Integrated Resource Planning (R.20-05-003)
2022 IRP Filings

Filing Requirements' Questions and Answers

This document is a reference guide for LSEs required to file Plans in the IRP process. It provides clarifying instructions on how to fulfill the LSE Plan requirements detailed in Decision (D.) Decision (D.) 18-02-018, and D.22-02-004. The questions included in this document reflect some of the questions IRP staff has received from various LSEs. Staff is documenting and sharing the questions and answers via this documents to ensure all LSEs' Plans are developed in a consistent and comprehensive manner.

This will serve as a living document. IRP staff will continue to update this document until the November 1 filing deadline with added guidance for LSEs as new questions arise. All updates will be posted to the IRP Procurement Track webpage.

Filing Requirements' Questions and Answers

List of Questions

General Guidance

1-   The Filing Requirements Overview document instructs LSEs to include contracts that are delivering as of 1/1/2023 but not short term contracts that end before 2024. (Section 4. 3. "Contracts to Include"). The Filing Requirements Overview document also insructs LSEs that they must meet or exceed their reliability need "in each year of the planning horizon" per the "Reliability" tab in the RDT (Section 4. "Completeness of the Resource Data Template will be defined by:"). Does "in each year of the planning horizon" mean only the years 2024, 2026, 2030, and 2035? Does it mean for 2024 through 2035?

2-   The "Reliability" tab shows summaries of peak load and resources for 2021, 2022, and 2023. Because the instructions say not to include contracts with end dates before 2024 (unless they are being procured for D.19-11-016), there are many contracts that contribute to meeting our capacity in 2021, 2022, 2023 that will not be included. Thus, are we required to show how we met our reliability needs in 2021, 2022, and 2023?

3-   Now that the 24-hour slice of day framework is adopted in the Resource Adequacy program, will LSEs be required to use that framework in analysis for the 2022-2023 IRP?

4-   Can CPUC staff provide a list of out-of-CAISO generating resources, similar to the lists it provided for the CAISO?

5-   Can the CPUC provide a justification for the use of fixed import shapes?

6-   Can Staff provide a comparison of what contracts should be included in the "August Compliance Filing" vs. "2022 IRP Filing Requirements"?

7-   What is the source/vintage of natural gas and GHG prices in RESOLVE?

8-   The requirements overview document states that the contract status cutoff date is August 1, 2022. It goes on to say that LSEs should update the status of procurement order resources (e.g. those for D.19-11-016 or D.21-06-035) per the cut-off date included in the document. If LSEs have more up-to-date information (for instance on project viability or expected CODs) closer to the filing date, should that information be included? Or should all RDT data fields be completed based on the project status as of August 1st?

9-   When comparing an individual portfolio to the PSP with updates, should LSEs assume a pro-rata distribution based on peak demand?

10-   If LSEs plan on meeting IRP reliability requirements with short-term RA that is not yet contracted, should they represent exactly meeting the reliability requirements or reflect the RA need forecasted from their internal modeling, which uses different resource counting and need assumptions?

Narrative Template

11- Please clarify the information required in the table in Section III.g for 'Substation/Bus' and 'Alternative location' in the High Electrification Planning requirements.

12- What load forecast should be used for the High Electrification Planning scenario described in Section III.g of the 'Standard LSE Plan'?

13- Are cost assumptions that differ from those used in the I&A expected to be explicitly shared or is it sufficient to explain methodology and how they compare directionally?

14- Is it acceptable for LSEs to use their own load assumptions (i.e., for Retail Demand and BTM PV), vs the CPUC-provided inputs in the analysis responding to the High Electrification Planning prompt?

15- Section III(a) guidance says: For new resources, LSEs should provide a description in table form of how those planned resources compare to the mix of new resources identified in the 2021 PSP Portfolio with updates and comment on the significance of the variances, if any. Should this be done to compare the resources between the LSE's filing and the PSP in 2030? The PSP only went out to 2032 and the CSP will not produce results for that year.

16- What is the expectation for DAC outreach from ESPs, which have no service territories and no residential customers that would be impacted by DAC programs. Is working with PPA partners for any new project development in DAC outreach and reducing emissions sufficient, especially if an ESP has no generation in a DAC?

17- Is the High Electrification Section N/A for ESPs since ESP enrollment is capped and ESP loads are flat?

18- For the Action Plan, must an LSE have subsections for each item listed in (A) or can they be woven into the narrative without individual subsections?

19- Is quantitative cost modeling required for non-IOU LSEs in section III(e)?

Resource Data Template

20- In absence of a discrete resource for "Northern Nevada Geothermal" resource in RDT, what LSEs should use?

21- How "buying_energy_capacity" should be filled for storage resources?

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23- The instructions for the "Reliability" worksheet indicate that only capacity contracts with online dates after June 1 of each year and end dates after October 1 will be counted – so should we only enter our capacity contracts if they are online between June 1 and October 1 of a particular year?

24- How should LSEs report the "contract_gwh_annual" volume for VAMO and GHG-Free resources if the amount is not specified in the contract?

