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Posted 2019/06/04

DETAILS AND PRINCIPLES REGARDING PROPOSED REVISED SERVICE CHARGES

JUNE 2019

GENERAL

This document (Details and Principles) provides additional details to expand upon the *Notice of Revised Service Charges* dated June 2019 (the Notice). Under Section 36 of the *Civil Air Navigation Services Commercialization Act*, S.C. 1996, c. 20 (the ANS Act), NAV CANADA is required to produce a document containing more details in relation to the proposed revised charges set forth in the Notice, including a justification in relation to the charging principles set out in Section 35 of the ANS Act.

Except for the revisions proposed in the Notice, all the existing charges and related terms and conditions, as set out in earlier Announcements pertaining to charges, remain in effect.

This document sets out the following: (1) a general overview of NAV CANADA, (2) traffic outlook, (3) amounts to recover, (4) customer service charge rate analysis, (5) Rate Stabilization Account, (6) a justification of the proposal in relation to the charging principles, and (7) information regarding the Notice and on making representations to NAV CANADA.

Persons interested in making representations in writing to NAV CANADA with regard to the Notice may do so by forwarding their submissions to the address set out in the Notice. Submissions must be received by NAV CANADA no later than August 6, 2019.

1. GENERAL OVERVIEW OF NAV CANADA

NAV CANADA is a non-share capital, private sector corporation which is responsible for the provision of civil air navigation facilities and services for aircraft in Canadian airspace or any other airspace for which Canada is responsible for providing air navigation services.

The system of governance at NAV CANADA is the result of a unique corporate structure intended to make the company a self-sustaining commercial enterprise. The Corporation is governed by a 15-member Board of Directors (the Board) consisting of 10 directors elected by stakeholders representing aviation users, bargaining agents and the federal government, four independent directors and the President & CEO. NAV CANADA also has an Advisory Committee elected by associates, empowered to analyze and make reports and recommendations to the Board on any matter affecting the air navigation system.

The fundamental elements governing the mandate conferred on NAV CANADA by the ANS Act include the exclusive right to provide certain air navigation services, the exclusive ability to set and collect charges for air navigation services provided or made available by NAV CANADA or a person acting under the authority of the Minister of National Defence, and the obligation of the Corporation to provide these services.

When establishing a new charge for air navigation services or revising an existing charge, the Corporation must follow the charging principles set out in the ANS Act. These principles prescribe that, among other things, charges must not be set at a level that, based on reasonable and prudent projections, would generate revenues exceeding the Corporation's current and future financial requirements in relation to the provision of civil air navigation services. Pursuant to the charging principles, the Board approves the amount and timing of changes to customer service charges. The Board also approves the Corporation's annual budget where the amounts to be recovered through customer service charges for the ensuing year are determined. The Corporation plans its operations to result in an annual financial breakeven position after recording adjustments to the Rate Stabilization Account, which is discussed below.

The financial statements and Management's Discussion and Analysis (MD&A), issued quarterly and annually, and the Annual Information Form provide extensive information on the revenues and expenses of NAV CANADA. These documents are available electronically at www.navcanada.ca.

2. TRAFFIC OUTLOOK

In developing the outlook for air traffic, the primary sources of information considered are airline schedules as reported in the Official Airline Guide, a time series analysis of historical charging units for different service charges, forecasts of macro-economic indicators, and available passenger and/or aircraft movement forecasts, such as from IATA, FAA and Eurocontrol. The forecast for fiscal 2019 reflects actual traffic results up to February and a forecast for the remainder of the fiscal year. NAV CANADA's fiscal year runs from September 1 to August 31. The preliminary budget for fiscal 2020 is based on forecast growth over the fiscal 2019 forecast traffic volumes.

The following table presents the Company's traffic growth assumptions. Overall, the year-over-year traffic growth forecasts for fiscal 2019 and fiscal 2020 are 2.4% and 3.5%, respectively.

