



TA-8566 REG: Mainstreaming Integrated Solid Waste Management in Asia -Solid Waste Management Team (46248-001)

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Solid Waste Action Plan (Terms Sheet) Quezon City



December 2016

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List of Abbreviations

ADB.	Asian Development Bank
ВОТ.	Build, Operate, Transfer
CAPEX.	Capital Expenditure
DOE.	Department of Energy
EPC.	Engineering, Procurement, and Construction
GFM.	Governmental Force Majeure
LGU.	Local Government Unit
MMDA.	Metro Manila Development Authority
OPEX.	Operational Expenditure
PPP.	Public Private Partnership
QC.	Quezon City
SIAC.	Singapore International Arbitration Centre
SPV.	Special Purpose Vehicle
TOR.	Terms of Reference
WtE.	Waste to Energy

1. Scope of Action Plan

This section provides some introductory remarks to the Terms Sheet which forms Section II.

1.1. Terms of Reference

- a. The Terms of Reference for TA 8566 require the submission of several reports that outline strategic objectives and milestones. The Integrated Solid Waste Management plan presented a series of proposed Quezon City actions in its conclusions and nominated a Waste-to-Energy Project as the specific project of focus that could be financed by ADB and which is therefore the subject of this Action Plan and a Prefeasibility Study to be developed separately.
- b. This report follows the definition of a detailed action plan under Output 3(i) of the RETA 8566 Terms of Reference (TOR) for a project that takes a PPP form. In the case of a PPP, the TOR states that the action plan shall include a term-sheet describing the key parties, respective rights and obligations, commercial terms, and risk allocation in sufficient details to form the basis for the actual project contracts.
- c. In the case of Quezon City, the Solid Waste Action Plan intentionally precedes both the Policy and Regulatory Reform Paper and the Technical and Commercial Prefeasibility study under RETA 8566 so as to later feed vital assumptions into these reports.
- d. The subject Action Plan is intended to be short and focused -- not only to meet the objectives of the Terms of Reference and ensure it can easily be read, but also to avoid persistent replication of information between different reports in the assignment. It will be the function of the Final Report to bring important conclusions of the different reports for assignment together.
- e. In recent years, Quezon City has been in the practice of regularly tendering its waste collection and landfill operating concessions. As discussed in the following paragraphs, the City has chosen to pursue a different unsolicited bid approach for Waste-to-Energy. The TOR indicates that the Action Plan include broad parameters of a bidding process only if the award of the concession would be through a competitive process which is not demonstrated intent of the City at present.

1.2. Unsolicited Bid for Waste to Energy Plant

Both news reports and unofficial information indicate that Quezon City has received an unsolicited bid offer for a much larger sized WtE plant than this report assumes. The bid seems to assume that waste would be imported into Quezon City for other LGU's Information from any such bid submitted is confidential to Quezon City as such cannot be shared with the authors of this report.

This report along with the other reports of RETA 8566, conservatively assumes a 1,000 tpd conventional technology plant which is in line with expected medium term Quezon City disposal needs – which would appear to be quite different for from the subject unsolicited bid under analysis. Therefore, the Action Plan represents a back-up case if the unsolicited plan does not go forward.

1.3. Consultant Perspective for the Assignment

This report is provided as a submission of consultant views on likely terms needed to raise both debt and equity finance for a project of this type. As it is advisory in nature, no Quezon City agreement to any terms sheet component would be required or expected.

1.4. Market Precedents

Waste to Energy projects of the scale required in Quezon City have no precedent in the Philippines, however, quite a few precedents of WtE projects using conventional technology can be found globally and within Asia. The PRC, Taiwan and Singapore have developed successful PPP models for WtE.

1.5. Limited Recourse Project Financing

The report assumes that given the project size that the majority of financing for the project would be from debt raised pre-completion or post-completion on a limited recourse project financing basis. The significant lender stake in overall financing naturally means that the transaction structure will need to be more conservative than under a shareholder finance scenario.

1.6. Project Specific Issues on Electricity Tariffs

Section 7 of the Renewable Energy Act, 2008 (Republic Act (RA) No. 9513) states that a feed-in tariff system is mandated for the development of emerging energy resources, including for electricity generated from wind, solar, ocean, run-of-river hydropower and biomass. It appears that only renewable projects qualify for the feed-in tariff, which is consistent with the intent and philosophy of this Act.