Filing Requirements' Questions and Answers

25- Will there be an option for long_duration_storage_ext in the d2106035_procurement_cat column?

26- What csp_resource_category should we use for a supplier' choice contract?

27- If we have a solar + storage contract where a portion of the storage is lithium ion and a portion of the storage is a flow battery, what should we enter for "storage_technology_sub_type"? "Other"?

28- Please clarify the information required in the interconnection_substation column of the RDT. LSEs do not typically have this information for generic resources. Are LSEs being asked for the substation of all contracts regardless of status or only those not yet online?

29- In the 2020 IRP cycle LSEs were not allowed to estimate their allocations from the incumbent IOU for VAMO or hydro/nuclear allocations. Given VAMO is now known and LSEs have several years of data for hydro and nuclear allocations, can LSEs estimate their share of such allocations and show them in their portfolio(s)?

30- How does an LSE know if they are contracting for resources that exceed existing TX deliverability limits?

31- How can an LSE determine TX deliverability for a planned candidate resource? Is taking the results from RESOLVE modeling sufficient?

32- For planned short-term contracts for carbon-free and RPS energy, can LSEs aggregate those in a single line (volumes will vary with need)? Or do LSEs need one for each year? Is the annual GWh used for anything important?

33- Does the macro enforce most of the required columns for the RDT? If enough info is provided to populate the capacity check, CSP report, and not generate macro errors is that sufficient?

34- How should LSEs represent CAM resources in their RDTs?

35- Should LSEs include year-ahead CPE allocations (which carry system RA) in the same manner as the RDT instructions describe the representation of CAM resources? And since the amount of CAM/DR/CPE allocations change each month due to variations in the monthly peak share for LSEs, what month should LSEs use to calibrate their representation of capacity from these contracts in the RDT?

36- Which offshore wind area or areas are captured in the offshore wind ELCC?

37- Do LSEs need to enter IST Hedge contracts in its RDTv3?

38- How should LSEs treat PCC 2 and PCC 3 contracts in its RDTv3?

39- For RA-only contracts where no energy is being purchased, can LSEs enter zero in the annual GWh columns?

40- For energy only contracts where no capacity is being purchased, can LSEs enter zero in the capacity columns?

41- For Inter LSE transfers, can an LSE that buys from another LSE and then subsequently sells a portion of that resource just report the net that it is showing for its compliance?

42- The ELCC values for MTR compliance and the RDT are different. Please confirm that LSEs need to use MTR values for assessing MTR compliance and the RDT values for assessing annual contribution to reliability in the RDT.

43- How should the LSEs be expected to know what D.19-11-016 resources were procured on their behalf?

44- If an LSE's contract is only for the generation or the battery storage of a hybrid/paired resource, but does not include BOTH the generation and the storage, does the LSE still report the resource as hybrid/paired? What if the LSE does have a contract with generation and battery storage from the same resource, but they are in separate contracts?

45- If an LSE has contracted only for a portion of a particular project, the LSE may not have the information on what the correct total_nameplate_capacity of the overall project is, as the developer may have multiple phases and/or other off-takers. What shold the LSE use for the "total_nameplate_capacity" in these instances?

46- For VAMO resources, where LSEs are instructed to list by resource type, should LSEs then also list different Contract IDs as well and if so how should they be distinguished? If we do not, we get an error in the macro check for duplicate contract IDs.

47- There is a macro error category called "Rows with invalid buying_energy_capacity and csp_resource_category" that is not explained in the UserGuide. Can you please explain what this is and how it is triggered?

48- If an LSE has an RA contract in which the resource backing the contract is not known, and the LSE selects "unspecified_non_import" as the resource type, no credit is on the reliability tab. How can an LSE get reliability credit for unspecified resource contracts?

49- Certain generic resource types "in_state_wind" and "out_of_state_wind" are not getting picked up on the reliability tab? How can LSEs get reliability credit for these resources?

Clean System Power (CSP) Calculator

50- How should LSEs report RA-only battery contract for CSP?

51- For the benchmarks, the columns "2030 load (GWh)" and "2035 load (GWh)" in the "Benchmarks" tabs:

a.   Is this measured at the generator (bigger number) or customer meter (smaller because of line losses)?

b.   Can you confirm that these numbers are gross load numbers (the "raw" customer demand, before applying EE, BTMPV, BTM batteries), and do NOT include BTM resources?

Filing Requirements' Questions and Answers

52- The hourly emissions rate in the CSP ("Emissions Profiles" tab) differs from the emissions rate in the previous IRP cycle. What assumptions led to this change in the emissions profile and what are the justifications for the change?

53- In the profiles, there are nearly 2,000 hours where Morro Bay has 100% CF and over 3,300 hours for Humboldt. Can the CPUC confirm that this is correct?

54- Are there hours at which the wind speed exceeds the turbine's cut-out rating, and should these hours be counted as zero production?

55- For hybrid resources is it okay to input the CSP MWh as the solar output or do storage losses need to be incorporated?

56- Should long-term RA-only contracts from D.19-11-016 and the MTR order be included in the CSP, and if not then how are the GHG impacts of such resources being accounted for in the CSP?

