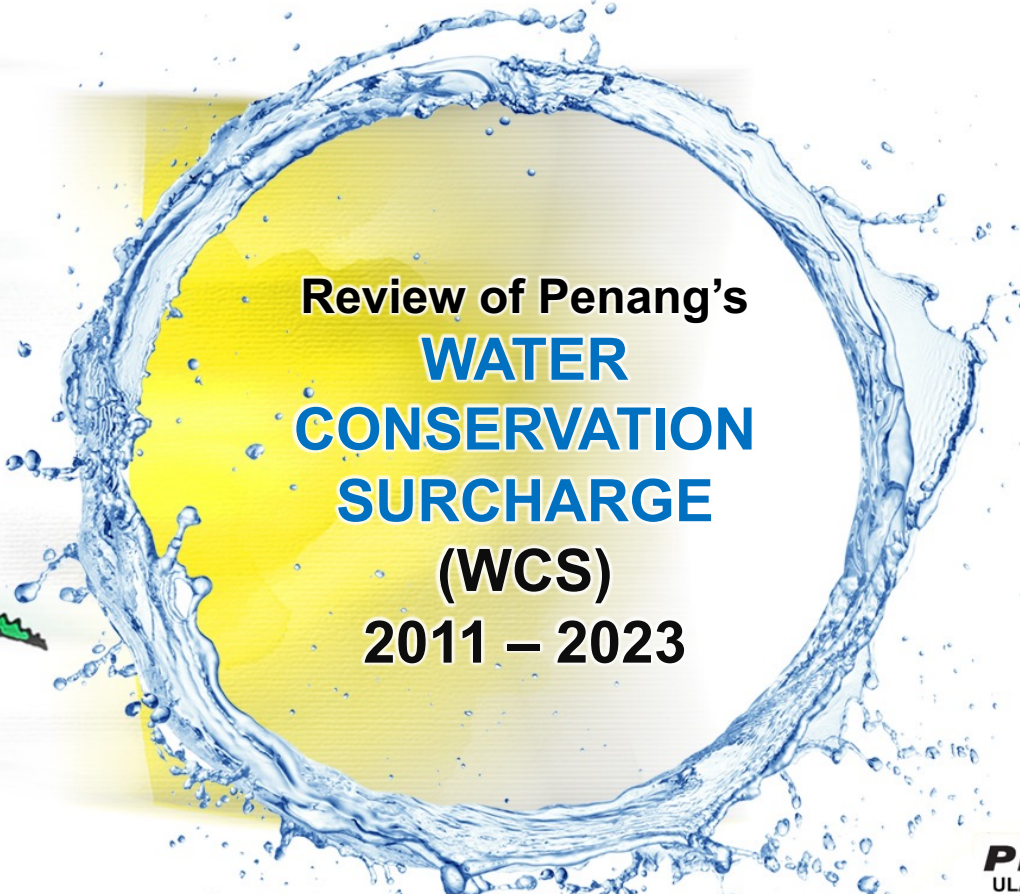


24.10.2024

**BIWVEC 2024 (SARAWAK) PRESENTATION BY
DATO' IR. PATHMANATHAN K., CEO of PBAPP & PBAHB**



**Review of Penang's
WATER
CONSERVATION
SURCHARGE
(WCS)
2011 – 2023**

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2024



1. Introduction to PBAPP

1. **Malaysian water supply operator** with a licence to supply water in Penang
2. Penang State Government-linked company (**State GLC**)
3. **Corporatised in 1999** (replaced Pihak Berkuasa Air)
4. **Public listed in 2002** (through PBA Holdings Bhd)
5. **Essential public service provider** (689,786 water consumers in 2023)

