Lamp Wastes Management Facility (LWMF) and Extended Producers Responsibility (EPR)

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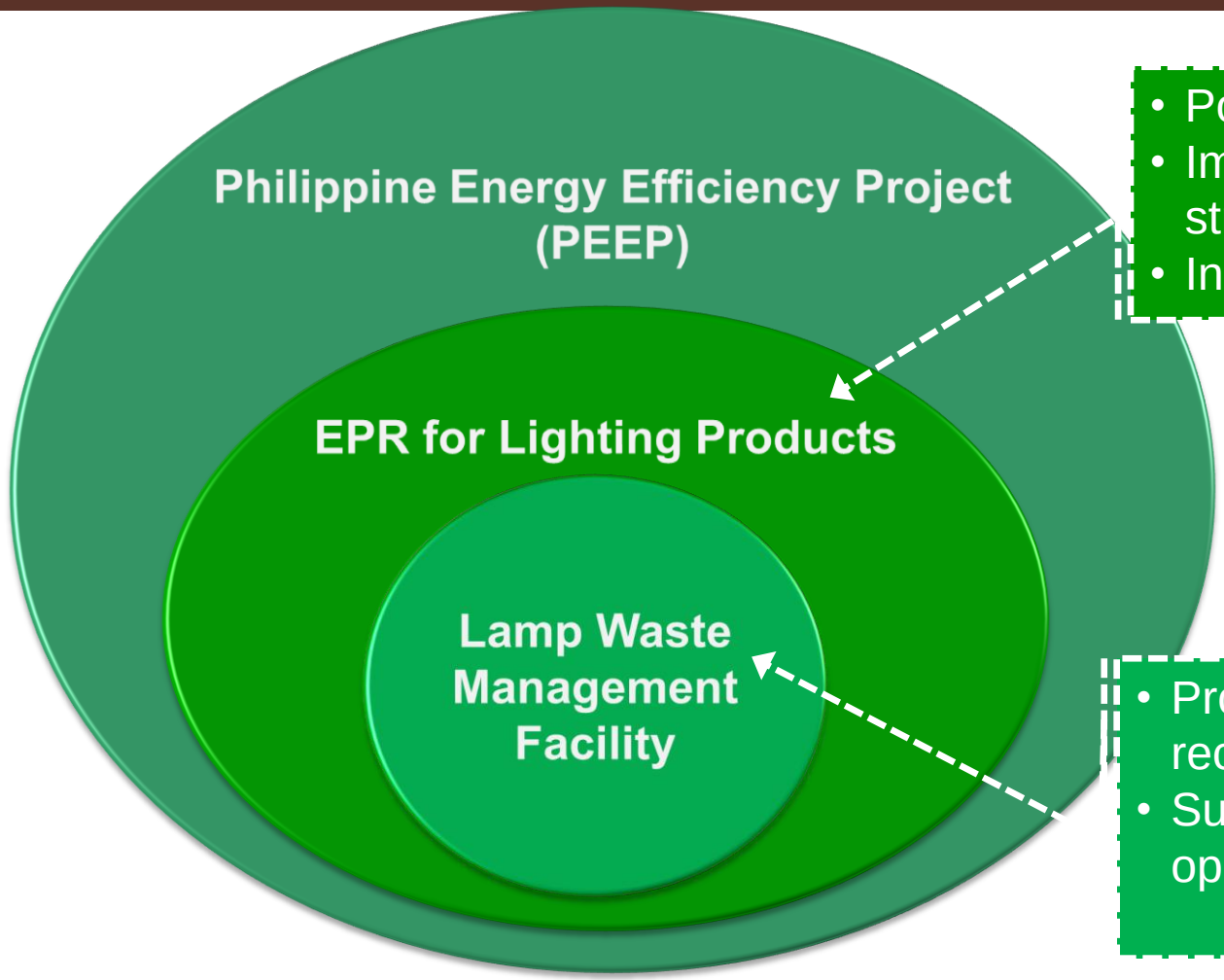
Presentation Outline

- Lamp Wastes Management (LWM) in the Philippines
- Implementation of EPR and Operationalization of a LWM Facility (Mercury Recovery)

DOE's Initiative on Lamp Wastes Management



- Policy Study
- Implementation strategies
- Initial operationalization

- Procurement of mercury recovery facility
- Support in the pre-operation phase

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LAMP WASTE MANAGEMENT IN THE PHILIPPINES

