Restructuring of The Water Industry (Malaysia's Experience)

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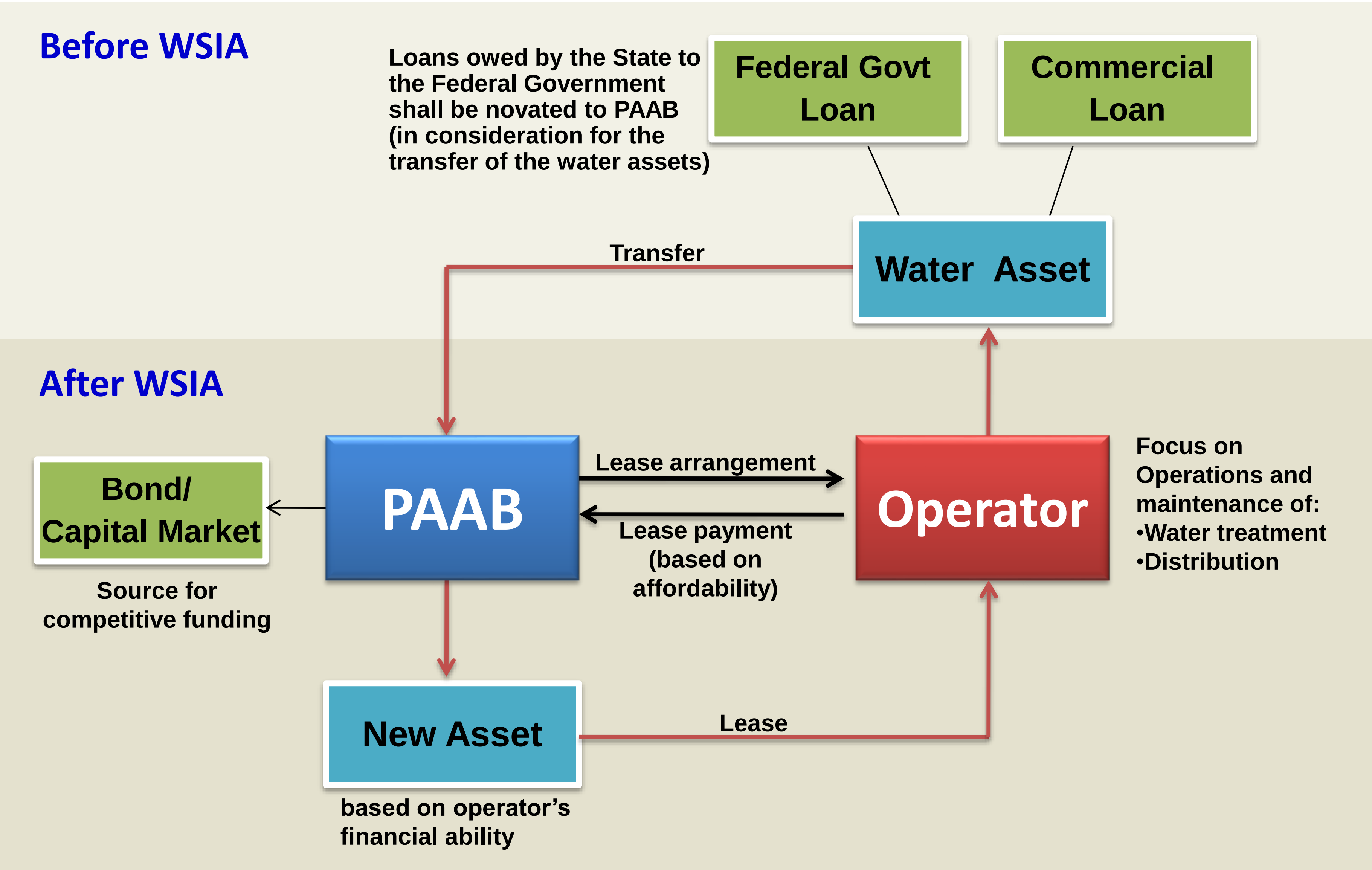
Background to Restructuring

- Since Independence in 1957, investment in water supply is the responsibility of the 13 States with loan/grant provided by the Federal Government.
- Faced with US2.2 billion debt, poor efficiency and poor cost recovery, water sector reforms was initiated in 2003.
- The Water Services Industry Act was passed in 2006 which led to formation of Water Asset Company, PAAB.
- The National Water Services Commission Act passed in 2006 which led to the formation of Federal regulator, SPAN. SPAN began operating in 2008.
- This Acts separate the function of policy making (Ministry), regulation (SPAN), asset ownership (PAAB) and service provision (State Water Company)
- Restructuring only applies for Penisular Malaysia.