Arguably WtE projects that specifically target biomass or other non-incineration WtE technologies would qualify for the feed-in tariff. "**Biomass resources**" has been defined in Section 4(b) of the Act and includes *"biodegradable organic fractions of industrial and municipal wastes that can be used in bioconversion process...*"

The Payatas WtE biogas plant located, developed by Pangea Green Energy Philippines, has been recognised by the Renewable Energy Management Bureau of Philippine's Department of Energy as the first biomass company to avail a 'feed-in-tariff'.

A similar feed-in tariff is assumed for the Quezon City WtE project. It is important to note that any renewable energy project developer's risk profile under RA 9513 includes:

- Assurance of any feed-in tariff will not be certain at time of financial close as it is subject to availability of biomass category capacity at the time of project completion; and
- (ii) The exact feed-in tariff also cannot not be known at the financial close date as it would be the rate then in force on project completion date. Such feed-in tariff is subject to adjustment by the Energy and Regulatory Commission in early 2017 and then biennially thereafter.

These risks will be further elaborated and analyzed in the Prefeasibility Report.

1.7. Tipping Fees

This report assumes that the electricity sales alone would be insufficient to repay WtE investments and cover operation and maintenance costs, and investor returns and that per ton tipping fees would be necessary for a sustainable project.

Currently, Quezon City benefits from the Metro Manila Development Authority (MMDA) tipping fees for Payatas landfill as an eligible disposal site. It is assumed that a WtE plant also would qualify for these subsidies.

As will be discussed further in the Policy and Regulatory Reform paper, the MMDA sourced tipping fees will likely require better defined and enforceable legal documentation. In addition, the Terms Sheet assumes that:

- (i) When MMDA subsidies arrive on time, they are directly pledged to the WtE Project Developer.
- (ii) In cases where MMDA subsidies are late or never paid, Quezon City tipping fees will cover the shortfall.

1.8. Quezon City Long Term Payment Credit

Since the passage of the 1991 Local Government Code, Philippine government has not agreed to any form of guarantee of local government (or even local water utility) obligations under Public-Private-Partnership Agreements for any major project. Therefore, close attention is paid to the obligations of Quezon City as a stand-alone obligor under WtE project contracts. The Terms Sheet is structured to address both the direct and contingent liabilities of the Quezon Government under tipping fee and termination provisions respectively.

2. Terms Sheet

This terms sheet sets out the key terms and principles governing the proposed Waste to Energy PPP/BOT project in Quezon City. More detailed and definitive terms will be set out in the Project Documents.

Item	Principles/Terms
Key Legislation	 Republic Act 6957 as amended by Republic Act 7718 (BOT Law)
	 Republic Act 9184 ("Government Procurement Reform Act")
	 Republic Act 7160 (Local Government Code of 1991)
	Quezon City PPP Code 2014
	Renewable Energy Act 2008
	Clean Air Act 1999
Procurement	 Project shall be procured on a PPP/BOT basis via competitive tender process.
	Pre-qualification of bidders
	 [Restrictions on equity participation by EPC Contractor in SPV]
Parties	Quezon City and Concessionaire (SPV)
Project Key Features	 Concessionaire shall design, construct, finance, own [100%], operate and maintain the WtE Plant for the entire Term.
	• The WtE Plant shall screen, accept and incinerate "biodegradable organic fractions of industrial and municipal wastes that can be used in bioconversion process" delivered to the WtE Plant.
	The WtE Plant shall have incineration capacity in

Item	Principles/Terms
	 two stages of 1,000 tons per day and additional 700 tons per day. QC shall pay Concessionaire a tariff (tipping fee) for providing incineration services. The WtE Plant is entitled to generate and sell electricity to the grid and third parties.
Contract Term	 [25] Years from Financial Close. Parties may mutually agree to extend Term.
Project Requirements	 Concessionaire shall design, construct, test and commission the WtE Plant in accordance with agreed Minimum Technical/Technology Requirements, Milestones and Testing & Commissioning procedures, and applicable laws. Concessionaire shall operate and maintain the WtE Plant in accordance with Plant Performance and Service Standards, good utility practice and applicable laws.
Minimum Technical/Technology Requirements	 WtE technologies that include biomass or other non-incineration WtE technologies. WtE technologies that include biomass or other non-incineration WtE technologies. Moving grate technology to be adopted. Plant availability of minimum 8,000 hours per year, and able to receive and treat waste 365 days per year. Minimum of 2 incineration trains, each train capable of handling 100% of treatment capacity. Electricity generation per tonne of waste shall be a minimum of 300kw/h, after deduction for Plant internal and ancillary use.

