NATIONAL EXCHANGE CARRIER ASSOCIATION, INC.
REVISIONS TO TARIFF F.C.C. NO. 5
ETHERNET TRANSPORT SERVICE
TRANSMITTAL NO. 1676
DESCRIPTION AND JUSTIFICATION

1. Introduction

The National Exchange Carrier Association, Inc. (NECA) is modifying Tariff F.C.C. No. 5 to introduce four new Ethernet Transport Service (ETS) transport speeds operating at 50 Gbps, 100 Gbps, 200 Gbps, and 400 Gbps.

These revisions are being made to meet the needs of commercial customers that require higher transmission speeds using Ethernet technology, including network providers, anchor customers, and wireless service providers. In addition, these revisions are being made to provide for more efficient consolidation of broadband services at access service connection points as well as to facilitate the consolidation of switching locations.

2. Proposed Tariff Provisions

This filing introduces four new ETS transport speed options operating at 50 Gbps, 100 Gbps, 200 Gbps, and 400 Gbps. The new speed options are available with the following ETS elements: Basic Ports; Channel Terminations (CTs); Intraswitch Extended Virtual Connections (EVCs); Interswitch EVCs; Extended EVCs; Interconnected EVCs, the Digital Subscriber Line Access Service Connection Point function, Class of Service (CoS) and Port Protection. Monthly and nonrecurring rates are specified in Section 17.4.8(C). All existing tariff provisions for the ETS rate elements specified in Section 16.3 will apply for the new speed options.

Monthly stabilized rates for the four new ETS speeds are also being introduced in ETS Fixed Rate Option Plan 9.[1]

3. Proposed ETS 50 Gbps, 100 Gbps, 200 Gbps and 400 Gbps Rates and Charges

The rates shown in the tables below reflect the uniform rate for each element. The uniform rate is the average Traffic Sensitive pool rate. Most recurring tariff rates are study area specific banded rates, which are set closer to study area costs (see *2022 Annual Filing*, Volume 5, Section 3). Non-banded rates are set at the uniform rate. The complete list of the proposed rates for each banded and non-banded element can be found in Section 17.4.8(C) of the tariff.

[1] National Exchange Carrier Association, Inc., Tariff F.C.C. No. 5, Transmittal No. 1668 (filed Jul. 15, 2022) (*July 2022 Filing).*

A) ETS Channel Terminations

Rate banded monthly and nonrecurring charges apply to each ETS CT ordered. Different monthly rates apply to ETS CTs up to 300 feet and ETS CTs greater than 300 feet from the ETS Serving Wire Center (SWC).

ETS Channel Terminations				
Capacity	**50 Gbps**	**100 Gbps**	**200 Gbps**	**400 Gbps**
Monthly ≤ 300 feet	$ 1,156.95	$ 1,349.78	$ 1,754.71	$ 2,281.12
Nonrecurring	$ 442	$ 442	$ 442	$ 442
Monthly > 300 feet	$ 5,616.00	$ 6,739.20	$ 8,760.96	$ 11,389.25
Nonrecurring	$ 650	$ 650	$ 650	$ 650

B) ETS Basic Ports

A rate banded monthly charge applies to each ETS Basic Port ordered. A nonrecurring charge applies to install each new ETS Basic Port.

ETS Basic Ports				
Capacity	**50 Gbps**	**100 Gbps**	**200 Gbps**	**400 Gbps**
Monthly	$ 1,976.40	$ 2,196.00	$ 2,854.80	$ 3,711.24
Nonrecurring	$ 650	$ 650	$ 650	$ 650

C) ETS Ethernet Virtual Connections

A rate banded monthly charge applies to each ETS EVC ordered by the customer. An ETS Intraswitch EVC rate applies for each ETS EVC established between two ETS Basic Ports within the same SWC. An ETS Interswitch EVC rate applies to each ETS EVC established between ETS Ports located in different SWCs within the same operating territory. A nonrecurring charge applies to establish each new ETS EVC.

