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## PRESS RELEASE

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### **Three Plant 30 MW Cascade on Piedra River in Panama's Chiriqui Province Completed with Commissioning of Final Plant in June 2013 - It all began with a Yoyo at HydroVision 2004 -**

Panama City, Panama and Benesov, Czech Republic – 7 August, 2013 - A cascade of three 10 MW hydroelectric power plants (the "Piedra River Cascade") developed by Hidrotenencias, S.A. ("Hidrotenencias") was completed with the official commissioning of the Las Perlas Sur hydroelectric power plant in June 2013. The June commissioning concludes eight years of cooperation between Mavel and Hidrotenencias for the development of the Piedra River Cascade that began with a discussion and a yoyo at HydroVision 2004 in Montreal, Canada.



**The Piedra River in the Chiriqui Province, Panama**

The Piedra River Cascade consists of the Concepcion Hydroelectric Power Plant (the "Concepcion HPP"), the Las Perlas Norte Hydroelectric Power Plant (the "Las Perlas Norte HPP") and the Las Perlas Sur Hydroelectric Power Plant (the "Las Perlas Sur HPP"). Each of the three plants utilizes two Mavel horizontal 5 MW Francis turbines **Model FH1050**. Each plant has installed power of approximately 10 MW for a total of 30 MW for the entire cascade.

"The commissioning culminates more than eight years of successful collaboration between Hidrotenencias and our turbine supplier Mavel, a.s.," according to Alejandro Hanono, President and CEO of Hidrotenencias. The two companies first met when Mr. Hanono travelled to HydroVision 2004 in Montreal, Canada to source potential equipment suppliers for the first hydro project of his then diversified family business.

"Knowing the strong industrial history of the Czech Republic, I was intrigued by the possibility of working with a company from that region," Mr. Hanono noted. "At HydroVision I met the full management team of the company and was impressed by their success throughout Europe competing against much larger companies. I also walked away with a few Czech-made wooden yoyos for my children back home."



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One of those yoyos remained in Mr. Hanono's office.

One year later in 2005, Hidrotenencias signed an agreement with Mavel, as part of a consortium of equipment suppliers, to furnish the turbines, generators, controls systems, gates, hydraulics and installation supervisory services for the Concepcion HPP. The Concepcion HPP site, with gross head of 65 meters and a design flow of 20 cubic meters per second (cms), is located on the Piedra River in the Chiriqui Province, Panama.

"The Concepcion project was a teacher for us," Mr. Hanono noted. "There were some delays with civil construction and other equipment suppliers but Mavel helped us navigate through the process and resolve the issues. Mavel was a strong advocate for our interests and Concepcion was successfully commissioned in 2008 with 10 MW of installed power."

The next two projects for Hidrotenencias were Las Perlas Norte HPP and Las Perlas Sur HPP; with gross head of 66 and 68 meters, respectively, and both with design flow of 20 cms. "Because of the strong relationship of trust built during the development of the Concepcion project, we negotiated the supply of equipment for the next two projects directly with Mavel on the condition that they be solely responsible for the entire water-to-wire supply. These agreements were signed in July 2010," Mr. Hanono noted.



**Powerhouse Interior Las Perlas Sud**



**Francis Runner Mavel FH1050**

For these two projects, Mavel's scope of supply included inlet valves, turbines, generators with fly-wheels, hydraulic pressure and lubrication units, plant control and switchgear and supervision of installation, testing and commissioning.

Mavel cooperated closely with the owners' Bogota, Colombia-based engineering firm Ingetec, S.A. In addition, Mavel also used Czech companies as major sub-suppliers purchasing generators provided by TES Vsetin and the plant controls and switchgear by INGOS.

Rostislav Pospisil, Mavel Sales and Technical Director for the Americas, noted that "the successful completion of these three projects was the result of a strong partnership and working relationship with Hidrotenencias and its CEO Mr. Hanono. When we started working with Mr. Hanono," Pospisil said, "he was just beginning to understand some of the complexities of developing a hydroelectric power site. Now, he knows more than many of our customers and consultants who have been in the business 20, even 30 or more years."

"Further," Pospisil added, "for the last two projects, the Mavel team was able to work with Andres Solis as the owner's project manager. Mr. Solis had experience on the Concepcion project and so was able to efficiently and effectively coordinate the work of the equipment supply, civil work, interconnection, permitting and owner requirements."



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“For Hidrotenencias, the advantage of working with Mavel were many but the most important were Mavel’s people, flexibility and technical excellence. After contract signings, the Mavel team expanded to include project managers, engineers and commissioning specialists, but we still had access to the top sales and management team that negotiated the contract. When there were issues, Mavel was flexible enough to help us resolve technical, scheduling and financial issues. Finally, the technical hydro experience and excellence in small hydro power sets Mavel apart from other suppliers.”

The Piedra River Cascade is completed. Mavel and Hidrotenencias, however, will continue their working relationship with the signing of a service agreement for the three plants, which will take advantage of Mavel’s remote monitoring and diagnostic system. This will allow Mavel to evaluate problems from its engineering base in the Czech Republic, and the evaluation of new projects to develop together in Panama.

This year, Mr. Hanono and his project manager Mr. Solis were back at HydroVision 2013 in Denver to evaluate potential vendors for new projects and Mavel returned to the conference/exhibition for its 13th consecutive year.

Mavel is a Czech-American owned engineering and manufacturing company providing turbines for small hydroelectric power plants around the world. With over 100 proprietary designs for Kaplan, Francis, Pelton and micro turbines, the company produces all of its equipment from one of its two manufacturing facilities in the Czech Republic. In the past 20 years, the company has installed over 425 turbines at more than 275 sites around the world.

Hidrotenencias, founded in 2003, is a developer and operator of renewable energy assests in Panama. The company currently owns and operates the three hydroelectric projects in the Piedra River Cascade, with a total capacity of 30MW. Hidrotenencias has an identified pipeline of renewable energy projects to further grow its portfolio in Panama and other countries in Latin America. Contact: Alejandro Hanono,CEO. Email: [Alex@Hidrotenencias.com](mailto:Alex@Hidrotenencias.com)



Concepcion HPP at Dusk



Las Perlas Sur HPP



Las Perlas Norte HPP