	Forecast	Preliminary Budget
Charge	FY 2019	FY 2020
Terminal	2.0%	3.7%
Enroute	1.2%	3.9%
Overflight	3.2%	3.2%
NAT	5.7%	4.8%
Int'l Com	4.8%	3.9%
Daily	2.0%	2.0%
Weighted	2.4%	3.5%

3. AMOUNTS TO RECOVER

Fiscal 2020 Amounts to Recover from Customers

Total preliminary budget costs in fiscal 2020 are expected to be \$1,552.2 million. The costs to recover from ANS user charges are less than this, as other revenues are taken into account, consistent with the requirements of the ANS Act. The Company anticipates other revenues of \$39.6 million in fiscal 2020 from technology sales, NAV CENTRE and other sources.

The following table sets out the specific amounts to recover in fiscal 2020, based on the preliminary budget.

Costs	\$ Millions
Operating Expenses:	
Salaries, Benefits and Allowances	1070.7
Other Operating Expenses less Satellite Surveillance	274.2
Satellite Surveillance	38.1
Depreciation and Amortization	163.1
	<u>1546.1</u>
Other Expenses	104.4
Regulatory Deferrals Excluding RSA	(98.3)
Total Costs to Recover in Fiscal 2020	<u><u>1552.2 (A)</u></u>
Other Revenues	39.6
Increase in Target RSA	(6.6)
Expected RSA Deficit from 2019	(9.4)
	<u>23.6 (B)</u>
Net costs to be recovered	<u><u>1528.6 (A-B)</u></u>

The Company is proposing that for fiscal 2020 it will recover from increased service charges only the data services costs for third party space-based ADS-B surveillance. Customer service charges will not be increased to recover other fiscal 2020 shortfalls that would occur at existing service charge rates.

For Customer Service Charges effective on or after September 1, 2019 (for fiscal 2020), the Company's rate proposals will result in the RSA balance declining from the forecast fiscal 2019 year-end balance of \$100.4 million to approximately \$66.9 million at the end of fiscal 2020. The expected decline in the RSA year-end balance will be used to address forecasted increases in operating expenses in fiscal 2020 not related to space-based ADS-B surveillance costs.

Instead of recovering the full \$1,528.6 million per the preceding table, the Company plans to recover in fiscal 2020 amounts equivalent to revenues that would be generated at 2020 forecasted traffic volumes at existing fiscal 2019 base rates (\$1,439.6 million), plus the third-party space-based ADS-B surveillance costs.

Satellite Surveillance Costs

For fiscal 2020 the Company will recover through increases in customer service charges the amounts related to the costs of third-party space-based ADS-B surveillance costs. Revisions to service charges related to this will be completed in two phases. Recovery of domestic space-based ADS-B surveillance costs will come into effect September 1, 2019, while recovery of oceanic space-based ADS-B surveillance costs will come into effect on January 1, 2020. Total fiscal 2020 amounts to recover for space-based ADS-B satellite surveillance costs will be as follows:

FY 2020 Satellite Surveillance Costs		\$ Millions
Domestic	12 Months effective Sept 1, 2019	11.9
Oceanic	8 Months effective Jan 1, 2020	26.2
Total FY 2020 Satellite Surveillance Costs		<u>38.1</u>

4. CUSTOMER SERVICE CHARGE RATE ANALYSIS

As identified in section 3, in order for the Company to break even it would have to adjust its base rates to recover the preliminary budget amount of \$1,528.6 million in fiscal 2020.

However, as noted in section 3, based on the analysis of the Company's current future financial requirements it has decided to only increase rates to recover additional costs associated with space-based ADS-B surveillance charges of \$38.1 million. Anticipated increases in all other costs in fiscal 2020 of \$50.9 million will be absorbed through reductions to the RSA.

4.1. Fiscal 2020 Base Rate Calculations

To determine the rate changes required in fiscal 2020, by service, the forecast revenues and amounts to recover by service are compared.

The amount to be recovered by each service is determined by the allocation of costs to services, i.e., to Terminal, Enroute, NAT and Int'l Com services. The Corporation's cost allocation methodology was developed in 1997, and an allocation exercise occurs annually.