57- Can LSEs update the % AAFS Load Modifier from the Clean System Power's current CAISO Mid Case AAFS Scenario 3 to the AAFS Scenario 4 to represent the additional building electrification load expected in the High Electrification scenario?

Filing Requirements' Questions and Answers

General Guidance

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   In order for a plan to be considered complete, the perfect capacity equivalent MW of the LSE's resources in the "Reliability" tab of the RDT must be equal to or greater than the LSE's "Reliability need (MW)" in that tab in each of the years—2024 through 2035.

2- **The "Reliability" tab shows summaries of peak load and resources for 2021, 2022, and 2023. Because the instructions say not to include contracts with end dates before 2024 (unless they are being procured for D.19-11-016), there are many contracts that contribute to meeting our capacity in 2021, 2022, 2023 that will not be included. Thus, are we required to show how we met our reliability needs in 2021, 2022, and 2023?**

   No. Those years are now excluded from "Reliability" tab of the updated RDT.

3- **Now that the 24-hour slice of day framework is adopted in the Resource Adequacy program, will LSEs be required to use that framework in analysis for the 2022-2023 IRP?**

   No

4- **Can CPUC staff provide a list of out-of-CAISO generating resources, similar to the lists it provided for the CAISO?**

   Staff did not model non-CAISO units for defining LSE filing requirements for reliability. Staff modeled fixed import shapes. We plan to update CPUC data on non-CAISO areas in Q3, 2022 so that we can reconsider explicitly modeling all of WECC later this year.

5- **Can the CPUC provide a justification for the use of fixed import shapes?**

   Staff chose to model with fixed import shapes because (1) CPUC's non-CAISO data is out-of-date, and (2) for expediency to significantly reduce simulation time in order to complete the many simulations required to produce the ELCC values for LSEs to use in their IRP filings. We assumed that in general, imports during loss of load events are going to be capped at the max import limit (4 GW) regardless of net load level (which was the primary input into import profile development). However, differences in the net load before the peak period across different

study years may result in dispatch differences that might be worth capturing. If we continue to use fixed import shapes we will revise to include variation across years.

6- **Can Staff provide a comparison of what contracts should be included in the "August Compliance Filing" vs. "2022 IRP Filing Requirements"?**

Table below shows what contracts should be included in each filing.

	Contracts	IRP D.19-11-016 Compliance & Additional Data Request Filing (Aug 1, 2022)	2022 Filing Requirements (Nov 1, 2022)
1	Projects for D19-11-016 procurement track (regardless of COD)	Yes	Yes
2	Projects for MTR procurement track (regardless of COD)	Yes	Yes
3	Projects planned/review/development in LA Basin as of 8/1/2022 and online after 1/1/2022	Yes	Yes
4	Contracts with delivery end dates after 2023 and not for rows 1, 2, and 3	No	Yes
5	Contracts with delivery end dates in 2023 or before and not for rows 1, 2, and 3	No	No

7- **What is the source/vintage of natural gas and GHG prices in RESOLVE?**

RESOLVE used natural gas and GHG prices from the CEC's 2020 IEPR, mid case when developing portfolios for use in LSE filing requirements.

8- **The requirements overview document states that the contract status cutoff date is August 1, 2022. It goes on to say that LSEs should update the status of procurement order resources (e.g. those for D.19-11-016 or D.21-06-035) per the cut-off date included in the document. If LSEs have more up-to-date information (for instance on project viability or expected CODs) closer to the filing date, should that information be included? Or should all RDT data fields be completed based on the project status as of August 1st?**

August 1, 2022 should be used as the cut-off date for the project status. LSEs are welcome to provide additional information about projects, including any post-August 1 updates, in the notes column.

Filing Requirements' Questions and Answers

9- **When comparing an individual portfolio to the PSP with updates, should LSEs assume a pro-rata distribution based on peak demand?**

The PSP with updates is meant to guide planning, but LSEs do not have to procure an amount of resources that aligns exactly with their proportional share of resources selected in the PSP. LSEs may submit portfolios that include more or less resources than their share of the PSP with updates as long as those portfolios achieve their emissions goals. However, if an LSE wants to compare their portfolio to their load-ratio share of the PSP with updates, they should use their share of energy load.

10- **If LSEs plan on meeting IRP reliability requirements with short-term RA that is not yet contracted, should they represent exactly meeting the reliability requirements or reflect the RA need forecasted from their internal modeling, which uses different resource counting and need assumptions?**

LSEs must at least meet their IRP reliability requirements, and staff expects that in many cases they will exceed them. In general LSEs can and will do their own modeling and planning, considering the RA program among many other factors, and then need to show how their plans are reliable and meet GHG targets using the IRP standards staff has set. An LSE can use the outputs from their internal modeling in their plans, even if their modeling uses different assumptions than those used by the CPUC. But all LSE plans must meet their IRP reliability and GHG targets, as measured by the reliability and emissions accounting methodologies set forth in the RDT and CSP calculator.

