For discussion on
15 November 2019

Legislative Council Panel on Transport

Outlying Island Ferry Services

Purpose

This paper briefs Members on the Government's proposals set out in the 2019 Policy Address regarding the long-term operation model of outlying island ferry services.

Background

2. It is the Government's established policy that public transport services should be run by the private sector in accordance with commercial principles to enhance efficiency and cost-effectiveness. In the past, there was no direct subsidy from the Government for public transport services save for the six "major" outlying island ferry routes ("six major routes")[1]. The Government provides Special Helping Measures ("SHM") to these routes, because there is basically no alternative to the ferry services available as a means of public transport[2], and short of the SHM, the ferry services cannot be maintained without periodic hefty fare increases. The fundamental policy consideration of providing subsidy is that ferry passengers, as in the case of passengers of other public transport modes, should shoulder a fair share of fare burden, while the SHM help alleviate the burden of fare increases on ferry passengers and enhance the financial viability of the ferry services.

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[1] Routes operated by the New World First Ferry Services Limited ("NWFF") :
(1) "Central – Cheung Chau";
(2) "Inter-islands" between Peng Chau, Mui Wo, Chi Ma Wan and Cheung Chau ; and
(3) "Central – Mui Wo" routes.

Routes operated by the Hong Kong & Kowloon Ferry Holdings Limited's three subsidiaries ("HKK"):
(4) "Central – Peng Chau";
(5) "Central – Yung Shue Wan"; and
(6) "Central – Sok Kwu Wan" routes.

[2] Only Mui Wo is also linked by an external road network, but its cross-district land-based public transport services are very limited.

3. The Government has recently completed the review on the long-term operation model of outlying island ferry routes (including the mid-term review of the six major routes) and announced in the 2019 Policy Address to –

(a) continue to provide SHM to the six major routes and extend the measures to eight other routes[3]; and
(b) launch a new Vessel Subsidy Scheme ("VSS") to replace the fleets of 11 ferry routes[4] and introduce greener vessels,

as the long-term operation model of outlying island ferry services. Details of the measures are set out in the ensuing paragraphs.

Long-term Operation Model of Outlying Island Ferry Services

(A) Provision of SHM

4. The SHM were first launched in 2011 with funding approval from the Finance Committee ("FC") of the Legislative Council ("LegCo") on a three-year cycle, tying in with the three-year ferry service licence period. For the current licence period from mid-2017 to mid-2020, a commitment of around $412 million[5], which is around 30% of the total operating cost of the concerned routes, was approved by the FC in 2017 to provide the third round of SHM for the six major routes, also for a period of three years. Details of the SHM and results of the mid-term review of the 2017-2020 licence period are set out at **Annex 1**.

Review of the existing SHM for the six major routes

5. The Government's review of the SHM shows that the measures have been effective in enhancing the financial viability of these ferry services and alleviating the burden of fare increases on passengers. Fares have only been increased by 4% on average since mid-2017. Without SHM, the operators are expected to suffer a severe loss in the current

[3] The eight other routes are "Aberdeen – Cheung Chau", "Aberdeen – Yung Shue Wan via Pak Kok Tsuen", "Aberdeen – Sok Kwu Wan via Mo Tat", "Tuen Mun – Tung Chung – Sha Lo Wan – Tai O", "Discovery Bay – Mui Wo", "Ma Wan – Central", "Ma Wan – Tsuen Wan" and "Discoveray Bay – Central" routes.
[4] These 11 routes are the six outlying island ferry routes mentioned in footnote 1, as well as the "Aberdeen – Cheung Chau", "Aberdeen – Yung Shue Wan via Pak Kok Tsuen", "Aberdeen – Sok Kwu Wan via Mo Tat", "Tuen Mun – Tung Chung – Sha Lo Wan – Tai O" and "Discovery Bay – Mui Wo" routes.
[5] The annual average subsidy for each ferry route is around $23 million.

licence period and would need a fare increase of around 30% to achieve breakeven, resulting in pressure of hefty fare increases faced by passengers.

