eDART October 2019 Release Enhancements

eDART Users Group Meeting

9/9/2019

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Release Schedule

Production release of September enhancements scheduled for Tuesday, October 8th.

- eDART will be unavailable from 19:00 to 02:00 on Wednesday, October 9th.

Sandbox release scheduled for September 16th.

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Agenda

- General Discussion Topics
- Generation Related Enhancements
- Transmission Related Enhancements
- Question and Answer Resolution Session

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eDART GO Survey

PJM will issue a new eDART GO Survey **mid-October 2019**, with a focus on Generator Fuel Inventory and Emissions updates for upcoming 2019/2020 winter season.

PJM requires that generating resources complete the survey no later than **mid-November 2019**.

Dates to be announced.

Please contact edartgosurvey@pjm.com with any questions related to the survey or tool.

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2019 Stakeholder Satisfaction Survey

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2019 Stakeholder Satisfaction Survey

PJM is asking for your feedback so we can look for opportunities to improve the service we provide our customers.

The survey helps PJM identify key stakeholder topics and how well we are meeting stakeholder needs.

Respondents will have the opportunity to provide comments on what PJM is doing well and where we may improve

The survey is administered by a third party consultant and all responses are confidential. All survey participants will have the opportunity to provide their contact information if they'd like.

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2019 Stakeholder Satisfaction Survey

The Survey is open for 2 weeks from **September 30** to **October 11**. The Survey contains approximately **25 questions** and should take **less than 10 minutes** to complete

PJM is in the process of updating our communication subscription tool.

- **We ask that you provide the IP address, 13.111.63.217, to your IT support team so that they can receive the survey.**
- Full details regarding the tool updates can be found at the Tech Change Forum

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eDART User Group Move

Per PJM Manual 34 a User Group is a “group formed by any five or more Members sharing a common interest as defined in section 8.7 of the Operating Agreement.”

Recommendation has been made and approved to roll the eDART User Groups under the Tech Change Forum.

New names:

- Tech Change Forum: eDART
- Tech Change Forum: eDART XML

Other changes and logistical moves will be communicated when available.

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General Enhancements

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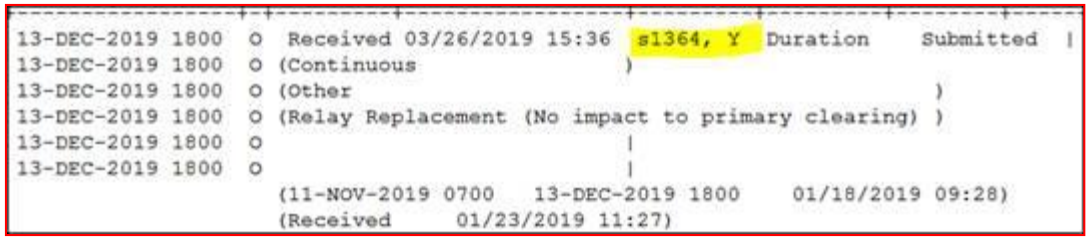
Changes to Linesout Files

Currently, the RTEP# field in linesout.txt and linesout_new.txt files allows a max of 8 characters. As a result, RTEP numbers are cut off if a ticket has more than one.



Solution:

- RTEP # renamed to RTEP
- RTEP field will display Yes if the ticket has RTEP numbers and will be blank if not.
- New file created that will have a list of tickets where RTEP is 'Yes' and the RTEP #(s).

