Assessing Financing “Readiness” for Municipalities

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On behalf of U.S. EPA
Outline

• Solid Waste Management Overview
• Financing Solid Waste Management Projects
• Financing Readiness Evaluation
Solid Waste Management Overview
Overview of Solid Waste

- In 2012, the world’s cities generated **1.3 billion tons** of solid waste per year, amounting to a footprint of 1.2 kilograms per person per day.
- With rapid population growth and urbanization, municipal waste generation is expected to rise to **2.2 billion tons** by 2025.
**SWM Challenges**

*In low and middle-income countries, waste is often disposed in unregulated dumps or openly burned.*

**Health, Safety, and Environmental**
- Breeding ground for disease vectors
- Contributes to global climate change through methane generation
- Promotes urban violence

**Financial Challenge**
- Globally, SWM costs will increase from $205 Bn (2016) to $375 Bn (2025). Cost increases will be most severe in low income countries (5x) and lower-middle income countries (4x).
- Effective waste management is expensive (20-50% of municipal budgets).
- Operating this essential municipal service requires integrated systems that are efficient, sustainable, and socially supported.
2 Financing Solid Waste Management projects
Financing the Waste Management Value Chain

Projects can be financed from value chain for upstream industry/populations to downstream disposal and energy utilization

**Waste Sources**
- Planning & capacity building
- Reduce, reuse, recycling
- Sustainable, efficient process optimization

**Collect and Transport**
- Waste collection
- Transfer station
- Transport – truck & rail

**Separate and Process**
- Waste separation
- Recycling
- Composting
- Refuse-derived fuel

**Dispose**
- Landfills
- Incineration
- Sell/utilize recyclables
- Compost

**Recover Energy**
- Anaerobic Digestion
- Biogas to Energy
- Biomass to energy
Financing Readiness Considerations

Key considerations to prepare for financial readiness of a waste management project:

- **Infrastructure**: Build or upgrade waste sorting and treatment facilities, close dumps, construct or refurbish landfills, and provide bins, dumpsters, trucks, and transfer stations.

- **Legal structures and institutions**:
  - National and/or local policies
  - Regulations on proper disposal
    - MSW is often mixed with medical and/or hazardous waste
    - Lack of local capacity to develop proper disposal regulations
  - Regulation enforcement
  - Local capacity or education
  - Funds to enforce regulations
  - Public awareness
  - Behavior change and public participation

- **Social inclusion**: Employment for informal workers (safety, social safety nets, child labor restrictions, and education)

- **Financial sustainability**: Taxes and fee structures

- **Health and safety**: Improve public health and livelihoods by reducing open burning, mitigating pest and disease vector spread.
Public-Private Partnerships – Shared Responsibility

Projects need to engage public and private sectors and civil society for risk sharing, transparency, and economically and financially successful structures.

**Lenders**
- **Provide Financing** (Local currency facilities; guarantees and structured financial products)

**Government**
- **Financial support**
  - Assets
  - Subsidies
- **Political support**
  - Legal and regulatory framework

**Private Investors**
- Equity
- Management experience
- Technical experience

**Civil Society**
- Local engagement
- Local work force

Projects need to engage public and private sectors and civil society for risk sharing, transparency, and economically and financially successful structures.
Financing Alternatives

Public Financing – Four ways of financing local public goods

• Local taxes
• User charges which are levied on various urban services
• Grants from higher levels of government (central, state governments)
• Raising funds through capital markets, from government/financial institutions or international agencies

Traditional Loans

• Bilateral and multilateral development banks
• Export credit agencies
• International and local government and commercial banks
Financing Alternatives

Results-based Financing
• Payments are tied to results
• Fee collection and behavior change toward recycling and source separation of organic waste;
• Access to basic services for the poor and reducing the adverse impact of uncollected or inappropriately disposed waste among low income residents;
• Transparency and accountability in the use of public funds through an independent verification process

Development Policy Financing
• Technical assistance and loan through public-private partnership mechanisms
3 Financing Readiness
Why Assess Financing Readiness?

• Raises awareness of financing challenges and potential pitfalls
• Identifies financial weaknesses or potential risks that need to be addressed
• Places cities in a position to obtain the most appropriate combination of financing
• Improves the transparency of a city’s financial state, which reduces risk for investors
• Reduces risk for cities (e.g., lowers risk of defaulting on payments)
How the Waste Initiative Works with Participating Cities

Stage 0 Letter of Intent
- The city is ready to mitigate SLCPs from the waste sector
- City joins CCAC Waste Initiative

Stage 1 City Assessment
- City collects waste-related data and develops baseline of emissions SLCPs of current MSW management in the city.

Stage 2 Action Plan
- City develops course of action for mitigating SLCPs from the waste sector.

Stage 3 Work Plan Design
- City identifies activities and projects that will lead to reduced SLCP emissions from the MSW sector.
- City assesses its financial readiness.

Stage 4 Ready to Launch
- City prioritizes and plans a MSW project that will lead to the reduction of SLCPs emissions.
- City prepares and submits proposals to financial institutions and other funding sources.

Financing Barriers Identified
Financing Barriers Elaborated
Financing Needs Identified
Financing Barriers Addressed
## Financial Readiness Evaluation

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<thead>
<tr>
<th>Category</th>
<th>Example Evaluation Question</th>
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<tbody>
<tr>
<td><strong>Political Environment</strong></td>
<td>• How long is the current government’s term? Does the project need to be completed within that timeframe?</td>
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<td><strong>Regulatory Environment</strong></td>
<td>• How does this project align or conflict with existing regulations (e.g., public health regulations)?</td>
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<td><strong>Legal Framework</strong></td>
<td>• Are there laws that determine how a project must be structured?</td>
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<td><strong>Revenue Streams</strong></td>
<td>• Will anticipated revenue streams go to the general fund, or can they be used for other waste projects?</td>
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<td><strong>Financial and Technical Expertise</strong></td>
<td>• Does the city have the in-house capacity it needs (e.g., for modeling project economics)?</td>
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<td><strong>Bidding</strong></td>
<td>• What are the local procurement policies and procedure? How do they apply to this project?</td>
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Public Private Partnerships

Poland Poznań WTE PPP and SUEZ

- WTE facility opened in March, 2017

- The facility reduces landfilled and dumped waste into electricity and district heating
  - 30% of the domestic energy is supplied by this facility

- The parties involved included the company SUEZ, the Marguerite Fund, the European Fund for Energy, Climate Change and Infrastructure, and the City of Poznań
  - 84 million Euros was financed from a European subsidy and 96 million euros from a non-recourse loan
  - SUEZ signed a 25 year contract with the City of Poznań

Source: Marguerite Fund

Source: https://pppknowledgelab.org/sectors/waste
Thank you! Questions?

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