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

Energy Division Staff's Responses to Frequently Asked Questions on Mid-Term Reliability Procurement Decision (D.) 21-06-035

Version 65.1: 061/1723/2025

The responses below represent Energy Division staff's understanding of CPUC Decisions. CPUC Decisions are the official directions of the Commission, and Energy Division staff may not modify Decisions.

Energy Division staff prepared this list of responses to Frequently Asked Questions (FAQs) to provide interested parties a consistent understanding of staff's interpretation of CPUC Decisions relevant to Load Serving Entities' (LSEs) IRP procurement requirements. Staff has endeavored to ensure that the content of this FAQ guide is consistent with the CPUC Decision language and other relevant statutes, case law and rules. In the event of any inconsistency, the CPUC is bound to operate pursuant to its Decisions and relevant statutes, case law and rules. Parties can contact Energy Division staff at IRPDataRequest@cpuc.ca.gov if they have additional questions or concerns about the interpretations offered by staff in this document. Staff emphasizes that interested parties should consult all relevant Decisions and their legal counsel with their factual situation in mind. This version of Energy Division Staff's Responses to FAQs supersedes all prior versions (01/23/2025, 02/28/2024, 01/04/2023, 06/06/2022, 3/15/2022, 8/24/2021). Staff does not currently plan to provide a further update of this document.

FAQ Version 65.1 (061/1723/2025) is the same as FAQ Version 54.1 (012/238/20254) but includes an updated response to Question 5.3.81.3.1, 1.3.2 and 1.3.3.

Further information on the procurement track of IRP is available at: https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/long-term-procurement-planning/more-information-on-authorizing-procurement/irp-procurement-track

1. Need determination

1.1. Timing of procurement

1.1.1. *Does the procurement obligation for a load serving entity in a given year mean that they have to put out an RFP by then? Have PPAs executed by then? Have PPAs delivering power to them by then? Have CPUC approval of the proposed projects by then?* A procurement obligation for a given year indicates that the LSE must have the resource online by the date indicated. For 2023, this is August 1. For 2024 and beyond, the requirement is June 1.

1.1.2. *Can staff clarify whether the requirement is for the resources to come online (energy-only) by August 1, 2023, and June 1, 2024-2026 or to start delivering resource adequacy (RA) i.e., with full capacity deliverability status*

(FCDS) on those dates? Staff expects the resources need to be fully deliverable / qualify for RA. Staff notes that D.19-11-016 did not insist on this for the 2021 requirement of that order only, and as such was an exception rather than the rule for reliability procurement.

1.2. 1,000 MW of firm zero-emitting resources procurement category

1.2.1. *Is the 80% capacity factor annual?* Yes.

1.2.2. *How will the Commission evaluate if a resource meets or does not meet the 80% capacity factor threshold? For example, will the Commission use a forecasted capacity factor from the resource's contract to calculate this?* This will be based on forecasted capacity factor based on the as-built design. LSEs should be able to provide an engineering assessment to demonstrate that their resource meets the capacity factor requirement based on the latest available designs when submitting milestone 1 and 2 documentation. LSEs should resubmit this assessment if a substantive change is made to the design that impacts the resource's ability to comply with the capacity factor requirement.

~~1.3. 1,000 MW of long-duration energy storage (LDES) resources procurement category:~~

~~*Does only standalone long-duration storage count toward this requirement, or can storage paired with a generation resource that primarily charges from the generation resource, count as well?* This sounds like a hybrid long-duration storage resource, using CAISO terminology. While staff does not see a significant difference between the reliability contribution of a 4-hr storage resource in hybrid configuration as compared to co-located, the longer the duration, the more likely there would be an issue with the reliance on the hybrid generator to sufficiently charge the storage. If using a hybrid resource (as opposed to stand alone storage), LSEs would need to demonstrate via an engineering assessment, and contracts if applicable, that upon commercial operation the generator has the capability to charge the battery to be sufficient to discharge for 8 hours.~~

Formatted: Indent: Left: 0.85"

1.3. 1,000 MW of Mid-Term Reliability (MTR) long-duration energy storage (LDES) resources procurement category:

1.3.1. What types of resources are eligible to meet the MTR LDES procurement requirement? To qualify toward the MTR LDES requirement, the resource must meet the qualifications outlined in Decision 25-06-005 OP 3. An MTR LDES is defined as a single storage facility that must be capable of discharging at its maximum capacity for at least eight consecutive hours. This also applies to the qualifying storage component of a hybrid generation and storage resource or co-located storage resource. Maximum capacity is defined as the highest power output that can be continuously dispatched

at the full installed or guaranteed capacity specified in the contract. The purpose of this FAQ response is to demonstrate some of the possible MTR LDES resource arrangements and demonstrate how staff will determine compliance.

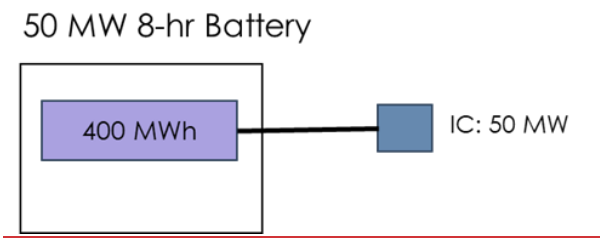
Formatted: Indent: Left: 0.85"

1.3.2. The following are examples of eligible MTR LDES resources and do not represent the entire scope of potential configurations:

A) A standalone storage resource that meets the 8-hour duration requirement.

- Example: A lithium-ion battery with 400 MWh of storage capacity and an interconnection limit of 50 MW that can discharge at 50 MW continuously for at least eight hours.

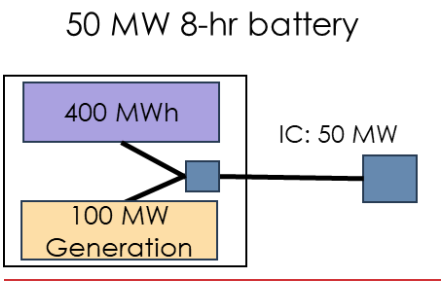
Formatted: Indent: Left: 1.6"



B) The storage component of a hybrid generation and storage resource provided the storage portion can operate as a standalone qualifying product.

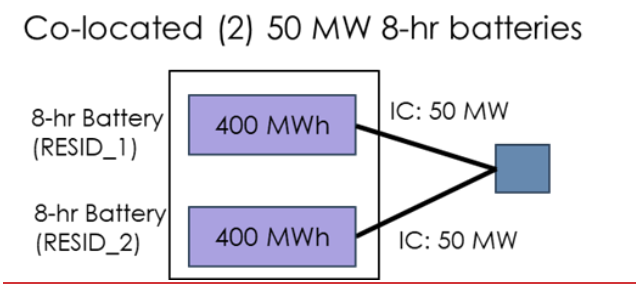
- Example: A hybrid resource with 100 MW of solar, wind or other generation and a 400 MWh battery with a single 50 MW point of interconnection limit. Only the storage component could count toward the MTR LDES requirement if it can discharge at 50 MW for at least eight hours.

Formatted: Indent: Left: 1.6"

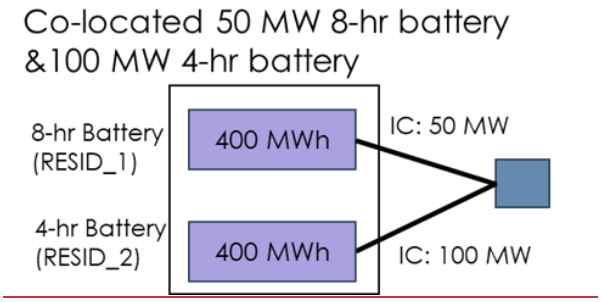


C) The storage component of multiple co-located storage resources, provided each storage element can independently qualify.

- Example: A co-located project with two batteries, each with 400 MWh of capacity and 50 MW of interconnection. Each battery could qualify separately.



- Similar to above, but if one battery has a 100 MW interconnection limit but cannot sustain 100 MW output for eight hours, only the 50 MW battery would be eligible.