6. Based on the revenue and cost situation and industry outlook (including the projections of patronage, oil price, wages and other operating costs), we have conducted an assessment on the financial performance of the six major routes in the next five-year licence period in 2021-2026[6]. The assessment results show that without SHM and fare increase, the ferry operators would suffer a significant financial loss of $700 million. To achieve breakeven, substantial fare increases of around 40% would be needed. It is unrealistic to expect operators to run these routes at a prolonged loss; on the other hand, hefty fare increases to cover such cost inflation would not be acceptable to passengers. The Government therefore sees the need for continued provision of the SHM to the six major routes.

Extension of the SHM to the remaining eight other outlying island routes

7. When reviewing whether provision of SHM is the most desirable operation model to maintain service quality and financial viability of ferry services, we also committed to looking into whether and how the SHM should be extended to cover the eight other outlying island ferry routes. We have critically reviewed the nature of these eight routes. Operationally, these routes provide public transport services that are essential to the outlying islands: the route is either supplementary to another major ferry route, or the alternative land transport route is very circuitous. Financially, most of the eight other routes are suffering a significant financial loss ranging from 8.9% to 105.7%. To achieve breakeven, substantial fare increases from 18.6% to 113.8% would be needed.

8. We therefore recommend that the SHM be extended to all these eight routes to ensure financial viability of the ferry service and alleviate the burden of fare increases on passengers, as well as to encourage service enhancement by the ferry operators in the long run.

[6] The “Ferry Services (Amendment) Bill 2018” commenced in November 2018 to lengthen the period for which a licence to operate a ferry service may be granted and extended from three years to five years, while the existing cap of a ten-year aggregate licence period remain unchanged.

SHM amount and arrangement

9. As provision of SHM becomes the long-term operation model of outlying island ferry services, we estimate that the amount of SHM required for the first five-year licence periods of the 14 routes spanning from 2020 to 2026 is more than $1.2 billion. In the long run, the full-year effect of cashflow required for provision of SHM to the 14 outlying island ferry routes is around $260 million[7].

10. The established arrangements in the provision of SHM to the six major routes will be extended to the eight other routes. In particular, we will continue to apply the profit-sharing mechanism that requires the operators to share any windfall profit exceeding the profit margin of an average of 6% with passengers on a 50:50 basis through offering fare concessions. According to the Government's experience in providing SHM and the findings of the consultancy study commissioned by the Government, a profit margin of around 6% is reasonable for ferry services. That said, the projection concerned is neither guaranteed profit nor profitability caps. In addition, we will continue to conduct mid-term reviews to monitor the proper spending of public funds.

11. Details of the long-term provision of SHM to the 14 outlying island ferry routes are at **Annex 2**.

Transitional arrangements for the extended licence period of the six major routes

12. Among the ferry routes, the licence periods of the six major routes will expire in mid-2020 and reach the maximum of ten years allowed under the law[8]. Taking into account the lead time required for the tender exercise, and to facilitate conducting the tender exercise for the six major routes in one go, the Transport Department ("TD") plans to extend the current licences of the six major routes by nine or 12 months for co-termination by end-March 2021[9]. Details of the tender exercise for the

[7] The annual average subsidy for each ferry route is around $18.6 million. Since the licence periods of the routes are staggered, cashflow of the actual subsidy each year will be different.

[8] The licences of the six routes were first granted in mid-2011 for a period of three years. The licences were subsequently extended twice (in 2014 and 2017), each for a period of three years. The licence periods will reach their aggregate periods of ten years by mid-2021. The Ferry Services Ordinance states that the period for which the licence was granted together with all extensions thereof shall not in any case exceed in the aggregate period of ten years.

[9] Except for the "Central – Mui Wo" route, the current licence period of which will expire on 31 March 2020, the current three-year licence periods of the rest of the six major routes will

six major routes and arrangements for the new licence period of the other routes are set out in paragraph 27 below.

13. We foresee the operating environment of the extended licence period will continue to be difficult. It is also projected that without any Government subsidy, the NWFF and HKK will record a loss of around 35% and 31% respectively, which is not financially viable. Therefore we will continue to provide SHM during the extended licence period. The estimated amount of SHM required is around $102 million (see **Annex 3** for details), which is proportionate to that of the 2017-2020 licence period.

