

# Generator Interconnection Process

**Wholesale Distribution Fast Track**



**This presentation summarizes the FERC-approved Generator Interconnection Procedures (GIP) in Attachment I of PG&E's Wholesale Distribution Tariff (WDT). The presentation does not replace the tariff. PG&E advises customers to become familiar with the tariff and use this presentation only as a supplement to it.**



**Generation Interconnection Services**

Updated: September 18, 2012



# Fast Track Process

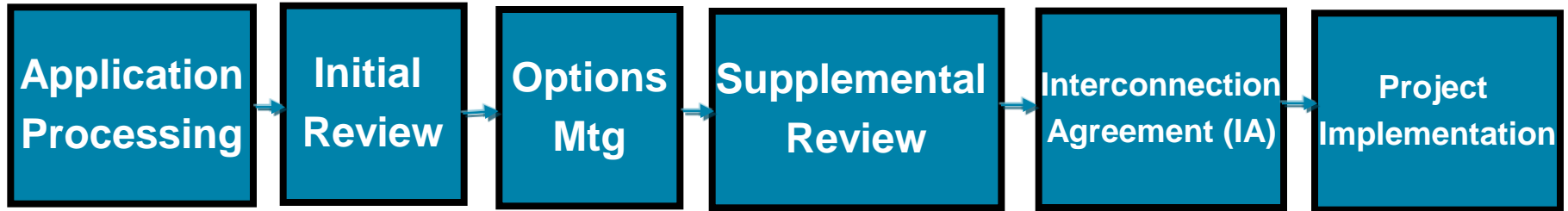
<b>Tariff section</b>	2
<b>Applicability</b>	Must pass screens
<b>MW limit</b>	2MW on 12kV 3MW on 21kV 5MW on higher voltages
<b>Application fee</b>	\$500 (includes initial review)

<b>Study</b>	<b>Timing</b>	<b>Fee</b>
<b>Initial review</b>	15 BD	Included in application fee
<b>Supplemental review</b>	10 BD	\$1,500 deposit

**BD – Business Day**



# Wholesale Distribution Fast Track Interconnection Process



- **PG&E's distribution voltage level: facilities operating below 60 kV**
  - **Governed by PG&E's Wholesale Distribution Tariff (WDT)**
  - **All applications must be submitted to PG&E**
  - **This presentation supplements WDT Attachment I**

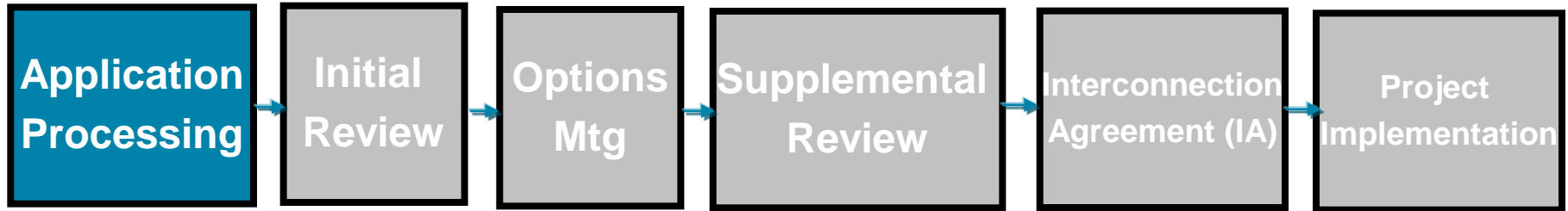


# Fast Track Screens

Screen	Summary
1	Generating Facility (GF) must interconnect to distribution jurisdiction
2	GF, in aggregate with other generation on the circuit, shall not exceed 15% of Peak Load
3	Requirements to interconnect to spot network (supply transformers bused together on the secondary side at one location)
4	GF, in aggregate with other generation on the circuit, shall not contribute more than 10% to the circuit's maximum fault current
5	GF, in aggregate with other generation, shall not exceed 87.5% of the short-circuit interrupting capability
6	Line configuration and transformer connection required to prevent over-voltage due to a loss of ground during the operating time of any anti-island function
7	GF, interconnecting to single-phase shared secondary, shall not exceed 20 kW
8	GF that is single-phase and is to interconnect on a central tap neutral of a 240-volt service, shall not create an imbalance between the two sides of the 240-volt service of more than 20% of the nameplate rating of the service transformer
9	GF, in aggregate with other generation interconnected to the transmission side of a substation transformer feeding the circuit the GF is connecting to, shall not exceed 10 MW in an area where there are known transient stability limitations
10	No construction of facilities by PG&E (distribution or network upgrades)