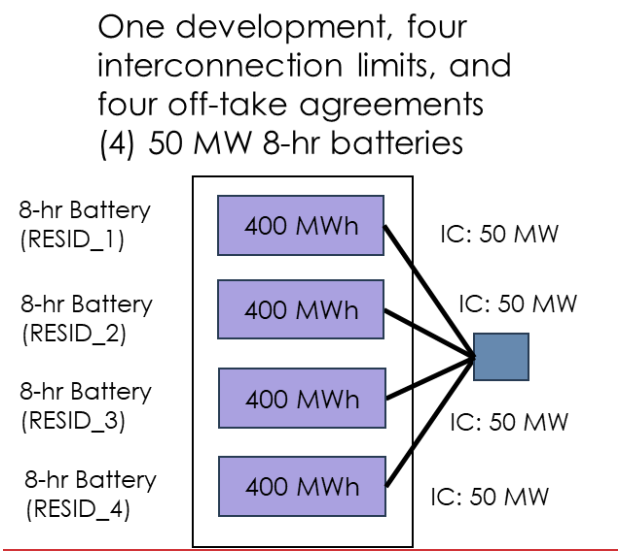


D) A multi-offtake project, where each Load-Serving Entity (LSE) contracts for a share of a resource that independently satisfies the MTR LDES requirement.

- Example: A 1600 MWh storage facility with four interconnection points of 50 MW each. Four LSEs each contract for 50 MW with corresponding 400 MWh shares. Each contract could qualify toward the MTR LDES requirement because CPUC would be able to verify compliance given the following resource characteristics.

Formatted: Indent: Left: 1.6"

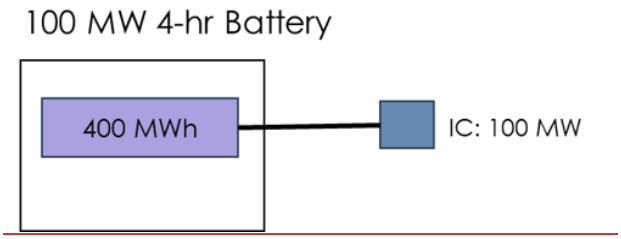
Formatted: Indent: Left: 1.6"



1.3.3. The following are examples of non-eligible MTR LDES resources:

A) Resources that cannot sustain discharge at maximum capacity for eight consecutive hours.

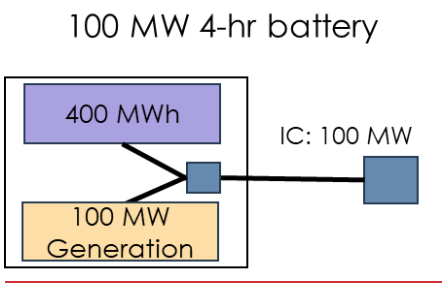
- Example: A lithium-ion battery with 400 MWh of storage capacity and an interconnection limit of 100 MW would be depleted in four hours at full output. This resource would not qualify.



B) Storage components in hybrid resources that fall short of the 8-hour requirement.

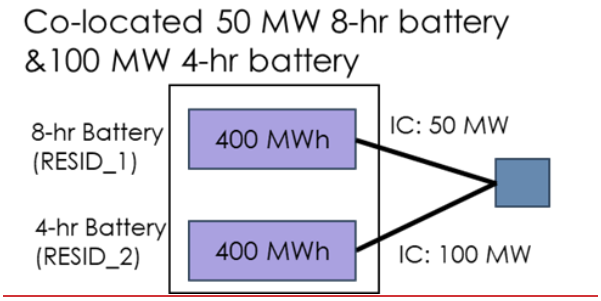
- Example: A hybrid project with 100 MW of solar, wind, or other generation and a 400 MWh battery with a 100 MW interconnection would not qualify if the battery cannot sustain 100 MW for eight consecutive hours.

Formatted: Indent: Left: 1.6"



C) Co-located resources with components that do not individually qualify.

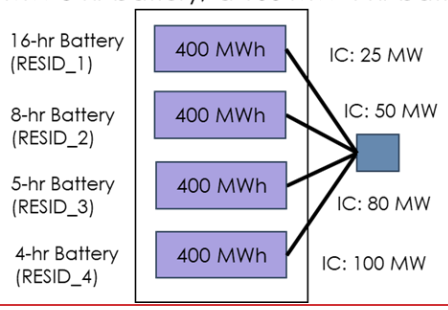
- Example: A co-located project with two batteries, each with 400 MWh of capacity, but with interconnection limits of 50 MW and 100 MW. If the 100 MW battery cannot sustain that output for eight hours, it would not be eligible.



D) Multi-offtake projects where individual LSE shares do not meet MTR LDES requirements.

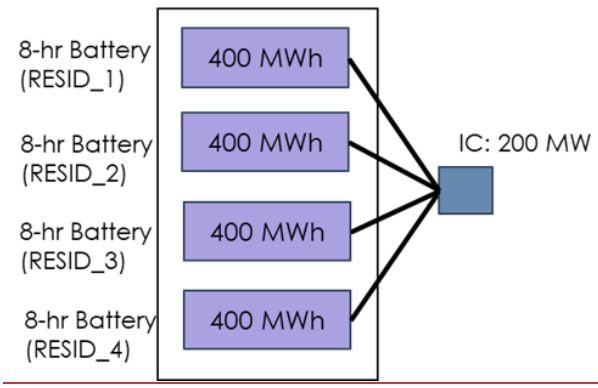
- Example: A 1600 MWh storage facility with four interconnection points of 25 MW, 50 MW, 80 MW, and 100 MW, each contracted to a different LSE. If any contracted share cannot discharge at its full interconnection limit for eight consecutive hours, that share would not be eligible.

One development, four interconnection limits and four off-take agreements: a 25 MW 16-hr battery, a 50 MW 8-hr battery, an 80 MW 5-hr battery, a 100 MW 4-hr battery



- If the project uses a single point of interconnection, each LSE must provide sufficient documentation to demonstrate that its contracted share meets the MTR LDES eligibility criteria. CPUC would not be able to verify compliance given the following resource characteristics below. If any contracted share cannot be verified to discharge at its full output for eight consecutive hours, that share would not be eligible.

One development, one interconnection limit, and four off-take agreements (4) 50 MW 8-hr batteries



~~1.4.~~1.3. 2,500 MW of zero-emissions generation, generation paired with storage, or demand response procurement category

~~1.4.1.~~1.3.1. *In regard to Ordering Paragraph (OP) 6, does an LSE have to demonstrate that the zero-emitting capacity be available from 5p.m. to 10p.m. to deliver 5 MWh for every MW of procurement every day of the year or just, say, for the month of September (since OP 1 and OP 3 both refer to September NQC)? For example, a paired solar and storage resource that charges entirely from the solar project may have sufficient energy to provide 20 MW of output from 5 p.m. to 10 p.m. in September, but only 15 MW of output from 5 p.m. to 10 p.m. in January.* The resource, whether generation, generation paired with storage, or demand response, should be available to deliver for the 5p.m. to 10p.m. window all year round. See FAQ **1.3.13~~1.4.13~~** below for more on this topic.

~~1.4.2.~~1.3.2. *How does the "5 MWh... for every MW of incremental capacity claimed" (OP 6c) for compliance interact with the marginal ELCCs for counting resources in this procurement category?* The incremental capacity claimed will be in nameplate terms for showing compliance with this requirement. It then needs to be converted into NQC terms by using the ELCC for the applicable resource type to determine how much the nameplate capacity counts towards the LSE's MW NQC obligations. See FAQ **1.3.13~~1.4.13~~** below for a worked example.

~~1.4.3.~~1.3.3. *Could standalone wind count towards this procurement category?* Staff does not see variable output renewables alone as meeting the intent of this part of the procurement. Decision dicta section 5.2.5 states that standalone wind is eligible to meet "any of the 7,000 MW of capacity requirements that are not specified in particular categories, and wind resources may also be paired with storage to qualify under the 2,500 MW capacity category to replace Diablo Canyon."

