



UG 15

ICAP Reference System User's Guide

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Revision History

Version	Date	Revisions
1.0	05/01/2014	Initial Release
1.1	06/23/2016	Section 2 <ul style="list-style-type: none"> ➤ Updated to clarify that digital certificates will no longer be NYISO issued and must be NAESB compliant
1.2	01/27/2017	Incorporated Generator Deactivation Assessment evaluation
2.0	07/25/2018	Updated prior version, also incorporated physical withholding evaluation, Going Forward Costs determinations, and buyer-side market power mitigation evaluations
2.1	12/06/2018	Updated links and screenshots due to new NYISO public website switch
3.0	09/25/2023	<p>Recertified</p> <ul style="list-style-type: none"> ➤ Updated branding and formatting ➤ Updated email addresses <p>Table of Figures</p> <ul style="list-style-type: none"> ➤ Updated figure captions <p>Section 1.2.1</p> <ul style="list-style-type: none"> ➤ Updated some language to be clearer. <p>Section 3.2.3</p> <ul style="list-style-type: none"> ➤ Updated some language to be clearer. <p>Appendix B</p> <ul style="list-style-type: none"> ➤ Added some clarifying language in the opening paragraph. <p>Appendix D</p> <ul style="list-style-type: none"> ➤ Added clarifying language to Figures D-4, D-5, D-6, and D-7

1. Introduction

1.1. What is the ICAP Reference System?

The ICAP Reference System automates some of the data collection for Generator Deactivation Assessment evaluation, physical withholding evaluations, Going Forward Costs determinations, and buyer-side market power mitigation (“BSM”) evaluations. Using a web-based data portal, Market Participants (“MPs”) will be able to upload and review their capacity market mitigation data. The NYISO (and its consultants, as applicable to the particular matter) will use the data portal throughout the Generator Deactivation Assessment evaluation, physical withholding evaluations, Going Forward Costs determinations, and BSM evaluations. The system may be used to communicate with MPs. The system will track MP submittals, communications between the MP and the NYISO, e.g., regarding the status of the review and requests for further information.

1.2. Mitigation Interactions

The following interactions are currently supported through the ICAP Reference System:

1. Generator Deactivation Assessment evaluation
2. Physical withholding evaluation
3. Going Forward Costs determination
4. BSM evaluation

Previous interactions that have been closed are available in the ICAP Reference System as view-only.

1.2.1. Generator Deactivation Assessment Evaluation

A Generator Deactivation Assessment evaluation begins once a Market Participant has submitted the entirety of Section 38.24 of the OATT (Appendix A – Generator Deactivation Notice Form) to the generator_retirement@nyiso.com mailbox.

Step 1 of Section 1.3 should be completed by the Market Participant, prior to the submission of a Generator Deactivation Notice in accordance with Section 38.24 (Appendix A) of the OATT. Once the completed (as determined by the NYISO) Generator Deactivation Notice form is received, the next step in the evaluation begins. With respect to the ICAP Reference System User Guide, that next step is described in Step 2 of Section 1.3.

The ICAP Reference System interaction involves a data and documentation upload, utilizing the Generator Deactivation Assessment evaluation template and instructions on the Market Monitoring page of the NYISO website shown in Figure 8. Communications, including of a final determination by the NYISO, may be done through the ICAP Reference System.

MPs are to submit cost data required by Section 38.25 of the OATT (Appendix B – Generator Deactivation Process Cost, Revenue, and Other Information Requirements) via the Generator Deactivation Assessment evaluation template. Any cost data or supporting information listed in Section 38.25 of the OATT that does not conform to the template must be uploaded as a separate attachment. It is the MP’s obligation to ensure that the NYISO receives the data.

The submission of attachments is described in more detail in section [3.2.4](#) of this document.

1.2.2. Physical Withholding Evaluation

A physical withholding evaluation can be triggered by a proposal or decision to retire or remove capacity MW from the NYISO market, as described in the NYISO’s Market Administration and Control Area Service Tariff (“MST”) Attachment H Section 23.4.5.6. The ICAP Reference System interaction for a physical withholding evaluation involves a data submittal to the NYISO, along with required documentation. The data submittal template and instructions are available on the Market Monitoring page of the NYISO website shown in Figure 8. Communications, including of the final determination by the NYISO, may be done through the ICAP Reference System.

1.2.3. Going Forward Costs Determination

A Going Forward Costs (GFC) determination can be requested by certain MPs (*i.e.*, if it is or is anticipated to be a Pivotal Supplier), pursuant to MST Attachment H Section 23.4.5.3. The GFC interaction in the ICAP Reference System is initiated through a data submittal, along with required documentation, utilizing the data submittal template and instructions on the Market Monitoring page of the NYISO website. Communications, including a final GFC determination by the NYISO, may be done through the ICAP Reference System.

1.2.4. BSM Evaluation

The initial submission and certain other submissions required in relation to a BSM evaluation, pursuant to MST Attachment H Section 23.4.5.7, are done through the ICAP Reference System. The interaction involves a data and documentation upload, utilizing the BSM template and instructions on the Market

Monitoring page of the NYISO website shown in Figure 8. Communications, including a final determination by the NYISO, may be done through the ICAP Reference System.

1.3. Interaction Process Roadmap

Each interaction goes through the following process states:

1. Initiation – the NYISO administrator creates an interaction within the system, and the (MP) user acquires a Digital Certificate and the ICAP Reference System access privilege in order to access the interaction. An MP may ask for the interaction to be opened, however, the state is not initiated unless and until NYISO administrator creates the interaction within the system. An MP can have more than one user but will be required to acquire a Digital Certificate and access privileges for each user. Refer to Section 2 below for more information on users and obtaining a Digital Certificate.
2. Open State – the user uploads the applicable completed template and documentation into the system. The user has the ability to communicate with the NYISO through the “Questions” tab on the system's user interface. Once the user submits data, the interaction moves into Review State. The “movement” to a Review State” does not constitute a determination by the NYISO that a Generator Deactivation Notice is complete or that adequate documentation has been received, or that the NYISO’s review has or even will commence.
3. Review State – This state is merely a “status” that certain information has been received. In this state, the NYISO may be reviewing the data. The NYISO may use the ICAP Reference System to communicate with the user through the “Questions” tab on the system's user interface. The user is not able to make changes to the submittal. The user may, however, communicate with the NYISO and upload additional data and documentation.
4. Closed State – the NYISO issues a final determination and closes the interaction.

The users and the NYISO administrator receive email notifications of changes in states, and new communication activity in the system.

1.4. Obtaining Help and Handling Error Messages

For help using the ICAP Reference System, contact your Stakeholder Services Representative.

For help with the data upload and associated error messages, consult Template Instructions and this User’s Guide.

For questions specific to the evaluation, contact the NYISO using the Questions Tab of the system's user interface or MMA-Withholding&Analysis@nyiso.com.

2. Requirements

The computer requirements for the user to utilize the ICAP Reference System are described in this section. Refer to Appendix B for a “Getting Started” checklist.

2.1. System Requirements

The following items are required to utilize the ICAP Reference System:

- Microsoft Internet Explorer (Version 11 or higher) or Firefox (Version 45 or higher)
- Minimum 1024x768 screen resolution
- A NAESB compliant digital certificate
- Internet connection with a recommended connection of at least 56Kbps

2.2. Using Digital Certificates

All users must have a NAESB compliant digital certificate linked to their MIS user name in order to access the NYISO ICAP Reference System.

For instructions on obtaining a NAESB compliant digital certificate, refer to the *Market Participant User's Guide*, available from the NYISO Web site at the following URL:

<https://www.nyiso.com/manuals-tech-bulletins-user-guides>

2.3. Signing Onto the ICAP Reference System

Once a user has been provided with a user id and password, digital certificate and appropriate privileges, that user can then sign on to the ICAP Reference System.

The user can access the system through the Market Access Login page on the NYISO website, as shown in Figure 1 and

Figure 2, or through a link on the Market Monitoring page of the NYISO website shown in Figure 8 above where the templates can be found.

Figure 1: NYISO website

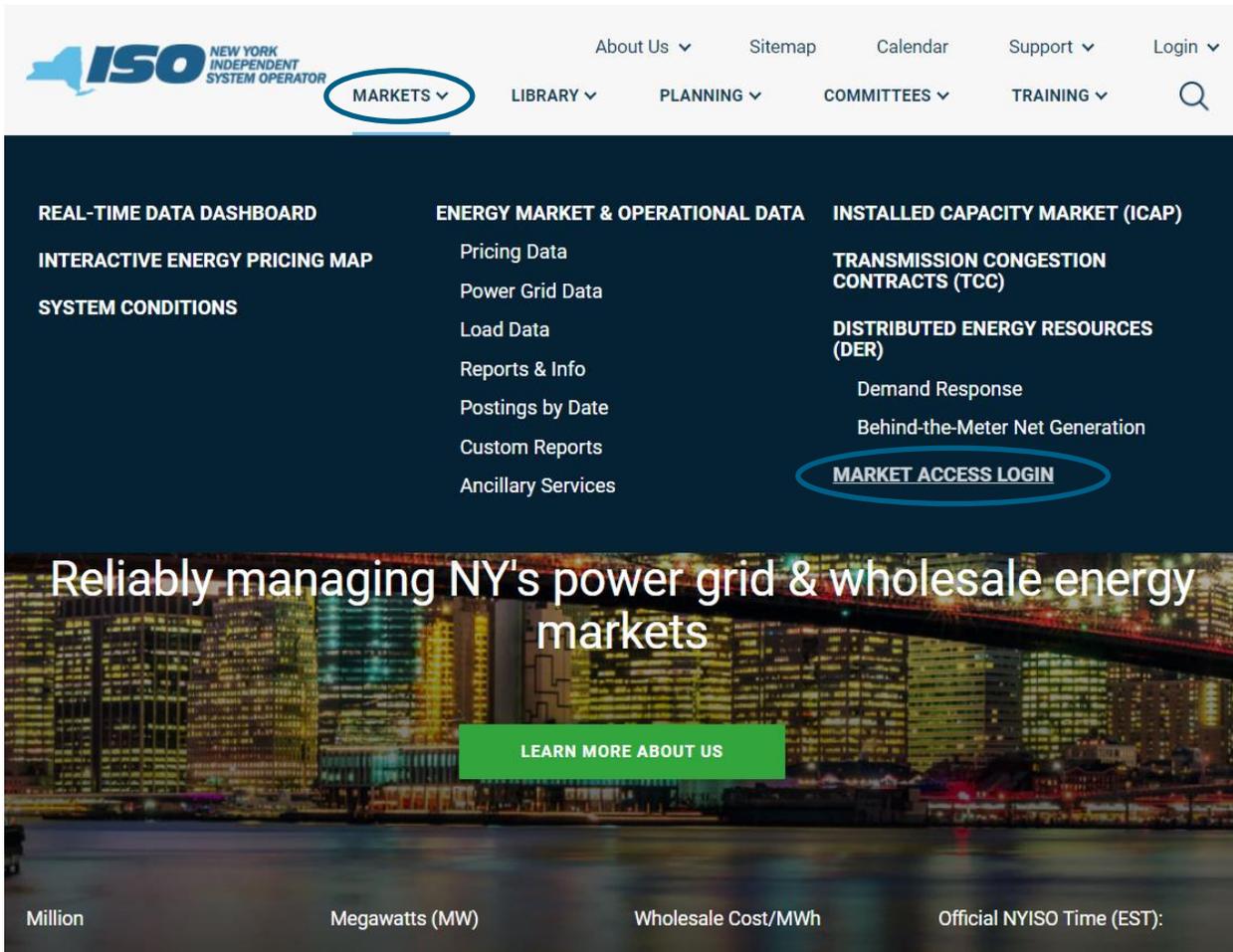


Figure 2: Log on

Markets

- [Real-Time Dashboard](#)
- [Interactive Energy Pricing Map](#)
- [System Conditions](#)
- [Energy Market & Operational Data](#) ▾
- [Installed Capacity Market \(ICAP\)](#)
- [Transmission Congestion Contracts \(TCC\)](#)
- [Distributed Energy Resources \(DER\)](#) ▾
- [Market Access Login](#)**

Marketplace Bidding & Scheduling

- [* Marketplace login \(User & Admin\)](#)
- [* Marketplace Upload/Download](#)
- [Self-Service Account Management \(SSAM\)](#)
- [Market Participant User Guide \(MPUG\)](#)

Joint Energy Scheduling System (JESS)

- [*JESS User Login](#)
- [*JESS Upload/Download](#)
- [JESS User's Guide](#)

Settlement Data Applications

- [*SDX Upload/Download](#)
- [*Customer Settlements Interface](#)
- [Settlement Data Application User Guide](#)

ICAP Automated Markets

- [*User Login](#)
- [*ICAP Upload/Download](#)
- [ICAP Automated Market User's Guide](#)

Demand Response Information System

TCC Automated Market

- [* User Login](#)
- [* TCC Upload/Download](#)
- [TCC User Documents](#)

Decision Support System (DSS)

- [*User Login](#)
- [*Account Request](#)

Outage Schedule (TOA)

- [*User Login](#)
- [Outage Schedule User's Guide](#)

Power Contracts Bulletin Board (IRC)

- [User Login](#)
- [Information](#)
- [View as Guest \(read only\)](#)

Credit Management System (CMS)

- [*User Login](#)
- [CMS User Guide](#)

ICAP Reference System (IRS)

- [*User Login](#)

Generator Fuel and Emissions Reporting System (GFERS)

Please Note

* A Valid NAESB or NYISO Digital Certificate is required for all Market Access and Sandbox links

Enter the login information in the ICAP Reference System sign on screen.

