Case 14

China

Water Sector

Jinan and Sponge City

Peng Pei
China Everbright – Environmental Water Projects in China

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- ¥8.3 trillion ($1.27 trillion#)
- 7,110 projects
- 19 industries

* As of 29 Feb 2016, PPP Center, Ministry of Finance of PRC. Foreign currency translation is based on United States Dollar ($) 6.5 : Renminbi (¥)1 throughout these slides.

- 4 municipalities, 22 provinces, 5 autonomous regions, 2 special administrative regions
- 1.3 billion population
- 9.6 million km²

Everbright International is also in Germany.

Shanxi Ningwu Wind Power Project
Shandong Ji’nan Waste Water Treatment Project
Hainan Sanya Waste-to-energy Project

Everbright International’s Profit Growth*
* Exchange rate: USD $7.75 to HK$1.00
In order to maintain operation, we have to come up with solutions to pay the electricity bills...

“If we fail to comply with the discharge standards, some waste water treatment plants will become source of pollution…”

- Survey on Some Urban Waste Water Treatment Plants, March 2014, Xinhua News Agency

Ji’nan No. 1 & No. 2 Waste Water Treatment Plants in 2005
- Operation since 1994 & 2001
- Public institutions managed by municipal government

Ji’nan Project in 2006
- Initial investment: ¥453.7 m ($69.8m)
- Designed capacity: 420k tons/day
- Operated capacity: 200k tons / day

Main Contracts in 2006
- Asset Transfer Agreement
- Concession Agreement
- Services Agreement
- Agreement on Employee Arrangement
- Loan Agreement

<table>
<thead>
<tr>
<th>Arrangement</th>
<th>Gov.</th>
<th>FB Water</th>
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<tbody>
<tr>
<td><strong>Budget</strong></td>
<td></td>
<td></td>
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<tr>
<td>EB Water to pay purchase price to Gov</td>
<td>✓</td>
<td></td>
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<tr>
<td>EB Water to assume operational cost</td>
<td>✓</td>
<td></td>
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<tr>
<td>Gov. to guarantee minimum waste water volume [minimum revenue]</td>
<td>✓</td>
<td></td>
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<tr>
<td>Gov. to compensate under special circumstances</td>
<td>✓</td>
<td></td>
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<tr>
<td><strong>Operation &amp; Maintenance</strong></td>
<td></td>
<td></td>
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<tr>
<td>Gov. to provide land use right</td>
<td>✓</td>
<td></td>
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<tr>
<td>Gov. to coordinate with other authorities</td>
<td>✓</td>
<td></td>
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<tr>
<td>minimum discharge standard; otherwise penalties</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Gov. to take over if public interest prejudiced</td>
<td>✓</td>
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Financing:
- Project financing
- Equity
- Loans to Listco
- Bond program
- Institutional Investors

Ji’nan Project
- 2.96 mil ppl & 360 km² service area
- Treated 2 billion tons of waste water
- Reusable water & sludge treatment
- Covers > 90% waste water treatment market in Ji’nan
- National Education Base

- Created > 4,200 jobs
- Processed 30.2 million tons of waste
- Generated 9.9 billion kWh of green electricity
- Fulfilled annual electricity consumption of 8.25 million households
- Saved 3.96 million tons of standard coal
- Reduced CO₂ emission by 11.6 million tons
- Prevented 1.29 billion trees from being cut down
Impact on the Sustainable Development Goal
No. 17

High Impact:
✓ Well being – healthy lives
✓ Water and sanitation for all
✓ Affordable and sustainable energy
✓ Economic growth & decent jobs for all
✓ Resilient infrastructure, sustainable industrialization, foster innovation
✓ Combat climate change
✓ Take care of the earth
✓ Protect the ocean

Some Impact:
✓ Provided quality education
✓ Improved gender equality
✓ Reduced inequalities within and among countries
✓ Made cities safer, more inclusive, resilient, and sustainable
✓ Created mechanisms and partnerships to reach the Sustainable Development Goals

13th Five-Year Plan
➢ Innovation
➢ Coordination
➢ Green Development
➢ Opening up
➢ Sharing

✓ People’s Well-Being:
  to lift 50 million population out of poverty

✓ Growth:
  to double the level of GDP & per capita income by 2020 (baseline: 2010)

✓ Energy Revolution & Environment Protection
✓ Belt and Road Initiative