

Best Practices for Submission Processes

Jeffrey Goldberg, PE, Senior Engineer II Tarik Bensala, Engineer II

Transmission Expansion Advisory Committee Tuesday, March 06, 2024



M3 Process – Study File Submission



Modeling Information Requirements for Solutions Meeting

Originally presented on 8/28/2018

	Activity	Timing	Day	Who	How
1	Send Solutions Meeting slides and, for proposed solution, modeling information (contingency files, IDEV, etc.) to PJM	15 days before Solutions Meeting	-15	TOs and Stakeholders	E-mail to PJM
2	Finalizes Solutions Meeting slides (i.e., adds diagrams, etc.)	Upon receipt of slides, prior to posting date	>-10	PJM	Revises supplied slides
3	Post Solutions Meeting slides	10 days before Solutions Meeting	-10	PJM	Web posting of meeting materials
4	Solutions Meeting		0	All	
5	Stakeholder comments	10 days after Solutions Meeting	+10	Stakeholders	E-mail to PJM, PJM posts comments (PJM determining most efficient method)
6	Review and consider stakeholder comments	10 days after comments received	>+10	TOs	Based upon comments, TO may add information in revised slides sent to PJM and PJM re-posts
7	No Harm analysis for proposed solution	After comments for Solutions Meeting	>+10	PJM	Web posting indicating status on Solutions Meeting slide

Short Circuit Modeling Reference Information

"Running" Do No Harm base cases posted on PJM Sharepoint portal

	 Search Lists Libraries 	Apjm ⁻ Transmission Pl	anning Modeling Da	ata	
	Recent 2021 Series Short Circ	$+$ New \vee		g ^Q Access	requests 🛛 📶 Site usage
	2021 Series Short Circ 2021 Series RTEP Load 2021 Series MMWG	Contents Subsites			
	External Entities and C	🗋 Name	Туре	ltems	Modified
	2022 RTEP Short Circuit	2017 Series MMWG	Document library	49	6/8/2019 12:00 AM
	2022 Series RTEP Load	🖻 2017 Series RTEP	Document library	119	6/8/2019 12:00 AM
M3 "Running" case	M3 - No Harm Analysis	🖺 2018 Series MMWG	Document library	775	6/8/2019 12:00 AM
Baseline "Running" case	Short Circuit Baselines	2018 Series RTEP	Document library	1455	6/8/2019 12:00 AM
	∠ Luit	🖻 2019 Series MMWG	Document library	891	1/15/2020 4:36 PM
		🖻 2019 Series RTEP	Document library	1662	2/19/2021 4:36 PM
		2019 Series Short Circuit	Document library	47	6/17/2019 2:40 PM
	Return to classic SharePoint	🖻 2020 Series MMWG	Document library	1053	12/17/2020 11:37 AM



🖉 Edit

1

Reference the posted "Running" case to model

each solution

		(\rightarrow	 ♦ Transr	nission Planning	g Modeling Data			🖻 Share
					오: 🖻 Share 💿	Copy link 📋 Dele	ete –⊐ Pin to top 📑 Move to	🗅 Copy to 🛛 · ·	• 1 selected 🗙	7 Ū
✓ Search					M3 - No Harm A	nal > Short Circ	cuit			
 ✓ Lists ✓ Libraries 	Apjm Transmission Plan	ning Modeling Da	ata		🗋 Name 🗸	/	Modified \smallsetminus	Modified By \smallsetminus	+	7
Recent	$+$ New \vee $\overline{\wedge}$ Upload \vee \bigcirc Sync	💵 Export to Excel 🛛 …			AE & D	PL	November 24	Bugay, Nicole		
2021 Series Short Circ				1	AEP		November 24	Bugay, Nicole	Scroll to lo	cate
2021 Series RTEP Load	M3 - No Harm Analysis				APS		November 24	Bugay, Nicole	TO breake	
2021 Series MMWG	🗋 Name 🗸	Modified \smallsetminus	Modified By \smallsetminus		ATSI (A	MPT)	November 24	Bugay, Nicole	and curren	
External Entities and C	Power Flow	November 24	Bugay, Nicole		BGE		November 24	Bugay, Nicole	1.	
2022 RTEP Short Circuit 2022 Series RTEP Load	Short Circuit	November 24	Bugay, Nicole		ComEc	I (NEET)	November 24	Bugay, Nicole	base cases	5
M3 - No Harm Analysis Short Circuit Baselines	2									

SMECO	November 24	Bugay, Nicole
UGI	November 24	Bugay, Nicole
^{الد} PJMSC_2026_20210612.DXT	Yesterday at 7:57	AM Goldberg, Jeffrey
⊘ ¹ PJMSC_2026_20210612.OLR	Yesterday at 7:58	AM Goldberg, Jeffrey



Sharepoint – Transmission Planning Modeling Data

Home Page

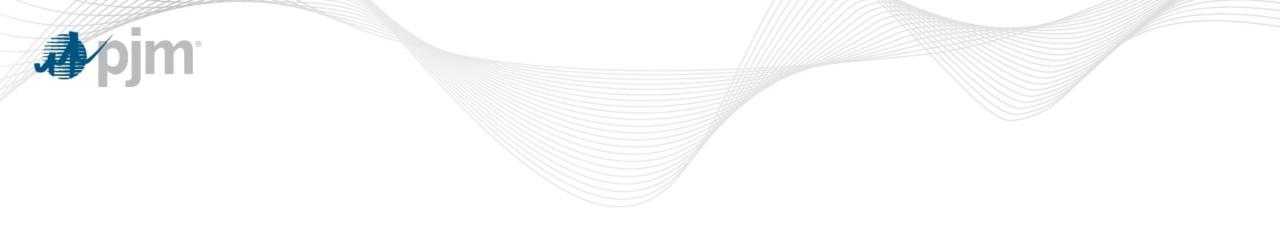
https://connect.pjm.com/Transmission%20Planning%20Modeling%20Data/default.aspx

