

# **AGENCY JUSTIFICATION FOR THE CONSTRUCTION AND OPERATION OF THE LAIBAN DAM PROJECT**

## **Background Information**

Laiban Dam Project was conceived as the next water supply source for Metro Manila. The projected water demand by the year 2015 is 5,600 Million Liters per Day (mld). The current and only source of water for Metro Manila is the Angat Dam, with a 4,000mld capacity; and thus, the projected deficit of 1,600mld by the year 2015.

In order to address the increasing water demand, and in order to avert a water shortage, there is a need to develop a new water source capable of producing at least 1,600mld. The various studies undertaken by experts have culminated into the proposed Laiban Dam Project, with a projected supply capacity of 1,900mld.

On the issue of the reliability of a single water supply source which is the Angat Dam, the Angat Dam because of its age and the presence of the West Valley fault in the vicinity of the dam, make our water supply source at risk. A new water source therefore will help mitigate the loss of water supply from the other source in case of major disasters and natural calamities.

Laiban is the most feasible and nearest surface water source for Metro Manila; the longer the Project is delayed, the more difficult the project implementation will be, due to increasing number of settlers in the project area and the more costly the project becomes.

All preparatory works were already completed; the detailed design, bid documents including the diversion tunnel was already constructed.

## **The Laiban Dam is responds to an urgent public need.**

Laiban Dam Project was conceived in 1979 as the next water supply source for Metro Manila.<sup>1</sup> The Laiban Dam Project was declared as a priority project, through various executive issuances: Proclamation No. 573, Series of 1969, "*Declaring parcel #8 as Kaliwa Watershed*," Presidential Memorandum Order No. 725, Series of 1981, "*Creating an Inter-Agency Committee*," Presidential Proclamation No. 2480, Series of 1986, "*Providing for a Resettlement Site*." In 1998, then President Joseph Estrada

---

<sup>1</sup> FS review in 1997 & PICOREM Resolution No. 80-1.

issued Presidential Memorandum Order No. 10, mandating MWSS to immediately implement the Laiban Dam Project.

MWSS started to update all available documents and find ways on how to implement the Project considering the huge amount of project cost involved estimated more or less at US\$1.00 Billion.

There are several studies that were undertaken by experts; namely:

<b>YEAR</b>	<b>PURPOSE</b>	<b>CONSULTANTS</b>
1979-1983	Feasibility Study and Detailed Engineering Design	Done by associated firms of Electrowatt, Renardet, Technosphere, Philtech & FF Cruz
1997	Review/Update of Engineering and Design including Tender Documents for the Manila Water Supply Project III (Laiban Dam Project)	Done by foreign consultant Electrowatt Engineering
2000	Review/update of the financial, legal/institutional and other aspects of Laiban Dam Project	Done by foreign consultant GHD & Partners
2002	Preliminary Resettlement Planning	Done by local consultant UPSARDF
2007	Preparation of Bid Documents and Assess Tenders	Done by local consultant Daruma
2007	Further Geological Investigation to confirm/validate the extent of limestone formation at damsite	Done by local consultant Daruma

And these studies are all part of the public record.

In June 2008, MWSS signed an MOU with an American firm, CalEnergy, and they conducted an extensive due diligence on the Project but later withdrawn and did not submit its Unsolicited Proposal.

In September 2008, MWSS signed another MOU with SM Bulk Water Company, Inc. (SMBWCI) for the conduct of due diligence, and this event was published in newspapers of general circulation. On February 09, 2009, SMBWCI submitted its Unsolicited Proposal for the Project under the name of San Miguel Consortium, and the same was likewise published.

Evaluation of this Unsolicited Proposal has been undertaken through a Joint Venture Selection Committee, a Technical Working Group, and a complement of legal, technical and financial consultants.

The public meetings, negotiations and consultations are being undertaken with the presence and participation of the National Economic and Development Authority (NEDA)

and the Office of the Government Corporate Counsel (OGCC), the GPPB, Private Sector observers from recognized experts in the field of government infrastructure projects, such as the PCA, etc.

