

Espejo de Tarapacá Project will utilize seawater and solar energy

## **EIA Approval of 300 MW Hydroelectric Plant in the Atacama Desert**

- Large-scale renewable energy storage initiative, sponsored by Chilean company Valhalla, contemplates the construction of a hydroelectric pumped-storage power plant.
- The project, located 100 kilometers south of Iquique, facilitates incorporation of non-conventional renewable energy (NCRE), by ensuring a clean and continuous supply of energy (24 hours a day, 7 days a week).

Iquique, December 3, 2015.-

Chilean company Valhalla received approval of the Environmental Impact Study (EIA) for its 300 MW Espejo de Tarapacá Project (EdT). The project will provide a clean and continuous supply of energy to the Chilean electric system. The project is expected to start construction in the second half of 2016 and initiate commercial operation in 2020.

With an estimated investment of USD 400 million, Espejo de Tarapacá involves the installation of a pumped-storage hydroelectric plant which will utilize solar energy during the day to elevate seawater to the surface of a coastal cliff, where it will be stored in natural concavities located at an altitude of 600 meters. During the night, when solar energy is not available, electricity will be generated by releasing the water through the same tunnels. The project will offer clean and continuous energy (24 hours a day, 7 days a week), overcoming the intermittency of NCRE.

The Project's particular distinction comes from the effective combination of the best conditions in the world for the production of solar energy and large-scale energy storage. The unique and exceptional geographical characteristics of the Atacama Desert—a high coastal cliff located very close to the sea which has natural surface concavities that allow for the storage of seawater without the need to construct dams—permit the project to reduce construction costs and make it competitive with other generation sources.

Espejo de Tarapacá is the first Chilean project that combines highly proven international technologies (pumped-storage hydroelectric and solar plants), that can be replicated and integrated with other renewable sources, allowing for transformation of the Chilean electric generation matrix through the use of local, clean and infinitely abundant resources. Additionally, as a zero emissions project, it will make a significant contribution to the commitments the country undertakes to reduce CO<sub>2</sub> emissions.

“We are convinced that the Tarapacá Region can be a solar energy leader and that Chile can become an international energy power based on clean, economic and infinitely abundant energy. As a result, approval of the environmental project is an important step in allowing us to move on to the next stage of executing the project which will change the face of Chile's energy matrix,” stated Francisco Torrealba.

Another important part of this initiative was the work carried out with the communities surrounding the project, conversations which started early, prior to initiation of any site studies. This process was characterized by active community participation during project development, involvement which led to

the incorporation of design modifications, taking into consideration not only technical and economic, but social variables as well.

“We believe that the trust established with community residents is the basis for confronting any future challenges or issues. It is important to consider the community’s concerns from the beginning and to explore opportunities for supporting their growth and development. This collaborative work resulted in Associativity Agreements executed with the Residents’ Counsel and Fishermen’s Syndicate from the Caleta San Marcos, which were included in the first addendum to the EIA and which seek to establish a transparent, constructive and long term relationship,” highlighted Juan Andrés Camus.

#### About Valhalla

Valhalla is a Chilean Company founded in 2011 by Juan Andrés Camus and Francisco Torrealba, with the objective of finding innovative solutions for resolving the energy problems faced by the country, based on the conviction that Chile is poor in energies of the past but infinitely rich in energies of the future. The company seeks to contribute to the development of a clean, reliable and competitive energy matrix.

At present, the company has approximately 50 shareholders—principally national—and Carlos Mathiesen, a civil engineer with a distinguished track record in the local market, leads project engineering.

The Company was recently recognized with a 2015 Avonni innovation award and is supported by Fundación Chile.

Additional information: [www.valhalla.cl](http://www.valhalla.cl)

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