Asset-light Model



Quick Facts – Raw Water Resources 2013

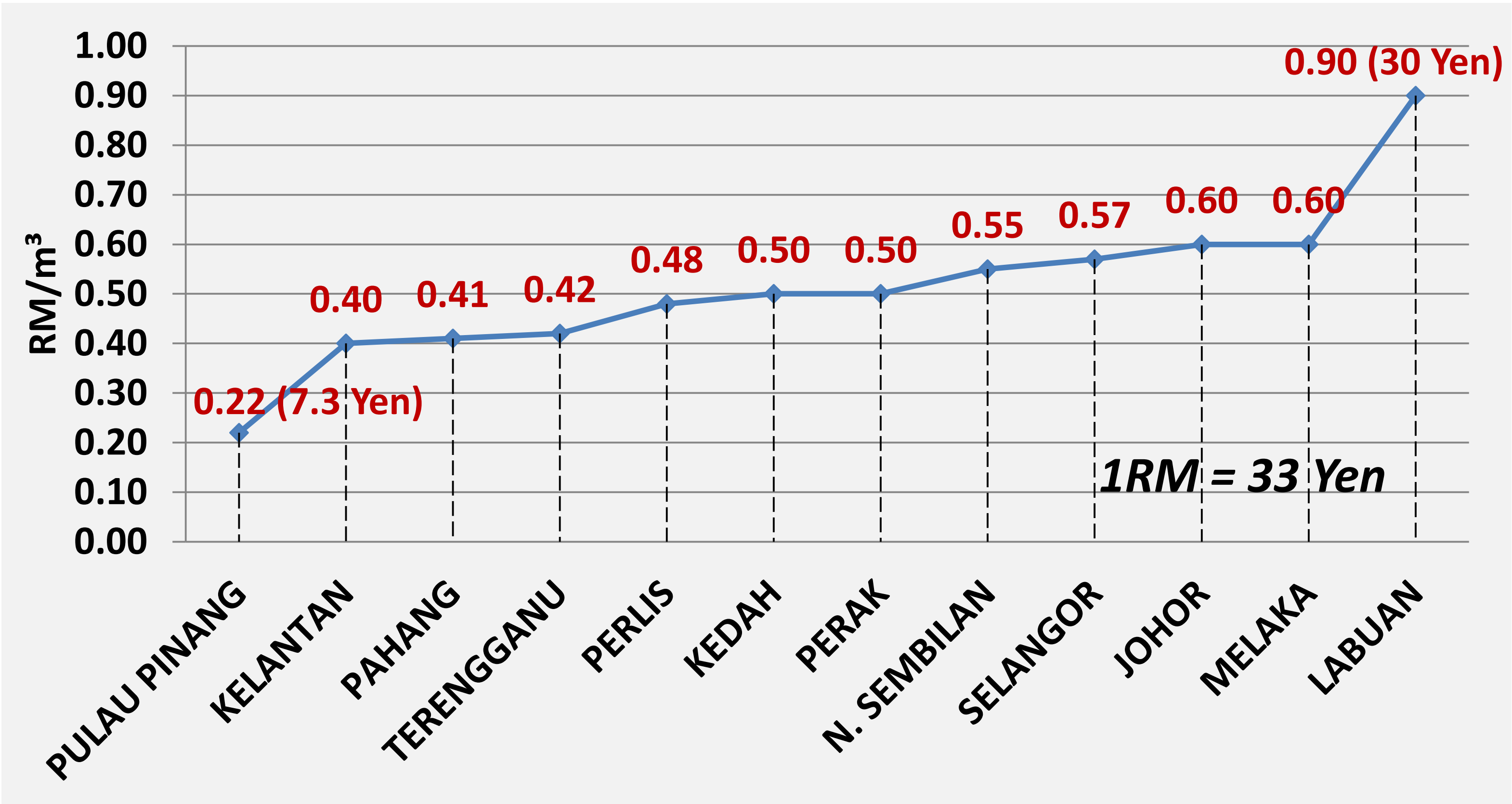
State	Direct Extraction From River (MLD)	Storage Dams (Direct)	Ground Water	TOTAL (MLD)
Johor	1,058	524	n.a.	1,583
Kedah	1,425	11	n.a.	1,436
Kelantan	254	n.a.	176	430
Labuan	63	3	n.a.	66
Melaka	430	223	n.a.	653
N. Sembilan	556	368	n.a.	924
Pulau Pinang	1,060	80	n.a.	1,140
Pahang	1,067	n.a.	31	1,098
Perak	808	524	n.a.	1,332
Perlis	175	41	7	223
Sabah	775	329	28	1,132
Sarawak	1,169	357	0.2	1,527
Selangor	4,432	211	n.a.	4,643
Terengganu	482	192	n.a.	674
MALAYSIA	**13,753**	**2,866**	**243**	**16,861**