Filing Requirements' Questions and Answers

Narrative Template

11- Please clarify the information required in the table in Section III.g for 'Substation/Bus' and 'Alternative location' in the High Electrification Planning requirements.

> LSEs should do their best to provide an estimated Substation/Bus in addition to Transmission zone (or Super CREZ) in the High Electrification Planning requirements table of the IRP narrative if they have a plan or preference for the location of the resource. LSEs should provide an Alternative location if there is a secondary or alternative location that would also be preferable above a generic resource. For Transmission zone and Alternative location information, LSEs should provide resource's likely CREZ or RESOLVE resource Transmission zone. This information can help Energy Division staff make assumptions about new resources that might be added to the system in a high electrification scenario during Preferred System Plan development, if applicable, and help prevent future data requests to LSEs requesting this information.

12- What load forecast should be used for the High Electrification Planning scenario described in Section III.g of the 'Standard LSE Plan'?

> LSEs should use the same load forecast (Additional Transportation Electrification Scenario) as the June 2022 CAISO TPP High Electrification case as described in the July 1, 2022 Transmittal Letter to CAISO for 2022-23 TPP High Electrification Portfolio available at: tpp-portfolio-transmittal-letter.pdf (ca.gov).
>
> For more detail on the annual energy and peak demand forecasts in the Additional Transportation Electrification scenario, LSEs can refer to the Scenario Tool in the Filing Requirements RESOLVE Package available at: https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/zipped-files/resolve-public-release-2022-06-23-lse-plans-filing-requirements.zip
>
> Within the Scenario Tool, LSEs can navigate to the high electrification load forecasts by entering the relevant ATE ("CEC 2021 Additional Transportation Electrification") scenario selections in the "Dashboard" tab, as depicted in the graphic below, and then updating the calculations in the workbook by pressing F9 (or: Formulas --> Calculate Now).

Load Assumptions	Active Scenario
Baseline Consumption	CEC 2021 Additional Transportation Electrification
Electric Vehicle Adoption	CEC 2021 Additional Transportation Electrification
Other Transport	CEC 2021 Additional Transportation Electrification
Building Electrification	CEC 2021 Additional Transportation Electrification
Hydrogen	No Hydrogen
Behind-the-meter PV	CEC 2021 Additional Transportation Electrification
Behind-the-meter Storage	CEC 2021 Additional Transportation Electrification
Energy Efficiency	CEC 2021 Additional Transportation Electrification
Existing Shed DR	Mid
TOU Adjustment	CEC 2021 Additional Transportation Electrification
Non-PV Self Generation	CEC 2021 Additional Transportation Electrification
BTM CHP	CEC 2021 Additional Transportation Electrification
Storage ELCC	TRUE
PRM Scenario	MTR_AssumptionsPersist

From there, LSEs can navigate to the "Loads - Forecast" tab in the RESOLVE Scenario Tool and follow the following steps for CAISO annual peak and retail sales numbers:

- Go to the "Scenario-Specific Managed Net Peak (MW)" section of this tab. The last row in that section shows annual CAISO system peak demand (row 569 in "CPUC IRP RESOLVE_Scenario Tool 2022-06-23_CEC2021_loads.xlsb").
- The breakdown of annual electricity sales by load component is provided in the "CA Retail Sales (GWh)" section. For total annual CAISO retail sales, go to the last row of that section where it says "= Total Managed Retail Sales" (row 234 in "CPUC IRP RESOLVE_Scenario Tool 2022-06-23_CEC2021_loads.xlsb").

13- **Are cost assumptions that differ from those used in the I&A expected to be explicitly shared or is it sufficient to explain methodology and how they compare directionally?**

LSEs do not need to explicitly detail every cost assumption that differs from the I&A, but they do need to provide enough details to explain their methodology and justify their assumptions. If an LSE is concerned about the confidentiality of any cost data, it should provide as much detail as possible so that public stakeholders can understand how the LSE approached IRP development. The LSE may redact sensitive cost information if needed and submit a confidential version as well.

14- **Is it acceptable for LSEs to use their own load assumptions (i.e., for Retail Demand and BTM PV), vs the CPUC-provided inputs in the analysis responding to the High Electrification Planning prompt?**

Yes, an LSE may use its own load assumptions for the high electrification question. However, please keep in mind that LSEs need to assume that system load matches the ATE scenario, and so your individual assumptions should be consistent with that at the system level.

15- **Section III(a) guidance says: For new resources, LSEs should provide a description in table form of how those planned resources compare to the mix of new resources identified in the 2021 PSP Portfolio with updates and comment on the significance of the variances, if any. Should this be done to compare the resources between the LSE's filing and the PSP in 2030? The PSP only went out to 2032 and the CSP will not produce results for that year.**
The 2021 PSP Portfolio with updates is defined on page 5 of the Narrative Template as the PSP portfolio that was updated by IRP staff with more recent inputs and posted on the IRP website on June 15, 2022. LSEs should be comparing the resources in their filings to the PSP Portfolio with updates, which goes out to 2035. Tables of resources added by year and by resource type in the PSP Portfolio can be found in slides 12 and 16 for the 38 MMT and 30 MMT scenarios respectively at the following link: https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/integrated-resource-plan-and-long-term-procurement-plan-irp-ltpp/2022-irp-cycle-events-and-materials/lse-filing-requirement-resolve-results.pdf

16- **What is the expectation for DAC outreach from ESPs, which have no service territories and no residential customers that would be impacted by DAC programs. Is working with PPA partners for**

any new project development in DAC outreach and reducing emissions sufficient, especially if an ESP has no generation in a DAC?