Figure 3: ICAP Reference System Sign On Screen



Login Required

You are attempting to access a protected resource
Please identify by entering your user ID and password

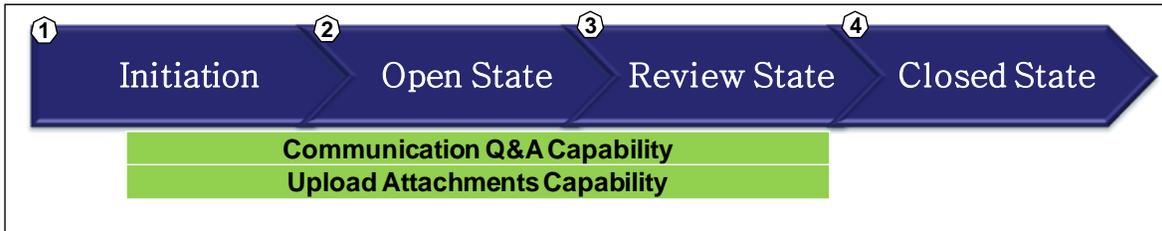
User ID:

Password:

Login

3. ICAP Reference System Interaction Roadmap

This section outlines the functionality of the system and the four basic stages of the process: Initiation, Open State, Review State, and Closed State. Every state provides the user with varying levels of access and functionality, as described below.

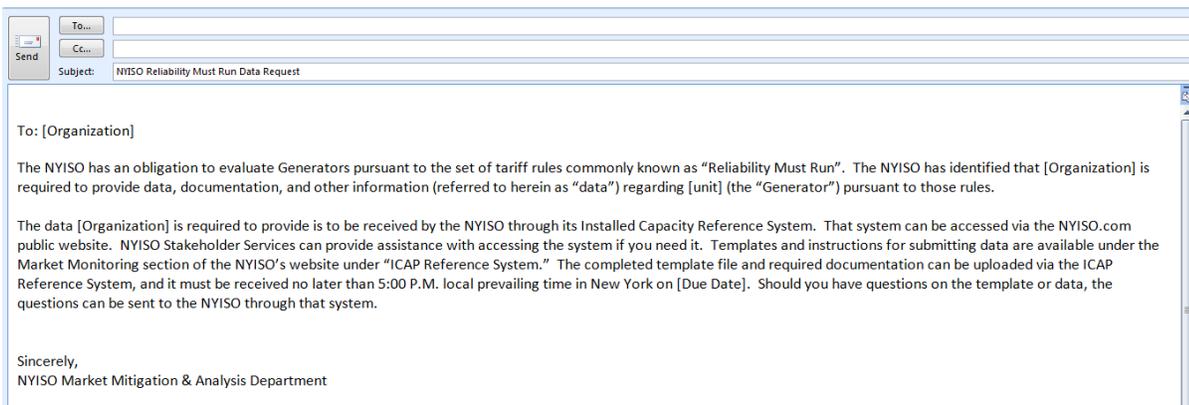


3.1. Initiation

During Initiation, users without MIS accounts are required to register with Stakeholder Services. Registered users can request required Digital Certificates and privileges.

The NYISO administrator opens an interaction for the user. The user receives an email notification regarding the data request.

Figure 4: Example of Initiation email



All features described in this chapter are accessible from the main ICAP Reference System Screen.

The Main ICAP Reference System Screen shown in Figure 5 lists all interactions for the organization by Interaction Type (BSM evaluation, GFC determination, physical withholding evaluation or Generator

Deactivation Assessment evaluation), the Status of the Interaction after it is initiated (Open, Review or Closed), the MP point of contact designated for the interaction, last updated time, and last user to update the interaction.

Figure 5: Interaction Menu

ISO ICAP Reference System

Interactions

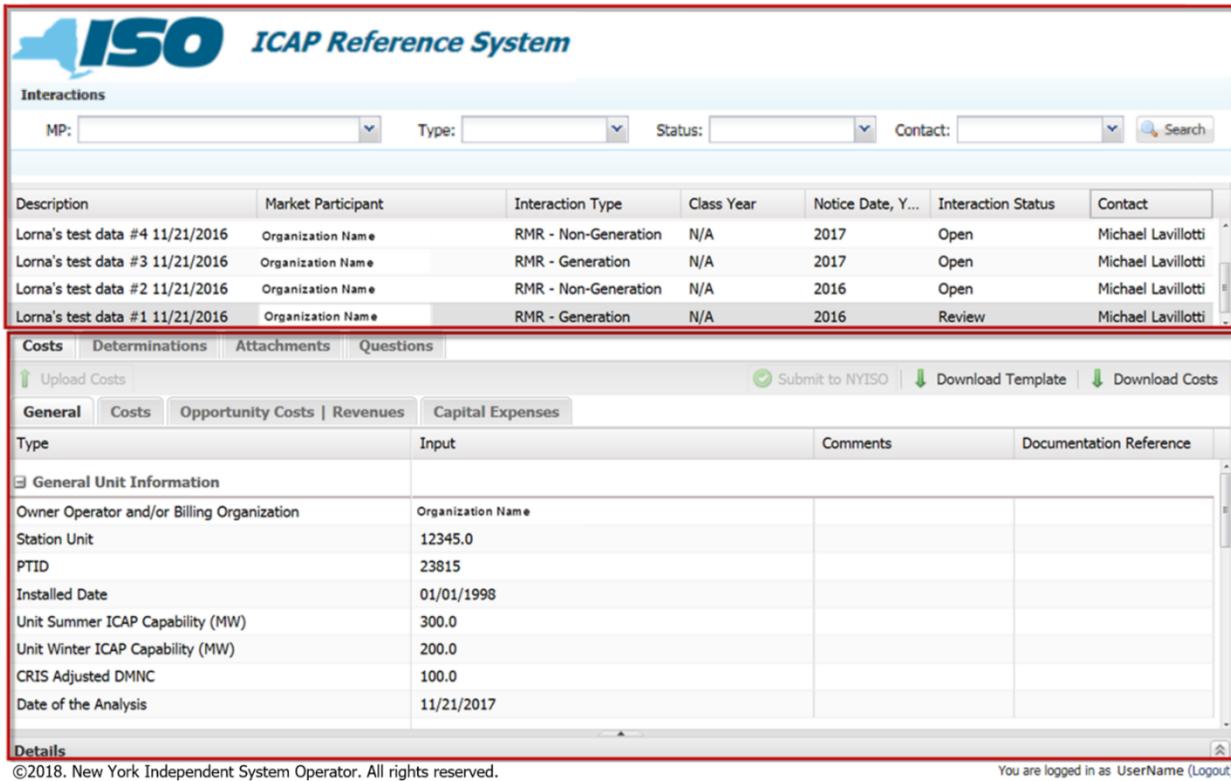
MP: [] Type: [] Status: [] Contact: [] Search

Description	Market Participant	Interaction Type	Class Year	Notice Date, Year	Interaction Status	Contact
Lorna's test data #6 11/21/2016	Organization Name	RMR - Non-Generation	N/A	2015	Closed	Michael Lavillotti
Lorna's test data #5 11/21/2016	Organization Name	RMR - Generation	N/A	2015	Closed	Michael Lavillotti
Lorna's test data #4 11/21/2016	Organization Name	RMR - Non-Generation	N/A	2017	Open	Michael Lavillotti
Lorna's test data #3 11/21/2016	Organization Name	RMR - Generation	N/A	2017	Open	Michael Lavillotti
Lorna's test data #2 11/21/2016	Organization Name	RMR - Non-Generation	N/A	2016	Open	Michael Lavillotti
Lorna's test data #1 11/21/2016	Organization Name	RMR - Generation	N/A	2016	Review	Michael Lavillotti

©2018. New York Independent System Operator. All rights reserved. You are logged in as: UserName (Logout)

There are two panels that are visible from the Main ICAP Reference System Screen: Interaction Menu and Cost Data.

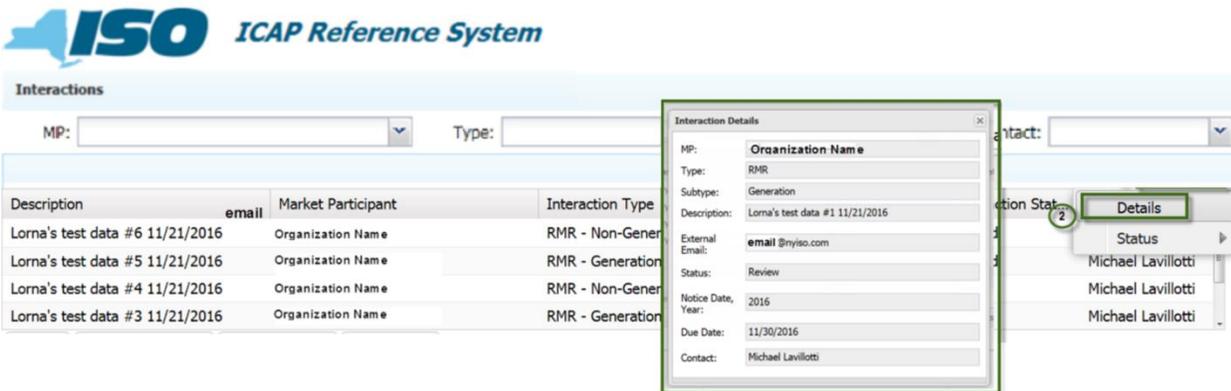
Figure 6: Main Screen – example fields



The items on the Main Screen can be sorted by clicking on the column headings or filtered by using the drop down menus. Select the appropriate interaction to proceed. The user may collapse and expand the Details panel by clicking on the collapse arrow emblem.

The Interaction Details can be accessed/viewed using the Manage option.

Figure 7: Interaction Details Screen



Click on the "Manage" icon (# 1 on Figure 7).

Click on the "Details" icon (#2 on Figure 7), and the system will display the Interaction Details screen.

3.2. Open State

In the Open State, the user follows instructions in the email to obtain and fill out the appropriate data submittal Template according to the Template Instructions. In the Open State, the functionality described in this section is available to the user.

3.2.1. Obtain data submission template

In the Open State, users can upload the Input Template via the template located on the NYISO website, Market Monitoring page under ICAP Market Mitigation Data Submission folder shown in Figure 8:

<https://www.nyiso.com/market-monitoring>

Figure 8: Link to Data Submission Template and IRS

The screenshot shows the NYISO website's Market Monitoring page. At the top, there is a navigation bar with the NYISO logo and various menu items like 'MARKETS', 'LIBRARY', 'PLANNING', 'COMMITTEES', and 'TRAINING'. Below the navigation, the page title 'MARKET MONITORING' is displayed. A 'Useful Links' section contains several links, including 'Tariffs, FERC Filings & Orders', 'Potomac Economics', and several PDF documents. On the left side, there is a 'Support' menu with 'Market Monitoring' highlighted. The main content area is titled 'Market Monitoring' and contains several paragraphs of text describing the Market Monitoring Unit (MMU) and the Market Mitigation and Analysis Department (MMA). A link for 'ICAP Reference System Login' is circled in blue. Below this, there are links for 'ICAP Reference System User's Guide' and 'Reference Level System User's Guide'. Further down, there is a section for 'Request an Investigation' and a link to 'View Tech Bulletin 104'. At the bottom, there is a table titled 'Market Monitoring' with columns for 'Name', 'Published', and 'Type'. The table lists various documents, including 'BSM Input Template', 'BSM Input Template Instructions', 'GFC Input Template', 'GFC Input Template Instructions', 'NYISO's Generator Deactivation Process/Reliability Must Run (RMR) Input Template', and 'SCR Offer Floor Data Submission', each with its publication date and file type (xls or pdf).