14. As the extended licence period is rather brief and of transitional nature, the Government has secured agreement from the two ferry operators to freeze the existing fare level until the end of the extended licence period.

(B) Introduction of the VSS

15. We take note of the public aspiration for improving the quality of vessels in terms of speed, comfort level, facilities and environmental performance. To this end, the Government has introduced a SHM item for the current licence period (2017-2020) enabling the six major routes to be reimbursed with half of the annual depreciation expenses associated with the introduction of new vessels or upgrade of the existing ones.

16. However, due to rising operating costs, the operators of the six major routes have been carrying out upgrading works for their ferry fleet (such as replacement of air-conditioning systems, replacement of passenger seats/seat coverings, refurbishment of washrooms and passenger cabins) and introducing new vessels, but only at a rather slow pace[10]. For the five other routes[11], since they are struggling to stay financially afloat and running at a relatively small scale, it is difficult for them to invest further to renew their fleet or enhance quality of facility. In fact, most of the vessels deployed in the fleet of the six major routes are over 15 years old, while most of the regular vessels serving the five other routes are relatively primitive ones with low speed being over 28 years old.

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expire on 30 June 2020. By extending the licence of the "Central – Mui Wo" route for 12 months and those of the rest of the six major routes by nine months, the licence periods of the six major routes will co-terminate on 31 March 2021.

[10] During the current licence period, one ferry operator purchased two new fast vessels, while another operator plans to purchase a second hand vessel to meet operational needs.

[11] Including the "Aberdeen – Cheung Chau", "Aberdeen – Yung Shue Wan via Pak Kok Tsuen", "Aberdeen – Sok Kwu Wan via Mo Tat", "Tuen Mun – Tung Chung – Sha Lo Wan – Tai O" and "Discovery Bay – Mui Wo" routes.

17. In order to improve fleet quality and promote environmental protection while alleviating the huge pressure of fare increases for passengers[12], we recommend introducing a new VSS to replace the fleets of 11 ferry routes and introduce greener vessels with newer facilities in two phases starting from 2021, involving some 47 new vessels to replace the 52 vessels in the existing fleet[13]. The SHM item on reimbursing the annual depreciation expenses associated with the introduction of new vessels or upgrade of the existing ones for relevant routes will be cancelled.

18. The vessel replacement is expected to take place throughout a period of about ten years (i.e. throughout two five-year licence periods, spanning across 2021 - 2031). Specifically, the procurement of vessels for the six major routes will be carried out in two batches. The first batch will cover 22 regular vessels of the six major routes, with at least six new vessels being hybrid vessels for trial[14]. The second batch will cover the remaining 11 vessels of the six major routes, and the whole fleet of 14 vessels of the five other routes. If the trial of first-batch hybrid vessels is found successful, we will arrange to procure hybrid vessels in the second round of the VSS.

19. Under the VSS, the Government proposes to subsidise the cost of purchasing the ferry vessels by reimbursement according to actual expenditures and by installments. The Government will enter into an agreement with each ferry operator and require them to, as the registered owners of the vessels, bear all the operational and legal responsibilities/liabilities in respect of management, repair and insurance of the ferry vessels; and manage properly the ferry vessels bought under Government subsidies. Should the operator cease to provide the ferry

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[12] According to market research, the capital cost of a 500-seat, newer and more environmentally friendly ferry made with lightweight materials is around $100 million. Assuming a depreciation of 15 years, the annual depreciation cost is around $6.7 million. Taking the "Central – Mui Wo" route as an example, if the operator replaces the entire fleet by purchasing seven newer, more environmentally friendly vessels mentioned above, the depreciation cost would be around $47 million per year, adding to around 40% of the annual operating cost.

[13] As the passenger carrying capacity of new vessels are different, there will be adjustments in the number of ferry vessels according to service level and patronage.

