California Public Utility Commission's SB 884 Guidelines: June 3, 2025

SB 884 Project List Data Requirements Guideline

California Public
Utilities Commission

Driving Safety

- “In 2022, 3,308 people were killed in motor vehicle crashes involving distracted drivers” - NHTSA
- Always wear your seatbelt no matter how short the trip.
- Keep your eyes on the road and hands on the wheel to stay focused and prevent accidents.

Agenda

Introductions	1:00 – 1:05 pm
SB 884 Project List Data Template: Safety Policy Division (SPD) Presentation	1:05 – 1:35 pm
Data Template Guideline Q&A: SPD	1:35 – 2:00 pm
Break	2:00 – 2:10 pm
General Discussion: SPD Data Template	2:10 am –4:00 pm

Staff Proposal for SB 884 Project List Data Templates

Presenter: SPD Staff

1:05 pm – 1:35 pm

Proposed SB 884 Project List Data Template

Safety Policy Division Staff

June 3, 2025

California Public Utilities Commission

Template and Table Structure

- Table 1: Data Set
- Table 2: Cost Breakdown
- Table 3: Risk Model Change Tracker
- Table 4: HFTD and Associated Asset
- Table 5: Financial Inputs
- Table 6: Interruption Cost Estimate Calculator Inputs

Table 1: Data Set

Tables 1,2 and 4 anchored around “RRU_ID”, “OEIS_Project_ID”, and “Undergrounding_Alternative_Mitigation” fields:

- A utility’s "RRU_ID naming schema must not result in the reuse of an RRU_ID.
- OEIS_Project_ID corresponds to project_ID, as defined in the 10-Year Electrical Undergrounding Plan Guidelines published by Office of Energy Infrastructure Safety on February 20, 2025
- Undergrounding_Alternative_Mitigation field
  - One row for Undergrounding mitigation
  - One row for each alternative mitigation
- All of these rows need to be recalculated using the three discount rates.

Definition of Risk Reporting Units (RRU)

- Risk Reporting Unit (RRU): A CPUC jurisdictional effort within Electric Operations or Gas Operations that simultaneously removes or mitigates the risk associated with a group of contiguous assets or systems that exhibit high levels of risk. The RRU must include common elements that must include, but are not limited to, Consequence Attributes, Risk level, line item costs, benefit-cost ratios (CBRs), work units and time. The RRU can be aggregated along several dimensions based on unique identifiers that include, but are not limited to, hierarchy, scenario, version, risk event, tranche and mitigation type.
- Additionally, to conform with the requirements of the SB-884 Program, the RRU must be:
  1. traceable through all stages of a lifecycle, including but not limited to, scoping, designing, permitting, construction/implementation, post-construction, retirement/decommissioning.
  2. auditable in terms of timing, location, work units, cost, and risk reduction.
  3. forecastable to at least the 10th year of the Electrical Undergrounding Plan(EUP).
  4. able to aggregate up to the EUP.

Table 1: Data Set

- Table1 shall be submitted with the Phase 2 Application and all subsequent progress reports.
- In cases where RRU_IDs have not yet been created for certain projects, the table must still be submitted using the Project level data.
- Once more detailed and updated information becomes available, reporting should transition to the use of RRU_IDs.