M3 – No Harm Analysis

https://connect.pjm.com/Transmission%20Planning%20Modeling%20Data/default.aspx

Short Circuit Baselines

https://connect.pjm.com/Transmission%20Planning%20Modeling%20Data/Short%20Circuit%20Bas elines/Forms/AllItems.aspx



Appendix – Informational Presentations



Appendix Topics



- Preparing for the Competitive Window
- Single Line Diagram (SLD)
- Contingency Naming Convention
- Contingency Change & Idev File Submissions



Preparing for the Competitive Window

A Guide for PJM Stakeholders

Tarik Bensala Engineer I, Transmissions Planning





Preparing for the Competitive Window

- What is the Competitive Planner Tool?
 - <u>https://www.pjm.com/planning/competitive-planning-process</u>
- How do you access the tool?
 - <u>https://pjm.com/-/media/etools/account-manager/single-user-multi-account-quick-start-guide.ashx?la=en</u>

Beginning in July 2020, all RTEP competitive proposals will be submitted through a new web-based Competitive Planner tool. Only transmission owners and developers who have received authorization to receive Critical Energy Infrastructure Information (CEII) associated with the current window will be able to participate in the PJM competitive planning process.

Request Access to Competitive Planner

Roles	Description
Competitive Planner Read Only	Can only read existing proposals. Cannot start, edit or submit proposals
Competitive Planner Read Write	Can start, edit or view proposals. Cannot submit proposals
Competitive Planner Submitter	Can start, edit, view, and submit proposals
SUMA accounts	Any combination of above three roles (one permitted per company)



Com	petitive Planner
	Pre-Qualified Expires on 07.24.2022 Start Net
Existing Proposals	
Proposal Window 2020 Long Term	Proposal Window 2020 Short Term
Long-Term proposals - submitted to solve of mitigate considers reliability criteria violations, economic constraints, system conditions and public policy requirements.	Short-Term proposals will be considered to solve of mitigate reliability criteria violations included in the Problem Statement below.
Proposals in progress 2	Proposals in progress
Proposals ready for submission 0	Proposals ready for submission
Total cost \$0 N	Total cost \$1,598.15
Total proposal fees \$0	Total proposal fees
Continue an Existing Proposal Start New Proposal	Continue an Existing Proposal Start New Proposa
Proposal Window 2017 Short Term	Proposal Window 2019 Long Term
Short-Term proposals will be considered to solve of mitigate reliability criteria violations included in the Problem Statement below.	Long-Term proposals - submitted to solve of mitigate considers reliability criteria violations, economic constraints, system conditions an public policy requirements.
Proposals in progress 0	Proposals in progress
Proposals submitted 0	Proposals submitted
Total cost \$0 N	Total cost \$0
Total proposal fees \$0	Total proposal fees

bim

1

Pre Qualified Users

- An entity's eligibility to be designated to construct a project is evaluated based on its technical and engineering qualifications, including its ability to develop, construct, operate and maintain transmission within the PJM region.
- Any entity can submit a proposal regardless of Pre-Qualified status, but must be pre-qualified pursuant to OA Schedule 6, section1.5.8 in order to be designated construction responsibility.
- For more information, please see Manual 14F and the competitive planning page.

https://pjm.com/-/media/documents/manuals/m14f.ashx

https://www.pjm.com/planning/competitive-planning-process/prequalification

Homepage Existing Proposals Pro	oposal Form		
General Information	General Information	Sa	ved as Draft 📕
Overloaded Facilities			
Project Components	Proposing entity name *	PJMTST	Joint Proposals
Financial Information	Company proposal ID		
Cost Containment Commitment	company proposal to	PJMTST-01	
Review	Project title '	New X/Y Line	
Confirmation	Project description * 4	Project is a new line between X and Y substations utilizing AAA structures.	
Project Cost Summary Cost estimate \$1.598 M (current year) Cost estimate \$0.007 M	Project in-service date * 5	01/2021	
(in-service year)	Tie-line impact ' 🕜 6		
Project in-service date 1.2021	The time impact	Ves No	
Proposal Window 2020 Short Term	Interregional project *	Ves No	
Company Proposal ID PJIMTST- 01	Is the proposer offering a binding cap on		
PJM Proposal ID 541	capital costs? "	Yes No	
	Additional benefits 9	For example: reliability, economics, etc.	
	Supporting Documents To submit multiple files at once, please p Project analysis attachments * IDEV, XML, etc. file types Market efficiency simulation modeling file IDEV, XML, etc. file types	es * the choose File	

Starting a new Proposal

- 1. Proposing Entity Name (This cannot be changed by the user. This is based on the user's account and the company it is tied with.)
- 2. Company Proposal ID is provided by the user to allow the company to track and identify their submittals
- 3. Project Title (**Do not use your Company Name or any CEII Material in the Title**)
- 4. Project Description that gives a general scope of the project
- 5. Projected In-service Date
- 6. Tie-Line Impact (Please check this if the proposal or a component of the proposal span two PJM Transmission Owner Zones)
- 7. Interregional Project (Please check if this project is being proposed as a solution to a cross-border issue e.g. PJM to MISO)