MARKET MONITORING

Useful Links

- Tariffs, FERC Filings & Orders
- Potomac Economics
- State of the Market Report
- Monthly Net Benefit Offer Floor
- Expectations of Generator Operation During a Gas Restriction or Interruption User Guide

Support

- Budget & Finance
- Customer Registration
- Market Monitoring**
- Member Community

Market Monitoring

The Market Monitoring Unit (MMU) is responsible for ensuring that the markets administered by the ISO function efficiently and appropriately, and to protect both consumers and participants in the markets administered by the ISO by identifying and reporting Market Violations, market design flaws and market power abuses. Direct contact with the Market Monitoring Unit can be established here nyisommu@potomaceconomics.com.

The Market Mitigation and Analysis Department (MMA) is responsible for the implementation of the ISO Market Power Mitigation Measures (MST ATT H) and working collaboratively with the Market Monitoring Unit and other ISO departments to assist the ISO's efforts to carry out its Tariff responsibilities, including the ISO's obligation to provide adequate data and support to its Market Monitoring Unit.

Contact with the Market Mitigation and Analysis unit can be established through the Customer Relations Help Desk at 518.356.6060 (please note, all calls are recorded for quality assurance) or by emailing stakeholder_services@nyiso.com.

[ICAP Reference System Login](#)

[ICAP Reference System User's Guide](#)

[Reference Level System Login](#)

[Reference Level System User's Guide](#)

The NYISO Market Monitoring Plan grants the NYISO Market Monitoring Unit authority to investigate market events, conduct, and/or performance. NYISO market participants may, at their discretion, request the NYISO investigate a specifically identified market issue.

[Request an Investigation](#)

[View Tech Bulletin 104](#)

Name	Published	Type
Consultation Request Form		
Fuel Entry Thresholds		
ICAP Market Mitigation		
Annual ICAP Report		
Buyer Side Mitigation		
Data Submission		
BSM Input Template	2013/10/30	xls
BSM Input Template Instructions	2013/10/30	pdf
GFC Input Template	2014/03/25	xls
GFC Input Template Instructions	2014/03/25	pdf
NYISO's Generator Deactivation Process/Reliability Must Run (RMR) Input Template	2016/12/08	xls
SCR Offer Floor Data Submission	2014/03/25	xls
Supply Side Mitigation		
Training Materials		
Investigations		
Load Pocket Thresholds		
Market Mitigation Announcements		

The BSM Input Template and Instructions for BSM interaction, the GFC Input Template and Instructions for GFC and physical withholding interactions, and the Generator Deactivation Assessment Input Template for the Generator Deactivation interaction are available on the NYISO website.

Due to the size of the Input Template, this User's Guide only displays the first section of the template.

Figure 9 : Generator Deactivation Assessment Upload Template

	A	B	C	D	E
1	Directions: Enter all dollar values at their full amount and not as a fraction of thousands, millions, or some other denomination				
2	Directions: Enter all cash in-flows as positive and all cash out-flows/expenses as negative				
3	Directions: For any in-flow or out-flow line populated, enter 0 for years of no activity, do not leave the cell blank				
4					
5			(A). Input	(B). Comment	(C). Documentation Reference
6	General Unit Information				
7	1 Owner Operator and/or Billing Organization				
8	2 Station Unit				
9	3 PTID				
10	4 Installed Date				
11	5 Unit Summer ICAP Capability (MW)				
12	6 Unit Winter ICAP Capability (MW)				
13	7 CRIS Adjusted DMNC				
14	8 Date of the Analysis				
15	Energy Model Inputs / Physical Parameters				
16	9 Net Plant Heat Rate (BTU/kWh)(HHV)				
17	10 Fuel Required to Start				
18	11 Mingen				
19	12 EFORd				
20	13 Primary Fuel				
21	14 Secondary Fuel				
22	15 Nox Rate				
23	16 CO2 Emission Rate				
24	17 SOX Emission Rate (tons/MMBtu)				
25	18 Variable O&M (\$/MWh)				
26	19 Cost of Debt (Nominal)				
27	20 Debt Weight				
28	21 Cost of Equity (Nominal)				
29	22 Equity Weight				
30	23 ATWACC (After Tax Weighted Average Cost of Capital)				
31	24 Composite Tax Rate				
32	25 Age of Plant				
33					
34					
35					

Sample RMR Template

3.2.2. Complete data submission template

Complete the data submission template, utilizing the Template Instructions available on the Market Monitoring page of the NYISO website, Appendix C Template Upload Checklist (Template Upload Checklist) and Appendix D(Data Specifications) of this User’s Guide.

The user must adhere to the data specifications outlined in Appendix D for a successful upload. All required fields, highlighted in Orange on the Excel Input Template, must be filled out, and should not contain more than two decimal places unless otherwise specified.

Note: If a required field is “Not Applicable”, enter “0”.

The following table defines the allowable data types accepted within the ICAP Reference System and corresponding BSM, GFC and physical withholding, and Generator Deactivation Assessment upload templates. For detailed instructions and examples of each field requirement *refer to* Appendix D.

Figure 10: Formats

Type	Rule
Text	Length = 256
Numeric	Length = 20 (10 Integers, 2 Decimals)
Date	MM/DD/YYYY
Percentage	Length = 6 (3 Integers, 3 Decimals)
Currency	Length = 14 (12 Integers, 2 Decimals)

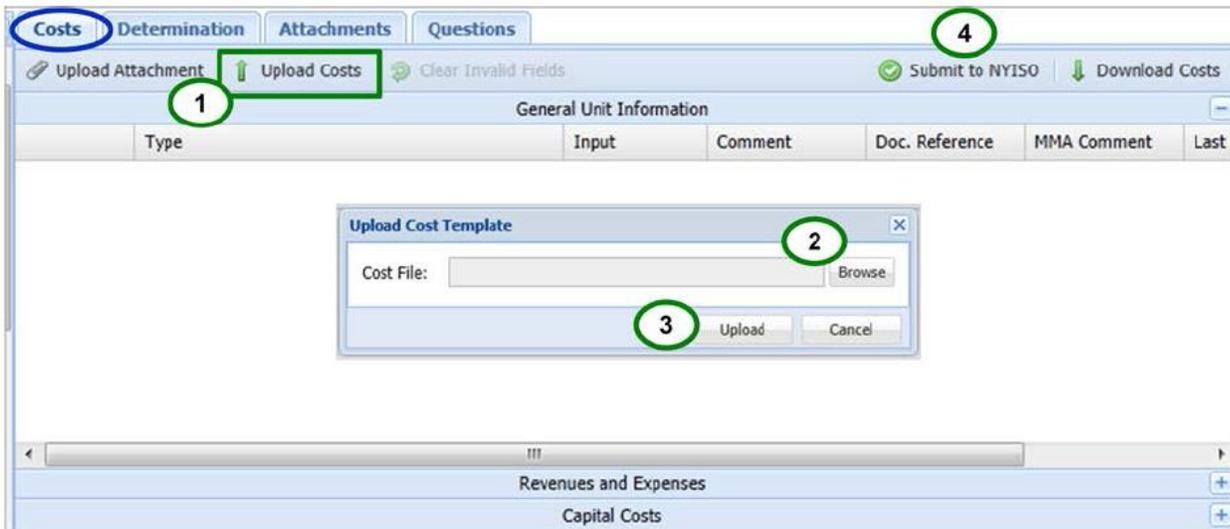
Note:
 * Do not insert additional rows or columns into the Input Template, unless it is to add Capital Expenses on the GFC or Generator Deactivation Assessment template. This template was designed to accept only the prepopulated data description rows and columns.

Utilize Appendix C Template Upload Checklist, Template Upload Checklist, to facilitate a successful upload.

3.2.3. Upload data submission template

To upload a completed template file, click “Upload Costs” button (#1 on Figure 11) on the Costs Tab of the Main Screen. Browse for the completed Input Template and click “Upload” (#2 and #3 on Figure 11).

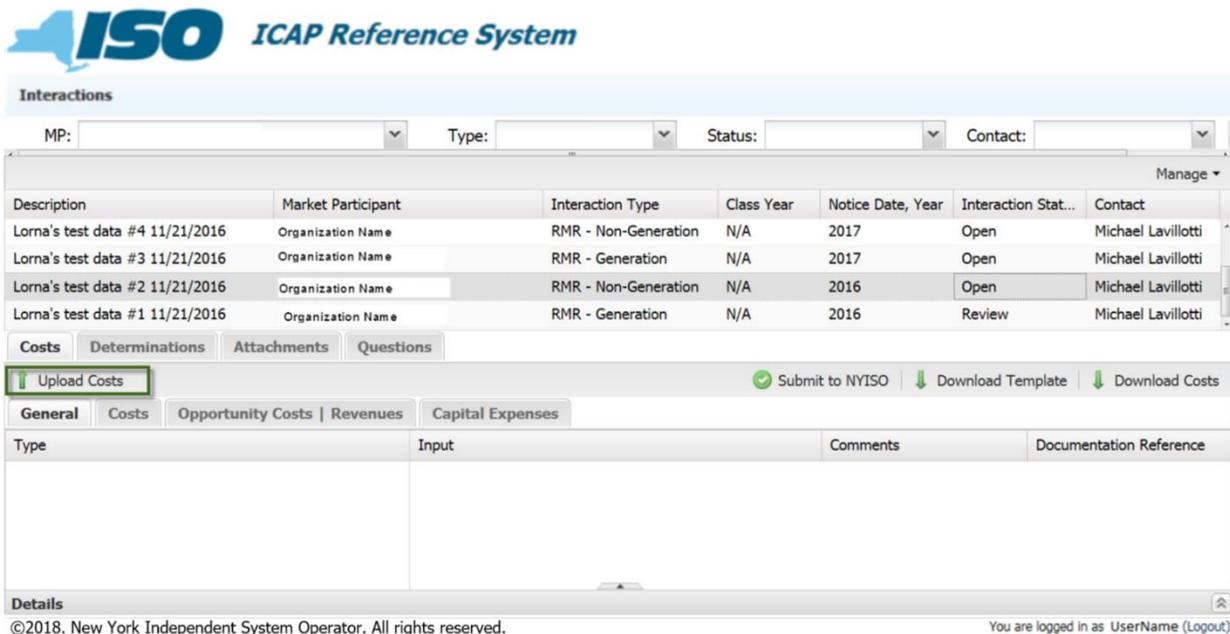
Figure 11: Upload Costs Screen



The user may receive error messages upon attempting to upload the template if the template has not been filled out according to the specifications in Appendix D. Correct the errors identified in the error messages and then resubmit the template.

Upon a successful upload, the “Upload Successful” message will appear on the screen. A message of “Upload Successful” does not constitute a determination by the NYISO that a Generator Deactivation Notice is complete or that adequate documentation has been received, or that the NYISO’s review has commenced

Figure 12: Upload Costs Screen



Upon a successful upload, the data will appear on the Main Screen, as illustrated by the example in the ICAP Reference System screenshot above. The user may view the data on the screen and may upload additional data and information subject to the limitation and as described in Section 3.2.6 below, until it is in a “Review State (see Section 3.3 below). In addition, the user can view “Last Update” time and date, NYISO Comments for each field if the NYISO inserted them.

The system will store and time-stamp all successful uploads under “Attachment” tab.

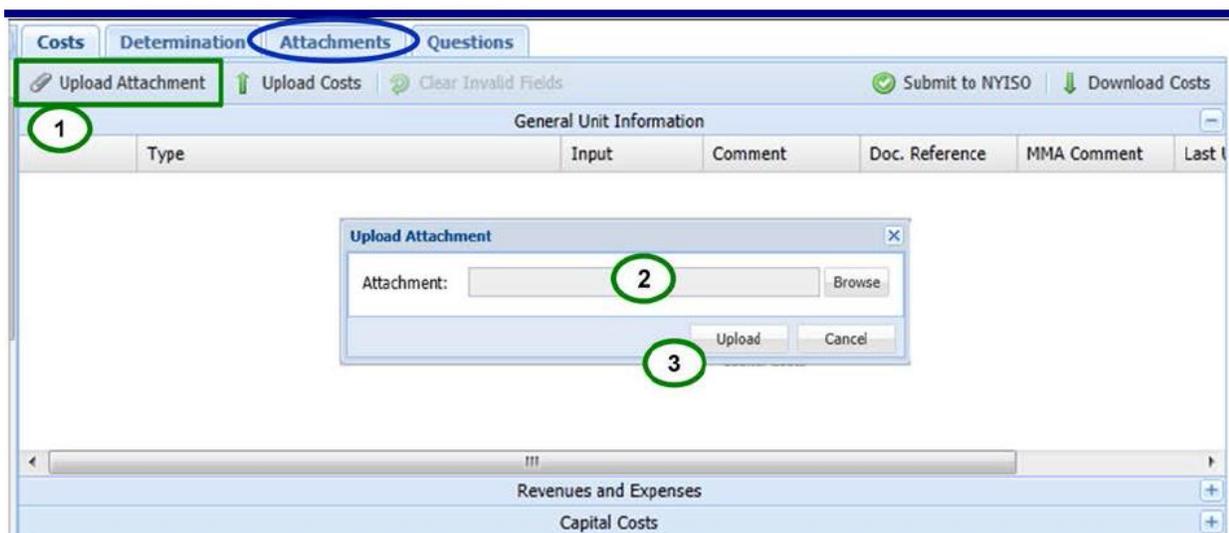
3.2.4. Upload attachments

The user shall upload documentation in the form of attachments, as outlined in the Template Instructions. Each field contains “Documentation Reference” that refers to the attachments.

