

Role of carbon& regulation challenges for private sector company's participation in domestic waste industry

Joseph Hwang M.Sc,
PT Gikoko Kogyo Indonesia
@Jakarta 2018 August 8th

www.gikoko.co.id



Predictable disaster; Banter Gebang is full



Cities are running out of spaces to dump

Bekasi TPA Sumur Batu



**Banter Gebang TPA for
Jakarta's rubbish**



Countless open burning ; Significant cancer risks?



Gikoko

from engineers to project developer

130 workers in
Pulogadung and
Cibinong

Niigata diesel
engine agent

DCE UK dust
collector agent

Kawasaki Boilers
and Absorption
Chillers



*EPC contract for Biomass Power Plant 4MWe.
UNFCCC no.1635 for Particle Board factory Java, 2009*



LFG : Clean & competitive energy resource

High calorie hydrocarbon ;

Methane Potent GHG

Natural microbial
decomposition of
leached out nutrient.

High methane gas content
50%



*Transforming environmental liability into
cashflow*

Bekasi 65,000ton ER/ year



Open Dumps yields no gas



Impacts of CDM

Before Gikoko CDM



After construction



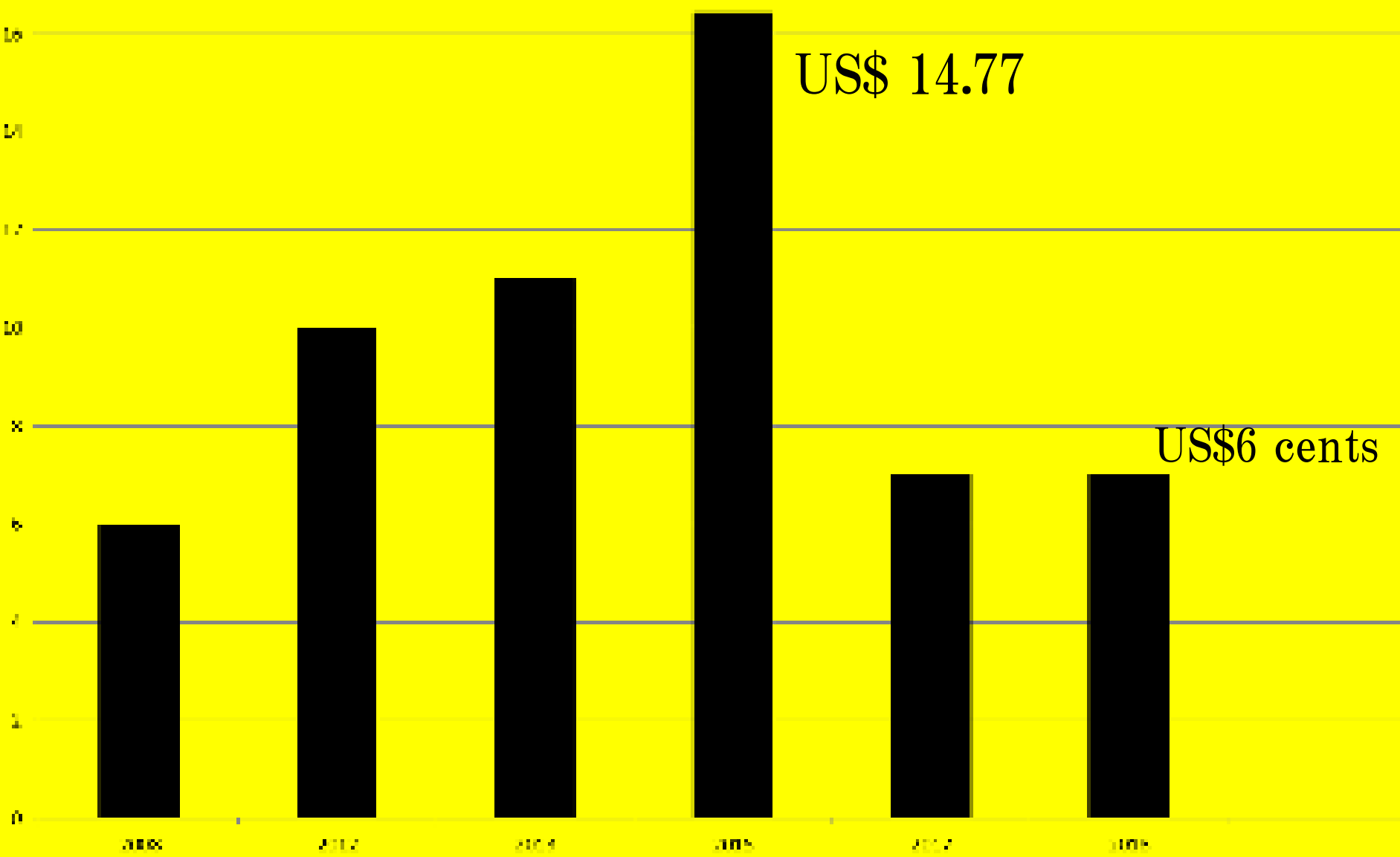
*Thermal engineering to Manufacturing and to
BOT concession operation*

- ❑ 2016 CDM MoU, MoA
- ❑ 2017 ERPA with Pontianak
- ❑ 2012 End of ERPA, Monitoring Report
- ❑ 2013 Start of FIT, CER issues
- ❑ 2014 FIT revision
- ❑ 2015 FIT revision
- ❑ 2016 Presidential Decree no 18, 7 cities
- ❑ 2017 Legal challenge to Presidential decree
- ❑ 2018 FIT rescinded in 2017 reinstated



