SMD Phase	Function Blocks	API Category	PG&E Supported Query Parameters	Description	HTTP Operation	API URL (PGE Prefix: https://api.pge.com/GreenButtonConnect)	Access Token Required	Variable 1	Variable 2	Variable 3	Variable 4
Ph 1	[FB: N/A] SampleData	SampleData	(request parameters ignored)	Sample data interface used for PG&E connectivity test	GET	.../espi/1_1/resource/DownloadSampleData	client_access_token				
Ph 1	[FB_3] Core Green Button Connect My Data	ApplicationInformation	(request parameters ignored)	Request ApplicationInformation resource.	GET	.../espi/1_1/resource/ApplicationInformation/{ApplicationInformationID}	registration_access_token	ApplicationInformationID	----	----	----
Ph 1	[FB_3] Core Green Button Connect My Data	Authorization	(request parameters ignored)	Request feed of all authorizations of 3rd party.	GET	.../espi/1_1/resource/Authorization	client_access_token	----	----	----	----
Ph 1	[FB_3] Core Green Button Connect My Data	Authorization	(request parameters ignored)	Request specific customer authorization (subscription level).	GET	.../espi/1_1/resource/Authorization/{AuthorizationID}	client_access_token	AuthorizationID	----	----	----
Ph 1	[FB_3] Core Green Button Connect My Data	Batch	published-max= (end date in Zulu time) &published-min=(start date in Zulu time)	Request (asynchronous) for complete usage point data feed for single subscription (authorization). A subscription (customer authorization) may comprise multiple authorized Usage Points (obfuscated service id aka PG&E Service Agreement) depending on customer authorization selections. Complete feed includes interval usage data under Interval Block (if usage point corresponds to an interval meter), and Usage Summary which contains billing period usage total and if authorized by the customer, also "Billing Information".	GET	.../espi/1_1/resource/Batch/Subscription/{SubscriptionID}	access_token	SubscriptionID	----		----
Ph 1	[FB_3] Core Green Button Connect My Data		(request parameters ignored)	Check server status (returns status xml).	GET	.../espi/1_1/resource/ReadServiceStatus	client_access_token	----	----	----	----
Ph 1	[FB_3] Core Green Button Connect My Data	Notification	(request parameters ignored)	Posting notification to 3rd parties (3p defined URI).	POST	https://services.greenbuttondata.org/ThirdParty/espi/1_1/Notification		----	----	----	----
Ph 1	[FB_32] Resource Level REST	Batch	published-max= (end date in Zulu time) &published-min=(start date in Zulu time)	Request (synchronous) for complete data feed for single usage point (obfuscated service id aka PG&E Service Agreement) belonging to single subscription (authorization). Complete feed includes interval usage data under Interval Block (if an interval meter is authorized), and Usage Summary which contains billing period usage total and if authorized by the customer, also "Billing Information".	GET	.../espi/1_1/resource/Batch/Subscription/{SubscriptionID}/UsagePoint/{UsagePointId}	access_token	SubscriptionID	UsagePointID	----	
Ph 1	[FB_32] Resource Level REST	LocalTimeParameters	(request parameters ignored)	Request feed of local time (PDT always)	GET	.../espi/1_1/resource/LocalTimeParameters	access_token	----	----	----	----
Ph 1	[FB_32] Resource Level REST	LocalTimeParameters	(request parameters ignored)	PG&E will have single LocalTimeParameter ID corresponding to PDT	GET	.../espi/1_1/resource/LocalTimeParameters/{LocalTimeParametersID}	access_token	LocalTimeParametersID	----	----	----
Ph 1	[FB_32] Resource Level REST	ReadingType	(request parameters ignored)	Request all possible reading types that we support, each reading type (combination of individual entries) is assigned an ID	GET	.../espi/1_1/resource/ReadingType	access_token	----	----	----	----
Ph 1	[FB_32] Resource Level REST	ReadingType	(request parameters ignored)	Request a single reading type for given readingtype ID.	GET	.../espi/1_1/resource/ReadingType/{ReadingTypeID}	access_token	ReadingTypeID	----	----	----
Ph 1	[FB_32] Resource Level REST	UsagePoint	(request parameters ignored)	Request all usage points (i.e. obfuscated service IDs) for given subscription (authorization).	GET	.../espi/1_1/resource/Subscription/{SubscriptionID}/UsagePoint	access_token	SubscriptionID	----	----	----
Ph 1	[FB_32] Resource Level REST	UsagePoint	(request parameters ignored)	Request given usage point entry only.	GET	.../espi/1_1/resource/Subscription/{SubscriptionID}/UsagePoint/{UsagePointID}	access_token	SubscriptionID	UsagePointID	----	----