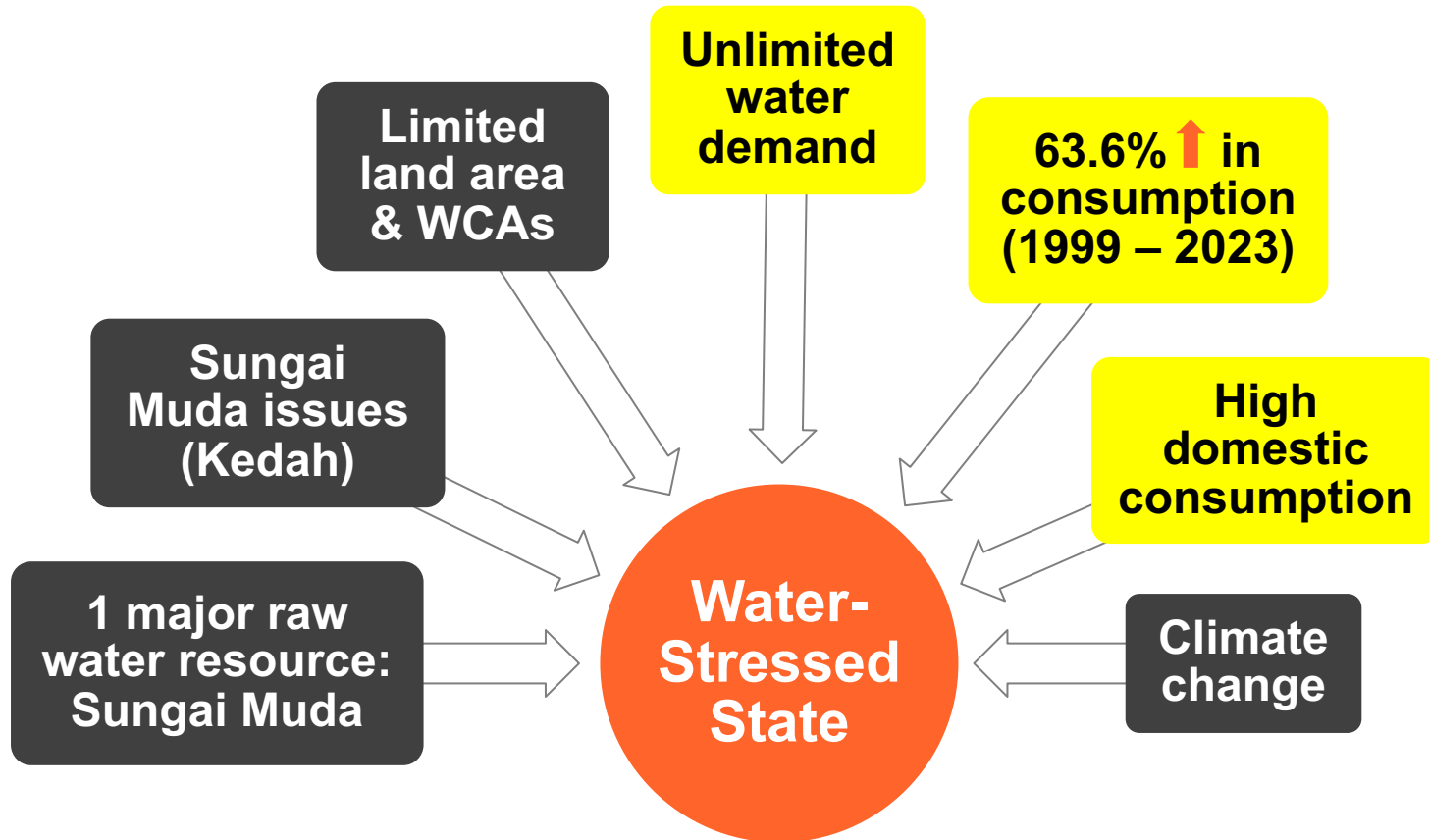


2024

2. PBAPP Report Card 2023

Water Supply KPIs	PBAPP	*National Average 2022
1. Population served		
• Urban	100.0%	97.1%
• Rural	99.8%	97.0%
2. Treated Water Production	1,198 MLD	1,295 MLD
3. Billed Water Consumption	877 MLD	855 MLD
4. Non-revenue Water (NRW)	26.8%	34.4%
5. Treated Water Reserve Margin	26.4%	15.7%
6. Treated Water Quality	QAP, Ministry of Health Malaysia	n.a.

3. Key Water Supply Challenges in Penang



2024

4. PBAPP Responses to Water Supply Challenges

A. SUPPLY management

1. Holistic “in-house” operations

- Abstraction
- Storage
- Treatment
- Distribution

2. WCP 2030 projects (RM1.184B)

- 8 additional infrastructure projects in 6 years
- Increase maximum water treatment capacity by 602 MLD

3. Alternative water resources:

- Desalination
- Wastewater recycling

B. DEMAND management

1. “Raise the value of water” to promote domestic conservation

- Rate reviews
- **WCS (2011 – 2023)**

2. Public education & awareness

- Regular news & updates
- Transparency in communications
- Mass media, social media & web