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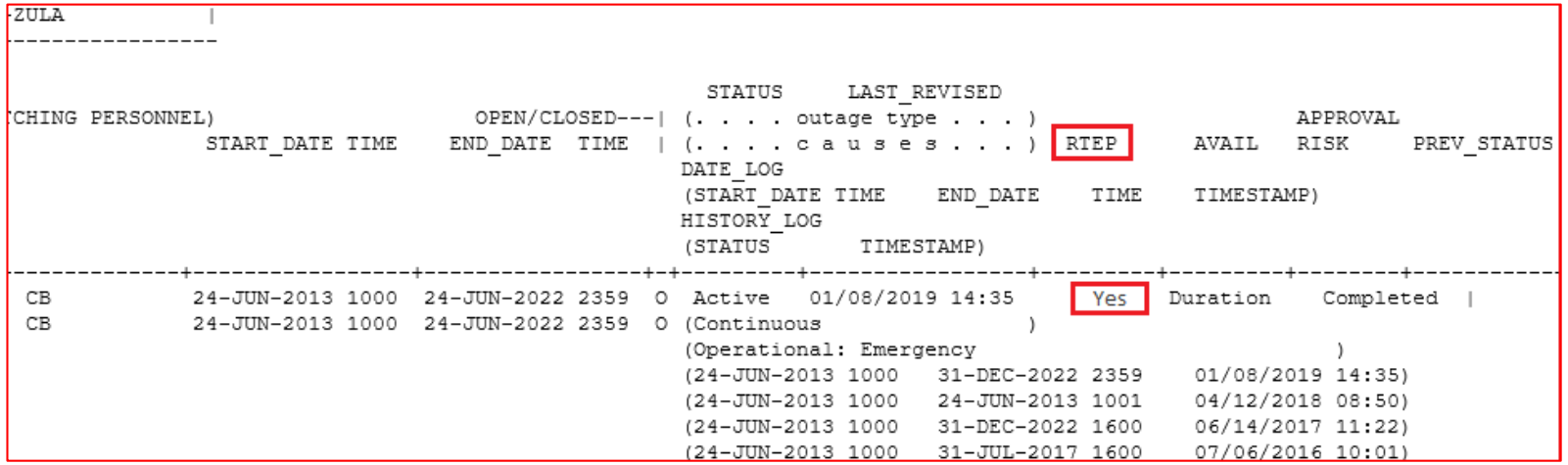
Changes to Linesout Files

RTEP file: https://edart.pjm.com/reports/rtep.txt *(future)*

A link to the RTEP file will also be added on the Outage Information page: https://www.pjm.com/markets-and-operations/etools/oasis/system-information/outage-info.aspx



```
-ZULA            |
-----------------

                                                  STATUS     LAST_REVISED
CHING PERSONNEL)                    OPEN/CLOSED---| (. . . . outage type . . . )                    APPROVAL
               START_DATE TIME    END_DATE  TIME  | (. . . . c a u s e s . . . ) RTEP      AVAIL   RISK     PREV_STATUS
                                                   DATE_LOG
                                                   (START_DATE TIME    END_DATE    TIME    TIMESTAMP)
                                                   HISTORY_LOG
                                                   (STATUS       TIMESTAMP)
-------------+-----------------+-----------------+-+---------+-----------------+---------+---------+--------+-----------
 CB          24-JUN-2013 1000  24-JUN-2022 2359  O  Active   01/08/2019 14:35     Yes   Duration    Completed  |
 CB          24-JUN-2013 1000  24-JUN-2022 2359  O (Continuous                )
                                                   (Operational: Emergency                          )
                                                   (24-JUN-2013 1000   31-DEC-2022 2359    01/08/2019 14:35)
                                                   (24-JUN-2013 1000   24-JUN-2013 1001    04/12/2018 08:50)
                                                   (24-JUN-2013 1000   31-DEC-2022 1600    06/14/2017 11:22)
                                                   (24-JUN-2013 1000   31-JUL-2017 1600    07/06/2016 10:01)
```

RTEP file

```
TIMESTAMP:08-23-2019 16:32:23

TICKET RTEP#
-----------------------------------------
51657  s1364, Y2214
51853  s1364
52018  a76543
62032  R123
62408  2408 - 1
```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Consolidation of Emails for Cause Type Changes

Currently, eDART sends an email when a cause type (Gen Outage or Trans Outage) is added or retired and when a Gen Outage cause type is associated to/removed from a unit type.

Member request to consolidate the emails sent when a Gen cause type is associated to a unit type.

Solution:

An email will be sent once a day with all the changes per cause type.

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Retirements

The following are being retired:

- Tariff Equipment Details download
  - Same as Tariff Facilities download except for <short_name>; no recent usage.
- SSR, SSR By Date, ERL downloads & On Cost Max Emerg. upload
  - SSR application retired with Manual 13 – Attachment C removal.
- Restoration Plans download
  - No longer needed for transmission ticket uploads.
- Status Report download
  - No recent usage

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Future Enhancements

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Model Build Enhancements

Expansion of eDART equipment model to include loads.

Future Model Build Functionality

- New functionality to implement future build with effective date (in and out of service) in eDART.
- Model build emails will still be sent on build day.
- Future equipment will be available for use in tickets and displayed in reports.

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Voltage Limits

New eDART web-based functionality to allow Transmission Owners (TOs) to update and view current voltage limits on buses.