~~1.4.4.~~1.3.4. *Does the availability requirement of OP 6 mean that the resource cannot have restrictions due to permitting or environmental constraints?* LSEs should factor in constraints to generation when assessing the resource against the annual P50 standard staff discusses in FAQ **1.3.13~~1.4.13~~** below. Staff does not see OP 6 requiring additional requirements beyond how resource adequacy (RA) program and CAISO market rules already address resource use limitations.

~~1.4.4.1.1.~~1.3.4.1.1. *Does the availability requirement of OP 6 mean the resource must offer into the CAISO market when not on outage? Is energy required to flow during the 5 p.m. to 10 p.m. window, or be capable of flowing?* Staff sees OP 6 as outlining the requirements for a resource to be eligible for this procurement category. Staff does not expect that OP 6, or any aspect of D.21-06-035 for that matter, changes the requirements for resources that are

participating in the RA program and CAISO market to follow the rules of those programs/markets.

~~1.4.5.~~1.3.5. *If an LSE is pairing generation with storage, can the generation component meet any part of the 5MWh of energy required during 5 p.m. to 10 p.m. Pacific Time, for every 1 MW of incremental capacity claimed?* Refer to staff guidance on this in FAQ **1.3.13~~1.4.13~~** below.

~~1.4.6.~~1.3.6. *If an LSE is pairing generation with storage, does the generation component have to always be able to charge the storage to meet the requirement to be able to provide energy during certain hours of every day?* Refer to staff guidance on this in FAQ **1.3.13~~1.4.13~~** below.

~~1.4.7.~~1.3.7. *How should LSEs prove this requirement is met?* Staff expects an LSE to show an engineering assessment and, if applicable, contractual support to demonstrate that the resource will be available to deliver. Staff will provide a template for demonstrating compliance with this requirement prior to the first D.21-06-035 filing milestone.

~~1.4.8.~~1.3.8. *Does the Commission have a definition for what a "contractually" paired generation and storage resource means (per OP 6(a))? Would a contractual arrangement between a renewable generator and a storage project that are not co-located or hybrid where the storage project is obligated to charge during certain times and to a certain level qualify? If so, how granular must the matching of the generation and the storage be to qualify?* "Contractual" pairing allows for the possibility of the resource not being co-located or hybrid. The LSE's contract should ensure that the charging can occur during hours when the generation resource is expected to be providing electricity, sufficient to meet the availability and deliverability requirements of OP 6 (b) and (c). Regarding the use of variable output resources to charge the storage, refer to staff guidance in FAQ **1.3.13~~1.4.13~~** below.

~~1.4.9.~~1.3.9. *The 2,500 MW of Diablo Canyon replacement resources must be available every day from 5:00 p.m. to 10:00 p.m. (the beginning of hour ending 1800 through the end of hour ending 2200). This means that it must be at least a 5-hour resource. Since the RA hours are 4:00 to 9:00 p.m., do the Diablo Canyon replacement resources actually have to be 6-hour resources to meet both the requirements of the IRP decision for the Diablo Canyon category and to qualify for RA because they need to be available from 4:00 p.m. to 10:00 p.m.? Maximum Cumulative Capacity (MCC) bucket 1 requires availability for 4 consecutive hours between 4:00 p.m. and 9:00 p.m.* A battery available for 5 hours between 5 p.m. and 10 p.m. also meets the 4-hour RA requirement to be available between 4 p.m. and 9 p.m. This is because batteries already have a 24-hr, 7 days per week must offer obligation, thereby meeting the RA requirement.

~~1.4.10.~~1.3.10. *Will adding storage to an existing solar facility qualify under the Diablo Canyon replacement category?* No, the generation facility must also be new incremental capacity. OP 6 requires incremental capacity to meet

Diablo Canyon replacement procurement, and specifically states that it cannot be solely incremental storage.

~~1.4.11.~~1.3.11. *Are there categories where an RA only contract would not satisfy the decision requirements? For e.g., for the DCPP replacement category "zero-emitting capacity", can an entity procure specified marginal ELCC value of 5-hour hybrid storage to meet the requirement?* Yes there are categories for which an RA only contract would not comply with decision requirements. The Diablo Canyon replacement category is a good example of this. Since this category has an energy component, an RA-only contract would not comply. Staff see a likely exception here for demand response (DR) for which it is generally not applicable to require a generation component, unless they are DR or permanent load shift resources that are significantly reliant on behind-the-meter batteries or other forms of storage that are charging from the grid, which staff does not believe would be compliant with the Diablo Canyon replacement category.

~~1.4.11.1.1.~~1.3.11.1.1. *1.4.11 states that an RA-only contract will not meet the Diablo Canyon replacement requirements. Will a contract meet the Diablo Canyon replacement requirements if it provides for both (1) the sale of RA (meeting the requirements for selling RA) and other capacity attributes to the LSE from an incremental resource, plus (2) a requirement that the resource also offers the associated energy between 5 p.m. and 10 p.m. on a 5 MWh for every 1 MW of NQC basis directly into CAISO's energy markets via self-schedules or economic bids?* Staff expects that for a paired generation and storage resource LSEs must demonstrate control of the energy of the generation resource sufficient to ensure the storage is available during the hours when the paired resource must be available to meet the requirements for Diablo Canyon replacement, based upon an annual P50 level of certainty (refer to more staff guidance on this in FAQ **1.3.13~~1.4.13~~** below). Staff expects this will require purchase of sufficient energy associated with the resource, as opposed to the capacity, but does not categorically rule out possible solutions it may not be aware of.

~~1.4.12.~~1.3.12. *If pairing generation with storage to meet this procurement category, is there a minimum required generation nameplate capacity to storage nameplate capacity ratio? For example, is pairing a 100 MW PV facility with 75 MW of storage reasonable (i.e., a 1.3:1 ratio) and, if so, can an LSE expect to get at least 75 MW to count towards its procurement requirement?* Staff does not expect that a certain ratio is required but rather that LSEs should demonstrate via engineering and contractual documentation, as applicable, that the generation component is sufficient to charge the battery and have it available for the required hours. See FAQ **1.3.13~~1.4.13~~** below for more on this topic.

~~1.4.13.~~1.3.13. *With what probability should the resource "be able to deliver" (OP 6)? Is there a particular confidence level that the resource is required to meet?* Staff expects that the resource (or combination of paired generation and storage resources) should have, on an annual basis, at least 50% probability of being "able to deliver at least 5 MWh during each of these daily periods for every MW of incremental capacity claimed" (OP 6). If the probability is lower than 50%, then the resource does not comply with the decision and is ineligible.

Staff expresses this standard as: the resource's annual P50 during the 5-hour period from 5 p.m. to 10 p.m. Pacific Time must be at least 1,825 MWh (5 x 365) for every MW of incremental net qualifying capacity claimed by the LSE to meet this procurement requirement. In summary, this requires the same resource counting as the other D.21-06-035 procurement categories but if the standard is not met the LSE must "de-rate" the NQC it is seeking to count until the standard is met.

Background

In expressing the requirement in probabilistic terms, staff emphasizes the time period for which the estimate applies to. While OP 6 references a daily requirement, staff uses the 50% probability of exceedance (i.e., "P50") over a year. This means that the resource's annual P50 during the 5-hour period from 5 p.m. to 10 p.m. Pacific Time must be at least 1,825 MWh (5 x 365) for every MW of incremental net qualifying capacity claimed by the LSE to meet this procurement requirement. In other words, staff does not expect that the probability of exceeding the 5 MWh requirement be 50% on any given day.

Staff's guidance here does not attempt to be prescriptive about when, specifically, during the 5-hr period the energy must be available. This is because OP 6 does not go into this detail and, furthermore, staff expects D.21-06-035 does not change the requirement for a resource to comply with the must offer obligation and all other RA program and CAISO market rules (refer FAQ **1.3.4.1.1~~1.4.4.1.1~~**).

LSEs should present an engineering assessment that demonstrates the resource meets this requirement. Staff expects that the assessment should use standard practices in renewables and storage project financing (for example, taking into account battery charging restrictions, round trip losses, and with the probabilistic assessment considering standard sources of uncertainty including interannual resource variability). Staff expects that the only atypical aspect of this is the daily 5-hour window focus of this category of the procurement order.