ltem	Principles/Terms
Environmental Requirements	 WtE Plant must meet World Bank and Asian Development Bank environmental standards/benchmarks on pollution, emissions and Site restoration.
Target Commercial Operation Date	• [240 - 300] days from Financial Close.
Construction Delay, Extension of Time and Liquidated Damages	 If delay is attributable to QC or Government Force Majeure, Concessionaire is entitled to extension of time at reasonable costs.
	 If delay is attributable to Non-Governmental Force Majeure, Concessionaire is entitled to extension of time.
	 If delay is attributable to Concessionaire, liquidated damages will be imposed on a "per day" basis, subject to a maximum cap, payable by Concessionaire.
Plant Performance and Service Standards	Plant performance and service standards need to be specified.
	 Deduction/penalty regime for failure to meet such standards.
Site and Access	 Preferred Site is located at [Payatas, Quezon City].
	Concessionaire can propose other Site.
	• Concessionaire shall acquire, own, lease or have the right to use the Site, at its cost.
	 QC to provide Concessionaire access to Site if Site located at Payatas.
Waste Delivery, Acceptance and Ash/Un-incinerable waste Disposal	 QC to be responsible for transporting and delivering waste to WtE Plant if located in QC. [Concessionaire shall, at its own cost, be

Item	Principles/Terms
	responsible for transportation and delivery of waste to WtE Plant, if located outside QC.]
	Concessionaire shall accept all waste delivered to WtE Plant.
	 Concessionaire shall, at its cost, transport deliver fly-ash and un-incinerable waste from WtE Plant to QC landfills.
	QC shall ensure QC landfills accept all such fly- ash and un-incinerable waste.
	• If QC landfills are unable to accept fly-ash and un-incinerable waste, QC to reimburse Concessionaire for costs incurred in disposing same to other landfills.
Recycling	 Concessionaire entitled to monetize and keep revenue derived from recycling materials recovered from waste delivered to WtE Plant.
Title and Risk	• Title and risk in respect of the Waste passes to the Concessionaire at the Waste Delivery Point (i.e. specified tipping point).
Tariff (Tipping Fee)	 QC to guarantee minimum waste quantity (tonnage) on "put or pay" regime.
	 Flat tariff with indexation for inflation, currency etc.
	 [Tariff shall not take into account Concessionaire's electricity sales revenue]
Measurement of Waste	 Measurement of waste delivered via separate weighbridge stations. (Similar to weighbridge system adopted at Payatas landfill).

ltem	Principles/Terms
Electricity Sale	 Concessionaire shall be entitled to generate and sell electricity to the grid based and third parties, and keep such electricity sales revenue. Concessionaire takes full risk for feed-in tariff (and renewal) eligibility, demand and price for electricity sales. Concessionaire to pay for construction cost of the first 15km of transmission lines to grid. DOE will bear the construction cost of remaining length of transmission lines, or reimburse Concessionaire if Concessionaire constructs.
Performance Security	 Concessionaire shall provide performance bond/security of [30%] of Project cost upon Contract signing.
Financial Model	 Concessionaire's financial model shall be part of the Contract.
Monitoring, Reporting and Records	 Concessionaire shall conduct regular monitoring, reporting and keep proper books and records.
Intellectual Property	 Usual Intellectual Property ownership, use/licence, protection and indemnity provisions. For the entire Term or upon buy-out of the Project by QC, the Concessionaire grants to QC a royalty free, irrevocable, transferable, and perpetual, non-exclusive licence to use Concessionaire's Intellectual Property for the purpose of designing, constructing, owning and operating the Project.
No Assignment or Transfer	 No sale, assignment or transfer of rights and interest in the Contract or Project without prior written consent of the other party, except where required for the financing of the Project.

Item	Principles/Terms
Restrictions against Transfer of Equity	 No sale or transfer of equity by Concessionaire's significant shareholder(s) before Commercial Operation Date plus [5] years without QC's prior written consent.
Limits of Liability	 Total limit of liability shall be [100%] of Project cost. Exceptions to liability limit include fraud, wilful misconduct, gross negligence and insurance loss proceeds. No party is liable for special, consequential, or punitive damages or indirect losses.
Indemnification	 Usual indemnification provisions including environmental indemnification.
Insurance	 Concessionaire shall, at its cost, obtain and maintain minimum insurance policies and coverage as is required by law and financing documents. Usual provisions dealing with application of loss proceeds.
Force Majeure	 Usual definitions and exclusions of Force Majeure (including Governmental and Non-Governmental Force Majeure). Force Majeure that continues for [180] days will be deemed Pro-longed Force Majeure If GFM, QC pays full tariff subject to existing performance deductions. If Non-GFM, QC pays [50%] of tariff.