ESPs need to work (with PPA partners) to ensure outreach is occurring to DACs where there are new projects developments. ESPs also need to explain in detail their efforts to minimize disadvantaged community air pollution impacts, not only in its own service areas, but also in the state as a whole. To the extent that an ESP is working with its customers to further reduce DAC emissions, the ESP should explain those efforts in this section as well.

17- Is the High Electrification Section N/A for ESPs since ESP enrollment is capped and ESP loads are flat?

No, ESPs should use this section to describe and provide qualitative and quantitative information about how the high electrification scenario would impact their resource planning. Although ESP loads are capped, high electrification could impact future GHG benchmarks for ESPs under the current GHG benchmark setting methodology. All LSEs would also be impacted by broader electric market trends that would emerge with high electrification. ESPs should use the Narrative Template to offer their perspective on the ways in which higher electrification would influence their procurement strategies.

18- For the Action Plan, must an LSE have subsections for each item listed in (A) or can they be woven into the narrative without individual subsections?

The LSE must have subsections for each item listed in (A).

19- Is quantitative cost modeling required for non-IOU LSEs in section III(e)?

Quantitative cost modeling is not mandatory for non-IOU LSEs in this section. However, LSEs must consider costs and affordability when developing their plans, and a include a narrative description of that analysis in the cost and affordability section of their Narrative Template. If the LSE conducted quantitative modeling, it should describe that in their plans. If the LSE did not conduct quantitative cost modeling, it should describe what other type of analysis it conducted.

Filing Requirements' Questions and Answers

Resource Data Template

20- In absence of a discrete resource for "Northern Nevada Geothermal" resource in RDT, what LSEs should use?

Please use "NEW_GENERIC_GEOTHERMAL" and specify the location and other details using other columns in RDT.

21- How "buying_energy_capacity" should be filled for storage resources?

If the contact is a full toll with arbitrage rights, please select "EnergyCapacity". If it is an RA-only contract, then please select "CapacityOnly." If the contract is only for the energy, then please select "EnergyOnly"

22- The User Guide says any sales will be reduced from an LSE's reliability resource contribution. Does this mean that the LSE must always show the purchase of the same resource even if it is prior to the cutoff date required for showing transactions? (otherwise they will be negatively impacted on this tab buy showing a resource as a sell without a buy)

As the Filing Requirement Overview document indicates LSEs need to enter contracts with delivery dates that are inclusive of January 2023 or later and contract end dates of January 1, 2024, or later. The cutoff date is for the purpose of determining the contract status and not whether to include the contract or not.

23- The instructions for the "Reliability" worksheet indicate that only capacity contracts with online dates after June 1 of each year and end dates after October 1 will be counted – so should we only enter our capacity contracts if they are online between June 1 and October 1 of a particular year?

The worksheet calculates this based on the dates LSEs provide for each contract. LSEs only need to provide accurate dates in the designated fields.

24- How should LSEs report the "contract_gwh_annual" volume for VAMO and GHG-Free resources if the amount is not specified in the contract?

LSE should report forecasted GWh volumes if contracted amounts are not known.

25- Will there be an option for long_duration_storage_ext in the d2106035_procurement_cat column?

The issue in RDT has been fixed and the updated version has this option.

26- What csp_resource_category should we use for a supplier' choice contract?

The same resource that LSE reports as the resoruce_mix for the supplier choice. Considering that LSEs can only choose one resource for CSP category, if the supplier choice resource is a mix of more than one resource providing energy, they should be reported in multiple lines.

27- If we have a solar + storage contract where a portion of the storage is lithium ion and a portion of the storage is a flow battery, what should we enter for "storage_technology_sub_type"? "Other"?

Please report "Other" and provide a note regarding this in the "notes" column.

28- Please clarify the information required in the interconnection_substation column of the RDT. LSEs do not typically have this information for generic resources. Are LSEs being asked for the substation of all contracts regardless of status or only those not yet online?

LSEs only need to provide data in the interconnection_substation column (column F) of the RDTv3 for identified projects contracted and in-development that are not yet currently online and do not have a WDAT or CAISO queue identifier provided.

29- In the 2020 IRP cycle LSEs were not allowed to estimate their allocations from the incumbent IOU for VAMO or hydro/nuclear allocations. Given VAMO is now known and LSEs have several years of data for hydro and nuclear allocations, can LSEs estimate their share of such allocations and show them in their portfolio(s)?

