Integrated Infrastructure Development Project
Puerto Galera, Mindoro Oriental, Philippines

Introduction

The sewerage component of the project was prepared by PEMSEA in 2006 together with SCOTIA and WWF-Philippines in cooperation with the LGU under a BTO bidding approach. Through a further initiative, the LGU launched an additional solicited BTO bidding to cover the rehabilitation and upgrading of the water system.

Puerto Galera Infrastructure Consortium, now (PGIC)\(^1\) provided the most beneficial proposal for both core project components and offered additional enhancements to further improve financial viability of the project. The project was duly awarded and contracted to PGIC and is up for further implementation upon establishment of appropriate user fee generation and EUF\(^2\).

The following summarizes the main characteristics and benefits of the developed innovative approach for the Puerto Galera project.

Development Vision, Mission & Principles of JLBTC

Vision:

To effectively meet the increasing need to sensibly manage resources and waste we generate and to fulfill demand for greater environmental protection.

Mission:

- To provide our partners and clients with the latest, global technology and innovative solutions that work in harmony with people and our environment.
- To achieve cost-efficient and best performance ratios by identification of appropriate partners and optimized application of technology;
- To ensure precise and efficient planning, effective project implementation and operation.

Development Principles & Approach:

JLBTC anchors its development approach on the following philosophy to achieve sustainable, environmental infrastructure solutions for emerging markets:

- Achieve sustainability through integration of Economic-, Socio-Cultural-, & Environmental values founded on a strong social commitment and by creating reasonable profits;
- The development approach and project solution is: Holistic, Sustainable, Scalable, Modular, Financeable and Socially committed;
- The implementation is through PPP\(^3\) or B2B\(^4\) approach.

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\(^1\) PGIC: Puerto Galera Infrastructure Corporation
\(^2\) EUF: Environmental User Fee
\(^3\) PPP: Public Private Partnership
\(^4\) B2B: Business to Business
Technical:
A unique and proprietary system developed by JLBTC is to technically integrate water- & waste water- and, if possible, by further integrating solid waste- management through maximized recycling approaches. Further integrating external RE\(^5\) sources like Hydro, Waste, External Biomass and Energy recovery plus other economical enhancement components into the project design can increase economies of scale, reduce construction and operation cost for the project and minimize potential user fees needed for refinancing the construction and operation of the PPP project components.

Financial:
The generally adapted, financial packaging approach follows classic financing principles by:

- Establishing a project investment vehicle either for a particular project or a number of similar projects to increase attractiveness for investors and reduce overheads through standardized project development, upgrading and approval procedures.
- Normal Equity/Debt ratios are 30%/70% and provide secured equity returns of above 14% to 20%, at around 12% overall project return ratio (FIRR-ppov)\(^6\) and under the condition of sufficient guarantees provided by the public partner. All projects are open for active and passive investors. Project supervision is through investment committee controlling planning, packaging and cost throughout the project period.

PGIC-JLBTC- Innovative Integrative Project Development Approach for Puerto Galera\(^7\)
The main challenge in Puerto Galera, which is representative of similar projects in developing countries, is the extreme limitations in capacity to refinance infrastructure investments.

We experience in many cases that there is also a profound misunderstanding of finance PPP or BOT project developments, where the public assumes that such projects are “at no cost to the public”. This is an inaccurate assumption, since all these projects have to be paid back through fees or subsidies raised by the public in the long run by additionally paying for profits calculated into each project for the entire time of operation. A beneficial project approach needs to be more efficient and provide less overall cost compare to government financed and operated projects by providing better alternatives, synergies and innovative solutions through the private proponent.

