

Project Statistics

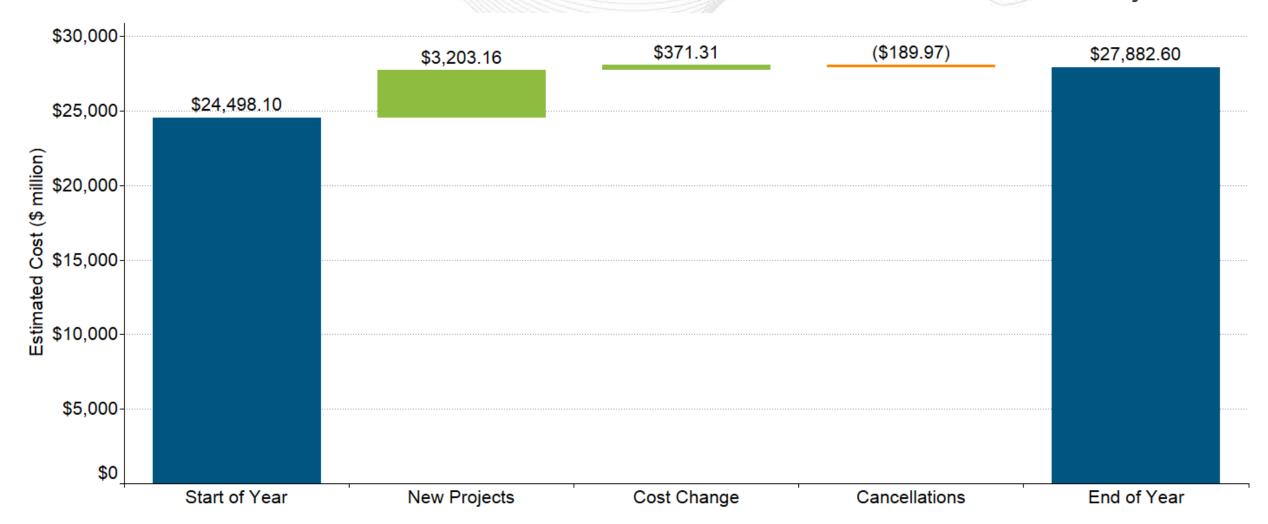
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- This in information-only posting, prepared based on stakeholder feedback and is anticipated to be updated following the periodic PJM Board meetings along with the "TEAC Whitepaper" documents that are typically posted.
- Each slide summarizes projects based on the estimated costs presented at the TEAC or Subregional TEAC meetings.
 - Costs are provided by the Designated Entity or Transmission Owners. Cost estimation methods may vary by company. Estimated costs in this document may include cost caps or cost containment even though it isn't specifically noted
 - Cost estimates may change over time as new information is known and incorporated into the estimate by the project sponsor, this document reflects the current estimates that are provided to PJM
 - A single cost is provided for each project identifier, without any additional breakdown (for example, cost by state)
- This information is not part of the TEAC agenda. PJM requests feedback in writing through the <u>Planning</u> <u>Community</u> tool.