# Application Processing Timeline



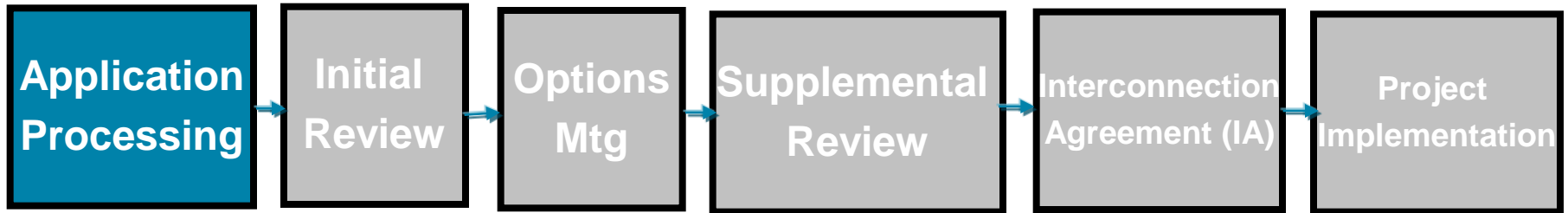
Milestone	Duration	Responsible Party
Submit application	Clock start	Customer
Deem application complete or provide notice of outstanding items	10 BD	PG&E
Provide outstanding items or request extension	10 BD	Customer
Provide outstanding items if extension requested	20 BD*	Customer
Deem application complete		PG&E

\* PG&E Extension Business Rule

BD – Business Day



# Complete Fast Track Interconnection Application



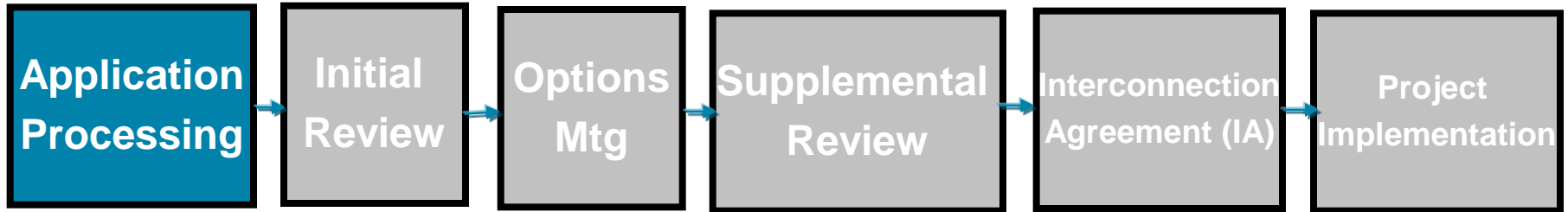
## Include:

- **Completed application (with Appendix A)**
- **Site plan diagram**
- **Single-Line Diagram**
- **Application fee\***
- **Site control document**

**\*Application fee paid after PG&E issues invoice letter**



# Fast Track Interconnection Application



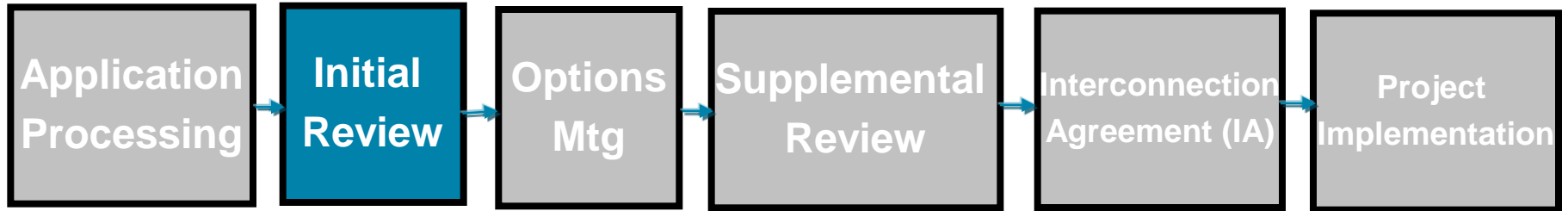
- **Submit complete interconnection application\* online at <http://pge.com/wholesale/apply>**
- **Direct inquiries to the Application Desk at [WholesaleGen@pge.com](mailto:WholesaleGen@pge.com)**

