Formulating Tarif Structure

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Water Malaysia 2013
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Quick Facts about the water services industry in Malaysia

Asset-light Model

Progress Achieved

Tariff Before WSIA

Tariff Setting Under WSIA

Key Performance Indicators

Key Success Factors

Moving Forward
Quick Facts

Average Water Tariff (Domestic) For First 20m³

SPAN’s target is to narrow the range for first 20 Meter cubic for all states over the medium term for domestic consumers
Quick Facts

Average Water Tariff (Domestic) For First 30m³

Water rates should be structured to encourage conservation
Quick Facts

Average Water Tariff (Industry)

<table>
<thead>
<tr>
<th>Region</th>
<th>for first 80m³</th>
<th>for first 500 m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulau Pinang</td>
<td>0.96</td>
<td>1.19</td>
</tr>
<tr>
<td>Kedah</td>
<td>1.25</td>
<td>1.25</td>
</tr>
<tr>
<td>Perlis</td>
<td>1.45</td>
<td>1.45</td>
</tr>
<tr>
<td>Kedah</td>
<td>1.15</td>
<td>1.15</td>
</tr>
<tr>
<td>Perak</td>
<td>1.30</td>
<td>1.30</td>
</tr>
<tr>
<td>N. Sembilan</td>
<td>1.40</td>
<td>1.40</td>
</tr>
<tr>
<td>Selangor</td>
<td>1.60</td>
<td>1.60</td>
</tr>
<tr>
<td>Johor</td>
<td>1.56</td>
<td>1.59</td>
</tr>
<tr>
<td>Melaka</td>
<td>2.27</td>
<td>2.27</td>
</tr>
<tr>
<td>Labuan</td>
<td>2.8</td>
<td>2.93</td>
</tr>
<tr>
<td>Pahang</td>
<td>1.67</td>
<td>1.8</td>
</tr>
<tr>
<td>Terengganu</td>
<td>0.90</td>
<td>0.90</td>
</tr>
</tbody>
</table>

RM/m³
## Comparison With Other Utilities

### Utilities Sector Revenue

<table>
<thead>
<tr>
<th>Year</th>
<th>Electricity</th>
<th>Telecommunication</th>
<th>Water</th>
<th>Sewerage²</th>
<th>Highway³</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>25.75</td>
<td>33.29</td>
<td>3.83</td>
<td>0.41</td>
<td>3.26</td>
</tr>
<tr>
<td>2009</td>
<td>28.78</td>
<td>35.44</td>
<td>3.93</td>
<td>0.47</td>
<td>3.47</td>
</tr>
<tr>
<td>2010</td>
<td>30.32</td>
<td>38.69</td>
<td>4.09</td>
<td>0.47</td>
<td>3.66</td>
</tr>
</tbody>
</table>

**Note:**
1. Telecommunication Service Provider- Telekom, Axiata, Maxis and Digi. Total Revenue exclude overseas revenue
2. Sewerage Company – IWK
3. Highway Concession Company - PLUS and Litrak Berhad

**Source:**
- 2008-2010 Annual Report (Telekom, TNB, Axiata, Maxis dan Digi)
- Highway Concession Company Financial Statement 2008-2010
- Malaysia Water Industry Guide 2011
- 2010 Water Operator Data
Quick Facts

Revenue Vs Operating Expenditure - 2011

- Operating Revenue include tariff and non tariff revenue
- Operating Expenditure comprise (where applicable):
  1. Water treatment and distribution cost
  2. Purchase of treated water
  3. Purchase of raw water
  4. Lease Rental to PAAB
  5. Exclude finance cost, depreciation and amortization
Quick Facts

Cost of Providing Water Services

Basic Cost Component (RM/m³)

