

Indonesia's Waste to Energy Projects

An aerial photograph showing a large-scale construction project on a massive landfill. The foreground features a partially completed building with a wooden roof structure. To its right, a more advanced structure with blue steel framing and a white roof is under construction. A tall, red-and-white striped chimney stands prominently. The background is dominated by a vast, flat expanse of grey waste material, with a line of green trees and a road with several orange trucks on the right side.

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Progress of Waste to Energy (WtE) Projects

per February 2019

Based on the Presidential Reg. No. 35/2018 on Acceleration of Waste-to-Energy (WtE) Projects, the GoI has selected 12 (twelve) big cities to be accelerated in developing WtE Projects.



Progress of Waste to Energy (WtE) Projects (1/2)

From those 12 targeted cities/provinces, 2 are currently in construction process, 4 in financial close process, 2 in transaction stage while 4 of those are still in preparation stage.

PROVINCE/CITY	VOLUME (TON/DAY)	ESTIMATED CAPACITY (MW)	INVESTMENT VALUE (USD Mio)	LATEST STATUS
CONSTRUCTION PROCESS				
Surabaya (B2B)	1,000	11	USD 49.86	<ul style="list-style-type: none"> Developer is PT Sumber Organik. The possible first recipient of tipping fee subsidy In construction stage (9 MW) and finalization of amendment PPA with PLN.
Surakarta (B2B)	400 – 450	12	USD 57.82	<ul style="list-style-type: none"> Developer is PT Solo Citra Metro Plasma Power. In construction stage (5 MW – first stage) and PPA has already been signed
FINANCIAL CLOSE PROCESS				
Denpasar (Sarbagita) (Assignment to PLN)	1,200	15-20	USD 120	<ul style="list-style-type: none"> Assignment to PT Indonesia Power (as PT PLN's subsidiary) and has signed cooperation agreement with PT Waskita Karya
DKI Jakarta (RoE)	6.000 (4 ITF)	35 (1 ITF) 60 (3ITFs)	USD 250 (1ITF) USD 360 (3 ITFs)	<ul style="list-style-type: none"> ITF Sunter: Joint Venture Agreement between Jakpro and Fortum Finland has been signed in October 2018. Currently, PPA is under finalization and IFC has committed to finance the project and under clearance of CP. Ground breaking already started
Palembang (B2B)	1,200	20	USD 120	<ul style="list-style-type: none"> Developer is PT Indo Green Power, currently using BOO scheme. All stakeholders are currently in discussion to change the scheme from BOO to BOOT.
Bekasi (B2B)	2,200	19	USD 120	<ul style="list-style-type: none"> Developer is PT Nusa Wijaya (NWA). In discussion with PLN to find an agreement regarding electricity interconnection and possible solution is to lower the capacity

Source: KPPIP



Progress of Waste to Energy (WtE) Projects (2/2)

From those 12 targeted cities/provinces, the total estimated generated capacity is 306 MW, while the total investment value reaches USD 1,922.68 million.

PROVINCE/CITY	VOLUME (TON/DAY)	ESTIMATED CAPACITY (MW)	INVESTMENT VALUE (USD Mio)	LATEST STATUS
TRANSACTION PROCESS				
Bandung (PPP) (West Java Region)	1,820	21 – 29	USD 245	<ul style="list-style-type: none"> Final Business Case (FBC) development by JICA. PQ is targeted in Q1 2019. JICA has signed with MOF as Transaction Advisory party for this project.
Tangerang (RoE)	2,000	15 – 20	USD 120	<ul style="list-style-type: none"> Assignment to Regional State Owned Enterprises. Currently in partner selection process. Technology used is MBT and RDF.
PREPARATION PROCESS				
Semarang (Potential B2B or PPP)	800 - 900	15-20	USD 120	<ul style="list-style-type: none"> Supported by KIAT (<i>Kemitraan Indonesia Australia Infrastruktur</i>) to develop the Outline Business Case (OBC). PwC has already been selected as OBC consultant
Makassar (Potential PPP)	1,000	15-20	USD 120	<ul style="list-style-type: none"> OBC has been completed by KEITI (South Korea Govt). Market Sounding and Public Consultation is targeted in Q1 2019 after official assignment of Mayor of Makassar.
South Tangerang (Potential PPP)	1,000	15-20	USD 120	<ul style="list-style-type: none"> Outline Business Case (OBC) is in preparation stage with funding from KEITI (South Korea).
Manado (Potential PPP)	1,000	15-20	USD 120	<ul style="list-style-type: none"> Funding option for OBC development, possibility from KIAT (Australia) or ADB.
Total		306 MW	USD 1,922.68	

Source: KPPIP



Presidential Regulation No. 35/2018

The regulation is also determined the tipping fee and formula for electricity tariff for Waste to Energy projects.



