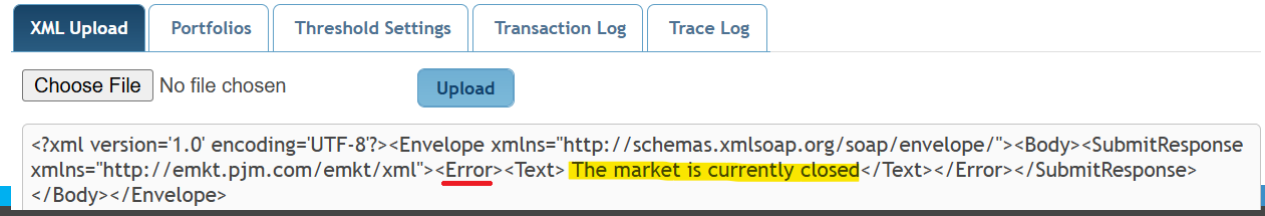


Exports data from selected UI page into XML format. Simply change the respective attributes into a SubmitRequest format in order to submit as an XML file.

```
<?xml version='1.0' encoding='UTF-8'?>
<Envelope xmlns="http://schemas.xmlsoap.org/soap/envelope/">
<Header />
<Body>
<SubmitRequest xmlns="http://emkt.pjm.com/emkt/xml">
<ScheduleOffer location="XXXXXXXX" schedule="1" day="2025-11-22" slope="true">
<OfferSegment MW="0" price="75.61"/>
<OfferSegment MW="100" price="75.96"/>
<OfferSegment MW="168.5" price="76.2"/></ScheduleOffer>
</SubmitRequest>
</Body>
</Envelope>
```

- XML submissions can be uploaded via System Utilities > **XML Upload** tab > “Choose File”
  - Select a .XML extension file to upload, then click *Upload* button. Return prompt will say “Success” if no errors were found, or “Error” along with reason (*check formatting or missing attributes*)





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Markets Gateway User Guides & Supporting Documentation

PJM.com > Markets & Operations > PJM Tools > Markets Gateway

- URL: https://www.pjm.com/markets-and-operations/etools/markets-gateway

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