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Distribution</th>
<th>Raw Water Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy 0.10</td>
<td>Energy 0.05</td>
<td>▪ Protecting Quality of Raw Water</td>
</tr>
<tr>
<td>Chemical 0.03</td>
<td>Chemical 0.001</td>
<td>▪ Preservation of Quality of Raw Water</td>
</tr>
<tr>
<td>Staff Costs 0.03</td>
<td>Staff Costs 0.19</td>
<td>TO BE ALLOCATED</td>
</tr>
<tr>
<td>Maintenance 0.07</td>
<td>Maintenance 0.09</td>
<td></td>
</tr>
</tbody>
</table>

RM0.56/m³ (not include Other Costs, Capex & NRW)

Costs

Avg Water Tariff RM1.26/m³
### Average Domestic Consumption

#### Avg Consumption per connection/month in Malaysia – 30m³

<table>
<thead>
<tr>
<th>Domestic – Tariff Band (m³)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 20</td>
<td></td>
<td>Lifeline</td>
</tr>
<tr>
<td>21 - 35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Consumption at lifeline band - 20m³

<table>
<thead>
<tr>
<th>WHO:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Lifeline</td>
<td>150 lcdn</td>
</tr>
<tr>
<td>• Basic Necessities</td>
<td>110 lcdn</td>
</tr>
</tbody>
</table>

*Domestic Consumption Per Capita Per Day based on a household of 4.29*
Asset-light Model

**Before WSIA**

Loans owed by the State to the Federal Government shall be novated to PAAB (in consideration for the transfer of the water assets)

- Federal Govt Loan
- Commercial Loan

**After WSIA**

- Bond/Capital Market
  - Source for competitive funding

- PAAB
  - Lease arrangement
  - Lease payment (based on affordability)

- Operator
  - Focus on Operations and maintenance of:
    - Water treatment
    - Distribution

- New Asset
  - Lease
  - based on operator’s financial ability
Progress Achieved

*Developing A Sustainable Water Services Industry*

- Continuous access to safe water at affordable rate
- Completed: Independent National Regulator
- Completed: Creative Innovative Financing
- On-going: Transparent Tariff Setting Mechanism
- Continuous: Effective and Efficient Service Delivery

Sustainable water services industry
Low Tariff

- Poor Quality of Service
- Inefficient Service
- Consumers unwilling to pay for the service

Financial Burden to Federal Government/State Government

Low Financial Investment

revenue insufficient to fund operations and maintenance resulting in below par operational efficiency and services
Tariff Setting Under WSIA

...... Uniform tariff setting mechanism

- A robust, stable and transparent framework for periodic tariff reviews

- The process is Transparent, Consultative, Participatory where customer’s views are considered and well planned and comprehensive

- Regulatory accounting framework to allow benchmarking to incentivize operators
Regulatory Water Accounting
“Relationship between Regulatory Water Accounting and Benchmarking and Tariff Setting Mechanism”

**Regulatory Water Accounting**
A tool to support tariff pricing structure

**Regulatory Accounts**
A uniform and consistent set of financial statements for regulatory purposes

**Benchmark Costs**
Benchmark costs form the regulatory costs in calculating future tariff pricing

**Tariff-Setting Mechanism**
Applying benchmark costs incentivizes businesses towards continuous improvement

- Water services operators submit regulatory accounts on an annual basis
- Regulator reviews and compares business costs and their relative efficiency position
- Regulator sets benchmark costs based on market price and set efficiency-based targets.
- Regulator through the pricing mechanism allows water services operators to recover benchmark costs

Source: KPMG
Tariff Setting Under WSIA

... tariff setting principles

- Tariffs to be determined every 3 years through a stable tariff setting framework and in consultation the Water Forum and other stakeholders
- Tariff setting framework that
  - promotes efficiency and transparency
  - provides consumers with a fair and affordable price structure
  - ensures reasonable returns that commensurate with the risks taken by the operators
Tariff Setting Under WSIA

......balancing affordability and sustainability

- Full Cost Recovery cannot be achieved with a one-time huge tariff increase
- Phased tariff increases to recover costs
- Short – Mid Term (Year 1-10 years) : full supply cost
- Long Term (Year 11-30) : full cost
Tariff Setting Under WSIA

