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Media Release

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PENANG CANNOT CONTINUE TO RELY ON ONLY ONE CRUCIAL RAW WATER RESOURCE

- **Hybrid future water solution: Treated water from Perak, strategic desalination projects and a stand-by off-river storage scheme.**

PENANG, Wednesday, 7.10.2026: PBAPP held a networking session with their top Non-Domestic customers recently to strengthen direct communication between PBAPP and its major consumers. During the session, Chief Executive Officer Dato' Ir. Pathmanathan K. presented PBAPP's plans for Penang's future water supply.

PBAPP is working to implement a "2030s Penang Hybrid Water Solution" to reinforce water supply services in the future. This solution should reduce the state's "over-dependency" on Sungai Muda as a crucial raw water resource.

This hybrid solution comprises the following 3 key components:

		Million litres per day (MLD)	Main benefits
1.	Perak-Penang Water Project	300 - 500	• Tapping a 2nd major water resource for Penang. • Water supply sufficiency to support future growth in Seberang Perai Selatan (SPS) and Seberang Perai Tengah (SPT). • Reduced risks of future Sungai Muda Incidents affecting people and industries in SPS and SPT.
2.	Desalination projects at strategic areas	200 - 300	• Securing a 3rd "alternative" water resource for Penang. • Making Penang's water supply more "weather-resistant" in this age of climate change by tapping seawater.
3.	Off-River Storage Scheme (ORSS) at Sungai Muda	2,000	• A massive 24-36 hour "spare tank" which may be drawn down in cases of future Sungai Muda Incidents. • Making Penang's water supply more "accident-resistant".

Rationales

Since 1973, Penang has depended on Sungai Muda (which flows through Seberang Perai Utara or SPU) as its major raw water resource to support socioeconomic development. Penang's population was about 0.8 million people in 1973. Our population has more than doubled to 1.81 million people in 2025.

Over the recent 4 years, Penang's contribution to the national GDP increased by 16.2%, from RM112.1 billion in 2022 to RM130.3 billion in 2025. This accelerated GDP growth was driven primarily by the services and manufacturing sectors.

Multinational and local investors are continuing to invest billions of ringgit in Penang. Projects in the pipeline include Andaman Island, Batu Kawan Industrial Park 3 (BKIP3), PERDA's 5,000 Homes Project in SPU, the PDC Linear Park and Silicon Island A, as well as factory-related developments by Intel, Osram, Silicon Precision and Western Digital.

All these projects must be supported by good water supply on a 24/7/365 basis.

Accordingly, projections indicate that Penang's water consumption will increase by 34.3%, from 865 million litres per day (MLD) in 2025 to at least 1,162 MLD by 2032.

In planning a comprehensive water solution for the 2030s, PBAPP must also take the following key factors into consideration:

- **Land Area:** Penang is a small state. All available secondary raw freshwater resources (the Expanded Mengkuang Dam, Sungai Kerian and Sungai Perai) will be optimised by 2030, in accordance to the Water Contingency Plan 2030 (WCP 2030).
- **Island State:** Penang is surrounded by sea. In theory, we have unlimited access to seawater that may be desalinated to produce treated water.
- **Climate Change:** In the past 5 years, climate change has affected rainfall in the water catchment areas of the Air Itam Dam and Teluk Bahang Dam, to the extent that PBAPP has had to implement its Double Dam Defence on Penang Island (D3PI) programme all year in 2025 and 2026.
- **Over-dependency:** In 2025, more than 80% of the treated water that PBAPP supplied in Penang was produced at the Sungai Dua Water Treatment Plant (WTP) in SPU. The Sungai Dua WTP's primary raw water resource is Sungai Muda.

- **Sungai Muda Incidents:** In 2022 and 2023, three Sungai Muda Incidents (which originated in Kedah) caused water supply interruptions that affected 465,000 - 660,000 water consumers in Penang. PBAPP had to implement countermeasures to prevent another 3 incidents in 2024 and 2025 from affecting water supply in Penang.
- **More Padi Planting Seasons:** Kedah has migrated to the “5 Seasons, 2 Years” padi planting calendar to boost national rice production. There are 6 irrigation areas that draw water from Sungai Muda, upstream of PBAPP’s Lahar Tiang Intake in SPU.

In first 51 days of 2026, the capacity of Kedah’s 100,000 million litre (ML) Muda Dam dropped from 84.6% to the 20.0% critical level. This was due to hot and dry weather, exacerbated by aggressive irrigation drawdowns. The Muda Dam was built to release water into Sungai Muda during prolonged dry seasons. As at 4.10.2026, its capacity was reported to be 23.7%.

Potential liability into a strong asset

Sungai Muda will continue to serve as our major raw water resource in the future. We cannot supply sufficient water in Penang without it.

At a macro level, the goal of the 2030s Penang Hybrid Water Solution (2030+ PHWS) is to turn water supply from a potential liability into a strong asset for Penang. The targeted completion of the WCP 2030 by 2030/31 is the first step towards this goal. The 2030+ PHWS is the next step.

Please note that both steps require firm commitments, in terms of time and money. As such, we seek the kind understanding, patience and support from the people and businesses in Penang.

Thank You.

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