2017 Changes to the RTEP Baseline Projects



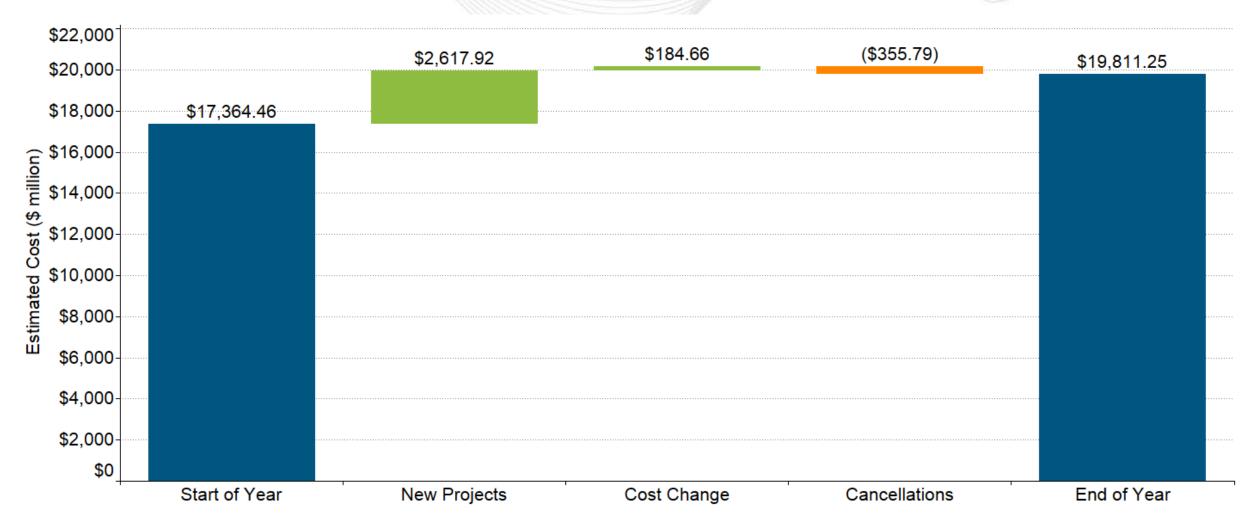


2017 Changes to the RTEP Generation and Merchant Network Upgrade Projects



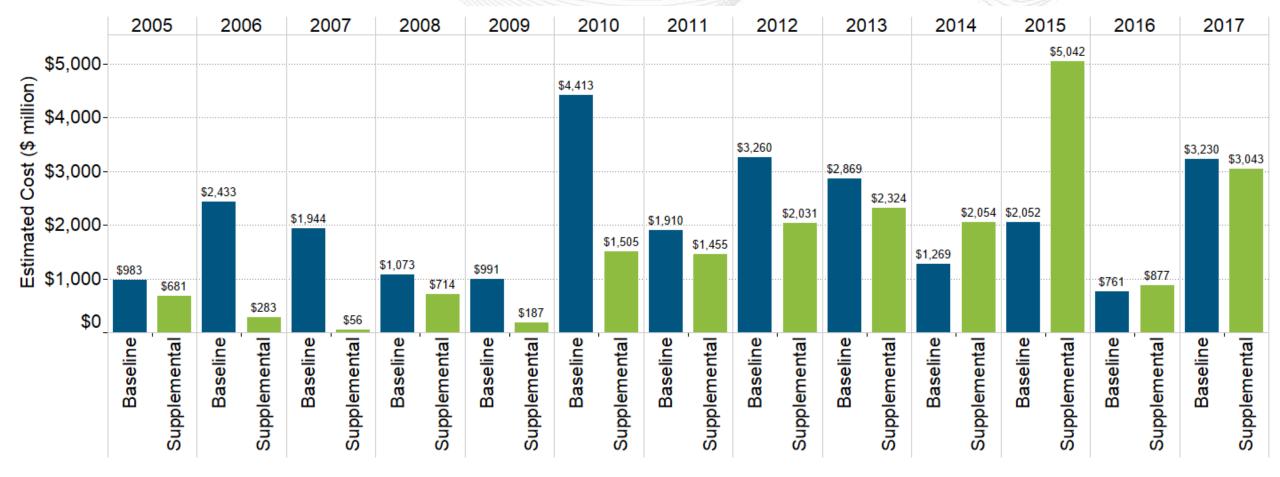


2017 Supplemental Projects Presented by TOs to TEAC/Sub-regional TEAC Meetings





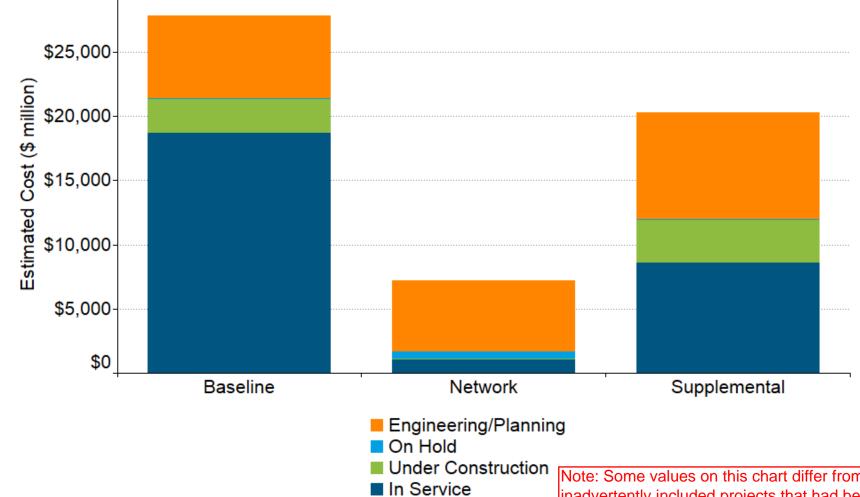
New Baseline and Supplemental Projects by Year



Note: Some values on this chart differ from the one published on 1/11/2018. The original posting inadvertently included projects that had been canceled or had not yet been fully accepted.

BaselineSupplemental



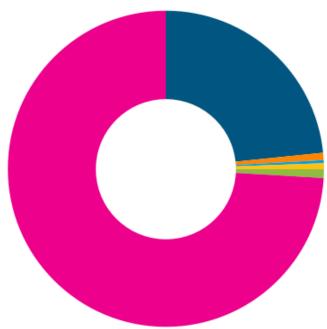


	Baseline	Network	Supplemental
Engineering/Planning	\$6,456	\$5,532	\$8,262
On Hold	\$34	\$567	\$77
Under Construction	\$2,614	\$95	\$3,343
n Service	\$18,726	\$1,028	\$8,590
Grand Total	\$27,830	\$7,223	\$20,272



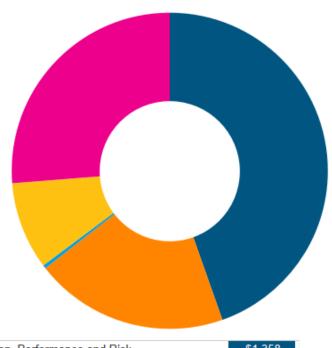
New Projects in 2017 **Project Drivers**

Estimated Cost of Baseline Projects Approved by PJM Board



Baseline Load Growth Deliverability & Reliability	\$755
Congestion Relief - Economic	\$24
Generator Deactivation	\$10
Operational Performance	\$21
Short Circuit	\$28
TO Criteria Violation	\$2,392

