Meeting Title: Generation Projects Coordination – Costa Sur Interconnection Review

📅 April 28, 2026

Key Points

- Meeting purpose: review proposed generation projects for Costasur, verify connection capacity with Luma, and coordinate project accommodation at the 115kV substation.

- Floating power barge project (200MW) proposed for Costasur, with a COD of 150 days from contract signature, though interconnection studies and system upgrades could extend that timeline.

- Marcella flagged that Luma's full interconnection process — including facility studies and system upgrades — could trump the 150-day target, and no technical sessions had yet been granted to begin that process.

- Three Luma-side projects are already in progress at Costasur: a 30MW battery (Deck), a 100MW Peakers battery (parking lot, 90% procurement complete, Q2–Q3 2027 target), and a 100MW Peñuelas battery connecting to the 115kV bus.

- The 115kV bus at Costasur can accommodate only ~200MW of injection; the three Luma battery projects alone total 230MW, meaning the floating barge cannot be added without displacing something.

- Contract terms for the barge: non-take-or-pay at $0.18/kWh, but includes a walk-away clause if dispatched below 70% capacity over a year.

- Trench battery projects are take-or-pay — capacity payments are owed regardless of dispatch — distinguishing them from must-run obligations, though all 230MW is expected to be utilized.

- A new 300–600MW generation facility (replacing units 5 and 6 at Costasur) was presented, targeting Q3 2029, with connection planned at the 230kV level and space from units 3 and 4.

- IRP listed units 5 and 6 in service until 2038–2039, which surprised participants; the 600MW project was not reflected in the IRP since it post-dates the nearly two-year-old PREPA 3000MW order.

- Running the new plant in parallel while keeping units 5 and 6 online is physically constrained — no room to expand the 230kV switchyard, and sequencing the cutover without tripping 800MW of load is a key engineering challenge.

- Upgrading the 115kV bus (component replacement, protection updates, bus reconfiguration) is technically feasible and relatively inexpensive, but planning and sequencing around live projects will take time.

- Proponents should be briefed on grid limitations — including the realistic interconnection timeline and minimum dispatch risks — before signing final contracts, to avoid penalties or walk-away scenarios.

- Concentrating so much generation at Costasur raises resilience concerns; spreading generation across the island would reduce single-point-of-failure risk and improve contingency options.

- No single decision-maker was identified in the room; findings will be taken back to the government, with the 115kV capacity constraint and sequencing complexity as the central issues to resolve.

Outline

Meeting Purpose and Introduction

- The meeting was convened to review generation projects proposed for Costas and to verify connection feasibility with Luma, enabling proper planning of which projects can be accommodated.

- Participants introduced themselves, representing organizations including Luma, FTI, P3A, Supply Side Contract Administration, and various development and operations teams.

- Miguel García emphasized that the meeting was intended to be an open, collaborative conversation where all parties were encouraged to contribute feedback and raise concerns.

Floating Power Barge Project Overview

- The project involves a floating power barge with a capacity of 200 MW proposed for the Costas work site.

- The commercial operation date was described as tentative, with an estimated timeline of 150 days from contract signature.

- Originally proposed for San Juan, the project was redirected to Costas due to complications associated with the San Juan location.

- The barge was noted as the most flexible project in terms of relocation, making it easier to accommodate compared to fixed infrastructure projects.

- The energy cost under the current agreement was stated at 18 cents per kilowatt hour.

- The contract was clarified as non-take-or-pay, meaning Luma is not obligated to run the unit but the proponent retains the option to exit if minimum usage thresholds are not met.

Interconnection Process and Timeline Concerns

- A concern was raised that the 150-day timeline from contract signature does not account for the full interconnection process required by Luma, including facility studies and system upgrades.

- No technical sessions between the barge project team and Luma had taken place yet, meaning the connection point had not been determined and no interconnection studies had been initiated.

- It was clarified that the 150-day timeline is contractually defined and approved by FOMB and PREPA, meaning any deviation must be formally justified.

- Luma representatives emphasized that their interconnection process adds time beyond the contractual timeline and must be factored into planning for all projects, not just the barge.

Battery and Beaker Projects at Costas

- Three fixed infrastructure projects were identified as already in advanced stages of procurement and delivery, including a 30 MW battery project, a 100 MW Peaker project, and a 100MW Penuelas battery project injecting into the 115 kV substation.

- Equipment for these projects had already been purchased and was either on-site or in transit, making it impractical to delay or cancel them.