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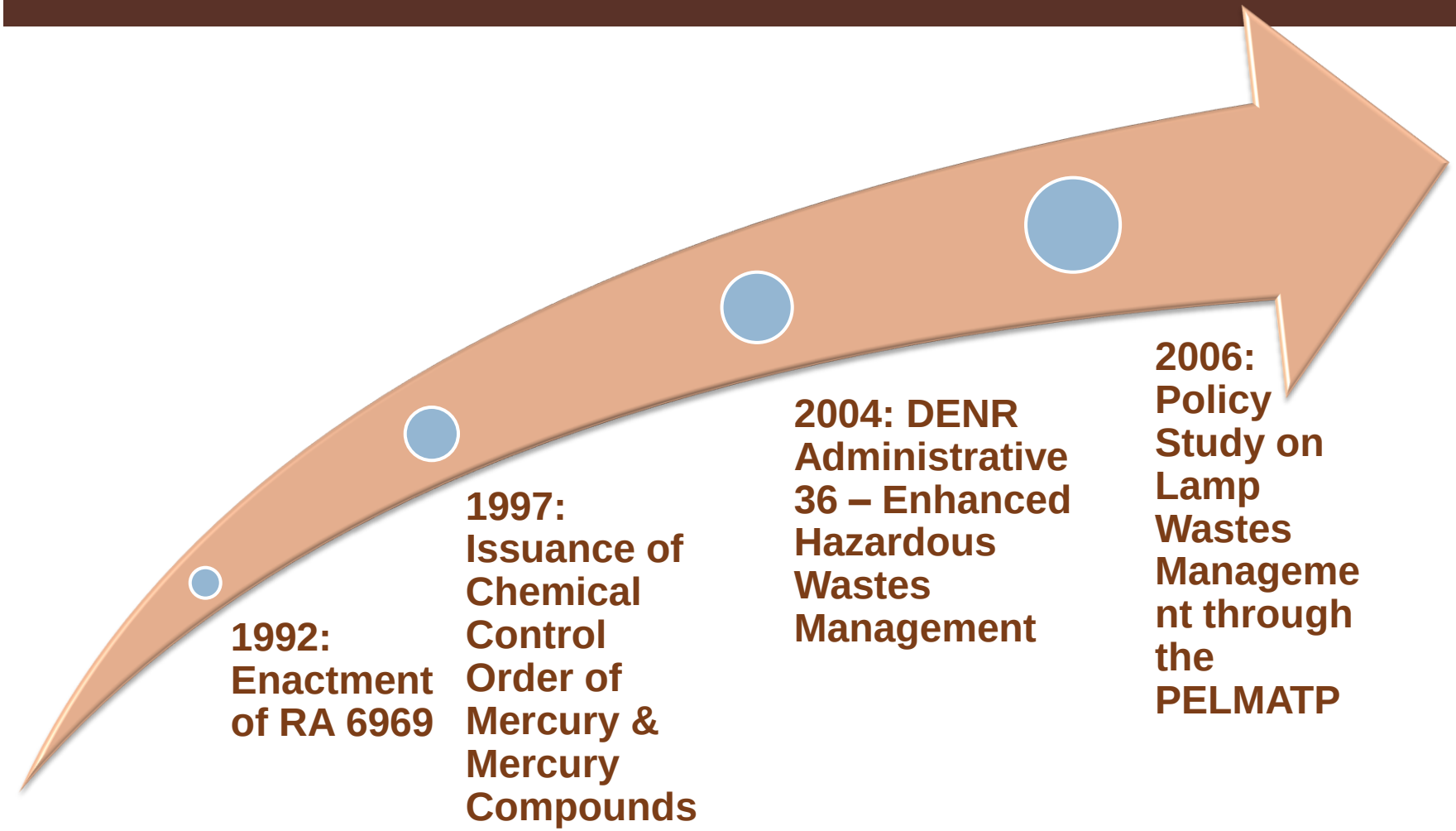
Evolution of the Lamp Waste Management in the Philippines



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Evolution of the Lamp Waste Management in the Philippines

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Lamp Wastes Generation in the Philippines

50 million LW per year

- 22 million pcs (**Establishments**)
- 13 million pcs (**Households**)
- 15 Million pcs (**Institutional**)