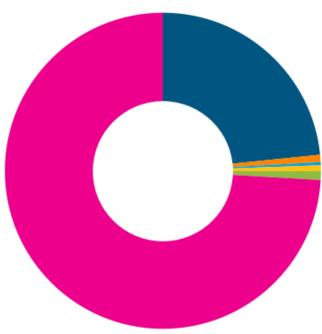
Estimated Cost of Supplemental Projects Presented by TOs to the TEAC



Equipment Material Condition, Performance and Risk	\$1,358
Operational Flexibility and Efficiency	\$603
Infrastructure Resilience	\$11
Customer Service	\$273
Other	\$0
Multiple Drivers	\$798



Estimated Cost of Baseline Projects Approved by PJM Board



Baseline Load Growth Deliverability & Reliability	\$755
Congestion Relief - Economic	\$24
Generator Deactivation	\$10
Operational Performance	\$21
Short Circuit	\$28
TO Criteria Violation	\$2,392

New Projects in 2017 **Baseline Project Drivers**

Estimated Cost of Baselines Projects Driven by TO Criteria Violations

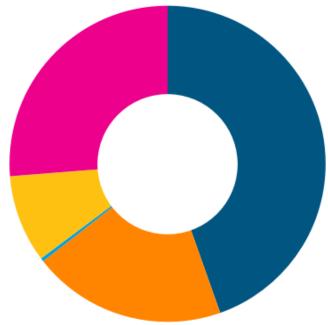


Aging Infrastructure

Other TO Criteria



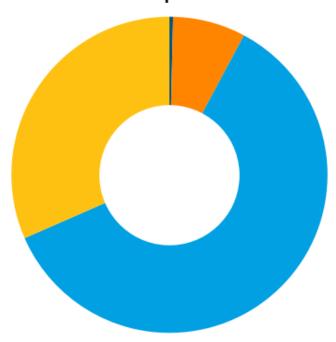
Estimated Cost of Supplemental Projects Presented by TOs to the TEAC



Equipment Material Condition, Performance and Risk	\$1,358
Operational Flexibility and Efficiency	\$603
Infrastructure Resilience	\$11
Customer Service	\$273
Other	\$0
Multiple Drivers	\$798

New Projects in 2017 Supplemental Project Drivers

Estimated Cost of Supplemental Projects with Multiple Drivers

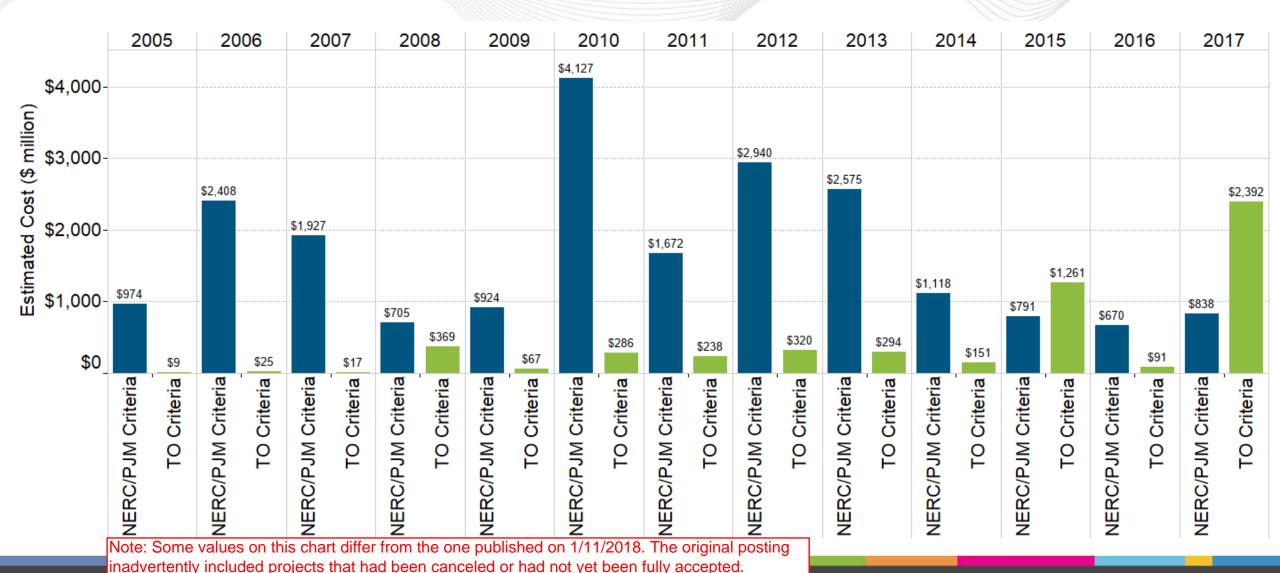


Equipment Material Condition, Performance and Risk / Customer Service	\$3
Equipment Material Condition, Performance and Risk / Infrastructure Resilience	\$59
Equipment Material Condition, Performance and Risk / Operational Flexibility and Efficiency	\$484
Operational Flexibility and Efficiency / Customer Service	\$252