- The Penuelas battery was described as a take-or-pay contract, meaning Luma must pay for capacity regardless of whether the units are dispatched.

- Combined injection from these three projects was calculated at approximately 230 MW, which was identified as exceeding the current capacity of the 115 kV substation.

- A concern was raised that batteries cannot remain idle without cycling for more than six months, adding urgency to the deployment timeline.

- The Peaker project was noted as being located in the parking area adjacent to the 115 kV yard, with connection lines running through the site.

115 kV Substation Capacity Constraints

- The 115 kV substation at Costa Sur was identified as having a maximum injection capacity of approximately 200 MW, meaning the three existing fixed projects alone would exceed available capacity.

- A preliminary study had been completed indicating that while the substation bus could potentially accommodate more, transmission line limitations remained a choking point.

- Upgrading the substation was discussed as involving component replacements, disconnects, and protection system updates rather than a full rebuild.

- It was noted that a section of the transmission infrastructure operates on a single conductor configuration, limiting overall capacity.

- Any upgrade work on the substation would need to be carefully sequenced to avoid interfering with ongoing construction and connection work for the battery and beaker projects.

- The possibility of operating a parallel connection temporarily and then transitioning once grid capacity increases was raised as a potential approach.

Must-Run vs. Take-or-Pay Contract Clarifications

- A distinction was drawn between must-run and take-or-pay contract structures, with the Trench battery projects confirmed as take-or-pay rather than must-run.

- Under the take-or-pay structure, Luma is obligated to pay for capacity whether or not the units are dispatched, but is not required to run them at all times.

- The barge contract was clarified as non-take-or-pay but containing a minimum dispatch clause, whereby if the unit is not run at approximately 70% of capacity over a year, the proponent may exit the contract with 30 days notice.

- Concerns were raised about the risk of proponents walking away if dispatch levels during low-demand seasons are insufficient to meet minimum usage thresholds.

- It was acknowledged that proponents need to be fully informed of the dispatch environment and seasonal demand patterns before finalizing contracts.

New Generation Facility Proposal at Costas

- A proposal for a new generation facility of up to 600 MW was presented, intended to replace units 5 and 6 at Costas over time.

- The planned commercial operation date for this facility was noted as Q3 2029, with the project currently in procurement.

- The facility was described as highly flexible in terms of ramping up and ramping down, making it suitable as a long-term replacement for aging thermal units.

- It was noted that units 5 and 6 must remain operational until the new facility reaches commercial operation, creating a sequencing challenge for construction and interconnection.

- The Integrated Resource Plan had projected units 5 and 6 remaining in service until 2038 and 2039, which was described as a surprise given their age and condition.

- Physical space constraints at Costas were identified as a significant challenge, as there is limited room to install new generation units while keeping units 5 and 6 running in parallel.

- Connecting the new facility to the 230 kV system would require careful sequencing to avoid tripping existing high-load connections, including the Echo Electric interconnection.

- The project had not been reflected in the IRP at the time it was published, as it was still in early procurement stages when the preferred scenario was finalized.

Grid Capacity and Long-Term Planning Considerations

- A broader concern was raised that the 115 kV substation cannot accommodate all proposed projects simultaneously, requiring a prioritization decision from the relevant government and regulatory authorities.

- Upgrading transmission infrastructure to increase capacity was discussed as a potential solution but was noted as requiring significant planning time and posing risks of taking lines out of service during construction.

- The concentration of generation assets at a single substation was flagged as a systemic risk, with a recommendation to consider distributing generation across multiple connection points on the island.

- It was acknowledged that future IRP cycles would need to incorporate the projects currently in the pipeline that were not reflected in the most recent plan.

- The importance of coordinating all projects at Costa Sur in a properly sequenced manner was emphasized to avoid construction conflicts and ensure grid stability.

Proponent Transparency and Pre-Contract Coordination

- A recommendation was made to arrange technical sessions with proponents before contracts are finalized so they fully understand the interconnection limitations and realistic timelines.

- Luma representatives stated their intent to be transparent with proponents about the constraints at the 115 kV substation and the likelihood that the 150-day contractual timeline may not be achievable.

- It was noted that non-disclosure agreements had been executed with some proponents but not all, and that this gap needed to be addressed before detailed technical information could be shared.

- The group agreed that proponents must understand the dispatch environment, seasonal demand patterns, and infrastructure sequencing before committing to final contract terms.

Next Steps

- The findings from the meeting were to be taken back to the relevant government and regulatory decision-making bodies to determine which projects would be prioritized for accommodation at the 115 kV substation.

