

Cost Containment Status and Next Steps

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Example Competitive Proposal Window With Cost Evaluation Process

Example Competitive Project Proposals

Key Tasks

Receive Proposals

Initial Triage

- Data Check
- Redaction Normalization

Independent Consultant Review

- Prepare Work Packages
- Project Specific Risk Identification
- Independent Cost Estimates

Financial Review

- Base revenue requirement analysis case
- Normalization & Base Case

Legal Review

- Evaluate the cost containment legal language

Project Cost Evaluation

- Calculations, Observations
- Visualization

Comparative Framework

- Side-by-side comparison of estimated costs, cost containment information, risk profiles, measurements and observations



Example Competitive Project Proposals

Key Task: Proposals Submitted

- Project sponsors submit proposal templates
 - Summary and Description
 - Problems Addressed
 - Project Components
 - Redaction
 - Financials
 - Cost Containment

Component cost (current year)	
Engineering and design	\$
Permitting / routing / siting	\$
ROW / land acquisition	\$
Materials and equipment	\$
Construction and commissioning	\$
Construction management	\$
Overheads and miscellaneous costs	\$
Contingency	\$
Total component cost	\$ Today
Component cost (in-service year)	\$ Future
Redacted financial information	
Cost containment redacted information	
Component 1 redacted information	
Component 2 redacted information	
Component 3 redacted information	

Cost containment commitment description	
Project scope covered by the cost containment commitment	
Cost cap in present year dollars	
Cost cap in in-service year dollars	
Additional Information on cost cap:	
Cost containment capital expenditure exemptions	
Capital cost component	Component covered by cost containment
Engineering and design	Yes
Permitting / routing / siting	Yes
ROW / land acquisition	Yes
Materials and equipment	Yes
Construction and commissioning	Yes
Construction management	Yes
Overheads and miscellaneous costs	Yes
Taxes	Yes
AFUDC	Yes
Escalation	Yes

- Template and supporting files data check (PSS/E and Market Simulation Data)
- Redaction review
- Project sponsor outreach
- Place projects into logical group “clusters”
 - Mix of project submissions (e.g. cost containment)





Example Competitive Project Proposals

Key Task: Group Competing Proposals

	Project 1	Project 2	Project 3	Project 4
Project Name	Vine to Cobbler Reconductor	New Harrison sub, new line Harrison to Jean	New line Falls to West Cooper	New Pine substation, new line to Jean
Project Description	Reconductor the Vine to Cobbler 500kV 35 mile line.	Build the new Harrison 500/230kV substation interconnecting the Logan and Wade 500kV substations. Construct a new dual circuit 230kV line between the new Harrison substation and the Jean substation.	Build the new 42 mile Falls to West Cooper 500kV line between the existing Falls and West Cooper substations.	Build the new Pine 500/230kV substation interconnecting the Logan and Wade 500kV substations. Construct a new dual circuit 230kV line between the new Pine substation and the Jean substation.

- Develop work scope packages
 - Including risk factor identification
- Communicate and coordinate with the vendors
- Receive reports

- Main inputs
 - Project submission templates
 - Includes any cost containment information
 - Constructability analysis
 - Including risk factors
- Main Outputs
 - NPV
 - Financial risk factor evaluation
 - Project financial side-by-side cost comparison
 - Legal evaluation



Example Competitive Project Proposals

Key Task: Cost Containment Evaluation

	Project 1	Project 2	Project 3	Project 4
Project Name	Vine to Cobbler Reconductor	New Harrison sub, new line Harrison to Jean	New line Falls to West Cooper	New Pine substation, new line to Jean
Capital Cost Cap (\$ Millions)	NA	110.5	NA	150*
Engineering and Design	NA	Yes	NA	Yes
Permitting / Routing / Siting	NA	Yes	NA	Yes
ROW / Land Acquisition	NA	Yes	NA	Yes
Materials and Equipment	NA	Yes	NA	Yes
Construction and Commissioning	NA	Yes	NA	Yes
Construction Management	NA	Yes	NA	Yes
Overheads and Misc. Costs	NA	Yes	NA	Yes
Escalation	NA	No	NA	Yes
AFUDC / CWIP	NA	No	NA	No
Taxes	NA	No	NA	No
ROE Cap (%)	NA	9.5	NA	No
Capital Structure (Equity %)	NA	45	NA	No

*Rate base cap

- Scenarios
 - Project cluster specific
 - Note: PJM adjusted cost incorporates cost cap scenario analysis and individual analysis

Scenario		Example Parameters
Cost of Capital	Return on Equity High	11.50%
	Return on Equity Low	9.00%
	Debt Cost High	6.00%
	Debt to Equity Ratio Low	45% Equity
	Debt to Equity Ratio High	55% Equity
	Total Construction Cost	High/Low/Etc.