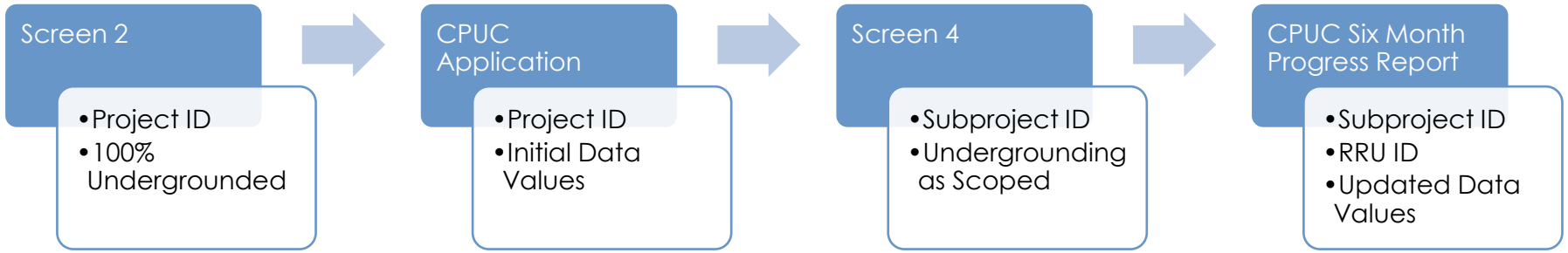

Table 1: Data Set

Field Name	Field Description	Field Value Constraints
RRU_ID	A unique value identifying the Risk Reporting Unit (RRU).	VARCHAR(255)
OEIS_Subproject_ID	A unique value identifying the Subproject. This is the same value as found in the OEIS Guidelines. The utility must retain the same Subproject ID over time. New Subprojects must receive new Subproject IDs which have not been used for any previously submitted Subproject.	VARCHAR(255)
OEIS_Project_ID	A unique value identifying the Undergrounding Project. This is the same value as found in the Energy Safety Guidelines. PROJECT_IDs must remain consistent over time and not be altered during updates.	VARCHAR(255)

Table 1: Data Set

Field Name	Field Description	Field Value Constraints
Tranche Level	The Tranche that includes the Assets or Systems that the Project mitigates. Each Project can only mitigate the risk exhibited by Assets or Systems found in one Tranche. Tranches are the quintiles of Likelihood of Risk Event (LoRE) and Consequence of Risk Event (CoRE) for Wildfire Ignition Risk. The structure of the Tranche level to record in this field is represented as LoRE quintile and CoRE quintile that make up each tranche. Thus, the Tranche Level should be presented in the following shorthand: CoRE 1×LoRE 2 or CoRE 2×LoRE 1 If the utility opts to write a whitepaper presenting an alternative approach to tranches, they must create a clear and concise shorthand for the structure of the tranches. Projects or RRUs reported in the initial Application. For any Projects reported in the initial Application, the corresponding RRUs are presumed to fall within the same Projects' Tranches.	VARCHAR(255)
Asset_System_List	List of the unique Assets and/or the unique Systems that exhibit risk, which is mitigated by the RRU (or Project). This should include, but not limited to, the following examples: Isolatable Circuit Segments or Circuit Segments. This field should also include the List of Associated Assets, if any, found in Table 4.	TEXT

Table 1: Data Set

RRU_ID	OEIS_Subproject_ID	OEIS_Project_ID	Tranche_Level	Asset_System_List
08W-RRU-A01			LoRE 1 & CoRE 1	CPZ ID #1 SAP #100XXXXXX SAP #100XXXXXY
08W-RRU-A01			LoRE 1 & CoRE 1	CPZ ID #1 SAP #100XXXXXX SAP #100XXXXXY
08W-RRU-A01			LoRE 1 & CoRE 1	CPZ ID #1 SAP #100XXXXXX SAP #100XXXXXY
08W-RRU-A02			LoRE 1 & CoRE 2	CPZ ID #2 SAP #100XXXXXZ SAP #100XXXXXW
08W-RRU-A02			LoRE 1 & CoRE 2	CPZ ID #2 SAP #100XXXXXZ SAP #100XXXXXW
08W-RRU-A02			LoRE 1 & CoRE 2	CPZ ID #2 SAP #100XXXXXZ SAP #100XXXXXW

Table 1: Data Set

Field Name	Field Description	Field Value Constraints
Undergrounding_Alternative_Mitigations	This field must include the Undergrounding Mitigation and the Alternative Mitigations that the utility has considered for this RRU (or Project). All following risk and cost analyses are carried on based on the value inputted within this field. This field enables comparing risk analyses of several alternative mitigations' options for the same RRU (or Project).	VARCHAR(255)
Undergrounding_Mitigation_Justification1	Primary reason for choosing the Undergrounding mitigation measures that the utility proposed for the RRU (or Project). This field can include, but is not limited to, responses such as operational limitations, cost efficiency, and continuity.	VARCHAR(255)
Undergrounding_Mitigation_Justification2	Other reasons for choosing the Undergrounding mitigation measures that the utility proposed for the RRU (or Project). This field can include, but is not limited to, responses such as operational limitations, cost efficiency, and continuity.	VARCHAR(255)
Pre_Mitigated_Overall_Utility_Risk	Unscaled value of Overall Utility Risk before the Undergrounding and Alternative Mitigations measures are applied to the assets or system associated with this RRU (or Project) (Dollar Value)	REAL
Post_Mitigated_Overall_Utility_Risk	Unscaled value of Overall Utility Risk after the Undergrounding and Alternative Mitigations measures are applied to the assets or system associated with this RRU (or Project) . (Dollar Value)	REAL

