

# Tamugan River as a source of potable water and clean energy



Water utilized by Hedcor-owned power plant in Benguet is returned to the river through its tailrace.

Water is an essential resource for life. But for one out of three people in the world today, lack of water is a stark reality. This, even in areas with much rainfall and freshwater. The problem worsens as cities and populations grow, and the need for water in agriculture, industry and households increase. (Source: World Health Organization)

Consider Davao City. The third largest city in the country, it has consistently developed as the business, investment, and tourism hub in Southern Philippines. It constantly grows in investments, from P6.36 billion in 2006, to P9.18 billion in 2007, up by 44%. Its steadily growing economy ensures the city's competitive position in attracting investments and penetrating new foreign markets.

Matching the city's progress is a growing population, now 1.42 million, up by 2.41%. Necessarily, the demand for water and electricity increases. For last year alone, when the city's growth rate was 4.95 %, the power consumption marked 1.21 billion kilowatt-hours. (Source: www.davaocity.gov.ph)

## Davao Rivers

Two companies, Hedcor, Inc. and Davao City Water District (DCWD), sought to develop the Tamugan River for power and water use, respectively, through their water permit applications to the National Water and Resources Board.

DCWD's source of water is the Tamugan River. Hedcor, Inc., through its Tamugan Hydropower Project (THP), would develop two cascading hydropower plants to tap the Panigan and Tamugan rivers.

It is well known that the Davao region is rich in river systems, however, not all rivers are able to support hydroelectric power generation. Several rivers were explored and assessed based on the feasibility requirements for hydropower development. The Lasang River has a large volume of water but a relatively flat elevation, while the Lipadas River has a high drop in elevation but with low volume of water. The characteristics of the Lasang and Lipadas Rivers are not feasible for hydropower development.

Davao River, the third largest river in Mindanao, would require the construction of a large impounding dam to be feasible for hydropower generation. The size of the dam would itself cause a major environmental impact in the surrounding areas including community settlements. This is far from what Hedcor intends to do.

The Tamugan River is one of three major rivers within the Baguio and Marilog Districts. Its catchments span the south of Mount Talomo all through the west of Mount Tipolog. To address the looming power crisis, Hedcor considers this river ideal for hydropower development, primarily because of its sufficient volume of water and its large drop in elevation (or head).

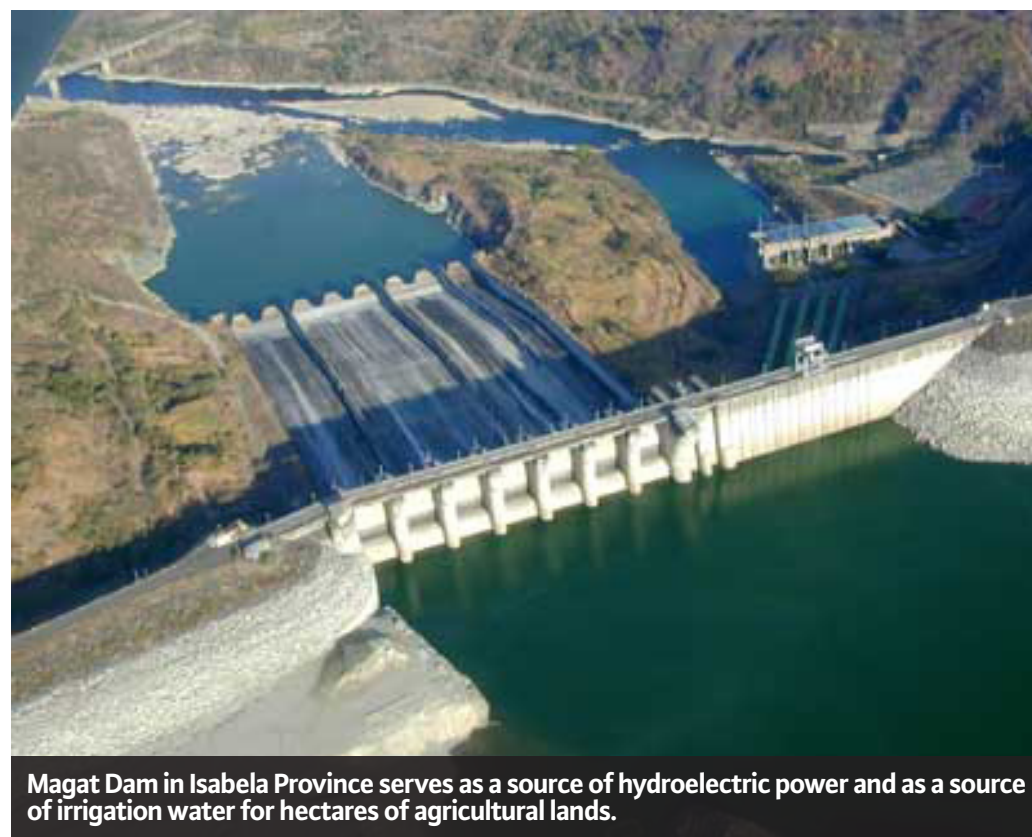
Especially because the Tamugan River is one of the few rivers suitable for drinking water, its utilization for electricity generation should carefully consider the effects on its potability after usage. Just how this is ensured is nothing new to Hedcor, Inc., considering its track record and extensive 30-year experience in constructing and operating run-of-river hydroelectric power systems to generate electricity. Consequently, Hedcor was awarded an Environmental Compliance Certificate for the Tamugan project.

In run-of-river operations, the volume of water entering the system will be the same volume returning to the river. Thus, this returning water can be used for irrigation, water supply, flood control, recreation and tourism. The Tamugan hydropower project will not adversely affect the water's potability since it is pollution-free. Rather, because trash and debris are filtered as they enter the system upstream, the resulting water is much cleaner.

## Co-existence of water and power generating facilities

For four years, Hedcor has been constantly communicating with DCWD towards a solution addressing their concerns. The goal is co-existence of the two projects: providing Davao City with potable water supply, and clean and renewable energy. Such win-win approach spells multiple benefits for the surrounding communities, and local and national governments.

Hedcor's 30-year experience in hydropower development and operation of its 15 hy-



Magat Dam in Isabela Province serves as a source of hydroelectric power and as a source of irrigation water for hectares of agricultural lands.

dropower plants in Benguet and in Davao, has included successful co-existence arrangements. Among these are Angat (for hydropower generation and water supply to the Manila area), Casecnan Multi-purpose dam (for hydropower generation and irrigation), and Pantabangan-Masiway (for hydropower generation and irrigation).

To propel a city's continued progress, Davao City can have both development projects: DCWD's Surface Water Project, and Hedcor's Tamugan Hydropower Project. Davao City need not choose between clean and potable water, or clean and renewable energy. The goal is not an either-or, because Dabawenyos can have both.