ETS Ethernet Virtual Connections				
Capacity	**50 Gbps**	**100 Gbps**	**200 Gbps**	**400 Gbps**
Monthly Intraswitch	$ 0	$ 0	$ 0	$ 0
Nonrecurring Intraswitch	$ 307	$ 307	$ 307	$ 307
Monthly Interswitch	$ 15,128.78	$ 16,809.75	$ 21,852.68	$ 28,408.48
Nonrecurring Interswitch	$ 307	$ 307	$ 307	$ 307

D) ETS Extended Ethernet Virtual Connections

A rate banded monthly charge applies to each ETS E-EVC ordered by the customer. An ETS E-EVC is ordered between one telephone company's ETS network and another telephone company's Ethernet network located in an adjacent serving territory. A nonrecurring charge applies to establish each new ETS E-EVC.

ETS Extended Ethernet Virtual Connections				
Capacity	**50 Gbps**	**100 Gbps**	**200 Gbps**	**400 Gbps**
Monthly	$ 9,032.40	$ 10,161.45	$ 13,209.89	$ 17,172.85
E-EVC Nonrecurring	$ 615	$ 615	$ 615	$ 615

E) ETS Interconnected Ethernet Virtual Connections

A non-banded monthly charge applies to each ETS I-EVC ordered by the customer. An ETS I-EVC is ordered between one telephone company's ETS network and another telephone company's Ethernet network located in a non-adjacent serving territory. Different rates apply for ETS I-EVCs when the airline miles between the ETS SWCs serving the CDP is less than or equal to fifty miles and when it is between fifty-one and seventy-five miles. A nonrecurring charge applies to establish each new ETS I-EVC.

ETS Interconnected Ethernet Virtual Connections				
Capacity	**50 Gbps**	**100 Gbps**	**200 Gbps**	**400 Gbps**
I-EVC 1-50 Miles Monthly	$ 32,647.05	$ 36,274.50	$ 47,156.85	$ 61,303.91
I-EVC 1-50 Nonrecurring	$ 615	$ 615	$ 615	$ 615
I-EVC 51-75 Miles Monthly	$ 38,535.75	$ 42,817.50	$ 55,662.75	$ 72,361.58
I-EVC 51-75 Nonrecurring	$ 615	$ 615	$ 615	$ 615

F) DSL Access Service Connection Point Function

A nonrecurring charge applies per port to equip a new or existing ETS Basic Port with the DSL ASCP function. The DSL ASCP function nonrecurring charge is applied at the same capacity as the associated ETS Basic Port.

ETS Basic Ports – DSL ASCP Function				
ETS Basic Port Capacity	**50 Gbps**	**100 Gbps**	**200 Gbps**	**400 Gbps**
Nonrecurring	$ 225	$ 225	$ 225	$ 225

G) ETS Port Protection Feature

A non-banded monthly charge and a nonrecurring charge apply for the ETS Port Protection feature at speeds of 50 Gbps to 400 Gbps based upon whether the CDP is located up to 300 feet of the ETS SWC or greater than 300 feet from the ETS SWC as shown in the table below:

ETS Port Protection Feature – 50 Gbps to 400 Gbps		
	CT ≤ 300 feet	CT > 300 feet
Monthly per Port/CT	$ 370	$ 930
Nonrecurring per Port/CT	$ 650	$ 650

H) ETS Class of Service

The rate banded monthly charges for the ETS Real Time CoS/QoS and Near Real Time CoS features will apply to both Intraswitch EVCs and Interswitch EVCs at speeds of 50 Gbps to 400 Gbps as shown in the tables below:

ETS CoS Level for Intraswitch 50 Gbps to 400 Gbps per Megabit	**Near Real Time CoS**	**Real Time CoS/QoS**
Monthly	$ .11	$ .22
ETS CoS Level for Interswitch 50 Gbps to 400 Gbps per Megabit	**Near Real Time CoS**	**Real Time CoS/QoS**
Monthly	$ .37	$ .73

4. Revenue, Cost, and Demand Support

NECA estimated the revenue associated with the proposed ETS 50 Gbps, 100 Gbps, 200 Gbps, and 400 Gbps service options. NECA developed these estimates using the Rate Development Task Group (RDTG) survey,[2] which asked companies for investments, cost data and new demand projections as well as demand expected to migrate from existing service(s) demand.

