

Summary

The 'scope' string returned in responses to (i) Authorization Code Request, (ii) Access Token Request and (iii) Authorization API shows a list of ESPI standard defined FBs ("Function Blocks) in addition to an ESPI standard defined "AdditionalScope" string that corresponds to utility defined authorization selections. For example:
scope=FB=1_3_8_13_14_18_19_31_32_35_37_38_39_40_4_5_10_15_16_46_47;AdditionalScope=Usage_Billing_Basic_Account_ProgramEnrollment;IntervalDuration=900_3600;BlockDuration=Daily;HistoryLength={3P Registered historical length};AccountCollection={count of authorized SAs};BR={ThirdPartyID};dataCustodianId=PGE
 *Note: (items in red are static and always returned, while other items returned are dynamic to reflect scope of each specific authorization)

PG&E Authorization Selections



Full List of PG&E supported Green Button/ESPI standard Function Blocks

Green Button FB #	Green Button ESPI Function Block	Green Button ESPI Description	Depends on Customer Selections	PG&E Customer Authorization Selections
1	Common	Common services	No	N/A (always return*)
3	Green Button Connect My Data	Core services	No	N/A (always return*)
4	Interval Metering	Interval usage data	Yes	Usage Info (Electric or Gas SAs)
5	Interval Electricity Metering		Yes	Usage Info (for Electric SAs)
8	Forward and Reverse Metering	Delivered/Consumption and Received/Generation	No	N/A (always return*)
10	Gas data	Gas data	Yes	Usage or Bill Info (for Gas SAs)
13	Security and Privacy classes	HTTPS support	No	N/A (always return*)
14	Authorization and Authentication (OAuth)	OAuth 2.0	Yes	N/A (always return*)
15	Usage Summary	Usage summary information (billed total usage)	Yes	Usage or Bill Info (i.e. billed usage)
16	Usage Summary with Cost	Usage summary with \$ bill cost	Yes	Bill Info (i.e. billed usage with \$ cost)
18	Multiple UsagePoints	Ability to authorize multiple SAs	No	N/A (always return*)
19	Partial update data	IntervalBlocks without full data sets (without UsagePoints, MeterReading)	No	N/A (always return*)
31	Core REST Services	Third Party Access to Subscription/Authorization	No	N/A (always return*)
32	Resource Level REST	Third Party Access to UsagePoints, MeterReading, and collections. (Excludes ElectricPowerQualitySummary)	No	N/A (always return*)
35	REST for Bulk	Support REST request for Bulk	No	N/A (always return*)
37	Query Parameters	(published-max, published-min)	No	N/A (always return*)
38	On Demand Requests	Request without prior notification	No	N/A (always return*)
39	Push model	Post Notification (of data being ready) followed by GET	No	N/A (always return*)
40	Offline Authorization to complement OAuth (paperCISR or Ops Portal etc.)	Authorization performed offline (manual)	No	N/A (always return*)
46	Core RetailCustomer	Retrieve resources for a RetailCustomer	Yes	Basic and/or Account Info and/or ProgramEnrollmentInfo
47	REST for RetailCustomer Bulk	Retrieve resources in Bulk for a RetailCustomers via REST	Yes	Basic and/or Account Info and/or ProgramEnrollmentInfo

*Scope always includes following base functionality: FB 1, 3, 8, 13, 14, 18, 19, 31, 32, 35, 37, 38, 39

FB, Function Block Rules (descriptions)
Scope always includes following base functionality FBs: 1, 3, 8, 13, 14, 18, 19, 31, 32, 35, 37, 38, 39
For 'offline' authorizations created via paper 'CISR' authorization form, also include FB 40
If Usage Info is authorized (regardless of electric or gas SA), also include FB 4
If Usage is authorized for an electric SA , also include FB 5
If Usage or Billing info is authorized (regardless of electric or gas SA), also include FB 15
If Usage or Billing info is authorized for a Gas SA , also include FB 10
If Billing Info is authorized (regardless of electric or gas SA), also include FB 16
If Basic Info or Account Info or Program Enrollment authorized is (regardless of electric or gas SA), also include FB 46, 47
AdditionalScope Rules (descriptions)
Return " " delimited list of customer authorized selections. For example, assuming all selections authorized: "AdditionalScope=Usage_Billing_Account_Billing_ProgramEnrollment"