- Technical sessions between Luma and individual proponents were to be arranged prior to contract finalization to ensure all parties understood the interconnection constraints and realistic timelines.

- A review of planned substation and transmission upgrades was identified as necessary to determine how much additional injection capacity could be unlocked and at what cost.

- The sequencing of construction activities across all projects at Costas was to be formally planned to prevent conflicts and ensure grid stability throughout the transition period.

- Proponents were to be provided with a clear picture of the dispatch environment and seasonal demand patterns so they could make informed decisions about proceeding with their contracts.

Project Details Discussed

- **Floating Power Barge (P3A / Fabian Velez's project)**

- Capacity: 200MW

- COD: TBD, approximately 150 days from contract signature

- Rate: 18 cents per kWh

- Contract type: Non-take-or-pay; includes a clause allowing the proponent to exit if not dispatched at least 65% of 80% of full capacity over a year, with 30 days notice

- Originally proposed for San Juan; redirected to Costa Sur per government preference

- Described as the most flexible/easiest to relocate given it is a floating solution

- Connection at the 115kV; site visit confirmed 200MW was available at the time

Peñuelas Battery Project

- Capacity: 30MW nameplate, with capacity closer to 50MW

- COD: Q4 2026

- Connection: 115kV

- Contract type: Take-or-pay

- Facility studies and protection/system studies (PSCS) already in process

- Equipment already purchased and on-site; breakers are long-lead items being exchanged with Luma

-P**eakers Battery Project**

- Capacity: 100MW (two units of 50MW or similar configuration)

- COD: Between Q2 and Q3 2027

- Connection: 115kV, located in the parking area adjacent to the substation

- Contract type: Take-or-pay

- Demolition of existing site structures already started; construction underway

- Batteries cannot remain uncycled for more than six months — equipment already on-site

New Generation Facility (P3A / Marcella Ferrara's project)

- Capacity: Up to 600MW (described as part of a 300–600MW range, referencing the 3000MW procurement)

- COD: Q3 2029

- Intended to replace Units 5 and 6 at Costa Sur

- Connection point referenced as 23230 (likely 230kV)

- Qualified proponents recently notified; land configuration discussions ongoing

- Units 5 and 6 must continue to operate until new plant reaches commercial operation

- IRP had projected Units 5 and 6 remaining in service until 2038–2039, which was noted as a surprise

- Physical space constraints at Costa Sur make parallel construction and sequencing very challenging

- No room to expand the existing switchyard; new connections would need to be carefully planned

Interconnection Process & Timing Concerns

- Luma has its own interconnection process including facility studies and system upgrade studies that must be completed before any project can connect

- No technical sessions between Luma and the floating barge project team have yet taken place despite repeated requests

- The 150-day COD timeline in the barge contract is per approved PREPA/FOMB timeframe; any deviation must be justified

- Interconnection studies are a prerequisite and could extend beyond the 150-day window

- Luma representatives emphasized they do not want to over-promise on timelines and want to be upfront about constraints

- Sequencing of multiple projects at the same substation must be carefully planned to avoid construction conflicts

- A recommendation was made to hold a technical session with proponents before any final contracts are signed so they understand grid limitations

Dispatch & Commercial Considerations

- The floating barge is non-take-or-pay but has a minimum dispatch requirement (65% of 80% of full capacity per year); failure to meet this allows the proponent to exit in 30 days

- The Penueas and Beakers battery projects are take-or-pay — PREPA pays for capacity whether dispatched or not

- Concern raised that if the barge comes online before batteries are ready, it may only operate for a limited window (e.g., 5–8 months) during which dispatch may be low due to low season (January–February)

- Proponents need to be informed of the full dispatch plan so they can assess financial viability before signing final contracts

- The 230MW of battery capacity already committed will largely be used; the barge's 200MW adds to an already constrained injection point

Grid & System Context

- Costa Sur Units 5 and 6 currently provide approximately 800MW and are the most reliable generation on the system

- Significant capital has already been invested in Units 5 and 6

- The IRP did not account for the 600MW new generation project as it had not been submitted at the time of the IRP

- A transmission upgrade study is needed to determine how much additional capacity could be added to the Costa Sur area and at what cost

- Concern raised about concentrating too much generation at one substation ("too many eggs in one basket"); spreading generation across the island was suggested as preferable from a contingency perspective

- Luma noted that any upgrade work on the 115kV while other projects are under construction would prevent any new connections during that period