Yes. The RDTv3 User Guide instructs LSEs to enter their known voluntary allocations and market offers (VAMO) agreements and GHG free Power Charge Indifference Adjustment (PCIA) resources, and then make their own assumptions about future allocations and buy/sell out to 2035. These contracts should be reported as energy-only and the LSE should select "VAMO" or "ghgfreepcia" in the "cam_d1911016_vamo_ghgfreepcia" column. LSEs do not need to report each resource individually. However, these transactions must be bundled by resource type and contract period and should be entered as existing_generic for that resource type. Purchasing LSEs should also select "buy" in column "buy_sell_own" and select the IOU holding the contract as the counterparty in the "counterparty" column. LSEs are not required to coordinate with one another about VAMO or GHG-free PCIA allocations and buys/sells when putting together their plans. However, LSEs are encouraged to do so. Staff will evaluate the reasonableness of LSEs reporting during the aggregation process.

30- How does an LSE know if they are contracting for resources that exceed existing TX deliverability limits?

Project developers for contracted projects should know their TPD allocation and whether or not upgrades are needed for it to be RA eligible. If an LSE is unsure of a project's transmission deliverability status, it should check with the project developer.

Filing Requirements' Questions and Answers

31- How can an LSE determine TX deliverability for a planned candidate resource? Is taking the results from RESOLVE modeling sufficient?

If a resource is not under contract, then yes, one way estimate transmission deliverability is to go by what is in the RESOLVE modeling results. Another option is if the LSE is looking at certain projects in the queue to note whether or not that project has full/partial deliverability.

32- For planned short-term contracts for carbon-free and RPS energy, can LSEs aggregate those in a single line (volumes will vary with need)? Or do LSEs need one for each year? Is the annual GWh used for anything important?

LSEs can aggregate these contracts by resource type into a single line and record changing volume amounts in the csp_annual_yyyy columns. Aggregating by resource type, entering different resource types in different lines, and recording changing GWh volumes is important for these energy-only contracts because the emissions impacts of the generation differ by resource type in the CSP calculator.

33- Does the macro enforce most of the required columns for the RDT? If enough info is provided to populate the capacity check, CSP report, and not generate macro errors is that sufficient?

The RDT macro does not check everything. The RDTv3 User Guide is the main source of guidance instructing LSEs how to fill out their RDTs. It is possible that an LSE submits an RDT that does not generate macro errors but still contains RDT errors. In that case, staff would identify those errors and request that LSEs re-submit their RDT. In addition to using the RDT macro, LSEs should read the RDTv3 User Guide carefully and independently confirm that their RDT submittals are error-free.

34- How should LSEs represent CAM resources in their RDTs?

Instructions for how LSEs should represent resources that are subject to CAM are included in section 8 of the RDTv3 User Guide. LSEs should enter their proportional share of CAM resources, which can be derived by dividing an LSE's Final Load Forecast for RA Compliance, which is issued to each LSE in the RA proceeding, by the total "coincident" peak load for each IOU service territory from the "RA 2023 Forecast summary table" which can be found on the RA compliance webpage here. All LSEs should September values when calculating their proportional share. The set of resources subject to CAM is also described in the RDTv3 User Guide and in this Q&A document. To further assist LSEs in better understanding which resources are subject to CAM when filling out their RDTv3 templates, IRP staff has posted a list of CAM resources aggregated up to the resource type level on its webpage that all LSEs should use to inform plan development. This list includes important relevant information such as contracted capacity, contract start/end dates, and CSP entries. LSEs should be applying their proportional CAM share to the resources on this list. This list is an informational resource to assist with IRP plan development and has no bearing on the treatment of CAM resources within the RA proceeding.

35- **Should LSEs include year-ahead CPE allocations (which carry system RA) in the same manner as the RDT instructions describe the representation of CAM resources? And since the amount of CAM/DR/CPE allocations change each month due to variations in the monthly peak share for LSEs, what month should LSEs use to calibrate their representation of capacity from these contracts in the RDT?**

LSEs should include their assigned year-ahead CPE allocations in their RDTs for the years 2023-2025. For years beyond 2025, the LSE should assume that their CPE allocations remain static at 2025 allocation levels. Since CPE costs are allocated through CAM, CPE resources should be entered following the same rules as other CAM resources. To further assist LSEs in better understanding which resources are subject to CAM when filling out their RDTv3 templates, IRP staff has posted a list of CAM resources aggregated up to the resource type level on its webpage that all LSEs should use to inform plan development. This list includes important relevant information such as contracted capacity, contract start/end dates, and CSP entries. LSEs should be applying their proportional CAM share to the resources on this list. This list will include CPE contract amounts.
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36- **Which offshore wind area or areas are captured in the offshore wind ELCC?**

The offshore wind ELCCs were developed based on a resource mix that consists of approximately two-thirds Morro Bay and one-third Humboldt.

37- **Do LSEs need to enter IST Hedge contracts in its RDTv3?**

No, IST-Hedge contracts do not need to be included in RDTv3 because they would not contribute to an LSE's GHG and reliability goals, and staff does not include hedging contracts in portfolio aggregation.