Off site Treatment 0.5 million pcs/yr (1%)		10 kg/yr Mercury
Storage 4 million pcs/yr (8%)		80 kg/yr Mercury
Sold to Junk Shops 3.5 million pcs/yr (7%)		70 kg/yr Mercury
Disposed to Garbage 42 million pcs/yr (84%)		840 kg/yr Mercury

Based on 2006-2007 Data

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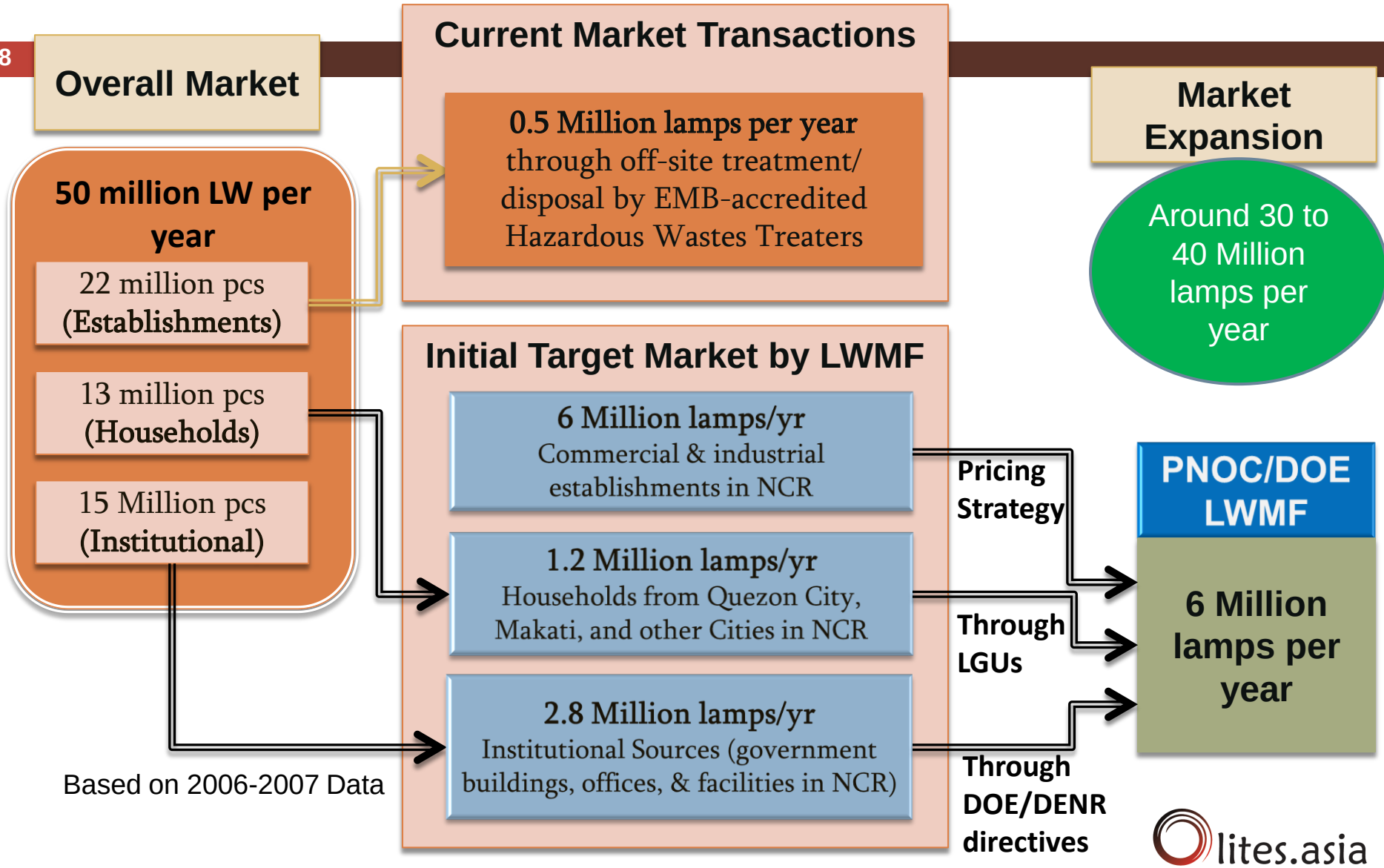
Market Analysis of LWM Services