- Report for PJM & TOs to see effective voltage limits and PJM defaults.
- TOs submit changes to Voltage Limits: company defaults or per station/voltage combination with effective date.
- PJM approves changes to Voltage Limits.
- Tickets implemented in PJM's EMS by PJM or implemented without approval if limits already updated in PJM's EMS.

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Future Retirements

The following CSV downloads are scheduled to be retired by December 2019 from the Download drop down list:

- dcurvegen
- dcurvetrans
- ratingscsv

The CSV downloads will be available via the web UI on the applicable eDART application page. E.g. TERM for ratings download.

Only XML files will be available via the XML interface.

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IRC Company Totals

Currently all transmission zones are displayed in the IRC Company Totals section resulting in blank columns if the company has no units in that zone.

Enhancement is to display only the transmission zones where the user's company has units.

Company Reserve Self-Check

Company:
User Name:
Request Timestamp: 09/06/2019 09:55
Date Updated: 09/06/2019 09:51

Company Totals

Time Range	Reserve Category	PJMCZ	AP	AEP	DAY	CE	DOM	RTO Total
0m-30m	OPERATING Reserve	1867				228		2095
0m-10m	PRIMARY Reserve	606				0		606
	SYNCHRONIZED Reserve	162				0		162
	Non-synchronized Reserve (Quick Start)	444				0		444
	-- NSR Hydro	0				0		0
	-- NSR Other	444				0		444
10m-30m	Secondary Reserve	1261				228		1489
30m-180m	Beyond Secondary	248				0		248

Company Reserve Self-Check

Company:
User Name:
Request Timestamp: 09/06/2019 09:55
Date Updated: 09/06/2019 09:51

Company Totals

Time Range	Reserve Category	PJMCZ	CE	RTO Total
0m-30m	OPERATING Reserve	1867	228	2095
0m-10m	PRIMARY Reserve	606	0	606
	SYNCHRONIZED Reserve	162	0	162
	Non-synchronized Reserve (Quick Start)	444	0	444
	-- NSR Hydro	0	0	0
	-- NSR Other	444	0	444
10m-30m	Secondary Reserve	1261	228	1489
30m-180m	Beyond Secondary	248	0	248

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D-Curve CSV File

D-Curve download (CSV file) available on the D-Curve Report.

- Downloaded file has the same columns as the file downloaded from the XML download menu (dcurvegen and dcurvetrans).
- If the D-Curve Report was filtered, downloaded file will have the filter results.
- Default file name format for Generation users: d_curve_gen_*company short name_mm_dd_yyyy_hh_mm*.csv
- Default file name format for Transmission users: d_curve_trans_*company short name_mm_dd_yyyy_hh_mm*.csv

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D-Curve CSV File

D-Curve Unit Acknowledgement Form

Company:

Initiate Timestamp: 08/20/2019 14:43 **Completed Timestamp:** Ongoing **Review Type:**

Unit Name	Unit Type	Installed Capacity	Voltage Control Philosophy	D-Curve Metered MVAR Location	Power System Stabilizer	EMS Equipment Name	MW Point	MVAR Min	MVAR Max	User ID	Last Update Timestamp	Acknowledge	Overwrite	Latest Completed Default MVAR Ticket
Unit 1	Combustion Turbine	50	Reactive Power Schedule	Low-side Gross	Yes	Equipment 1	45 50 55 60 65 70 75 80	-42 -41 -40 -40 -40 -40 -39 -39	76 74 71 66 61 57 50 42					

Submit Form | Select All / None | Color Legend | Main Menu | Download | Help

	A	B	C	D	E	F	G	H	I	J	K
1	Unit Name	Unit Type	Installed Capacity	Voltage Control Philosophy	Metered MVAR Value	Blackstart	EMS Equipment Name	TA_ID	MW Point	MVAR Min	MVAR Max
2	UNIT 1	Combustion Turbine	50	Reactive Power Schedule	Low-side Gross	0	EQUIPMENT 1	11111	45	-42	76
3	UNIT 1	Combustion Turbine	50	Reactive Power Schedule	Low-side Gross	0	EQUIPMENT 1	11111	50	-41	74
4	UNIT 1	Combustion Turbine	50	Reactive Power Schedule	Low-side Gross	0	EQUIPMENT 1	11111	55	-40	71
5	UNIT 1	Combustion Turbine	50	Reactive Power Schedule	Low-side Gross	0	EQUIPMENT 1	11111	60	-40	66
6	UNIT 1	Combustion Turbine	50	Reactive Power Schedule	Low-side Gross	0	EQUIPMENT 1	11111	65	-40	61
7	UNIT 1	Combustion Turbine	50	Reactive Power Schedule	Low-side Gross	0	EQUIPMENT 1	11111	70	-40	57
8	UNIT 1	Combustion Turbine	50	Reactive Power Schedule	Low-side Gross	0	EQUIPMENT 1	11111	75	-39	50
9	UNIT 1	Combustion Turbine	50	Reactive Power Schedule	Low-side Gross	0	EQUIPMENT 1	11111	80	-39	42