Homepage Existing Proposals Pro	posal Form		
General Information	General Information	Saved as Draft	F
Overloaded Facilities	General Information	Saved as branc	-
Project Components	Proposing entity name *	PJMTST	Joint Proposals
Financial Information	Company proposal ID 2		
Cost Containment Commitment	Company proposar to	PJMTST-01	
Review	Project title 3	New X/Y Line)
Confirmation	Project description	Project is a new line between X and Y substations utilizing AAA structures.	
Project Cost Summary			
Cost estimate \$1.598 M (current year)			
Cost estimate \$0.007 M (in-service year)	Project in-service date * 5	01/2021	
Project in-service date 1.2021	Tie-line impact '	Ves No	
Proposal Window 2020 Short Term	Interregional project '	0 *** 0 **	
Company Proposal ID PJMTST-	and a grant project	Ves No	
01 (8	Is the proposer offering a binding cap on capital costs? *	Yes No	
PJM Proposal ID 541			
	Additional benefits 9	For example: reliability, economics, etc.	
			l
	Supporting Documents 11		
	To submit multiple files at once, please p	lace them into a Zip file before uploading.	
	Project analysis attachments *	+ Choose File	
	IDEV, XML, etc. file types		
	Market efficiency simulation modeling file	H Choose File	
	IDEV, XML, etc. file types		

Starting a new Proposal

- 8. Indicate if any Cost Containment Commitment is being proposed, if yes a detailed description is required under the *Cost Containment Commitment* heading
- 9. Please identify any additional benefits to the projects (e.g. Solving more violations, reliability, economic, resilience, etc.)

2

10. Joint Proposal, if your project falls under this, one party **must** be the contact with PJM and the joint parties will determine the Joint Proposal ID





mepage Existing Proposals	Proposal Form		
rloaded Facilities	General Information		Saved as Draft 📕
ject Components	Proposing entity name *	PJMTST	Joint Prop
incial Information	Company proposal ID 2	DHITET OF	
t Containment Commitment	company proposar io	PJMTST-01	
8w	Project title "	New X/Y Line	
firmation	Project description *	Project is a new line between X and Y substations utilizing AAA structures.	
oject Cost Summary			
st estimate \$1.598 M			
urrent year) ist estimate \$0.007 M	Project in-service date * 5	01/2021	
service year)	Tie-line impact ' 🕜 🌀	0.0.0	
ject in-service date 1.2021	The time impact	Ves No	
posal Window 2020 Short Term	Interregional project *	Ves No	
mpany Proposal ID PJMTST- 01	Is the proposer offering a binding ca	np on 💽 Yes 🚫 No	
M Proposal ID 541	capital costs? *		
	Additional benefits 9	For example: reliability, economics, etc.	
		D	
	To submit multiple files at once, pl	ease place them into a Zip file before uploading.	
	Project analysis attachments *	+ Choose File	
	IDEV, XML, etc. file types		
	Market efficiency simulation modeli	ing files " + Choose File	
	IDEV, XML, etc. file types		

Starting a new Proposal

11. Supporting Documents

10

R

Reminder, please identify each file with a unique identifier. Do not label these files with the same name. Please bundle these into one ZIP file if there are multiple files being posted at once.

- The information must be organized in the ZIP folders for Project Analysis Files and Market Efficiency Technical Files as separate ZIP folders as listed below:
 - Project Analysis Files
 - Powerflow files (.ldv, .Raw, .Sav)
 - Short Circuit Files (.Chf, .Dxt)
 - Contingency Changes (<u>Include all</u> new, modified, and removed)
 - One Line Diagrams (Before and After)
 - Market Efficiency Technical Files
 - Any Promod file (Eve, Xml, Lib, Dat, Pff, Promod Simulation Results)
 - BC Ratios in Excel Format
 - Powerflow files (.ldv, .Raw, .Sav)

| Public



Мy

Congestion Drivers/Flowgates

Training Submitter							FJMIST	PJM TEST (RWS_T	
n Planning Center									
				Competitive Planner					
omepage Existing Proposals Pro	pposal Form								
eneral Information	Overloaded Facilities	or Condestion Drivers	ć.						
verloaded Facilities	overtoaded racifices (or congestion privers							
oject Components	Co	ongestion Drivers		Existing Flowgates		New Flowgat	es		
nancial Information	4								
ost Containment Commitment	Select a checkbox next to ea	each facility that will be addre	essed by the proposed project						
eview	view selected congestion			I.					ved & Validated
onfirmation		Analysis type Select	From Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT Select	Voltage Select	TO Zone Select
		Summer N1 Volt Low	360339	Another Bus Name	342812	5SUMM SHAD T	3	162/161	PE
		and a second to and at	360337	ABC name4	342813	5SUMM SHAD T	1	161/161	PG
Project Cost Summary		Winter N1 Volt High	500557						
Cost estimate \$1.598 M	ME-S69 Su	Summer N1 Thermal	360341	ABC name1		5SUMM SHAD T		161/161	
Cost estimate \$1.598 M (current year)	ME-S69 SL		360341 360336	ABC name1 ABC name3	342812	5SUMM SHAD T	2	161/161	PI
Cost estimate \$1.598 M	ME-S69 SL ME-S64 SL	Summer N1 Thermal	360341 360336	ABC name1 ABC name3 ABC name6	342812 342812	5SUMM SHAD T 5SUMM SHAD T	2		P
Cost estimate \$1.598 M (current year) Cost estimate \$0.007 M	ME-S69 SL	Summer N1 Thermal	360341 360336	ABC name1 ABC name3 ABC name6 Records per page: 50 •	342812 342812 (# (1 of 1) >>>	5SUMM SHAD T 5SUMM SHAD T	2	161/161	P
Cost estimate \$1.598 M (current year) Cost estimate \$0.007 M (in-service year)	ME-S69 SL	Summer N1 Thermal	360341 360336	ABC name1 ABC name3 ABC name6 Records per page: 50 •	342812 342812	5SUMM SHAD T 5SUMM SHAD T	2	161/161	PI
Cost estimate \$1.598 M (current year) Cost estimate \$0.007 M (in-service year) Project in-service date 1.2021	ME-S69 SL	Summer N1 Thermal	360341 360336	ABC name1 ABC name3 ABC name6 Records per page: 50 •	342812 342812 (# (1 of 1) >>>	5SUMM SHAD T 5SUMM SHAD T	2	161/161	PI Pi Pi

pjm			
Training Submitter			PJMTST PJ
m [·] Planning Center			
		Competitive Planner	
Homepage Existing Proposals Pro	posal Form		
General Information Overloaded Facilities	Project Components		
Project Components	Project components *	Select project component	▼ Add
Financial Information		Select project component	
Cost Containment Commitment		Transmission Line Reconductor/Rebuild Component	
Review		Substation Upgrade Component Greenfield Transmission Line Component	
Confirmation		Greenfield Substation Component	_
Project Cost Summary			
Cost estimate (current year)			
Cost estimate (in-service year)			
Project in-service date 1.2021			