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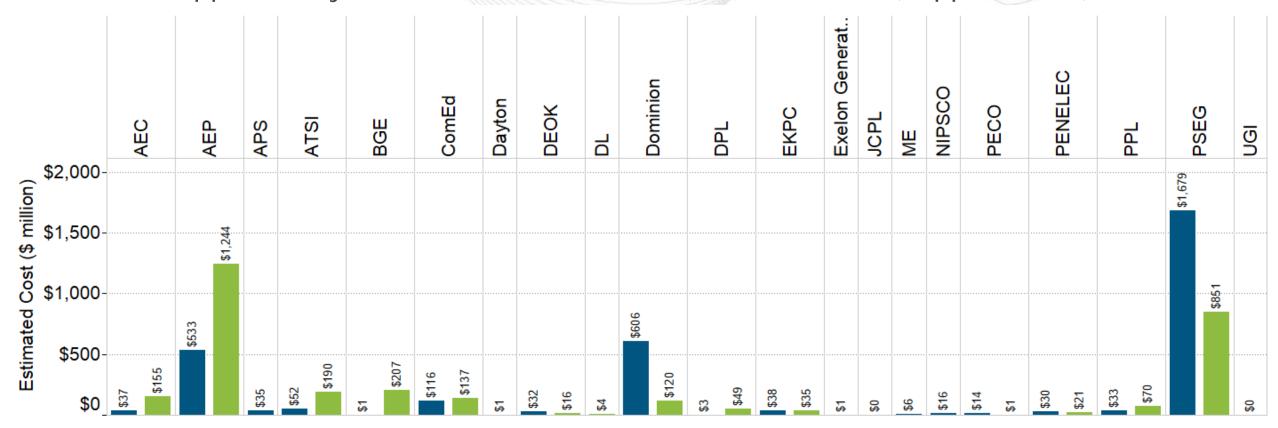


*Baseline Project Driver Type



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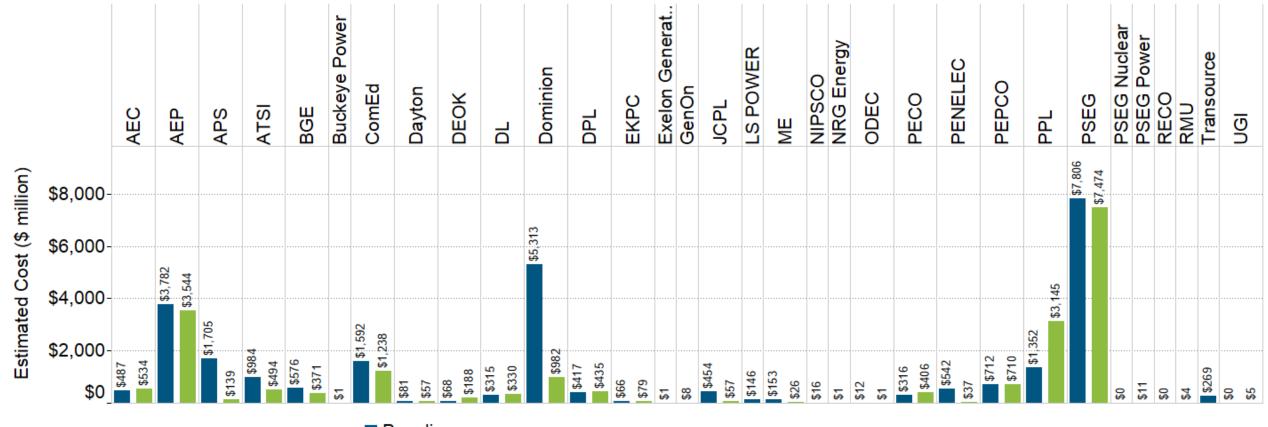
Distribution of New Baseline and Supplemental Projects Approved by the PJM Board (baseline) or Presented (supplemental) in 2017



■ Baseline Projects Approved in Calendar Year

Supplemental Projects Presented in Calendar Year

Distribution of New Baseline and Supplemental Projects Approved by the PJM Board (baseline) or Presented (supplemental) since 2005