[14] Hybrid ferry integrates power from diesel engines with electrical power for propulsion and other operations on board. Electrical storage devices, such as batteries, are built into the system to store extra energy produced by diesel engines. The ferry can be propelled by the diesel engines and/or the battery systems at different times, depending on the design. A consultancy study commissioned by the EPD concluded that electric ferry and hybrid ferry are feasible green ferry technology that can be explored for trial operation at local ferry routes, with hybrid ferries being more suitable for running outlying island ferry services given the higher speed and longer distance.

services within a prescribe timeframe, the agreement will ensure the VSS vessels be transferred to the nominee of the Government (for example, the succeeding operator or the Government) at a nominal price in order to continue the operation of the concerned routes. It is noteworthy that the Government does not intend to alter the established policy that ferry services should be run by the private sector in accordance with prudent commercial principles to enhance efficiency and cost-effectiveness.

Trial of hybrid vessels

20. We will also carry out a 16-month trial of hybrid vessels[15]. The Environmental Protection Department will set up an expert panel to provide professional advice on the design and tender specification of the hybrid vessels, as well as evaluate their performance during the trial operation. Under the current difficult operating environment, if the operating cost of the trial is not reimbursed by the Government, the trial will create extra financial burden to the operators, thereby reducing their incentive to join the trial. As such, we will also subsidise the operating cost of the hybrid vessels during the trial period.

21. Details of the proposed VSS are at **Annex 4.**

Fare arrangements

22. At present, there are both fast ferry[16] and ordinary ferry[17] services for the “Central – Cheung Chau”, “Central – Mui Wo” and “Central – Peng Chau” routes. The fares of fast ferry services are higher than those of ordinary ferry services[18]. Under the VSS, ordinary vessels will be gradually replaced by fast vessels. As a transitional arrangement for the first batch of ferry replacement, special fare arrangement is proposed for the three routes in the 2021-2026 licence period: when the ordinary ferry services are gradually replaced by fast ferry services, the fares of these sailings will be maintained at ordinary ferry levels.

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[15] During the trial period, the ferry operators will arrange their crew to familiarise themselves with the hybrid vessels without carrying passengers, and then arrange the hybrid vessels to run passenger-carrying additional sailings, followed by operating scheduled sailings.

[16] The highest sailing speed of a fast ferry is 25.7 nautical miles per hour on average.

[17] The highest sailing speed of an ordinary services is 14.7 nautical miles per hour on average.

[18] Taking the “Central – Mui Wo” route as an example, the journey time of fast ferry service is around 35 – 40 minutes; and the weekday adult fare is $31.3. The journey time of ordinary ferry service is around 50 – 55 minutes; and the ordinary adult weekday fare is $15.9.

(C) Other Options

23. We have also committed to exploring other options as the long-term operation model of outlying island ferry services (see LC Paper CB(4)108/16-17(05) for details). To encourage and facilitate ferry operators to make longer term planning and investment with a view to improving the financial viability of ferry services and service quality, we amended the Ferry Services Ordinance (Cap. 104) in November 2018 to lengthen the period for which a licence to operate a ferry service may be granted and extended from three years to five years, while the aggregate licence period (including all licence extension periods) remains unchanged.

24. As regards the proposal to construct additional floors at Central Piers Nos. 4, 5 and 6 to provide shop rental income to cross-subsidise the operation of the six major routes, when the proposal was submitted to the Public Works Sub-committee under the FC for consideration in 2013, members raised various concerns over the rental income and operation and management issues, and voted down the proposal of upgrading the construction project to Category A.

25. Taking into account the construction cost involved, uncertainty of rental income, complex contractual relationship among stakeholders (namely the Government, ferry operators, the lease agency as well as shop tenants), and that the fees to be charged by the lease agency would reduce the eventual rental income for the cross-subsidy purpose, we consider this proposal undesirable.

26. Separately, there are views that the Government should procure and own its own ferry vessels and contract out the operation. We see the need to adhere to the established policy that public transport services should be run by the private sector in accordance with commercial principles to enhance efficiency and cost-effectiveness. The proposal would also involve a much larger public spending as compared to the proposed VSS but with lower cost-effectiveness. There is also no guarantee of service improvement. On balance, we consider introducing the new VSS a better option.

