ICAP AMS Software Changes for Energy Storage Resources (ESR)

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MP Informational WebEx

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Overview

- **The ESR Project will be implemented by Sept/2020**
  - Dec/2017 - NYISO published MDCP for Energy Storage Integration
  - Feb/2018 - FERC issued Order 841
  - Dec/2018 - NYISO submitted ESR participation model and tariff revisions to FERC
  - Dec/2019 - FERC accepted majority of ESR participation model with limited further directives

- **NYISO Project B629: ESR Participation Model**
  - Sept/2020 - ESR software release target
  - Comprehensive ESR Implementation Training provided in time for go-live

- **ICAP AMS Software Changes for ESR Participation Model**
  - Mar/2020 – ICAP AMS software change include DMNC screen enhancements
  - New Generation Type for ESR DMNC tests
  - Resource Type required on all upload files

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Overview

- **ICAP Manual revisions for ESRs (pending May/2020 BIC Vote):**
  - ICAP Manual Sections 4.2.2, 4.5, and 4.8.1
  - Attachment D
  - Attachment J – Sections 1, 2, and 3 including subsections
    - New Section 3.7 Calculation of UCAP for Energy Storage Resources including Average Unavailability Factor discussed at ICAPWG
  - Attachment K
- **ICAP AMS User's Guide revisions for ESRs include:**
  - Section 4 – Certification
    - Certification screens display ESRs as any other Generator or RMR resource
  - Section 11 - Dependable Maximum Net Capability (DMNC)
    - Generation Type to Test Hours Cross-Reference update
  - Section 14 – DMNC Upload/Download

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Overview

- ## ICAP AMS Software Changes: DMNC Screen Enhancements
  - New user interface for Mar/2020 deployment
    - New "DMNC Results" screen replaces former "Maintain DMNC" screen
    - New "Monthly DMNC" screen replaces former "View Monthly DMNC" screen
    - Updated UCAP_UPLOAD_DMNC and UCAP_DOWNLOAD_DMNC to include new required Resource Type parameter
  - ESR's Generation Type will be 'Storage'
  - ESR's Minimum Number of DMNC Test Hours will be 4
  - An ESR may operate at a de-rated DMNC value to meet the 4-hour test requirement
    - Example: a 4 MWh ESR may conduct its DMNC test at 1 MW for each tested hour
  - An ESR will not be eligible for Ambient Condition Dependent status

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DMNC Screens

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New "*DMNC Results*" screen

- User navigates to DMNC Results
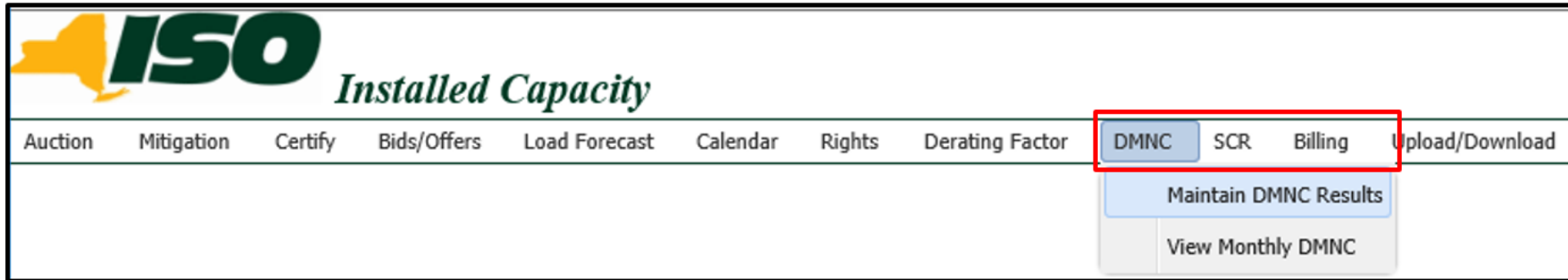
New "*DMNC Results*" screen