Project Components

- Describe the scope of the work for each major project component
- Provide a project cost breakdown by the indicated categories for each component
- Provide an in-service year component project total cost for Market Efficiency projects
- Identify the entity designated to build the component



Project Components

Competitive Planner

Success			X
Homepage Existing Proposals	Proposal Form		
General Information Overloaded Facilities	Project Components		
Project Components	Project components *	Select project component 🔹 Add	
Financial Information			
Cost Containment Commitment	1. Substation Upgrade		Saved as Draft 📕 🛯 🕲 💼
Review			
Confirmation			





Financial Information

Competitive Planner

Homepage	Existing Proposals	Proposal Form	
General Infor	rmation	Project Financial Information	Saved as Draft F
Overloaded F	acilities		Suved as brance
Project Comp	ponents	Capital spend start date * 03/2020 Construction start date * 08/2020 Project Duration (In Months)	10
Financial Inf	ormation		
Cost Contain	ment Commitment		
Review		Capital Expenditure Documents	
Confirmation		Describe what and why needs to be uploaded.	
		Upload completed template * + Choose File	
Project Cost	Summary	Download blank template (XISX) Download completed template example (PDF)	
Cost estimate (current year			
Cost estimate (in-service ye		Save as Dra	ft Save & Validate
Project in-set	rvice date 1.202	1	
Proposal Wir	ndow 2020 Short Term		
Company Pro	oposal ID PJMTS' O		

- Provide the Capital starting date of the project, then the Projected Construction Start Date
- User Completed Template that is provided within the tool

541

PJM Proposal ID

⇒ ·J···				
		Competitive Plann	er	
Homepage Existing Proposals	Proposal Form			_
Overloaded Facilities	Cost Containment Comm	itment	Saved & Validated 🤡	
Project Components	Cost cap (in current year)	\$78,678.00		
Financial Information	Cost cap (in-service year)			
Cost Containment Commitment		\$8,876,785.00		
Review	Components covered by	cost containment		
Confirmation		oject component that will be covered by cost containment.		 Identify the Cost
	1. Substation Upgrade - Const	truction Responsibility 1		
Project Cost Summary	Cost elements covered b	v cost containment		Containment Commitment
Cost estimate (current year)	Indicate which capital cost elemen			and which components that
Cost estimate				-
(in-service year)	Engineering & design *	Yes No		have been saved prior are
Project in-service date 1.2021	Permitting / routing / siting *	• Yes No		covered
Proposal Window 2020 Short Term Company Proposal ID PJMTST-	ROW / land acquisition *	Yes No		 Identify the cost elements
01				radinary and door diornalities
PJM Proposal ID 541	Materials & equipment *	Ves No		covered by cost containmen
	Construction & commissioning *	Yes No		•
	Construction management *	Yes No		
	Overheads & miscellaneous costs *	Yes No		
	Taxes *	Yes No		
	AFUDC *	● Yes ○ No		
	Escalation *	Yes No		



Cost Containment

Additional Information *

Would this ROE cap apply to the determination of AFUDC? *	Yes No
Would the proposer seek to increase the proposed ROE if FERC finds that a higher ROE would not be unreasonable? *	● Yes ○ No
Engineering & design *	• Yes No
Permitting / routing / siting *	• Yes No
ROW / land acquisition *	• Yes No
Materials & equipment *	• Yes No
Construction & commissioning *	• Yes No
Construction management *	• Yes No
Overheads & miscellaneous costs *	• Yes No
texes *	• Yes No
AFUDC *	• Yes No
Escalation *	• Yes No
Additional Information	Al more

A

 Provide any additional information to clearly describe the Cost Containment being offered for the proposal



Cost Containment

Is the proposer offering a Debt to Equity Ratio cap? *	Yes No
Additional cost containment measures not covered above	ACC
Supporting Documents To submit multiple files at once, please p	lace them into a Zip file before uploading.
Cost commitment legal language *	+ Choose File 05 Network.txt
Provide language to be included in the De	rsignated Entity Agreement that expresses the legally binding commitment of the developer to the construction cost cap.



• Provide any supporting documents at the end of the Cost Containment page.



Competitive Planner

Homepage Existing Proposals	Proposal Form		
General Information			
verloaded Facilities	Proposal Window 2020 Short Term		Full proposal view
roject Components			
nancial Information	General Information		Saved as Draft 🚪
Cost Containment Commitment	Proposing entity name *	PJMTST	
eview			
onfirmation	Company proposal ID	PJMTST-01	Not validated. Click Pen button to
	PJM Proposal ID *	541	edit/review and validate
Project Cost Summary	Project title *	New X/Y Line	Valituate
Cost estimate (current year)	Project description *	Project is a new line between X and Y substations utilizing AAA structures.	
Cost estimate (in-service year)	Project in-service date *	01/2021	
Project in-service date 1.2021	Tie-line impact *	No	
Proposal Window 2020 Short Term	Interregional project *	No	
Company Proposal ID PJMTST- 01 PJM Proposal ID 541	Is the proposer offering a binding cap on capital costs?	Yes	
	Cost containment commitment *	Yes	
	Additional benefits	For example: reliability, economics, etc.	