NECA used the RDTG survey to develop the monthly unit costs underlying the introduction of the ETS 50 Gbps, 100 Gbps, 200 Gbps, and 400 Gbps speed options using fiber-based technology. Based on data collected from the RDTG study, NECA adapted its existing ETS cost models to determine the investment cost for deploying ETS 50 Gbps, 100 Gbps, 200 Gbps, and 400 Gbps services and their optional features.

Exhibit 1 displays the investments and costs for the ETS Basic Ports, developed from RDTG survey data, which are part of the Ethernet switching equipment. These costs include chassis, power supply, central processor, switch fabric, and ports to support up to 400 Gbps bandwidth. To calculate average port investment, NECA used the distribution of ports from the sample, and weighted each respondent's port investment levels by its special access non-DSL demand. NECA converted investment per port to a direct cost per port using the "Direct Cost Factor" described in the *2022 Annual Filing* (Volume 5, Exhibit 4, Workpaper 1).[3]

Exhibit 2 displays the investments and costs for ETS CTs, developed from RDTG survey data. Fiber-based channel termination equipment includes SWC and customer premises' electrical-to-optical converters, fiber pairs, outside plant, and other premises equipment such as cabinet and power supply.

[2] Based on 2022 ETS Investment and Demand Data Request. The Rate Development Task Group is a group of selected participants in the NECA Traffic Sensitive (TS) and Common Line (CL) Pools. Other companies may participate as associates to the RDTG on an ad hoc basis. NECA uses the RDTG to develop cost characteristics representative of pool companies and to facilitate the rate development process and provide supporting information for NECA tariff filings.

[3] See National Exchange Carrier Association, Inc., Transmittal No. 1665, filed June 16, 2022 (*2022 Annual Filing*).

Investments and costs are shown for channel terminations up to 300 feet and channel terminations having lengths greater than 300 feet from the ETS SWC. Loops up to 300 feet will support ETS transmissions up to 400 Gbps using fiber transmission facilities at relatively low cost.

Exhibit 3 displays the unit investments and costs for the ETS EVCs, the ETS E-EVCs, and the ETS I-EVCs developed from data received from RDTG survey data.

Exhibit 4 displays the average monthly unit costs for the ETS Class of Service (CoS) optional feature, developed from data received from the RDTG survey. The investment for the ETS CoS feature on Intraswitch EVCs includes software and hardware for a system to test and monitor EVC performance. Investment for ETS CoS on Interswitch EVCs is developed by applying Real Time and Near Real Time factors to the EVC investment to account for the extra bandwidth reserved to support the CoS level, and then adding the testing and monitoring cost.

Exhibit 5 displays the investments and monthly unit costs for the ETS Port Protection Optional Feature. The cost model covers two basic network elements in a standby configuration: a standby Basic Port connecting the customer to the Ethernet network and associated CT for the facility between the customer premises and serving wire center during a network outage. The sum of Basic Port and CT (within 300 feet) costs is for the 400 Gbps speed, the proposed highest speed in FCC Tariff No. 5. There is a single ETS Port Protection Function rate for the four proposed speeds, and this rate is above the unit cost. NECA converted investment per standby to a direct cost per port using the "Direct Cost Factor" described in the *2022 Annual Filing* (Volume 5, Section 3.B).

