



Interregional Targeted Market Efficiency Projects

Market Efficiency Process
Enhancement Task Force

December 7, 2018

- Respond to stakeholder requests for TMEP examples

Interregional TMEPs Approved in 2017

- NERC FG ID: 2286/2205
- Ownership: CE-NIPS
- Outages Impacting: None known
- Planned Upgrades Impacting: None known
- Current Rating: 1195/1195
- Upgrade: Reconfigure Munster as ring bus (NIPSCO)
- Upgraded Rating: 1201/1441
- TMEP Cost: \$6.7 Million
- TMEP Benefit: \$32 Million

- NERC FG ID: 2647
- Ownership: ATSI – ITC
- Outages Impacting: None known
- Planned Upgrades Impacting: None known
- Current Rating: 1262/1494
- Upgrade : Replace conductor on river-crossing span (FE)
- Upgraded Rating: 1486/1702
- Upgrade Cost: \$1 Million
- TMEP Benefit: \$17 Million

- NERC FG ID: 2427/2540
- Ownership: NIPS – AEP
- Outages Impacting: New Carlisle (~20%)
- Planned Upgrades Impacting: None known
- Current Rating: 156/156
- Upgrade: Reconductor (NIPSCO)
- Upgraded Rating: 186/221
- TMEP Cost: \$6.0 Million
- TMEP Benefit: \$29.6 Million

- NERC FG ID: 20729/2548/2685
- Ownership: NIPS
- Outages Impacting: None known
- Planned Upgrades Impacting: None known
- Current Rating: 287/287
- Upgrade: Replace terminal equipment at Reynolds (NIPSCO)
- Upgraded Rating: 305/366
- TMEP Cost: \$120 k
- TMEP Benefit: \$14.5 Million

- NERC FG ID: 2577/2531
- Ownership: NIPS
- Outages Impacting: None known
- Planned Upgrades Impacting: None known
- Current Rating: 158/158
- Upgraded Rating: 434/525
- Proposed Upgrade: Reconductor (NIPSCO)
- TMEP Cost: \$6.1 Million
- TMEP Benefit: \$6.5 Million



Summary of Approved TMEPs

Facility	Transmission Owner	PJM Project ID	MISO Project ID	TMEP Cost (Million \$)	TMEP Benefit (Million \$)	Benefit Allocation (%PJM/%MISO)
Burnham - Munster 345kV	CE - NIPS	b2971	14264	6.7	32	88/12
Bayshore - Monroe 345kV	ATSI - ITC	b2972	14265	1	17	89/11
Michigan City – Bosserman 138kV	NIPS - AEP	b2973	14266	6.0	29.6	90/10
Reynolds-Magnetation 138kV	NIPS	b2974	14267	0.12	14.5	41/59
Roxana - Praxair 138kV	NIPS	b2975	14268	6.1	6.5	24/76



Interregional TMEPs Recommended for December 2018 Board Approval

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- M2M facilities with >\$1 million congestion (2016 + 2017)

33

- Addressed by planned system upgrade/changes

16

- Outage driven

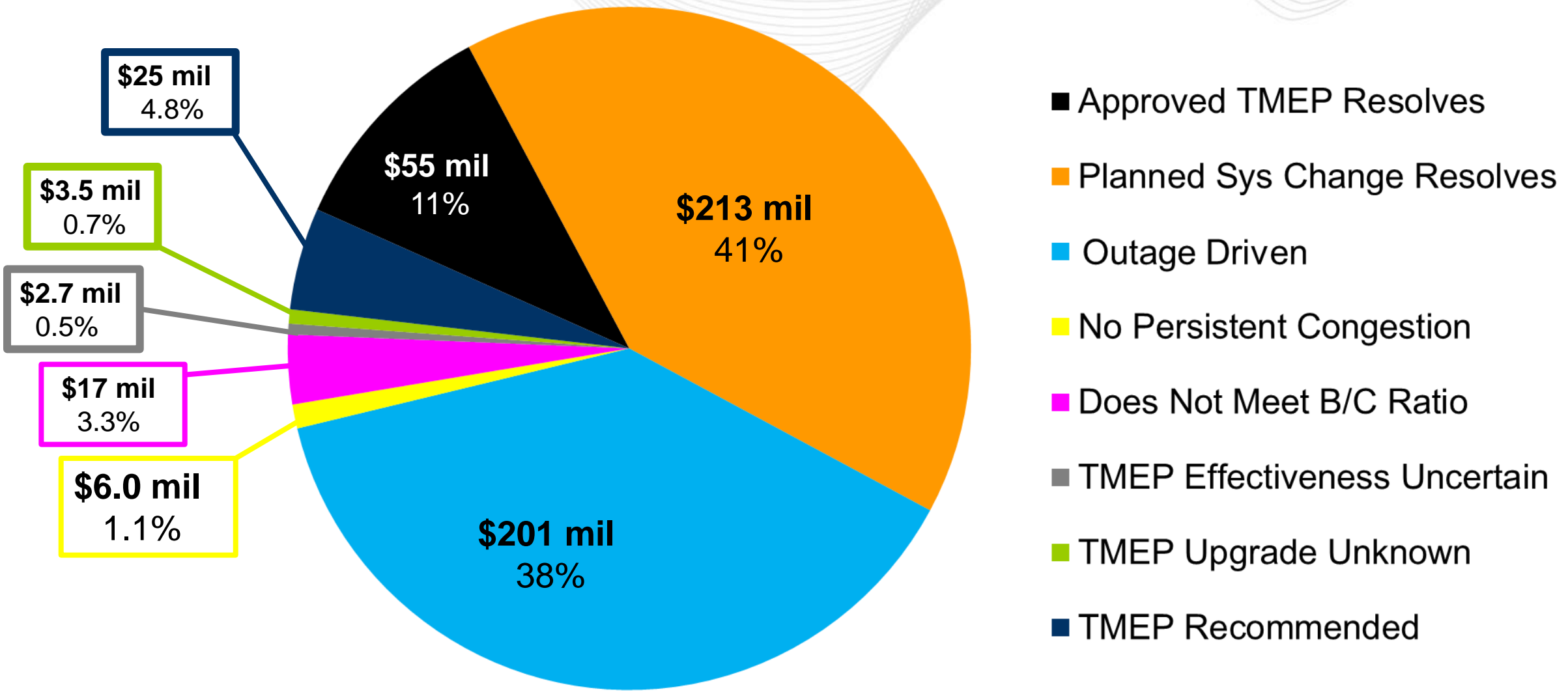
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- Don't meet TMEP Criteria