Review – Validated Example

Supporting	Documents							
	attachments * cy simulation modeling files *	Comp Plan FG.xls						
Overloaded Congestion	Facilities				click	ated. User can still Pen button to edit afore submittal	Saved &	Validated
CD #	Analysis type	From Bus No.	From Bus Name	To Bus No.	To Bus Name	СКТ	Voltage	TO Zone
ME-S65	Winter N1 Volt High	360337	ABC name4	342813	5SUMM SHAD T	1	161/161	PG&E
	Summer N1 Thermal		ABC name3		5SUMM SHAD T		161/161	PPL

Saved & Validated 🔗 📝

FG #	Analysis type	From Bus No.	From Bus Name	To Bus No.	To Bus Name	СКТ	Voltage	TO Zone
N1-S61	Summer N1 Volt Low	250086	XYZ name	249988	08BKJ135	1	138/138	PECO
N1-S62	Winter N1 Volt High	360335	ABC name1	342812	5SUMM SHAD T	1	161/161	PPL
N1-S63	Summer N1 Thermal	360335	ABC name1	342812	55UMM SHAD T	1	161/161	PPL

FG #	Analysis type	From Bus No.	From Bus Name	To Bus No.	To Bus Name	СКТ	Voltage	TO Zone
G-541-1	Winter N1 Volt High	876876	765	7687	686	876	100/200	AE

Existing Flowgates

Jpjm



Review – Final Submission

Additional Comments				
AC				
I certify that all information e	entered on this form is complete and a	occurate.		

Apjm

Final Submission Page

Competitive Planner

Homepage Existing Proposals	Proposal Form
General Information	Thank You. This proposal is marked for submission.
Overloaded Facilities	
Project Components	
Financial Information	
Cost Containment Commitment	
Review	
Confirmation	
Project Cost Summary	
Cost estimate (current year)	
Cost estimate (in-service year)	
Project in-service date 1.2021	
Proposal Window 2020 Short Term	
Company Proposal ID PJMTST 01	
PJM Proposal ID 541	



Updating Submitted Proposals

- Users are able to edit their submitted proposals prior to the closing of the Window, however please note that any change will remove the submission status from the proposal and you will need to "Save and Validate" each portion of the proposal again and "Submit" again as discussed earlier in the presentation.
- This submission can be resubmitted by anyone that has a submitter role.





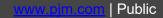


 If you run into any additional issues regarding the tool, please reach out to the Competitive Planner Tool Admins at <u>ProposalWindow-Admin@pjm.com</u>





- Competitive Planner User Guide
 - <u>https://pjm.com/-/media/etools/planning-center/competitive-planner-user-guide.ashx</u>
- Competitive Planner Demonstration
 - <u>https://videos.pjm.com/media/1_f7a912e2</u>





Single Line Diagram (SLD) Guidance for Open Window Submittals





SLD - Guidance for Open Window Submittals

PJM typically receives many project proposals whenever a competitive window is open. The process of selecting a winning proposal includes PJM Transmission Planning modeling each project and subsequently performing reliability analysis.

Single Line Diagrams are critical for communicating the proposal:

Validating the modeling (idv files) for accurate incorporation to the study case Facilities to be Removed, Added, Modified

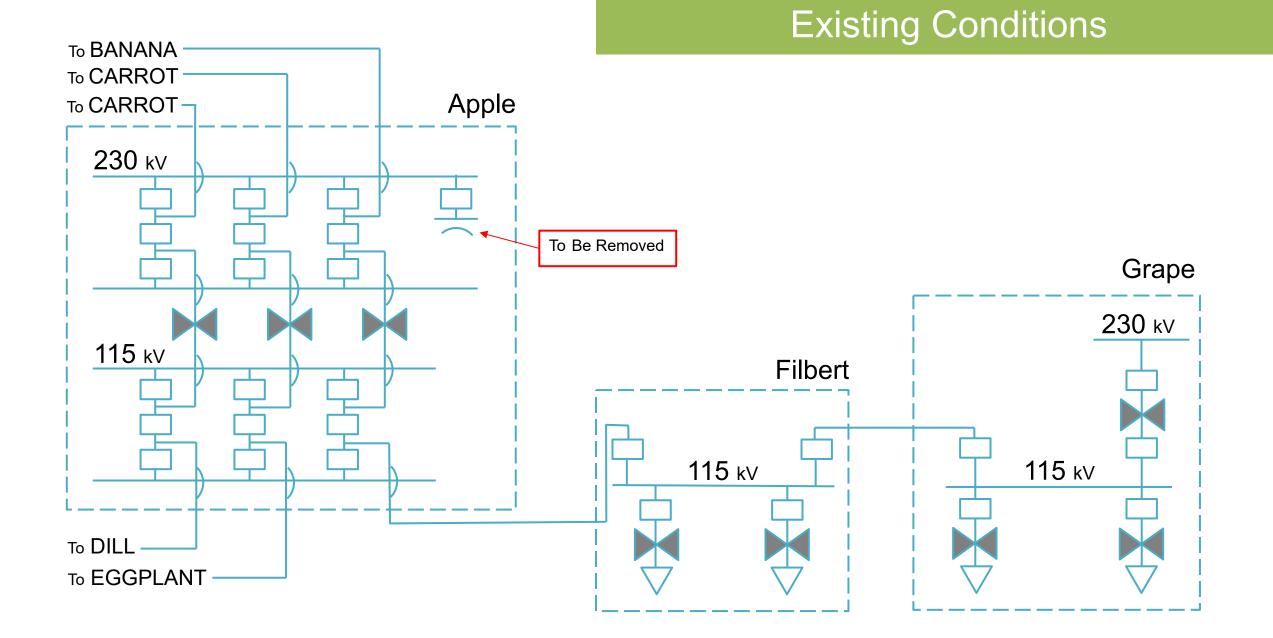
Validating changes to the Contingency Sets

