

Pumped-storage as the backbone of Australia's transition to a zero-carbon generation mix

Tractebel is at the forefront of pumped-storage engineering in the country



CONTRACT AWARDS

Cultana Seawater PSP, Australia

Located near the city of Port Augusta in South Australia, Energy Australia has tendered the EPC construction of a pumped-storage scheme with a capacity of some 250 MW. Tractebel, in a joint venture under the lead of Australia-based engineering company Aurecon, develops the bid design of the powerhouse and the power conduit. Aurecon is in charge of the design of the upper and lower reservoirs with a reservoir volume of 3.5 million m³.

With our competitive design as a basis, our client, the German branch of Strabag SE, will bid for the project. For the supply of the electromechanical equipment, Andritz is on board.

As a special feature, the upper and the lower reservoir are a closed system with no exchange of water with external natural water bodies. The water, which is used for the operation will be abstracted from the ocean and thereafter be desalinated by a reverse osmosis plant. The design of the reverse osmosis plant will be done by GWK Consult of Mannheim, Germany, in a close co-operation with Tractebel Germany and Aurecon.

For the construction of the ambitious project a duration of 36 months has been envisaged by the EPC specifications. This is one of the major constraints for the realization of the cost-effective design.

Contact: Christian Siemer, Christoph Grass

NEW CHALLENGE

Snowy 2.0: Boosting activity in Australia?

2000 MW, this is the installed capacity of a new Pump Storage Plant (PSP) to be implemented in the well-known Snowy scheme in Australia. The project concept is to link existing Tantangara and Talbingo reservoir by a new underground waterway and a cavern powerplant with 2000 MW turbine/pumps. Excess of energy from intermittent renewable energy sources (wind and solar mainly) can be stored by the mean of water in the upper reservoir for later use when required.

Tractebel was engaged by Future Generation to perform a due diligence analysis of the scheme and to prepare jointly with Coffey and Studio Pietrangeli, a proposal of services to be the designer of the EPC contract. A team has been set up to prepare this proposal and is currently negotiating a contract. This project would be an iconic reference for a high capacity PSP, on a high exposure project in Australia and working for an EPC Contractor in a 100% BIM context. Fingers crossed!

Contact: Matthieu Beraud

To go further on the topic:

[Will pumped hydro unlock the transition to renewables?](#)

[Which energy storage technology is going to power Australia's future?](#)

PROJECT NEWS

Lemro HPP studies continue

When Engie decided to sell Glow to GPSC last year, this put in stand by the development of the Lemro project, in which Glow was meant to continue the development of this 600 MW HPP based on a Feasibility Study prepared by French experts of Tractebel and financed by a French grant (FASEP).

To follow up on the assistance by French Authorities in the development of clean energy in Myanmar, the French Ministry of Finance decided to provide a second Grant to Myanmar using another financing tool (FEXTE) that was approved on July 3rd.

This new tool requires a co-investment by a French company. EDF agreed to step in and become the new project developer and be part of the picture. Discussions were held with EDF CIH to share the scope of studies and this will be a new corner stone for a collaboration with the design department of EDF on a hydropower project after the Garafiri project in the 2000's.

The next step will be for Myanmar Ministry of Energy to send an official letter to request officially the grant. This will open the road to studies in collaboration with EDF CIH to start by the end of the year.

Contact: Matthieu Beraud

CONTRACT AWARDS

A 60MW - runoff hydropower project on the Amburayan River in Luzon Island, Philippines

Cordillera Hydro Electric Power Corporation (COHECO) decided to move forward with the construction of a 60MW Kapangan hydropower project in barangay Cuba which is expected to contribute in spurring the socio-economic growth in the host and neighboring communities.



The project concept is to take advantage of high relief terrain to bypass the water from upstream weir over a distance of 8.6 kilometers in order to gain a different head of 248 m for hydropower generation.

Tractebel has been awarded the contract for providing Conceptual and Detailed Design Drawings of the Main Civil Works in July 2019. While the construction of access road which pave the way for construction of the hydro plant facilities has progressing well, Tractebel APAC in cooperating with Tractebel Germany has started to conduct the conceptual design of a Weir and its Facilities, a 8.6 km long tunnel, an on-ground powerhouse and project facilities.

Contact: Pratoomkhan Saritanon

CONTRACT AWARDS

Grid integration studies for Sahofika hydroelectric scheme

The Ministry of Energy and Hydrocarbons of the Republic of Madagascar has awarded the international consortium Eiffage - Themis - Eranove - H.I.E.R the task to develop the hydroelectric scheme of Sahofika. With an installed capacity of 205MW, this project is expected to play a major role in addressing the island state's long-standing electricity supply issues.

The concession consortium has entrusted to Tractebel the study of the integration of the project in the interconnected electric network of Antananarivo. In that framework, Tractebel's electrical engineers have modelled the projected electricity network by 2024 and 2035. The static and dynamic studies being conducted will enable to assess the impact of this new development on the management of the electricity grid and ultimately to confirm the electrical characteristics of the generating units.

This study testifies to our strong involvement in the development of hydroelectric and electrical infrastructures in Madagascar, and to our capacity to assist efficiently public and private developers in all the stages of the development of their projects.

Contact: Xavier Bancal

CONTRACT AWARDS

Wawa Dam Project Award in the Philippines

In order to address Metro Manila's water supply shortage as well as flood concerns, the Philippine Government awarded through a BOT scheme the "Wawa Bulk Water Supply Project" to a group of local private developers: Wawa JV Co.

The project is composed of 2 main components: the "Tayabasan Multi-Basin System" which is aimed at providing additional 80 MLD by 2021, and the 'Upper Wawa Dam' which is expected to provide 438 MLD of water by 2025 and will act as a flood mitigation structure during heavy rainfall.

Tractebel has been awarded by Wawa JV Co the Tender Engineering Design of 'Upper Wawa Dam' and related water transfer system up to the water treatment plant. This is a 100m high dam which will provide a water reservoir together with related water transfer facility.

This project is being led internally by the BE APAC with the full support of Tractebel's international water supply and hydro competence centers in France and Germany.

A site visit was organized on June 25th and 26th in order to perform an initial assessment of the main components of the project (location of the dam, in-situ analysis of the geology, routing of the water transfer,...)

"We are glad to play an important role in the development of this key infrastructure for the future of the Philippines' capital city. This project award confirms Tractebel's strategy in the development of our activity towards the water sector. It will bring us valuable visibility and therefore further business opportunities in this growing market" – Nicolas LEFEVRE

Contact: Nicolas Lefevre – Regional Manager Philippines / Marc Demirdache – APAC Head of Water