■ Filter using the search/filter row
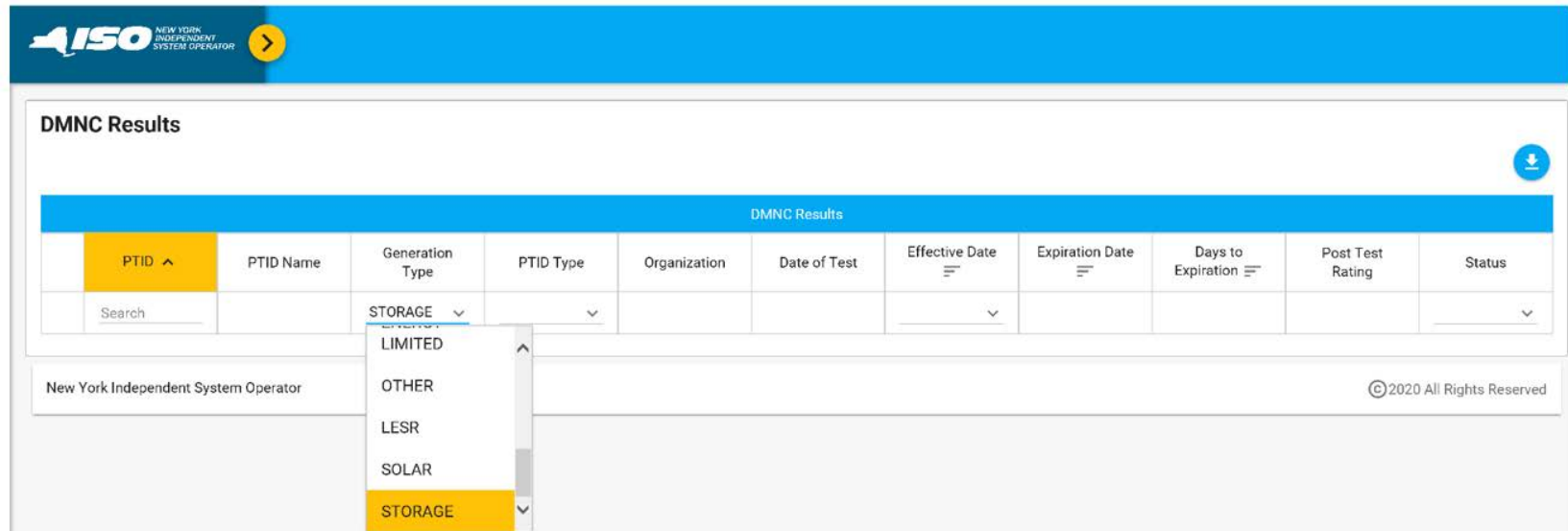
New "*DMNC Results*" screen

- *Generation Type* filter includes 'Storage'

New "*DMNC Results*" screen (View)

- User filters and views desired DMNC Results

New "*DMNC Results*" screen (View)

DMNC Results – New Features

- Blue icon on *Date of Test* indicates an "Out of Period Test"

- Red icon on *Post Test Rating* if the Pre Test Rating < Post Test Rating

-

New "*DMNC Results*" screen (View)

- DMNC Results – New DMNC Test Details Panel

| | 12345 | BV CC1 | COMBINED CYCLE | Internal | Big Valley Gen Co | Jun 19, 2015 | May 1, 2016 | Oct 31, 2016 | -100 | 135.5 | 🔴 | APPROVED |

Begin Hour: 1
Average Ambient Temp(°F): 92
Test Temp(°F): 66
Per Curve(MW): 135.5
Pre Test Rating(MW): 133.8
Post Test Rating(MW): 135.5
Difference(MW): 1.7

Remarks:

Last Updated By: NYISO

Demonstrated Capability

	Hour 1	Hour 2	Hour 3	Hour 4	Average
	142	142.7	142.6	142.1	142.4

Last Updated: Jul 7, 2015 02:12:24 PM

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New "*DMNC Results*" screen (Add)

- DMNC Results – User with DMNC privilege can Add DMNC Result

New "*DMNC Results*" screen

- User with DMNC privilege clicks add

- Add DMNC Result entry panel displays

Add DMNC Result

Select PTID

Test Date

Effective Date

Begin Hour
0

Starting Test Temperature (°F)

Average Ambient Temperature (°F)

Pre Test Rating (MW)

Hour 1 (MW)

Hour 2 (MW)

Hour 3 (MW)

Hour 4 (MW)

Per Curve (MW)

Post Test Rating (MW)

Remarks

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New "*DMNC Results*" screen (Add)