Staff provides this guidance based on several aspects of D.21-06-035. The decision discussion states that the Diablo Canyon replacement resources

"are expected to be largely incremental renewables paired with storage" (p.44). Given that OP 6 requires "a generation resource, a generation resource paired with storage (physically or contractually), or a demand respond resource," it is staff's view that pairing with storage is necessary if the generation resource has variable output (e.g., solar or wind). In other words, without the storage, the variable output resource may not be able to deliver during the 5-hour period required by OP 6 with sufficient certainty. Staff therefore expects that these requirements and allowances of the decision necessarily lead to considerations of probability.

Staff guidance regarding annual P50 stated earlier reflects a balance: If the requirement were for much higher certainty (e.g., annual P90 or P95), staff expects the size of the generator, relative to the paired storage, would be much larger than typical system ratios currently installed or in development, and would be unnecessarily high in cost. On the other hand, if the requirement were for lower certainty (e.g., annual P25 or P10), staff expects that would be too far from the aim to replace Diablo Canyon capacity. Further, by using an annual probability of exceedance requirement (rather than seasonal or monthly), staff expects that in the case of solar paired with storage, the resource would have lower likelihood of meeting the 5-hour period required by OP6 during winter months than it would during the summer months. This would broadly fit with the reliability need that D.21-06-035 aims to address (for example, as indicated by OP 1 requiring resources online by June in most years.)

While these points do not apply directly to wind paired with storage, given wind's different annual production profile as compared to solar, staff expects solar to be the most prevalent resource type paired with storage for this procurement. The value of developing technology-specific compliance guidance would not outweigh the complications, in staff's view. Staff expects the guidance provided here to be applicable to all resource types eligible to meet this category of procurement. For example, an LSE could demonstrate compliance using a generation resource that does not have variable output, such as geothermal, with an engineering assessment that addresses the expected output of the resource, including the sources of uncertainty of the estimate. The assessment would of course not involve demonstrating that the sizing of the generator is sufficient relative to any storage, but the same principles discussed here should apply.

Worked example

Assume a 50 MW, 5-hour duration (i.e., 250 MWh) battery is paired with a 50 MW solar farm that has an annual P50, excluding hours after 5 p.m. Pacific Time, of 127,750 MWh (350 MWh daily). Assume the resource is coming online before the compliance date in 2023 and is the only resource the LSE is counting towards tranche 1 (meaning that it can use the tranche 1 ELCCs

provided in the "Incremental ELCC Study for Mid-Term Reliability Procurement" dated October 22, 2021).

Excluding round trip losses for simplicity, 350 MWh is more than enough to fully charge the 250 MWh battery by 5 p.m., enabling the battery to deliver 50 MW for 5 hours from 5 p.m. to 10 p.m. The combined resource of the battery charged by the solar has an annual P50 during the 5-hour period from 5 p.m. to 10 p.m. of 91,250 MWh (250 MWh x 365). If the LSE intends to count the 48.6 MW NQC (50 MW nameplate capacity x 97.2% ELCC*) battery towards its Diablo Canyon replacement requirement, this battery capacity, in combination with the solar, is eligible. This is because, with reference to staff's compliance guidance described above, the combined resource's annual P50 during the 5-hour period from 5 p.m. to 10 p.m. is 1,878 MWh (91,250 MWh divided by 48.6 MW) which meets the at least 1,825 MWh for every MW of incremental net qualifying capacity requirement.

As stated, there are simplifications used in this example. Round trip losses and the possibility of the generator contributing after 5 p.m. have been excluded here. If the LSE wanted to include generation from the solar after 5 p.m. in order to count some of the nameplate capacity of it towards the requirement, it would need to support that using the guidance and principles discussed here.

* Note that the 97.2% is drawn from the Staff Memo dated October 22, 2021 and the associated Incremental ELCC Study for Mid-Term Reliability Procurement. In this example, the LSE would use linear extrapolation between the 4-hour and 6-hour battery ELCCs for tranche 1 (96.3% and 98.0% respectively) to arrive at 97.2%.

~~1.4.14.~~1.3.14. *Is it acceptable to pair a storage resource with an energy-only generation resource to comply with the "zero-emitting generation, generation paired with storage, or demand response resources" procurement category?* The key requirement here is that LSEs must be able to provide an engineering assessment that demonstrates their paired resource meets the requirement stated in FAQ **1.3.13~~1.4.13~~**. Staff expects that if an energy-only resource is being paired with a storage resource, the LSE must meet the P50 assessment within the CAISO footprint. This is staff's expectation of how an LSE would need to manage the use of a resource that is not deliverable in this situation. The LSE would need to show via the engineering assessment that sufficient energy will be provided specifically in CAISO to charge the storage resource prior to the required daily availability period for 5 hours of discharge. The energy-only solar's capacity would not count directly at all towards the LSE's procurement requirement since, per FAQ 1.1.2, resources must be deliverable. (Staff expects that even if the solar was deliverable, it follows from the P50 standard set in FAQ **1.3.13~~1.4.13~~** that is highly unlikely to contribute materially to reliability between 5 p.m. and 10

p.m. other than by charging the storage earlier in the day; so it is likely that just the ELCC of the storage that is able to be counted towards an LSE's procurement requirement for this category anyway). If the energy cannot be demonstrated to be serving CAISO load as stated above, use of energy-only resources would not be permitted.

2. Eligible resources
   2.1. *Is new storage added to existing natural gas plants eligible?* Yes, except for the 1,000 MW of firm zero-emissions category, and the 2,500 MW of zero-emissions generation, generation paired with storage, or demand response procurement category. This is based on staff not seeing, for the remainder of the procurement, the decision placing any restrictions on how storage is charged. However, some storage added to existing natural gas plants has not always increased the available resource adequacy from that location – instead it has been used to offer natural gas plants a cleaner way to operate. Storage at a gas plant must be providing incremental NQC to be eligible.
   2.2. *Could you confirm that the incremental storage must be contracted separately from the underlying gas generation asset, which the decision has deferred on their eligibility for IRP procurement compliance?* The storage may be contracted separately or concurrently with the gas asset. However, only capacity added as storage will be considered in compliance with D.21-06-035. Any expanded or contracted gas capacity will not count toward an LSE's D.21-06-035 procurement obligation.
   2.3. *Would existing resources utilizing renewable natural gas as a fuel source count for any of the required procurement buckets?* New (not existing) generating facilities that use RPS eligible biogas, including directed biogas (that meets the delivery requirements in California Public Utilities Code Section 399.12.6), are eligible provided that they do not blend the biogas with fossil fuel gas at the generation site.
   2.4. *How will power pricing be determined? By competitive procurement? Avoided cost? By CPUC order or approval?* Non-IOU LSEs will procure resources through whatever procurement mechanisms they prefer, and it is up to those entities to determine how to pass those costs on to their customers. For IOUs, the CPUC provides specific procurement requirements and approves IOU contracts of 5 years or greater and approves customer rates as well.
   2.5. *Can existing resources qualify as incremental if they will be uncontracted by the mid-decade?* No, per section 9.2 of the decision, resources in the Baseline Generator List are not incremental, regardless of contracting status. There is an exception allowed for by section 5.2.1 whereby an LSE that procured long duration storage or firm zero-emissions resources for D.19-11-016 may count early for the 2026 requirements of this decision, provided the LSE can show they met the total capacity requirements across both decisions.
   2.6. *If the NQC of a resource that was in the Baseline Generator List used to determine the procurement need increases without repowering or other physical changes at the facility, can the additional NQC be counted towards D.21-06-035 procurement requirements?* No. RA program rules may allow changes to NQCs but these may just impact LSEs' compliance with that program, not D.21-06-035. The decision requires that the capacity be incremental to the Baseline Generator List, whether from a new resource or expansion of an existing resource, per D.21-06-035 OP 1.

2.7. *What is the definition of "new" for imports and how should LSE demonstrate this?* Per OP 7, LSEs should show that the resource came online after the date of the order, which is June 24, 2021. LSEs should provide a commercial operations date (COD) notice to demonstrate compliance.