Using an RDTG survey, NECA asked companies to project new demand and demand expected to migrate from current ETS speeds to the proposed new speed options. NECA estimated average monthly demand for new speed options to reflect both new demand and migration demand from the existing speeds. In Exhibits 6 through 9, based on data gathered from the survey, NECA estimated ETS revenue from the proposed ETS 50 Gbps, 100 Gbps, 200 Gbps, and 400 Gbps service options using uniform rates during the remaining eight months of the current test period. Revenue was not projected for the ETS I-EVC and CoS since there was no demand for these elements for the current test period.

Exhibit 10 summarizes the overall impact of this filing on the NECA pool. NECA anticipates demand for the new service speeds will develop over time. At this time, NECA expects *de minimis* revenue impact for the remainder of the current tariff test period resulting from the proposed new ETS speed options and related Optional Features.

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EXHIBIT 1

BASIC PORTS

INVESTMENTS AND COSTS [1]

LINE NO.	DESCRIPTION	AVERAGE INVESTMENT PER PORT (A)	MONTHLY UNIT COST (B) = (A * Line 5) / 12
	ETS Basic Ports		
1	50 Gbps	$14,076.30	$156.99
2	100 Gbps	$14,076.30	$156.99
3	200 Gbps	$14,076.30	$156.99
4	400 Gbps	$14,076.30	$156.99
5	**Direct Cost Factor [2]**	**0.133836**	

[1] Based on the 2022 RDTG ETS Investment Study.

[2] 2022 Annual Filing, Volume 5 Exhibit 4 Workpaper 1

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INVESTMENTS AND COSTS [1]

EXHIBIT 2

LINE NO.	DESCRIPTION	EQUIPMENT INVESTMENT [1] (A)	TRANSMISSION FACILITY INVESTMENT [1] (B)	TOTAL INVESTMENT (C) = A + B	TOTAL MONTHLY UNIT COST (D) = (C * Line 9) / 12
	Channel Termination 300 Feet or Less				
	Bandwidth Capacity:				
1	50 Gbps	$5,940.00	$2,087.60	$8,027.60	$89.53
2	100 Gbps	$5,940.00	$2,087.60	$8,027.60	$89.53
3	200 Gbps	$5,940.00	$2,087.60	$8,027.60	$89.53
4	400 Gbps	$5,940.00	$2,087.60	$8,027.60	$89.53
	Channel Termination greater than 300 Feet				
	Bandwidth Capacity:				
5	50 Gbps	$8,290.00	$47,122.75	$55,412.75	$618.02
6	100 Gbps	$8,290.00	$47,122.75	$55,412.75	$618.02
7	200 Gbps	$8,290.00	$47,122.75	$55,412.75	$618.02
8	400 Gbps	$8,290.00	$47,122.75	$55,412.75	$618.02
9	**Direct Cost Factor [2]**	**0.133836**			

[1] Based on the 2022 RDTG ETS Investment Study.

[2] 2022 Annual Filing, Volume 5 Exhibit 4 Workpaper 1

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ETHERNET TRANSPORT SERVICE **EXHIBIT 3**

ETHERNET VIRTUAL CONNECTIONS, EXTENDED ETHERNET VIRTUAL CONNECTIONS,

AND INTERCONNECTED ETHERNET VIRTUAL CONNECTIONS

INVESTMENTS AND COSTS [1]

LINE NO.	DESCRIPTION (A)	UNIT INVESTMENT [1] (B)	MONTHLY UNIT COST (C) = (B * Line 11) / 12
	Ethernet Virtual Connection (EVC)		
1	Unit Investment per Gbps [2]	$6,245.59	
	Ethernet Virtual Connection with Capacity of:		
2	50 Gbps	$312,279.55	$3,482.84
3	100 Gbps	$624,559.10	$6,965.69
4	200 Gbps	$1,249,118.19	$13,931.37
5	400 Gbps	$2,498,236.38	$27,862.74
	Extended Ethernet Virtual Connection (E-EVC)		
6	Unit Investment per Gbps [3]	$3,747.35	
	Extended Ethernet Virtual Connection with Capacity of:		
7	50 Gbps	$187,367.73	$2,089.71
8	100 Gbps	$374,735.46	$4,179.41
9	200 Gbps	$749,470.91	$8,358.82
10	400 Gbps	$1,498,941.83	$16,717.65
11	**Direct Cost Factor [4]**	**0.133836**	