Attachments may be uploaded from any tab in the record by clicking the “Upload Attachment” icon. All attachments are stored and time-stamped in the Attachments Tab of the record.

The following screen will display:

Figure 13: Attachment Confirmation Screen



Click on the "Browse" icon (# 2 on

Figure 13) to browse your local or network drives for documents in order to upload them as an attachment to the template or in response to a further data request by the NYISO.

Click on the "Upload" icon (#3 on

Figure 13) in order to upload a document to the record.

The user may view all attachments, including the upload file (template) in the Attachment Tabs.

Note: The user cannot delete attachments once uploaded.

The following screen will display:

Figure 14: Attachment Screen

ISO ICAP Reference System

Interactions

MP: [] Type: [] Status: [] Contact: [] Search

Description	Market Participant	Interaction Type	Class Year	Notice Date, Year	Interaction Status	Contact
Test Data only	Organization Name	RMR - Generation	N/A	2016	Open	Michael Lavillotti
Lorna's Test Data #2 - 11/22/2016	Organization Name	RMR - Non-Generation	N/A	2016	Open	Michael Lavillotti
Lorna's Test Data 11/22/2016	Organization Name	RMR - Generation	N/A	2016	Review	Michael Lavillotti
Test Data only	Organization Name	RMR - Generation	N/A	2016	Review	Michael Lavillotti

Costs | Determinations | **Attachments** | Questions

Upload Attachment [] Download All

Pub...	Filename	Attachment Type	Update Time	Last Updated By	Downlo...
Y	RMR_Staging_2016_LS Data ver02-11222016134930309.xlsx	Template File	11/22/2016 01:49:30 PM	MP Name	[]

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3.2.5. Download data submission template

The user can download its MP's template file via the cost detail screen, view its upload file on the Attachment screen, and also download the MP costs it submitted to a separate spreadsheet.

When a user signs onto the ICAP reference system, the ICAP Reference System Main Screen will be displayed.

Figure 15: ICAP Reference System Main Display

ISO ICAP Reference System

Interactions

MP: Type: Status: Contact:

Description	Market Participant	Interaction Type	Class Year	Notice Date, Year	Interaction Status	Contact
Lav 5 Test NPV Determination	Organization Name	RMR - Generation	N/A	2016	Review	Michael Lavillotti
Lav 5 Test APR Determination	Organization Name	RMR - Generation	N/A	2016	Review	Michael Lavillotti
Test Data only	Organization Name	RMR - Generation	N/A	2016	Open	Michael Lavillotti
Lorna's Test Data #2 - 11/22/2016	Organization Name	RMR - Non-Generation	N/A	2016	Open	Michael Lavillotti
Lorna's Test Data 11/22/2016	Organization Name	RMR - Generation	N/A	2016	Review	Michael Lavillotti
Lav 4 APR Validation	Organization Name	RMR - Generation	N/A	2016	Review	Michael Lavillotti
Lav 4 NPV Validation	Organization Name	RMR - Generation	N/A	2016	Review	Michael Lavillotti
Test Data #2 - Generate Initial Data Requ...	Organization Name	RMR - Generation	N/A	2016	Review	Michael Lavillotti
Lorna's Test Data	Organization Name	RMR - Generation	N/A	2016	Review	Michael Lavillotti
Lorna's Test Data #1 - 11/16/2016	Organization Name	RMR - Generation	N/A	2016	Open	Michael Lavillotti
Lorna's Test Data	Organization Name	RMR - Generation	N/A	2016	Open	Michael Lavillotti
Qa Create RMR Interaction	Organization Name	RMR - Non-Generation	N/A	2016	Open	Robert Logan
Lavil Test 3	Organization Name	RMR - Generation	N/A	2013	Open	Michael Lavillotti
Lavil Test 2	Organization Name	RMR - Non-Generation	N/A	2016	Review	Michael Lavillotti
Lavil Test 1	Organization Name	RMR - Generation	N/A	2016	Open	Michael Lavillotti
Test Data only	Organization Name	RMR - Generation	N/A	2015	Closed	Scott Godfrey

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Once the user selects a specific record, the screen shown in the figure below will display.

Note: For GFC, physical withholding, BSM and Generator Deactivation Assessment records, there are 3 ribbons on the screen, "General Unit Information", "Revenues and Expenses" and "Capital Costs". To display the data fields within each category, click on the desired ribbon to see the data.

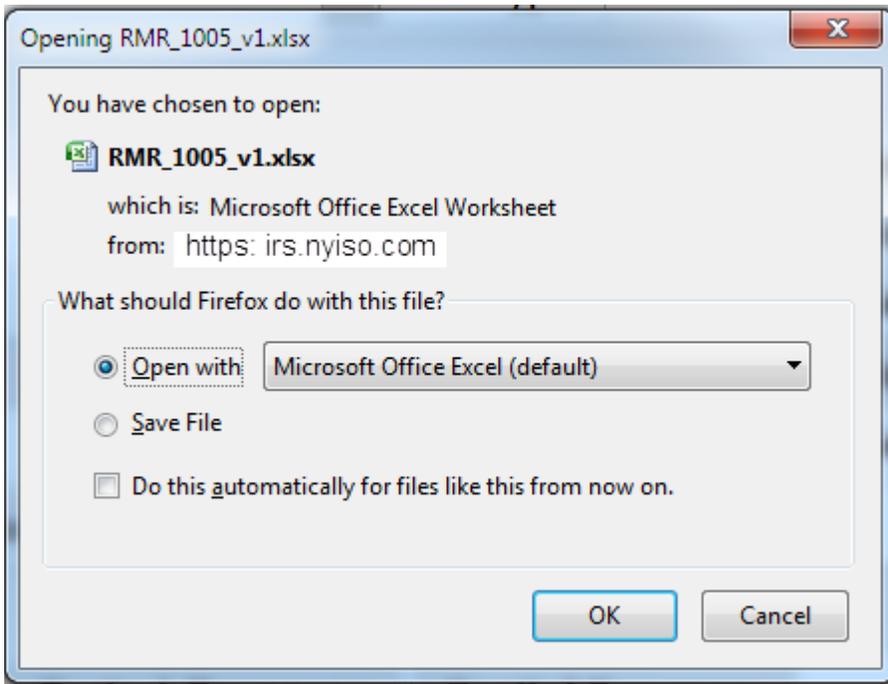
Figure 16: ICAP Reference System Generator Deactivation Assessment Detail Screen

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Click on the "Download Cost" icon. The following screen will display. The user may select "Open", "Save" or "Save As".

To view the original upload file, click on Attachment Tab, locate the cost file and click on the "Download" icon.

Figure 17: Download Confirmation Detail Screen



The user can select "Open", "Save" or "Save As".

3.2.6. Submit data for NYISO Review

The user can submit the Generator Deactivation Assessment cost data by clicking on the "Submit to NYISO" icon.

The user submits by uploading in that same manner physical withholding evaluation, GFC determination and BSM evaluation templates. After an interaction has been created by the NYISO for the applicable process, the respective submission template will be available for download, directly from the ICAP Reference System (in addition to being available on the NYISO's website on the Market Monitoring page.

* Once the user submits the template to the NYISO for review, the user will not be able to change it. The user can separately add costs or identify data to supersede previously submitted data by submitting a new template.

Figure 18: Submit to NYISO

The screenshot shows the 'Interactions' section of the ICAP Reference System. At the top, there are filters for MP, Type, Status, and Contact. Below these is a table of interactions with columns: Description, Market Participant, Interaction Type, Class Year, Notice Date, Year, Interaction Status, and Contact. The 'Submit to NYISO' button is highlighted with a green box. Below the button are tabs for 'General', 'Costs', 'Opportunity Costs', 'Revenues', and 'Capital Expenses'. A table follows with columns: Type, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, Periodicity/Life, and % Avoidable. The 'Revenues' section is expanded, showing data for Energy, Capacity, and various Ancillary services.

Type	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Periodicity/Life ...	% Avoidable
Revenues													
Energy	\$100....	\$100....	\$100....	\$100....	\$80.00	\$80.00	\$80.00	\$60.00	\$60.00	\$30.00	\$20.00	15	75.000%
Capacity	\$200....	\$200....	\$200....	\$200....	\$150....	\$150....	\$150....	\$100...	\$100...	\$80.00	\$70.00	15	25.000%
Ancillary - Spinning and Non-Spinning Reserves	\$300....	\$300....	\$300....	\$300....	\$200....	\$200....	\$200....	\$150...	\$120...	\$60.00	\$60.00	15	15.000%
Ancillary - Regulation	\$100....	\$100....	\$100....	\$100....	\$80.00	\$80.00	\$80.00	\$40.00	\$40.00	\$30.00	\$20.00	15	10.000%
Ancillary - Voltage Support Service	\$200....	\$200....	\$200....	\$200....	\$150....	\$150....	\$150....	\$75.00	\$75.00	\$75.00	\$50.00	15	35.000%
Ancillary - Black Start Service	\$300....	\$300....	\$300....	\$300....	\$200....	\$200....	\$200....	\$110...	\$110...	\$50.00	\$50.00	15	95.000%
Other	\$50.00	\$50.00	\$50.00	\$50.00	\$20.00	\$20.00	\$20.00	\$18.00	\$18.00	\$10.00	\$10.00	15	35.000%

Once the user clicks on the "Submit to NYISO" icon the following confirmation screen will display.

Figure 19: Submit to NYISO Confirmation Screen

The screenshot shows the same 'Interactions' page as Figure 18, but with a modal dialog box overlaid in the center. The dialog box is titled 'Confirm Status Change' and contains the text 'Are you sure you want to complete this action?' with 'Yes' and 'No' buttons. The background content is dimmed.

If the user selects "Yes" the system will identify that data needs to be reviewed by NYISO.

3.3. Review State

During the Review state, the user may upload additional attachments and correspond with the NYISO using the “Questions” tab, as outlined in Section 4.1. The NYISO may identify fields that the MP needs to update during the Review State.

3.4. Closed State

The “Closed” State means the NYISO has made a final determination and closed the interaction. A determination may be final and an interaction closed without the NYISO identifying it as a “Closed State” within the ICAP Reference System. The MP point of contact and other users will receive an email notification that the determination is ready to be viewed. For the purposes of GFCs or Generator Deactivation Assessments, a “Closed” interaction indicates a determination of GFCs or costs for a Generator Deactivation Assessment for the period indicated by the NYISO. Any subsequent updates to GFCs or Generator Deactivation Assessments will require a new interaction.

3.5. View Determination Summary

Sections below outline information that the user may view in the Closed State for the Generator Deactivation Assessment and the BSM evaluation.

3.5.1. Generator Deactivation Assessment Determination Screen

Click on the "Determination" tab on the Generator Deactivation Assessment Detail Record. The following screen will display.

Figure 20: Generator Deactivation Assessment Summary Screen

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Figure 21: Revenues

Template Screen	Information
Fixed Costs ()	Sum(All Fixed Costs Per KW Year ICAP)
Capital Expense	Sum(All Capital Expense Cost Per KW Year ICAP)
Net Energy Revenues	Entered by the NYISO.
Ancillary Services	Entered by the NYISO.
ICAP Forecast	Entered by the NYISO. Calculated for Physical Withholding evaluations.
Mitigation Determination	Entered by the NYISO. Calculated for Physical Withholding evaluations.
Comment	The NYISO may enter comments in the NYISO entered fields.
Documentation Reference	The NYISO may enter documentation references to attachments for the NYISO entered fields.

3.5.2. Generator Deactivation Assessment Cost Screen

Click on the "Costs" tab on the Generator Deactivation Assessment Detail Record. The following screen will display.

Figure 22: Generator Deactivation Assessment Screen – General

The screenshot shows the 'General' tab of the Generator Deactivation Assessment screen. At the top, there is a search bar with fields for MP, Type, Status, and Contact, along with a Search button. Below this is a table with columns: Description, Market Participant, Interaction Type, Class Year, Notice Date, Year, Interaction Status, and Contact. The table contains four rows of data related to 'Lorna's Test Data' and 'Lav 4 APR Validation'. Below the table are tabs for 'Costs', 'Determinations', 'Attachments', and 'Questions'. The 'General' tab is selected and highlighted. Below the tabs are buttons for 'Upload Costs', 'Submit to NYISO', 'Download Template', and 'Download Costs'. The main content area is a table with columns: Type, Input, Comments, and Documentation Reference. It is divided into sections: 'General Unit Information' (Owner Operator, Station Unit, PTID, Installed Date, Unit Summer/Winter ICAP Capacity, CRIS Adjusted DMNC, Date of Analysis) and 'Energy Model Inputs / Physical Parameters' (Net Plant Heat Rate, Fuel Required to Start, Mingen, EFORd, Primary Fuel). At the bottom, there is a copyright notice: '©2018. New York Independent System Operator. All rights reserved.' and a login status: 'You are logged in as UserName (Logout)'.