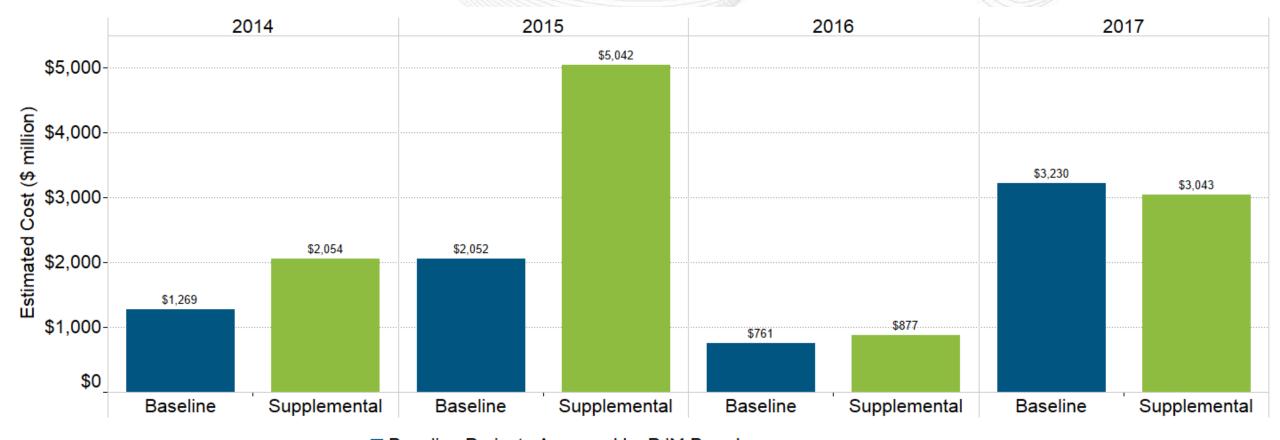


Baseline

Supplemental



Baseline and Supplemental Projects by Year

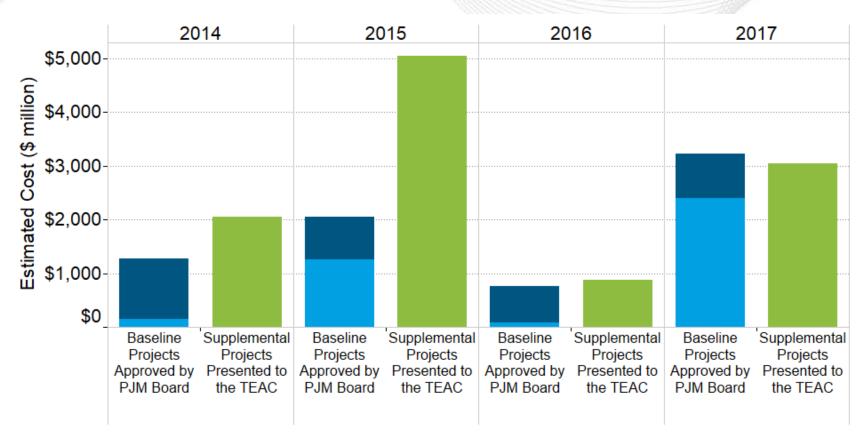


■ Baseline Projects Approved by PJM Board

Supplemental Projects Presented to the TEAC



Baseline and Supplemental Projects by Year

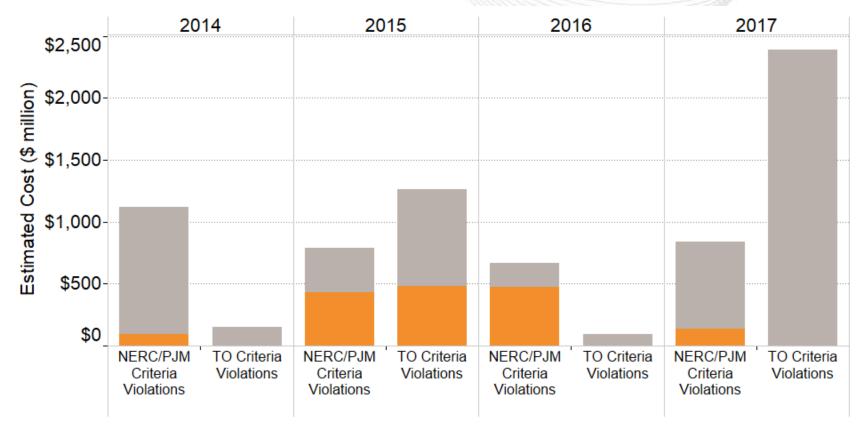


	Baseline		Supplemental	
	NERC/PJM Criteria Violations	TO Criteria Violations	Supplemental Projects	
2014	\$1,118	\$151	\$2,054	
2015	\$791	\$1,261	\$5,042	
2016	\$670	\$91	\$877	
2017	\$838	\$2,392	\$3,043	

- NERC/PJM Criteria Violations
- TO Criteria Violations



Baseline Projects by Year



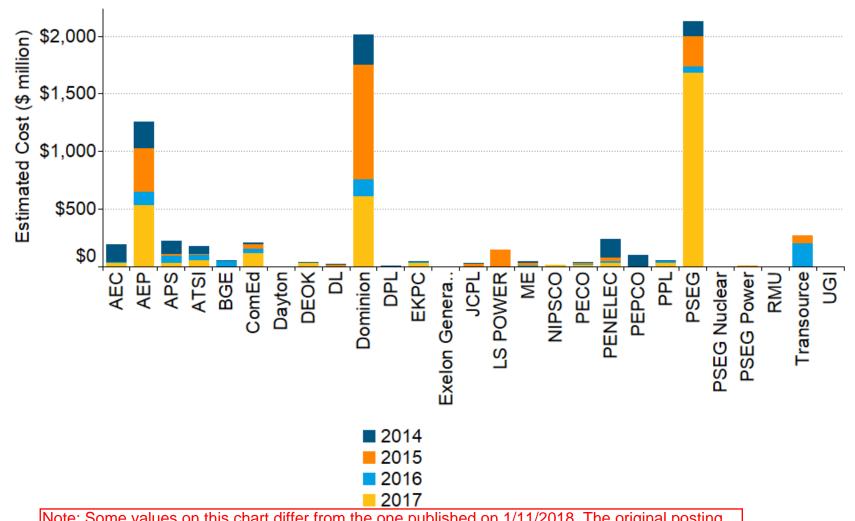
	Eligible for Competitive Window	Not Eligible for Competitive Window
2014	\$90	\$1,179
2015	\$912	\$1,140
2016	\$471	\$290
2017	\$136	\$3,094

