



Hidroituango Reaches Another Historic Milestone by Synchronizing Power Generation Unit Three Ahead of Schedule

- Hidroituango can now technically generate 900 MW (Megawatts), which represents a transcendental contribution to the country's energy reliability, mitigating the effects of the El Niño phenomenon.
- Power generation unit three is ready to contribute another 300 MW (Megawatts) to the National Interconnected System.

Medellin, Tuesday, October 24, 2023 (@epmestamosahi) | EPM has given great news to the country by synchronizing the third-generation unit ahead of schedule and with complete success. It represents another 300 MW (Megawatts) of clean and renewable energy to be added to the National Interconnected System. This milestone, which comes at a critical moment for the country in terms of power generation, means the plant can now deliver a total of 900 MW (Megawatts) of electricity for Colombia.

Synchronizing a new power generation unit at Hidroituango is a great achievement for the country's energy security and for EPM.

"For several reasons, we celebrate the outcome of the tests performed on the machine. We were certain they would be satisfactory due to the commitment of the Company's human talent and the performance of contractors. Here we are fulfilling our commitment to Colombia, and we are convinced it will have a positive effect on energy rates and users' pockets. Additionally, with the Unit's completion, we continue to mitigate the risk to communities in the area of interest," said Jorge Carrillo Cardoso, CEO of EPM, in view of the milestone reached at Hidroituango.

Previous Work

After demolishing the concrete plug-in recent days and adapting some missing civil works in the pipeline, the underwater works continued and, with expert divers immersed at a depth of 60 meters in the reservoir, the 80-ton hydromechanical bulkhead or gate that had been installed there a month prior was dismantled. It fully fulfilled its purpose of preventing water from passing from the reservoir into the pipeline while these civil works were being completed. This was an unprecedented work in Colombian engineering, which gave way to beginning the various tests that had to be completed on the machine.



Final Tests to Deliver More Energy to Colombia

With the pipeline free for water to flow, it was possible to fill the entire tunnel with water, from the reservoir to the turbine, and start the different tests to which the machine had to be subjected before beginning commercial operation. Therefore, in order to synchronize the machine, it had to pass a series of established tests, namely:

Type A tests: dry tests.

The machine is subjected to a series of turns without water to determine its behavior.

Type B tests: tests with still water or water without flow.

Without any flow, the machine is filled with water from the surge tank to determine its behavior.

Type C tests: dynamic tests with water, with flow and without charge.

Water is allowed to flow through, which means it carries a force that allows the machine to rotate at certain speeds, but without an electrical charge.

Type D tests: water, flow and charge tests (synchronization test).

This last test was precisely the one EPM passed with Hidroituango's generation unit number three. The purpose of this final test was to make sure the machine met the established regulatory requirements, where it can be synchronized and registered to the National Interconnected System. In addition, static, dead band and net effective capacity tests are performed to make the final adjustments and fine tune the machine.

Once this last phase of the test is completed, the machine is operational and under testing for a few days while waiting for XM (the National Interconnected System Operator and Wholesale Energy Market Administrator) to approve the reports prepared during the tests and officially declare the machine in commercial operation.

"Thanks to the experience we gained from commissioning units one and two a year ago, we were able to optimize yields without accelerating or putting the communities, employees or the project at risk. We reached this great milestone and are waiting to also synchronize unit number four, which has been performing very well. With this additional synchronization, the plant would be delivering 1,200 MW (Megawatts) of energy to the system, fulfilling our commitment to Colombia and with the CREG in 2023," added the CEO of EPM.



Press Release



By commissioning generation unit number four, the first stage of Hidroituango will be complete and stage two will be resumed with the construction, assembly and commissioning of units 5 to 8.

By synchronizing unit three and, later, unit four, EPM and Hidroituango are growing in power generation for the well-being, development and quality of life of all Colombians. They contribute to the harmony of life for a better world.

Press Kit

Audiovisual support material and statements from EPM spokespersons.

https://drive.google.com/drive/folders/1XuLpFG_9l4rU8-Jn6MqRy0Tt1w2NZo?usp=share_link

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