Figure 23: Generator Deactivation Assessment Screen – Costs

The screenshot shows the 'Costs' tab of the Generator Deactivation Assessment screen. It features the same search bar at the top as Figure 22. Below the search bar is a table with columns: Description, Market Participant, Interaction Type, Class Year, Notice Date, Year, Interaction Status, and Contact. This table contains four rows of data, each with a 'Description' (Description #1 to #4) and corresponding interaction details. Below the table are tabs for 'Costs', 'Attachments', 'Questions', and 'Activity Log'. The 'Costs' tab is selected and highlighted. Below the tabs are buttons for 'Download Template' and 'Download Costs'. The main content area is a table with columns: Type, Input, Comments, and Documentation Reference. It is divided into sections: 'General Unit Information' (Owner Operator, Station Unit, PTID) and 'EPC Cost Components' (Equipment, Spare-Parts, Construction Labor and Materials, Electrical Connection and Substation, Electrical Interconnect and Upgrades, Gas Interconnect and Reinforcement, Site Prep, Engineering and Design, Construction Mgmt. / Field Engr. / Indirects, Startup and Training). At the bottom, there is a copyright notice: '©2018. New York Independent System Operator. All rights reserved.' and a login status: 'You are logged in as UserName (Logout)'.

Figure 24: Generator Deactivation Assessment Screen - Opportunity Costs | Revenues

Interactions

MP: Type: Status: Contact:

Description	Market Participant	Interaction Type	Class Year	Notice Date, Year	Interaction Stat...	Contact
Lorna's test data #4 11/21/2016	Organization Name	RMR - Non-Generation	N/A	2017	Open	Michael Lavillotti
Lorna's test data #3 11/21/2016	Organization Name	RMR - Generation	N/A	2017	Open	Michael Lavillotti
Lorna's test data #2 11/21/2016	Organization Name	RMR - Non-Generation	N/A	2016	Open	Michael Lavillotti
Lorna's test data #1 11/21/2016	Organization Name	RMR - Generation	N/A	2016	Review	Michael Lavillotti

Costs | Determinations | Attachments | Questions

Upload Costs

General | Costs | **Opportunity Costs | Revenues** | Capital Expenses

Type	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Periodicity/Life ...	% Avoidable
Opportunity Cost 1	\$30...	\$30...	\$30...	\$30...	\$20...	\$35...	\$40...	\$45...	\$50...	\$55...	\$60...	15	75.000%
Opportunity Cost 2	\$20...	\$20...	\$20...	\$20...	\$15...	\$35...	\$40...	\$45...	\$50...	\$55...	\$60...	15	25.000%
Opportunity Cost 3	\$30...	\$30...	\$30...	\$30...	\$20...	\$35...	\$40...	\$45...	\$50...	\$55...	\$60...	15	15.000%
Opportunity Cost 4	\$20...	\$20...	\$20...	\$20...	\$15...	\$35...	\$40...	\$45...	\$50...	\$55...	\$60...	15	10.000%
Opportunity Cost 5	\$30...	\$30...	\$30...	\$30...	\$20...	\$35...	\$40...	\$45...	\$50...	\$55...	\$60...	15	35.000%

Details

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Figure 25: Generator Deactivation Assessment Screen - Capital Expense

Interactions

MP: Type: Status: Contact:

Description	Market Participant	Interaction Type	Class Year	Notice Date, Year	Interaction Stat...	Contact
Lorna's test data #4 11/21/2016	Organization Name	RMR - Non-Generation	N/A	2017	Open	Michael Lavillotti
Lorna's test data #3 11/21/2016	Organization Name	RMR - Generation	N/A	2017	Open	Michael Lavillotti
Lorna's test data #2 11/21/2016	Organization Name	RMR - Non-Generation	N/A	2016	Open	Michael Lavillotti
Lorna's test data #1 11/21/2016	Organization Name	RMR - Generation	N/A	2016	Review	Michael Lavillotti

Costs | Determinations | Attachments | Questions

Upload Costs

General | Costs | Opportunity Costs | Revenues | **Capital Expenses**

Type	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Periodicity/Life ...	Depreciation
Capital Expense 1	\$30...	\$30...	\$30...	\$30...	\$20...	\$35...	\$40...	\$45...	\$50...	\$55...	\$60...	15	Straightline
Capital Expense 2	\$20...	\$20...	\$20...	\$20...	\$15...	\$35...	\$40...	\$45...	\$50...	\$55...	\$60...	15	MACRS
Capital Expense 3	\$30...	\$30...	\$30...	\$30...	\$20...	\$35...	\$40...	\$45...	\$50...	\$55...	\$60...	15	Production
Capital Expense 4	\$20...	\$20...	\$20...	\$20...	\$15...	\$35...	\$40...	\$45...	\$50...	\$55...	\$60...	15	Straightline
Capital Expense 5	\$30...	\$30...	\$30...	\$30...	\$20...	\$35...	\$40...	\$45...	\$50...	\$55...	\$60...	15	MACRS

Details

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Figure 26: Generator Deactivation Assessment Determination screen

Unit Net CONE (UCAP):

Mitigation Net CONE

Annual ICAP Revenue Requirement 2018: Comment: Doc. Reference:

System EFORD 2018: Comment: Doc. Reference:

Mitigation Net CONE (\$/KW-yr, ICAP) 2018: Comment: Doc. Reference:

Annual Default Offer Floor, UCAP 2018: Comment: Doc. Reference:



Interactions

MP: Type: Status: Contact:

Description	Market Participant	Interaction Type	Class Year	Notice Date, Year	Interaction Status	Contact
Test Data only	Organization Name	RMR - Generation	N/A	2016	Open	Michael Lavillotti
Lorna's Test Data #2 - 11/22/2016	Organization Name	RMR - Non-Generation	N/A	2016	Open	Michael Lavillotti
Lorna's Test Data 11/22/2016	Organization Name	RMR - Generation	N/A	2016	Review	Michael Lavillotti
Liv 4 APR Validation	Organization Name	RMR - Generation	N/A	2016	Review	Michael Lavillotti

Costs: **Determinations** Attachments Questions

* All values published on this page are preliminary and not binding

Determination Type	2017	2018	Comments	Doc. Reference
Revenues - Net Adjusted Value	\$233.55	\$229.05		
Variable Costs - Net Adjusted Value	\$306.75	\$302.25		
Labor - Net Adjusted Value	\$96.50	\$92.00		
Maintenance - Net Adjusted Value	\$153.55	\$153.55		
Administration - Net Adjusted Value	\$287.05	\$287.05		
Other - Net Adjusted Value	\$230.80	\$226.30		

APR:

Expense	2017	2018	Periodicity	Depreciation Me...	Useful Life	Depreciation Rate	Salvage Value	% Avoidable	Comments	Doc. Reference
Capital Expense 1	\$327.50	\$375.00	15	Straightline	15.0	15.0	100	75.000%		
Capital Expense 2	\$112.50	\$125.00	15	MACRS	15.0	15.0	100	25.000%		
Capital Expense 3	\$67.50	\$75.00	15	Production	15.0	15.0	100	15.000%		
Capital Expense 4	\$45.00	\$50.00	15	Straightline	15.0	15.0	100	10.000%		
Capital Expense 5	\$157.50	\$175.00	15	MACRS	15.0	15.0	100	35.000%		

Figure 27: Generator Deactivation Assessment Determination Template screen

Template Screen	Information
Revenues – Net Adjusted Value	Addition of all Revenue Source original values by year and multiply by the percent avoidable. (Energy + Capacity + Ancillary (Spinning and Non-Spinning Reserves) + Ancillary (Regulation) + Ancillary (Voltage Support Service) + Ancillary (Black Start Service) + Other) X %Avoidable
Variable Costs – Net Adjusted Value	Addition of all Variable Costs original values in this category by year and multiply by percent avoidable. (Fuel + NOX + SO2 + CO2 + Start Up Shut Down Gas/Station Light & Power + BOP Maintenance, Materials, Services & Consumables + Long Term Service Agreement LTSA Variable + Other) X %Avoidable
Labor – Net Adjusted Value	Addition of all Labor Fixed Costs original values by year and multiply by the percent avoidable. (Plant Labor + Plant Labor (Overtime) + Contract Labor/Services + Labor Benefits) x %Avoidable
Maintenance – Net Adjusted Value	Addition of all Maintenance Fixed Costs original values by year and multiply by percent avoidable. (Maintenance + LTSA Fixed + Balance of Plant + Environmental/Security/Safety) x %Avoidable
Administration – Net Adjusted Value	Addition of all Administration Fixed Costs original values by year and multiply by percent avoidable (Administrative Expense + Employee Expenses + Travel & Entertainment + Office Expense + Training + Information Technology + Procurement) x %Avoidable
Other – Net Adjusted Value	Addition of all Other Fixed Costs original values by year and multiply by percent avoidable (Plant Utilities & Aux Load + Property Tax Expense + Insurance + Lease Payments + Legal + Other) x %Avoidable

3.5.3. Buyer-Side Mitigation Cost Screen

Click on the "Costs" tab on the BSM Record. The following screen will display.

Figure 28: BSM Cost screen

ISO ICAP Reference System

Interactions

MP: Type: Status: Contact:

Description	Market Participant	Interaction Type	Class Year	Notice Date, Year	Interaction Status	Contact
Description #1	Organization Name	RMR - Generation	N/A	2016	Review	Jonathan Newton
Description #2	Organization Name	BSM	2012	N/A	Closed	Lorenzo Seirup
Description #3	Organization Name	BSM	2012	N/A	Closed	Julia popova
Description #4	Organization Name	BSM	2012	N/A	Closed	Anya Myagiota

Costs Attachments Questions Activity Log

Type	Input	Comments	Documentation Reference
General Unit Information			
Owner Operator and/or Billing Organization	Organization Name		
Station Unit	N/A		
PTID			
EPC Cost Components			
Equipment	825051000	Includes manufacture and testing, and freight f...	N/A
Spare-Parts	0.0	EPC bid does not include a cost breakout for sp...	N/A
Construction Labor and Materials	751086314	Includes all installation costs, excluding site pre...	N/A
Electrical Connection and Substation	160465024	NYISO SUFs estimate as reported at 8/15/2014...	N/A
Electrical Interconnect and Upgrades	0.0	Not available	N/A
Gas Interconnect and Reinforcement	0.0	Not available	N/A
Site Prep	90924129	Includes clearing and access roads along cable ...	N/A
Engineering and Design	61466557	Includes supply E&D (\$3.5MM) and install E&D ...	N/A
Construction Mgmt. / Field Engr. / Indirects	0.0	Included in #4 and #6	N/A
Startup and Training	1472000.0	Includes testing (EPC bid groups "Testing" with ...	N/A

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Figure 29: Unit Net CONE

Template Screen	Information
Annual Net Cone (ICAP) [Class Year +3]	Entered by the NYISO.
Annual Net Cone (ICAP) [Class Year + 4]	Entered by the NYISO.
Annual Net Cone (ICAP) [Class Year +5]	Entered by the NYISO.
Annual Net Cone (UCAP) [Class Year +3]	Entered by the NYISO.
Annual Net Cone (UCAP) [Class Year +4]	Entered by the NYISO.
Annual Net Cone (UCAP) [Class Year +5]	Entered by the NYISO.
Unit Net Cone (UCAP)	Average of Annual Net Cone (UCAP) [Class Year +3], Annual Net Cone (UCAP) [Class Year + 4], Annual Net Cone (UCAP) [Class Year + 5]
Comment	The NYISO may enter comments in the NYISO entered fields.
Documentation Reference	The NYISO may enter documentation references to attachments for the NYISO entered fields.

Figure 30: Mitigation Net CONE

Template Screen	Information
Annual ICAP Revenue Requirement [Class Year + 3]	Entered by the NYISO.
System EFORd [Class Year + 3]	Entered by the NYISO.
Mitigation Net CONE (\$/kW-yr, ICAP) [Class Year + 3]	Entered by the NYISO.
Annual Default Offer Floor, UCAP[Class Year + 3]	Entered by the NYISO.
Comment	The NYISO may enter comments in the NYISO entered fields.
Documentation Reference	The NYISO may enter documentation references to attachments for the NYISO entered fields.

4. Communications

4.1. Questions Tab

This section describes how a user can create a question and/or communication with the NYISO within the system.