Quick Facts – Water Treatment Plants Design Align Capacity and Production 2013

State	No. of WTPS	WTPs Design Capacity MLD	Production MLD	Reserve Margin % MLD
Johor	44	1,986	1,508	**24.1**
Kedah	36	1,300	1,326	**0**
Kelantan	32	480	430	**10.3**
Labuan	6	104	64	**38.9**
Melaka	8	556	487	**12.5**
N. Sembilan	22	793	736	**7.2**
Pulau Pinang	10	1,497	988	**34.0**
Pahang	80	1,300	1,065	**18.0**
Perak	46	1,789	1,215	**32.1**
Perlis	5	289	218	**24.5**
Sabah	67	1,286	1,132	**12.0**
Sarawak	85	1,529	1,165	**23.8**
Selangor	34	4,606	4,563	**0.9**
Terengganu	13	906	638	**29.5**
MALAYSIA	**488**	**18,421**	**15,536**	**15.7**

Quick Facts

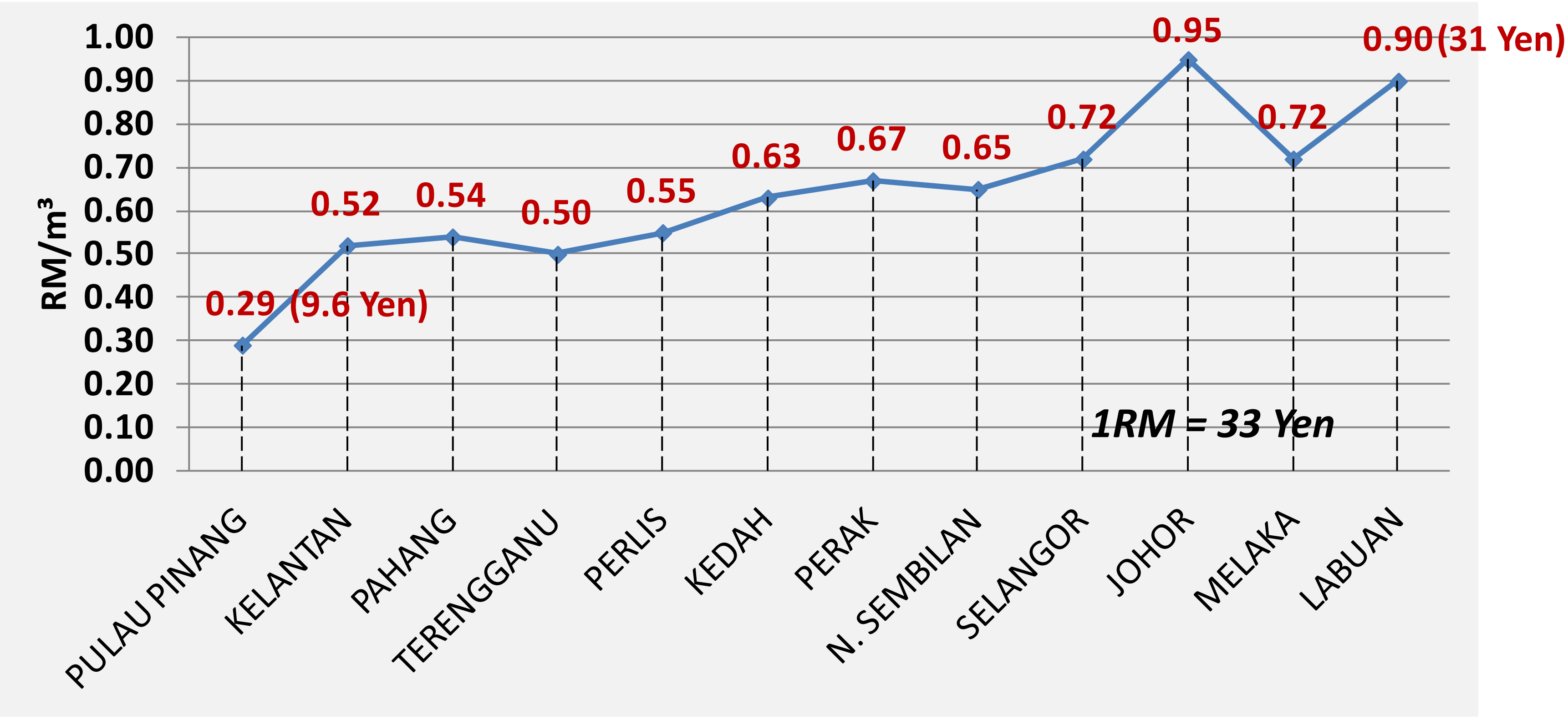
Average Water Tariff (Domestic) For First 20m^3



