

NATIONAL EXCHANGE CARRIER ASSOCIATION, INC.
REVISIONS TO TARIFF F.C.C. NO. 5
DIGITAL SUBSCRIBER LINE SERVICE
ETHERNET TRANSPORT SERVICE
TRANSMITTAL NO. 1428
DESCRIPTION AND JUSTIFICATION

1. Introduction

The National Exchange Carrier Association, Inc. (NECA) is modifying Tariff F.C.C. No. 5 to introduce: 1) two new Symmetric Digital Subscriber Line (SDSL) Voice-Data and Data-Only speed options of 10/10 Mbps and 100/100 Mbps; 2) two new Asymmetric Digital Subscriber Line (ADSL) Data-Only speed options of 25/50 Mbps and 50/100 Mbps; and 3) a new Two-Way Ethernet Transport Service (ETS) Multi-Media Virtual Circuit Channel (MM-VCC) option available only for use with A/SDSL Access Services with upstream and downstream transmission capabilities of 10 Mbps or greater. This filing will also: 1) consolidate existing DSL Wholesale Pricing Plan (WPP) Term Plan options; 2) grandfather the existing SDSL Data-Only 2/2 Mbps and 4/4 Mbps speed options; 3) expand the nonrecurring charge (NRC) waiver provisions for A/SDSL Access Services; and 4) modifies A/SDSL conversion provision as described below.

The new SDSL speed options and Two-Way ETS MM-VCC option are being introduced to allow member companies who have deployed advanced broadband networks to offer their network and anchor customers higher speed broadband transmission services. The existing ADSL Data-Only speed options are being introduced to allow customers who subscribe to an ADSL Voice-Data option to keep the data portion of the service if they cancel their voice service.

2. Proposed Tariff Provision

2.1 SDSL 10/10 Mbps and 100/100 Mbps Voice-Data and Data-Only Service

This filing introduces two new SDSL Voice-Data and Data-Only speed options of 10 Mbps upstream/10 Mbps downstream (10/10 Mbps) and 100 Mbps upstream/100 Mbps downstream (100/100 Mbps), which will be available where technically feasible. Peak speeds are not guaranteed by the telephone company due to factors such as loop length which may affect the actual speeds delivered.

The SDSL Voice-Data and Data-Only 10/10 Mbps and 100/100 Mbps speed options are offered at both monthly rate banded retail and DSL Wholesale Pricing Plan (WPP) rates with WPP Term Plan Volume Pricing Plan discounts also available. A nonrecurring charge (NRC) applies per line for the installation of each SDSL Voice-Data and Data-Only 10/10 Mbps and 100/100 Mbps speed option.

Where suitable facilities exist, the Telephone Company will provision SDSL at speeds of 10/10 Mbps and 100/100Mbps in compliance with the requirements specified in the Technical References in Tariff F.C.C. No. 5 Section 8.2.2.

The NRC will be waived for each new SDSL Voice-Data or Data-Only 10/10 Mbps or 100/100 Mbps access line ordered when the customer commits to retain the SDSL Voice-Data or Data-Only 10/10 Mbps or 100/100 Mbps access line for a minimum period of six months following installation of service.

This filing also grandfathers the existing SDSL Data-Only 2/2 Mbps and 4/4 Mbps speed options. As of the effective date of this filing, customers cannot order and the telephone company will not provision any new SDSL 2 Mbps or 4 Mbps Data-Only service options. Any existing customer who previously purchased an SDSL Data-Only 2/2 Mbps or 4/4 Mbps speed option may retain such service at its existing location or may convert it to another speed option provided in the tariff.

This filing also expands the NRC waiver provision to include each new SDSL Data-Only 144/144 kbps and 768/768 kbps access line ordered when the customer commits to retain the SDSL Data-Only access line for a minimum period of six months following installation of service.

This filing also expands the NRC waiver provision to include each new SDSL Data-Only 256/256 kbps access line ordered when; 1) the customer has not previously had any ADSL or SDSL Access Service at the same location within the three months immediately prior to installing service; and 2) the customer commits to retain the SDSL Data-Only 256/256 kbps option Access Line for a minimum period of 6 months following installation of service.

Except as otherwise specified in Section 8.2.5(E), changes to an existing SDSL Voice-Data or Data-Only 10/10 Mbps or 100/100 Mbps access service will be treated as a discontinuance of the existing service and an installation of a new service. A nonrecurring installation charge will apply per SDSL access line for this work activity.

In addition, this filing modifies the provisions of SDSL service conversions to include: 1) a change from any SDSL Voice-Data or Data-Only speed level to an equal or greater SDSL Voice-Data or Data-Only speed level; 2) a change in service option (i.e., SDSL Voice-Data to SDSL Data-Only, or vice versa); or 3) any combination of a simultaneous change of service option or higher speed level. The provisions for SDSL upgrades are replaced by these conversion provisions.