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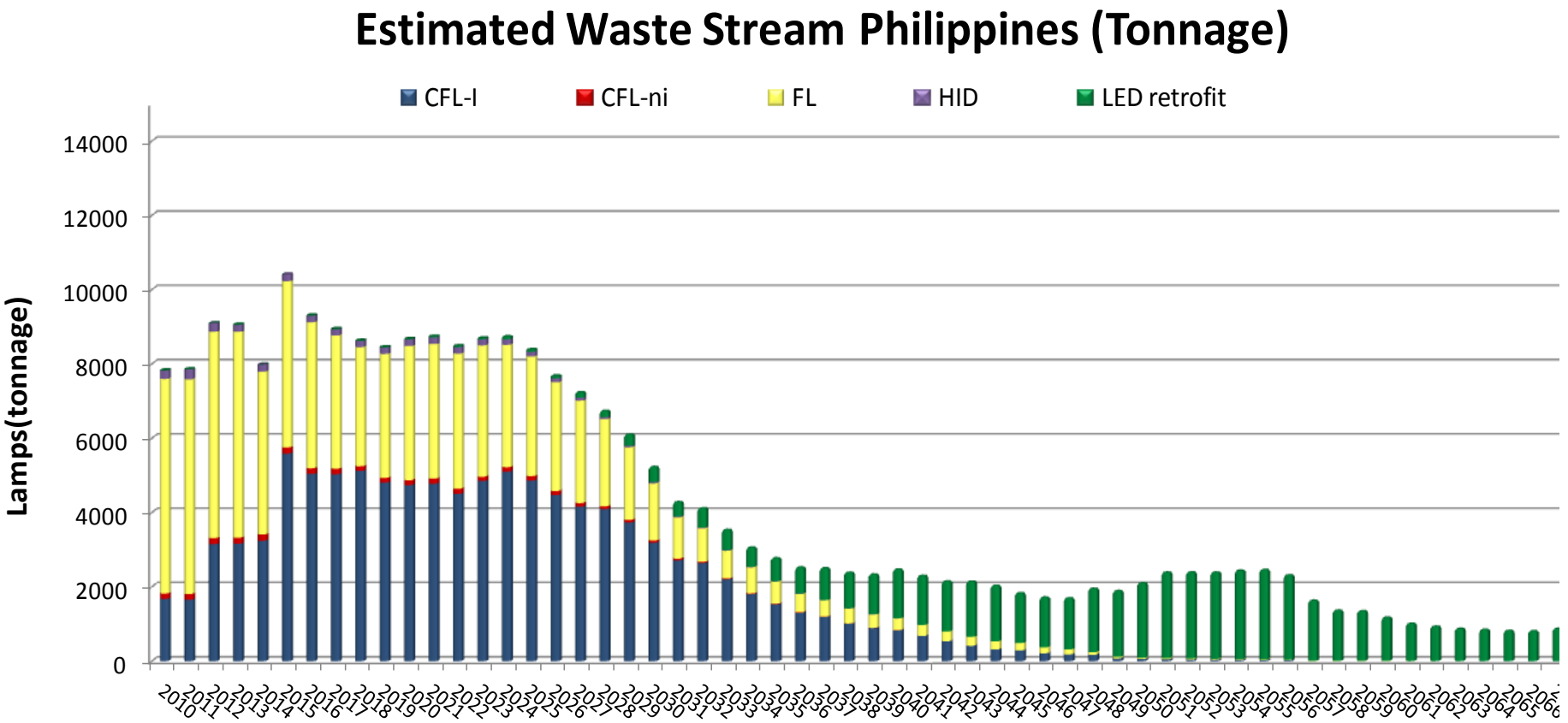
Finance and Operational Scenario

Market Data: Projected Waste Stream in Tonnage



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Implementation of EPR and Operationalization of a LWM facility (Mercury Recovery)

What is EPR?