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

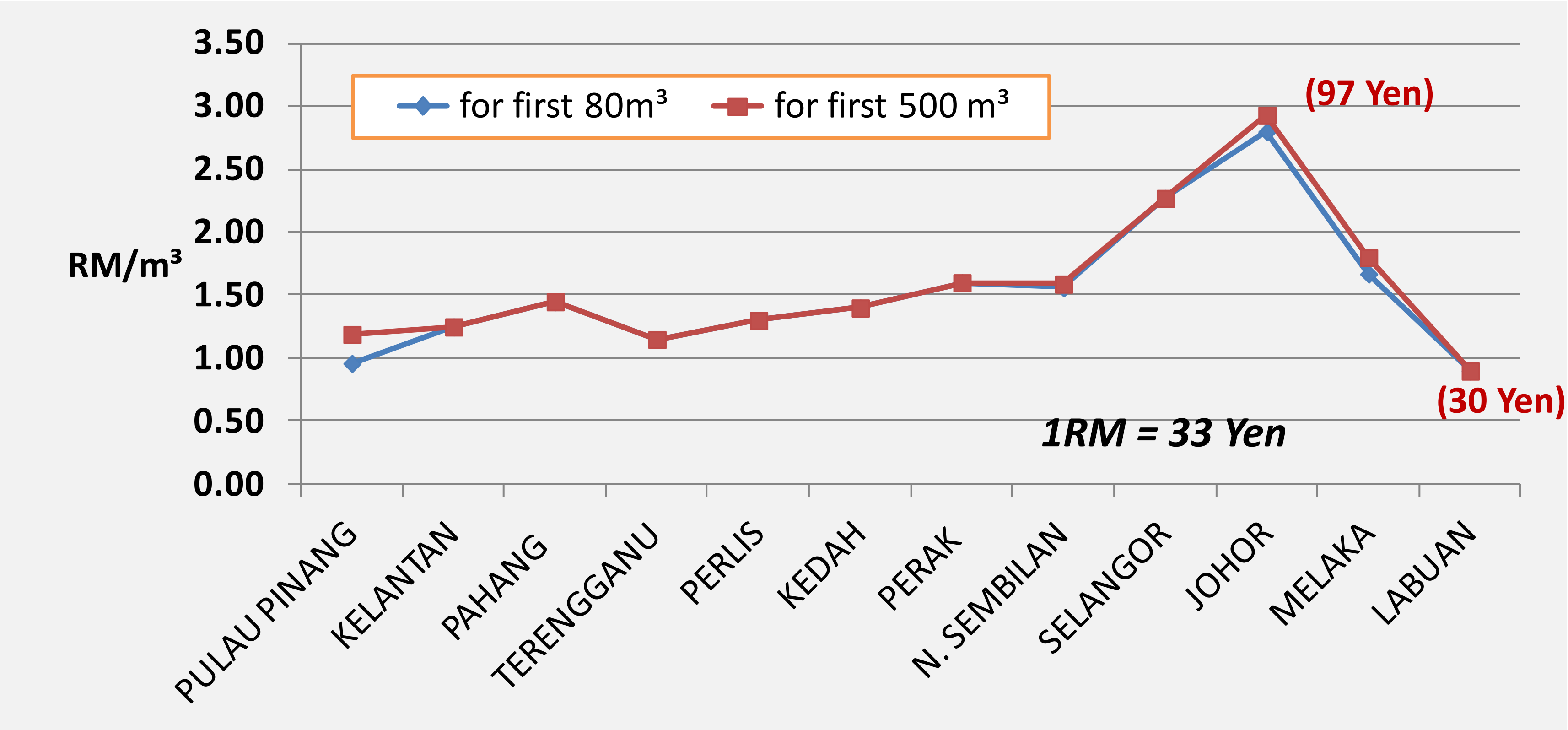
Average Water Tariff (Domestic) For First 30m³



