Performance Report
for 2016
VISION: To be the leading water operator in the region
MISSION: To deliver the best possible service experience to our customers
Pengurusan Air Selangor Sdn Bhd or Air Selangor, a company wholly owned by the Selangor State Government, was incorporated on 26 February 2014 under the Malaysian Companies Act 1965 to provide holistic water supply services in the state of Selangor and the Federal Territories of Kuala Lumpur and Putrajaya.

Air Selangor took over the water supply services and distribution systems in the state of Selangor and Federal Territories of Kuala Lumpur and Putrajaya from the water concession companies, namely Syarikat Bekalan Air Selangor Sdn Bhd (SYABAS), PNSB Water Sdn Bhd (PNSB Water), Konsortium ABASS Sdn Bhd (ABASS) and Konsortium Air Selangor Sdn Bhd. Discussion is still in progress to take over the services from Syarikat Pengeluar Air Sungai Selangor Sdn Bhd (SPLASH).

Air Selangor strives to provide the highest attainable service standards by further improving the water treatment systems, distribution systems, reducing non-revenue water (NRW) and providing value for money water supply as well as water services that meet customer satisfaction and expectations.

The Air Selangor Group operates under the regulatory framework of the Water Services Industry Act, 2006 (WSIA) and Selangor Water Management Authority (LUAS) Enactment, 1999 respectively under the regulation of the National Water Services Commission (SPAN) and Selangor Water Management Authority (LUAS).
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Am pleased to present Air Selangor’s 2nd Performance Report for the year 2016, which accentuates the Group’s dedication and commitment to providing water services in a responsible and sustainable manner.

This report aims to illustrate the breadth and scope of our water services, provided by our subsidiary companies, namely Syarikat Bekalan Air Selangor Sdn Bhd, PNSB Water Sdn Bhd (previously Puncak Niaga Sdn Bhd), Konsortium Abass Sdn Bhd and Konsortium Air Selangor Sdn Bhd; as well as depicts our continued commitment to balance the environmental and social interests while managing our services to customers efficiently and effectively.

As the leading water service provider in the country, we continue to sustain our leadership in the water industry. Our sustainable approach gives us the leading edge through innovation, efficiency and responsiveness.

Our activities continue to be driven by our ongoing commitment to provide holistically sustainable services to our customers. In areas where we encountered challenges in the past, such as Non-Revenue Water and water theft, we saw signs of improvement, although we know there is more work to be done. We are committed to building on the progress achieved.

As part of the initiatives to reduce Non-Revenue Water (NRW), we re-deployed 227 staff to undertake the tasks of detecting pipe leaks. As at end of 2016, a total of 79,426 pipe leaks were detected and repaired.

Water theft cases registered drastic reduction when we launched a new water supply application policy with flexible terms and conditions. Applying for water supply has become simpler and faster.

In 2016, RM262.8million was awarded for capital works such as water treatment plant upgrades, Non-Revenue Water reduction programmes, development and upgrading systems as well as asset management and replacements. This includes RM125 million on pipe replacement programmes to replace 144.5 kilometres of aged pipes in 23 out of the 84 hotspots targeted between 2016 and 2019.

I trust you will find this report meaningful as well as informative. Thank you for your interest in our journey.

Suhaimi Kamaralzaman
Chief Executive Officer
GOVERNANCE

At Air Selangor, our Core Values define our culture and the way we conduct our business.

We have a sound governance framework in place to streamline the organisation's structures, work processes and management systems into the way we conduct our business.

As our company progresses, our “Core Values” define our culture and the way we conduct our business. As a team, we act with honesty, integrity and professionalism in providing highest standard of services to our customers.

Recognizing these Core Values, we provide avenue for employees and members of the public to disclose concerns regarding the company through our “Whistleblowing Policy” that provides a safe and acceptable way for concerns to be addressed appropriately in an independent and unbiased manner.

The company has also adopted a “No Gift Policy”, which prohibits employees from directly or indirectly receiving gifts from or providing gifts to customers, vendors and external parties. The policy is aimed at avoiding situations, which may influence employee's judgment in decision-making process or put the employee in a position of conflict or obligation.

The company has implemented “Enterprise Risk Management” system, which is a systematic process for identifying, evaluating and addressing the impact and possibility of occurrence of risks in accordance to good governance practice. The key risks areas presently being managed, includes source of water supply, water supply operations, billings and collection, emergency response plan and information technology.