"An environmental policy approach where the producers' responsibility, physical and/or financial, for a product is extended to the post-consumer stage of a product's life cycle"

- (OECD, 2001)

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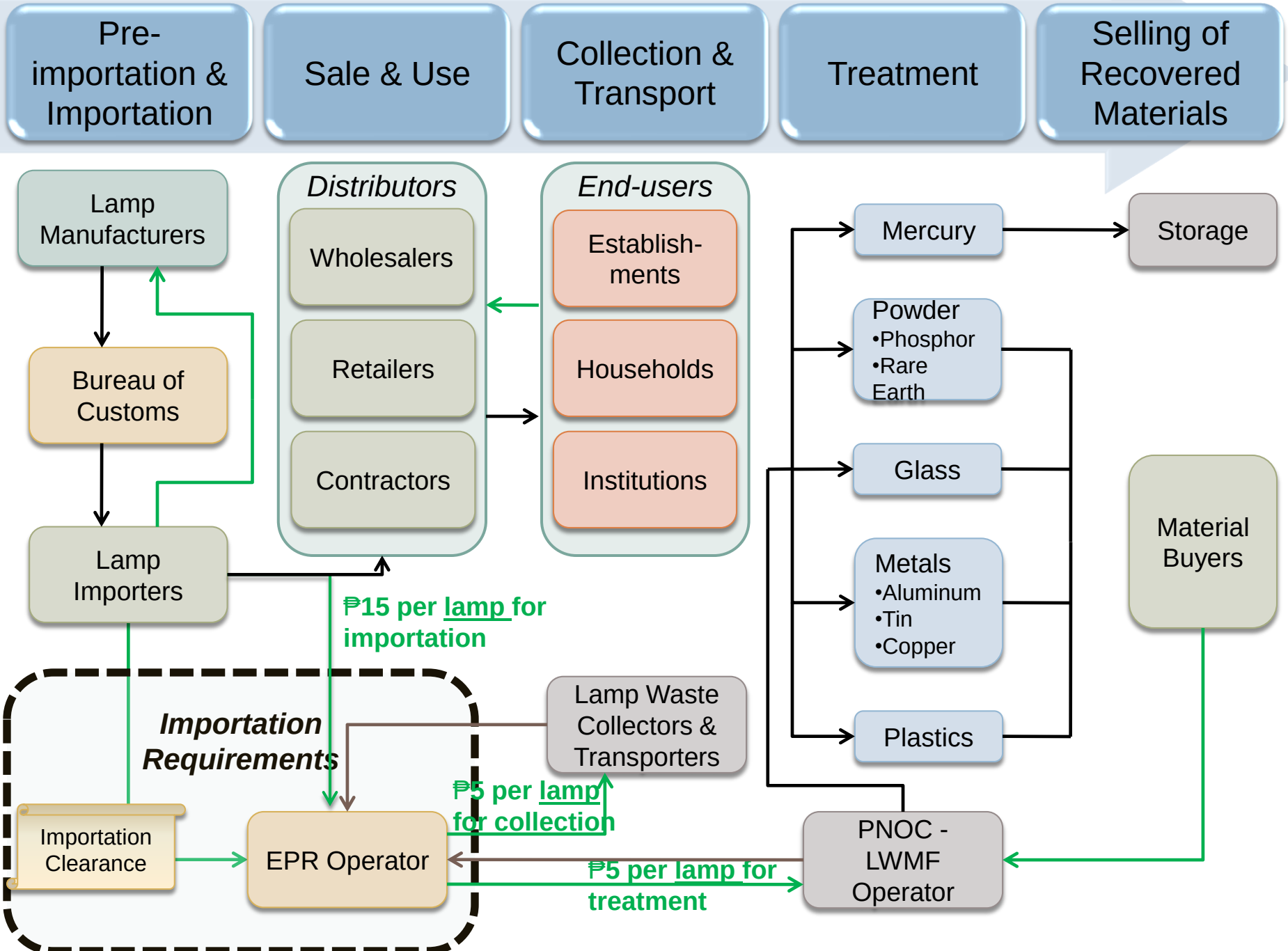
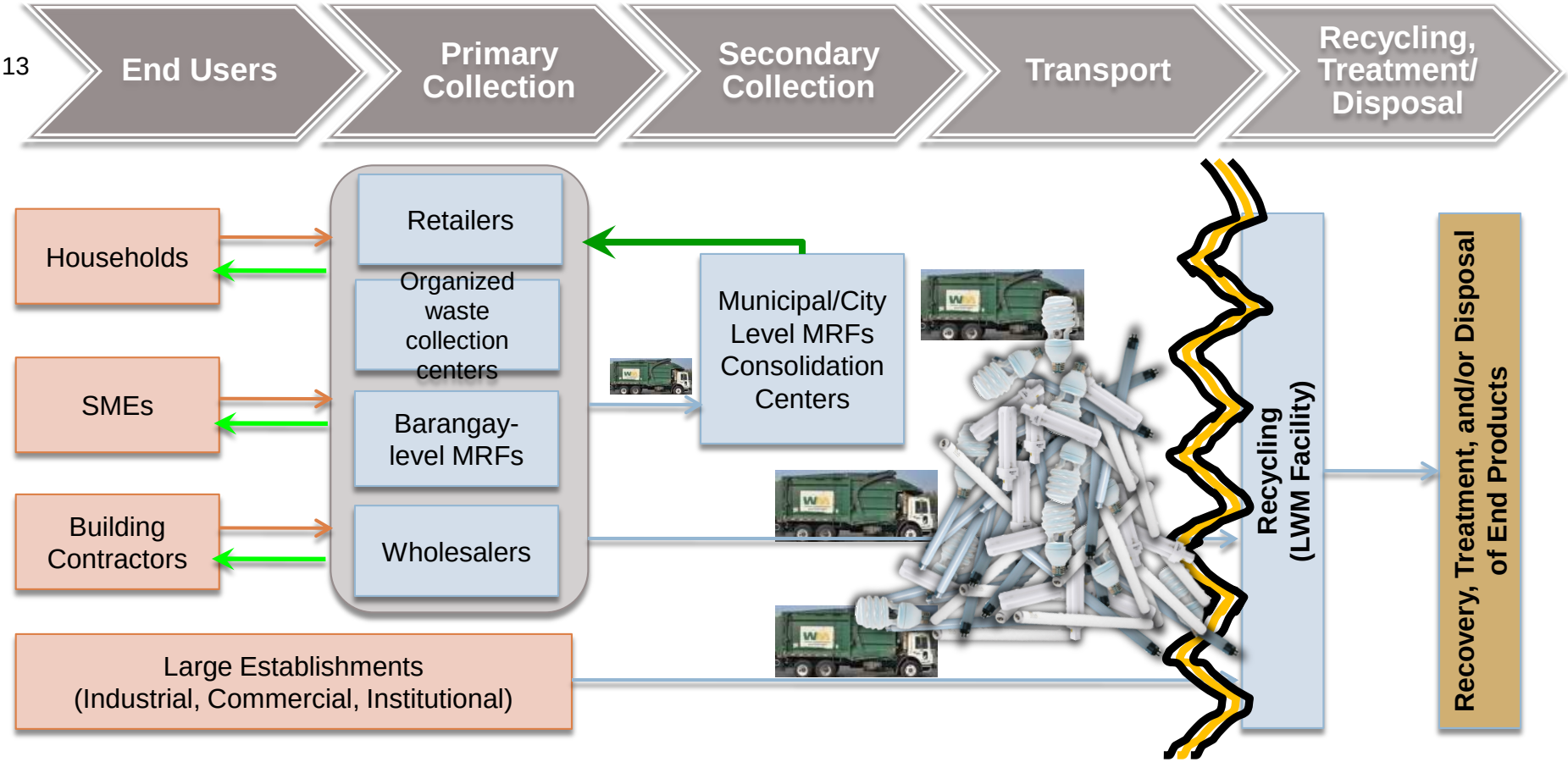
Proposed EPR Model and the Lighting Products Value Chain