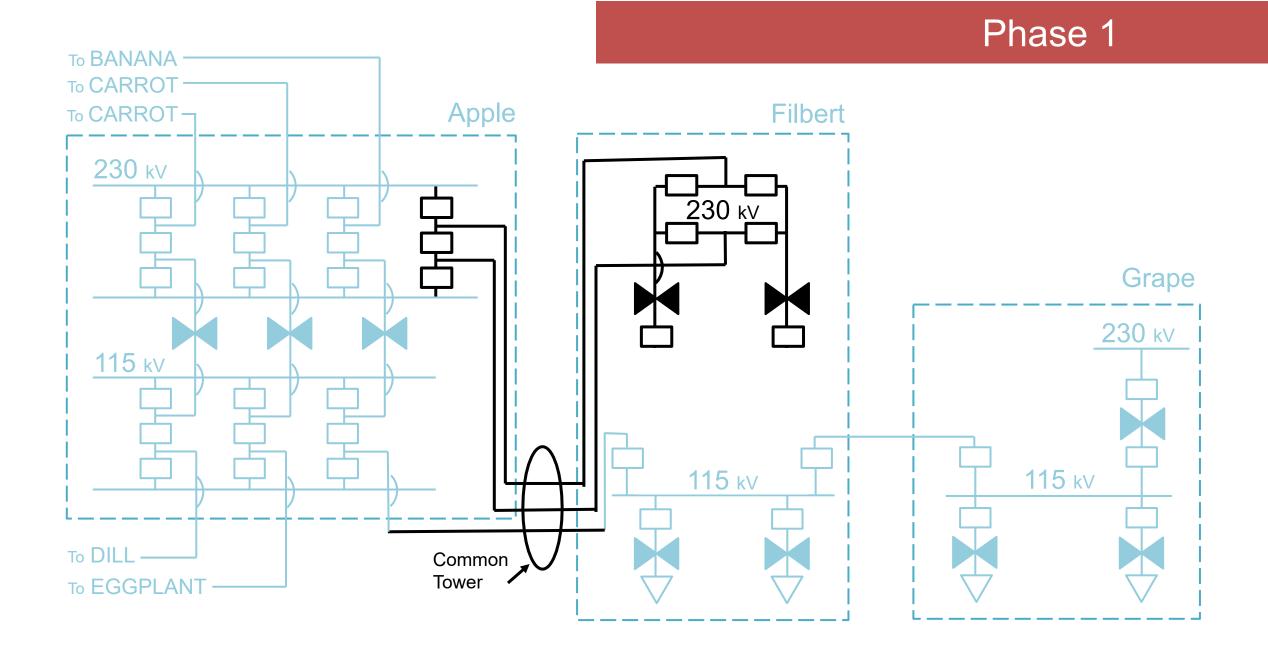
Contingency Definitions to be Removed, Added, Modified

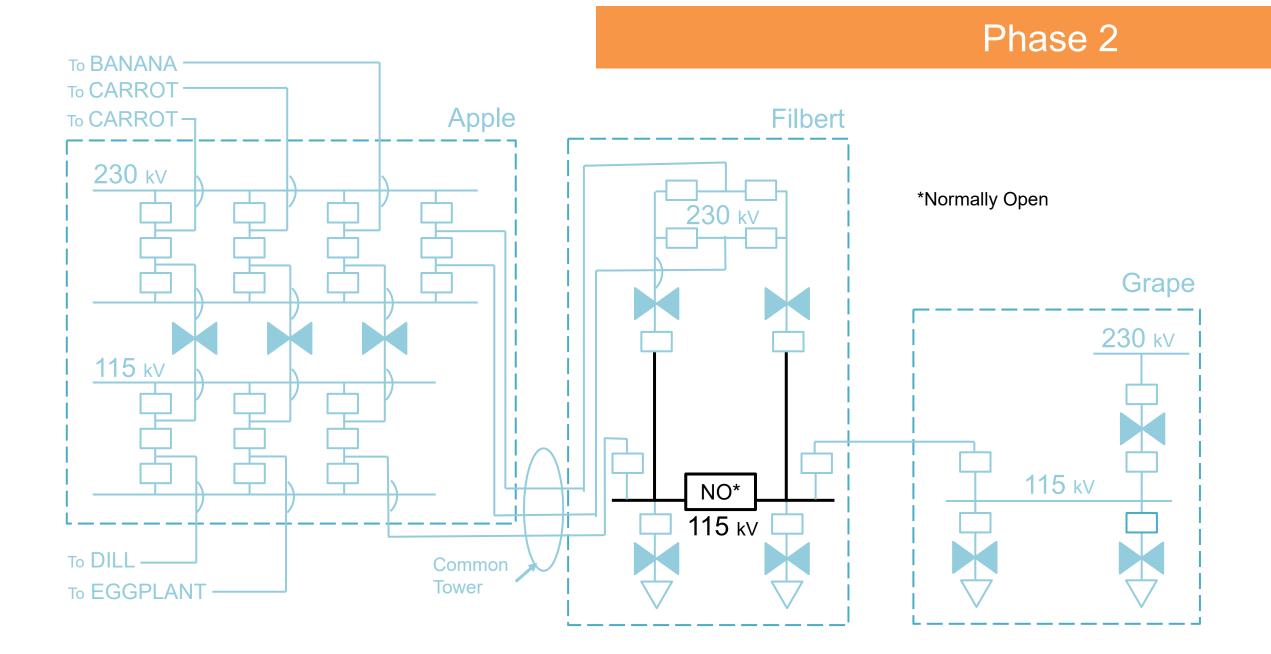
Understanding the sequencing of project phases