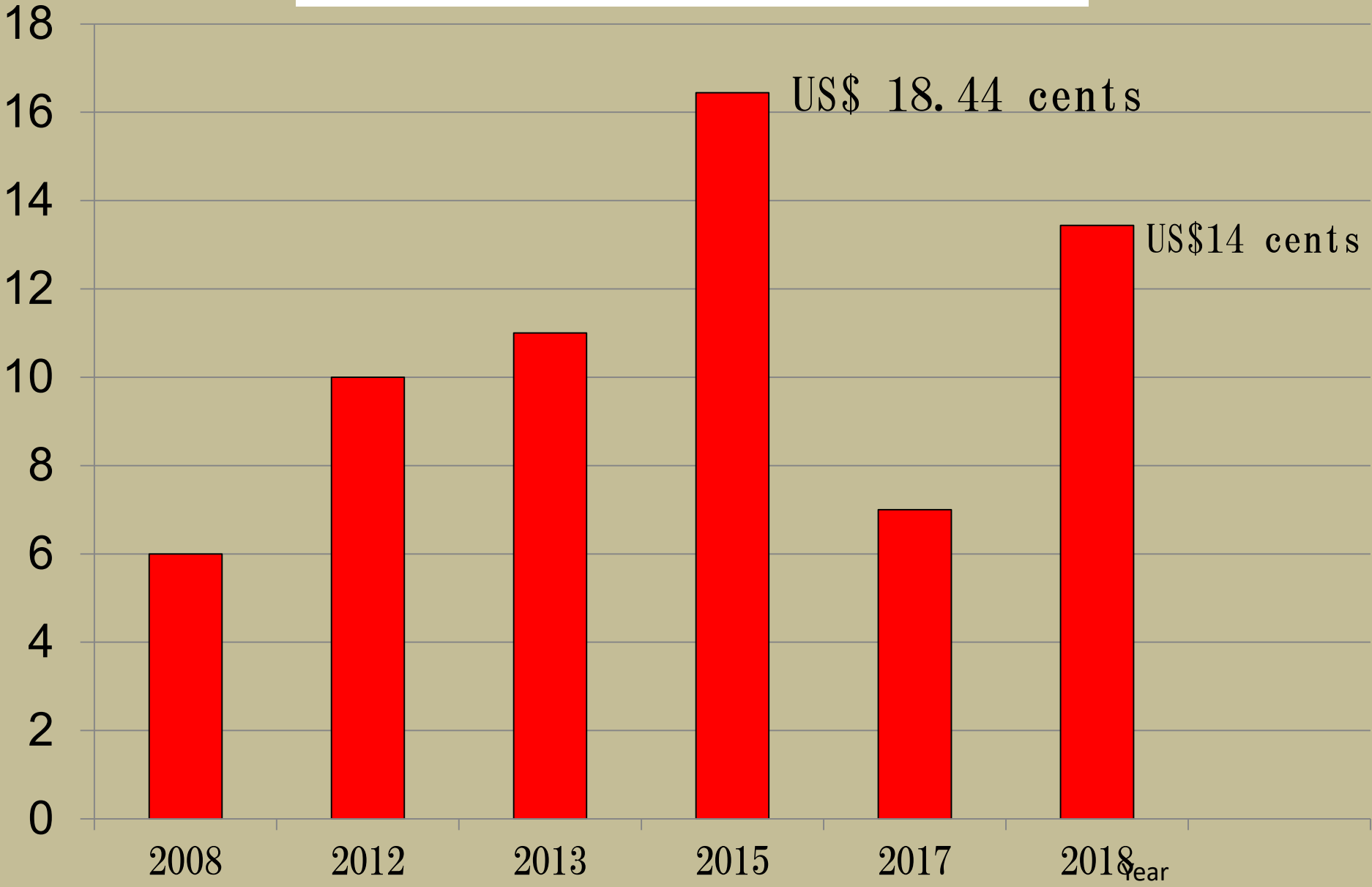
FIT for LFG, year 2008~2018

USD (Cent/kWh)



USD (Cent/kWh)

FIT for Incineration



Challenges in CDM 1

1. Legal due diligence;

Overlap in national and regional regulation

➤ Delay in advance payment disbursement

2. Technical oversight by designer

Difference in climatic condition

➤ 2 years lost opportunity; delay in gas production and collection, damaging output reduction



CDM challenges 2

3. Host government lack of resources

Broken perimeter access roads, lack of fuel, repair, operator of heavy equipment

➤ Poor cell profiling, reduced gas output

4. Lack of trust by UNFCCC secretariat

Prolonged audit process

➤ Cash pay out delayed, cashflow strain



Financial modality challenges 1

1. Mis-match in investment size

Technical, Legal, Environmental and Social safeguards

Total development costs US\$400,000

For lenders and investors , projects need to be US\$15~US\$25million

>but project size only US\$ 3~7 million for 1~3MWe



Viable projects with carbon incentives

- 3~8MWe RDF grate boiler electricity generation
- POME bio compressed gas or Compressed Biogas
- Used cooking oil refined biodiesel fossil fuel substitute



Biogas CNG /Compressed Biogas from CPO mill POME fermented gas



Biogas CNG /Compressed Biogas from Landfill Gas



New Domestic carbon incentive

- Encourage investment in GHG reduction and renewable energy projects small scale 10MWe equivalent
- Tax fossil fuel polluters
- Administered by Designated National Authority
- Specialists from former UNFCCC DOE auditors



www.gikoko.co.id