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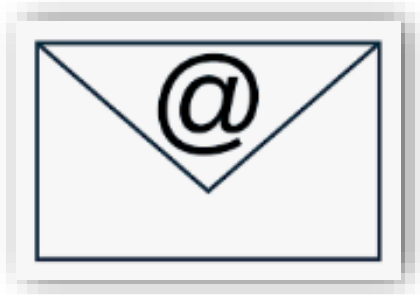
Email Type for GO Survey Questions

The email fields in GO Surveys have been converted from a regular text field to an email field.

This will check that entered email addresses meet certain requirements like having @ and a domain.



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Agenda

- General Discussion Topics
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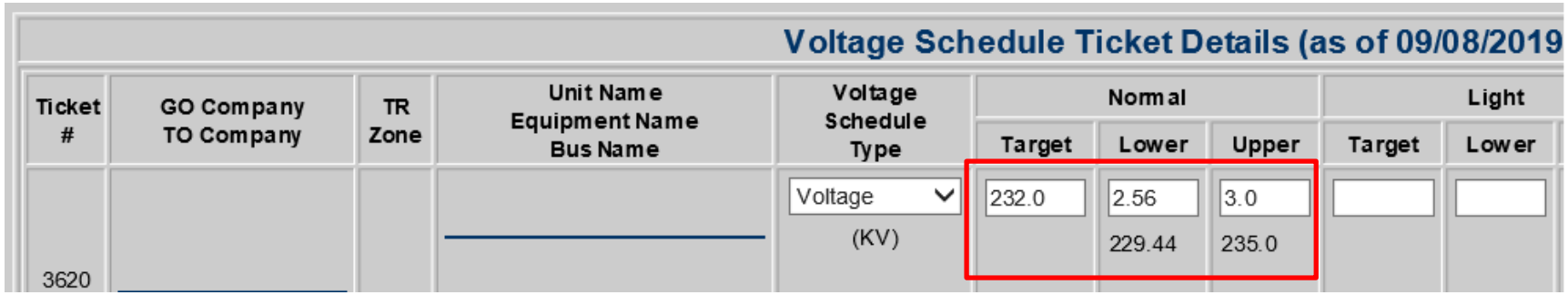
Voltage Schedules Enhancements

Increased voltage schedule precision from one to two decimal places.

- One decimal place (current setup) displayed unless 2 decimal places have been entered for a voltage schedule.



Voltage Schedule Ticket Details (as of 09/08/2019

Ticket #	GO Company TO Company	TR Zone	Unit Name Equipment Name Bus Name	Voltage Schedule Type	Normal			Light	
					Target	Lower	Upper	Target	Lower
3620				Voltage (KV)	232.0	2.56 229.44	3.0 235.0		

Fixed the issue seen with revising a reactive voltage schedule with negative upper and lower values.

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TERM Enhancements

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Equipment Historical Change Log Report

Ticket ID on the report changed to hyperlink which will open revision version of that ticket.

Congestion Management Priority added to the report under Ticket Status.

Back to Report button the ticket will return the user to the filtered report.

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Equipment Historical Change Log Report

Equipment Historical Change Log Report

Number of rows in report is limited to 500 rows.

Type: LINE **Station Name:** **Voltage:** 500 KV
Equipment Name: **End:** END A **Cong. Mngt. Priority** Reliability & Markets

Ticket: 84732
Start Date: 12/30/2016
End Date: 12/30/2016
Ticket Status: Submitted
Cong. Mngt. Priority: Reliability & Markets
Impedance
R: 0.0004
X: 0.0103
Charging B: 0.732

	Normal		Long Term		Short Term		Load Dump	
Temp	Day	Night	Day	Night	Day	Night	Day	Night
95	281	281	293	293	293	293	310	310
86	287	287	298	298	298	298	315	315
77	293	293	304	304	304	304	320	320
68	298	298	309	309	309	309	326	326
59	304	304	314	314	314	314	331	331
50	309	309	320	320	320	320	336	336
41	314	314	326	326	326	326	341	341
32	320	320	331	331	331	331	346	346