This rigorous, multi-disciplinary, and multi-tiered process of evaluation, will be subjected to further scrutiny through a "Competitive Challenge" in accordance with published Guidelines and Procedures for Entering into Joint Venture (JV) Agreements between Government and Private Entities.

**The Unsolicited Proposal Mode  
is Public, Legal, and Open to All  
who may wish to participate  
through the Competitive Challenge**

Considering the importance of this Project, and in order to address the increasing water demand and the issue on the reliability of a single source which is the Angat Dam, MWSS pursued a mode of procurement known as the Joint Venture Agreement scheme, under the framework of the *Guidelines and Procedures for Entering into Joint Venture Agreements between GOCC and Private Entity*, promulgated by the NEDA. Hence, interested proponents through MOU were allowed to undertake due diligence preparatory to the submission of their Unsolicited Proposals.

These Guidelines were promulgated pursuant to Section 8 of Executive Order (EO) No. 423 dated 30 April 2005, which mandates the National Economic and Development Authority (NEDA), in consultation with the Government Procurement Policy Board (GPPB), to issue the necessary guidelines on Joint Ventures (JVs). The Office of the Government Corporate Counsel (OGCC), Department of Justice (DOJ), GOCCs and the private sector have also been consulted in the formulation of the Guidelines.

The **2008 Guidelines and Procedures for Entering into Joint Ventures between Government and Private Entities** (JV Guidelines), set forth the guiding principles that govern all government procurement of goods and services, as well as infrastructure project undertakings: accountability, transparency and competition. They provide for substantially similar, if not mirror-procedures for the procurement of goods, services and infrastructure projects under Republic Act No. 9184, and Republic Act No. 6957, amended by Republic Act 7718, or the law providing for Build-Operate-Transfer (BOT) schemes of public-private partnerships.

The JV Guidelines do not violate the BOT Law, or any other law, precisely because they are borne out of the same intent to ensure accountability and transparency in joint development projects, where a "level playing field" is laid out for those who have the legal, technical and financial capability.

In fact, the same competitive challenge opportunity, provided under the BOT Law, is available to any challenger under the JV Guidelines.

These are the same JV Guidelines being employed by most government owned and controlled corporations to encourage private sector participation in what used to be purely governmental activities: roads and bridges, power and water, airports and seaports, bulk water supply and distribution, and every conceivable government undertaking that would stand to benefit from private sector funding and expertise.

In fact, a project has just been concluded between the Philippine Tourism Authority (PTA) and the Manila Water, to develop and operate the existing Boracay Water Supply and Sewerage System (BWSS) in Malay, Aklan, under an Incorporated Joint Venture Agreement, using the same 2008 JV Guidelines.

### **Addressing the Looming Water Crisis**

The Laiban Dam is a project that is not only imbued with public interest, but also impressed with an urgent public need – a sustainable and steady water supply for Metro Manila in the immediate future.

It has been 30 years since the MWSS's Laiban Dam Project was first conceived. Since then, the 41-year old Angat Reservoir and Dam has remained the only major source of water for Metro Manila. It is located at the Angat River in San Lorenzo, Norzagaray, Bulacan. The facilities were constructed from 1964 to 1967 and have been operational since 1968. Its multi-purposes include:

1. Irrigation of about 31,000 hectares of land in 20 municipalities and towns in Pampanga and Bulacan controlled by the National Irrigation Authority (NIA);
2. Supply of the domestic and industrial water requirements of residents in Metro Manila controlled by MWSS; and
3. Generation of hydroelectric power to feed the Luzon Grid controlled by the National Power Corporation (NPC);

The projected water demand (Million Liters Per Day) on the Year 2015 is reflected in the Water Supply, Sewerage and Sanitation Master Plan for Metro Manila; the breakdown of which is indicated in the table below:

YEAR	WATER SUPPLY DEMAND
2015	5619 mld

The breakdown of the 5,619 (Million Liters Per Day) in 2015 is further broken down as follows:

WATER SUPPLY DEMAND BREAKDOWN	
Domestic (MLD)	2,736
Commercial (MLD)	1,048
Industrial (MLD)	204
Physical Losses	1,632
TOTAL (MLD)	5,619

According to this Master Plan, "given the existing source capacity of 4,090 MLD there is already a shortfall in water supply of over 1000 million liters per day (1 GL/day) and new water sources will be required to contribute an additional 2,868 MLD of capacity by year 2025 to match projected average day demand".