	Interconnected Ethernet Virtual Connection (I-EVC)	Monthly Cost per Gbps [5]	Incidence for I-EVC
12	Ethernet Facility Investments (up to 50 miles)	$509.67	60%
13	Leased Ethernet Facility (up to 50 miles)	$1,600.77	40%
14	**I-EVC Transport Capacity Cost per Gbps (up to 50 miles) [6]**	**$946.11**	
15	Ethernet Facility Investments (50-75 miles)	$748.55	40%
16	Leased Ethernet Facility (50-75 miles)	$1,600.77	60%
17	**I-EVC Transport Capacity Cost per Gbps (50-75 miles) [6]**	**$1,259.88**	

[1] Based on the 2022 RDTG ETS Investment Study.

[2] For Lines 2 through 5, Column B = Line 1 * Capacity in Column A.

[3] Extended Ethernet Virtual Connection cost is assumed to be 60% of Ethernet Virtual Connection Cost. For Lines 7 through 10, Column B = Line 6 * Capacity in Column A.

[4] 2022 Annual Filing, Volume 5 Exhibit 4 Workpaper 1

[5] NECA Transmittal No. 1273, April 30, 2010, which introduced Interconnected Ethernet Transport Service, describes how investment was developed. NECA Transmittal No. 1327, Dec. 5, 2011, introduced the I-EVC for 50-75 miles. The transport capacity cost model was updated based on an RDTG ETS Data Request. For leased transport facilities, monthly lease costs are considered as "direct unit costs" in the calculation of monthly cost per Gbps. For all other invested facilities, the investment is divided by 12 and multiplied by the direct cost factor to estimate monthly unit costs per Gbps. The monthly transport capacity costs per Gbps are based on 400 Gbps ETS I-EVC. The costs of the facilities associated with an ETS I-EVC are weighted by the demand for the ETS I-EVC bandwidth to develop a cost per Gbps per month. See 2022 Annual Filing, Volume 5 Exhibit 4 Workpaper 1 for the direct cost factor.

[6] The transport capacity cost per Gbps up to 50 miles in Line 14 is a weighted average of the values in Column A, Lines 12-13, using the values in Column B as the weights. The transport capacity cost per Gbps from 50 miles to 75 miles in Line 17 is a weighted average of the values in Column A, Lines 15-16, using the values in Column B as the weights. Incidence in Column B is based on information supplied by the RDTG members to reflect different deployment strategies.

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ETHERNET TRANSPORT SERVICE **EXHIBIT 4**

CLASS OF SERVICE (CoS)

INVESTMENTS AND COSTS [1]

LINE NO.	DESCRIPTION (A)	UNIT INVESTMENT (B)	CoS MONTHLY UNIT COST PER Mbps (C)	SOURCE (D)
	Class of Service (CoS) over Intraswitch EVC			
1	Unit Investment per Mbps [1]	$4.23		
	CoS Unit Investment per Mbps by Priority Level:			
2	*Near Real-Time (NRT) Priority*		$0.05	Col B Line 1 * Line 7 / 12
3	*Real-Time (RT) Priority*		$0.05	Col B Line 1 * Line 7 / 12
	Class of Service (CoS) over Interswitch EVC			
4	Inter-Switch EVC Unit Investment per Mbps [2]	$6.25		
	CoS Unit Investment per Mbps by Priority Level:			
5	*Near Real-Time (NRT) Priority*		$0.064	Col B Line 4 * Line 7 / 12 * (Line 8 - 1) + Line 2
6	*Real-Time (RT) Priority*		$0.082	Col B Line 4 * Line 7 / 12 * (Line 9 - 1) + Line 3
7	**Direct Cost Factor [3]**		**0.133836**	
8	**Near Real-Time Incremental Cost Factor [4]**		**1.247484**	
9	**Real-Time Incremental Cost Factor [4]**		**1.494968**	

[1] Based on the 2022 RDTG Investment Study, the test and monitoring system was a common investment for CoS levels over intraswitch and interswitch EVCs. This common unit investment for the test and monitoring system was based on a lease cost model using a statewide service provider's test system. See National Exchange Carrier Association, Inc., Tariff F.C.C. No. 5, Transmittal No. 1302, filed March 8, 2011.

