




PUBLIC-PRIVATE PARTNERSHIP IN WASTE MANAGEMENT




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Onyx

- Waste management division of Veolia Environnement of France
- Largest waste services provider in Europe and second largest in the world with revenues of € 6.2 billion in 2004
- Handles all forms of waste at every step of the waste management process




Onyx in Hong Kong

Four Contracts with Hong Kong EPD:

- Chemical Waste Treatment Centre
- South East New Territories Landfill
- West Kowloon Transfer Station
- North Lantau Transfer Station








Chemical Waste Treatment Centre

Enviropace Ltd.

- Contract type: Design, build & operate
- Operation period: 15 years
- Treatment capacity: 100,000 tonnes per year









South East New Territories Landfill

Green Valley Landfill Ltd.

- Contract type: Design, build, operate, closure & aftercare
- Contract duration: Landfill life (19 years) plus 30 years' aftercare
- Landfill capacity: 43 million m³
- Waste volume: 8,100 tonnes per day with over 1,650 trucks (2004)








West Kowloon Refuse Transfer Station

South China Transfer Ltd.

- Contract type: Design, build & operate
- Operation period: 15 years
- Transfer capacity: 2,875 tonnes per day
- Current tonnage: 2,600 tonnes per day



North Lantau Refuse Transfer Station

Ecoserve Ltd.

- Contract type: Design, build and operate
- Operation period: 15 years
- Transfer capacity: 650 tonnes per day
- Current tonnage: 135 tonnes per day



HK Contract Features

- Single client contracts
- Performance-based technical specifications
- Limited implementation and permitting risk
- Distinct capital and operation fee payments
- Minimum operation fee payment based on waste volume guarantees
- Annual price adjustment mechanism



Contract Limitations

- No operator control over waste flow
- Limited flexibility to adopt to a changing operating environment
- Long lead time to implement any upgrade/expansion/revision of services to meet new market demands



Onyx in China

- Guangzhou Xing Feng MSW Sanitary Landfill
- Guangzhou Likeng Waste-To-Energy Facility
- Shanghai Puxi Jiangqiao Waste-To-Energy Facility
- Shanghai Laogang MSW Sanitary Landfill Phase 4



Onyx in China

New Projects

- Foshan Gaoming MSW Sanitary Landfill
- Guangdong Hazardous Waste Treatment and Disposal Facility in Huizhou



Guangzhou Xingfeng Landfill



- Contract type: Design, construction quality assurance, operation & maintenance and aftercare
- Investment vehicle: Wholly foreign owned enterprise
- Contract duration: 8-year operation and maintenance and 1-year aftercare
- Waste volume: 6,000-7,000 tonnes per day





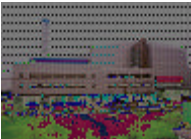

Guangzhou Likeng WTE Plant

- Contract type: Technical assistance during design and construction; operation and maintenance
- Investment vehicle: Wholly foreign owned enterprise
- Contract duration: 10 years
- Waste volume: 1,000 tonnes per day

Shanghai Puxi WTE Plant

- Contract type: Testing & commissioning services; operations & maintenance
- Investment vehicle: Joint venture with local partners
- Contract duration: 20 years
- Waste volume: 1,500 tonnes per day

Shanghai Laogang Landfill Phase 4


- Contract type: Build, operate & transfer
- Investment vehicle: Joint venture with local and foreign partners
- Contract duration: 20 years
- Waste volume: 6,300 tonnes per day





Why PPP ?

- Expert and innovative solutions
- Efficiency and value for money
- Leverage government resources to provide more services to meet the public needs
- Additional financing cost is offset by enhanced services



Changing HK Market

- Long-term waste disposal strategy for Hong Kong
- Extent and impact of user charging scheme
- Potential cross-border waste movement
- Waste flow control





Important Considerations

- Risk allocation
- Separate payment for availability and usage
- Level of government control
- Transparency in planning and award process
- Mechanism for mutually-agreeable changes
- Bank financing requirements



Conclusions

- Pioneer in PPP projects
- Experience from complete project life cycle
- Consider needs of different stakeholders
- True public consultation and not endorsement
- Adopt to changing market situation