In the case of Puerto Galera the beneficial outcome is achieved through the following key measures, among others:

- Integration of three sewerage treatment plants into one achieving economies of scale;
- Aligning build-out schedules of water lines with sewer line installation;
- Joint operation of fee collection for water, sewer, pier and other components;

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\(^5\) RE: Renewable Energy
\(^6\) FIRR-ppov: Financial Rate of Return, Project point of view
\(^7\) See also for illustration draft presentation: PEMSEA-XIAMENPuertoGaleraProjectTrevC2.pdf
• Creating synergy effects through joint build-out of water lines from spring sources with hydro project component;
• Application of the highly efficient NH4-PO\textsuperscript{8} process under SBR\textsuperscript{9} configuration;
• Application of a highly modular and scalable design for a sewerage treatment plant with optional integration of an anaerobic stage and bio-solids from organic solid waste shifting the power-consuming treatment mode of the plant into a RE power producing mode;
• Integration of the still isolated and unprotected wetland beside the proposed STP\textsuperscript{10} into a protected, bio-diverse wetland and biologically purified water reservoir for the area;
• Achieving highest international cleaning- and ocean-water- protection standards, far beyond existing laws;
• Substantial economic benefits and higher security for local community and commercial sector through integration of pier and bay-walk.

The environmental, economic and financial result would not be possible under a non-integrated approach without the proposed enhancements, which could potentially bring down future EUF fees to zero.

Finance Structure & Contracting Conditions

Contract Mode & Contracting Period:
• BTO contract scheme (following BOT Law), (completed portions will be transferred upon completion of each portion wherein the contracting period will extend correspondingly)
• Baseline contracting period: 25 years

Estimated Investment Volume of all Project components:
• 38 - 40 million USD (2016 cost level)

Estimated Build out Period of all Project components:
• 6 years
• Detailed build out schedule: (depends on agreed implementation schedule and readiness of refinancing sources)

Financing Structure:
• Equity: 25% / 30%
• Loan: 75% / 70%

Previously Offered Loan Conditions:
• 6-7\% p.a.

\textsuperscript{8} NH4-PO process: In USA, EU et.al. patented process by G & J. Lorenz for high-end and efficient sewerage treatment including biological Nitrogen and Phosphorus removal under minimized construction and operation cost and maximised power generation from bio-methane production

\textsuperscript{9} SBR: Sequence Batch Reactor

\textsuperscript{10} STP: Sewerage Treatment Plant
- 1-2-year grace period
- 12-year repayment period at 12 years fixed term loan non-recourse basis with claw back clause for revenue & fee generation streams and future IRA allocation in case of default

**Guarantee Condition for Equity Investment of Private Partner:**
- FIRR-equity: 20%, (WACC-project <=12%)

**O&M Contract:**
- Under JV-Agreement with LGU
- (80% / 20%; Private / Public)

**Further Contracted Income Conditions for Private Partner**
- Agreed management fees over determined fixed and variable O&M cost of individual project components

**Refinancing of Project** through charging of appropriate User Fees & Revenue generating sources (*Enhancement components*):
- EUF
- User Fees for Sewerage, Water Services and Pier Fees
- Rental of Spaces
- Potential Power Generation from Hydro and Biomass
- Potential subsidies from National Government & Donor Institutions
- LGU funding (*in case of default by LGU*)

**User Fee Structuring & Cost Adjustments** follow Legal Procedures mandated by Law:
- For Water: NWRB
- For Sewer Cost Benchmarking of comparable utility areas, EUF
- NEDA (*Parametric Formula*)
- All calculated fees are within the affordability levels of the respective user groups, allowable under Philippine Law

The developed, integrated project development approach is ready to be replicated and scaled up in other areas of Asia for the benefit of the people.
For further inquiries, please contact:

Jürgen Lorenz M.Sc. MBA. (Dipl. Wirtsch. Ing.(TH))
CEO; JLBTC, PGIC & PEC

JLBTC Inc. Philippines
Rufino cor. Salcedo Sts.
Legaspi Village, Makati, Metro Manila
Philippines
Tel.: (0063) 2 8121239
FAX: (0063) 2 8176334
Mobile: (0063) 917 5299701
Skype: juergenlorenz3
Viber (0063) 917 5299701

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