[2] Exhibit 3 Line 1, scaled to cost per 1Mbps.

[3] 2022 Annual Filing, Volume 5 Exhibit 4 Workpaper 1

[4] Incremental cost factor is from the 2022 Annual Filing, Volume 5 Exhibit 7 Workpaper 14. The incremental factors reflect incremental investment costs to account for the extra bandwidth reserved to support the CoS levels.

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ETHERNET TRANSPORT SERVICE

EXHIBIT 5

ETS PORT PROTECTION

INVESTMENTS AND COSTS

LINE NO.	DESCRIPTION	AVERAGE INVESTMENT PER BASIC PORT (A)	AVERAGE INVESTMENT PER CHANNEL TERMINATION (B)	AVERAGE INVESTMENT PER PORT PROTECTION STANDBY CIRCUIT (C) = A + B	MONTHLY UNIT COST (D) = (C* Line 3) / 12
	ETS Port Protection [1]				
1	50 Gbps or Higher (300 feet or less) [2]	$14,076.30	$8,027.60	$22,103.90	$246.52
2	50 Gbps or Higher (greater than 300 feet) [3]	$14,076.30	$55,412.75	$69,489.05	$775.01
3	**Direct Cost Factor** [4]	**0.133836**			

[1] The ETS Port Protection Feature is an optional feature which establishes a standby capability that will be activated to restore service should a failure occur in a customer's ETS Basic Port and/or associated ETS Channel Termination (CT). Unit investment cost for ETS Port Protection Feature is based on a standby circuit (i.e., a standby ETS Basic Port and associated CT).

[2] Unit investment for a standby circuit is a sum of unit investment costs of ETS 400 Gbps Basic Port and 400 Gbps CT 300 feet or less. A standby circuit will be placed into service only when the active Port or CT fails.

[3] Unit investment for a standby circuit is a sum of unit investment costs of ETS 400 Gbps Basic Port and 400 Gbps CT greater than 300 feet. A standby circuit will be placed into service only when the active Port or CT fails.

[4] 2022 Annual Filing, Volume 5 Exhibit 4 Workpaper 1

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ETHERNET TRANSPORT SERVICE

EXHIBIT 6

BASIC PORTS

PROPOSED RATES AND REVENUE

LINE NO.	DESCRIPTION	AVERAGE MONTHLY DEMAND W/O DISCOUNT [1] (A)	3 YEAR TERM DISCOUNT AVERAGE MONTHLY DEMAND (10% DISCOUNT) [1] (B)	5 YEAR TERM DISCOUNT AVERAGE MONTHLY DEMAND (20% DISCOUNT) [1] (C)	PROPOSED NON-DISCOUNTED UNIFORM RECURRING RATE (D)	RECURRING REVENUE (E) = 8 months * (A + B * .9 + C * .8) * D	NON-RECURRING DEMAND (F)	PROPOSED NON-RECURRING RATE (G)	NON-RECURRING REVENUE (H) = F * G
	ETS Basic Ports								
1	50 Gbps	0	0	0.83	$1,976.40	$10,515	0.83	$650.00	$540
2	100 Gbps	0	0	2.63	$2,196.00	$36,893	2.63	$650.00	$1,706
3	200 Gbps	0	0	0.00	$2,854.80	$0	0.00	$650.00	$0
4	400 Gbps	0	0	0.00	$3,711.24	$0	0.00	$650.00	$0
5	Subtotals					$47,408			$2,247
6	**Estimated Basic Port Recurring & Non-Recurring Revenue [2]**								$49,655

[1] Based on the 2022 RDTG ETS Demand Data Request, average monthly demand was estimated to reflect both new demand and migration demand from the existing speeds and adjusted for the remaining months of the test period.