The Company has calculated the fiscal 2020 forecasted costs by service to be recovered. Costs to be recovered are forecasted to be \$1,439.6 million plus space-based ADS-B surveillance costs.

4.2. Proposed Changes to Customer Service Charges

The Company is proposing customer service charge changes related to the recovery of space-based ADS-B surveillance charges. This will be implemented in a two-phase approach.

Recovery of domestic space-based surveillance costs will be integrated into the existing Enroute cost base and recovered through Enroute customer service charges, effective September 1, 2019. Recovery of oceanic space-based ADS-B surveillance costs will be integrated into the NAT cost base and recovered through the NAT customer service charges effective January 1, 2020.

The following table shows the rate calculations for the September 1, 2019 proposed revisions.

Effective September 1, 2019 changes to service charges are calculated for each service in the following table:

Fiscal		Terminal	Enroute	NAT	Comm.	Total
2020	Costs to Recover	\$ 637,581,066	\$ 752,601,900	\$ 37,428,557	\$ 11,948,347	\$ 1,439,559,870
	Cost Allocation ->	44.29%	52.28%	2.60%	0.83%	100.00%
	Add - Domestic Space-Based ADS-B Costs		\$ 11,944,305			\$ 11,944,305
	Revised Cost to Recover	\$ 637,581,066	\$ 764,546,205	\$ 37,428,557	\$ 11,948,347	\$ 1,451,504,175
2020	Total Revenue at Existing Base Rates	\$ 637,639,170	\$ 749,677,421	\$ 41,074,002	\$ 11,169,277	\$ 1,439,559,870
	Shortfall (Surplus)	\$ (58,104)	\$ 14,868,784	\$ (3,645,445)	\$ 779,070	\$ 11,944,305
	Sept 01, 2019 Rate Change Required	0.0%	2.0%	-8.9%	7.0%	0.8%
	Domestic Flat Fees	0.3%				

The fiscal 2020 oceanic space-based ADS-B surveillance expense to be recovered is \$26.2 million. For purposes of this customer service charge rate analysis, the previous September 1 annual calculation is repeated but with the oceanic space-based ADS-B costs added. This 8-month expense has been grossed up to \$39.3 million to represent a 12-month expense for simplicity of the rate calculation but note that this additional rate revision will be effective on January 1, 2020, therefore only eight-months of costs will be recovered (in the January - August 2020 period).

Effective January 1, 2020 changes to service charges are calculated for each service in the following table. Note that the percent changes shown are in comparison to the existing base rates and not the proposed rates set out in the preceding table for September 1, 2019.

Fiscal		Terminal	Enroute	NAT	Comm.	Total
2020	Costs to Recover	\$ 637,581,066	\$ 752,601,900	\$ 37,428,557	\$ 11,948,347	\$ 1,439,559,870
	Cost Allocation ->	44.29%	52.28%	2.60%	0.83%	100.00%
	Add - Domestic Space-Based ADS-B Costs		\$ 11,944,305			\$ 11,944,305
	Costs to Recover including Domestic SB ADS-B	\$ 637,581,066	\$ 764,546,205	\$ 37,428,557	\$ 11,948,347	\$ 1,451,504,175
	Add - Oceanic Space-Based ADS-B Costs - 12 Month Gross-up			\$ 39,289,014		\$ 39,289,014
	Costs to Recover including Domestic SB ADS-B	\$ 637,581,066	\$ 764,546,205	\$ 76,717,570	\$ 11,948,347	\$ 1,490,793,189
2020	Total Revenue at Existing Base Rates	\$ 637,639,170	\$ 749,677,421	\$ 41,074,002	\$ 11,169,277	\$ 1,439,559,870
	Shortfall (Surplus)	\$ (58,104)	\$ 14,868,784	\$ 35,643,568	\$ 779,070	\$ 51,233,319
	Rate Change Required	0.0%	2.0%	86.8%	7.0%	3.6%
	Domestic Flat Fees	0.3%				