■ Not Eligible for Competitive Window

Eligible for Competitive Window



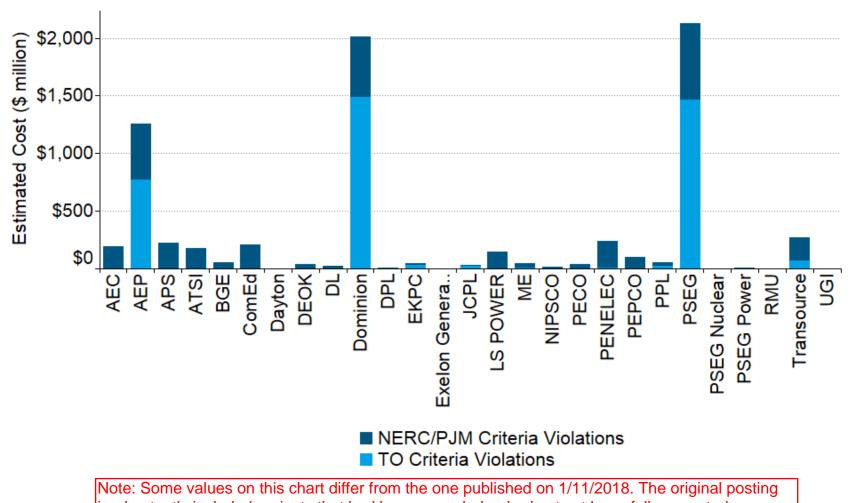
Baseline Projects by Designated Entity Approved by PJM Board 2014-2017



	2014	2015	2016	2017
AEC	\$152		\$1	\$37
AEP	\$229	\$381	\$114	\$531
APS	\$114	\$15	\$60	\$35
ATSI	\$70	\$12	\$45	\$52
BGE	\$2		\$53	\$1
ComEd	\$14	\$40	\$39	\$116
Dayton	\$0			\$1
DEOK	\$2	\$7		\$30
DL	\$7	\$13		
Dominion	\$259	\$998	\$148	\$606
DPL	\$0	\$4		\$3
EKPC	\$0	\$5	\$1	\$38
Exelon Generation				\$1
JCPL	\$6	\$23	\$1	\$ 0
LS POWER		\$146		
ME	\$14	\$21	\$3	\$6
NIPSCO				\$16
PECO	\$2	\$12	\$12	\$14
PENELEC	\$163	\$30	\$15	\$30
PEPCO	\$97			
PPL	\$3	\$5	\$14	\$33
PSEG	\$134	\$260	\$56	\$1,679
PSEG Nuclear		\$0		
PSEG Power		\$8		
RMU			\$4	
Transource		\$72	\$197	
UGI			\$0	



Baseline Projects by Designated Entity Approved by PJM Board 2014-2017

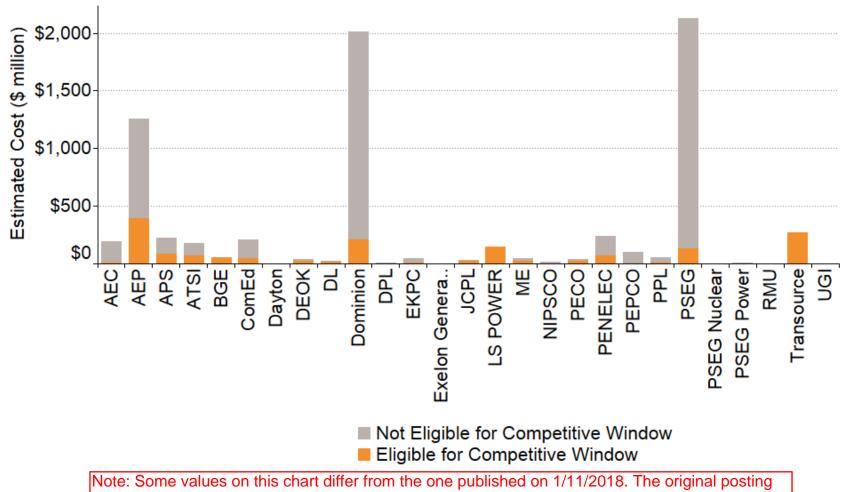


	NERC/PJM Criteria Violations	TO Criteria Violations
AEC	\$191	
AEP	\$481	\$774
APS	\$223	\$1
ATSI	\$179	
BGE	\$56	
ComEd	\$210	
Dayton	\$1	
DEOK	\$39	
DL	\$20	
Dominion	\$521	\$1,490
DPL	\$8	
EKPC	\$10	\$34
Exelon Generation	\$1	
JCPL	\$3	\$27
LS POWER	\$146	
ME	\$38	\$6
NIPSCO	\$16	
PECO	\$40	
PENELEC	\$229	\$9
PEPCO	\$97	
PPL	\$32	\$22
PSEG	\$668	\$1,462
PSEG Nuclear	\$0	
PSEG Power	\$8	
RMU	\$4	
Transource	\$197	\$72
UGI	\$0	

inadvertently included projects that had been canceled or had not yet been fully accepted.