38- **How should LSEs treat PCC 2 and PCC 3 contracts in its RDTv3?**

LSEs do not need to enter PCC 2 or PCC 3 contracts in RDTv3 because these resources would not contribute to an LSE's GHG and reliability goals, and staff does not include them in portfolio aggregation. However, if an LSE wants to include them in their RDT, it can enter them using the "unbundledrec" or "UNBUNDLED_crezname" resource names. LSEs should enter "NA" for in the "csp_resource_category" field for any PCC 2 and PCC 3 contracts.

39- **For RA-only contracts where no energy is being purchased, can LSEs enter zero in the annual GWh columns?**

Yes, LSEs should enter zero in in the annual GWh columns if they are not purchasing energy. Per the RDT User Guide: "If this is an RA only contract, enter zero here. Do not leave this blank"

40- For energy only contracts where no capacity is being purchased, can LSEs enter zero in the capacity columns?

Yes, LSEs should enter zero in in the contracted capacity column(s) if they are not purchasing capacity. LSEs still need to report the total template capacity column(s) (e.g., total_nameplate_capacity column) of the resource following the instructions in the User Guide.

41- For Inter LSE transfers, can an LSE that buys from another LSE and then subsequently sells a portion of that resource just report the net that it is showing for its compliance?

LSEs should follow the instructions detailed in the RDTv3 User Guide and report these contracts in different lines (one line for the buy and line(s) for the sale). This gives staff a more complete picture for any possible analysis of inter-LSE transfers as part of the aggregation process.

42- The ELCC values for MTR compliance and the RDT are different. Please confirm that LSEs need to use MTR values for assessing MTR compliance and the RDT values for assessing annual contribution to reliability in the RDT.

Staff is confirming that LSEs need to use MTR ELCC values for assessing MTR compliance. For LSE plans due on 11/1, which do not have an MTR compliance use case, the reliability value of all LSE resources, including those procured for MTR, will be assessed using the reliability valuation methodology in RDTv3.

43- How should the LSEs be expected to know what D.19-11-016 resources were procured on their behalf?

Energy Division staff will communicate the appropriate RDT entries to those LSEs that opted out of their D.19-11-016 obligations.

44- If an LSE's contract is only for the generation or the battery storage of a hybrid/paired resource, but does not include BOTH the generation and the storage, does the LSE still report the resource as hybrid/paired? What if the LSE does have a contract with generation and battery storage from the same resource, but they are in separate contracts?

If an LSE is only contracting for the generation or storage portion of a hybrid/paired resource, it should still report the contract as hybrid/paired and then enter the details accordingly. For example, if the LSE is only contracting for the generation portion of the project, it should report the contract as hybrid/paired and report the contracted storage portion as 0. Similarly, if the LSE is contracting for just the storage portion of the project, it should report the contracted generation portion as 0. The LSE should still provide accurate project information for the total nameplate capacity of the project in the fields that request total, as opposed to contracted, nameplate capacity.

If an LSE has separate contracts for the generation and storage portions of the same resource, the LSE can combine project information into a single row if the other relevant contract information such as start dates, end dates, viability, and interconnection data are the same for

both contracts. But contract information differs across the RDTv3 columns, they should be entered as two rows.

45- If an LSE has contracted only for a portion of a particular project, the LSE may not have the information on what the correct total_nameplate_capacity of the overall project is, as the developer may have multiple phases and/or other off-takers. What should the LSE use for the "total_nameplate_capacity" in these instances?

LSEs should report their best estimate and note in that this is an estimate in the note column.

46- For VAMO resources, where LSEs are instructed to list by resource type, should LSEs then also list different Contract IDs as well and if so how should they be distinguished? If we do not, we get an error in the macro check for duplicate contract IDs.

Each line in the unique contracts tab should have unique contract ID. LSEs can choose their own contract ID to distinguish the resource types associated with each line.

47- There is a macro error category called "Rows with invalid buying_energy_capacity and csp_resource_category" that is not explained in the UserGuide. Can you please explain what this is and how it is triggered?

This is a new macro error check that was added in the 8/24/22 version of RDTv3. A description of this error check has been added to the RDTv3 User Guide.

This macro checks to make sure that LSEs are only entering contracts that provide energy into their CSP calculators. It is triggered if the LSE identifies a resource as CapacityOnly in the buying_energy_capacity column and enters values in the CSP_annual_yyyy columns. The LSE can correct this error by leaving the CSP_annual_yyyy columns blank and enter "NA" in the csp_resource_category. The one exception to this rule is storage resources for which the LSE believes that no other LSE can claim the hourly dispatch of the resource and with which they have an RA contract. In this case, the LSE can identify a storage resource as CapacityOnly in the RDT's buying_energy_capacity column and enter values in the RDT's CSP_annual_yyyy columns without triggering a macro error.

48- If an LSE has an RA contract in which the resource backing the contract is not known, and the LSE selects "unspecified_non_import" as the resource type, no credit is on the reliability tab. How can an LSE get reliability credit for unspecified resource contracts?

