

The
Disconnect
Between
Transmission
Policies and
Planning

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Transmission Policies – All Good Goals

- End to balkanization of the grid
- Grid modernization
- Competition
 - Order 1000
- Integrated planning
- Reduced prices for electricity
- Deployment of advanced technologies
 - EPCRA 2002 § § 1223 and 1241 (42 U.S.C. § 16422 & 16 U.S.C. § 824s(b)(1))

Reality – Transmission Planning Only Applies To A Shrinking Subset of Projects

- RTOs review only a fraction of the transmission projects that are built
- The rest are built with limited or no RTO review for either need or cost
 - These are primarily end-of-life projects – aka, repair and replacement of existing facilities, “asset management projects,” or “supplemental projects”
 - The costs of these projects is flowed directly into rate base
- California’s largest utility, PG&E, is spending approximately \$750 million each year on these “asset replacements”
 - Approximately 63% of its annual capital additions
- The scope of these projects is growing

2007-2017 (Last Decade) Transmission Investment of California's Three Largest PTOs

Utility	Total Capital Additions 2007-2017	Self-Approved Capital Additions (\$)	Self-approved Project Costs (% of Total Cap Adds)
PG&E	\$7,990,370,000	\$5,036,333,000	63.03%
SCE	\$6,513,529,000	\$971,333,000	14.91%
SDG&E	\$4,206,737,000	\$492,453,000	11.71%
TOTAL	\$18,710,636,000	\$6,500,119,000	34.74%

2018-2022 (Next Five Years) Transmission Investment Anticipated

Utility	Forecasted Total Capital Additions 2018-2022	Forecasted Self-Approved Project Costs (\$)	Forecasted Self-Approved Project Costs (% of Total Cap Adds)
PG&E	\$5,149,284,000	\$3,231,484,000	62.76%
SCE	\$3,134,801,000	\$1,123,347,000	35.83%
SDG&E	\$1,240,941,000	\$566,480,000	45.65%
TOTAL	\$9,525,026,000	\$4,921,311,000	51.67%



It's Not Just California

11/16/2018

Historical Transmission Investment in the U.S.

Scope of ISO/RTO Oversight in U.S. Transmission Investments

Of \$70 billion in transmission investments by FERC-jurisdictional TOs in ISO/RTO regions over the last 4-5 years, almost **half was made without full ISO/RTO and stakeholder engagement** in the planning process

- Investments based on local planning processes of incumbent TOs are only subject to limited ISO/RTO review
- FERC's August 31 Order (Docket No. EL17-45, still subject to rehearing): **only transmission "expansion" activities are subject to full regional planning requirements**

Transmission Investments Subject to Full or Limited Review in ISO/RTO Regional Planning Processes

	Years Reviewed	FERC Jurisdictional Additions by Transmission Owners (nominal \$million, based on FERC Form 1 Filings)	Investments Approved Through <u>Full ISO/RTO Planning Process</u> (nominal \$million)	% of Total FERC Jurisdictional Investments Approved Through <u>Full</u> ISO/RTO Planning Process	% of Total FERC Jurisdictional Investments with <u>Limited</u> ISO/RTO Review
CAISO	2014 - 2016	\$7,528	\$4,043	54%	46%
ISO-NE	2013 - 2017	\$7,488	\$5,300	71%	29%
MISO	2013 - 2017	\$15,530	\$8,068	52%	48%
NYISO	2013 - 2017	\$2,592	n/a	n/a	n/a
PJM	2013 - 2017	\$31,469	\$14,458	46%	54%
SPP	2013 - 2017	\$6,202	\$4,226	68%	32%
Total	-	\$70,810	\$36,095	53%	47%

Sources & Notes: Data based on FERC Form 1 and ISO/RTO Tracking Reports. CAISO data reflects only select transmission additions/approved investments of PG&E, SCE, and SDG&E for 2014-2016, based on available data. Aggregate Investment for each ISO/RTO reflects total FERC Form 1 transmission additions over indicated time periods. Investments approved by ISO/RTO reflects total value of transmission additions placed in-service over indicated time periods, approved through ISO/RTO processes.

FERC's Conflicting Orders Create Confusion

- August 2016 - PJM Order to Show Cause
 - FERC Docket No. EL16-71, 156 FERC ¶ 61,134
- February 2017 - California Parties filed a complaint against PG&E
 - Asked FERC to order PG&E to apply Order 890 to all PG&E transmission projects not reviewed by the CAISO
- August 2018 – FERC Order Dismisses Cal Parties' Complaint
 - “Asset Management Projects” which do not add capacity to the grid are not subject to Order 890
 - PG&E should consider a voluntary process
 - FERC Docket No. 17-45, 164 FERC ¶ 61,161
- October 2018 – ALJ Initial Decision in PG&E's Rate Case
 - PG&E's \$750 million/year spent on asset management projects is “outside the scope”
 - FERC Docket No. 16-2320, 165 FERC ¶ 63,001, PP 624-626

Where Do We Go From Here?

- PG&E is spending over \$2 million/day on these projects
- This is clearly transmission planning – PG&E had 5 year plans for this work
- While some work is clearly justified, the magnitude of the problem cannot be ignored
- As the Brattle Study shows, it's a national problem that impacts all RTOs

Solutions Needed – Sooner Rather Than Later

- Stakeholders need mandatory and comprehensive transparency
- Consumers lose the benefits of competition
- No integrated transmission planning
- How are we going to get FERC to do the right thing?
- What else can be done?
- Join me in turning this around