- Add DMNC Result entry panel
- Select PTID, Test Date, Effective Date, and Begin Hour
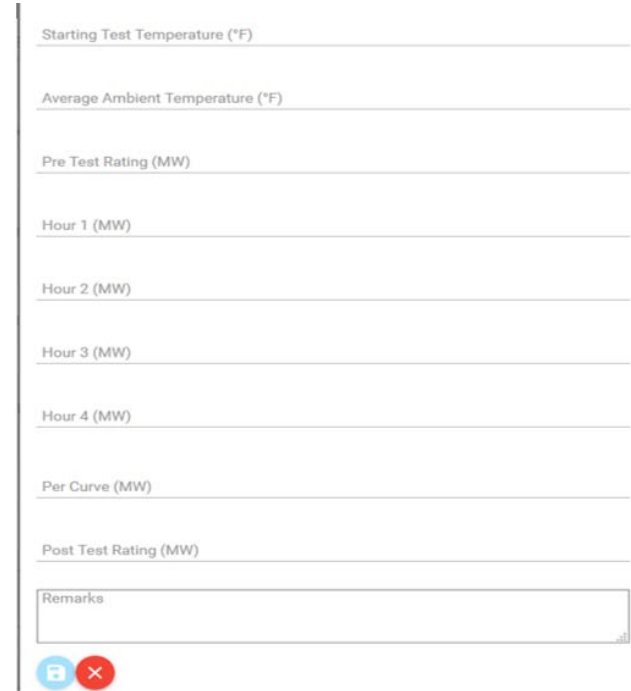
New "*DMNC Results*" screen (Add)

- **Add DMNC Result entry panel**

- **Enter the following information**

  - Starting Test Temperature
  - Average Ambient Temperature
  - Pre-test and Test Result MW data
  - Remarks, if any
  - Click *Save* icon to save DMNC Results
  - Click *Cancel* icon to clear panel

New "*DMNC Results*" screen (Update)

- User with DMNC privilege selects row and clicks Edit icon

- Prior to Effective Date, update editable Remarks while the Status is 'Undecided' for selected DMNC Result
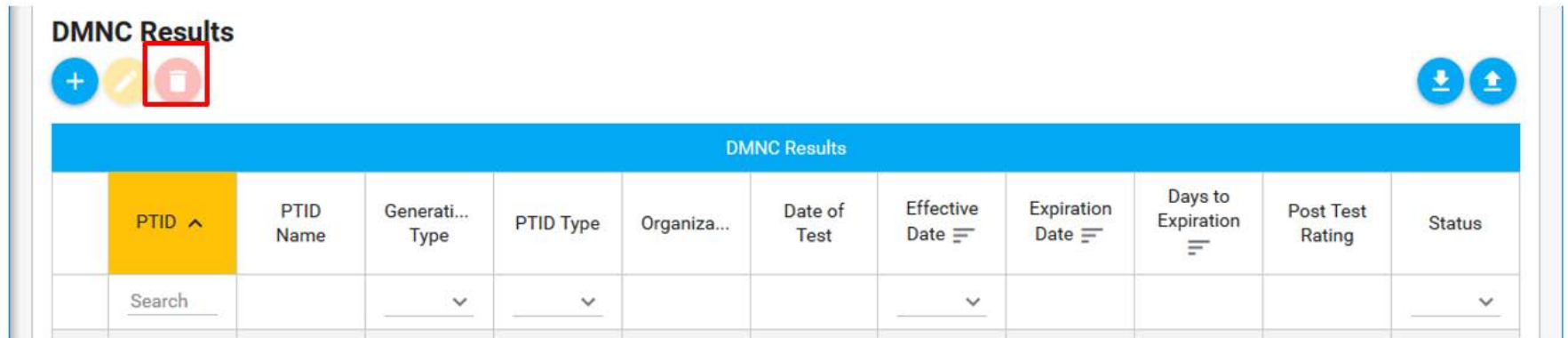

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New "*DMNC Results*" screen (Delete)