Baseline Projects by Designated Entity Approved by PJM Board 2014-2017

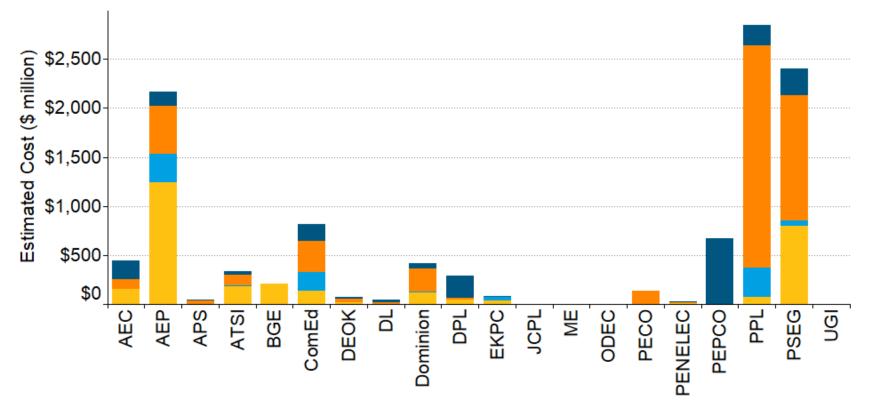


	Eligible for Competitive Window	Not Eligible for Competitive Window
AEC	\$8	\$184
AEP	\$393	\$862
APS	\$84	\$139
ATSI	\$72	\$107
BGE	\$56	
ComEd	\$48	\$162
Dayton		\$1
DEOK	\$26	\$14
DL	\$18	\$2
Dominion	\$205	\$1,806
DPL	\$4	\$3
EKPC	\$6	\$38
Exelon Generation		\$1
JCPL	\$23	\$6
LS POWER	\$146	
ME	\$23	\$20
NIPSCO		\$16
PECO	\$22	\$18
PENELEC	\$67	\$170
PEPCO		\$97
PPL	\$7	\$48
PSEG	\$132	\$1,997
PSEG Nuclear	\$0	
PSEG Power		\$8
RMU		\$4
Transource	\$269	
UGI		\$0

inadvertently included projects that had been canceled or had not yet been fully accepted.



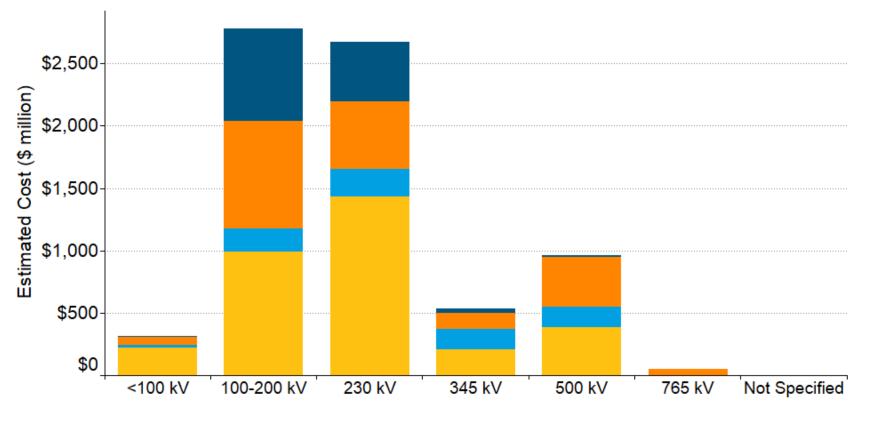
Supplemental Projects by Transmission Owner Presented to the TEAC/Sub-regional TEAC Meetings in 2014-2017



	2014	2015	2016	2017
AEC	\$190	\$97		\$155
AEP	\$146	\$492	\$288	\$1,244
APS	\$9	\$40	\$1	
ATSI	\$43	\$102	\$2	\$190
BGE				\$207
ComEd	\$179	\$317	\$186	\$137
DEOK	\$20	\$37		\$16
DL	\$28	\$11		\$4
Dominion	\$60	\$235	\$6	\$120
DPL	\$220	\$17		\$49
EKPC	\$1	\$10	\$33	\$35
JCPL	\$0	\$0		
ME		\$4		
ODEC		\$1		
PECO		\$135		\$1
PENELEC	\$1	\$1	\$0	\$21
PEPCO	\$674			
PPL	\$212	\$2,262	\$306	\$70
PSEG	\$272	\$1,283	\$55	\$795
UGI				\$0