...... tariff structure is based on

**Domestic**
- Affordability
- Punitive rate to prevent excessive consumption and encourage water conservation

**Commercial/Industrial**
- Commercial/industry profile of the respective states
- Encourage commercial/industrial users to adopt water efficiency technology
**Tariff Setting Under WSIA**

.... *tariff review request and revision process*

<table>
<thead>
<tr>
<th>Uniform Tariff revision process allows less room to politicize</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 major stages</td>
</tr>
<tr>
<td>✓ Initiation by operator</td>
</tr>
<tr>
<td>✓ Recommendation by SPAN</td>
</tr>
<tr>
<td>✓ Approval by Minister</td>
</tr>
</tbody>
</table>

### Uniform tariff revision process

<table>
<thead>
<tr>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
<th>Stage 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator</td>
<td>SPAN</td>
<td>Minister</td>
<td>Operator</td>
</tr>
</tbody>
</table>

- **Stage 1**
  - Operator
  - Tariff Request

- **Stage 2**
  - SPAN
  - Assessment & Recommendation
  - Tariff Consultation with all stakeholders and citizen participation

- **Stage 3**
  - Minister
  - Approval by YB Minister/Cabinet
  - Gazette of water rates

- **Stage 4**
  - Operator
  - Consumer awareness program
  - New tariff in effect
Key Performance Indicators

- **Efficiency**
  - Operating costs efficiency (RM/m³)
  - Treatment and distribution optimization (least cost option)
  - NRW losses Control and improvements

- **Effectiveness**
  - Water Quality
  - Excellent Asset Management and Planning
  - Consumer Standard
    - Billing
    - Complaint Handling System
    - Fault/Complaint Rectification

- **Sustainability**
  - Environmental Protection – sludge facilities
  - Energy efficiency
  - Water Reuse
  - Water Resource Protection & Availability
Key Success Factors

- Corporatization of Water Distribution Licensees
- Buy In on RAF
- Comprehensiveness of RAF covered to facilitate benchmarking
- Skill set for evaluation
- Adoption of AMP
- Public Awareness
- Transparency
- Political Will
Effective regulations and increase investment to improve services

Improve level of service

Better consumers’ acceptance

Increase in willingness to pay
Moving Forward - Tariff Setting Mechanism

- Integrating water and sewerage services and tariffs

- Implement Regulatory Accounting Framework (RAF) and move towards full cost recovery
  - Consultant has been appointed to conduct study on the implementation
### RAF Awareness and Engagement
- Awareness and engagement with stakeholders on RAF
- Understanding of RAF Guidelines (WARGA) and Accounts (WIRA)
- Understanding of role of benchmarking in RWA
  - identify key benchmark parameters
  - addressing special factors
  - benchmarking process

### Data Gathering and Integrity
- Data collection based on WARGA and WIRA
- Verification of accuracy of data
- Adoption of benchmark costs
- Asset Management Plan
- Operators to prepare regulatory accounts
- Regulatory audits conducted by SPAN and provide guidance
- SPAN to use regulatory accounts as a guide for tariff review
- SPAN and operators to identify key enablers to facilitate data export

### Phase Implementation
- Submission of audited regulatory accounts
- Holistic MIS System for preparation, submission and analysis for tariff review
- Continuous guidance to operators who are not ready to adopt RWA

### RWA Implementation Roadmap

<table>
<thead>
<tr>
<th>Year</th>
<th>Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>RAF Introduction</td>
</tr>
<tr>
<td>2013</td>
<td>Data Gathering and Integrity</td>
</tr>
<tr>
<td>2014</td>
<td>Submission of Regulatory Accounts for tariff revision for year 2014 (guide)</td>
</tr>
<tr>
<td>2015</td>
<td>Submission of audited regulatory accounts</td>
</tr>
<tr>
<td>2016</td>
<td>Holistic MIS System for preparation, submission and analysis for tariff review</td>
</tr>
<tr>
<td>2018</td>
<td>Continuous guidance to operators who are not ready to adopt RWA</td>
</tr>
</tbody>
</table>
THANK YOU