- **User with DMNC privilege selects row and clicks Delete icon**

- **Prior to Effective Date, delete a selected DMNC Result while the Status is 'Undecided'**
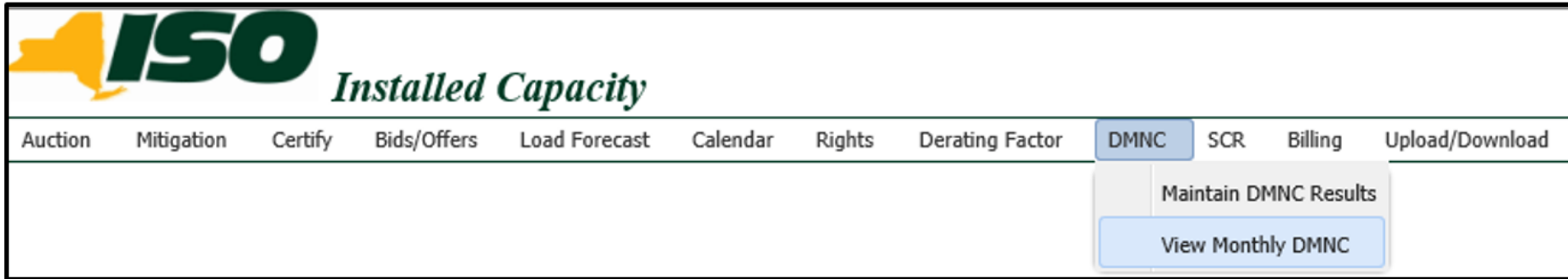
New "*Monthly DMNC*" screen

- User navigates to Monthly DMNC

New "*Monthly DMNC*" screen

- Filter using the search/filter; *Generation Type* includes 'Storage'

New "*Monthly DMNC*" screen

- User views their Monthly DMNC Results including *Date of Test* and *DMNC Rating*

Monthly DMNC

					Monthly DMNC Results					
Organization	PTID Type	Generation Type	PTID	PTID Name			Season	Winter 2018-2019 ⌄		
	Internal ⌄	⌄			Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019
Big Valley Gen Co	Internal		4321	EAST MUNI	Feb 15, 2018					
					5.3	5.3	5.3	5.3	5.3	5.3
Big Valley Gen Co	Internal	FOSSIL FUEL	87654	FAIRWEATHER FOSSIL FUEL						
Big Valley Gen Co	Internal	HYDRO	76543	BV HYDRO 2	Dec 31, 2017	Date of Test				
					16.4	Rating 16.4	16.4	16.4	16.4	16.4

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DMNC Upload/Download

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New *DMNC Upload/Download*

- User can navigate to Upload/Download from menu on the ICAP AMS main page

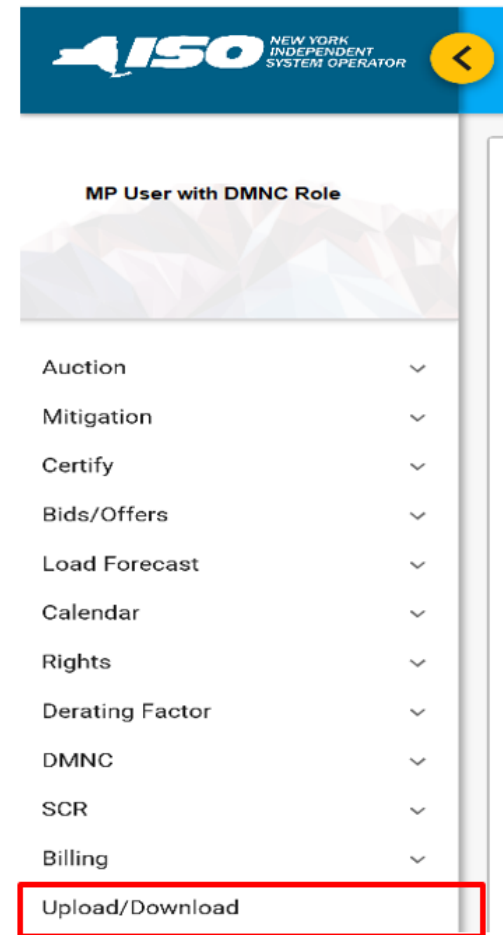| Auction	Mitigation	Certify	Bids/Offers	Load Forecast	Calendar	Rights	Derating Factor	DMNC	SCR	Billing	Upload/Download
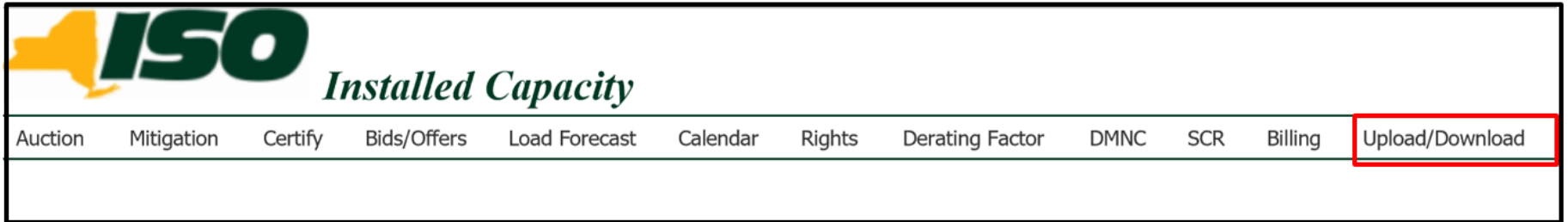
New *DMNC Upload/Download*