Moreover, since the operation of the Angat Water Supply Optimization Project (AWSOP) in 1993, NPC claims energy and capacity losses at the Angat Hydro Electric Plant due to the shifting of 15 cubic meters per second from the main units of the power plant to the auxiliary units. The main power units discharge into the NIA irrigation service area while the auxiliary power units discharge toward the MWSS thru the Ipo Dam. With the transfer of 15 cms from the NIA allocation to the MWSS allocation under AWSOP, NPC estimates a one time capacity loss of ₱2.77 Billion and an energy loss of ₱36.26 Million per year. The NPC's claims on energy loss has been partly addressed by the Angat Transbasin Tunnel Project (UATP) starting in the year 2000. However, the reduction of allocation for irrigation purposes has remained.

If the 15 cms now allocated to MWSS is returned to NIA, there will be a resulting reduction of 1296 MLD to the raw water allocation of MWSS.

Further, the Angat Main Dike axis is right on the recently confirmed Marikina Valley System fault. The Main Dike straddles in the fault, which stretches from Taal Lake area to Angat River. The Dike has one of the steepest slopes in the world. Seepage has been observed right after construction. The downstream slope has been observed to be deteriorating. The design criteria for the Dam, particularly for seismicity, may not be sufficient considering the latest requirements for design codes and regulations.

In his Report No. 1 dated 29 November 2002, Dr. Kaare Hoeg of the Norwegian Technical Institute concluded that "**the new information about the Marikina Fault and the uncertainties related to future earthquake loads, and due to the lack of performance monitoring to evaluate the present conditions of the structures, the Level of risk involved** (product of probability of failure and consequences of failure) **is unacceptable.**

## Summary

The Metropolitan Waterworks and Sewerage System (MWSS), under its Charter, Republic Act No. 6234, is tasked with "the proper operation and maintenance of waterworks system to insure an uninterrupted and adequate supply and distribution of potable water for domestic and other purposes and the proper operation and maintenance of sewerage system are essential public services because they are vital to public health and safety."

The MWSS is also empowered "to construct, maintain, operate dams, reservoirs, conduits, tunnels, purification plants, water main, pipes, fire hydrants, pumping station, machineries and other waterworks for the purpose of supplying water to the inhabitants of its territory, for domestic and other purposes; and to purify, regulate and control the use, as well as prevent the wastage of water."

On top of the need to augment our existing water supply sources to address the increasing water demand based on the projection of experts and the concessionaires, MWSS still has to address the issue of the reliability of a single water supply source. Angat Dam, because of its age and the presence of volcanic fault underneath it, puts our water supply at serious risk. Recent studies conducted by the PHILVOCS on the likelihood of a big earthquake, further bolsters our resolve to pave the way for the long-delayed implementation of Laiban Dam Project.

From the foregoing, the construction and operation of the Laiban Dam is warranted by:

- (1) The need to increase the MWSS water supply capacity to cater the increasing demand of Metro Manila;
- (2) The need to replace the 15 cms NIA allocation from Angat in order to serve the irrigation needs of the Province of Bulacan; and;
- (3) To serve as an alternative source of domestic water supply for Metro Manila considering the risk of the Angat Dam.

The construction of the Laiban Dam is the direct responsibility of MWSS, under its mandate "***to insure an uninterrupted and adequate supply and distribution of potable water for domestic and other purposes,***" and its equally important

responsibility for protecting of the watershed areas, to ensure sustainable sources of clean water for future generations.

It was the Hungarian Biochemist and 1937 Nobel Prize Winner for Medicine, Albert Szent-Gyorgyi who said that: "***Water is life's mater and matrix, mother and medium. There is no life without water.***"

We believe that our common future is inextricably tied to the future of our water supply. We must do all that we can to secure that future, for we cannot afford to fail, when failure amounts to a life that we Filipinos do not deserve. Water is life, and life cannot wait. Water is now.