Table 1: Data Set

RRU_ID	Undergrounding_Alternative_Mitigations	Undergrounding_Mitigation_Justification1	Undergrounding_Mitigation_Justification2	Pre_Mitigated_Overall_Utility_Ris	Post_Mitigated_Overal1_Utility_Ris
08W-RRU-A01	Undergrounding	Reduce the Likelihood of a Wildfire Risk Event	Improve Electric Reliability	$774,537.79	$38,726.89
08W-RRU-A01	Covered Conductor	N/A	N/A	$774,537.79	$271,088.23
08W-RRU-A01	Covered Conductor + EPSS	N/A	N/A		
08W-RRU-A02	Undergrounding	Reduce the Likelihood of a Wildfire Risk Event	Improve Electric Reliability	$473,379.41	$23,668.97
08W-RRU-A02	Covered Conductor	N/A	N/A	$473,379.41	$165,682.80
08W-RRU-A02	Covered Conductor + EPSS	N/A	N/A		

Backcast

- Backcast: use updated inputs (e.g., new RRUs, new risk models) to recalculate Benefit-Cost Ratios, pre-mitigated risk, post-mitigated risk or other data points as required by the RDF, Commission Ruling or Commission Decision. The goal of a Backcast is to establish a bridge between the prior inputs and the new inputs, which ensure an "apples-to-apples" comparison.
- Backcast is necessary for utilities that elect to use the Subproject designation
- Backcast relevant for Cost Benefit Ratio, Mitigation Benefits and Present Value Cost

Table 1: Data Set

Field Name	Field Description	Field Value Constraints
Backcasted_Mitigation_Benefit	Retrospective present value of the Risk Reduction from the Undergrounding and Alternative Mitigations measure for the RRU using the assumptions and data submitted in the Phase 2 Application. (Dollar Value)	REAL
Backcasted_Present_Value_Costs	Retrospective present value of the costs of the Proposed and Alternative Mitigations for the RRU using the assumptions and data submitted in the Phase 2 Application	REAL
Backcasted_Cost_Benefit_Ratio	Retrospective Cost-Benefit Ratio of the Undergrounding and Alternative Mitigations for the RRU using the assumptions and data submitted in the Phase 2 Application	REAL

Table 1: Data Set

Field Name	Field Description	Field Value Constraints
Unit_Cost_Variance_Percentage	The percentage difference between forecasted Unit Costs submitted in the Phase 2 Application and updated Unit Costs in the subsequent progress reports.	REAL
CBR_Variance_Percentage	If the utility elects to use the Subproject designation then this is calculated as the percentage difference between either the Backcasted_Cost_Benefit_Ratio and Cost_Benefit_Ratio in the subsequent progress reports If the utility elects not to use the Subproject designation this is calculated as the percentage difference forecasted Cost_Benefit_Ratio submitted in the Phase 2 Application and the updated Cost_Benefit_Ratio presented in the subsequent progress reports.	REAL

Table 1: Data Set

Field Name	Field Description	Field Value Constraints
Reporting_Date	The date the risk and costs for the Proposed and Alternative Mitigations for the RRU are reported.	Date (YYYY-MM-DD)
Calculated_Date	The date the risk and costs for the Proposed and Alternative Mitigations for the RRU are calculated.	Date (YYYY-MM-DD)

Table 2: Cost Breakdown

Field Name	Field Description	Field Value Constraints
CapEx_Labor	Including all the required Engineering, Design, and Construction	REAL
CapEx_Materials	All the required material costs	REAL
CapEx_Permits_Environmental	Permitting fees from local and state agencies. Environmental impact assessments and mitigation measures.	REAL
CapEx_Other_Costs	Other Capital Expenditure that are not categorized in the rows above.	REAL
Total_CapEx	Total nominal value of the Capital expenditures of the Undergrounding and Alternative Mitigations for the RRU. This value must be equal to Total_CapEx fields in Table 1.	REAL
Total_OpEx	Total nominal value of the Operational expenditures of the Undergrounding and Alternative Mitigations for the RRU. This value must be equal to Total_OpEx fields in Table 1.	REAL

Table 2: Cost Breakdown

RRU _ID	Undergrounding_Alternative_Mitigations	CapEx-Labor	CapEx-Materials	CapEx_Permits_Environmental	CapEx_Other_Costs	Total_CapEx	Total_OpEx	Reporting_Date	Calculated_Date
08W-RRU-A01	Undergrounding	$4,950,000	$2,262,500	$770,000	$312,500	$8,295,000	$5,500,000	1/8/2025	10/24/2024
08W-RRU-A01	Covered Conductor	$900,000	$600,000	$200,000	$300,000	$2,000,000	$7,500,000	1/8/2025	10/24/2024
08W-RRU-A01	Covered Conductor + EPSS							1/8/2025	10/24/2024
08W-RRU-A02	Undergrounding	$2,320,000	$1,013,000	$310,000	$130,000	$3,773,000	$4,000,000	1/8/2025	10/24/2024
08W-RRU-A02	Covered Conductor	$968,000	$528,000	$176,000	$88,000	$1,760,000	$6,000,000	1/8/2025	10/24/2024
08W-RRU-A02	Covered Conductor + EPSS							1/8/2025	10/24/2024