(D) Arrangement for the New Licence Period

27. As mentioned in paragraph 12 above, TD will carry out a tender exercise for the operating rights for the new five-year licence period (April 2021 – March 2026) of the six major routes. TD also plans to conduct an

expression of interest exercise[19] (and tender exercise[20] if necessary) for the five other routes, whereas licences of the "Ma Wan – Central", "Ma Wan – Tsuen Wan" and "Discovery Bay – Central" routes will be handled according to existing practice.

28. Generally speaking, ferry operators may submit application for fare increases to the Commissioner for Transport any time during the licence period. TD will consider the application by taking into account, among other things, the financial position of the operator, financial projections, as well as public acceptability. With the provision of SHM to the six major routes since 2011, the ferry operators usually apply for fare increases at the time of licence extension. For the upcoming new five-year licence periods beginning in 2021, we expect that there would be a 5% fare increase for the six major routes. Such rate is comparable to fare increases in the previous licence periods as well as that of other public transport modes.

29. As for the eight other routes, individual operators have applied for fare increases. When processing the applications, TD will take into account the amount of SHM to be provided by the Government in the new licence periods, in order to ensure a reasonable share of fare burden by passengers while ensuring the long-term financial viability of the ferry operations to provide safe and quality services.

Way forward

30. After reporting to Members the details of the SHM and VSS, depending on Members' views, we will seek funding from the LegCo through established procedures.

Transport and Housing Bureau
Transport Department
November 2019

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[19] TD recently received an application from the operator of the "Aberdeen – Cheung Chau" route to return its ferry service licence and terminate the operation of the route on 31 December 2019. TD is now inviting submissions from interested parties to indicate their interest in operating the concerned ferry service.

[20] According to the Ferry Services Ordinance, where two or more persons apply separately for a licence to operate substantially the same ferry service between the same points, the Commissioner for Transport shall make arrangements for such applications to be made by way of public tender.

Annex 1

Details of the SHM and Mid-term Review of the 2017-2020 Licence Period

Details of the SHM

The Government has since 2011 provided SHM to the six major outlying island ferry routes. Subsidies are made through reimbursement of certain expenses associated with the operation of the ferry services. Reimbursement items are pre-agreed between the Government and the operators, and arranged according to actual expenses to ensure that the operators would continue to drive operating efficiency and that public funds are properly used. As a matter of policy, fuel and staff costs are not covered by the SHM.

2. Implementation of the package of SHM for the six major outlying island ferry routes in the current licence period (mid-2017 to mid-2020) is as follows –

	SHM	Total Commitment for the Current three-year Licence Period ($ Million)	Actual Amount Reimbursed in the First Two Operating Years ($ Million)
(a)	Reimbursing pier-related expenses (including pier electricity, water and cleansing charges)	17	10
(b)	Reimbursing vessel-related expenses (including repairs and maintenance cost, insurance cost, vessel survey fee and private mooring charge and vessel related depreciation costs)	267	156
(c)	Reimbursing fare concession-related expenses (including revenue foregone due to provision of child fare	59	44

	concessions, implementation of "Visiting Scheme to Outlying Islands" and revenue foregone due to provision of elderly fare concessions after netting off the amount of pier rental reimbursement and vessel licence fee exemption under the established arrangement)		
(d)	Buffer provision	69	Not Applicable
	Total	**About 412**	**About 210**

Mid-term Review

3. When consulting the LegCo Panel on Transport on the implementation of the SHM starting from 2011, the Government undertook to conduct a mid-term review during the three-year licence period to monitor the proper spending of public funds and consider lowering ferry fares when operating costs are projected to be reduced.

4. In the mid-term review of the current licence period (2017-2020), we examined the financial performance of the last licence period (2014-2017) and first 18 months of the current licence period of the six major routes. NWFF[1] and HKK[2] achieved a profit margin of 7.2% and 15.3% in the last three-year licence period. According to the profit sharing mechanism[3], the two operators should share their windfall profit (i.e. profit exceeding the projected profit margin) with passengers on a 50:50 basis through offering fare concessions[4].