Water rates should be structured to encourage conservation

Quick Facts

Average Water Tariff (Industry)



for first $80m^3$	0.96	1.25	1.45	1.15	1.30	1.40	1.60	1.56	2.27	2.8	1.67	0.90
for first 500 m^3	1.19	1.25	1.45	1.15	1.30	1.40	1.60	1.59	2.27	2.93	1.8	0.90

Quick Facts

Cost of Providing Water Services

Basic Cost Component (RM/m³)

Treatment		Distribution		Raw Water Resources
Energy	0.10	Energy	0.05	▪ Protecting Quality of Raw Water
Chemical	0.03	Chemical	0.001	▪ Preservation of Quality of Raw Water
Staff Costs	0.03	Staff Costs	0.19	
Maintenance	0.07	Maintenance	0.09	TO BE ALLOCATED

Basic Cost of Treated Water

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

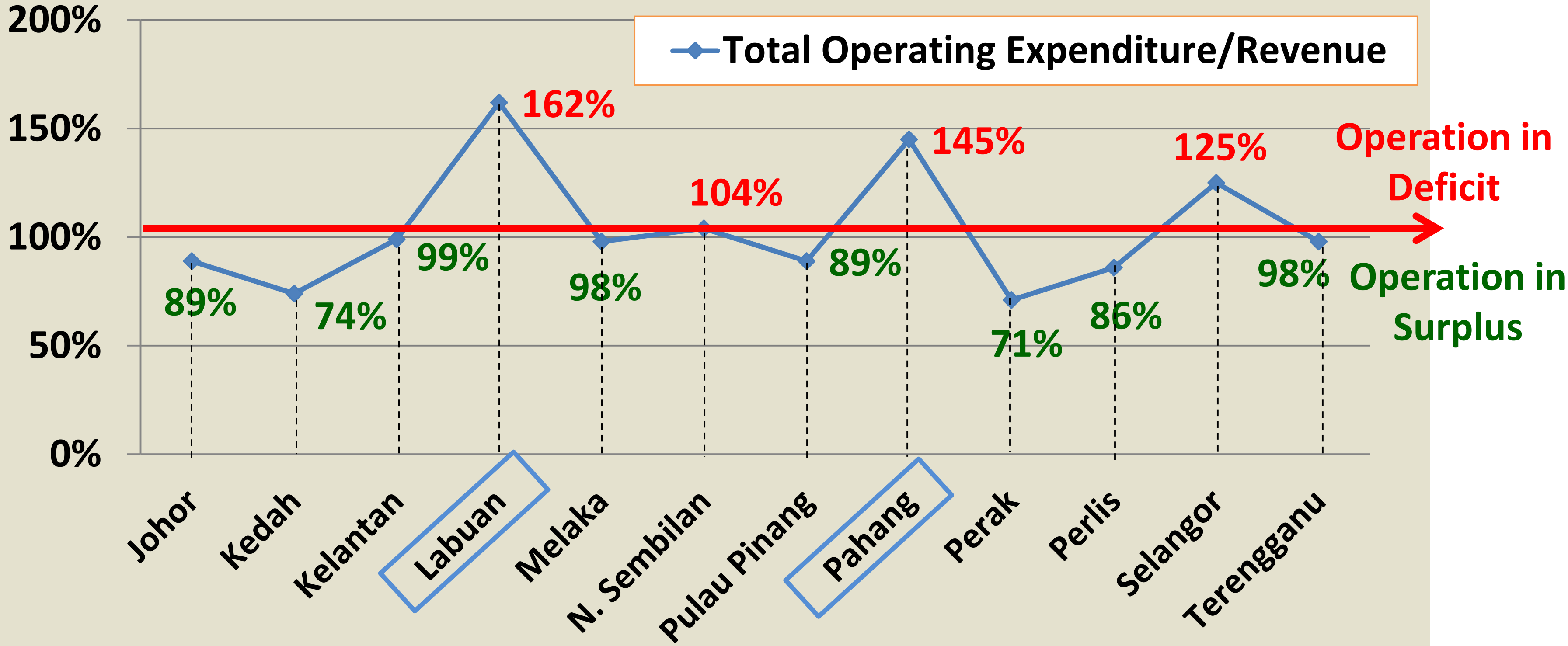
Costs

Avg Water Tariff

RM1.26/m³

Quick Facts

Revenue Vs Operating Expenditure - 2013



- 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

Key Performance Indicators

KPI

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

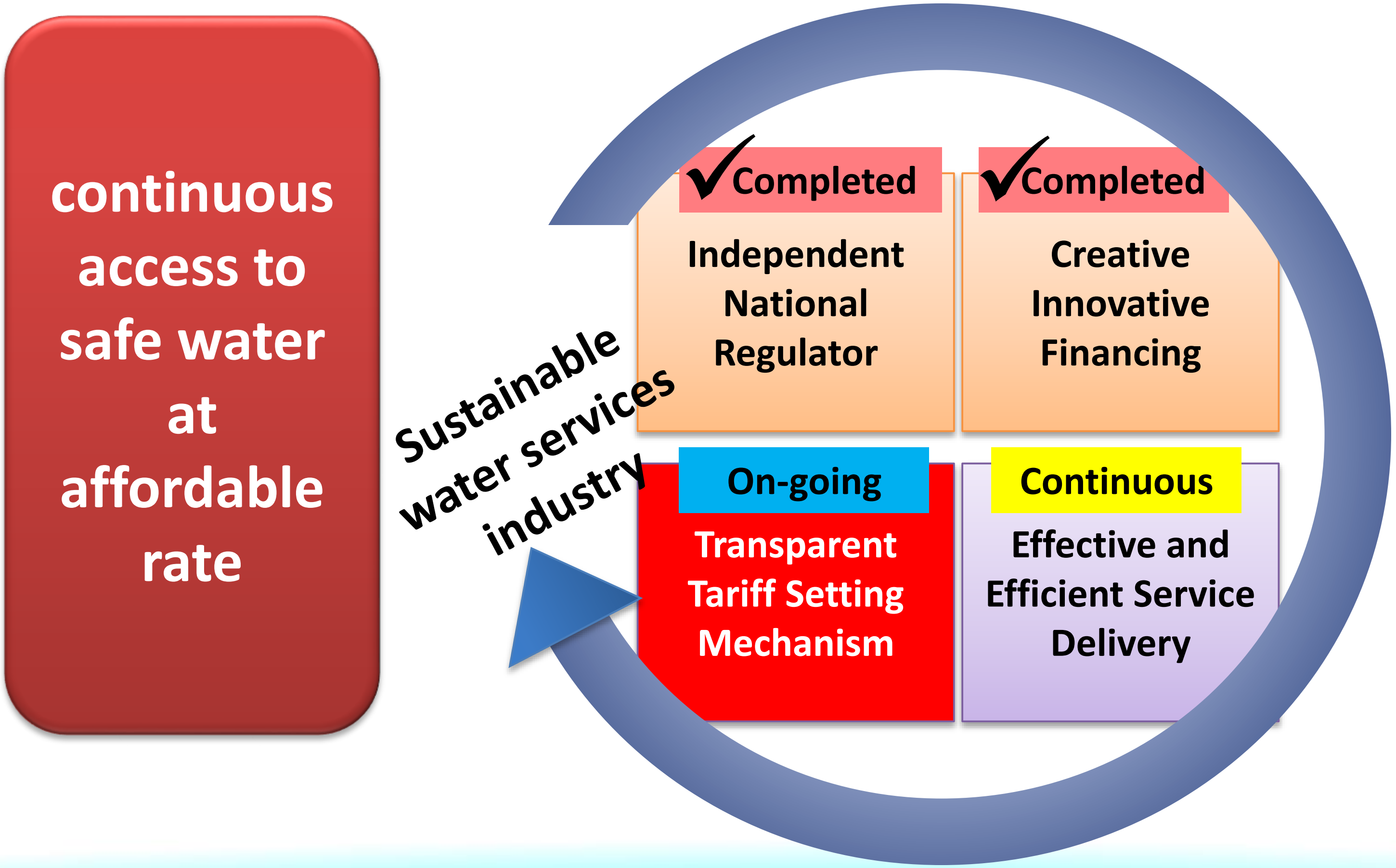
- ✓ Environmental Protection – sludge facilities
- ✓ Energy efficiency
- ✓ Water Reuse
- ✓ Water Resource Protection & Availability