Ticket: 84601
Start Date: 12/30/2015
End Date: 12/30/2015
Ticket Status: Submitted
Cong. Mngt. Priority: Reliability & Markets
Impedance
R: 0.0004
X: 0.0103
Charging B: 0.732

	Normal		Long Term		Short Term		Load Dump	
Temp	Day	Night	Day	Night	Day	Night	Day	Night
95	281	281	293	293	293	293	310	310
86	287	287	298	298	298	298	315	315
77	293	293	304	304	304	304	320	320
68	298	298	309	309	309	309	326	326
59	304	304	314	314	314	314	331	331
50	309	309	320	320	320	320	336	336
41	314	314	326	326	326	326	341	341
32	320	320	331	331	331	331	346	346

TERM Ticket Revision

Ticket ID: 84732 **User:** **Company:**
Company Ticket ID:
Trans Ticket ID:

Reason for Changes: System Conditions — Planned / Permanent
Ticket Status: Submitted — Immediate / Temporary
Dynamic: No

	Date (MM/DD/YYYY)	Hour (HH24:MI)
Est. Start:	12/30/2016	00:15
Est. End:	12/30/2016	12:15
Actual Start:		
Actual End:		

Comments: test comments for TERM report
PJM Comments:

Type: LINE **Station Name:** **Voltage:** 500 KV **Equipment Name:** **End:** END A

	Normal		Long Term		Short Term		Load Dump	
Temp	Day	Night	Day	Night	Day	Night	Day	Night
95	281	281	293	293	293	293	310	310
86	287	287	298	298	298	298	315	315
77	293	293	304	304	304	304	320	320
68	298	298	309	309	309	309	326	326
59	304	304	314	314	314	314	331	331
50	309	309	320	320	320	320	336	336
41	314	314	326	326	326	326	341	341
32	320	320	331	331	331	331	346	346

Impedance/Charging:
R = 0.0004 X = 0.0103 B = 0.732

Congestion Mngt. Priority:
Reliability & Markets

Adj. %: Apply

Copy: Cell Up — Copy

Submit Form | Duplicate Ticket | Request Approval | Equipment History Log | History Log | Notifications Log | Comment Log | Default Ratings | % of Change | Limitations | Files | Main Menu | Back to Report

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TERM Review/Revise Reports Filters

Updated TERM ticket filters to ignore other fields and return the ticket if a Ticket ID or Company Ticket ID is provided.

This applies to:

- View/Revise
- Recently Restored
- Historical Report

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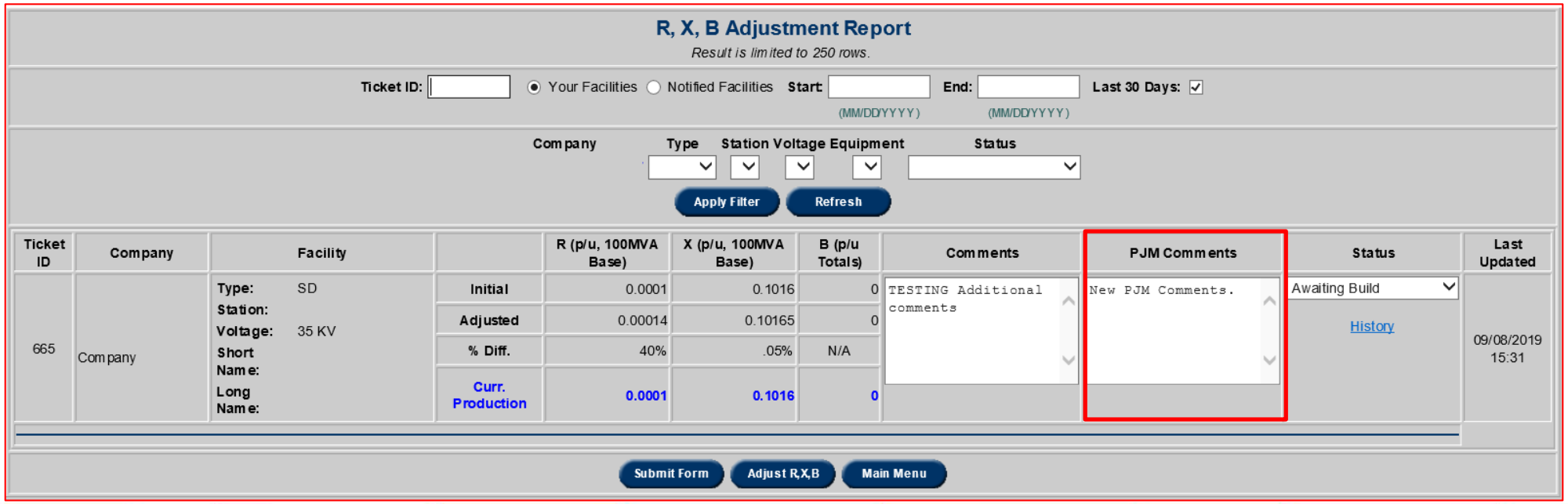
RXB Ticket Enhancements