Philippine Lighting Products EPR Model

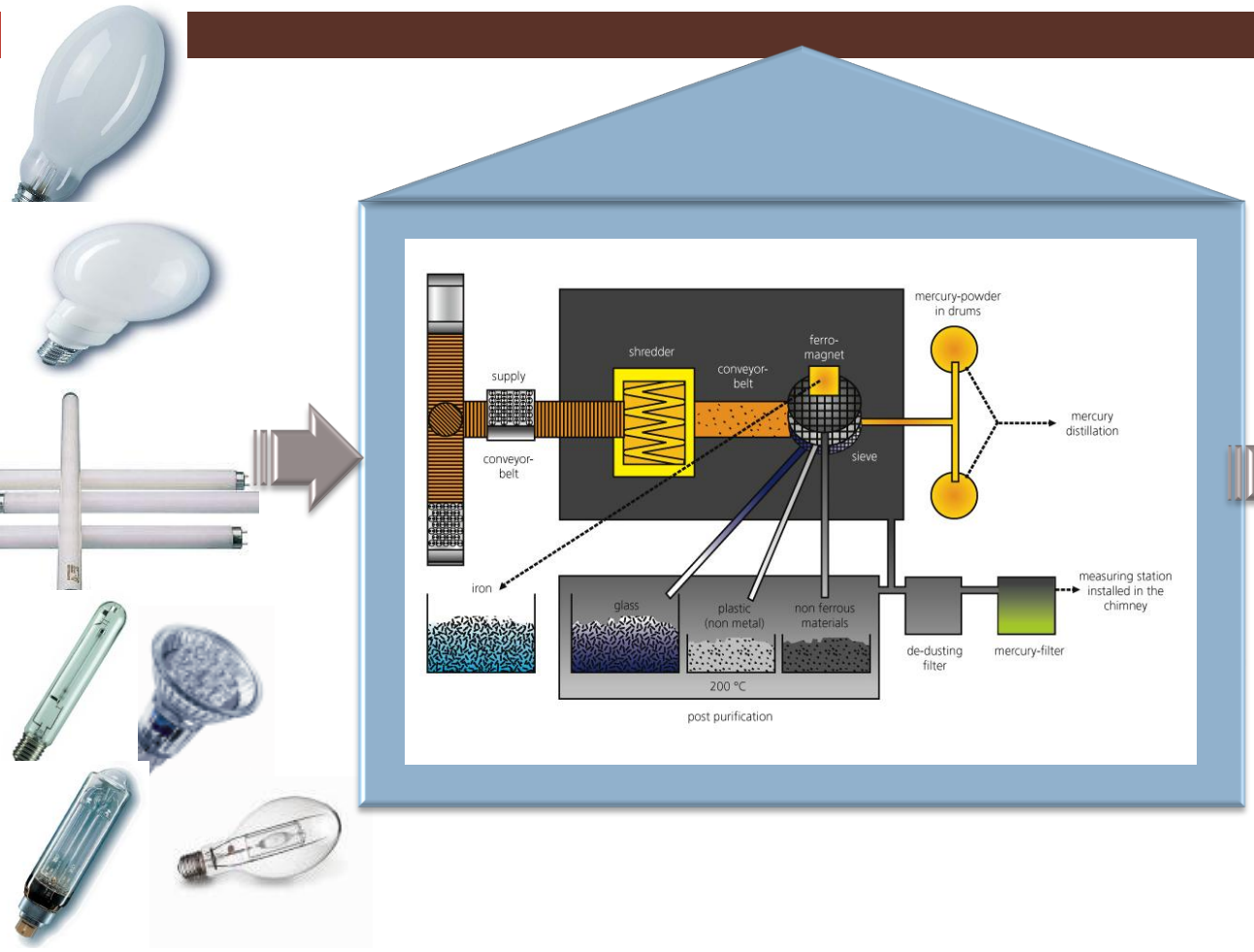
Critical Role of an Effective LWM Facility



Legend:

- End-user bringing the LW to any of the 1^0 collection point
- Transport of wastes through 3rd party transporter with SLA
- Establishments with SLA to collect, store, and/or recycle wastes
- Flow of consolidated LW transported by the 1^0collection point s to avail of the financial incentives
- Financial incentive given per full container (commensurate to the cost of transport)
- Incentive given per LW brought to the 1^0 collection point

Proposed LWM (Mercury Recovery) Facility



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Brief Profile of the LWM Facility

Parameters	Description
Basic Technology	Mercury recovery technology
Capacity	6 million lamps per year for 8-hour daily operations
Investment Cost	1.3M USD
Source of Fund	Part of PEEP Loan Agreement
Input materials	Busted lamps
Outputs	Glass - 88% Metals - 5% Mercury - 0.005% Powders (with the rare earth) – 3% Others (including resinous materials)– 4%

Brief Profile of the LWM Facility

Parameters	Description
Auxiliaries	• Dehumidifier / Drying oven • Programmable Logic Controller (PLC) System • Continuous mercury analyzer • Two series of connected carbon filters
Power consumption	75 kW or 750 kWh/day for a 10-hour operation
Manpower requirements	5 to 8 personnel
Space requirements	2,000 square meters