The company implemented the “Code of Ethics for Business Associates”, including third party vendors and business partners. The Code of Ethics conveys the company's principles and expectations whenever business associates conduct business dealings with the Air Selangor Group. In enforcing this code of ethics, vendors, who wish to participate in tenders are required to sign a 'Declaration of Non-Collusion' with other vendors as well as the company's employees.
Transformation Management Office

Established in April 2016

TMO Objectives

1. To manage Air Selangor Group’s on-going and continuous transformation initiatives;
2. To ensure physical readiness once Air Selangor’s WSIA license becomes effective;
3. Facilitate greater coordination of Air Selangor’s group operations through a comprehensive transformation programme;
4. Promote a higher level of co-operation among all departments; and
5. Create a working environment that is effective and efficient in order to provide optimal services to both internal and external clients.

Task Force Teams

Corporate Services
Operation and Maintenance
Asset and Procurement
Human Resources
Customer and Billing Services

Initiatives

242* Issues/Opportunities Identified
311* Initiatives Formulated
161 Remaining Initiatives are Work-In-Progress
150 Initiatives Completed * 31 December 2016

New initiatives include:

- Standard Templates for Conditions of Contracts & Letters of Awards
- Streamlining Social Media
- Revision of SOPs
- Consumer Client Charter
- Dedicated River Surveillance & Sampling Teams
- CRM & Billing System
- Consumer Contact Update
- Enterprise Resource Planning System
- Change of Toll-Free Number
- New Procurement Guidelines
- Faster Deposit Refund
- Code of Ethics Policy
- Whistleblowing Policy
- No Gift Policy
- Conflict of Interest Policy

The Transformation Management Office (TMO) was established in April 2016 with a view to manage Air Selangor Group’s on-going and continuous transformation initiatives as well as ensure physical readiness when Air Selangor is appointed as a licensee under the Water Services Industry Act.

The initiatives implemented were also aimed at facilitating the coordination of Air Selangor Group’s operations through a comprehensive transformation programme to promote a higher level of co-operation amongst all departments, create an efficient and effective working environment as well as implement continuous improvements.

The Task Force members consist of:

<table>
<thead>
<tr>
<th>Task Force</th>
<th>Department/Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer &amp; Billing Services</td>
<td>Customer Relationship Services</td>
</tr>
<tr>
<td></td>
<td>Customer Billing Services</td>
</tr>
<tr>
<td>Corporate Services</td>
<td>Finance, Strategy &amp; Business Planning</td>
</tr>
<tr>
<td></td>
<td>Legal &amp; Company Secretarial</td>
</tr>
<tr>
<td></td>
<td>Information Technology</td>
</tr>
<tr>
<td></td>
<td>Corporate Communications</td>
</tr>
<tr>
<td></td>
<td>Administration</td>
</tr>
<tr>
<td>Asset &amp; Procurement</td>
<td>Planning &amp; Capital Works</td>
</tr>
<tr>
<td></td>
<td>Procurement</td>
</tr>
<tr>
<td>Operations &amp; Maintenance</td>
<td>Production</td>
</tr>
<tr>
<td></td>
<td>Distribution</td>
</tr>
<tr>
<td></td>
<td>Operational Services</td>
</tr>
<tr>
<td></td>
<td>Water Quality &amp; Laboratory Services</td>
</tr>
<tr>
<td>Human Resources</td>
<td>Human Resources</td>
</tr>
</tbody>
</table>

As at 31 December 2016, from a total of 311 initiatives, 150 (48%) initiatives were successfully completed and a balance of 161 (52%) initiatives are work-in-progress.
Investment: Cost of Treated Water

Average domestic water bill before 20 m$^3$ of free water in Selangor is **RM25.06** per month.

For every **RM1.00** of revenue earned, the concession company (water treatment plant operator) charges **RM1.18** to SYABAS.

Average cost of treating & distributing water supply is **RM2.46** per m$^3$.

Average tariff charged to customers is **RM1.50** per m$^3$. 
A total of RM262.8 million was awarded for capital works projects in 2016 such as water treatment plant upgrading works, Non-Revenue Water reduction programmes, development and upgrading of water distribution systems, as well as asset management and replacement.
Non-Revenue Water

Non-Revenue Water (NRW) is treated water produced that is “lost” before it reaches the customer. Losses can either be commercial loss due to inaccurate meter readings, water thefts, unbilled water usage, unmetered public water use or physical losses caused by leakages or burst pipes.