2.8. *For DR resources, are LSEs required to submit any documentation in addition to the executed contract to demonstrate interconnection, site control, notice to proceed with construction, or commercial operation of the aggregated DR resource, pursuant to the milestones? If so, can you provide guidance on what documents the CPUC needs to see for this type of contract?* For DR contracts, the LSE must submit the executed contract and the load impact protocol if it has been approved. If applicable, the LSE should also submit progress on Rule 21 permits for DR contracts involving BTM storage. The LSE does not need to submit the other milestone 1 and 2 documentation being requested for new construction (interconnection agreement, notice to proceed, site control).

2.9. *Contract term- Does the following language from D.21-06-035 (p.70) mean that, for example, a resource contracted in 2021 to come online in 2023 need only be under contract until 2031?*

> *"Consistent with D.19-11-016, as well as § 454.51(d) requirements surrounding long-term commitments to renewable integration resources, we also find that it is necessary to require long-term contracts for the procurement specified herein. Long-term is defined as at least ten years. This ten-year requirement applies to the period of the contract, and is not based on the resource's online date."*

No – the ten-year requirement refers to the required period of contracted resource delivery. This has been clarified in D.22-02-004 (p.135) as follows:

> "This minimum ten-year contract period is intended to spur the development of new resources and begins once the new resource is online and delivering energy and/or providing capacity. In the event that a resource is delayed in coming online, it is permissible for an LSE to utilize capacity or take energy deliveries from the same contractual counterparty from other owned resources to show compliance with the online date requirements. This still does not relieve the LSE of the requirement to show a ten-year contract for the new resource, however, once it comes online."

2.10. *Would a contract of ten years or more that is made up of capacity from two sites, both of which are incremental resources, meet D.21-06-035 requirements if a resource from one site meets the compliance date required for the associated procurement tranche, and the same type of resource comes online at a different site on a later date and replaces some or all of the capacity provided by the first site?* In D.19-11-016 and D.20-12-044 the

Commission established that an LSE may cure a deficiency or delay of a resource intended to meet their requirements via submitting a remediation plan to the Commission. In D.21-06-035, the Commission further established that a "bridge" may be used as a viable remediation method for D.21-06-035 procurement delay. In D.22-02-004, the Commission further clarified that the minimum contract term refers to when a resource is online and delivering, but that in the event of a delay, bridge capacity (that meets certain requirements) could substitute for the delayed resource within the context of a ten-year contract. Staff interprets this language to suggest that more than one resource can be used to meet the ten-year contract requirement in certain circumstances. In this light, staff expects that a resource that is online by the compliance date of the associated tranche or will be online in advance of the compliance date could act as a bridge to another eligible incremental resource with a long-term contract.

Provided all other D.21-06-035 resource requirements were met by both resources in question, including incrementality, the use of one resource to "bridge" to a second resource that comes online at a later date, would meet the requirements of D.21-06-035. The contract should stipulate that the second resource would itself be providing capacity for ten years, as required by D.21-06-035.

A contract structured to allow one compliant resource that met a required online date to bridge to a second resource would not meet D.21-06-036 requirements if the second resource itself was not contracted to provide capacity for ten years. Staff believes the bridge concept was envisioned for short-term delays and was not intended to relax the long-term contract project delivery requirements in any substantial manner.

Considering that the first resource is being used to temporarily substitute for the second resource, the LSE should use resource counting based on the second resource's online date. For resource types for which staff have provided ELCCs, as discussed in the staff transmittal memo re "Incremental ELCCs to be used for D.21-06-035" dated October 22, 2021, this means counting the resources using the ELCC for the tranche the second resource comes on line in time for. For other resource types, the LSE should use system resource adequacy NQC counting rules at the time of contract execution, per section 9.2 of the dicta of D.21-06-035.

2.11. *Are contracts where the nameplate capacity varies month-to-month (e.g., a contract that procures 100% of nameplate capacity for summer months and 50% for other months) compliant with D.21-06-035? How would such a contract be considered toward an LSE's procurement requirement?*

The ten-year contract requirement in D.21-06-035 requires that the entirety of the nameplate of the portion of the resource an LSE is claiming toward D.21-06-035 must be under contract every month. While the resource's NQC may vary between months, the resource's nameplate under contract should not.

2.12. *We would like to retire a >40 year-old combined heat and power (CHP) unit and replace it with a battery. If the existing CHP unit is in the D.21-06-035 Baseline Generator List, will the battery be considered incremental and count towards the D.21-06-035 procurement requirement?* Staff expects that a project like this would likely be considered an incremental project for D.21-06-035 compliance purposes if the battery was a new project coming online with a new contract executed after June 30, 2020 with a new Resource ID separate from the retiring CHP unit. Counting a new battery as incremental is consistent with Finding of Fact (FoF) #5 of D.21-06-035, which says that that the 11,500 MW of new NQC must be incremental to resources online, or contracted and approved to come online, as of June 30, 2020. Staff sees it as significant that the replacement of a retiring CHP unit is done with a new battery, i.e., changing from one resource type to another. Also, the D.21-06-035 need determination assumed that thermal resources would retire after 40 years of operating life, additional to the announced retirements assumed to occur in the Baseline Generator List. Replacing older retiring CHP units with D.21-06-035-eligible resources is consistent with that assumption and helps to make up for that assumed loss of capacity.

2.13. *Can a facility be counted as incremental if it is included on the D.21-06-035 Baseline Generator List but has a Planned Retirement Date before the D.21-06-035 compliance year(s)?* Yes, units on the Baseline Generator List may count as incremental for D.21-06-035 compliance purposes if their planned retirement date in the Baseline Generator List is prior to the D.21-06-035 obligation year in question, provided that all other D.21-06-035 eligibility requirements are met. Capacity from these units after their planned retirement dates was not counted in the need determination that led to the 11.5 GW procurement decision, which means that contracting with them after their planned retirement dates would add incremental capacity to the system on top of the D.21-06-035 Baseline Generator List. This does not apply to retiring fossil-fueled resources because D.21-06-035 does not allow LSEs to use fossil-fueled resources to meet their procurement obligations.

To look up when a unit on the Baseline Generator List is no longer a baseline generator for D.21-06-035 compliance purposes, refer to the column titled "Last Year to Count" (Column K) in the Baseline Generator List. This contains the last year that a unit was projected to provide system RA capacity in the D.21-06-035 need determination. Units are no longer considered baseline generators for compliance purposes after that year, meaning that a unit on the Baseline Generator List becomes eligible to be contracted for D.21-06-035 compliance starting one year after the year in Column K if all other eligibility requirements are met. For example, if the last year to count is 2022 then the unit would no longer

be a D.21-06-035 baseline generator starting in 2023. If the last year to count is 2023 then the unit would no longer be a baseline generator starting in 2024.

2.14. *Can resources on the D.21-06-035 Baseline Generator List located outside of CAISO enter D.21-06-035-eligible contracts with LSEs if they currently sell their output out-of-state or to other non-CAISO entities?* Existing non-CAISO capacity may not be counted toward D.21-06-035 even if its output is currently sold outside of CAISO. D.21-06-035 states (p.46) that "imports used for compliance with the capacity requirements of this order must show that they are associated with a new resource, or expansion of an existing resource, with a commercial online date after the date of this order, and under a long-term contract of at least ten years. This will ensure that the imports will be from truly incremental resources." Therefore, existing non-CAISO resources are not eligible to count toward D.21-06-035 compliance regardless of which entity is the current offtaker for that resource, unless the contract is associated with an expansion of the existing resource and meets the contract length requirement. In that case, the additional capacity resulting from the expansion would count towards D.21-06-035.

2.15. *Is there a process that a developer can use to correct or update the nameplate capacity attributed to non-CAISO resources on the D.21-06-035 Baseline Generator List that were not explicitly counted in the Commission's need determination (i.e., were not counted as specified imports)?* Developers with an existing baseline unit outside of CAISO that have an incorrect or outdated maximum capacity listed in the Baseline Generator List should contact their incumbent balancing authority if they wish to have the capacity corrected or updated. Developers seeking such a change will be required to document a change to their existing baseline capacity in coordination with their balancing authority. Through this process, the updated baseline capacity should then flow into the Western Electricity Coordinating Council (WECC) "anchor data set" the next time that gets updated. In the meantime, staff would consider documentation from the balancing authority attesting to a project's updated baseline as valid for setting the baseline amount against which incremental capacity would be measured for D.21-06-035 compliance purposes. Staff may request follow-up documentation to support the updated baseline capacity amounts as needed.