Proposed Rate Revisions

Proposed Changes to Oceanic Charges

Calculations for the proposed NAT Service Charge revision options are presented in the following tables. The calculations use forecast fiscal 2020 values for oceanic charging units based on methodologies using aircraft weight and distance flown. These values have been estimated using a methodology as follows:

- Actual traffic activity in the Gander Oceanic FIR/CTA was analyzed for the period of March 2018 to February 2019.
- Distances flown in the Gander Oceanic FIR/CTA are available in the Company's flight data processing system.
- Aircraft weight for each flight was determined by using the aircraft weights currently being used for billings for the domestic airspace enroute charges (including overflights) for flights that transit the Gander Oceanic FIR/CTA.
- The weight/distance charging units, as well as the kilometers flown charging units, were factored up from the analysis period to the fiscal 2020 budget year based on the ratio of budgeted 2020 flight counts (determined using our traditional forecast methodology) to the actual flight counts in the analysis period.

The unit rate calculations for the three different charging options are presented in the following tables.

Option 1 – Weight and Distance Unit Rate Charge

		Annualized NAT Costs	Charging Units	Proposed Rate (per charging unit)
Option 1	Weight and Distance	\$ 76,717,570	10,762,872,778	\$ 0.00713

Option 2: Distance Only

		Annualized NAT Costs	Total Distance GOA in KM	Proposed Rate (per km)
Option 2	Distance	\$ 76,717,570	696,974,692	\$ 0.11007

Option 3: Flat fee per flight

		Annualized NAT Costs	Number of Flights	Proposed Rate (per flight)
Option 3	Flat fee per flight	\$ 76,717,570	494,851	\$ 155.03

Determination of Aircraft Weight and Distance Flown for Option 1 (Weight and Distance) and Option 2 (Distance)

If the Company proceeds with NAT charging option 1, the determination of aircraft weight and distance flown for billing purposes would be determined in a manner that is consistent with current practice for the existing enroute charge in domestic airspace. These practices are presented below. If the Company proceeds with either NAT charging option 1 or option 2, the distance calculation methodology presented below would apply.

Determination of Aircraft Weight***OPTION 1: AVERAGE WEIGHT BY AIRCRAFT TYPE WITHIN THE OPERATOR'S FLEET***

The average of the maximum permissible take-off weight is calculated using all of the operator's aircraft of the same type, based on current fleet submissions provided by the operator. These averages are used in the calculation of charges for the flights, according to aircraft type, operated by the customer. The weight, as stated in the current fleet submission, is expressed in metric tonnes rounded to the first decimal place.

OPTION 2: SPECIFIC WEIGHT OF EACH AIRCRAFT

The weight of the aircraft is defined as the maximum permissible take-off weight of the specific aircraft flown as stated in the fleet submission, in metric tonnes rounded to the first decimal place.

Under this option, in addition to providing fleet submissions, the operator must include the correct aircraft registration marks on all flight plans.

PROVISION OF INFORMATION:

Fleet submissions are necessary to determine the aircraft weight that is used in the fee calculation for each flight billed by NAV CANADA. In the absence of a current fleet submission NAV CANADA calculates the charge for the flight based upon the highest published maximum permissible take-off weight for an aircraft of the same type.

Under the specific aircraft weight option, in cases where the aircraft flown are not in current fleet submissions with NAV CANADA, or where correct aircraft registration marks are not provided in the flight plan, the flight will be billed at the highest published maximum permissible take-off weight for an aircraft of the same type of the carrier concerned. If the operator does not have any other aircraft of the same type in their current fleet submission, then the highest published maximum permissible take-off weight for an aircraft of the same type will be used.

In the fleet submission, the operator indicates the registration marks and the maximum permissible take-off weight of each aircraft, as specified in the aircraft's certificate of airworthiness or in a document referred to in that certificate. NAV CANADA sends fleet submission update requests to customers periodically. However, customers must file an updated fleet submission any time their fleet is modified.