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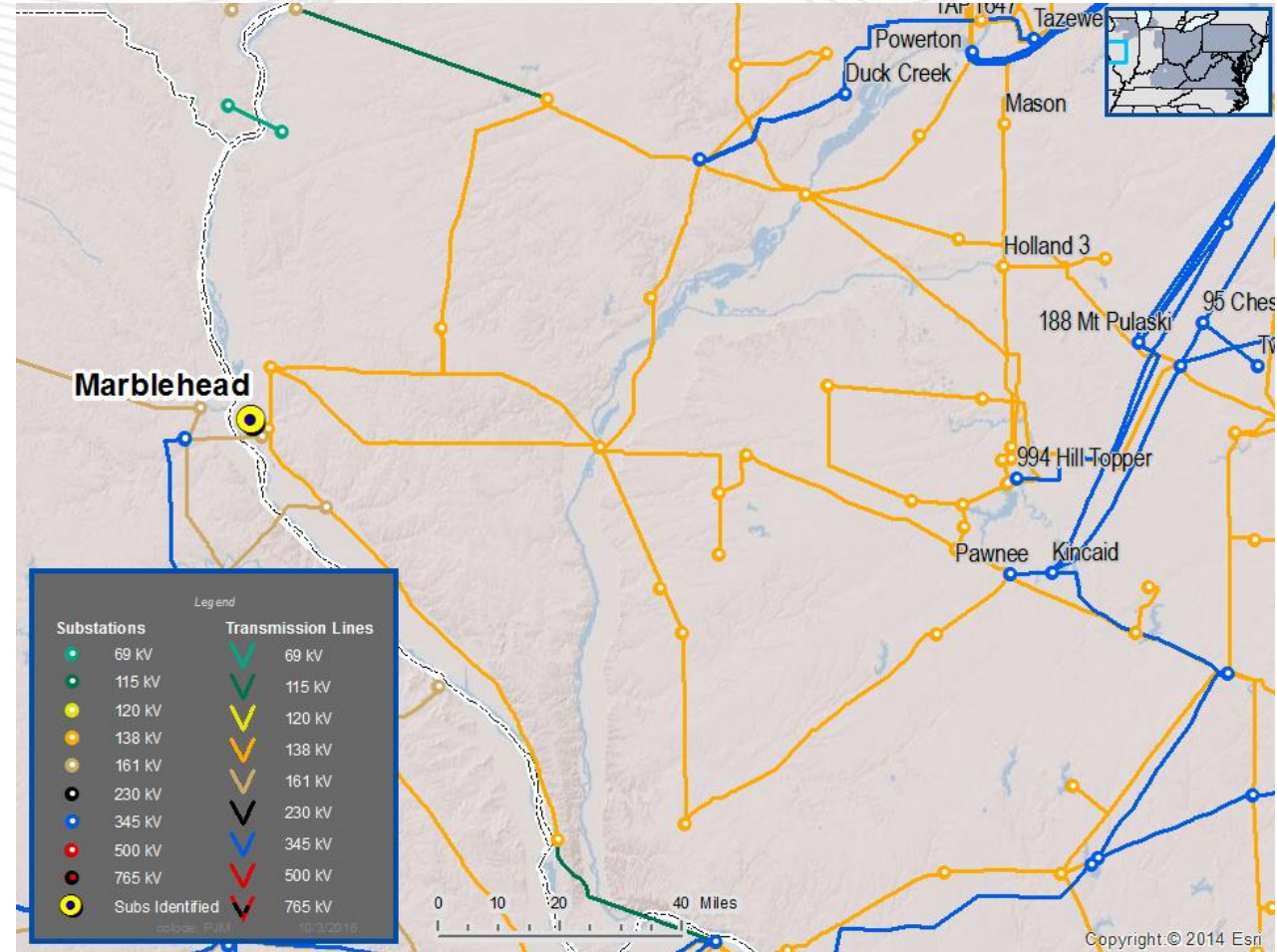
- Recommended TMEPs