[2] Column E + Column H in Line 5.

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ETHERNET TRANSPORT SERVICE

CHANNEL TERMINATION

PROPOSED RATES AND REVENUE

EXHIBIT 7

LINE NO.	DESCRIPTION	AVERAGE MONTHLY DEMAND W/O DISCOUNT [1] (A)	3 YEAR TERM DISCOUNT AVERAGE MONTHLY DEMAND (10% DISCOUNT) [1] (B)	5 YEAR TERM DISCOUNT AVERAGE MONTHLY DEMAND (20% DISCOUNT) [1] (C)	PROPOSED NON-DISCOUNTED UNIFORM RECURRING RATE (D)	RECURRING REVENUE (E) = 8 months * (A + B * .9 + C * .8) * D	NON-RECURRING DEMAND (F)	PROPOSED NON-RECURRING RATE (G)	NON-RECURRING REVENUE (H) = F * G
	Channel Termination 300 Feet or Less								
	Bandwidth Capacity:								
1	50 Gbps	0	0	0.42	$1,156.95	$3,078	0.42	$442.00	$184
2	100 Gbps	0	0	1.31	$1,349.78	$11,338	1.31	$442.00	$580
3	200 Gbps	0	0	0.00	$1,754.71	$0	0.00	$442.00	$0
4	400 Gbps	0	0	0.00	$2,281.12	$0	0.00	$442.00	$0
	Channel Termination greater than 300 Feet								
	Bandwidth Capacity:								
5	50 Gbps	0	0	0.42	$5,616.00	$14,940	0.42	$650.00	$270
6	100 Gbps	0	0	1.31	$6,739.20	$56,609	1.31	$650.00	$853
7	200 Gbps	0	0	0.00	$8,760.96	$0	0.00	$650.00	$0
8	400 Gbps	0	0	0.00	$11,389.25	$0	0.00	$650.00	$0
9	Subtotals					$85,965			$1,887
10	**Estimated Channel Termination Recurring & Non-Recurring Revenue [2]**								$87,852

[1] Based on the 2022 RDTG ETS Demand Data Request, average monthly demand was estimated to reflect both new demand and migration demand from the existing speeds and adjusted for the remaining months of the test period.

[2] Column E + Column H in Line 9.

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ETHERNET TRANSPORT SERVICE

EXHIBIT 8

ETHERNET VIRTUAL CONNECTIONS & EXTENDED ETHERNET VIRTUAL CONNECTIONS

PROPOSED RATES AND REVENUE

LINE NO.	DESCRIPTION	AVERAGE MONTHLY DEMAND W/O DISCOUNT [1] (A)	3 YEAR TERM DISCOUNT AVERAGE MONTHLY DEMAND (10% DISCOUNT) [1] (B)	5 YEAR TERM DISCOUNT AVERAGE MONTHLY DEMAND (20% DISCOUNT) [1] (C)	PROPOSED NON-DISCOUNTED UNIFORM RECURRING RATE (D)	RECURRING REVENUE (E) = 8 months * (A + B * .9 + C * .8) * D	NON-RECURRING DEMAND (F)	PROPOSED NON-RECURRING RATE (G)	NON-RECURRING REVENUE (H) = F * G
	Ethernet Virtual Connection (EVC)								
	Intra-switch Ethernet Virtual Connection with Capacity of:								
1	50 Gbps	0	0	0.42	$0.00	$0	0.42	$307.00	$128
2	100 Gbps	0	0	1.75	$0.00	$0	1.75	$307.00	$537
3	200 Gbps	0	0	0.00	$0.00	$0	0.00	$307.00	$0
4	400 Gbps	0	0	0.00	$0.00	$0	0.00	$307.00	$0
	Inter-switch Ethernet Virtual Connection with Capacity of:								
5	50 Gbps	0	0	0.42	$15,128.78	$40,246	0.42	$307.00	$128
6	100 Gbps	0	0	1.75	$16,809.75	$188,269	1.75	$307.00	$537
7	200 Gbps	0	0	0.00	$21,852.68	$0	0.00	$307.00	$0
8	400 Gbps	0	0	0.00	$28,408.48	$0	0.00	$307.00	$0
	Extended Ethernet Virtual Connection (E-EVC)								
	Extended Ethernet Virtual Connection with Capacity of:								
9	50 Gbps	0	0	0.00	$9,032.40	$0	0.00	$615.00	$0
10	100 Gbps	0	0	1.31	$10,161.45	$85,356	1.31	$615.00	$807
11	200 Gbps	0	0	0.00	$13,209.89	$0	0.00	$615.00	$0
12	400 Gbps	0	0	0.00	$17,172.85	$0	0.00	$615.00	$0
13	Subtotals					$313,871			$2,137
14	**Estimated EVC and E-EVC Recurring & Non-Recurring Revenue [2]**								$316,008