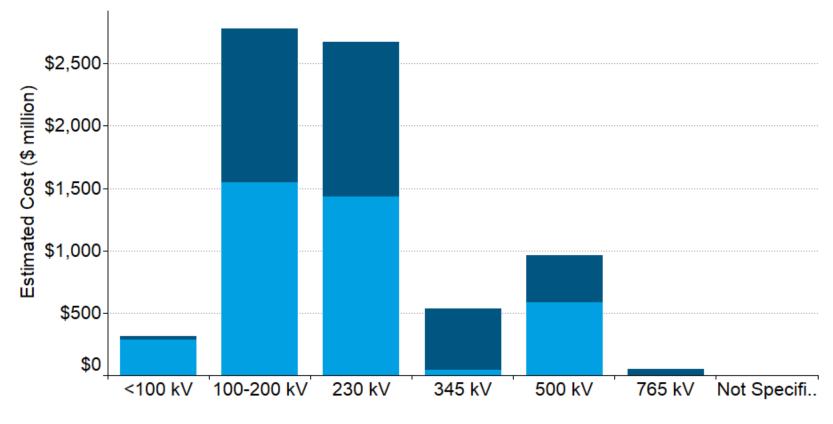
Baseline Projects by Voltage Approved by PJM Board 2014-2017



	2014	2015	2016	2017
<100 kV	\$3	\$65	\$25	\$221
100-200 kV	\$746	\$860	\$186	\$991
230 kV	\$474	\$542	\$223	\$1,431
345 kV	\$32	\$135	\$161	\$206
500 kV	\$14	\$399	\$165	\$383
765 kV		\$52		
Not Specified	\$1	\$0		



Baseline Projects by Voltage Approved by PJM Board 2014-2017



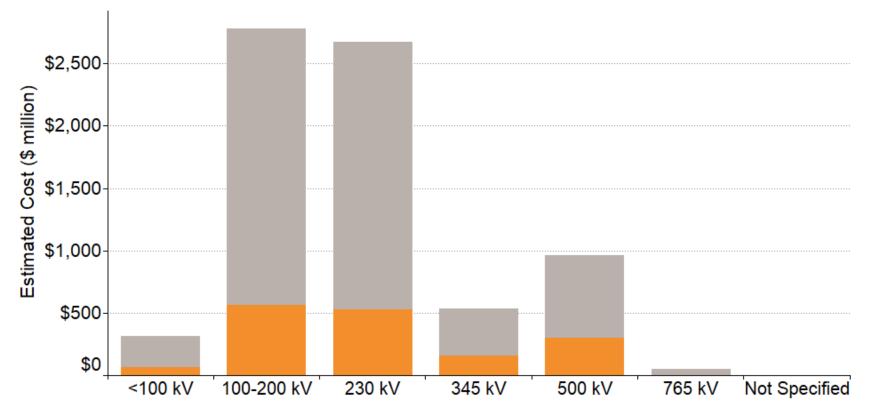
	NERC/PJM Criteria Violations	TO Criteria Violations
<100 kV	\$28	\$286
100-200 kV	\$1,233	\$1,550
230 kV	\$1,237	\$1,433
345 kV	\$490	\$43
500 kV	\$377	\$583
765 kV	\$52	
Not Specified	\$1	

■ NERC/PJM Criteria Violations

■ TO Criteria Violations



Baseline Projects by Voltage Approved by PJM Board 2014-2017



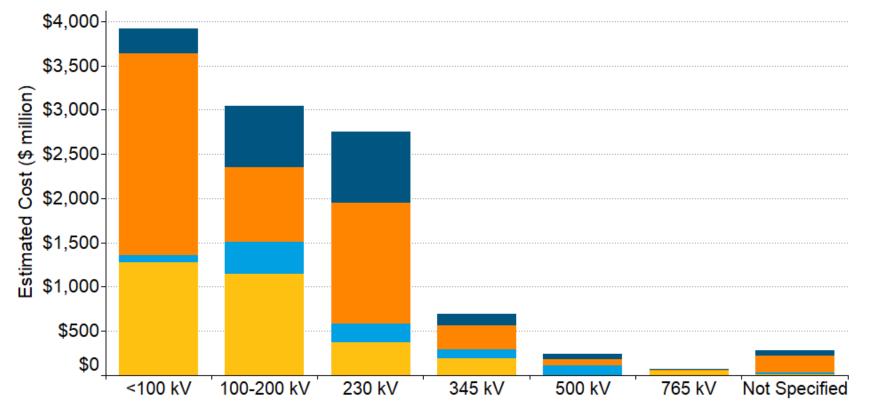
	Eligible for Competitive Window	Not Eligible for Competitive Window
<100 kV	\$63	\$251
100-200 kV	\$561	\$2,221
230 kV	\$530	\$2,140
345 kV	\$158	\$375
500 kV	\$297	\$664
765 kV	\$1	\$51
Not Specified	\$0	\$1

■ Not Eligible for Competitive Window

Eligible for Competitive Window



Supplemental Projects by Voltage Presented to the TEAC/Sub-regional TEAC Meetings in 2014-2017



2014 2015 2016

2017

	2044	2045	2040	2047
	2014	2015	2016	2017
<100 kV	\$284	\$2,284	\$78	\$1,278
100-200 kV	\$693	\$845	\$365	\$1,142
230 kV	\$811	\$1,358	\$217	\$370
345 kV	\$129	\$277	\$97	\$189
500 kV	\$66	\$68	\$105	\$3
765 kV	\$7	\$19		\$50
Not Specified	\$65	\$192	\$14	\$12

Note: Some values on this chart differ from the one published on 1/11/2018. The original posting inadvertently included projects that had been canceled or had not yet been fully accepted.

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- V2 2/13/2018 Reposted with tabular values
- V1 1/9/2018 Original Slides Posted