NRW Level 2005 (Pre WSIA) – 013 (Post WSIA)

State	2005	2013)	Reduction 2005 - 2013
Johor*	35.50	26.40	9.1
Kedah	43.80	50.90	(7.1)
Kelantan*	40.00	53.10	(13.1)
Melaka*	28.80	22.10	6.7
N. Sembilan*	53.00	36.30	16.7
Pahang	49.70	52.70	(3.0)
Perak	30.60	30.40	0.2
Perlis	36.30	62.40	(26.1)
Pulau Pinang	19.40	18.20	1.2
Selangor	38.40	34.50	3.9
Terengganu	34.70	33.80	0.9
Sabah	57.20	53.20	3.8
Sarawak	24.70	31.30	(6.6)
Labuan	24.00	25.90	(1.9)
MALAYSIA	**37.70**	**36.60**	**1.1**

Progress Achieved

Developing A Sustainable Water Services Industry



Tariff Before WSIA

Low Tariff

Financial Burden
to Federal Government/
State Government

Low Financial
Investment

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

revenue insufficient to fund operations and maintenance resulting in below par operational efficiency and services

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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

...... 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

Tariff Setting Under WSIA

……. *tariff review request and revision process*

- Uniform Tariff revision process allows less room to politicize

- 3 major stages
  - ✓ Initiation by operator
  - ✓ Recommend-ation by SPAN
  - ✓ Approval by Minister

Uniform tariff revision process

Stage 1	Stage 2	Stage 3	Stage 4
Operator	**SPAN**	**Minister**	**Operator**
Tariff Request	▪Assessment & Recommendation ▪Tariff Consultation with all stakeholders and citizen participation	▪Approval by YB Minister/ Cabinet ▪Gazette of water rates	▪Consumer awareness program ▪New tariff in effect

