

# Overview of CAISO Integration Costs for PG&E

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# Order of Presentation Topics

1. How PG&E disaggregated Rule 24 functions to help break out its costs
2. What Rule 24 functionality already exists
3. Rule 24 related costs in current proceedings
4. What activities are supported by these costs
5. Summary of total CAISO integration costs
6. Key take-aways

# Cost Incrementality

- Costs provided are INCREMENTAL to current or previously funded processes and IT work.
- **PG&E has requested cost recovery for its MRTU work but has yet to receive cost recovery for that work.**

# **How PG&E Disaggregates Rule 24 Functions When Deriving its Costs in These Proceedings.**

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# This matrix will be used to describe the scope of all cost recovery filings to follow And Services

Case	Customer	LSE	MDMA	DRP
1	Bundled	PG&E	PG&E	PG&E
2	Bundled	PG&E	PG&E	3rd party
3	CCA	3rd party	PG&E	PG&E
4	DA	3rd party	PG&E	PG&E
5	CCA	3rd party	PG&E	3rd party
6	DA	3rd party	PG&E	3rd party
7	DA	3rd party	3rd party	PG&E
8	DA	3rd party	3rd party	3rd party

All Combinations of PG&E Roles and Customer Types **Plus**

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All Combinations of ISO Product Offerings

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# MRTU Proceeding

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# MRTU Foundational Work

## PG&E bids in PDR for one of its programs (“PDR1”)

Most Simple Case

Case	Customer	LSE	MDMA	DRP	Supported Day Ahead Products			Supported Real Time Products	
					Energy	A/S	RUC	Energy	A/S
1	Bundled	PG&E	PG&E	PG&E	YES	NO	NO	NO	NO

Used for Peak Choice Program in  
2011 and 2012

**Rule 24 Cost Recovery Application  
filed June 2<sup>nd</sup>, 2014**

**Cost to Fully Integrate Third Party Bidding  
into CAISO Market**

**As Illustrated in Appendix B of Application**

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# Rule 24 Cost Recovery Filing – Appendix B Full Implementation for non-Utility DRPs

Case	Customer	LSE	MDMA	DRP	Supported Day Ahead Products			Supported Real Time Products	
					Energy	A/S	RUC	Energy	A/S
1	Foundational Work – Partially Implemented, Updated with PDR2								
2	Bundled	PG&E	PG&E	3 <sup>rd</sup> Party	YES	YES	YES ?	YES	YES
3									
4									
5	CCA	3rd party	PG&E	3 <sup>rd</sup> Party	YES	YES	YES?	YES	YES
6	DA	3rd party	PG&E	3 <sup>rd</sup> Party	YES	YES	YES?	YES	YES
7									
8	DA	3rd party	3rd party	3 <sup>rd</sup> Party	YES	YES	YES?	YES	YES

**Cost estimate for 3<sup>rd</sup> party full implementation is about \$19M**

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# Business and IT Activities Needed to Facilitate non-IOU DRPs Participation into CAISO Market

Activity Number	Activity Description
1	Isolating PG&E staff that provide services to non-utility DRPs
2	Establishing and maintaining third parties as non-utility DRPs
3	Processing and maintaining a DRP's Access to customer specific data via CISR-DRP Form
4	Modifying PG&E systems to produce and track non-interval data needed for Rule 24
5	Transferring interval data on an ongoing basis to DRPs
6	Transferring non-interval data on an ongoing basis to DRPs
7	Reviewing CAISO registrations
8	Preventing dual enrollment by customer in utility DR programs and non-utility DRPs
9	Forecasting load reductions for PG&E Bundled customers
10	Manage Energy Procurement and Settlements

IT Only Functions

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**Rule 24 Cost Recovery Application  
filed June 2<sup>nd</sup>, 2014**

***PG&E's Reduced Rule 24 Cost Recovery Request***

***As Illustrated in PG&E's Testimony***

# Rule 24 Cost Recovery Filing – PG&E's *Reduced* Cost Recovery Request

<b>Limited Scope</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Maximum Non-Residential Customers:	20	100	500
Maximum Electric Meters:	30	150	750
Maximum Number of DRPs:	2	5	5
Maximum Wholesale Resources (PG&E as LSE):	6	6	6
Maximum Load Reduction (PG&E as LSE):	50 MW	50 MW	50 MW
Residential Participants Allowed:	N	N	N

**2013 Demand Response OIR, Phase 2 and 3**  
**Filed May 6, 2014**

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# Full Implementation for PG&E as the DRP – Current DR Programs (“PDR2”)

Case	Customer	LSE	MDMA	DRP	Supported Day Ahead Products			Supported Real Time Products	
					Energy	A/S	RUC	Energy	A/S
1	<b>Programs TBD</b>	PG&E	PG&E	PG&E	YES	YES	YES?	YES	YES
2	Provided under Rule 24 Cost Recovery Application								
3	CCA	3rd party	PG&E	PG&E	YES	YES	YES?	YES	YES
4	DA	3rd party	PG&E	PG&E	YES	YES	YES?	YES	YES
5	Provided under Rule 24 Cost Recovery Application								
6									
7	DA	3rd party	3rd party	PG&E	YES	YES	YES?	YES	YES
8	Provided under Rule 24 Cost Recovery Application								

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# **IT Activities to Needed to Facilitate PG&E Bidding it DR Programs into CAISO Market**

## **Convert Programs for PDR Day Ahead Energy**

- SmartAC™ Program
- Capacity Bid Program (CBP)
- Aggregator Managed Portfolio (AMP)

## **Expand PDR platform to enable Real Time Energy**

- Convert SmartAC Program

## **Convert BIP for RDRR Real Time Energy**

## **Expand PDR platform to enable ancillary services (excludes telemetry)**

# Summary of Costs to FULLY Integrate into CAISO Markets

- 1. MRTU Proceeding (incremental already incurred) ...\$ 16M
- 2. Rule 24 Cost Recovery (incremental). .....\$ 19M
- 3. 2013 DR OIR (incremental).....\$ 19M-\$30M

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**Total Cost** ..... **\$ 54M - \$65M**

**PG&E's Incremental Costs** ..... **\$ 38M - \$49M**



# Key Take-Aways



- It is expensive to fully integrate retail DR into the CAISO market



- It is less expensive to manually integrate DR reductions into the market – but it has limits



- The costs of integration are incremental



- Given the costs and market uncertainties, (FERC 745) it may be prudent to wade into the pool rather than to dive right in.



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# Witness Present for Questions

- Steve De Backer – Processes
- Stephen Kung – IT Costs