2.16. *If a facility on the D.21-06-035 Baseline Generator List is going to reach the end of its useful life and would otherwise retire if it is not repowered, can that facility be repowered and considered "incremental" for compliance purposes? Would it make a difference if the repowered facility gets a different name?* To determine if a project on the Baseline Generator List can be counted toward D.21-06-035 compliance, refer to the column titled "Last Year to Count" (Column K) in the Baseline Generator List, which contains the last year that a unit was projected to provide system RA capacity in the decision's need determination. Units are no longer considered baseline generators for D.21-06-

035 compliance purposes after that year, meaning that a unit on the Baseline Generator List becomes eligible to be contracted for D.21-06-035 compliance starting one year after the year in Column K if all other eligibility requirements are met. If the baseline project is being decommissioned and repowered after the Last Year to Count then its full repowered capacity could be considered "incremental" and could be counted toward an LSE's D.21-06-035 procurement requirement. However, for all years prior to the Last Year to Count, repowered capacity is not considered "incremental" and cannot be counted toward an LSE's D.21-06-035 compliance obligation unless the repower adds capacity, in which case the additional capacity beyond the D.21-06-035 baseline capacity could be counted as incremental capacity for compliance purposes. The name of the repowered facility will not make a difference in terms of how its capacity is counted toward D.21-06-035. Resources with a Last Year to Count" beyond the D.21-06-035 compliance years are not eligible to be repowered and counted as incremental.

2.17. *Is it acceptable for a planned D.21-06-035 resource to be accelerated so that a different LSE can use that resource as a bridge resource? In this case, the same D.21-06-035 resource for the same reliability capacity would be used first as a bridge resource and then later by a separate LSE toward their separate incremental D.21-06-035 obligations, assuming no overlap in the delivery periods (e.g., 2023-24 bridge vs. 2025 core D.21-06-035 project).* In general, staff does not see an issue with using an accelerated D.21-06-035 resource as a bridge for an earlier year's requirement. Since both LSEs will have different "core" D.21-06-035 projects, both will meet their obligation using different reliability capacity. While the bridge does not represent *additional* reliability capacity to the system, it does bring the benefit of *earlier* reliability while also meeting the requirement to be incremental to the D.21-06-035 Baseline Generator List.

2.18. *Can an incremental DR contract be considered compliant with the D.21-06-035 requirements (assuming it meets all other requirements), despite exceeding the LSE's RA Maximum Cumulative Capacity (MCC) DR Bucket cap in some months?D.21-06-035* Similar to D.19-11-016, DR procured beyond an LSE's RA MCC bucket cap would not be compliant with D.21-06-035 procurement, as required by the backstop procurement D.20-12-044.

3. Need allocation

3.1. *For the long lead-time (LLT) resource requirements, should LSEs assume an even split between firm zero-emitting resources and long-duration storage resources?* Yes, though note that the asterisk (*) note at the bottom of Table 6 in the decision dicta states LSEs with an odd-numbered obligation may choose how to round their obligations.

3.2. *How should LSEs comply with the 2025 requirement for zero-emitting resources if the requirement is higher than their general 2025 need allocation?* LSEs must have the required amount of zero-emitting resources under contract in 2025, but

can procure those resources earlier than 2025 and apply those amounts to the 2023 and 2024 requirements, as explained in the double asterisk (**) note at the bottom of Table 6 of the Decision.

4. Cost allocation

4.1. *When will the Modified Cost Allocation Mechanism (Modified CAM) be adopted?* Modified CAM was adopted via D.22-05-015.

5. Approval, compliance, and monitoring

5.1. Utility Owned Generation

5.1.1. *Do LSEs have the choice to procure via a PPA or via ownership of the underlying resource itself?* Yes. IOUs seeking utility-owned generation will need to have their projects approved by application rather than Tier 3 Advice Letter, unless that project has been approved by the Commission in another proceeding.

5.2. Marginal (or "incremental") effective load carrying capabilities (ELCCs)

5.2.1. *How are annual marginal ELCCs used yet meanwhile OP 1 and OP 3 require September NQC?* For resource types for which staff published ELCCs for in 2021, per OP 15, the ELCC is annual and should be used to determine compliance with OP 1 and OP 3. For other resource types, LSEs should use the September NQC according to RA program rules at the time of contract signing. This is discussed in decision dicta in Section 9.2 and explained in the staff transmittal memo accompanying the ELCC study, available on the IRP procurement track website.

5.2.2. *Will the marginal ELCC values that will be finalized by the end of August 2021, per OP 15, include offshore wind?* Offshore wind was included in the ELCCs staff published in 2021. Refer to the staff transmittal memo for more information, including how the values for 2025 and 2026 apply and the process for staff updating these.

5.2.3. *Will the marginal ELCCs published at the end of August 2021 for solar paired with storage replace the Hybrid QC methodology adopted in D.20-06-031, or will the ELCCs for solar, storage, and/or solar plus storage be inputs to the formula adopted in that decision?* The referenced decision / hybrid methodology applies to the RA program. For the purposes of this IRP procurement, the ELCCs that were published in 2021 do not use the hybrid methodology developed for RA compliance purposes in the RA proceeding. Rather, as the ELCC document explains, for the purposes of this IRP procurement the marginal ELCC of each standalone resource should be added together and capped at the interconnection size to determine the paired resources' marginal ELCC, all in NQC MW terms. This is applicable to

all configurations of paired resources, except hybrid resources (i.e., the storage is restricted to charging from the generator and not the grid) for which the size of the generator is too small relative to the storage. Astrape's modeling finds that this limitation is not reached for solar and 4-hour storage hybrid configurations as long as the solar nameplate capacity is equal to or greater than the storage nameplate category, and for wind and 4-hour storage hybrid configurations as long as the wind nameplate capacity is at least double the 4-hour storage nameplate capacity. Example: A paired facility with nameplate capacities of 100 MW solar and 50 MW 4-hour battery and a 100 MW interconnection, coming online on or before the compliance date in 2023 would take the standalone solar ELCC (7.8% or 7.8 MW) and add to the standalone battery ELCC (96.3% or 48.15 MW), resulting in a combined ELCC of 55.95 MW NQC. Refer to staff's memo accompanying the ELCC study for consideration of other issues that may impact this simplified example.

5.2.4. *Regarding adding new storage to existing solar, should an LSE expect the solar and the storage to receive a marginal ELCC value even though the solar component is an existing resource?* No. With reference to the paired resources counting rule described above, only the new resource's contribution to the combined ELCC would be counted.

5.2.5. *Should an LSE account for the fact that the existing solar is already on the Baseline Generator List when determining the compliance value of the resource and, if so, how? For example, if an LSE pairs a new 50 MW battery with an existing 100 MW solar facility, what compliance value should an LSE expect to receive? 50 MW? 50 MW minus the September NQC value of the existing solar to reflect the fact that the solar component is on the baseline resource list? If so, is this a marginal September NQC or an average September NQC? 50MW plus some value from the existing solar?* Yes, the existing solar should be accounted for by not counting it at all towards D.21-06-035 procurement. In this example, and assuming the interconnection size and marginal ELCC percentages as per the similar example above, the LSE would count 48.15 MW NQC towards D.21-06-035. This is the standalone battery's ELCC (96.3% of 50 MW).

5.2.6. *If an LSE executed a contract for an eligible hybrid resource after June 30, 2020, but before the adoption of D.21-06-035, will that resource receive a marginal ELCC value, or will it receive an average ELCC similar to the treatment given to resources in the RA program pursuant to D.21-06-029.* While the D.19-11-016 procurement did rely on the RA hybrid resource methodology for NQC/ resource compliance accounting, the D.21-06-035 procurement compliance will rely on the marginal ELCC. Consequently, resources being shown for compliance with D.21-06-035 should receive a marginal ELCC value regardless of when contracts were signed.