In 2016, the NRW registered a marginal increase of 0.2% as compared to 2015 due to leakages along existing water distribution pipes in Kuala Lumpur, Klang, Petaling, Hulu Langat and Kuala Langat, which were not covered in the District Metering Zones (DMZs).

The leakages occurred after the commissioning of the RM328 million Matang Pagar Reservoir (under Selangor State Government’s Mitigation 2 project) which produced additional water supply of 227 million liters per day (MLD) to Petaling, Klang, Kuala Lumpur, Hulu Langat and Kuala Langat from the Sungai Selangor Phase 1 and 3 water treatment plants.

The high-water pressure from the additional water supply to several areas within the 5 Regions, which which are not within DMZs, had resulted in leakages along the existing water distribution pipes. DMZs are being implemented in identified areas to control and manage the water pressures to prevent leakages in the existing distribution pipes.

A holistic programme is being implemented to address NRW in totality as follows:

1. Dedicated leak detection team;
2. Comprehensive leakage repair works;
3. Replacement of aged and faulty water meters;
4. Replacement of aged and dilapidated pipes;
5. Close monitoring of District Metering Zones (DMZs) and;
6. Management of water pressure

<table>
<thead>
<tr>
<th>Year</th>
<th>NRW (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>33.1</td>
</tr>
<tr>
<td>2013</td>
<td>34.5</td>
</tr>
<tr>
<td>2014</td>
<td>33.6</td>
</tr>
<tr>
<td>2015</td>
<td>32.0</td>
</tr>
<tr>
<td>2016</td>
<td>32.2</td>
</tr>
</tbody>
</table>

NRW (%)
Raw water undergoes extensive treatment processes at our water treatment plants (WTPs) before it is supplied as treated water which meets the standards set out in the Ministry of Health's "Quality Assurance Programme".

The quality of water is tested by three in-house laboratories located at Sungai Selangor Phase 2 WTP (SSP2), Sungai Labu WTP and Sungai Semenyih WTP, which are accredited under the Laboratory Accreditation Scheme Malaysia by the Department of Standard Malaysia. The laboratories provide independent water sample analysis for the Production and Distribution Departments.

This year, 92,666 tests were conducted on more than 34,000 samples taken from 1,150 sampling stations.

We still managed to maintain the overall compliance at 99.1% despite the challenges in the deterioration of river water quality, especially water from the Sungai Selangor and its tributaries.

As a testimony of our commitment to water quality assurance, in 2016, our laboratories at the Sg Selangor Phase 2, Sg. Labu and Sg. Semenyih water treatment plants were awarded with The Malaysian Institute of Chemistry's "Laboratory Excellence Award" for testing of raw water, river water, filtered water, treated water, effluent and wastewater.
In 2016, 65% of our customers communicated with us via telephone, 30% walked-in to our offices while 4% wrote us e-mails.

We received 1,318,700 phone calls and 80,314 e-mails throughout the year. In comparison to 2015, the number of calls and e-mails received in 2016 grew by 8.4% and 19.6% respectively.

However, walk-ins and SMSes received showed a slight decline in 2016 compared to the year before.

Our reach-out to customers was further improved through WhatsApp group messaging and Facebook (FB) postings. Water interruption messages were transmitted to customers via WhatsApp groups.

In 2015, we only had 2,132 followers on FB. By the end of 2016, the number of FB followers grew to 24,780, while the number of WhatsApp groups created rose from 77 to 446.

The number of customers who have downloaded the "mySYABAS" smart phone application for information on water services, has been rising steadily since its introduction in 2014. In 2015, there were 32,332 customers who downloaded this free application. As at 31 December 2016, the number of customers who downloaded this application had grown to 80,974.

The application provides timely information as well as status updates on scheduled and unscheduled water interruptions by locations. Customers can conveniently send requests or lodge complaints as well as check billing status through this application.

<table>
<thead>
<tr>
<th>Channels of Communication</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMS</td>
<td>6,939</td>
<td>5,963</td>
</tr>
<tr>
<td>Facsimile</td>
<td>10,332</td>
<td>7,377</td>
</tr>
<tr>
<td>E-Mail</td>
<td>67,132</td>
<td>80,314</td>
</tr>
<tr>
<td>Letter</td>
<td>56</td>
<td>105</td>
</tr>
<tr>
<td>Telephone Calls</td>
<td>1,216,538</td>
<td>1,318,700</td>
</tr>
<tr>
<td>Counter Service</td>
<td>672,543</td>
<td>604,317</td>
</tr>
</tbody>
</table>
The centralised customer call centre located in headquarters operates 24 hours a day and 7 days a week on 4-work shifts with a pool of 65 staff.