Rules (in table format)				
Online / Offline	Authorization Scope	SA Type (Electric/Gas)	Additions to "FB="	Additions to "AdditionalScope="
Offline	Anything	Any	40	N/A
Either	Anything	Any	1, 3, 8, 13, 14, 18, 19, 31, 32, 35, 37, 38, 39	N/A
Either	Usage	Any	4	Usage
Either	Usage	Electric	5	Usage
Either	Usage and/or Billing	Any	15	Usage/Billing/Usage_Billing
Either	Usage and/or Billing	Gas	10	Usage/Billing/Usage_Billing
Either	Billing	Any	16	Billing
Either	Basic and/or Account and/or Program Enrollment	Any	46, 47	Basic/Basic_Account/Basic_Account_ProgramEnrollment

Example Scope Strings (as per rules above)				
Authorized SA	Usage Info	Usage Info + Basic and/or Account Info and/or Program Enrollment Info	Billing Info	Billing Info + Basic and/or Account Info and/or Program Enrollment Info
Electric SA	scope=FB=1_3_8_13_14_18_19_31_32_35_37_38_39_4_5_15; AdditionalScope=Usage	scope=FB=1_3_8_13_14_18_19_31_32_35_37_38_39_4_5_15_46_47; AdditionalScope=Usage_etc.(e.g.Basic_Account_ProgramEnrollment)	scope=FB=1_3_8_13_14_18_19_31_32_35_37_38_39_10_15_16; AdditionalScope=Billing	scope=FB=1_3_8_13_14_18_19_31_32_35_37_38_39_15_16_46_47; AdditionalScope=Billing_etc.(e.g.Basic_Account_ProgramEnrollment)
Gas SA	scope=FB=1_3_8_13_14_18_19_31_32_35_37_38_39_4_10_15; AdditionalScope=Usage	scope=FB=1_3_8_13_14_18_19_31_32_35_37_38_39_4_10_15_46_47; AdditionalScope=Usage_etc.(e.g.Basic_Account_ProgramEnrollment)	scope=FB=1_3_8_13_14_18_19_31_32_35_37_38_39_10_15_16; AdditionalScope=Billing	scope=FB=1_3_8_13_14_18_19_31_32_35_37_38_39_10_15_16_46_47; AdditionalScope=Billing_etc.(e.g.Basic_Account_ProgramEnrollment)
Electric + Gas SA	scope=FB=1_3_8_13_14_18_19_31_32_35_37_38_39_4_5_10_15; AdditionalScope=Usage	scope=FB=1_3_8_13_14_18_19_31_32_35_37_38_39_4_5_10_15_46_47; AdditionalScope=Usage_etc.(e.g.Basic_Account_ProgramEnrollment)	scope=FB=1_3_8_13_14_18_19_31_32_35_37_38_39_10_15_16; AdditionalScope=Billing	scope=FB=1_3_8_13_14_18_19_31_32_35_37_38_39_10_15_16_46_47; AdditionalScope=Billing_etc.(e.g.Basic_Account_ProgramEnrollment)

Example Scope Strings (continued)				
Authorized SA	Usage Info + Billing Info	Usage Info + Billing Info + Basic and/or Account Info and/or Program Enrollment Info	Basic and/or Account Info and/or Program Enrollment Info	Offline Auths
Electric SA	scope=FB=1_3_8_13_14_18_19_31_32_35_37_38_39_4_5_15_16; AdditionalScope=Usage_Billing	scope=FB=1_3_8_13_14_18_19_31_32_35_37_38_39_4_5_15_16_46_47; AdditionalScope=Usage_Billing_etc.(e.g.Basic_Account_ProgramEnrollment)	scope=FB=1_3_8_13_14_18_19_31_32_35_37_38_39_46_47; AdditionalScope=Basic_etc.(e.g.Account_ProgramEnrollment)	append 40 to FB=...
Gas SA	scope=FB=1_3_8_13_14_18_19_31_32_35_37_38_39_4_10_15_16; AdditionalScope=Usage_Billing	scope=FB=1_3_8_13_14_18_19_31_32_35_37_38_39_4_10_15_16_46_47; AdditionalScope=Usage_Billing_etc.(e.g.Basic_Account_ProgramEnrollment)	FB=1_3_8_13_14_18_19_31_32_35_37_38_39_46_47; AdditionalScope=Basic_etc.(Account_ProgramEnrollment)	append 40 to FB=...
Electric + Gas SA	scope=FB=1_3_8_13_14_18_19_31_32_35_37_38_39_4_5_10_15_16; AdditionalScope=Usage_Billing	scope=FB=1_3_8_13_14_18_19_31_32_35_37_38_39_4_5_10_15_16_46_47; AdditionalScope=Usage_Billing_etc.(e.g.Basic_Account_ProgramEnrollment)	FB=1_3_8_13_14_18_19_31_32_35_37_38_39_46_47; AdditionalScope=Basic_etc.(Account_ProgramEnrollment)	append 40 to FB=...