5.2.7. *Will staff provide marginal ELCCs as well for long-duration storage?* Yes. Refer to the ELCC study staff published in 2021 and the staff memo accompanying it.

5.2.8. *For hybrid units, will staff provide different marginal ELCCs for different ratios of PV nameplate to storage nameplate (e.g. 2:1, 3:1)?* No. Reliability modeling to calculate the marginal ELCCs indicates that, within reason, the ratio does not affect the annual reliability contribution of hybrids, as long as the ratio is equal to or greater than 1:1 in the case of solar, and 2:1 in the case of wind. Accordingly, the marginal ELCCs published by staff in 2021 do not differentiate ELCCs for different ratios of PV and storage nameplate capacity.

5.2.9. *Assuming that an LSE wishes to count a hybrid resource towards its total requirement, rather than the specific line items listed in Table 5 on page 48 of the Decision (Diablo Canyon replacement, firm zero-emitting, or long-duration storage), what counting convention should the LSE use?* Per section 9.2 of the Decision, regardless of the procurement category a resource is meeting, the resource will be counted based upon the marginal ELCCs provided by staff in 2021. For resource types for which marginal ELCCs are not provided, counting will use system RA NQC counting rules at the time the incremental resource is contracted. Refer to staff's memo accompanying the ELCC study for further information, including how the values for 2025 and 2026 apply and the process for staff updating these. Also refer to FAQ **1.3.13~~1.4.13~~** for guidance on the standard required to the meet the Diablo Canyon replacement category.

5.3. Compliance

5.3.1. *For the compliance filings listed in Table 7 of the decision and required by OP 3, if the LSE has contracted with another LSE for a portion of the unit, do both LSEs (Buyer and Seller) need to submit the same contract for the resale and the resource supporting documentation? Or, can the Seller (in the LSE-LSE transaction) submit the original resource contract with their supplier and the supporting documentation, while the Buyer (in the LSE-LSE transaction) submits the resale contract between the two LSEs?* Both LSEs should submit all required documentation that they have access to (including the original documentation and re-sale contract) that demonstrates their specific claim to the resource for compliance purposes.

5.3.2. *For Milestone #2 per D.20-12-044, developers may not be contractually required to provide a Notice to Proceed (NTP) to the LSE. What should the LSE submit instead?* If the LSE does not have the NTP documentation, they may submit what similar evidence they are able to provide that serves the purpose of demonstrating that construction has started (e.g., project management reports or photos on status of construction).

5.3.3. *How should LSEs demonstrate achievement of milestone #3 per D.20-12-044 (online status)?* LSEs should include a COD notice if available to provide evidence of online status. If that is not available, LSEs should demonstrate their resource is a participating generator on the CAISO Master Generating list, including identifying the resource ID.

5.3.4. *For DR, staff did not provide an ELCC pursuant to OP 15 and therefore the RA program's September NQC is used to count the resource towards each LSE's share of the procurement requirement (per D.21-06-035 p.71). To comply using a DR resource, does an LSE need to contract for the same quantity of MW across the year, or can they enter into a contract that provides more capacity in summer months?* Staff expects that for supply-side resources, a contract must commit the total nameplate capacity of the resource an LSE wishes to claim towards their procurement requirement across all months. For some resources (e.g., geothermal), this will result in a different NQC per month, but the nameplate capacity of the resource will not vary. DR resources are treated consistently. For a DR resource, an LSE must demonstrate that they have contracted every month for the entirety of the potential available capacity, as shown to the Energy Division via the Load Impact Protocol, that they wish to claim toward their IRP procurement obligations, although the NQC value of that resource may differ across months.

5.3.5. *D.21-06-035 specifies parameters for requesting an extension for LLT resource procurement. Will there be procedures for LSEs to seek extensions for tranches other than the LLT resource tranche if the exact annual procurement cannot be achieved, either due to construction delays or other issues? Is there any guidance that can be provided on specific showings that would be needed for such waivers?* No. Staff will provide guidance for the compliance showing for LLT procurement, but D.21-06-035 does not provide for a similar, extension-seeking procedure for other procurement categories. For those, LSEs should submit their progress via the showings required by D.21-06-035 and D.20-12-044, including remediation plans if applicable.

5.3.6. *What will be the process to request an extension from 2026 to a date no later than June 1, 2028 for LLT resources to come online?* LSEs who have not been able to procure all or a portion of either LLT category for a 2026 compliance date may apply for an extension to a compliance date of no later than June 1, 2028. LSEs must submit this request labeled as "Long Lead-Time Resource Procurement Obligation Deadline Extension Request for [Entity Name]." D.21-06-035 OP5 details the minimum standard for Commission consider of LSE "good faith effort," and all requests that meet that the minimum standard will receive consideration. To assist staff with understanding an LSE's good faith effort, this request should include the following:

(a) a narrative description that outlines what portion of the LSE's LLT requirement the LSE is requesting extension for, a description of the attempt to procure a 2026 compliance date resource, and a description of the later compliance date resource that was instead procured.

(b) Evidence of a solicitation and/or Evidence of bids in a solicitation. Please include an affidavit if insufficient bids for a 2026 resource were accepted and state reason why. Please include the following information, at minimum: Counterparty, Project name, Technology, COD, County, and Total Nameplate Capacity.

(c) an executed contract for a 2027 or 2028 compliance date resource as well as the following if available: Evidence of site control; An interconnection agreement; and a notice to proceed. If a contract has not been executed, the LSE can provide other earlier indications of which project they are pursuing such as draft contract materials or a narrative description of the status of negotiations

LSEs that fully meet the above requirements should expect to receive an extension. Extensions may or may not be granted to LSEs that only meet partial requirements. These additional requirements are to provide LSEs confidence that Commission will look favorably on requests that indicate procurement progress.

LSEs may be required to submit this extension request as an advice lender, pending additional Commission action. If no further Commission action is taken, LSEs may submit this request with their compliance filings.

5.3.7. *Do LSEs need to file all milestone documentation and engineering assessments for bridge resources (in addition to providing that documentation for their "core" resources)?* LSEs should provide all milestone documentation required by D.20-12-044 for bridge resources so staff can verify online status or projected COD (i.e., contracts, site control, interconnection, NTP, etc.). However, staff does not see the need for LSEs to provide engineering assessments for resources that will only be briefly serving the reliability need. Thus, for bridge proposals shorter than 6 months, staff will not require LSEs to submit engineering assessments as generally would be required for the firm zero-emitting procurement category or zero-emissions generation, generation paired with storage, or demand response procurement category. Staff expects based on the stated use case in D.21-06-035 for bridge resources, "to cover the risk of a delay in a project online date," that such resources would be likely to serve a period of less than 6 months. In the event a bridge is proposed for a longer period, the LSE must submit all required engineering assessments.

5.3.8. How should LSEs select MTR tranches when resources are delayed?Energy Division staff assess compliance by evaluating an LSE's entire stack of

resources, the duration of resource delays, and whether bridge resources are available to address any compliance gaps. LSEs are required to fulfill each tranche of their procurement obligation, regardless of delays or procurement gaps. Delayed resources (short-term and long-term) can be counted toward the tranche the resource was originally intended for if a delay occurs, although enforcement actions may still take place. The LSE is not required to reassign a delayed resource to a later tranche if the prior tranche has not been filled. Ultimately, resource tranche selection is up to the LSE.

5.4. D.19-11-016 Resources

5.4.1. *Can a resource be used toward both D.19-11-016 and D.21-06-035 if the capacity is in excess of the LSE's D.19-11-016 obligation?* Capacity cannot be double-counted toward both decisions, but an LSE may use a portion of one resource to comply with D.19-11-016 and another portion of that same resource to comply with D.21-06-035 (if it meets the requirements of D.21-06-035, including being incremental to the Baseline Generator List).

5.4.2. *If an LSE included a resource in their D.19-11-016 report that is in excess of their obligation, can they count that resource toward D.21-06-035?* Yes, provided those resources comply with D.21-06-035. Prior to the first compliance filing staff will provide a method for LSEs to identify which resources they are using to count toward D.19-11-016 and which resources are excess and available to count toward D.21-06-035.