Distance Determination

For flights which enter or exit Canadian-controlled oceanic airspace (i.e. the Gander Oceanic FIR/CTA), distance will be calculated as the great circle distance between the point of entry and point of exit of the flight in that airspace. For flights that enter and exit the airspace more than once, distance will be calculated as the sum of the great circle distances of each leg of the flight in that airspace. This methodology is consistent with current practice for existing enroute charges (including overflight) in Canadian-controlled domestic airspace.

Summary of Proposed Rate Revisions

The following table sets out and compares the existing rates and proposed revised base rates for both September 1, 2019 and January 1, 2020. All three potential charging options are presented for the NAT charge.

	Current Rates (FY2019)	Effective September 1, 2019			Effective January 1, 2020					
		FY 2020 Proposed Rates		NAT Option 1		NAT Option 2		NAT Option 3		
		Proposed Base Rates	% Change VS Existing Base Rates	Weight and Distance Proposed Base Rates	% Change VS Existing Base Rates	Distance Only		Flat Fee per Flight		
						Proposed Base Rates	% Change VS Existing Base Rates	Proposed Base Rates	% Change VS Existing Base Rates	
Movement Based Charges										
Terminal Charge	\$ 24.36	\$ 24.36	0.0%	\$ 24.36	0.0%	\$ 24.36	0.0%	\$ 24.36	0.0%	
Enroute Charge	\$ 0.02949	\$ 0.03008	2.0%	\$ 0.03008	2.0%	\$ 0.03008	2.0%	\$ 0.03008	2.0%	
NAT	\$ 83.00	\$ 75.61	-8.9%	\$ 0.00713	86.8%	\$ 0.11007	86.8%	\$ 155.03	86.8%	
Int'l Comm										
Data Link	\$ 18.68	\$ 19.99	7.0%	\$ 19.99	7.0%	\$ 19.99	7.0%	\$ 19.99	7.0%	
Voice	\$ 49.66	\$ 53.14	7.0%	\$ 53.14	7.0%	\$ 53.14	7.0%	\$ 53.14	7.0%	
Aircraft Based Charges										
Daily Charges										
Weight Group (in Tonnes)										
Propellers										
Over 3.0 to 5.0	\$ 41.53	\$ 41.65	0.3%	\$ 41.65	0.3%	\$ 41.65	0.3%	\$ 41.65	0.3%	
Over 5.0 to 6.2	\$ 83.07	\$ 83.32	0.3%	\$ 83.32	0.3%	\$ 83.32	0.3%	\$ 83.32	0.3%	
Over 6.2 to 8.6	\$ 329.31	\$ 330.30	0.3%	\$ 330.30	0.3%	\$ 330.30	0.3%	\$ 330.30	0.3%	
Over 8.6 to 12.3	\$ 764.44	\$ 766.73	0.3%	\$ 766.73	0.3%	\$ 766.73	0.3%	\$ 766.73	0.3%	
Over 12.3 to 15.0	\$ 1,139.23	\$ 1,142.65	0.3%	\$ 1,142.65	0.3%	\$ 1,142.65	0.3%	\$ 1,142.65	0.3%	
Over 15.0 to 18.0	\$ 1,368.66	\$ 1,372.77	0.3%	\$ 1,372.77	0.3%	\$ 1,372.77	0.3%	\$ 1,372.77	0.3%	
Over 18.0 to 21.4	\$ 1,845.33	\$ 1,850.87	0.3%	\$ 1,850.87	0.3%	\$ 1,850.87	0.3%	\$ 1,850.87	0.3%	
Over 21.4	\$ 2,394.18	\$ 2,401.36	0.3%	\$ 2,401.36	0.3%	\$ 2,401.36	0.3%	\$ 2,401.36	0.3%	
Maximum Helicopters	\$ 83.07	\$ 83.32	0.3%	\$ 83.32	0.3%	\$ 83.32	0.3%	\$ 83.32	0.3%	
Jets										
Up to 3.0	\$ 157.25	\$ 157.72	0.3%	\$ 157.72	0.3%	\$ 157.72	0.3%	\$ 157.72	0.3%	
Over 3.0 to 6.2	\$ 202.73	\$ 203.34	0.3%	\$ 203.34	0.3%	\$ 203.34	0.3%	\$ 203.34	0.3%	
Over 6.2 to 7.5	\$ 329.31	\$ 330.30	0.3%	\$ 330.30	0.3%	\$ 330.30	0.3%	\$ 330.30	0.3%	
Annual Minimum Charges										
Propeller Aircraft over 3.0 Tonnes and Jet Aircraft	\$ 224.44	\$ 225.12	0.3%	\$ 225.12	0.3%	\$ 225.12	0.3%	\$ 225.12	0.3%	
General Aviation Charges										
Annual Charge										
Under 2.0	\$ 67.20	\$ 67.40	0.3%	\$ 67.40	0.3%	\$ 67.40	0.3%	\$ 67.40	0.3%	
2.0 to 3.0	\$ 224.44	\$ 225.12	0.3%	\$ 225.12	0.3%	\$ 225.12	0.3%	\$ 225.12	0.3%	
Quarterly Charge										
Under 2.0	\$ 16.80	\$ 16.85	0.3%	\$ 16.85	0.3%	\$ 16.85	0.3%	\$ 16.85	0.3%	
2.0 to 3.0	\$ 56.11	\$ 56.28	0.3%	\$ 56.28	0.3%	\$ 56.28	0.3%	\$ 56.28	0.3%	
Daily - Seven Major Airports	\$ 9.89	\$ 9.92	0.3%	\$ 9.92	0.3%	\$ 9.92	0.3%	\$ 9.92	0.3%	