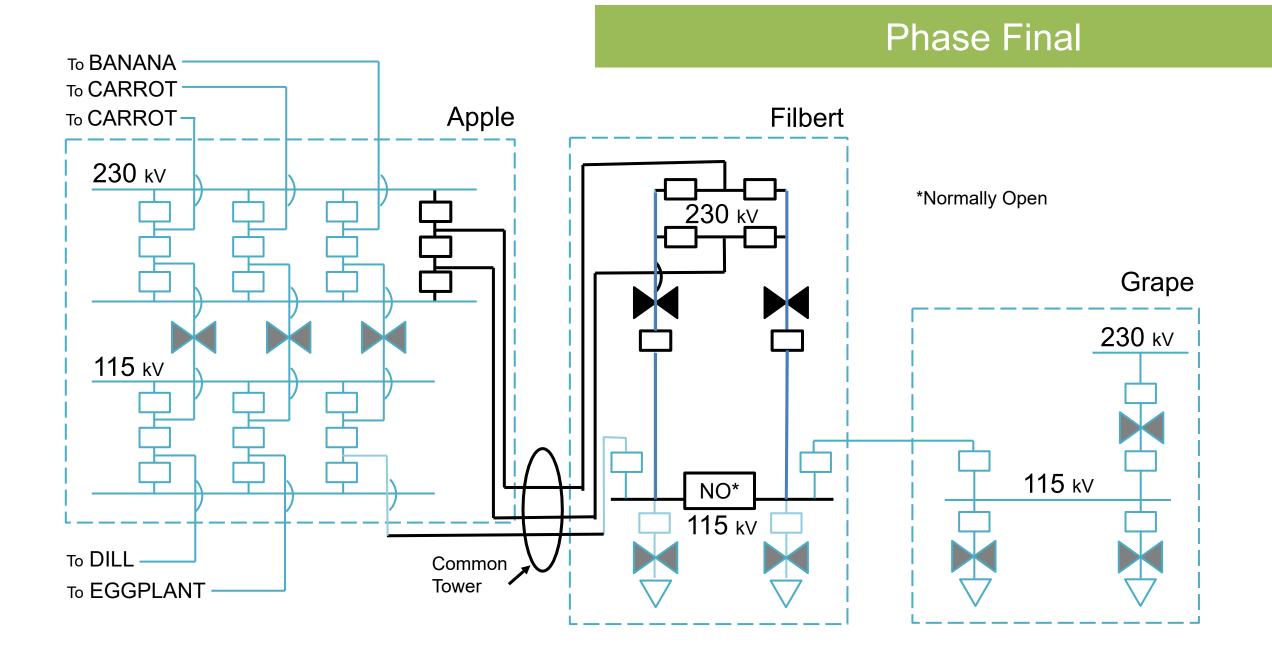
Existing System Topology - showing those facilities relevant to the proposed project

Post In-service Topology – resultant topology after each project phase











SLD Guidance - Conclusion

Proposing entities may use their own graphics on submitted SLDs For optimal communication and clarity:

SLD of Existing System

Only show facilities relevant to the project.

Identify facilities to be removed in the subsequent project phase. These facilities will be missing in subsequent SLD

SLD of Intermediate Project Phase

- All facilities installed from a previous project phase should be represented the same as existing facilities (Normal Weight)
- Ensure all facilities identified for removal from a previous project phase are missing
- Identify all facilities added in the current project phase (Heavy Weight)

Identify facilities to be removed in the subsequent project phase.

Include graphic to facilitate validation of Contingency definitions (i.e. Common Tower, breaker diagrams, etc.)

SLD of Final Project Phase

Identify all facilities added for <u>all project phases</u> (Heavy Weight)



Contingency Naming Convention

↓pjm

What we need from TOs

For each RTEP study year, six (6) contingency files are required. The common names of these six contingency files and the associated NERC TPL contingency definitions are shown in the table below:

PJM File Name	TPL-001-5 Contingencies
Single	P1 (All)
P_2-1	P2.1
Bus	P2.2
Line_FB	P2.3, P2.4 P4 (All)
P5	P5
Tower	P7(All)

Contingency Title Naming Convention

1. Standard Format

PJM has identified a specific naming standard convention to contingencies. This is necessary to be able to sort on contingencies that apply to certain seasons and assist in the consolidation of all contingency files into one (1) yearly set per contingency type.

Below is an example of the standard format:

"Company Name" _ "TPL Number" - "Sub Number Remainder of Contingency Title" _ "Sort" - "Seasonal Restricted"

2. Seasonal Consideration and Sorting

To maintain all different seasonal contingencies within a yearly contingency case, contingency titles will require a standard adder to providing sorting capability.

Command for Cont.	Command for Cont.
_SRT-A	_SORT-ALL
_SRT-S	_SORT-SUM
_SRT-W	_SORT-WIN
_SRT-L	_SORT-LL
_SRT-SL	_SORT-SUM & LL
_SRT-WL	_SORT-WIN & LL
_SRT-SW	_SORT-SUM & WIN

Contingency Title Naming Convention

3. Contingency File Naming Convention

Below are several examples of valid contingency names:

AP_P1-1_MP-138-513_SRT-S ATSI_P1-2_OEC-69-010_SRT-A AEP_P1-2_#5522_SRT-L CE_P4_207-38-L4606N_SRT-A DVP_P7-1_LN 46-74_SRT-SW ME_P2-2_ME-115-022T_SRT-W

Contingency Title Naming Convention

4. Contingency File Naming Convention

PJM requires consistent naming of the .con files to assist when compiling the various contingency files from the different members together. Below is the standard for naming contingency files.