* See October 5 IPSAC for full details: <https://pjm.com/committees-and-groups/stakeholder-meetings/ipsac-midwest.aspx>

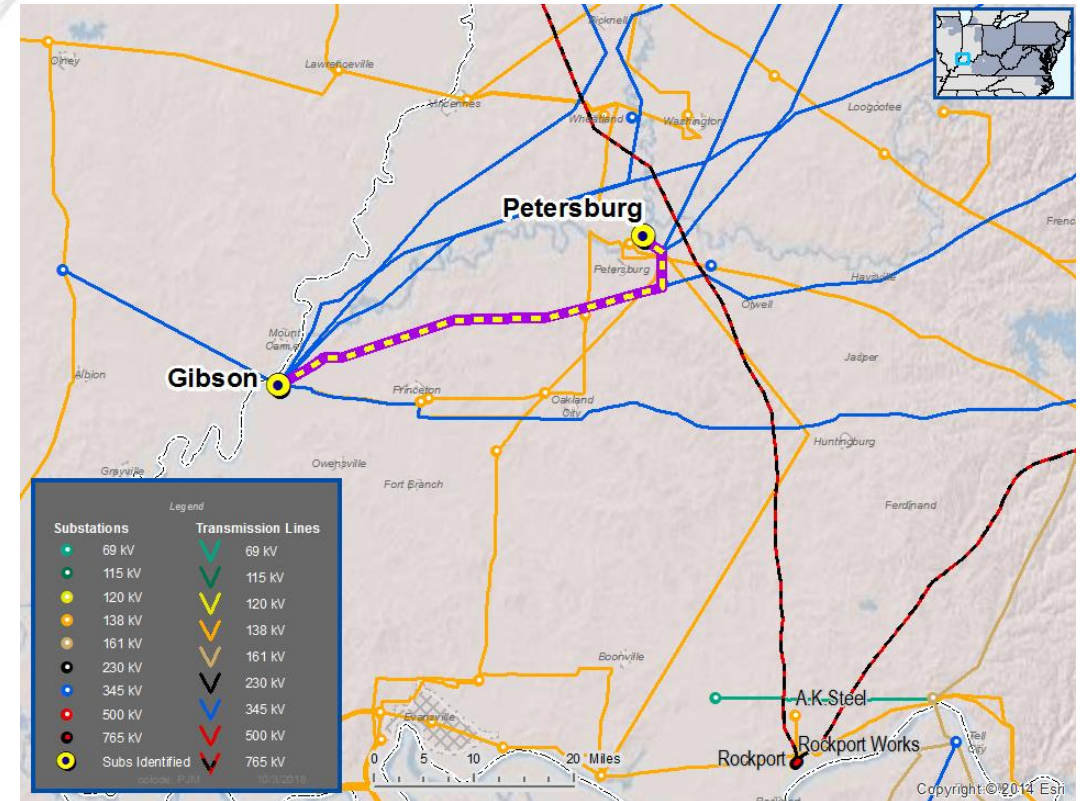


- Approved TMEP Resolves
- Planned Sys Change Resolves
- Outage Driven
- No Persistent Congestion
- Does Not Meet B/C Ratio
- TMEP Effectiveness Uncertain
- TMEP Upgrade Unknown
- TMEP Recommended

Flowgate ID(s): 23418
Historical Congestion: \$ 15.5 million
Ownership: AMIL
Outages Impacting: None Identified
Planned Upgrades: None Identified
Current Rating: 280/287/287/287
Upgrade Type: Terminal equipment
Upgrade Cost: \$ 175 k
Upgraded Rating: 300/300/300/300



Flowgate ID(s): 2047, 21530, 22613
Historical Congestion: \$ 9.8 Million
Ownership: DEI – IPL tie
Outages Impacting: None Identified
Planned Upgrades: None Identified
Current Rating: 1195/1195/1195/1195
Upgrade Type: Substation equipment
Upgrade Cost: \$4.3 million
Upgraded Rating: 1374/1374/1798/1798 MVA





Summary of Recommended TMEPs

Facility	Transmission Owner	TMEP Cost (Million \$)	TMEP Benefit (Million \$)	Benefit Allocation (%PJM/% MISO)
Marblehead 161/138 kV	AMIL	0.175	12.4	0 / 100
Gibson – Petersburg 345 kV	DEI - IPL	4.3	19.5	7 / 93