Note that the rates for the domestic flat fees (Daily, Annual, Quarterly, Annual Minimum and Daily – 7 Specified Major Airports) change by 84% of the terminal rate change and 16% of the enroute rate change. Changes to these rates will be effective on March 1, 2020, consistent with the revision cycle for these changes.

5. RATE STABILIZATION ACCOUNT

Customer service charges are set based on the Company's financial requirements, which take into account estimated air traffic volumes and planned expenditures. Since actual revenue and expenses will differ from these estimates, methods to accumulate the variances are required so that they may be taken into account when setting future customer service charges. There is also a need to absorb the immediate effect of unpredictable factors – mainly fluctuations in air traffic volumes resulting from unforeseen events. We meet these objectives through a “rate stabilization” mechanism.

When determining the level of customer service charges, the Company considers its current and future financial requirements. Among other things, the following are considered when establishing customer service charges:

- the Company's financial requirements and the extent to which operating costs are variable;
- the current and anticipated balance in the rate stabilization account; and
- the recovery of pension contributions on a cash basis.

For customer service charges effective on or after September 1, 2019 (fiscal 2020), the Company proposes to allow the RSA balance to decline from the forecast fiscal 2019 year-end balance of \$100.4 to approximately \$66.9 at the end of fiscal 2020. The Company believes that the forecast fiscal 2020 RSA balance and an objective analysis as to the magnitude of operating costs that could be reduced in the event of a liquidity type event combined provide it with an appropriate level of corporate contingency for fiscal 2020. The review and determination of an appropriate corporate contingency, in which the RSA balance would be included, will be undertaken annually and will be an input in the setting of future customer service charges.

6. PRINCIPLES GOVERNING NAV CANADA'S SERVICE CHARGES

The principles governing the establishment of new charges or the revision of existing charges by NAV CANADA are set out in Section 35 of the ANS Act. Each of the principles is presented below in italics, followed by an explanation of how the Notice complies with that particular principle.

- 35 (1) (a) *Charges must be in accordance with a methodology established and published by the Corporation that is explicit and that also includes the terms and conditions affecting charges;*

The Notice, required under Section 36 of the ANS Act, has been placed on the Internet and sent to aviation associations. On the basis of this information, any person subject to NAV CANADA's charges can calculate the amount that would be payable for a given flight.

