



INSTITUTE FOR CLIMATE AND SUSTAINABLE CITIES  
Harnessing Sustainable Energy Solutions



# **CLOSING THE GREEN LOOP:** Integrated waste management, energy and sustainable transport in the Philippines

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# Institute for Climate and Sustainable Cities (iCSC)



- We work on fair climate policy.
- We climate finance, specifically adaptation finance.
- We work on sustainable energy solutions, particularly sustainable electric public transport.
- iCSC runs the Climate-Friendly Cities initiative. We're the proponent of the electric jeepney, or eJeepneys, including eTrikes and eQuads.
- We work with communities.



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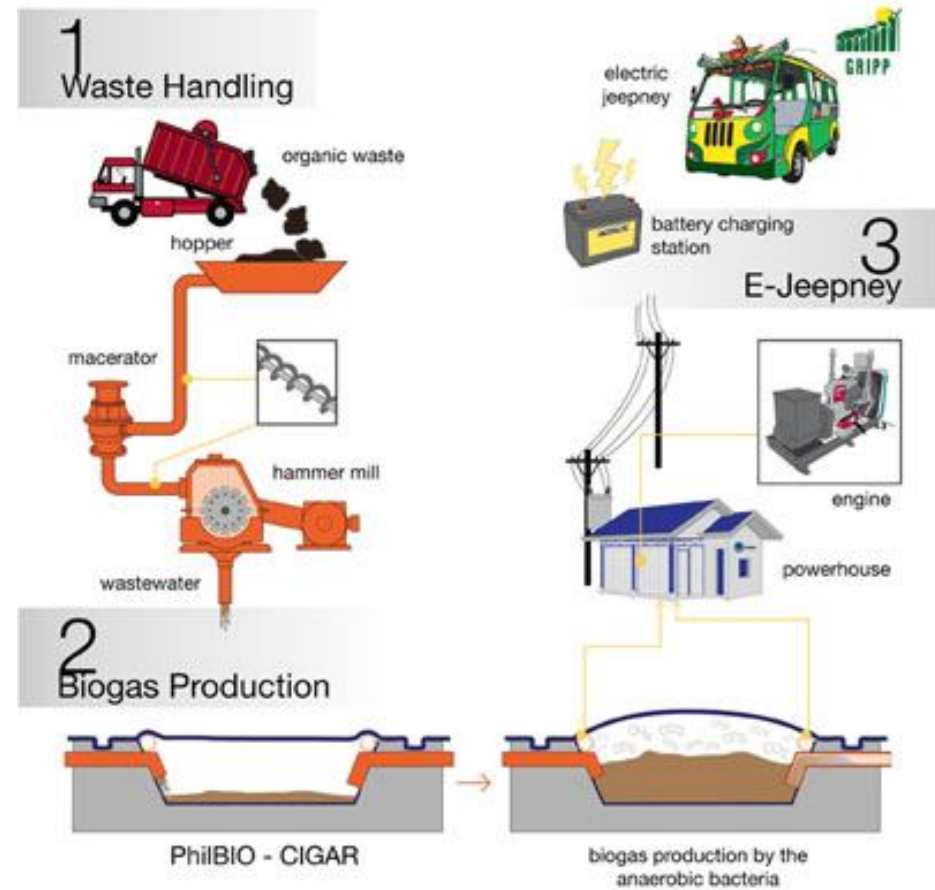
# The Climate-Friendly Cities initiative: No Regrets

- Clarity of direction: low-carbon pathways, resilient cities and communities.
- Even without climate change, the CFC initiative is desirable:
  - Sustainable transport
  - Dramatic reduction in air and noise pollution
  - Green jobs
  - Long-term waste solutions
  - Local green growth
- What more with the climate crisis and the need for resilient cities and communities?



# Closing the Green Loop: the Climate-Friendly Cities initiative

- Launched in July 2007 in Makati City.
- Unveiled first eJeepney units.
- July 2008 launched first domestically made eJeepneys.
- 2008: launched CFC initiative in Puerto Princesa City.
- 2009: launched the Makati Green Routes.



# Climate-Friendly Cities advances

- Received the top award in *Discovery Channel's Ecopolis* program as the "single most important new transportation technology with the best chance to save our cities (from pollution)".
- Fr. Satur Neri Prize for environmental excellence.
- Not rocket science: it's about application, ideas and the right kind of partnerships.
- Green jobs – potential stimulus to local auto industry and allied businesses representing 20,000 jobs.



# CFC initiative in Makati City

- Now into fourth generation (4G) of Philippine-made eJeepneys.
- Green jobs – stimulus to local auto industry.
- Local is great – after-sales service, spare parts, innovation



# Embrace of CFCs

Two Makati Green Routes (MGR) opened, a third MGR scheduled to open end of June.

20 units deployed and plying regularly since 2009. Around 55 in the country currently (not including tricycles). Average of around 170 passengers/day for ejeepneys.



# CFC in Puerto Princesa City

- Groundbreaking of city's \$2-4 million biodigester Feb. 14, 2010. Can provide up to 1-MW of power.
- Developing array of electric vehicles.
- Ultimate aim: programmed replacement of 4,000 conventional tricycles.
- Higher development ambition: increasing city's carrying capacity through the CFC.



# Lessons and Challenges

- Leadership is vital: this is why iCSC chose to work with Makati and Puerto Princesa first.
- Electric public transport: building public trust. Operators and jeep/trike drivers are central.
- Technology: batteries, components, price, financing.
- Regulatory: inadequate supply and market incentives
- Multisectoral, especially private sector, alliances is key: R&D, charging station deployment, partnerships, innovation drivers.
- Scale-up needed. We're on the cusp of big things ...



# Ways forward

- Beyond local benefits is the dignity of contributing to the fight against onset of dangerous climate change.
- Essential to demonstrate solutions and application-driven initiatives to local governments.
- iCSC: it's about making energy solutions of tomorrow available to Filipinos today.

We're here to stay.

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