**\*GIS will send your invoice letter with instructions on wire payment after we receive your interconnection request**





# Fast Track Path 1- Initial Review Passes

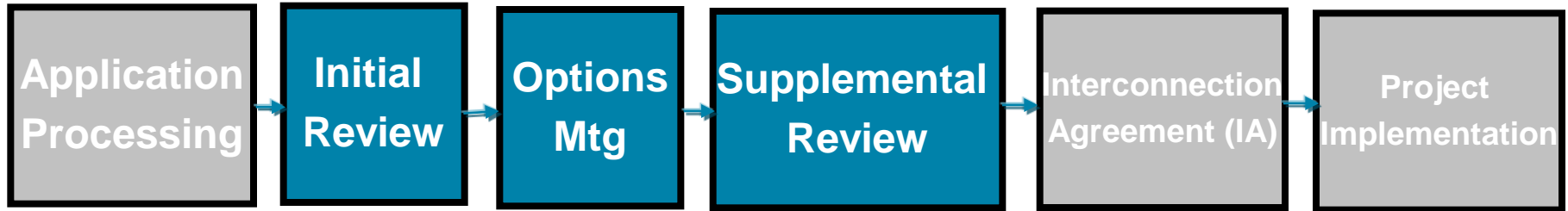


Process Milestone	Duration	Responsible Party
Deem application complete	Clock start	PG&E
Provide initial review results - passes	15 BD	PG&E
Move to IA	15 BD	PG&E

BD – Business Day



# Fast Track Path 2 - Supplemental Review Passes

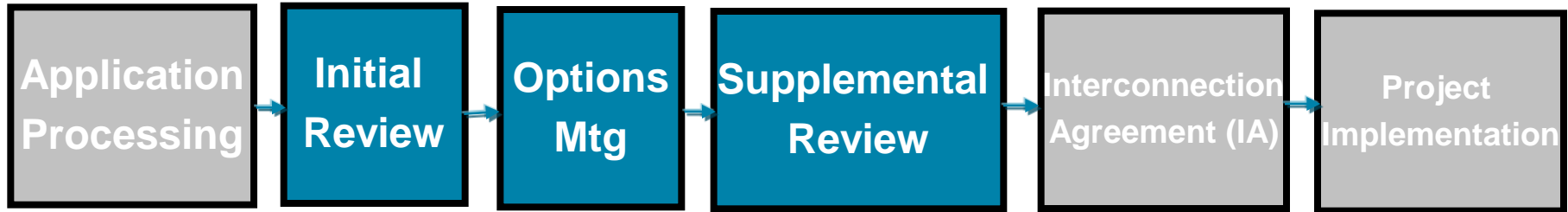


Process Milestone	Duration	Responsible Party
Deem application complete	Clock Start	PG&E
Provide initial review results - needs supplemental review	15 BD	PG&E
Offer to convene options meeting	10 BD	PG&E
Options meeting – offer to perform supplemental review and invoice	To be scheduled	All parties
Agree to supplemental review and submit fee	15 BD	Customer
Provide supplemental review results - passes	10 BD	PG&E
Move to IA	15 BD	PG&E