3. Water saving devices (WSDs)

All new development projects in Penang since 2018

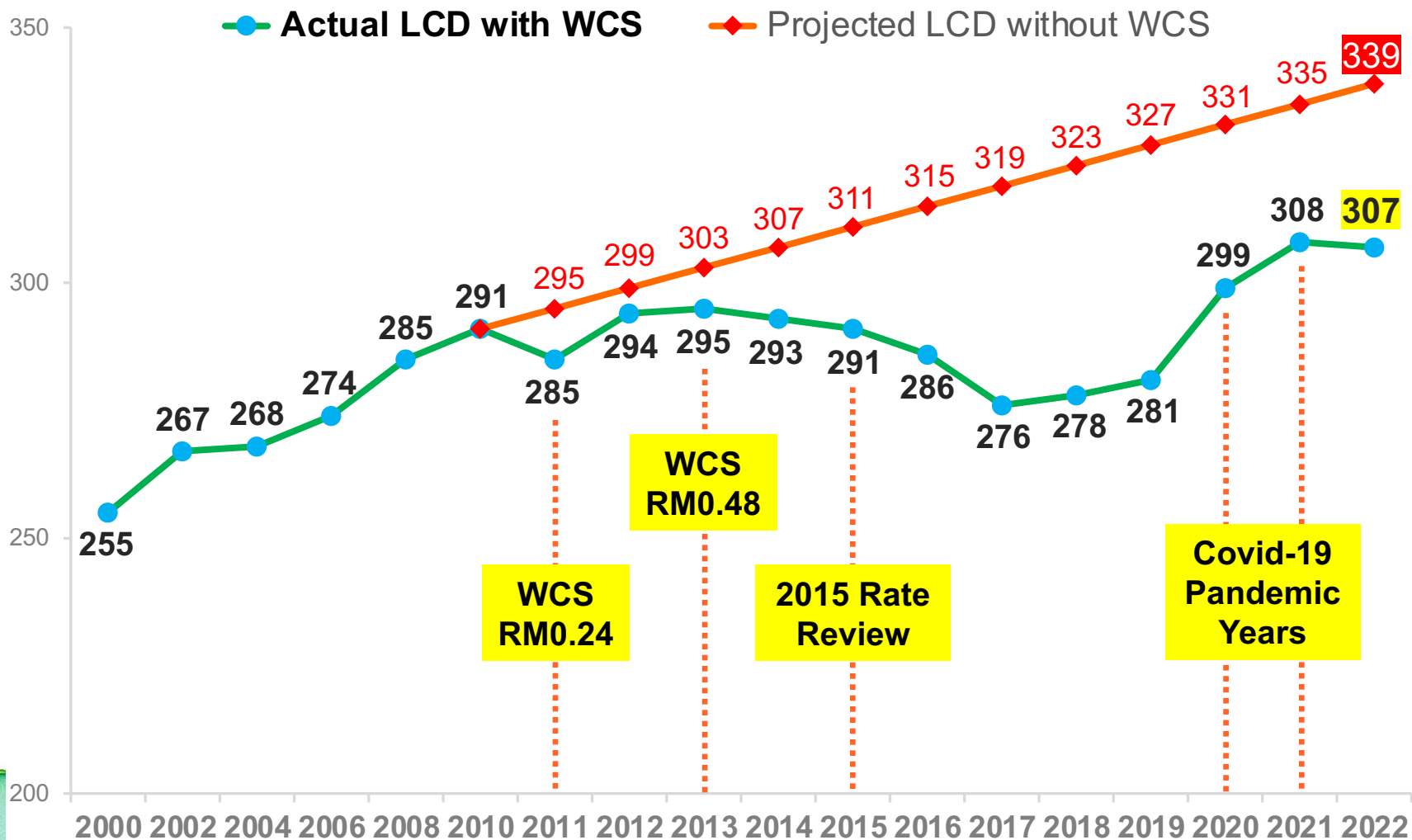
5. What was the WCS?

1. **A component of PBAPP's water demand management initiative** to convince Penang domestic consumers to use less water at home.
2. **Only for DOMESTIC consumption above 35m³ (35,000L) per month.** Non-domestic consumers paying more than “full cost recovery” rates.
3. 35m³ threshold = **4 persons per household x 280 LCD x 31 days.**
4. **WCS 1 (2011 - 2013): RM0.24 per m³** for every m³ above 35m³ per month.
5. **WCS 2 (2013 - 2023): RM0.48 per m³** for every m³ above 35m³ per month.
6. % of domestic consumers who paid WCS: **28% (2011) to 23% (2023).**

6. 2010 Rationales for the WCS

1. **Penang is a water-stressed state.**
2. **Highest per capita domestic consumption in Malaysia: 286 LCD (2009).**
 - National average: 202 LCD (2009)
 - Penang projected: 315 LCD by 2016 without WCS intervention
3. **Lowest domestic tariffs in Malaysia** (for the 1st 35m³ per month).
4. **High domestic water subsidy** was affecting PBAPP's CAPEX for projects.
5. **WCS concept based on "water saving"** vs. rate reviews based on consumption.
6. About **70% of domestic water consumers would not be penalised.**

7. WCS Result Data



8. WCS Analysis

1. Did it work?

Yes, to a certain extent, as reflected in the resulting data.

2. Why did domestic consumption continue to increase in 2012 - 2013 after WCS RM0.24?

Likely that **RM0.24 per m³ was not enough** to elicit a positive response, hence the 2013 review to RM0.48 per m³.

3. Were domestic rates increased in the 2015 Penang water rate review?

- **RM0.01 per m³ for the 1st 35m²** per month.
- **RM0.04 – RM0.30 per m³ above 35m²** per month.

4. Why did consumption increase significantly in 2020 and 2021?

Covid-19 pandemic MCOs in Malaysia.

5. Why was domestic consumption still recorded as 307 LCD in 2022?

Likely that most Penangites had become used to **consuming more water at home to maintain personal hygiene.**

9. Why was the WCS Removed in 2024?

1. **SPAN regulations to simplify domestic water rates for all states in Peninsular Malaysia to only 3 bands:**
 - 0 – 20m³ per month
 - 21 – 35m³ per month
 - More than 35m³ per month.
2. **New regulated domestic water rates in Penang from 1.2.2024.**
3. **WCS incorporated into 2024 rates** for consumption above 35m³ per month.



THANK YOU

2024