5. During the first 18 months of the current licence period, NWFF's profit margin is 13.9%, whereas HKK recorded a slight profit of 1.5%.

[1] Operator of the "Central – Cheung Chau", "Central – Mui Wo" and "Inter-islands" routes.
[2] Operator of the "Central – Yung Shue Wan", "Central – Sok Kwu Wan" and "Central – Peng Chau" routes.
[3] According to the profit sharing mechanism, the windfall profit of the operators in the first half of the licence period (i.e. the first 18 months) should be shared with passengers through fare concessions in the second half of the licence period (i.e. the subsequent 18 months); while the windfall profit in the second half of the licence period should be shared with passengers during the next licence period.
[4] For the last licence period (2014 – 2017), the six major routes have shared around $22 million of windfall profits with passengers through fare concessions, and will share with passengers the remaining windfall profits of $6.8 million.

As estimated during the extension of the current licence period, the projected profit margin of NWFF and HKK were 6.0% and 6.2% respectively[5]. As per the profit sharing mechanism, NWFF needs to share half of the windfall profit achieved in the first 18 months with passengers in the form of time-limited, one-off fare concessions. HKK does not need to share its profit which has not exceeded the projected level.

6. As mentioned in paragraphs 12 to 14 of the main paper, the ferry operators will extend the licence periods by nine or 12 months until March 2021 to facilitate the Government's plan, and have agreed to freeze the fair levels, albeit facing a difficult operating environment and rising costs. To enable the operators to absorb part of the increasing costs during the extended period and maintain the financial viability of the ferry services[6], we will review the actual operational data of the current licence period (i.e. the entire three-year period) and implement the first round of profit sharing; and conduct a second round review at the end of the extended licence period in March 2021.

Operational Performance

7. In addition, we have examined the complaint figures, passenger survey results and operational returns submitted by the operators in order to assess the operational performance of the six major outlying island ferry route.

8. Our analysis shows that the ferry services are overall satisfactory. In the first and second operating year of the current three-year licence period of the six major outlying island ferry routes (i.e. from mid-2017 to mid-2020), a total of 154 and 80 complaints respectively were received by the TD on the service of the routes, a reduction of 40% - 69% compared with the 257 complaints received in the final operating year of the last licence period (i.e. mid-2016 to mid-2017). According to the monitoring survey conducted by TD in 2018, all six ferry routes were operated according to the official Schedules of Service issued by TD, with appropriate additional sailings to cater for passenger demands[7] according

[5] During extension of the licence for the 2017-2020 licence period in 2016, the Government has come up with the projected profit margin through estimating the various major items of operating costs (including fuel, staff cost, repairs and depreciation) and farebox revenue and non-farebox revenue of the two ferry operators.

[6] We estimate that even with SHM, NWFF and HKK will recorded a loss of 2.2% and 2.7% respectively during the extended licence period. To achieve breakeven, a fare increase of around 3.2% - 3.8% would be needed.

[7] For example, during special occasions such as the Birthday of the Buddha and Easter holiday, the operator of the "Central – Cheung Chau" route would arrange for additional sailings to

to actual needs.

9. Furthermore, according to a passenger opinion survey conducted recently by TD between December 2018 and January 2019, more than 76% of interviewed passengers considered the overall performance of the six major outlying island ferry routes "very satisfactory", "satisfactory" or "fair" (see table below).

Percentage of Passengers who Considered "Very Satisfactory", "Satisfactory" or "Fair"						
	Central – Cheung Chau	**Inter-islands**	**Central – Mui Wo**	**Central – Peng Chau**	**Central – Yung Shue Wan**	**Central – Sok Kwu Wan**
Service Adequacy	96%	92%	92%	89%	93%	62%
Service Reliability	94%	99%	98%	98%	97%	99%
Overall Performance	95%	97%	86%	94%	91%	76%

The TD conducted the passenger opinion survey in the form of face-to-face questionnaire interviews on board and completed 2 192 questionnaires. The overall response rate was 64%.

ensure adequate services to cater for passenger demand.