The NYISO may also initiate questions and communications with the user within the ICAP Reference System. The user will receive email notifications whenever there is activity in the “Questions” tab.

Figure 31: Main Screen

The screenshot shows the ICAP Reference System interface. At the top is the ISO logo and the text "ICAP Reference System". Below this is a header for "Interactions" with search filters for MP, Type, Status, and Contact, along with a search button. A table lists interactions with columns for Description, Market Participant, Interaction Type, Notice Date, Year, Interaction Status, and Contact. The table contains four rows of data. Below the table are tabs for Costs, Determinations, Attachments, and Questions. At the bottom, there is a "Generate Question/Answer Notification Email Test Data" section with a "Refresh" button and a "New Topic" button.

Description	Market Participant	Interaction Type	Notice Date, Year	Interaction Status	Contact
Lav 4 APR Validation	HQ Energy Services (US)	RMR - Generation	2016	Review	Michael Lavillotti
Lav 4 NPV Validation	HQ Energy Services (US)	RMR - Generation	2016	Review	Michael Lavillotti
Test Data #2 - Generate Initial Data Request for Reliability Must R...	HQ Energy Services (US)	RMR - Generation	2016	Review	Michael Lavillotti
Lorna's Test Data - Generate Email test Data	HQ Energy Services (US)	RMR - Generation	2016	Closed	Michael Lavillotti

The user may initiate a communication in the “Questions” field.

Figure 32: Questions Screen

The screenshot shows the "Questions" tab in the ICAP Reference System. It features the same search filters as Figure 31. The table below the filters shows interactions with an additional "Class Year" column. The "Questions" tab is selected and highlighted. Below the table, the "Generate Question/Answer Notification Email Test Data" section is visible, showing a question and its reply. The question is from "MP name" and the reply is from "Michael Lavillotti".

Description	Market Participant	Interaction Type	Class Year	Notice Date, Year	Interaction Status	Contact
Lorna's Test Data - Generate Email test Data	Organization Name	RMR - Generation	N/A	2016	Review	Michael Lavillotti
Lav 4 APR Validation	Organization Name	RMR - Generation	N/A	2016	Review	Michael Lavillotti
Lav 4 NPV Validation	Organization Name	RMR - Generation	N/A	2016	Review	Michael Lavillotti
Test Data #2 - Generate Initial Data Request fo...	Organization Name	RMR - Generation	N/A	2016	Review	Michael Lavillotti

Generate Question/Answer Notification Email Test Data
Created by: MP name 11/18/2016 09:57:06 AM Last Reply: Michael Lavillotti 11/18/2016 09:59:05 AM

Fri Nov 18 2016 09:57:32 GMT-0500 (Eastern Standard Time)
MP name : Generate Question/Answer Notification Email test data; check if MMA Admin receives an email notification.
Doc. Reference: 12345

Fri Nov 18 2016 09:59:05 GMT-0500 (Eastern Standard Time)
Michael Lavillotti: MMA Admin replies to MP name question -- test data.
Doc. Reference: 67890

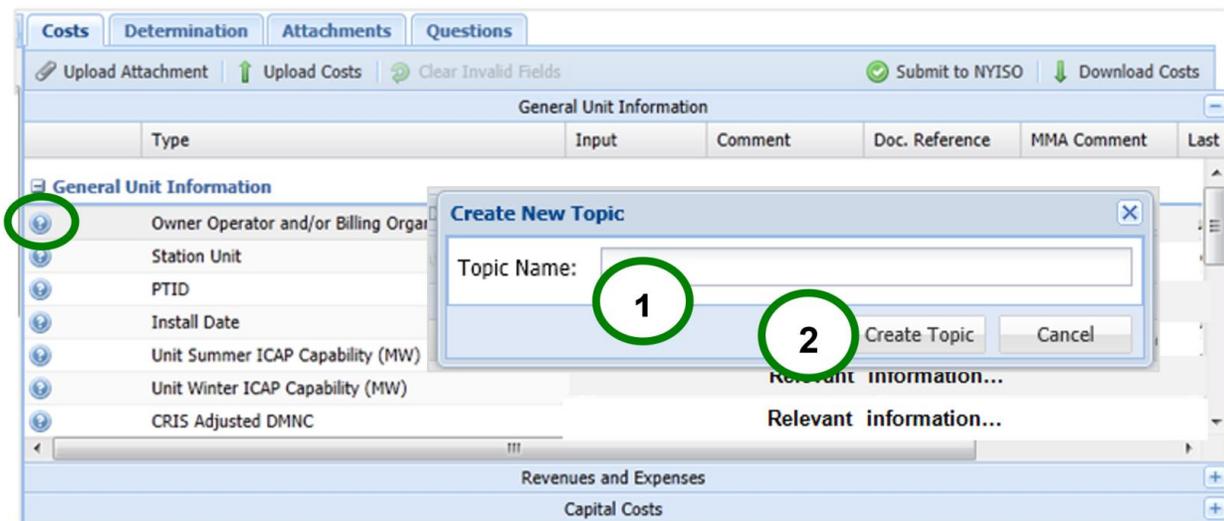
MP name : [input field]

Click on the "New Topic" icon to create a new question.

For example, to initiate a discussion about a particular cost field, the user may click on the "?" icon next to the field. Once the communication has been created, it will appear in the "Questions" Tab.

The user can also view communications associated with the costs by clicking on the "discussion" icon next to the fields for which communications have been created. This functionality is designed to help identify the actual field for which a question is being created. If this functionality is used, the best practice is to use the actual field name as the Question Topic. (*i.e.*, Station Unit). This functionality follows the same instructions as above.

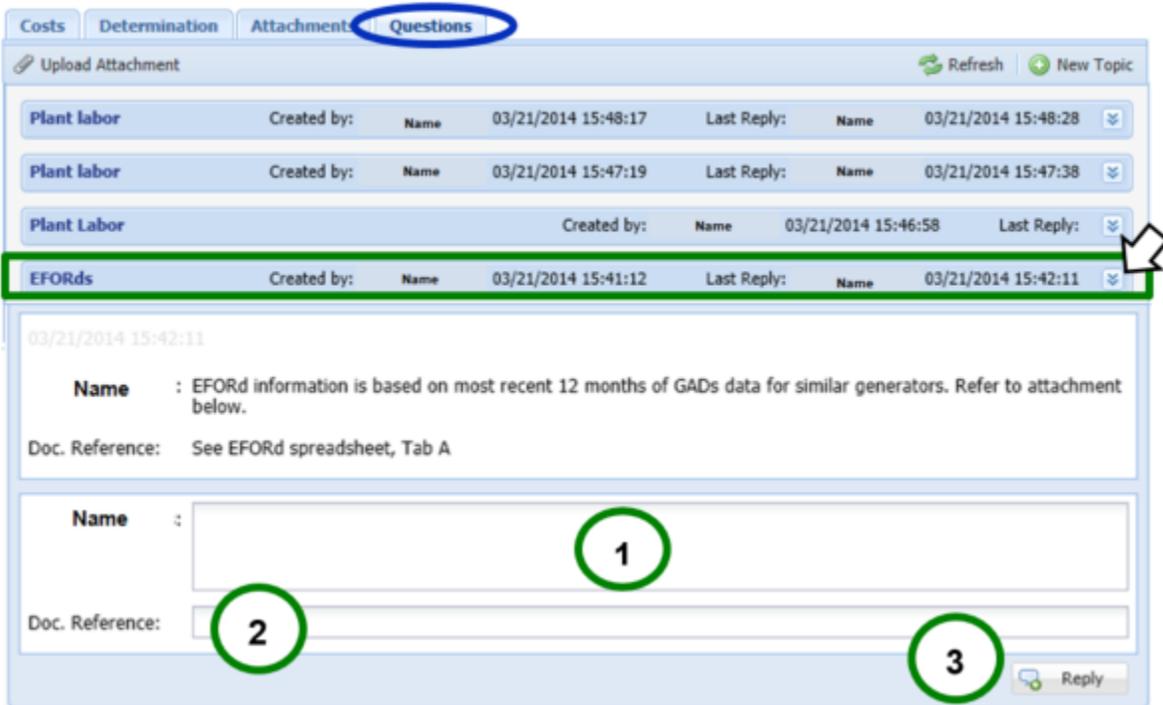
Figure 33: Questions Topic Confirmation Screen



Type a topic name and click the "Create Topic" icon.

Type in your Question and a Documentation Reference if referring to an attachment. Click the "Reply" icon.

Figure 34: Questions Topic Screen



The question will be seen by the NYISO and the user. The user will be able to reply to NYISO questions and vice versa.

Notification emails regarding communications within the ICAP Reference System and their content will be sent to all users designated by the MP.

4.2. Email Notifications

Throughout the interaction, users may receive email notifications about ICAP Reference System activities:

- NYISO Data Request
- Data Submittal Confirmation: This email is generated when a Cost file has been uploaded for the selected interaction.
- NYISO Determination Notification: This email is generated when a Generator Deactivation Assessment determination has been published.
- “Question” Thread Alert: This email is generated when a new topic was created, or a reply to a question has been posted,

Email notifications will inform the MP of activity and changes in information in the ICAP Reference System and provide direction for required actions.

Appendix A List of Acronyms

Terms not defined herein have the meaning set forth in the NYISO's *Market Administration and Control Area Services Tariff*, available from the NYISO web site at <https://www.nyiso.com/regulatory-viewer>.

	Definition
BSM	Buyer-side mitigation
GFC	Going Forward Costs
ICAP	Installed Capacity
MP	Market Participants
MST	Market Administration and Control Area Services Tariff
NYISO	New York Independent System Operator, Inc.
PTID	Point Identifier for a specific Generator, UDR associated with a single Load Zone, single Location, and single Resource.

Appendix B Getting Started Checklist

The following checklist items are processes/procedures that must be completed by the MP, Developer, or Project Owner before the NYISO will grant access to the ICAP Reference System.

- To become a Market Participant of the NYISO, please call Stakeholder Services at 518-356-6060 or at stakeholder_services@nyiso.com. Note: The MP, Developer, or Project Owner need not be a Market Participant to access the system for a BSM Interaction.
- To access the ICAP Reference System MPs must have a Digital Certificate. To obtain a Digital Certificate, contact Stakeholder Services at 518-356-6060 or at stakeholder_services@nyiso.com.
- To access the ICAP Reference System click on the following Link. Please note that you must have a Digital Certificate and have a user name and password for the application.
<https://www.nyiso.com/market-monitoring>
- System Requirements for the ICAP Reference System.
- MPs must initiate a Going Forward Cost request, a Physical Withholding or a Generator Deactivation Assessment evaluation request (if applicable) by contacting Stakeholder Services at 518-356-6060 or at stakeholder_services@nyiso.com.
- Provide list of users to be configured in the ICAP Reference System and their email addresses. Each MP, in addition to designating the main point of contact, can designate other users.
- Download ICAP Reference System Templates (GFC, BSM and Generator Deactivation Assessment), located at the following link: <https://www.nyiso.com/market-monitoring>

Appendix C Template Upload Checklist

The following checklist items are a guide to a successful Input Template Upload.

- Do not add or delete columns or rows, unless it is to add additional Capital costs in the GFC /Generator Deactivation Assessment template.
- Ensure all required fields as outlined in Appendix D are filled out. Required fields are shaded in Orange in the Excel Input Template. Orange data validation will turn to normal format when the field is entered.
- All values are in correct format as outlined in Appendix D.
- The values are not simply rounded to correct format, but are truncated. For example, a “Currency” number format in Excel for a value of 3.3333333 rounds the value to two decimal places \$3.33(333333...). The system requires the value to be truncated to \$3.33 before upload.
- If “Other” line items are entered, be sure to fill out entire item.
- If values are not applicable, enter “0”, as appropriate. If values are not available, enter “0” and provide comments and documentation, as appropriate.
- Do not remove pre-populated formulas in the Template.
- When uploading the Input Template, be sure to click “Upload Costs” and not “Upload Attachments”.
- When submittal is complete and all documentation is uploaded, be sure to click “Submit to the NYISO” button. The Review State does not commence until the user submits the data to the NYISO.

Appendix D Data Validation Guide

Error! Reference source not found. defines the allowable data types accepted within the ICAP Reference System and corresponding GFC, BSM, and Generator Deactivation Assessment upload templates.

Figure D-1: Allowable Data Types

Data Type	Rule	Example
Text	Length = 256	The text field can be 256 characters.
Numeric	Length = 24 (12 Integers, 12 Decimals)	10,124,356.2356
Numeric 2	Length = 12 (12 Integers, 0 Decimals)	2015
Date	MM/DD/YYYY	04/18/2014
Percentage	Length = 6 (3 Integers, 3 Decimals)	93.257 = 93.257%
Currency	Length = 14 (12 Integers, 2 Decimals)	1,000,000,000.02

In Section (A.) Input (below) indicates that the field is required for a successful system upload. If data is not applicable, enter “0.”