PJM Comments added to RXB Tickets.

Transmission users now able to edit comments on RXB tickets in 'Submitted' or 'Awaiting Build' status.



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Ratings CSV Files

Ratings download (CSV file) available via Effective Ratings Report.

- Download is a zip file consisting of
  - Ratings.csv
  - Equipment.csv – includes R, X and B information
  - Equipment_psse.csv
  - Limitations.csv
- If the report was filtered, downloaded file will have the filter results.
- Default file name format: RATINGS_*company short name_mm_dd_yyyy_hh_mm*.zip

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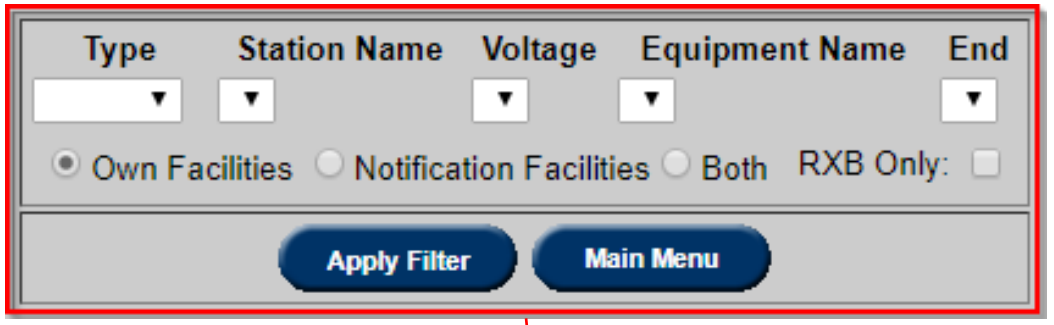
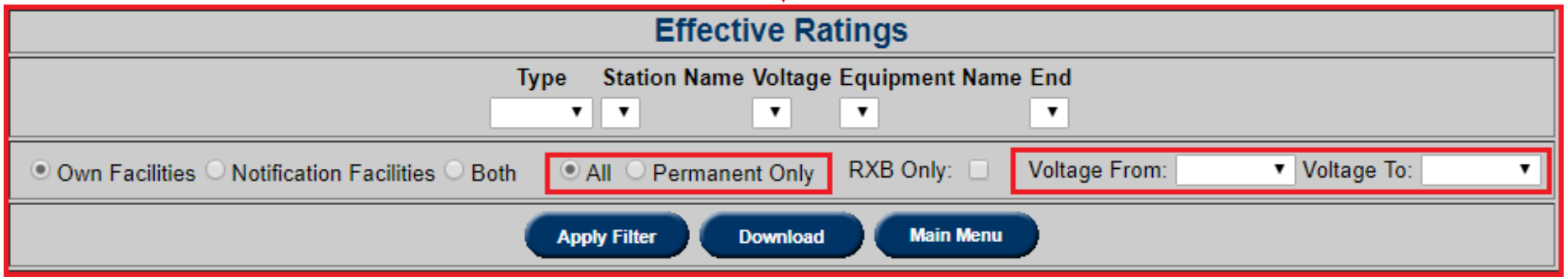
Filter options from the Download page added to Effective Ratings filter.