5.4.3. *Can the Commission clarify how the accounting would work for hybrid resources? How would the Commission determine "excess" to D.19-11-016? For example, suppose that an LSE exceeded its total D.19-11-016 requirement by 20 NQC MW. To fulfill this requirement, the LSE had procured a 100 MW solar paired with 50 MW storage project with a total NQC of 60 NQC MW under the counting rules in D.19-11-016. Could they apply the excess capacity of that project to the requirements for 2,500 MW of incremental zero emissions resources, or other procurement required by D.21-06-035, on a NQC MW – for - NQC MW basis? If not, please clarify the accounting.* D.19-11-016 and D.21-06-035 do not necessarily use the same resource counting rules, as such, the NQC value of a certain project might differ between the Decisions. If a part of a resource is being used to count towards meeting one decision's requirements, and the rest of the resource towards meeting the other decision's requirements, LSEs should tie their calculation of NQCs for each back to the underlying nameplate capacity such that the resource's total nameplate capacity is not exceeded.

5.4.4. *If excess capacity from a D.19-11-016 resource is applied to an LSE's D.21-06-035 obligations, does the 10-year requirement for contract term (OP 9) change? Is 10 years for the entire resource from COD sufficient or is an extension required for capacity that counts for D.21-06-035?* Staff expects

this matter will only apply to a small number of resources given that D.21-06-035 eligible resources cannot already be in the Baseline Generator List. Nevertheless, staff thinks 10 years from COD is reasonable for a resource that is being counted towards both Decisions. This should meet the intent of D.21-06-035's OP 9 to ensure projects can get financed and constructed at a reasonable annual cost, to provide reliability in the mid-term.

5.4.5. *D.21-06-035 (OP 17) says that the procurement in excess of the D.19-11-016 requirements can count toward meeting D.21-06-035 requirements, subject to meeting the other requirements of D.21-06-035. There are several non-IOU LSEs that opted out of the D.19-11-016 procurement. Will the costs of any procurement in* ***excess*** *of the requirements of D.19-11-016 be assessed to opt-out customers subject to the Modified CAM or will those costs will be recovered solely from the IOUs' bundled customers. If the former, will the opt-out LSEs receive a proportionate share of the excess procurement to count toward their D.21-06-035 requirements?* While staff understands the concern regarding an allocation of excess procurement being provided to opt-out LSEs, it is also the case that some over-procurement conducted by IOUs would allow for potential contract failure and thus would be of use to opt-out LSEs in ensuring they met their obligations. Since this is a substantive issue that has a potential impact on multiple LSEs, staff cannot resolve this without the benefit of further Commission direction. At this time, staff expects these issues can be considered in the context of a Commission Decision on Modified CAM.

5.4.6. *D.21-06-035 (p. 37) says that if any of the procurement done by entities pursuant to D.19-11-016 satisfies the requirements for LLT resources, the entity can use that to meet the LLT requirement of D.21-06-035, so long as they meet the total quantity of procurement required across both decisions. For entities that opted out of the D.19-11-016 procurement, if any of the procurement done by the IOUs on their behalf included LLT resources, will opt-out LSEs be able to similarly count that procurement toward their LLT requirement? Can you please confirm whether any of the resources authorized by the Commission for procurement by the IOUs to meet the D.19-11-016 requirements are in the category of resource that would meet the LLT requirements of D.21-06-035?*

Staff does not perceive IOU procurement pursuant to D.19-11-016 as meeting the LLT requirements of D.21-06-035. As filings are still under analysis, and more procurement toward D.19-11-016 could occur, this is subject to change. The principle behind this question should also be addressed in Modified CAM, similar to question 5.4.5 above.

5.4.7. *If an LSE signed a contract with a resource to meet its D.19-11-016 obligations on or before June 30, 2020 (thus being part of D.21-06-035's Baseline Generator List) that is now facing a delay such that the resource will not be online to meet D.19-11-016 compliance dates, and the LSE has signed another contract to fill the resulting shortfall, can the LSE count the*

original contract towards its D.21-06-035 obligations? Per staff's guidance in **5.4.1** above, it is possible that resources LSEs procured in excess of their D.19-11-016 obligations can be counted towards their D.21-06-035 obligations. Here there is an additional issue to consider: the excess D.19-11-016 resource is now delayed and unable to meet the D.19-11-016 milestone compliance dates. Staff's guidance here assumes the resource is able to meet all requirements for an LSE's D.21-06-035 obligations except that they are included in the Baseline Generator List of resources (thus currently excluding it from counting toward D.21-06-035 compliance). Staff's guidance is that LSEs with such a resource can request to swap it with a replacement resource/s they contracted to meet their D.19-11-016 obligations, such that the delayed resource would now be excess to meeting the LSE's D.19-11-016 requirements. The delayed resource now in excess of D.19-11-016 obligations would be removed from the D.21-06-035 Baseline Generator List, and the new resource that the LSE is procuring to replace that capacity would be added in its place. To pursue this process, staff requests LSEs to fill out the LSE Swap Template demonstrating that the D.19-11-016 excess capacity is incremental to their D.19-11-016 obligations and was procured to replace the delayed resource's capacity to meet their D.19-11-016 procurement obligations. LSEs must have submitted sufficient supplemental documentation through regular compliance filings such that staff is able to verify the details provided on this form, as well as submitted a remediation plan that includes specific documentation of the cause of the delay. If supplemental documentation is missing, staff may not be able to grant the request. Upon submission of the LSE Swap Template, Staff may request additional documentation of the cause of the delay.

5.5. Emergency Reliability Resources

5.5.1. *D.21-06-035 (p. 80) says that procurement authorized in the emergency reliability proceeding may count toward D.21-06-035 requirements. Since costs of that procurement are being recovered using the CAM, will all LSEs be allocated a share of that procurement to count toward D.21-06-035 requirements? If so, when will staff provide information about that procurement to LSEs?*

Please refer to OP 9 and p. 127 of D.22-02-004. OP 9 states:

"Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company shall not be authorized to count procurement in compliance with Decision (D.) 21-12-015 that utilizes the cost allocation mechanism toward compliance with D.21-06-035 requirements in the same compliance year."

IOU procurement that is subject to cost recovery using the CAM is not eligible to meet the requirements of D.21-06-035 and thus LSEs will not receive any allocation of this procurement to count toward D.21-06-035.

5.6. Penalties ***

5.6.1. *The net cost of new entry (CONE) is an annual value that represents the levelized fixed costs of a new battery minus the estimated revenues the battery earns in the energy and ancillary markets. Thus, the net CONE corresponds to the year the battery is expected to begin dispatch. Can the Commission confirm that, when calculating the penalty an LSE must pay, the net CONE for the year in which the backstop resource is expected to come online will be used?*
*For example, if an LSE fails to procure to meet its 2025 obligation and backstop procurement is triggered, the net CONE that would be applied to calculate the penalty would be the net CONE for the year in which the backstop resource is expected to come online, **not** the net CONE for the year in which the penalty is assessed.*

The assumption included in the question – that the CONE penalty will be equal to the CONE for the year in which the backstop resource comes online – is incorrect. The CONE value used in calculating penalties will be the year in which the penalty is assessed. Since the year in which the backstop resource will come online will be uncertain, using the CONE for the year the penalty is assessed will be more transparent and make penalty costs clear in a timely fashion. For the example above, if the penalty is assessed in 2025 the CONE used will be also for the year 2025. Note there are other factors that may impact the total penalty(for example, if the LSE is still deficient in 2026.)

*** Please note that staff's August 2021 answer to question 5.6 included a table with sample values. Staff has removed the table to avoid confusion as the values of net CONE in the ACC are subject to regular updates.

This concludes this FAQ guide. If staff's understanding of the associated CPUC Decisions changes staff may issue revisions to the guidance, but does not currently plan to update this document. In any case, in the event of any inconsistency, the CPUC is bound to operate pursuant to its Decisions and relevant statutes, case law and rules.