- 35 (1) (b) *Charges must not be structured in such a way that a user would be encouraged to engage in practices that diminish safety for the purpose of avoiding a charge;*

For any given flight, NAV CANADA's charges are not structured in such a manner that safety may be affected. For example, any flight of any given aircraft between two points (e.g., Ottawa and Québec City) is subject to the same charges, regardless of whether the flight is IFR or VFR.

The proposals in the current Notice (June 2019) provide options for the structure of the NAT charge. These options include a weight and distance method, a distance method and the retention of the current flat fee per flight method. The Company has assessed the potential safety impact of the three options and has determined that the options are structured in a way that this charging principle would be observed.

- 35 (1) (c) *Charges for the same services must not differentiate between domestic and international flights of air carriers;*

There is no differentiation in the proposed revised charges between domestic and international flights of air carriers.

- 35 (1) (d) *Charges for the same services must not differentiate among Canadian air carriers or among foreign air carriers;*

There is no differentiation in the proposed revised charges for a flight based on which domestic or foreign carrier provides the flight.

- 35 (1) (e) *Charges must differentiate between the provision of services in relation to the landing and take-off of aircraft and the provision of services in relation to aircraft in flight, and must reflect a reasonable allocation of the costs of providing the services in those circumstances;*

The charges are based on an allocation of costs among the enroute, terminal and oceanic services. The rules for the attribution of costs to the services were arrived at by considering workloads, statistics based on activity reports, management judgment and ICAO guidelines.

- 35 (1) (f) *Charges in respect of recreational and private aircraft must not be unreasonable or undue;*

The charges reflect the need for recreational and private aircraft to contribute, along with other users, to the costs of operating the Canadian civil air navigation system. NAV CANADA believes the charges are neither unreasonable nor undue.

- 35 (1) (g) *Charges for designated northern or remote services and for services directed to be provided under subsection 24(1) must not be higher than charges for similar services utilized to a similar extent elsewhere in Canada;*

Since NAV CANADA's charges are uniform throughout Canada, northern or remote services are subject to the same charges as services utilized elsewhere in Canada.

- 35 (1) (h) *Charges must be consistent with the international obligations of the Government of Canada; and*

The most relevant international obligations are the Convention on International Civil Aviation of 1944 (the Chicago Convention) and bilateral air services agreements between Canada and other states.

Article 15 of the Chicago Convention deals with charges for air navigation facilities and establishes the principle that fees charged for the use of airport and air navigation services not be higher for foreign compared to domestic users engaged in similar international air services. The charges comply with Article 15 because: (i) the charges in respect of international air services are not higher for foreign air carriers than they are for Canadian carriers engaged in similar international air services (i.e., the charges do not differentiate according to the flag of the carrier), and (ii) the charges relate to the availability or provision of air navigation services and are not imposed for the right of entry into Canadian airspace.

The charges are also consistent with bilateral air services agreements between Canada and other states.

- 35 (1) (i) *Charges must not be set at a level that, based on reasonable and prudent projections, would generate revenues exceeding the Corporation's current and future financial requirements in relation to the provision of civil air navigation services.*

NAV CANADA's charges are set to recover the Corporation's expenses net of other revenues determined in accordance with International Financial Reporting Standards (IFRS) and the costs of complying with certain financial requirements, as described in detail in Subsection 35(5) of the ANS Act. For fiscal 2020 NAV CANADA has decided that it will not recover in service fees increases in costs unrelated to space-based ADS-B surveillance costs. This will result in an RSA balance decline from the forecast fiscal 2019 year-end balance of \$100.4 million to approximately \$66.9 million at the end of fiscal 2020.

- 35 (2) *The charging methodology may recognize that the value of the services differs among users.*

NAV CANADA's charging methodology does recognize that the value of the services differs among users, e.g., charges that vary with aircraft weight.