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Network Model Enhancements

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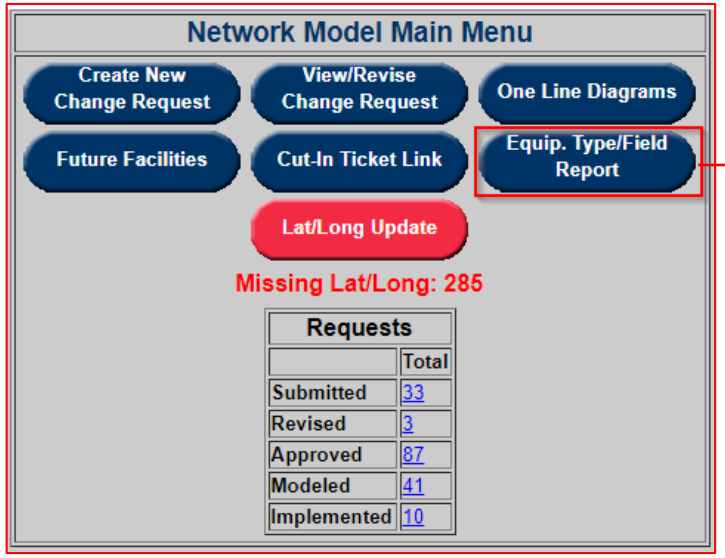
Equipment Type/Field Report

Equip. Type/Field Report added to the Network Model Main Menu.

Lists Network Model Change Request fields per equipment type.



Equipment Type/Field Report

Type	Fields
Lines	B (Per Unit on 100MVA base) Telemetered R (Per Unit on 100MVA base) X (Per Unit on 100MVA base) Retired
Loads	Load MW Load MR Load Non-conforming Telemetered Retired
Phase Shifters	Telemetered R (Per Unit on 100MVA base) X (Per Unit on 100MVA base) Nominal Low Side Voltage Nominal High Side Voltage Retired
Reactive Devices	Min MR Telemetered Reactive Device Type Retired Max MR
Series Devices	Telemetered R (Per Unit on 100MVA base) X (Per Unit on 100MVA base) Retired
Switching Devices	Switch Type Normally Open Telemetered Retired
Transformers	Telemetered R (Per Unit on 100MVA base) X (Per Unit on 100MVA base) Nominal Low Side Voltage Nominal High Side Voltage LTC Location LTC - Neutral Tap Position LTC - Tap Min Step LTC - Step Size % Retired LTC Tap Max Step LTC - Normal Tap Position

Main Menu

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Transmission Ticket View:

- Ticket ID filter added
- Station wildcard search field (case insensitive) added
- If 'No Request Needed' is checked, Linkage Exception message will be displayed.
  - Click OK to close the message.
  - Click Cancel to close the message and uncheck the box.
- NM requests for builds going back 3 years in the past now displayed on Add Network Model Request page.

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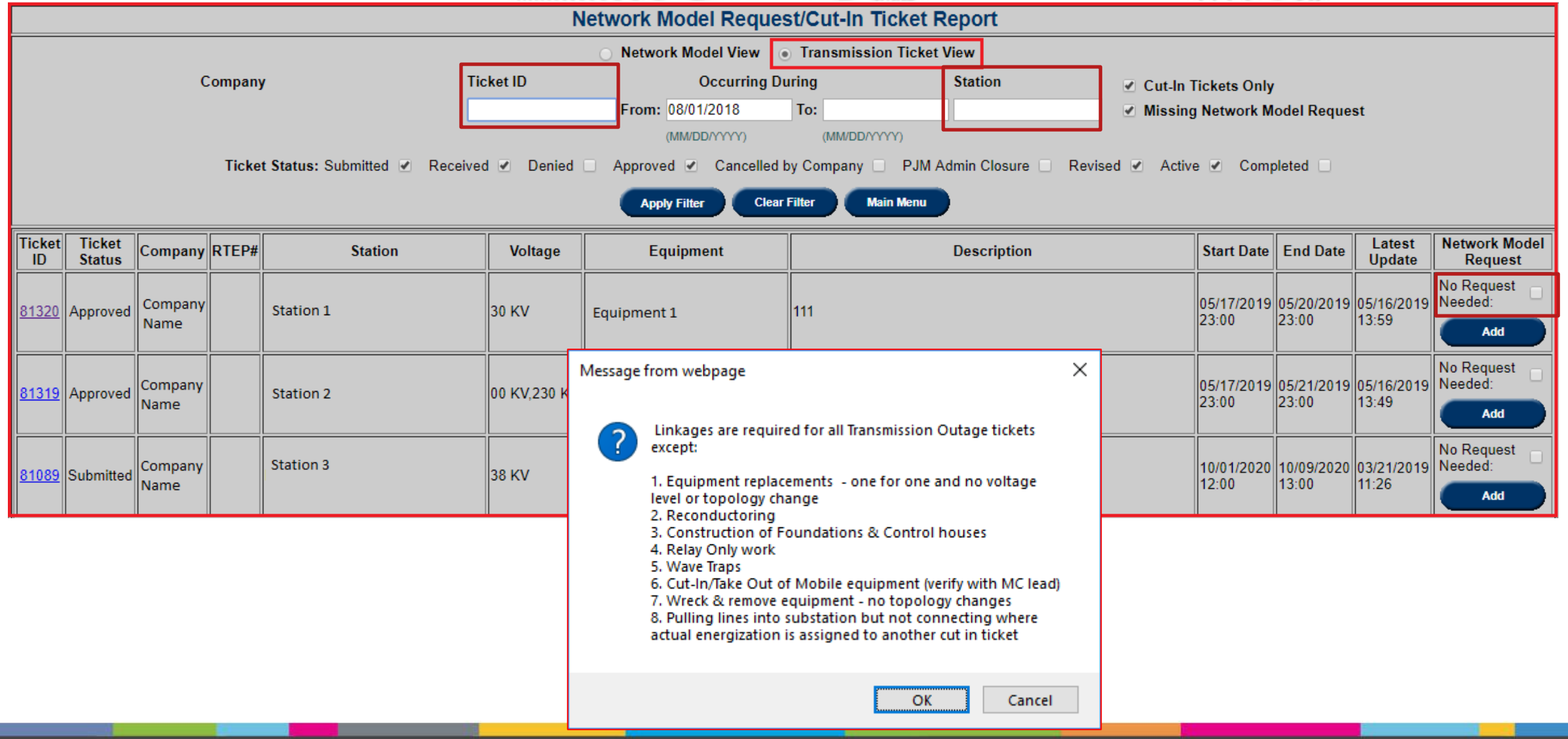
Network Model/Cut In Link