Initial Stock of the PNOC-DOE Operated LWMF

1st Two Month of Operations

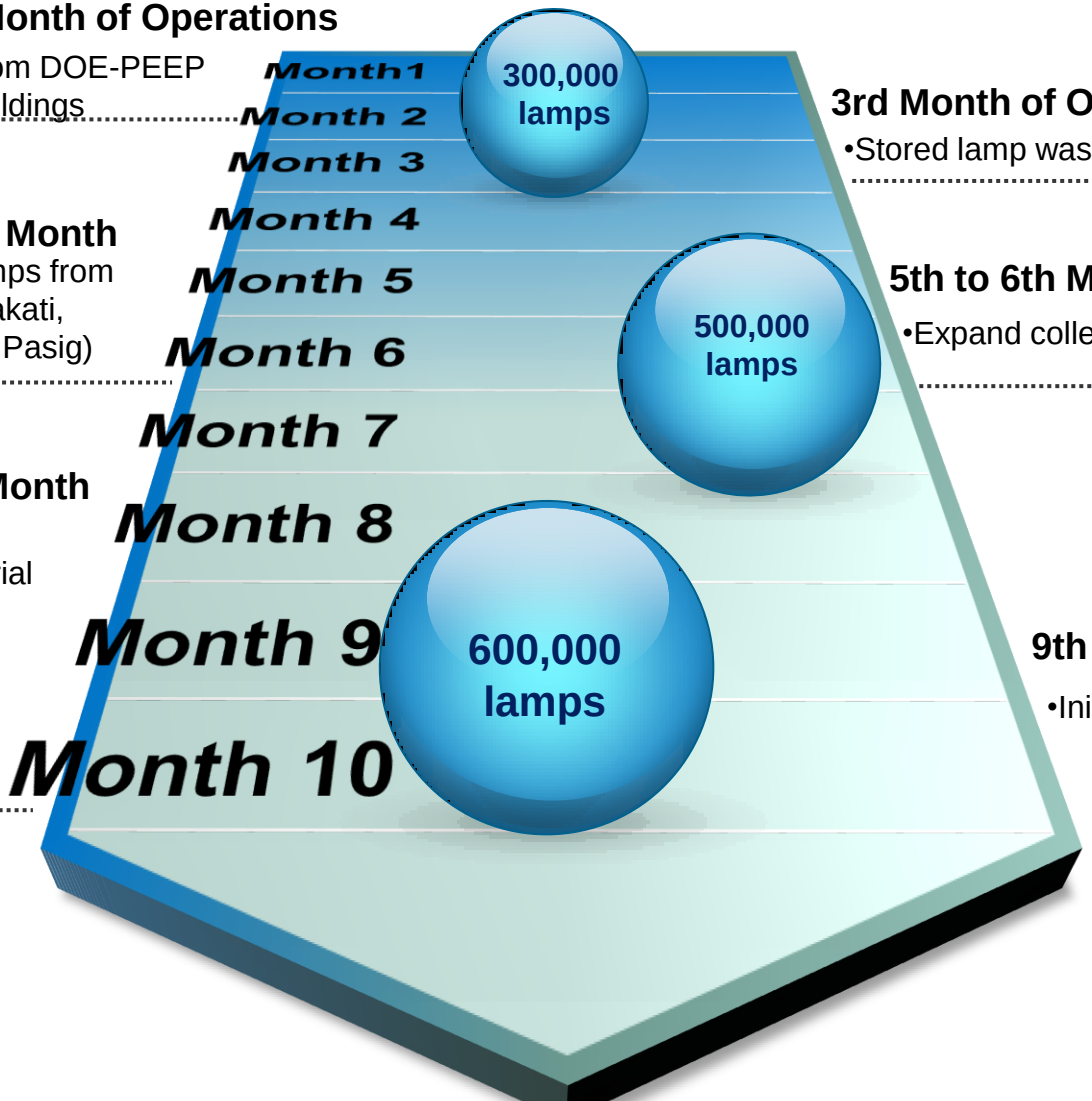
•Feedstock from DOE-PEEP Retroffited Buildings

4th to 6th Month

• Collected lamps from LGUs (QC, Makati, Mandaluyong, Pasig)

7th to 10 Month

•Collected lamps from commercial and industrial establishments through agressive enforcement coupled with Pricing Strategy



3rd Month of Operations

•Stored lamp wastes from DOH Hospitals

5th to 6th Month

•Expand collection from government buildings

9th to 10th Month

•Initial implementation of the EPR System

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THANK YOU!

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