RTEP-SSSS_YYYY_CCCC_TTTT_RR

Legend for the format above where:

- ③ S = RTEP Series Year
- ⑦ Y = Case Year
- ⑦ C = Company
- ⑦ T = Type (Tower, Single, Line_FB, Bus, P_2-1, P5)
- \bigcirc R = Revision (Start at Revision 0)



Contingency Change & Idev File Submissions



Contingency Changes

Currently, PJM receives contingency changes in multiple formats: Text file, excel, word Deletions, additions, modifications All in one file vs. separate files

PJM is looking to standardize the submission of contingency changes to minimize confusion and any potential errors:

- 1. Submit contingency changes using the provided "Contingency Change Submission" template
- 2. Follow the contingency naming convention as described in previous section
- 3. Use unique contingency names (i.e. no duplicate contingencies)
- 4. Use 'delete' and 'add' methodology in template to represent contingency modifications

Contingency Changes

New Contingencies

Delete	Add
N/A	CONTINGENCY 'PJM_P1-2_BUS1_BUS2_SRT-A' DISCONNECT BRANCH FROM BUS #####1 TO BUS #####2 CKT 1 /* BUS 1 138 TO BUS 2 138 END
Deleted Contingencies	

Delete	Add
CONTINGENCY 'PJM_P1-2_BUS1_BUS2_SRT-A' DISCONNECT BRANCH FROM BUS #####1 TO BUS #####2 CKT 1 /* BUS 1 138 TO BUS 2 138 END	N/A

Delete	Add
CONTINGENCY 'PJM_P1-2_BUS1_BUS2_SRT-A'	CONTINGENCY 'PJM_P1-2_BUS1_BUS3_SRT-A'
DISCONNECT BRANCH FROM BUS #####1TO BUS #####2 CKT 1 /* BUS	DISCONNECT BRANCH FROM BUS #####1 TO BUS #####3
1 138 TO BUS 2 138	CKT 1 /* BUS 1 138 TO BUS 3 138
END	END

Contingency Changes

Modified Contingencies – 1:2 (or more) Replacements \rightarrow Merge the "Delete" cells

Delete	Add
CONTINGENCY 'PJM_P1-2_BUS1_BUS2_SRT-A' DISCONNECT BRANCH FROM BUS #####1 TO BUS #####2 CKT 1 /* BUS 1 138 TO BUS 2 138 END	CONTINGENCY 'PJM_P1-2_BUS1_BUS3_SRT-A' DISCONNECT BRANCH FROM BUS #####1 TO BUS #####3 CKT 1 /* BUS 1 138 TO BUS 3 138 END
	CONTINGENCY 'PJM_P1-2_BUS3_BUS2_SRT-A' DISCONNECT BRANCH FROM BUS #####3 TO BUS #####2 CKT 1 /* BUS 3 138 TO BUS 2 138 END

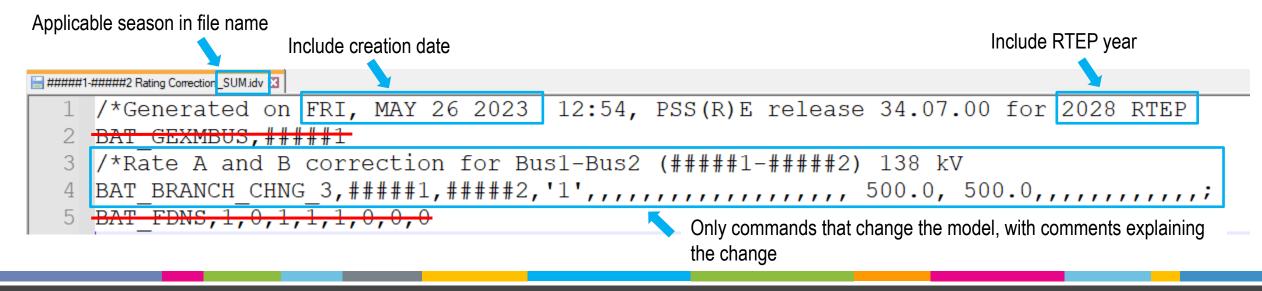
Delete	Add
CONTINGENCY 'PJM_P1-2_BUS1_BUS3_SRT-A' DISCONNECT BRANCH FROM BUS #####1 TO BUS #####3 CKT 1 /* BUS 1 138 TO BUS 3 138 END	CONTINGENCY 'PJM_P1-2_BUS1_BUS2_SRT-A' DISCONNECT BRANCH FROM BUS #####1 TO BUS #####2 CKT 1 /* BUS 1 138 TO BUS 2 138 END
CONTINGENCY 'PJM_P1-2_BUS3_BUS2_SRT-A' DISCONNECT BRANCH FROM BUS #####3 TO BUS #####2 CKT 1 /* BUS 3 138 TO BUS 2 138 END	



Idev Files

PJM is looking to standardize the submission of idev files to minimize confusion and any potential errors:

- 1. Add comments inside the idev file to clearly show/explain the changes being made
- 2. Include only commands that <u>change</u> the model (i.e. no BAT_GEXMBUS, BAT_FDNS, etc.)
- 3. In the first line of the idev, add the following:
 - a) Idev creations date
 - b) RTEP case year
- 4. Include the applicable season that the idev is applicable to in the file name (WIN, SUM, LL, or All)





Contact

Facilitator: Paul McGlynn, Paul.McGlynn@pjm.com

Secretary: Tarik Bensala, Tarik.Bensala@pjm.com

SME/Presenter: Jeffrey Goldberg, Jeffrey.Goldberg@pjm.com Member Hotline (610) 666 – 8980 (866) 400 – 8980 custsvc@pjm.com



Revision History

V1 – 06/02/2023 – Original slides posted