Item	Principles/Terms
Change in Law	 Equitable adjustment to the Tariff if there is a Change in Law that prevents performance of Contract or results in net costs or savings. Change in Law amounting to a Force Majeure will be deemed a Governmental Force Majeure.
Step-change in Technology	 Equitable adjustment to the Tariff if there is a Step-change in Technology which results in net cost savings. Parties to agree on capex, net cost savings and Tariff adjustment prior to adoption of such Step-change Technology.
Events of Default	 Concessionaire's default events include: failure to achieve Commercial Operation Date within 180 days from Target Commercial Operation Date abandonment of the Project material breach of the Contract Concessionaire's insolvency non-compliance/breach of law QC's default events include: Material breach of the Contract Non-payment of Tariff Expropriation or nationalization of the Project Usual notice and cure provisions.

Item	Principles/Terms	
Termination/Buy-Out Compensation	 If default not remedied within cure period, non-defaulting party shall be entitled to terminate the Contract by giving [30] days written notice to the other party. In the case of pro-longed Force Majeure, either party may terminate the Contract by giving [30] days written notice to the other party. In all termination scenarios, QC shall acquire/buy-out the Project and pay the Termination Fee to Concessionaire. In the event of QC's default or GFM, Termination Fee shall cover equity, debt and equity return. In the event of Concessionaire's default or insurable Non-GFM, Termination Fee shall cover debt, equity and [50%] of equity return. 	
Expiry of Term	 Concessionaire, at its cost, shall demolish WtE Plant and restore Site [to state and condition as closely approximate to the fullest extent possible to date of initial possession, and in compliance with law (including environmental law).] QC shall have option to require WtE Plant be transferred "as is" to it [without cost/at nominal amount]. 	

Item	Principles/Terms
QC Step-in Rights	 QC entitled to exercise Step-in Rights to take possession and control of the WtE Plant for the purpose of operating the WtE Plant upon: insolvency of the Concessionaire Concessionaire's default/failure to operate the WtE Plant in accordance with the Contract resulting in a real and immediate risk to the environment, public health and safety public emergency, national security or public interest Provisions to address extent of Step-in Rights, obligations and Tariff payable under different Step-in scenarios. QC Step-in Rights has priority over and can be exercised in parallel with lenders' step-in rights.
Governing law	• The governing law of the Contract shall be the laws of the Republic of the Philippines.
Dispute Resolution	 Refer to Third Party Expert for resolution of disputes involving certain technical and specified matters. Arbitration in Singapore pursuant to the SIAC Rules.

Item	Principles/Terms
Financing	 It is envisaged that the Project shall be financed by non/limited recourse debt financing by commercial lenders.
	• Without a strong credit and security package offered by Quezon City behind its tariff tipping fee obligation, there is increased probability that a Philippines Government guarantee may be required by lenders for Quezon City's obligations.
	• The following measures are indicative of some key pledges would constitute the major portion of what Quezon City could offer as a strong credit and security package:
	 QC covenants to make an annual appropriation for the full amount of tariff payment due each year
	 QC shall pledge a first lien on its Internal Revenue Allocation to lenders
	 QC to ring fence MMDA payments for tariff payment]
	 QC not to incur additional LGU or other debt borrowings that will adversely impact its ability to pay Termination Fee.

Item	Principles/Terms
Key Project Documents	 Incineration Services Contract (QC and Concessionaire)
	EPC Agreement (Concessionaire and EPC Contractor)
	 O&M Agreement (Concessionaire and O&M Operator)
	 Direct Agreement - provides for lenders' step-in rights (QC, Concessionaire and lenders)
	 Site/land Agreement (Concessionaire with land owner)
	 Loan Facility Agreement (Concessionaire and lenders)
	 Security Documentation – project/asset securitization includes project cash flow securitization (Concessionaire and lenders)
	 Inter-Creditor Agreement – sets out the rights and obligations, and priorities between lenders in relation to the debt financing (amongst lenders)