The total number of calls in 2016 registered 8% higher than 2015 due to several unscheduled water supply interruptions during the El Nino phenomena in April 2016 resulted in high demand and usage of water during the hot weather, Semenyih Water Treatment Plant ceased operations in October 2016 and November 2016 due to raw water pollution in the river and TNB maintenance works in December 2016.

As part of the initiatives to further enhance our communications with customers whenever there are unscheduled water interruptions, a campaign is being undertaken to request customers to provide mobile telephone numbers to be updated in their water account. This initiative is primarily to facilitate transmission of ‘Short Message Service’ (SMS) to customers on water services related announcements.

In addition, since August 2016, customers can contact the Customer Call Centre via telephone call or SMS via Short Code 15300 on water services related matters.
Complaints

- "No water supply" registered highest complaints (238,837) in 2016 mainly due to the shutdown of water treatment plants caused by raw water pollution that occurred in the year and unscheduled repairs of burst pipes and leaks.

- Scheduled works for maintenance, upgrading or replacement of the water treatment or distribution systems also contributed to the "No Water Supply" complaints. In such cases, customers were notified in advance of the scheduled works to facilitate sufficient storage of water supply.

- Low water pressure complaints (32,926) are usually received after repair, replacement or maintenance works on the water treatment or distribution systems. Areas affected are mainly high-rise buildings, premises located at the end of the distribution systems and on higher ground.

- Faulty meters (31,424) are replaced after inspection at no additional charge to customers. Under normal circumstances, water meters are replaced once every ten years.

- High bill (22,122) complaints usually stem from leaks within the premises' aged pipes or water tanks. Hence, customers are advised to engage a plumber to check and rectify the internal leakages at their own cost.
Pipe bursts and leaks

In 2016, the average number of complaints per day on burst pipes was 13.5 and pipe leaks was 326. Both complaints registered marginally higher than the previous year.

In July 2016, a pipe replacement programme was initiated to replace over 422 kilometres of aged pipes involving 84 areas in Selangor and Kuala Lumpur. The programme is expected to be completed by end of 2019.

The first phase of the pipe replacement programme involving 144.5 kilometres of aged pipes, which started between July 2016 to December 2016 is expected to be completed by end of 2017.

In October 2016, a dedicated team of leak inspectors was formed, as part of the initiative to proactively identify leaks in managing Non-Revenue Water. From October 2016 to December 2016, a total of 6,581 leaks were detected and repaired.
In July 2016, the company embarked on a programme to replace approximately 422 kilometres of aged pipes in 84 areas with frequent pipe bursts.

The cost to replace the pipes was estimated at RM363 million. Most of the Asbestos Cement pipes in the coastal areas were replaced with High Density Polyethylene (HDPE) pipes, whilst other areas were replaced with Ductile Iron pipes.

In the same year, the total length of pipes registered an increase of 1% from 27,800 kilometres to 28,135 kilometres.

The total length of pipes in Selangor is 24,340 kilometres consisting of Mild Steel (49%), Asbestos Cement (22%) and Plasticised Polyvinyl Chlorine (13%) pipes.

The total length of pipes in Kuala Lumpur and Putrajaya is 3,795 kilometres consisting of Mild Steel (49%), Asbestos Cement (43%) and Ductile Iron (6%) pipes.

### Pipe Materials & Length (Kilometres)

<table>
<thead>
<tr>
<th>Material</th>
<th>Length (km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Others</td>
<td>108</td>
</tr>
<tr>
<td>Acrylonitrile Butadiene Styrene</td>
<td>1</td>
</tr>
<tr>
<td>Galvanised Iron</td>
<td>5</td>
</tr>
<tr>
<td>Plasticised Polyvinyl Chlorine</td>
<td>3,712</td>
</tr>
<tr>
<td>High-Density Polyethylene (HDPE)</td>
<td>1,980</td>
</tr>
<tr>
<td>Ductile Iron</td>
<td>2,278</td>
</tr>
<tr>
<td>Cast Iron</td>
<td>52</td>
</tr>
<tr>
<td>Mild Steel</td>
<td>6,291</td>
</tr>
<tr>
<td>Asbestos Cement</td>
<td>13,710</td>
</tr>
</tbody>
</table>

Pipe replacement works at Taman Eng Ann, Klang