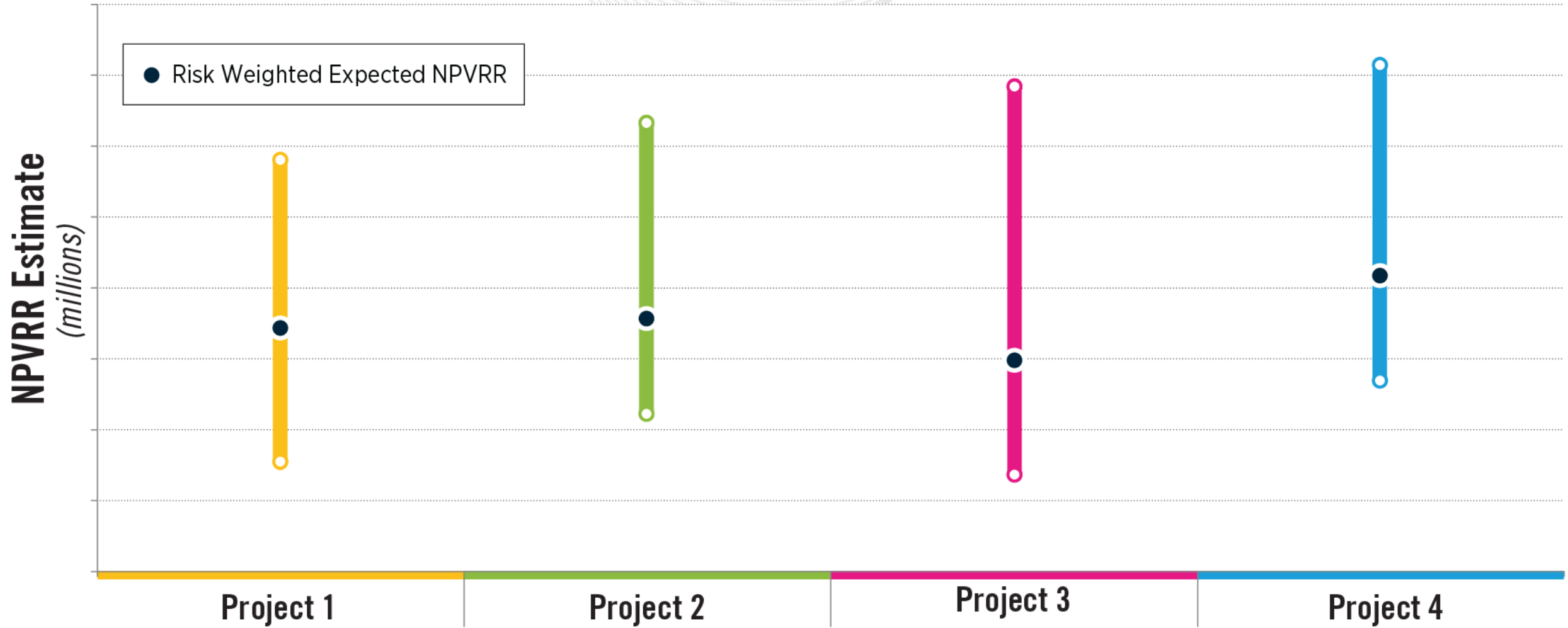
Example Competitive Project Proposals

Key Task: Cost Comparative Framework Evaluation

	Project 1	Project 2	Project 3	Project 4
Project Name	Vine to Cobbler Reconductor	New Harrison sub, new line Harrison to Jean	New line Falls to West Cooper	New Pine substation, new line to Jean
Project Sponsor Proposed Cost Estimate	\$126.5	\$127	\$115.5	\$130.9
	As received from the project sponsor. May consider cost containment.			
Independent Consultant Cost Estimate	\$132	\$146.6	\$124.8	\$152.4
	Independently developed. Does not consider cost containment.			
Cost Containment	No	Yes	No	Yes
PJM Cost Estimate With Cost Containment	These estimates will include consideration of the independent cost estimates, constructability analysis, financial analysis, legal analysis and any other relevant information.			