Common errors:

- Not all required fields are filled out. Fill out required fields according to correct data specifications.
- Numeric2 fields contain values with more than 2 decimal places. Truncate each value to 2 decimal places. Alternatively, utilize =ROUND() function in Excel to truncate the values to 2 decimal places.
- Percentage fields contain more than 3 decimal places. Truncate each value to 3 decimal places. Alternatively, utilize =ROUND() function in Excel to truncate the values to 3 decimal places. Note that “Currency” and “Accounting” Excel formats merely display the value to 2 decimal places and do not truncate the value, as required.
- Incomplete entry in the “Other” field. If “Other” field is entered, the whole line item must be completed, including the Comment and Documentation Reference fields.

D.1 Going Forward Costs / Physical Withholding

The following illustration provides an example of a completed template.

Figure D-2: Completed Template Example



Directions: Please fill out all of the Orange Cells. If the value is 0, please insert 0. Add lines to Capacity Costs as needed, filling in one cost per line item.

Privileged and Confidential-- May Contain Confidential Market Participant Data

	(A). Input	(B). Comment	(C). Documentation Reference
General Unit Information			
1 Organization	ABC		
2 Station Unit	ABC		
3 PTID	0		
4 Installed Date	1/1/1950		
5 Unit Summer ICAP Capability (MW)	300		Operations Tab A Cell A1
6 Unit Winter ICAP Capability (MW)	300		Operations Tab A Cell A2
7 CRIS Adjusted DMNC	300		Operations Tab A Cell A3
8 Date of the Analysis (MM/DD/YYYY)	12/12/2012		Operations Tab A Cell A4
Energy Model Inputs / Physical Parameters			
9 Net Plant Heat Rate (BTU/kWh)(HHV)	10000		Operations Tab A Cell A5
10 Fuel Required to Start	5555		Operations Tab A Cell A6
11 Mingen	111		Operations Tab A Cell A7
12 EFORd	33.33%		Operations Tab A Cell A8
13 Primary Fuel	gas		Operations Tab A Cell A9
14 Secondary Fuel, if applicable	oil		Operations Tab A Cell A10
15 Nox Rate (tons/MMBtu)	22.22		Operations Tab A Cell A11
16 CO2 Emission Rate (tons/MMBtu)	222		Operations Tab A Cell A12
17 Sox Emission Rate (tons/MMBtu)	111		Operations Tab A Cell A13
18 Variable O&M (\$/MWh)	6.66		Operations Tab A Cell A14
19 WACC	6.66%		Operations Tab A Cell A15
20 Age of the Plant	62.95		Operations Tab A Cell A16

	(D). Historical					(E). Projected						
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Revenues												
21 Energy						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
22 Ancillary - Spinning and Non-Spinning						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23 Reserves						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
24 Ancillary - Regulation						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25 Ancillary - Voltage Support Service						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
26 Ancillary - Black Start Service						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
27 Other												
Variable Costs												
28 Fuel						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
29 NOX						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
30 SO2						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
31 CO2						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
32 Startup/Shutdown Gas/Station Light & Power						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
33 BOP Maintenance, Materials, Services & Consumables						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
34 Long Term Service Agreement (L TSA)						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
35 Variable						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
36 Other												
Fixed Costs												
37 Plant Labor						\$ 22,222,222.00	\$ 22,888,888.00	\$ 23,555,555.00	\$ 24,333,333.00	\$ 25,111,111.00	\$ 25,888,888.00	\$ 26,777,777.00
38 Plant Labor - Overtime						\$ 1,111,111.00	\$ 1,222,222.00	\$ 1,333,333.00	\$ 1,444,444.00	\$ 1,555,555.00	\$ 1,666,666.00	\$ 1,777,777.00
39 Contract Labor/Services						\$ 2,222,222.00	\$ 2,222,222.00	\$ 2,222,222.00	\$ 2,222,222.00	\$ 2,222,222.00	\$ 2,222,222.00	\$ 2,222,222.00
40 Labor Benefits						\$ 7,999,999.92	\$ 8,239,999.68	\$ 8,479,999.80	\$ 8,759,999.88	\$ 9,039,999.96	\$ 9,319,999.68	\$ 9,639,999.72
41 Maintenance						\$ 10,000,000.00	\$ 10,111,111.00	\$ 10,222,222.00	\$ 10,333,333.00	\$ 10,444,444.00	\$ 10,555,555.00	\$ 10,666,666.00
42 LTSA Fixed						\$ 3,333,333.00	\$ 3,333,333.00	\$ 3,333,333.00	\$ 3,333,333.00	\$ 3,333,333.00	\$ 3,333,333.00	\$ 3,333,333.00
43 Balance of Plant						\$ 1,111,111.00	\$ 1,111,111.00	\$ 1,111,111.00	\$ 1,111,111.00	\$ 1,111,111.00	\$ 1,111,111.00	\$ 1,111,111.00
44 Environmental/Security/Safety						\$ 555,555.00	\$ 555,555.00	\$ 555,555.00	\$ 555,555.00	\$ 555,555.00	\$ 555,555.00	\$ 555,555.00
45 Plant Utilities & Aux Load						\$ 1,111,111.00	\$ 1,111,111.00	\$ 1,111,111.00	\$ 1,111,111.00	\$ 1,111,111.00	\$ 1,111,111.00	\$ 1,111,111.00
46 Administrative Expense						\$ 2,222,222.00	\$ 2,333,333.00	\$ 2,444,444.00	\$ 2,555,555.00	\$ 2,666,666.00	\$ 2,777,777.00	\$ 2,888,888.00
47 Property Tax Expense						\$ 2,000,000.00	\$ 2,100,000.00	\$ 2,200,000.00	\$ 2,300,000.00	\$ 2,400,000.00	\$ 2,500,000.00	\$ 2,600,000.00
48 Employee Expenses						\$ 55,555.00	\$ 55,555.00	\$ 55,555.00	\$ 55,555.00	\$ 55,555.00	\$ 55,555.00	\$ 55,555.00
49 Travel & Entertainment						\$ 22,222.00	\$ 22,222.00	\$ 22,222.00	\$ 22,222.00	\$ 22,222.00	\$ 22,222.00	\$ 22,222.00
50 Office Expense						\$ 11,111.00	\$ 11,111.00	\$ 11,111.00	\$ 11,111.00	\$ 11,111.00	\$ 11,111.00	\$ 11,111.00
51 Training						\$ 44,444.00	\$ 44,444.00	\$ 44,444.00	\$ 44,444.00	\$ 44,444.00	\$ 44,444.00	\$ 44,444.00
52 Information Technology						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
53 Insurance						\$ 1,111,111.00	\$ 1,111,111.00	\$ 1,111,111.00	\$ 1,111,111.00	\$ 1,111,111.00	\$ 1,111,111.00	\$ 1,111,111.00
54 Lease payments						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
55 Legal						\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00
56 Procurement						\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00
57 Other												
Capital Expense (Description)												
58 Job 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 22,222.00	\$ -	\$ -	\$ -	\$ -
59 Job 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 22,222.00	\$ -	\$ -
60 Job 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 111,111.00	\$ -
61 Job 4	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
62 Job 5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 22,222.00	\$ -	\$ -	\$ -	\$ -
63 Job 6	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 222,222.00	\$ -	\$ -	\$ -
64 Job 7	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,555,555.00	\$ -	\$ -	\$ -	\$ -	\$ -
65 Job 8	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,111,111.00	\$ -	\$ -	\$ -
66 Job 9	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,222,222.00	\$ -	\$ -
67 Job 10	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 888,888.00	\$ -
68 Job 11	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 22,222.00	\$ -
69 Job 12	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
70 Job 13	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 22,222.00	\$ -	\$ -	\$ -	\$ -
71 Job 14	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,555,555.00	\$ -	\$ -	\$ -	\$ -
72 Job 15	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,444,444.00

(F) Periodicity/ Life of equipment years	(G). % Avoidable %	(B). Comment e.g. this line also includes...	(C). Documentation Reference e.g. Attachment A, p. 100-101
			Energy Model Tab A, Cell B1
			Energy Model Tab A, Cell B2
			Energy Model Tab A, Cell B3
			Energy Model Tab A, Cell B4
			Energy Model Tab A, Cell B5
			Energy Model Tab A, Cell B6
			Energy Model Tab A, Cell B7
			Energy Model Tab A, Cell B8
			Energy Model Tab A, Cell B9
			Energy Model Tab A, Cell B10
			Energy Model Tab A, Cell B11
			Energy Model Tab A, Cell B12
			Energy Model Tab A, Cell B13
	33.00%	Plant shares with 2 other Gens and shares cost equally	Financial Model Tab C Cell C1
	33.00%	Plant shares with 2 other Gens and shares cost equally	Financial Model Tab C Cell C2
	33.00%	Plant shares with 2 other Gens and shares cost equally	Financial Model Tab C Cell C3
	33.00%	Plant shares with 2 other Gens and shares cost equally	Financial Model Tab C Cell C4
	33.00%	Plant shares with 2 other Gens and shares cost equally	Financial Model Tab C Cell C5
	33.00%	Plant shares with 2 other Gens and shares cost equally	Financial Model Tab C Cell C6
	33.00%	Plant shares with 2 other Gens and shares cost equally	Financial Model Tab C Cell C7
	33.00%	Plant shares with 2 other Gens and shares cost equally	Financial Model Tab C Cell C8
	33.00%	Plant shares with 2 other Gens and shares cost equally	Financial Model Tab C Cell C9
	33.00%	Plant shares with 2 other Gens and shares cost equally	Financial Model Tab C Cell C10
	33.00%	Plant shares with 2 other Gens and shares cost equally	Financial Model Tab C Cell C11
	33.00%	Plant shares with 2 other Gens and shares cost equally	Financial Model Tab C Cell C12
	33.00%	Plant shares with 2 other Gens and shares cost equally	Financial Model Tab C Cell C13
	33.00%	Plant shares with 2 other Gens and shares cost equally	Financial Model Tab C Cell C14
	33.00%	Plant shares with 2 other Gens and shares cost equally	Financial Model Tab C Cell C15
	33.00%	Plant shares with 2 other Gens and shares cost equally	Financial Model Tab C Cell C16
	33.00%	Plant shares with 2 other Gens and shares cost equally	Financial Model Tab C Cell C17
	33.00%	Plant shares with 2 other Gens and shares cost equally	Financial Model Tab C Cell C18
	33.00%	Plant shares with 2 other Gens and shares cost equally	Financial Model Tab C Cell C19
	33.00%	Plant shares with 2 other Gens and shares cost equally	Financial Model Tab C Cell C20
5			Capital Cost Model Tab A Cell D1
5			Capital Cost Model Tab A Cell D2
5			Capital Cost Model Tab A Cell D3
5			Capital Cost Model Tab A Cell D4
5			Capital Cost Model Tab A Cell D5
5			Capital Cost Model Tab A Cell D6
5			Capital Cost Model Tab A Cell D7
5			Capital Cost Model Tab A Cell D8
5			Capital Cost Model Tab A Cell D9
5			Capital Cost Model Tab A Cell D10
5			Capital Cost Model Tab A Cell D11
5			Capital Cost Model Tab A Cell D12
5			Capital Cost Model Tab A Cell D13
5			Capital Cost Model Tab A Cell D14
5			Capital Cost Model Tab A Cell D15

The following illustration delineates the data types for each line item.

Line Item	Template Field Name	Example	Data Type
General Unit Information			
1	Owner Operator and / or Billing Organization	ABC	Text
2	Station Unit	DEF	Text
3	PTID	12345	Numeric 2
4	Year Installed	4/15/1960	Date
5	Unit Summer ICAP Capability (MW)	50.2	Numeric
6	Unit Winter ICAP Capability (MW)	55.2	Numeric
7	Unit Average ICAP Capability (MW)	52.2	Numeric
8	Date of the Analysis (MM/DD/YYYY)	3/19/2014	Date
Energy Model Inputs / Physical Parameters			
9	Net Plant Heat Rate (BTU/kWh)(HHV)	7000.01	Numeric
10	Fuel Required to Start	1000.003	Numeric
11	Mingen	10.5	Numeric
12	EFORd	6.321	Percentage
13	Primary Fuel	Gas	Text
14	Secondary Fuel, if applicable	Oil	Text
15	Nox Rate (tons/MMBtu)	12.123456	Numeric
16	CO2 Emission Rate (tons/MMBtu)	13.45678	Numeric
17	Sox Emission Rate (tons/MMBtu)	0.12345	Numeric
18	Variable O&M (\$/MWh)	10.258369	Numeric
19	WACC	12.246	Percentage
20	Age of the Plant (Calculated Field)	54	Numeric 2
Revenues			
21	Energy	10,123,456.52	Currency
22	Ancillary - Spin and Non-Spin	1,000,000.25	Currency
23	Ancillary - Regulation	500,000.23	Currency
24	Ancillary - VAR	100.12	Currency
25	Ancillary - Black Start	11,000.35	Currency
26	Other		Currency
Variable Costs (COGS)			
27	Fuel	100.12	Currency
28	NOX	100.12	Currency
29	SO2	100.12	Currency
30	CO2	100.12	Currency
31	Startup/Shutdown Gas/Station Light & Power	100.12	Currency
32	BOP Maintenance, Materials, Services & Consumables	100.12	Currency
33	Long Term Service Agreement (LTSA) Variable	100.12	Currency
34	Other		Currency

D.2 Generator Deactivation Assessment

The following illustration provides an example of a completed template.