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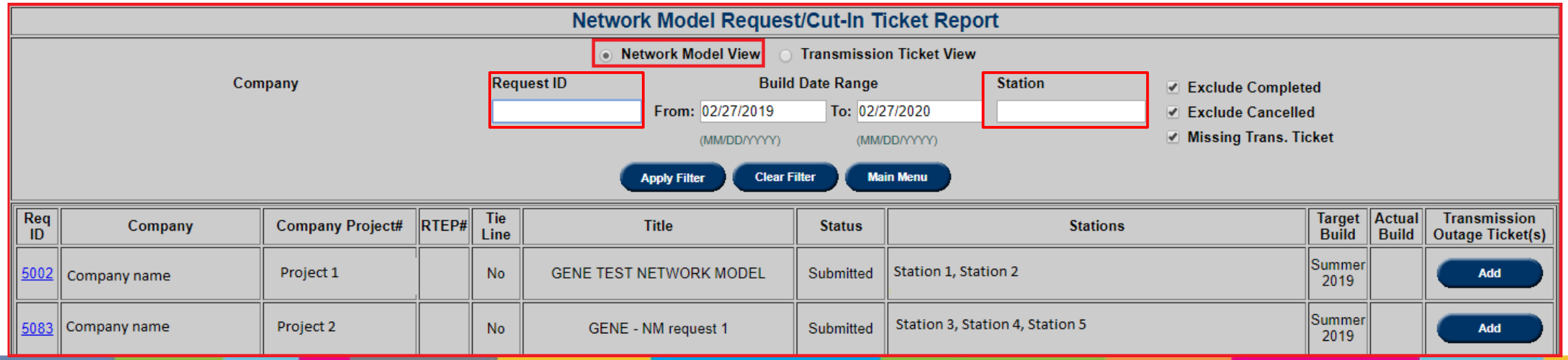
Network Model/Cut In Link

Network Model View:

- Request ID filter added
- Station drop down changed to wildcard search field (case insensitive)



Network Model Request/Cut-In Ticket Report

Network Model View | Transmission Ticket View

Company | Request ID | Build Date Range (From: 02/27/2019 (MM/DD/YYYY) To: 02/27/2020 (MM/DD/YYYY)) | Station

Exclude Completed
Exclude Cancelled
Missing Trans. Ticket

Apply Filter | Clear Filter | Main Menu

Req ID	Company	Company Project#	RTEP#	Tie Line	Title	Status	Stations	Target Build	Actual Build	Transmission Outage Ticket(s)
5002	Company name	Project 1		No	GENE TEST NETWORK MODEL	Submitted	Station 1, Station 2	Summer 2019		Add
5083	Company name	Project 2		No	GENE - NM request 1	Submitted	Station 3, Station 4, Station 5	Summer 2019		Add

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Contact

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