BD – Business Day



# Fast Track Path 3 - Supplemental Review Fails

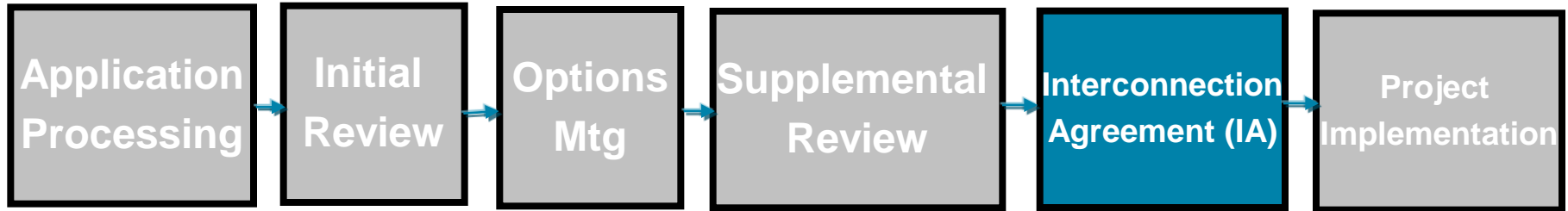


Process Milestone	Duration	Responsible Party
Deem application complete	Clock start	PG&E
Provide initial review results – needs supplemental review	15 BD	PG&E
Offer to convene options meeting	10 BD	PG&E
Options meeting – offer to perform supplemental review and invoice	To be scheduled	Both
Agree to supplemental review and submit fee	15 BD	Customer
Provide supplemental review results - fails	10 BD	PG&E
Move to Independent Study or Cluster Study Process	15 BD	Customer

BD – Business Day



# Interconnection Agreement

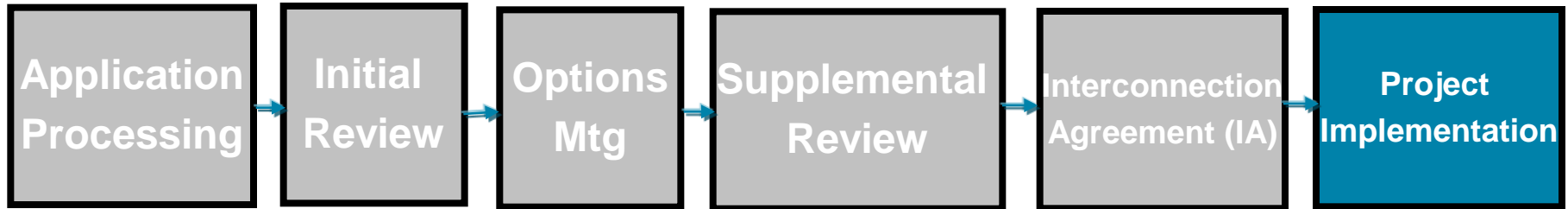


## Small Generator Interconnection Agreement (SGIA) – 20 MW or less

Process Milestone	Duration	Responsible Party
Provide final study results	Clock start	PG&E
Tender Interconnection Agreement (IA)	30 CD/15 BD (Fast Track)	PG&E
Respond to draft	30 CD	Both
IA negotiated and agreed on	90 CD from clock start	Both
PG&E issues executable IA	15 BD	PG&E
Execute IA	ASAP	Both
Post final posting (except Fast Track)	On or before start of construction	Customer

BD – Business Day CD – Calendar Day

# Project Implementation



- **Post-Interconnection Agreement, PG&E and customer engineer, design, procure and construct (EPC) electrical interconnection**
  - **PG&E engineers capital improvements per Interconnection Agreement**
  - **Customer engineers electrical system on customer side of meter and any upgrades to be customer-built and deeded**
- **Post-EPC, PG&E and customer coordinate pre-parallel inspection and commissioning to achieve commercial operation**



# Interconnection Resources

- **PG&E Wholesale Generation Interconnections website:**  
<http://pge.com/wholesale>
  - **PG&E's Public Distribution (WDT) Queue**
  - **Getting Started Guides**
  - **Application Checklists**
  - **Online Application at <http://pge.com/wholesale/apply>**
- **Questions? Contact [wholesalegen@pge.com](mailto:wholesalegen@pge.com)**



# Appendix 1: Fast Track Schedule Summary

This diagram is for estimating purposes and assumes immediate customer response.

2011 (weeks)

6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
<b>IR Validation</b>	<b>Initial Review</b>	<b>Options Mtg</b>	Supp Review Agmt	Supp Review	IA	<b>EPC</b>																																	
			IA	<b>EPC</b>																																			



# Appendix 2: Definitions

**Distribution Upgrades** – Additions, modifications and upgrades to the distribution provider's distribution system at or beyond the point of interconnection that facilitate interconnection of the GF and render the service necessary to effect the Interconnection Customer's wholesale sale of electricity in interstate commerce. Distribution upgrades do not include interconnection facilities.