Reliability accreditation is based on a resource's contracted nameplate times the resource type's ELCC as defined in the reliability tab. With an unspecified resource type, we are unable to assign an ELCC, which is why no credit is being given in the reliability tab. LSEs can enter a generic resource type if knows the resource type of its contracted resources. If the LSE does not know the resource type but expects to receive RA value from the contract, it should make its best guess at resource type and enter a contracted nameplate amount that would produce their contracted RA quantity using the RA program's resource counting conventions.

Filing Requirements' Questions and Answers

49- Certain generic resource types "in_state_wind" and "out_of_state_wind" are not getting picked up on the reliability tab? How can LSEs get reliability credit for these resources?

This was an error in the 8/24 version of RDTv3. It has been updated in the latest version of RDTv3 posted to the IRP webpage.

Filing Requirements' Questions and Answers

Clean System Power (CSP) Calculator

50- How should LSEs report RA-only battery contract for CSP?

If an LSE believes that no other LSE can claim the hourly dispatch of batteries with which they have an RA contract, the LSE should enter the battery capacity into the CSP's study year(s) and receive emissions savings from its dispatch.

51- For the benchmarks, the columns "2030 load (GWh)" and "2035 load (GWh)" in the "Benchmarks" tabs:
   a. Is this measured at the generator (bigger number) or customer meter (smaller because of line losses)?
   b. Can you confirm that these numbers are gross load numbers (the "raw" customer demand, before applying EE, BTMPV, BTM batteries), and do NOT include BTM resources?

Load figures represent the LSE's annual managed sales. The load figures include demand modifier components and so do not represent gross customer demand. Where necessary, the CSP calculator will automatically populate the "Calculated Demand" section of the Demand Inputs worksheet, which adds line losses and breaks the managed sales forecast into many components by assuming that the LSE has a sales-weighted share of specific components of the IEPR demand forecast, such as the level of baseline demand, energy efficiency, electric vehicles, etc.

52- The hourly emissions rate in the CSP ("Emissions Profiles" tab) differs from the emissions rate in the previous IRP cycle. What assumptions led to this change in the emissions profile and what are the justifications for the change?
The 2022 CSP calculator is based on a new set of SERVM runs (vs. the 2020 CSP calculator), with updated resource portfolios from RESOLVE and various SERVM updates that have occurred over the previous 2 years.

53-   In the profiles, there are nearly 2,000 hours where Morro Bay has 100% CF and over 3,300 hours for Humboldt. Can the CPUC confirm that this is correct?

Correct. The Offshore wind profiles are created from NREL normalized wind production response curves - the best available data at the time. Due to lack of historical data, the Offshore wind profiles are not calibrated. We are currently implementing temperature decay and velocity cut-off to the Offshore wind profiles, similar to what is used for our Onshore wind profiles, as a way to improve the profiles despite the lack of offshore historical data for the foreseeable future.

54- Are there hours at which the wind speed exceeds the turbine's cut-out rating, and should these hours be counted as zero production?

Cut-out at high wind speeds was not implemented for either Onshore or Offshore wind profiles since we assumed it would be relevant for a small fraction of hours. We are currently implementing this in our wind profile model and intend to use for future IRP modeling.

55- For hybrid resources is it okay to input the CSP MWh as the solar output or do storage losses need to be incorporated?

The hybrid profile in the CSP is already net of losses so inputting the MWh of solar production before losses would result in overcounting hybrid energy production by the level of storage losses from the hybrid resource. LSEs should enter the energy that ultimately goes to serve load, which is the same as production net of losses.

56- Should long-term RA-only contracts from D.19-11-016 and the MTR order be included in the CSP, and if not then how are the GHG impacts of such resources being accounted for in the CSP?

If an LSE believes that no other LSE can claim the hourly dispatch of a storage resource with which they have an RA contract, the LSE should enter the storage MWh nameplate energy capacity into the CSP's study year(s) and receive emissions savings from its dispatch. Nameplate energy capacity should be the same as the unit's contracted_storage_depth_mwh. LSEs can claim RA-only contracts in the CSP for storage resources only. In other words, if an LSE identifies a storage resource as CapacityOnly in the RDT's buying_energy_capacity column, it may also enter values in the RDT's CSP_annual_yyyy columns if it believes that no other LSE can claim the hourly dispatch of that storage. For all non-storage resources, if the LSE identifies it as CapacityOnly in the buying_energy_capacity column and enters values in the CSP_annual_yyyy columns, the RDT's macro will return an error.

57- Can LSEs update the % AAFS Load Modifier from the Clean System Power's current CAISO Mid Case AAFS Scenario 3 to the AAFS Scenario 4 to represent the additional building electrification load expected in the High Electrification scenario?

It depends on the use case. An LSE's Confirming Portfolio needs to use the CSP calculator's default load modifier settings, which are based on the 2021 IEPR mid-mid case. As such, an LSE may not modify building electrification load volumes in their CSP calculator. However, an LSE can modify load modifier volumes in an Alternative Portfolio. If an LSE wants to include the impacts of additional building electrification in an Alternative Portfolio, modifying the CSP building electrification inputs to AAFS Scenario 4 seems like a reasonable approach.