Annex 2

Details of Provision of SHM to the 14 Outlying Island Ferry Routes

We estimate the SHM expenditure for the 14 outlying island ferry routes in their next five-year licence periods would be 1.2399 billion. Details are as follows –

	SHM	Estimated Expenditure for the Five-year Licence Periods ($ Million)
(a)	Reimbursing pier-related expenses (including pier electricity, water and cleansing charges)	49.6
(b)	Reimbursing vessel-related expenses (including repairs and maintenance cost, insurance cost, vessel survey fee and private mooring charge and vessel related depreciation costs[1])	622.2
(c)	Reimbursing fare concession-related expenses (including revenue foregone due to provision of child fare concessions, implementation of “Visiting Scheme to Outlying Islands” and revenue foregone due to provision of elderly fare concessions after netting off the amount of pier rental reimbursement and vessel licence fee exemption under the established arrangement)	228.9
(d)	Buffer provision	339.2
	Total	**1,239.9**

[1] Only applicable to the “Ma Wan –Central”, “Ma Wan – Tsuen Wan”, “Discovery Bay – Central” routes. Actual reimbursement expenditure will depend on the operators’ plan of fleet upgrade or renewal.

Annex 3

Details of Provision of SHM to the Six Major Routes during the Extended Licence Period

We estimate the SHM expenditure for the six major routes in their next expended licence periods would be 102.08 million. Details are as follows –

		2020-21	2021-22	Total
			($ Thousand)	
(a)	Reimbursing pier-related expenses (including pier electricity, water and cleansing charges)	3,100	1,550	4,649
(b)	Reimbursing vessel-related expenses (including repairs and maintenance cost, insurance cost, vessel survey fee and private mooring charge)	40,419	20,209	60,628
(c)	Reimbursing fare concession-related expenses (including revenue foregone due to provision of child fare concessions, implementation of "Visiting Scheme to Outlying Islands" and revenue foregone due to provision of elderly fare concessions after netting off the amount of pier rental reimbursement and vessel licence fee exemption under the established arrangement)	13,195	6,597	19,792
(d)	Buffer provision	11,343	5,671	17,014
	Total	**68,056**	**34,028**	**102,084**

Note 1: Figures may not add up due to rounding.
Note 2: Apart from cancelling the item on reimbursing the annual depreciation expenses associated with the introduction of new vessels or upgrade of the existing ones (see paragraph 17 of the main paper), the above SHM items are the same as those provided in the current licence period.

Annex 4

Details of the Proposed VSS

A. Comparison of the existing and VSS fleet

Routes	No. of existing vessels (including spare vessels)		No. of VSS vessels (including spare vessels)
	Fast vessels (capacity)	Ordinary vessels/ordinary vessel equivalents[1] (capacity)	Fast vessels (capacity)
Six Major Routes			
1. Central – Cheung Chau	6 (200/400seats)	5 (1 300 - 1 400 seats)	10 (500/1 000 seats)
2. Central – Mui Wo	3 (200/400 seats)	3 (580 seats)	7 (500 seats)
3. Inter-islands	-	1 (350 seats)	2 (400 seats)
4. Central – Peng Chau	4 (200 - 400 seats)	2 (400 seats)	5 (500 seats)
5. Central – Yung Shue Wan	6 (400 seats)	-	6 (500 seats)
6. Central – Sok Kwu Wan	3 (200/400 seats)	-	3 (400 seats)
Total	**33**		**33**

[1] Routes 7-10 are operated by single vessel type, the speed of which are comparable to the ordinary vessels of the six major routes. For route 11, while the operator shows fast ferry and ordinary ferry services on its fare table, the speed of both its "fast ferries" and "ordinary ferries" are comparable to the ordinary vessels of the six major routes.