[1] Based on the 2022 RDTG ETS Demand Data Request, average monthly demand was estimated to reflect both new demand and migration demand from the existing speeds and adjusted for the remaining months of the test period.

[2] Column E + Column H in Line 13.

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ETHERNET TRANSPORT SERVICE
ETS OPTIONAL FEATURES
PROPOSED RATES AND REVENUE

EXHIBIT 9

LINE NO.	DESCRIPTION	AVERAGE MONTHLY DEMAND W/O DISCOUNT [1] (A)	3 YEAR TERM DISCOUNT AVERAGE MONTHLY DEMAND (10% DISCOUNT) [1] (B)	5 YEAR TERM DISCOUNT AVERAGE MONTHLY DEMAND (20% DISCOUNT) [1] (C)	PROPOSED NON-DISCOUNTED UNIFORM RECURRING RATE (D)	RECURRING REVENUE (E) = 8 months * (A + B * .9 + C * .8) * D	NON-RECURRING DEMAND (F)	PROPOSED NON-RECURRING RATE (G)	NON-RECURRING REVENUE (H) = F * G
	ETS Port Protection								
1	50 Gbps or Higher (300 feet or less)	0	0	0.42	$370.00	$984	0.42	$650.00	$270
2	50 Gbps or Higher (greater than 300 feet)	0	0	0.42	$930.00	$2,474	0.42	$650.00	$270
3	Subtotals					$3,458			$540
4	**Estimated Port Protection Recurring & Non-Recurring Revenue [2]**								$3,999

[1] Based on the 2022 RDTG ETS Demand Data Request, average monthly demand was estimated to reflect both new demand and migration demand from the existing speeds and adjusted for the remaining months of the test period.

[2] Column E + Column H in Line 3.

OCTOBER 17, 2022 NECA ACCESS CHARGE FILING

SPECIAL ACCESS REVENUE SUMMARY **EXHIBIT 10**

TEST PERIOD: JULY 1, 2022 - JUNE 30, 2023

LINE	DESCRIPTION	AMOUNT	SOURCE
1	Total ETS Basic Port Revenue	$49,655	Exhibit 6
2	Total ETS Channel Termination Revenue	$87,852	Exhibit 7
3	Total ETS EVC and Extended EVC Revenue	$316,008	Exhibit 8
4	Total ETS Optional Features Revenue	$3,999	Exhibit 9
5	Total Proposed Revenue Change from the Proposed New ETS Speeds	$457,513	Line 1 + Line 2 + Line 3 + Line 4
6	Projected Special Access Revenue in NECA *2022 Annual Filing*	$269,766,900	*2022 Annual Filing* : VOL 5 EX 9 WP 15 LINE 14
7	Revenue Impact for the remaining 8 months of the current test period	0.25%	LINE 5 / (LINE 6 x /12)