- User can navigate to Upload/Download from the menu on the ICAP AMS new UI vertical menu

New *DMNC Upload/Download*

- User can navigate to Upload/Download from DMNC Results screen

Upload/Download

- MP User submits Upload/Download Request File

UPLOAD DMNC

- **New field *RESOURCE_TYPE* in DMNC Upload Request File**

  - Since PTID can be a Generator, a Load Modifier, or a Municipal, to fix a historic defect, user must now indicate RESOURCE_TYPE = ['Gen', 'LM', or 'Muni']

    - RESOURCE_TYPE for ESR will be 'Gen'

  - ICAP Automated Market System User's Guide section 14.6 will be updated to reflect a complete list of upload request parameters

- **Improved ERROR TEXT when user uploads a duplicate DMNC record**

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DOWNLOAD DMNC

- Updated UCAP_DOWNLOAD_DMNC

- User filters for selected Season and clicks the Download icon
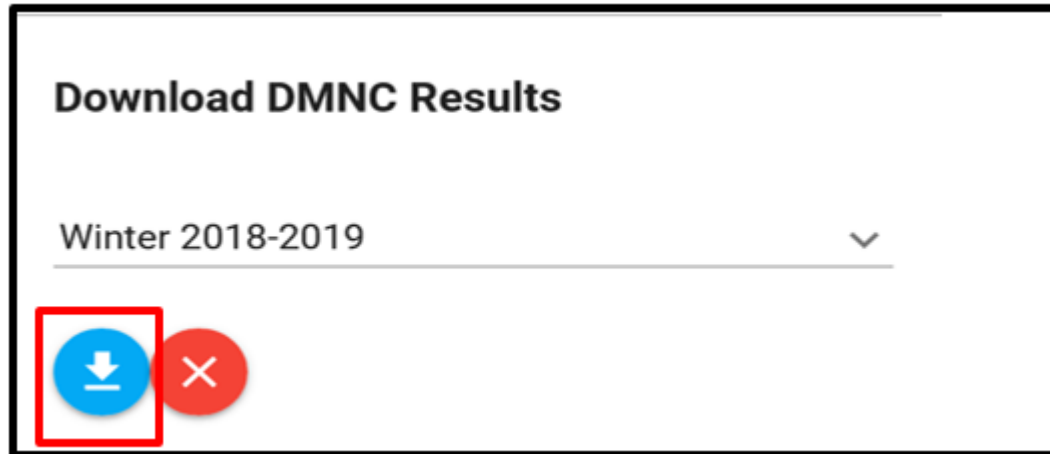
DOWNLOAD DMNC

- ■ **User views DMNC Download data as a CSV file**

DOWNLOAD DMNC

- **New field *RESOURCE_TYPE* in DMNC Download Response File**

  - Since PTID can be a Generator, a Load Modifier, or a Municipal, to fix a historic defect, user must now indicate RESOURCE_TYPE = ['Gen', 'LM', or 'Muni']

    - RESOURCE_TYPE for ESR will be 'Gen'

  - ICAP Automated Market System User's Guide section 14.6 will be updated to reflect a complete list of download response parameters

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Questions?

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Support

- For questions specific to the ICAP AMS software and UI changes presented in this WebEx, please contact NYISO Stakeholder Services
  - Email: stakeholder_services@nyiso.com
  - Phone: 518-356-6060

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