Routes	No. of existing vessels (including spare vessels)		No. of VSS vessels (including spare vessels)
	Fast vessels (capacity)	**Ordinary vessels/ordinary vessel equivalents[1] (capacity)**	**Fast vessels (capacity)**
Five Other Routes			
7. Aberdeen – Cheung Chau	-	5 (210 - 420 seats)	3 (200 seats)
8. Aberdeen – Yung Shue Wan via Pak Kok Tsuen	-	2 (180 seats)	2 (200 seats)
9. Aberdeen – Sok Kwu Wan via Mo Tat	-	3 (140 seats)	2 (200 seats)
10. Discovery Bay – Mui Wo	-	4 (160 - 300 seats)	2 (200 seats)
11. Tuen Mun – Tung Chung – Sha Lo Wan – Tai O	2 (90 seats)	3 (130- 330 seats)	5 (250 seats)
Total	**19**		**14**

B. Vessel specifications under the proposed VSS

Based on market research, we propose that the operators should purchase vessels built with aluminium or carbon fibre. The vessels would still be fueled by diesel (the prevalent mode of propulsion for vessels), but are lighter and thus use less fuel. Moreover, we propose that the new vessels should use the engines that are in compliance with the International Maritime Organization (IMO) Tier III emission standard which can reduce emission of nitrogen oxides. Details are tabulated below[2] -

Type	Catamaran/Monohull
Carrying Capacity	200-/250-/400-/500-/1000-seater vessels (single–deck/double-deck/triple-deck)
Hull Material	Aluminium/Carbon fibre
Power Source	Among the first batch of 22 vessels procured for the six major routes, at least six should be hybrid vessels (i.e. diesel fuel/battery propulsion) and the remainder will be diesel-fuel engine vessels. If the trial of hybrid vessels in the first batch is successful, the remaining vessels to be procured under the second batch (including the remaining 11 vessels for the six major routes and the 14 vessels for the five other routes) should be hybrid vessels.
Engines	Engines in compliance with the IMO Tier III emission standard (unless technically not viable).
Speed	25 - 30 knots per hour
Compartment	• Air-conditioning system • Toilet facilities including wheelchair accessible facilities • Accessible facilities for passengers with disabilities • Breast-feeding room • Luggage racks • Freight area • Open deck area for vessels with 1 000 passenger seats

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2 The vessel specifications may be adjusted with reference to actual circumstances and operating needs of individual routes.

C. Cost of VSS

If the trial of hybrid vessels is successful, the estimated total cost for the VSS will be $5,788 million (with 20% buffer)[3].

Six major routes

Vessel Type	VSS deployment in 2021-26 licence period		VSS deployment in 2026-31 licence period		Estimated total costs ($ Million)
	Quantity	**Sub-total ($ Million)**	**Quantity**	**Sub-total ($ Million)**	
Diesel-fuel engine vessels					
1 000 seats	3	1,917	0	0	1,917
500 seats	11		0		
400 seats	2		0		
Hybrid vessels (including six in the first batch for trial purpose)					
1 000 seats	0	502	2	1,217	1,719
500 seats	4		8		
400 seats	2		1		
Operating cost for the trial of hybrid vessels	110		0		110
Total	**22**	**2,528**	**11**	**1,217**	**3,745** (without buffer) **4,495** (with 20% buffer)

3 If the trial run of hybrid vessels suggests the timing for general deployment of hybrid vessel is not yet ready, we will purchase six diesel-fuel engine vessels for the six major routes to replace the six hybrid vessels. Under this circumstance, the estimated total cost for the VSS will be $6,897 million (with 20% buffer).

<u>Five other routes</u>

<table>
<tr><th rowspan="2">Vessel Type</th><th colspan="2">VSS deployment in 2025-31 licence period</th></tr>
<tr><th>Quantity</th><th>Estimated total costs
($ Million)</th></tr>
<tr><td colspan="3">Hybrid vessels</td></tr>
<tr><td>250 seats</td><td>5</td><td rowspan="2">1,078</td></tr>
<tr><td>200 seats</td><td>9</td></tr>
<tr><td>Total</td><td>14</td><td>1,078 (without buffer)
1,294 (with 20% buffer)</td></tr>
</table>

Notes:
(1) Estimated costs for design, drawing and delivery have been included.
(2) Figures above may not add up due to rounding.