- 35 (3) *Where the Corporation's charging methodology recognizes the value of the services and aircraft weight is used as a measure of the value of the services, the principle referred to in paragraph (1)(a) is deemed not to have been observed if aircraft weight is taken into account either directly proportionally or greater than directly proportionally.*

The International Communication Services Charges and the existing North Atlantic Enroute Facilities and Services Charge (NAT) are levied on a per flight basis and do not take weight into account. The proposed changes to the NAT charge for option 1 – Weight and Distance NAT Charge, would take the square root of the weight into account (i.e. less than proportionally). The Enroute and Terminal Services charges take weight into account, but less than proportionally. The Enroute Charge is based on a unit rate multiplied by the square root of aircraft weight multiplied by distance. The Terminal Services Charge is based on a unit rate multiplied by aircraft weight raised to the 0.8 power.

Pursuant to Subsection 35(7), Subsection 35(3) does not apply to flat fees. The Annual, Quarterly and Daily Charges represent flat fees.

- 35 (4) *For the purpose of subsection (3), "weight", in relation to an aircraft, means the maximum permissible take-off weight specified in the aircraft's certificate of airworthiness or in a document referred to in that certificate.*

Weight calculations are based on the maximum permissible take-off weight specified in the aircraft's certificate of airworthiness or in a document referred to in that certificate. For more information, please refer to the September 1, 2018 *Customer Guide to Charges*.

7. INFORMATION REGARDING THE NOTICE AND ON MAKING REPRESENTATIONS TO NAV CANADA

The Notice and this document are available on-line and a copy may be downloaded from NAV CANADA's Internet site (www.navcanada.ca).

Information on the existing charges is provided in NAV CANADA's announcements on service charges and *Customer Guide to Charges*, which are also posted on the Internet site.

Additional copies of the Details and Principles document may be obtained by contacting NAV CANADA:

In writing: NAV CANADA
P.O. Box 3411, Station "T"
Ottawa, Ontario
CANADA K1P 5L6
Attention: AVP Stakeholder and Commercial Relations

By e-mail: service@navcanada.ca
By facsimile: 1-613-563-3426
By telephone: 1-613-563-5588
 1-800-876-4693 (Toll Free North America)

Pursuant to Section 36 of the ANS Act, persons interested in making representations in writing to NAV CANADA with regard to the Notice may do so in writing to the following address:

NAV CANADA
P.O. Box 3411, Station "T"
Ottawa, Ontario
CANADA K1P 5L6
Attention: Director, Rates and Revenue Systems

By facsimile: 1-613-563-5882

Note: Representations must be received by NAV CANADA not later than the close of business on August 6, 2019.

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Caution Concerning Forward-looking Information

This document contains certain statements about NAV CANADA’s future expectations. These statements are generally identified by words like “anticipate”, “plan”, “believe”, “intend”, “expect”, “estimate”, “approximate” and the like, as well as future or conditional verbs such as “will”, “should”, “would” and “could”, or negative versions thereof. Because forward-looking statements involve future risks and uncertainties, actual results may be quite different from those expressed or implied in these statements. Examples include geopolitical unrest, terrorist attacks and the threat of terrorist attacks, war, epidemics or pandemics, natural disasters, weather patterns, environmental concerns, cyber security attacks, labour negotiations, arbitrations, workforce recruitment, training and retention, general aviation industry conditions and trends, air traffic levels, the use of telecommunications and ground transportation as alternatives to air travel, capital market and economic conditions, the ability to collect customer service charges and reduce operating costs, the success of our investment in space-based aircraft surveillance through Aireon, investment returns or losses, changes in interest rates, changes in laws, tax changes, adverse regulatory developments or proceedings and lawsuits. Some of these risks and uncertainties are explained under “Risk Factors” in our fiscal 2018 Annual Information Form. The forward-looking statements contained in this document represent our expectations as of June 4, 2019 and are subject to change after this date. Readers of this document are cautioned not to place undue reliance on any forward-looking statement. We disclaim any intention or obligation to update or revise any forward-looking statements included in this document whether as a result of new information, future events or for any other reason, except as required by applicable securities legislation.