Figure D-3: Completed Template Example

Directions: Enter all cash in-flows as positive and all cash out-flows/expenses as negative
 Directions: For any in-flow or out-flow line populated, enter 0 for years of no activity, do not leave the cell blank

	(A). Input	(B). Comment	(C). Documentation Reference
General Unit Information			
1 Owner Operator and/or Billing Organization	Organization Name		
2 Station Unit	12345		
3 PTID	23815		
4 Installed Date	1/1/1998		
5 Unit Summer ICAP Capability (MW)	300		
6 Unit Winter ICAP Capability (MW)	200		
7 CRIS Adjusted DMNC	100		
8 Date of the Analysis	10/1/2016		
Energy Model Inputs / Physical Parameters			
9 Net Plant Heat Rate (BTU/kWh)(HHV)			
10 Fuel Required to Start			
11 Mingen			
12 EFORd			
13 Primary Fuel			
14 Secondary Fuel			
15 Nox Rate			
16 CO2 Emission Rate			
17 SOX Emission Rate (tons/MMBtu)			
18 Variable O&M (\$/MWh)			
19 Cost of Debt (Nominal)			
20 Debt Weight			
21 Cost of Equity (Nominal)			
22 Equity Weight			
23 ATWACC (After Tax Weighted Average Cost of Capital)			
24 Composite Tax Rate			
25 Age of Plant			

General Costs Opportunity Costs Revenues Capital Expenses Documentation Organizer

Directions: Enter all dollar values at their full amount and not as a fraction of thousands, millions, or some other denomination
 Directions: Enter all cash in-flows as positive and all cash out-flows/expenses as negative
 Directions: For any in-flow or out-flow line populated, enter 0 for years of no activity, do not leave the cell blank

	(D). Historical										(E). Projected					(F) Periodicity/ Life of equipment	(G). % Avoidable	(B). Comment	(C). Documentation Reference
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Yrs	e.g. this line also includes...% of \$ could be excluded if...	e.g. Attachment A, p. 100-101 (For example, Insurance and/or Inspection Reports)					
Revenues																			
1 Energy	100	100	100	100	80	80	80	60	60	30	20	15							
2 Capacity	200	200	200	200	150	150	150	100	100	80	70	15							
3 Ancillary - Spinning and Non-Spinning Reserves	300	300	300	300	200	200	200	150	120	60	60	15							
4 Ancillary - Regulation	100	100	100	100	80	80	80	40	40	30	20	15							
5 Ancillary - Voltage Support Service	200	200	200	200	150	150	150	75	75	75	50	15							
6 Ancillary - Black Start Service	300	300	300	300	200	200	200	110	110	50	50	15							
7 Other	50	50	50	50	20	20	20	18	18	10	10	15							
Variable Costs																			
8 Fuel	100	100	100	100	80	80	80	60	60	30	20	15							
9 NOX	200	200	200	200	150	150	150	100	100	80	70	15							
10 SO2	300	300	300	300	200	200	200	150	120	60	60	15							
11 CO2	100	100	100	100	80	80	80	40	40	30	20	15							
12 Start Up Shut Down Gas/Station Light & Power	200	200	200	200	150	150	150	75	75	75	50	15							
13 BOP Maintenance, Materials, Services & Consumables	300	300	300	300	200	200	200	110	110	50	50	15							
14 Long Term Service Agreement LTSA Variable	50	50	50	50	20	20	20	18	18	10	10	15							
15 Other	300	300	300	300	200	200	200	110	110	50	50	15							
Fixed Costs																			
16 Plant Labor	100	100	100	100	80	80	80	60	60	30	20	15							
17 Plant Labor - Overtime	200	200	200	200	150	150	150	100	100	80	70	15							
18 Contract Labor/Services	300	300	300	300	200	200	200	150	120	60	60	15							
19 Labor Benefits	100	100	100	100	80	80	80	40	40	30	20	15							
20 Maintenance	200	200	200	200	150	150	150	75	75	75	50	15							
21 LTSA Fixed	300	300	300	300	200	200	200	110	110	50	50	15							
22 Balance of Plant	50	50	50	50	20	20	20	18	18	10	10	15							
23 Environmental/Security/Safety	300	300	300	300	200	200	200	110	110	50	50	15							
24 Plant Utilities & Aux Load	100	100	100	100	80	80	80	60	60	30	20	15							
25 Administrative Expense	200	200	200	200	150	150	150	100	100	80	70	15							
26 Property Tax Expense	300	300	300	300	200	200	200	150	120	60	60	15							
27 Employee Expenses	100	100	100	100	80	80	80	40	40	30	20	15							
28 Travel & Entertainment	200	200	200	200	150	150	150	75	75	75	50	15							
29 Office Expense	300	300	300	300	200	200	200	110	110	50	50	15							
30 Training	50	50	50	50	20	20	20	18	18	10	10	15							
31 Information Technology	300	300	300	300	200	200	200	110	110	50	50	15							
32 Insurance	200	200	200	200	150	150	150	75	75	75	50	15							
33 Lease Payments	300	300	300	300	200	200	200	110	110	50	50	15							
34 Legal	200	200	200	200	150	150	150	75	75	75	50	15							
35 Procurement	300	300	300	300	200	200	200	110	110	50	50	15							
36 Other	50	50	50	50	20	20	20	18	18	10	10	15							

Directions: Enter all dollar values at their full amount and not as a fraction of thousands, millions, or some other denomination
 Directions: Enter all cash in-flows as positive and all cash out-flows/expenses as negative
 Directions: For any in-flow or out-flow line populated, enter 0 for years of no activity, do not leave the cell blank

	(D). Historical										(E). Projected					(F) Periodicity/ Life of equipment	(G). % Avoidable	(B). Comment	(C). Documentation Reference
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Yrs	e.g. this line also includes...% of \$ could be excluded if...	e.g. Attachment A, p. 100-101 (For example, Insurance and/or Inspection Reports)					
Opportunity Costs/Revenues																			
Opportunity Cost 1	300	300	300	300	200	350	400	450	500	550	600	15							
Opportunity Cost 2	200	200	200	200	150	350	400	450	500	550	600	15							
Opportunity Cost 3	300	300	300	300	200	350	400	450	500	550	600	15							
Opportunity Cost 4	200	200	200	200	150	350	400	450	500	550	600	15							
Opportunity Cost 5	300	300	300	300	200	350	400	450	500	550	600	15							
Opportunity Cost 6	200	200	200	200	150	350	400	450	500	550	600	15							

Directions: Enter all dollar values at their full amount and not as a fraction of thousands, millions, or some other denomination
 Directions: Enter all cash in-flows as positive and all cash out-flows/expenses as negative
 Directions: For any in-flow or out-flow line populated, enter 0 for years of no activity, do not leave the cell blank

	(D). Historical										(E). Projected					(F) Periodicity/ Life of equipment	(H) Depreciation Method	(I) Useful Life	(J) Depreciation Rate	(K) Salvage Value	(G). % Avoidable	(B). Comment	(C). Documentation Reference
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Yrs	Unit measurement in yrs#of production level#ec.	Unit measurement used for depreciation; e.g. "Straightline over useful life" "T" yr	\$Unit salvage value at end of useful life								
Capital Expense and Excess Inventories																							
Capital Expense 1	300	300	300	300	200	350	400	450	500	550	600	15	Straightline/MACRS/Production/Etc.	15	100	0.75							
Capital Expense 2	200	200	200	200	150	350	400	450	500	550	600	15	MACRS	15	100	0.25							
Capital Expense 3	300	300	300	300	200	350	400	450	500	550	600	15	Production	15	100	0.15							
Capital Expense 4	200	200	200	200	150	350	400	450	500	550	600	15	Straightline	15	100	0.1							
Capital Expense 5	300	300	300	300	200	350	400	450	500	550	600	15	MACRS	15	100	0.35							
Capital Expense 6	200	200	200	200	150	350	400	450	500	550	600	15	Production	15	100	0.35							

The following illustration delineates the data types for each line item.

Figure D-4: Generator Deactivation Assessment General Unit Information

General Unit Information				
Line Item	Template Field Name	(A). Input	Data Type	Required
1	Owner Operator and/or Billing Organization	Organization Name	Alpha Numeric	Y
2	Station Unit	12345	Alpha Numeric	N
3	PTID	99999	Numeric	N
4	Installed Date	1/1/1998	Date	Y
5	Unit Summer ICAP Capability (MW)	300	Numeric	N
6	Unit Winter ICAP Capability (MW)	200	Numeric	N
7	CRIS Adjusted DMNC	100	Numeric	Y
8	Date of the Analysis	10/1/2016	Date	N

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Figure D-5: Energy Model Inputs/Physical Parameters

Energy Model Inputs/Physical Parameters				
Line Item	Template Field Name	(A). Input	Data Type	Required
9	Net Plant Heat Rate (BTU/kWh)(HHV)	100	Numeric	N
10	Fuel Required to Start	Test Data	Text	N
11	Mingen	100	Numeric	N
12	EFORd	100	Numeric	N
13	Primary Fuel	Test Data	Text	N
14	Secondary Fuel	Test Data	Text	N
15	Nox Rate	100	Numeric	N
16	CO2 Emission Rate	100	Numeric	N
17	SOX Emission Rate (tons/MMBtu)	100	Numeric	N
18	Variable O&M (\$/MWh)	200	Currency	N
19	Cost of Debt (Nominal)	300	Percent	N
20	Debt Weight	100	Percent	N
21	Cost of Equity (Nominal)	200	Percent	N
22	Equity Weight	100	Percent	N
23	ATWACC (After Tax Weighted Average Cost of Capital)	100	Numeric	N
24	Composite Tax Rate	100	Numeric	N
25	Age of Plant	12	Numeric	N

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Figure D-6: Revenues and Expenses

Revenues and Expenses				
Revenues				
Line Item	Template Field Name	(A). Input	Data Type	Required
1	Energy	100	Currency	Y
2	Capacity	200	Currency	Y
3	Ancillary – Spinning and Non-Spinning Reserves	300	Currency	Y
4	Ancillary - Regulation	100	Currency	Y
5	Ancillary – Voltage Support Service	200	Currency	Y
6	Ancillary – Black Start Service	300	Currency	Y
7	Other	100	Currency	N
Variable Costs				
8	Fuel	100	Currency	Y
9	NOX	200	Currency	Y
10	SO2	300	Currency	Y
11	CO2	100	Currency	Y
12	Start Up Shut Down Gas/Station Light & Power	100	Currency	Y
13	BOP Maintenance, Materials, Services & Consumables	200	Currency	Y
14	Long Term Service Agreement LTSA Variable	300	Currency	Y
15	Other	100	Currency	N
Fixed Costs				
16	Plant Labor	100	Currency	N
17	Plant Labor - Overtime	200	Currency	N
18	Contract Labor/Services	300	Currency	N
19	Labor Benefits	100	Currency	N
20	Maintenance	100	Currency	N
21	LTSA Fixed	200	Currency	N
22	Balance of Plant	300	Currency	N
23	Environmental/Security/Safety	100	Currency	N
24	Plant Utilities & Aux Load	100	Currency	N
25	Administrative Expense	200	Currency	N
26	Property Tax Expense	300	Currency	N
27	Employee Expenses	100	Currency	N
28	Travel & Entertainment	100	Currency	N
29	Office Expense	200	Currency	N
30	Training	300	Currency	N
31	Information Technology	100	Currency	N
32	Insurance	200	Currency	N
33	Lease Payments	300	Currency	N
34	Legal	100	Currency	N
35	Procurement	200	Currency	N
36	Other	300	Currency	N

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Figure D-7: Capital Expenses

Capital Expenses			
Template Field Name	(A). Input	Data Type	Required
[Description]	Capital Expense 1	Text	Y
Periodicity/ Life of Equipment	15	Numeric	Y
% Avoidable	0.75	Numeric	Y
Depreciation Method	Straightline	Text	Y
Useful Life	15	Text	Y
Depreciation Rate	15	Text	Y
Salvage Value	100	Currency	Y

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