**Distribution System** – Those non-ISO transmission and distribution facilities owned, controlled and operated by the Distribution Provider that are used to provide distribution service under the Tariff, which facilities and equipment are used to transmit electricity to ultimate usage points such as homes and industries directly from nearby generators or from interchanges with higher voltage transmission networks which transport bulk power over longer distances. The voltage levels at which Distribution Systems operate differ among areas.

**Interconnection Facilities** – The distribution provider's and interconnection customer's interconnection facilities. Interconnection facilities include all facilities and equipment between the generation facility (GF) and the point of interconnection, including any modifications, additions or upgrades necessary to physically and electrically interconnect the GF to the distribution provider's distribution system. Interconnection facilities are sole-use facilities and do not include distribution upgrades or network upgrades.





# Appendix 2: Definitions

**Network Upgrades** – Additions, modifications, and upgrades to the distribution provider's transmission system required at or beyond the point at which the distribution system connects to the distribution provider's transmission system to accommodate the interconnection of the GF to the distribution provider's transmission system. Network upgrades do not include distribution upgrades.

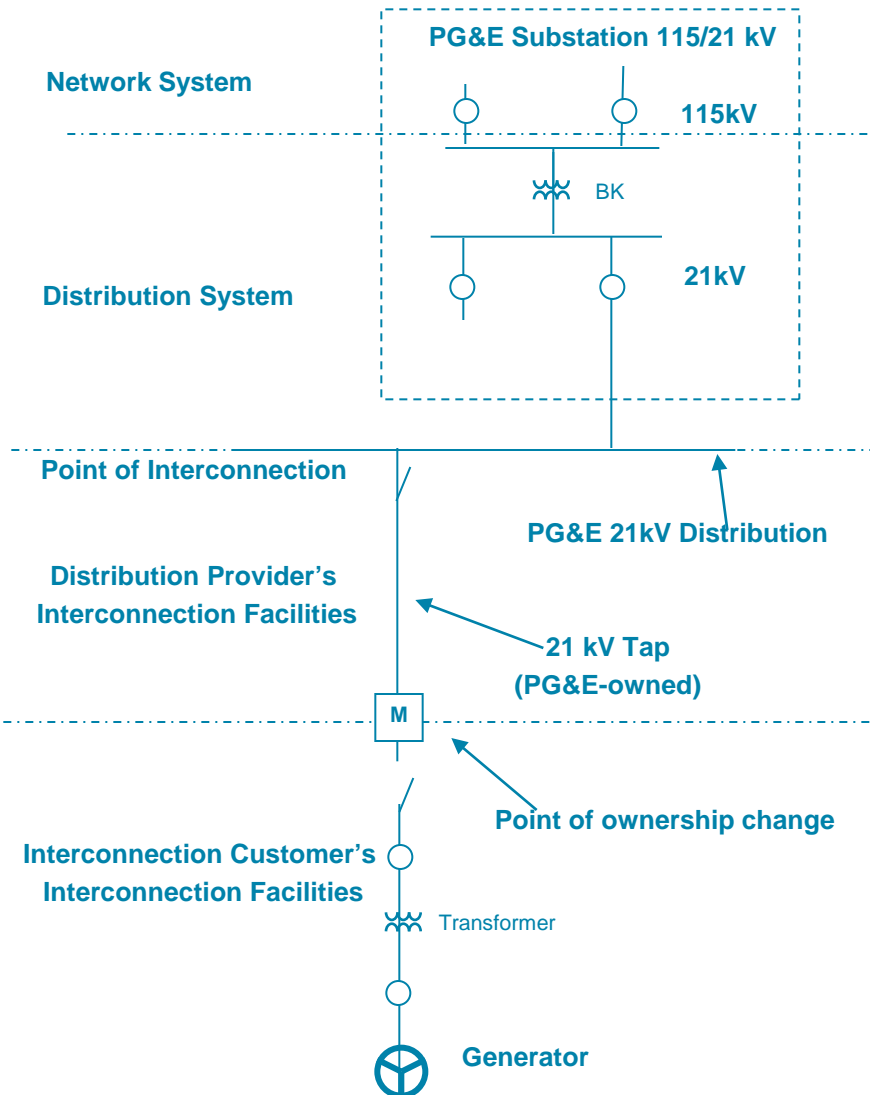
**Point of Interconnection** – The point where the interconnection facilities connect with the distribution provider's distribution system.