ARTICLE 15 ON TIPPING FEE SUBSIDY

Pasal 15

- (1) Pendanaan yang bersumber dari Anggaran dan Pendapatan Belanja Negara sebagaimana dimaksud dalam Pasal 14 digunakan untuk bantuan Biaya Layanan Pengolahan Sampah kepada Pemerintah Daerah.
- (2) Besarnya bantuan Biaya Layanan Pengolahan Sampah sebagaimana dimaksud pada ayat (1) paling tinggi Rp500.000,00 (lima ratus ribu rupiah) per ton Sampah.
- (3) Alokasi anggaran untuk bantuan Biaya Layanan Pengolahan Sampah sebagaimana dimaksud pada ayat (2) diusulkan oleh Menteri Lingkungan Hidup dan Kehutanan kepada Menteri Keuangan sesuai dengan ketentuan peraturan perundang-undangan.

BAB VII ...

1

The maximum value of **tipping fee subsidy is Rp 500,000/ton.**

2

Minister of Environment and Forestry will propose to Minister of Finance regarding the amount of tipping fee subsidy.



ARTICLE 11 ON ELECTRICITY TARIFF

Pasal 11

- (1) Harga pembelian tenaga listrik oleh PT PLN (Persero) sebagaimana dimaksud dalam Pasal 10 ayat (3) huruf b ditetapkan berdasarkan besaran kapasitas PLTSa yang dijual kepada PT PLN (Persero) dengan ketentuan:
 - a. untuk besaran kapasitas sampai dengan 20 MW (dua puluh megawatt) sebesar USD 13.35 cent/kWh yang terinterkoneksi pada jaringan tegangan tinggi, jaringan tegangan menengah, atau jaringan tegangan rendah; atau
 - b. untuk besaran kapasitas lebih dari 20 MW (dua puluh megawatt) yang terinterkoneksi pada jaringan tegangan tinggi atau jaringan tegangan menengah dengan perhitungan sebagai berikut:
Harga Pembelian (USD cent/kWh) = $14,54 - (0,076 \times \text{besaran kapasitas PLTSa yang dijual ke PT PLN (Persero)})$.

1

Based on the formula, the electricity tariff for capacity \leq 20 MW will be **US\$ 13.35 cent/kWh.**

2

For capacity above >20 MW based on the formula below:
 $14.54 - [0.076 \times \text{capacity}]$

Attachments



Current ongoing supports from International Organizations and Development Banks in the Waste to Energy Projects

City	Scope	International Support
1. Bandung	Outline Business Case (OBC)	MCA of USA (Done)
2. Bandung	a. Final Business Case (FBC) b. Transaction Advisor	a. JICA (on going) b. JICA (on going)
3. Makassar	Outline Business Case (OBC)	KEITI (Done)
4. Tangerang Selatan	Outline Business Case (OBC)	KEITI (on going)
5. Semarang	Outline Business Case (OBC)	KIAT (on going)

JICA - Japan International Cooperation Agency
 KIAT - Kemitraan Indonesia Australia untuk Infrastruktur
 KEITI - Korea Environmental Industry and Technology Institute
 MCA - Millenium Challenge Account of USA

Source:
KPIIP



Opportunities possible future support for the further development of Waste to Energy Projects

City	Scope	Interested Organizations
1. Makassar	a. Final Business Case (FBC) b. Transaction Advisor	a. ADB, IFC, KIND b. ADB, IFC, KIND
2. Manado	Outline Business Case (OBC)	KIAT, ADB, French Govt
3. Tangerang Selatan	a. Final Business Case (FBC) b. Transaction Advisor	a. IFC, KIND b. IFC, KIND
4. Semarang	a. Final Business Case (FBC) b. Transaction Advisor	a. KIAT b. KIAT

ADB - Asian Development Bank
 JICA - Japan International Cooperation Agency
 KIAT - Kemitraan Indonesia Australia untuk Infrastruktur
 KIND - Korea Overseas Infrastructure & Urban Development Corporation

Source:
KPPIP

