LCQ11: Management of water resources

â€‹Following is a question by the Hon Yim Kong and a written reply by the Secretary for Development, Ms Bernadette Linn, in the Legislative Council today (May 14):

Question:

Water charges in Hong Kong have not been adjusted for nearly 30 years since February 1995. The Waterworks Operating Accounts have recorded persistent deficits since 1999, and such deficits have increased substantially from less than $1 billion in the 2013-2014 financial year to about $2.4 billion in the 2022-2023 financial year. Moreover, it has been reported that the water charges in Hong Kong are among the lowest in advanced cities. While the water charges in other advanced countries or cities (such as Japan and Singapore) account for about 1 per cent to 2 per cent of the local household income, Hong Kong's average water charges represent only less than 0.2 per cent of its household income. In this connection, will the Government inform this Council:

(1) whether it has studied the reasons why persistent deficits have been recorded in the operation of waterworks in Hong Kong, apart from the apparently low water charges, and whether the authorities have examined the reasons for persistent deficits from the management and operation perspectives; if it has studied, of the details, and how the authorities will make improvements;

(2) given that according to the paper submitted by the Government to the Panel on Development of this Council on December 13, 2023, the main source of water supply for Hong Kong is Dongjiang water purchased from the Guangdong Province under the "package deal deductible sum" approach, and the annual ceiling water prices from 2024 to 2026 will be over $5 billion, whether the authorities have actively enlisted support from the relevant ministries of the Central Government and proactively discussed with the authorities of the Guangdong Province to explore ways to optimise the existing mode of water supply (especially the water prices); and

(3) whether it will actively consider privatising the Water Supplies Department; if so, of the specific timetable and roadmap; if not, the reasons for that?

Reply:

President,

The Water Supplies Department (WSD) has all along been committing to providing the public with reliable, sufficient and quality fresh water. Over the years, the WSD has been constructing many waterworks facilities to meet the needs of social development and the public on the one hand, while on the

other hand containing fresh water demand growth through various water conservation and water loss management initiatives. The WSD is exploiting new water resources including desalinated seawater, reclaimed water (Note 1) and treated grey water (Note 2) to diversify the water supply portfolio and build resilience in fresh water supply.

Besides, through adopting new technology to enhance operational cost-effectiveness and streamline business processes, the WSD effectively controls the capital cost of water supply.

The Government will review the level of water tariff periodically based on the principles of "user pays" and "service cost recovery", taking into account the social and economic situations, affordability of the consumers, financial performance of waterworks operations and the views of the stakeholders, etc. Water is a daily necessity for people, and the water tariff adjustment will have significant impact on people's livelihood and the operation of various trades and industries. The Government needs to consider the factors very carefully in order to balance the public finance position and the impact on the public.

The reply to the various parts of the question raised by the Hon Yim is as follows:

(1) The number of water accounts has increased from 2.2 million in 1998 to 3.27 million in 2024 (an increase of about 49 per cent). To meet the new service demands, the WSD has increased the number of waterworks facilities substantially between 1998 and 2024, including an increase of 43 per cent in the length of water mains from about 5 900 km to about 8 500 km, a rise of 8 per cent in the number of service reservoirs from 215 to 232, and an increase of 8 per cent in the number of pumping stations from 177 to 191, which results in a continuous increase in the associated operational and maintenance expenses. The Composite Consumer Price Index also increased by 40 per cent over the same period. Besides, water tariff has not been adjusted since 1995 (except for the adjustment of water fees for non-local vessels in 1996). Taking all these factors into account, the Waterworks Operating Accounts (WOA) have continuously recorded a deficit since 1998-99, and the cost recovery rate also dropped to about 75 per cent.

To control the cost of water supply and improve waterworks operating conditions, the WSD has been committing to improving water resources management and making good use of technology to streamline business processes, reduce water loss and save energy consumption. Meanwhile, the WSD has reduced its establishment from about 6 100 in 1998 to about 4 700 in 2024.

In addition, the WSD has implemented water loss management initiatives, including the replacement and rehabilitation of about 3 000 km of aged water mains between 2000 and 2015 and the implementation of Risk-based Improvement Programme of Water Mains and Water Intelligent Network in recent years. These efforts have reduced the leakage rate of government water mains from around 25 per cent in 2000 to around 13.4 per cent at present. The WSD has also

spared no efforts in promoting water conservation to defer the need for building additional waterworks facilities, thereby lowering the operational, maintenance, and depreciation expenses associated with water supply, alleviating the pressure from the rising costs and achieving better cost-effectiveness.

Other measures that have been implemented to enhance the cost-effectiveness of waterworks facilities include controlling private water main leakage, installing smart water meters, and upgrading the WSD's energy management system to save the energy cost.

To control the cost of water supply more effectively in the long run, the WSD is formulating an overall digital transformation roadmap to implement a series of digitalisation projects and measures in phases, including the establishment of the WSD’s Central Operation Management Centre, Internet of Things platform, cloud data centre, digital twin and hydraulic model applications, etc, with a view to improving the operational efficiency and stability of water supply, and reducing energy consumption. By implementing the aforementioned measures and making timely and suitable adjustments to water tariff, the performance of the WOA could be improved in the long run.

(2) The price for the Hong Kong Special Administrative Region Government to purchase Dongjiang (DJ) water includes the costs incurred by the mainland for supplying DJ water to Hong Kong, such as the costs for infrastructure, system operation and maintenance, etc, as well as the cost of measures to protect the quality of DJ water supplied to Hong Kong. The fees do not include the costs of the Mainland on ecological conservation and other aspects including the opportunity costs of the control of development in the protection zones along the basin, and the prohibition of activities such as quarrying, mining and extensive poultry farming within the protection zones, etc. The price of DJ water will be reviewed every three years upon each renewal of the DJ water supply agreement, and adjusted in a reasonable and appropriate manner based on the established mechanism which takes account of a number of objective factors including changes in the exchange rate between Renminbi and Hong Kong dollar, changes in the relevant price indices of Guangdong (GD) and Hong Kong, as well as increase in operation costs. In fact, the increase of annual ceiling water price for the 2024 to 2026 DJ water supply agreement is lower than the changes in the exchange rate and price indices mentioned above.

Since 2021, DJ water supply agreement has adopted the "package deal deductible sum" approach. Hong Kong can import DJ water based on the city's need. If there is a high local yield and the amount of DJ water required is below the pre-set annual supply ceiling, a price deduction, according to the actual amount of water supplied, will be made to the annual ceiling water price. This approach provides greater flexibility in the control of water storage level, preventing wastage of DJ water resources and saving energy cost for water delivery. Also, both the GD and Hong Kong sides agreed that the "package deal deductible sum" approach should be maintained at least up to 2029.

(3) As mentioned above, water is a daily necessity for people. A highly

reliable water supply service is extremely important and has significant impact on people's livelihood and the operation of various trades and industries. While there are examples where the water supply business is privatised, we are also aware that such operation arrangement may not necessarily bring overall benefits to the society. On the contrary, private investors may charge the public a higher water fee for the sake of profit, or be reluctant to invest resources in maintaining and repairing aging water pipes and other water facilities to control costs. The Government currently does not have plans to privatise the WSD.

Note 1: Reclaimed water is a water resource generated by further processing treated effluent from sewage treatment works.

Note 2: Water collected from bathrooms, wash basins, kitchen sinks and laundry machines etc. is known as grey water. Along with harvested rainwater, the grey water can be treated and reused for non-potable purposes such as toilet flushing.