**Upgrades** – The required additions and modifications to the distribution provider's transmission system and distribution system at or beyond the point of interconnection. Upgrades may be network upgrades or distribution upgrades. Upgrades do not include interconnection facilities.

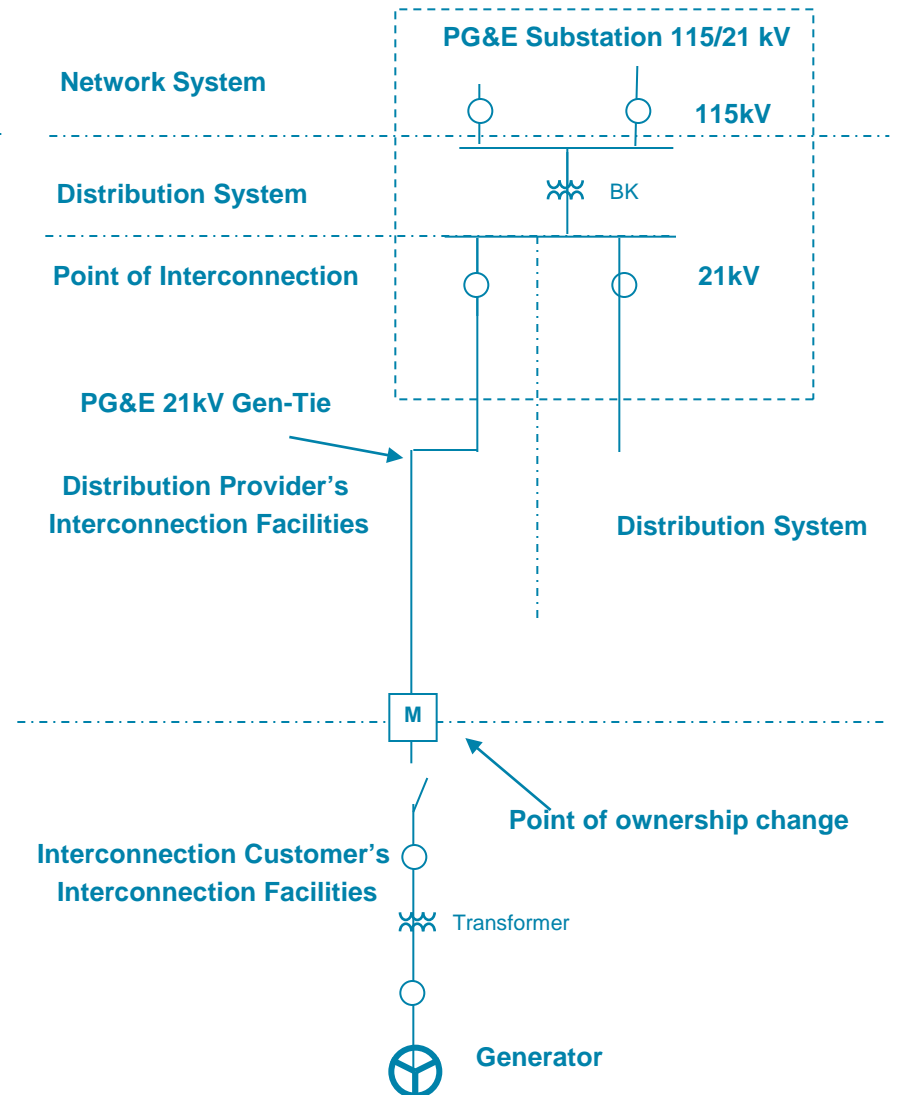


# Appendix 3: Point of Interconnection Illustration

### Simplified Single Line for Tap Interconnection



### Simplified Single Line for Gen-Tie Interconnection



# Thank You

**For more information please contact  
Generation Interconnection Services at  
[wholesalegen@pge.com](mailto:wholesalegen@pge.com)**