Tariff Setting Under WSIA

…… tariff structure is based on

Domestic

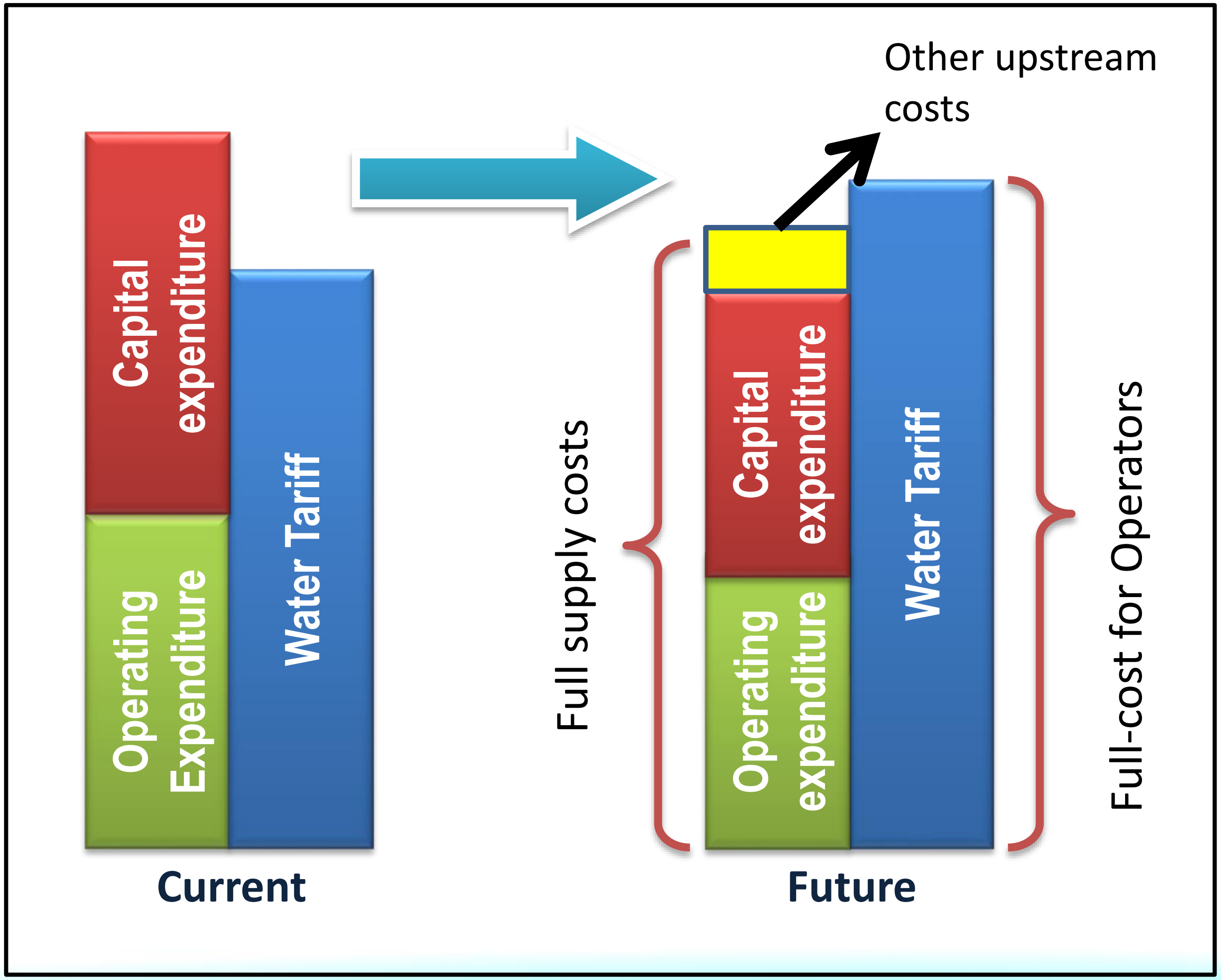
- Affordability
- Punitive rate to prevent excessive consumption and encourage water conservation

Commercial/ Industrial

- Commercial/ industry profile of the respective states
- Encourage commercial/ industrial users to adopt water efficiency technology

Tariff Setting Under WSIA

…….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

Moving Forward - Towards Better Water Services

Effective regulations and increase investment to improve services

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Improve level of service

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Better consumers' acceptance

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Increase in willingness to pay

CHALLENGES

1. Prolong negotiation for State to migrate - issue of valuation affordability and surrender of assets.
2. Approval for Business Plan - Opex and Capex, profit margin etc.
3. State Water Company setup. Chaired by State Chief Minister/Politician.
4. Political intervention on tariff increase.

THANK YOU