Table 3: Risk Model Change Tracker

Field Name	Field Description	Field Value Constraints
Current_Risk_Model	Name and Version of the updated Risk Model used to calculate the risk score for the assets mitigated by the RRU (or Project). (E.g., V2)	VARCHAR(255)
Current_Asset_System_List	List of current unique Assets and/or the unique Systems that exhibit risk, which is mitigated by the RRU (or Project). The list in this field should be the same as the list in the List of Asset(s) or System(s) field in Table 1.	TEXT
Current_Total_Miles	Total circuit miles under Current Risk Model for the RRU (or Project).	VARCHAR(255)
Current_Pre_Mitigated_Risk_Score	The pre-mitigated risk score for the assets mitigated by the RRU (or Project) calculated under the Current Risk Model. (Dollar Value)	VARCHAR(255)
Current_Risk_Percentage	The pre-mitigated risk score for the assets mitigated by the RRU (or Project) divided by the total risk score calculated using the Current Risk Model.	VARCHAR(255)
Change_Type	Identification of how the assets or systems mitigated by the RRU have been defined and redefined since the last update.	VARCHAR(255)
Previous_Asset_System_List	For each RRU (or Project), if the value in the Change Type field in this Table is one of the following: Then list the unique Assets and/or the unique Systems mitigated by the RRU(or Project), prior to the Change Date.	TEXT
Previous_Risk_Model	Name and Version of the previous Risk Model used to calculate the risk score for the assets mitigated by the RRU (or Project).	VARCHAR(255)
Previous_Total_Miles	Total circuit miles under the Previous Risk Model for the RRU (or Project).	VARCHAR(255)

Table 3: Risk Model Change Tracker

RRU_ID	Current_Risk_Model	Current_Total_Miles	Current_HFTD_Miles	Current_Pre_Mitigated_Risk_Score	Change_Type	Change_Date	Previous_Risk_Model	Previous_Total_Miles	Previous_HFTD_Miles	Previous_Pre_mitigated_Risk_Score
08W-RRU-A01	V.4	2.5	0	$774,537.79	New Data Inputs to Risk Model	1/12/2024	V.3	2.5	0	$792,334.20
08W-RRU-A02	V.4	2.2	0	$473,379.41	New Data Inputs to Risk Model	1/12/2024	V.3	2.2	0	$486,095.52

Table 4: HFTD and Associated Asset

Field Name	Field Description	Field Value Constraints
HFTD_Tier2_Miles	If applicable, total number of miles included in the RRU (or Project) located in HFTD Tier 2	REAL
HFTD_Tier3_Miles	If applicable, total number of miles included in the RRU (or Project) located in HFTD Tier 3	REAL
Wildfire_Rebuild_Miles	If applicable, total number of miles included in the RRU (or Project) located in Wildfire Rebuild Area.	REAL
Associated_Assets	List of all connected low risk Associated Assets that the utility plans to mitigate because of operational constraints or reasons other than the reducing risk (e.g., Service lines and Secondary lines).	TEXT
Associated_Asset_Miles	Total associated asset miles included in the RRU (or Project) that the utility plans to mitigate.	REAL
Associated_Assets_Present_Value_Costs	The Present Value of costs of the Undergrounding and Alternative Mitigations for all of the Associated Assets that the utility plans to mitigate.	REAL
Associated_Assets_Mitigation_Benefit	Present value of the Risk Reduction of the Undergrounding and Alternative Mitigations for all of the Associated Assets that the utility plans to mitigate.	REAL

RRU_ID	HFTD_Tier3_Miles	HFTD_Tier2_Miles	Fire_Rebuild_Miles	Undergrouning_Alternative Mitigations	Associated_Assets	Associated_Asset_Miles	Associated_Assets_Costs	Associated_Assets_Risk_Reduction
08W-RRU-A01	2.5	0	0	Undergrounding	SAP #100XXXXXV SAP #100XXXXXU	0.525	$1,770,056.88	$282,517.17
08W-RRU-A01	2.5	0	0	Covered Conductor		0	$0.00	$0.00
08W-RRU-A01	2.5	0	0	Covered Conductor + EPSS				
08W-RRU-A02	2.2	0	0	Undergrounding	SAP #100XXXXXS SAP #100XXXXXT	0.462	$876,753.22	$187,054.69
08W-RRU-A02	2.2	0	0	Covered Conductor	SAP #100XXXXXS	0.262	$298,599.56	$6,553.28
08W-RRU-A02	2.2	0	0	Covered Conductor + EPSS	SAP #100XXXXXS			