Example Competitive Project Proposals

Key Task: Compare Project Estimates and Risk



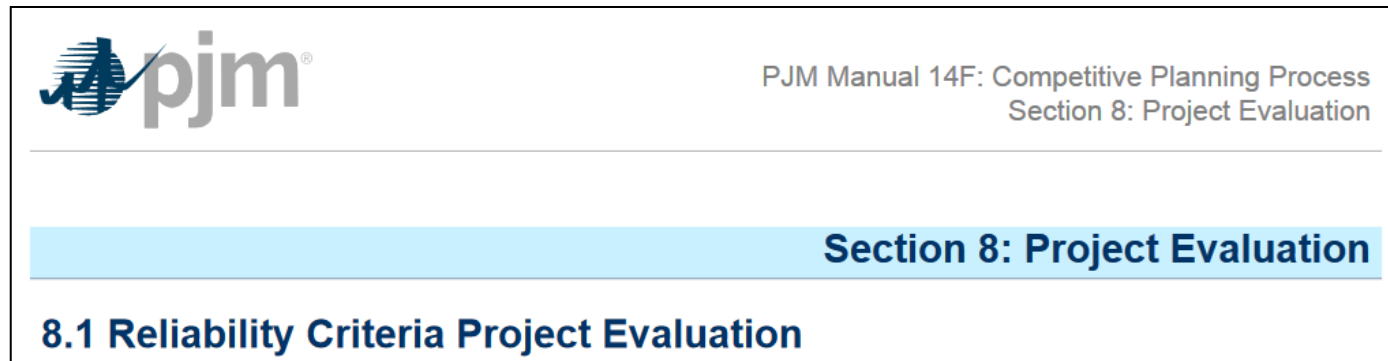
- The cost evaluation is input to overall project assessment and selection
- Will occur in parallel with performance and other analysis
 - Impact to evaluation cost

IMM and Consultant Engagement

- IMM
 - Recent 5/14 meeting
 - Future meetings scheduled
- Independent feasibility study consultants
 - Several procured
 - The number of consultants used is submission volume dependent
- Financial consultant

Necessary Documentation

- Manual 14F
 - <https://www.pjm.com/-/media/documents/manuals/m14f.ashx>
 - Add language to support cost containment



- PJM Operating Agreement
 - File by September 2019



Proposal Fee Structure Review

- All proposals, upgrade and greenfield solutions, submitted for consideration in any RTEP Proposal Window are subject to a proposal fee based on the following fee structure:

Proposal Cost Estimate	Fee
<\$20M	\$0
\$20M-\$100M	\$5k
>\$100M	\$30k



Background – Existing Process

- Current Tiered proposal fee structure
 - Developed by RPPTF in 2014/2015
 - Endorsed by MC in August of 2015 and accepted by FERC as of 2/16/2016
- PJM commitment (ER15-2648) to monitor the fee collections and costs over a two year period
 - In 2016 and 2017, collected fees closely matched evaluation costs
- Work in series vs. parallel
- Did not include cost comparative framework related costs

2016 and 2017 RTEP Window Revenue and Cost	<u>2016 Proposal Window 1</u>	<u>2016 Proposal Window 2</u>	<u>2016 Proposal Window 3*</u>	<u>2016 Totals</u>	<u>2016/17 Long Term Proposal Window**</u>	<u>2017 Proposal Window 1</u>	<u>2017 Totals</u>	<u>2016 + 2017 Total</u>
Proposal Fees Collected	\$ 165,000	\$ 270,000	\$ 55,000	\$ 490,000	\$ 980,000	\$ 160,000	\$ 1,140,000	\$ 1,630,000
Total Evaluation Costs	\$ 66,530	\$ 258,564	\$ 132,623	\$ 457,717	\$ 902,115	\$ 328,287	\$ 1,230,402	\$ 1,688,119
Net of Fees and Costs	\$ 98,470	\$ 11,436	\$ (77,623)	\$ 32,283	\$ 77,885	\$ (168,287)	\$ (90,402)	\$ (58,119)
Negative numbers = Undercollection			* This includes Addendum 1		**This includes addendum 1A			

Additional Costs Associated With Comparative Framework Approach

Independent Consultant Review

- # of consultants depends on scope of work
 - Look at more projects, earlier
- Cost up to ~ \$50k per project proposal

Financial Review

- Single consultant
 - Cost very dependent on window and cost containment
- Overall cost somewhat dependent on volume

Legal Review

- Evaluate the cost containment legal language

Comparative Framework

- Side-by-side comparison of estimated costs, cost containment information, risk profiles, measurements and observations

- Next Steps
 - Finalize review of anticipated additional costs
 - Propose new structure to address additional cost
- The comparative framework will add cost to the evaluation process
- Fee structure filed at FERC
- Current process is defined in PJM Manual 14F Attachment C