

# **March 2016 Energy Storage Procurement Plan Application Filing**



# PG&E's Procurement Targets

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	2014	2016	2018	2020	Total
Transmission Connected (MW)	50	65	85	110	310
Distribution Connected (MW)	30	40	50	65	185
Customer Connected (MW)	10	15	25	35	85
Total (MW)	90	120	160	210	580

- Seeking projects for all connection levels and ownership structures
- Focus on achieving diversity in agreements execute
  - Technology
  - Configurations
  - Term
  - Size
- Must be operational before the end of 2024



# PG&E's Procurement Application - TOC

## March 2016 Procurement Plan application filing

- Application
- Testimony
  - Chapter 1: Overview and Policy [of Procurement Application]
  - Chapter 2: Report on Existing and Eligible Energy Storage Resources
  - Chapter 3: Intended Procurement of Energy Storage Resources
  - Chapter 4: Operational Requirements for Energy Storage Resources
  - Chapter 5: Evaluation Methodology
  - Chapter 6: Recovery of Energy Storage Costs
  - Appendix A: 2016 Energy Storage Request for Offer Solicitation Protocol [including protocol appendices/agreements/term sheets]
  - Appendix B: Governing Statutes and Rules

What will PG&E be seeking in the 2016 Energy Storage RFO?

Connection Level	Ownership Structure	Type/Configuration	Contract Type
Transmission (T) or Distribution (D)	Third-party ownership	Stand-alone or aggregated (aggregation only for T)	<ul style="list-style-type: none"> <li>• RA Only</li> <li>• RA w/ energy settlement</li> </ul>
	Utility-ownership	Reliability or Capacity asset (e.g., distribution deferral asset)	<ul style="list-style-type: none"> <li>• Purchase and Sale Agreement</li> </ul>
	Utility-ownership	Stand-alone (market resource)	<ul style="list-style-type: none"> <li>• Purchase and Sale Agreement</li> </ul>
	Utility-ownership	ES @ PG&E-owned PV site	<ul style="list-style-type: none"> <li>• Purchase and Sale Agreement</li> </ul>
Customer (C)	Third-party ownership	Stand-alone or aggregated	<ul style="list-style-type: none"> <li>• RA w/ settlement</li> <li>• Other agreements TBD</li> </ul>
	Utility-ownership	TBD	TBD

Before December 1 Application Launch, PG&E will:

- Identify reliability and capacity asset sites for energy storage projects
- Clarify what they will be seeking in RFO for customer-connected energy storage projects
- Provide drafts of the RA Only and RA w/ energy settlement (for T&D connected and BTM) form agreements



# 2016 ES RFO – Site Control and Interconnection

Connection Level	Ownership Structure	Type/Configuration	Requirements
Transmission (T) or Distribution (D)	Third-party owned	Stand-alone	<ul style="list-style-type: none"> <li>• Site control required</li> <li>• Phase I (or equivalent) interconnection study required</li> </ul>
	Third-party owned	Aggregated (T-connected)	<ul style="list-style-type: none"> <li>• Site control required</li> <li>• Phase I (or equivalent) interconnection study required</li> </ul>
	Utility-owned	Stand-alone (market resource)	<ul style="list-style-type: none"> <li>• Site control required</li> <li>• Phase I (or equivalent) interconnection study required</li> </ul>
	Utility-owned	ES @ PG&E-owned PV sites	<ul style="list-style-type: none"> <li>• Site control and interconnection application not required at time of offer submission</li> </ul>
	Utility-owned	Reliability or Capacity asset	<ul style="list-style-type: none"> <li>• Site control and interconnection application not required at time of offer submission</li> </ul>
Customer (C)	Third-party owned	Stand-alone or aggregated	<ul style="list-style-type: none"> <li>• Site control and interconnection application not required at time of offer submission</li> </ul>
	Utility owned	TBD	<ul style="list-style-type: none"> <li>• TBD</li> </ul>

How 2016 ES RFO differs from 2014 ES RFO:

- Actively seeking Customer-connected projects
  - May consider utility-owned projects
- Site control required (where applicable)
- Phase 1 (or equivalent) interconnection study required where applicable
- Agreement structure (for third-party owned T&D resources)
  - Moving to RA Only or RA with energy settlement type agreements
- Maximum project size is 50 MW
- Evaluation methodology updated
  - “Portfolio’s Net Capacity Position” as new PAV adjustment
  - “Term and Commercial Operation Date Diversity” as qualitative evaluation criteria

## Quantitative Criteria:

- Net Market Value (NMV)
  - Benefits (Energy, Ancillary Services, Capacity)
  - Fixed and Variable Costs
- Portfolio Adjusted Value (PAV)
  - Location
  - Transmission Network Upgrade Cost
  - T&D Investment Deferral Value
  - Increased System Efficiency
  - Avoided Renewable Curtailment
  - Portfolio's Net Capacity Position

## Qualitative Criteria:

- Project Viability
- Technology Diversity
- Contract Modifications
- Safety
- Term and Commercial Operation Date Diversity
- Counterparty Concentration
- Credit
- Supplier Diversity

Ranked shortlisted offers based on PAV and qualitative criteria

As with 2014 ES RFO:

- Sellers must submit information regarding their safety history and practices
- Sellers may be required to submit a site safety plan with respect to their project
  - Project design and description of key safety related systems
  - Potential hazards and risk mitigations and safeguards
- Each agreement will contain specific requirements intended to ensure that the Seller and entities that construct, operate, or maintain the project, as applicable, in a safe, reliable and efficient manner that protects public health and safety





## 2016 ES RFO Proposed Timeline

- March 1, 2016: PG&E filed Procurement Application with CPUC
- March – November 2016: Update 2016 ES RFO Materials
- September/October 2016: Expected decision on 2016 Procurement Application
- December 1, 2016: Date by which PG&E must launch 2016 Energy Storage Request for Offers
- December 15, 2016: Participant’s Webinar
- January 10, 2017: Participant’s Offer Form Webinar
- January 31, 2017: Deadline for PG&E to receive Offers
- April 14, 2017: PG&E notifies shortlisted Participants
- April 21, 2017: Participants notify PG&E whether they accept shortlist status
- April 28, 2017: Deadline to submit shortlist deposit and other requested documents (e.g., Confidentiality Agreement)
- May – November 2017: Negotiate and execute agreements
- December 1, 2017: Deadline to file CPUC Application for approval of executed agreements