Table 5: Financial Inputs

Field Name	Field Description	Field Value Constraints
WACC_Discount_Rate	The Weighted Average Cost of Capital (WACC) Discount Rate Scenario the utility must use to calculate Present Value Benefits and Costs as well as the BCR for an RRU (or Project).	REAL
Societal_Discount_Rate	The Societal Discount Rate Scenario the utility must use to calculate Present Value Benefits and Costs as well as the BCR for an RRU (or Project).	REAL
VSL	Dollar value of statistical life used to monetize the Safety Consequence	REAL
OpEx_Escalation_Factor	The escalation factor to account for the anticipated increase in costs over time due to factors like inflation, labor cost increases, material cost changes, or other economic conditions.	REAL
PVRR	The escalation factor to account for the anticipated increase in costs over time due to factors like inflation, labor cost increases, material cost changes, or other economic conditions	REAL
ICE_Calculator_Version	The ICE Calculator version that utility uses to estimate dollar value per customer minute interrupted	REAL

Table 6: Interruption Cost Estimate Calculator Inputs

Field Name	Field Description	Field Value Constraints
Operational_Division_Headquarters_By_HFTD_Tiers	Operational Division or Headquarters, further broken down by HFTD Tier 2 and Tier 3. (E.g., Yosemite3 or Yosemite2)	VARCHAR(255)
Affected_Customers_Residential	Total number of residential customers affected by the risk event.	REAL
Affected_Customers_Small_CI	Total number of small commercial and industrial customers affected by the risk event.	REAL
Affected_Customers_Medium_Large_CI	Total number of medium and large commercial and industrial customers affected by the risk event.	REAL
Average_Annual_Usage_Residential	Average annual electricity usage in megawatt-hours for residential customers.	REAL
Average_Annual_Usage_Small_CI	Average annual electricity usage in megawatt-hours for small commercial and industrial customers.	REAL
Average_Annual_Usage_Medium_Large_CI	Average annual electricity usage in megawatt-hours for medium and large commercial and industrial customers.	REAL

Table 6: Interruption Cost Estimate Calculator Inputs

Field Name	Field Description	Field Value Constraints
Medium _Large_CI_Manufacturing_Percentage	Percentage of medium and large commercial and industrial customers engaged in manufacturing.	REAL
Small_CI_Construction_Percentage	Percentage of small commercial and industrial customers engaged in construction	REAL
Small_CI_Manufacturing_Percentage	Percentage of small commercial and industrial customers engaged in manufacturing.	REAL
Small_CI_Backup_Generation_Percentage	Percentage of small commercial and industrial customers with backup generation.	REAL
Outage_Morning_Percentage	Outages by time of Day-Morning (6 am to 12 pm)	REAL
Outage_Afternoon_Percentage	Outages by time of Day-Afternoon (12 pm to 5 pm)	REAL
Outage_Evening_Percentage	Outages by time of Day-Evening (5 pm to 10 pm)	REAL
Outage_Night_Percentage	Outages by time of Day-Night (10 pm to 6 am)	REAL

Table 6: Interruption Cost Estimate Calculator Inputs

Field Name	Field Description	Field Value Constraints
Outage_Summer_Percentage	Outages by time of Year- Summer (June through September)	REAL
Outage_Non_Summer_Percentage	Outages by time of year- non-Summer (October through May)	REAL
SAIDI	System Average Interruption Duration Index. It is calculated by dividing the total minutes of customer interruptions by the total number of customers served.	REAL
SAIFI	System Average Interruption Frequency Index. It is calculated by dividing the total number of customer interruptions by the total number of customers served.	REAL
Electric_Reliability_Valuation	Dollar value per customer minute interrupted as estimated by the Interruption Cost Estimate Calculator for each Operational_Division_Headquarters_By_HFTD_Tiers.	REAL

Q&A on SPD Data Template

1:35 pm – 2:00 pm

Break

2:00 pm – 2:10 pm

General Discussion: SPD Data Template

2:10 pm – 4:00 pm

Thank you!

Amin Emrani

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