Ph 1	[FB_32] Resource Level REST	(ElectricPower)UsageSummary	published-max= (end date in Zulu time) &published-min=(start date in Zulu time)	Request given usage point's specific usage summary. Usage summary contains billing period usage total and if authorized by the customer, also "Billing Information".	GET	.../espi/1_1/resource/Subscription/{SubscriptionID}/UsagePoint/{UsagePointID}/UsageSummary	access_token	SubscriptionID	UsagePointID	----	----
Ph 1	[FB_32] Resource Level REST	(ElectricPower)UsageSummary	published-max= (end date in Zulu time) &published-min=(start date in Zulu time)	Request a single usage summary for given usage summary ID only. Usage summary contains billing period usage total and if authorized by the customer, also billing details.	GET	.../espi/1_1/resource/Subscription/{SubscriptionID}/UsagePoint/{UsagePointID}/UsageSummary/{UsageSummaryID}	access_token	SubscriptionID	UsagePointID	ElectricPowerUsageSummaryID	
Ph 1	[FB_32] Resource Level REST	MeterReading	(request parameters ignored)	Request given usage point's meter reading	GET	.../espi/1_1/resource/Subscription/{SubscriptionID}/UsagePoint/{UsagePointID}/MeterReading	access_token	SubscriptionID	UsagePointID	----	----
Ph 1	[FB_32] Resource Level REST	MeterReading	(request parameters ignored)	Request given usage point's single meter reading for given meter reading ID only. (single empty tag returned)	GET	.../espi/1_1/resource/Subscription/{SubscriptionID}/UsagePoint/{UsagePointID}/MeterReading/{MeterReadingID}	access_token	SubscriptionID	UsagePointID	MeterReadingID	----
Ph 1	[FB_32] Resource Level REST	IntervalBlock	published-max= (end date in Zulu time) &published-min=(start date in Zulu time)	Request interval blocks for requested period and interval readings. PG&E defines interval block as daily so each day will be assigned an ID.	GET	.../espi/1_1/resource/Subscription/{SubscriptionID}/UsagePoint/{UsagePointID}/MeterReading/{MeterReadingID}/IntervalBlock	access_token	SubscriptionID	UsagePointID	MeterReadingID	----
Ph 1	[FB_32] Resource Level REST	IntervalBlock	published-max= (end date in Zulu time) &published-min=(start date in Zulu time)	Request single interval block for given interval block id. Corresponds to single day (i.e. interval block is a day for PG&E).	GET	.../espi/1_1/resource/Subscription/{SubscriptionID}/UsagePoint/{UsagePointID}/MeterReading/{MeterReadingID}/IntervalBlock/{IntervalBlock ID}	access_token	SubscriptionID	UsagePointID	MeterReadingID	IntervalBlockID
Ph 1	[FB_35] REST for Bulk	Batch	published-max= (end date in Zulu time) &published-min=(start date in Zulu time)	Request (asynchronous) for complete data feed for all authorized Usage Points for all authorizations of 3rd party.	GET	.../espi/1_1/resource/Batch/Bulk/{BulkID}	client_access_token	BulkID	----	----	----
Ph 1	[FB_14] Authorization	Authorization	N/A	Request authorization code	GET	Full URL: https://api.pge.com/datacustodian/oauth/v2/Authorize (Note: OAuth URLs are not prefixed with https://api.pge.com/GreenButtonConnect)	SMSession				
Ph 1	[FB_14] TokenEndpoint	TokenEndpoint	N/A	Request access token (client credentials exchange for client access token or authorization code exchange for initial access token/refresh token or refresh token exchange for access token/refresh token).	POST	Full URL: https://api.pge.com/datacustodian/oauth/v2/token (Note: OAuth URLs are not prefixed with https://api.pge.com/GreenButtonConnect)	client_credentials/ authorization_code/ refresh_token				
Ph 1	[FB: N/A] TestAuthorization	TestAuthorization	N/A	OAuth Test: Request authorization code	GET	Full URL: https://api.pge.com/datacustodian/test/oauth/v2/authorize (Note: OAuth URLs are not prefixed with https://api.pge.com/GreenButtonConnect)	N/A				
Ph 1	[FB: N/A] TestTokenEndpoint	TestTokenEndpoint	N/A	API Connectivity Test & OAuth Test: Request access token (client credentials exchange for client access token or authorization code exchange for access token/refresh token)	POST	Full URL: https://api.pge.com/datacustodian/test/oauth/v2/token (Note: OAuth URLs are not prefixed with https://api.pge.com/GreenButtonConnect)	client_credentials/ authorization_code				
Ph 2	[FB_46] Resource Level REST	Batch	(request parameters ignored)	Request (synchronous) "Account Information" and/or "Basic Information" depending on customer authorization selections.	GET	.../espi/1_1/resource/Batch/RetailCustomer/{RetailCustomerID}	access_token	RetailCustomerID			
Ph 2	[FB_47] REST for Bulk	Batch	(request parameters ignored)	Request (asynchronous) "Account Information" and/or "Basic Information" depending on each customer's authorization selections for all authorizations of 3rd party.	GET	.../espi/1_1/resource/Batch/BulkRetailCustomerInfo/{BulkID}	client_access_token	BulkID			