Other existing regulations specified in Sections 8.2 and 8.5 of NECA Tariff F.C.C. No. 5 for SDSL access service apply to the new SDSL Voice-Data or Data-Only 10/10 Mbps and 100/100 Mbps speed options.

2.2 ADSL 25/50 Mbps and 50/100 Mbps Data-Only Service

This filing introduces two new ADSL Data-Only speed options of 25 Mbps upstream/50 Mbps downstream (25/50 Mbps) and 50 Mbps upstream/100 Mbps downstream (50/100 Mbps), which will be available where technically feasible. These new speeds are being introduced to allow customers who currently subscribe to ADSL Voice-Data services at these speeds and choose to no longer subscribe to voice service to continue to use telephone company provided broadband data service at the same speeds. Peak speeds are not guaranteed by the telephone company due to factors such as loop length that may affect the actual speeds delivered.

The ADSL Data-Only 25/50 Mbps and 50/100 Mbps speed options are offered at both monthly rate banded retail and DSL WPP rates with WPP Term Plan Volume Pricing Plan discounts also available. A NRC applies per line for the installation of each ADSL Data-Only 25/50 Mbps and 50/100 Mbps speed option.

This filing also eliminates the existing ADSL Data-Only 5/50 Mbps speed option. Existing customers who have purchased the ADSL Data-Only 5/50 Mbps speed option will automatically be converted by the telephone company to the ADSL Data-Only 25/50 Mbps option. There is no rate impact to customers since the ADSL Data-Only 25/50 Mbps rate is set equal to the ADSL Data-Only 5/50 Mbps rate. Since this is a telephone company initiated conversion, no NRC, Access Order Charge (AOC) or penalty for failing to meet the six month minimum commitment on the lower speed service will apply for this conversion.

In addition, this filing modifies the provisions of ADSL service conversions to include a change from any ADSL Voice-Data or Data-Only service option or speed level to any DSL Voice-Data or Data-Only service option of equal or greater downstream speed level.

Other existing regulations specified in Sections 8.1 and 8.5 of NECA Tariff F.C.C. No. 5 for ADSL access service apply to the new ADSL Data-Only 25/50 Mbps and 50/100 Mbps speed options.

2.3 DSL Wholesale Pricing Plan (WPP) Term Plan Revisions

The existing DSL WPP Term Plan is being revised to consolidate the DSL WPP Pricing Plan A and Pricing Plan B options into a single WPP Term Plan commitment option. The new option will be available with one-year and three-year term plan commitment periods. Rates for the new consolidated WPP Term Plan commitment option will initially be set at the existing WPP Pricing Plan B monthly rates.

Any existing customer who subscribed to a WPP Pricing Plan A will automatically be converted by the telephone company to the new consolidated WPP under the applicable one-year or three-

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year term commitment option with no change in its existing WPP term plan commitment period. The conversion of existing Pricing Plan A customers will result in monthly line charge reductions since the existing monthly line charges for the Pricing Plan A option are in all cases higher than the new consolidated WPP Term Plan rates.

Any existing customer who subscribed to a WPP Pricing Plan B will automatically be converted by the telephone company to the new consolidated WPP Term Plan under the applicable one-year or three-year term commitment option with no change in its existing WPP term plan commitment period. Since the monthly rates for the new consolidated WPP Term Plan commitment option are equal to the existing Pricing Plan B monthly rates, existing Pricing Plan B customers will see no change in their charges as a result of this filing.

An AOC or NRC will not apply for the conversion of existing Pricing Plan A or Pricing Plan B customers to the new consolidated WPP Term Plan commitment option. Pricing under the existing WPP Monthly Plan option remains unchanged.

The new DSL WPP structure provides a simplified term plan with one and three year commitments, each of which results in lower per-line rates than the Retail or WPP Monthly per-line rates. The optional WPP Term Plan Volume Pricing Plan remains unchanged.

2.4 Two-Way ETS MM-VCC

This filing introduces a new Two-Way ETS MM-VCC available in 10 Mbps increments of bandwidth capacity. The Two-Way ETS MM-VCC option is available only for use with those tariffed ADSL and SDSL access services having upstream and downstream transmission capabilities of 10 Mbps or greater, i.e., ADSL 25/50 Mbps, ADSL 50/100 Mbps, SDSL 10/10 Mbps and SDSL 100/100 Mbps. The total transmission capacity for ADSL or SDSL lines using the Two-Way MM-VCC option may not exceed 1 Gbps. Where suitable facilities exist, this new option will provide an ETS customer the ability to send and receive high speed multimedia transmissions between its Customer Designated Premises (CDP) and the premises of its end user customer.

Two-Way ETS MM-VCCs are only available when the ETS customer's CDP, the ETS customer's end user's premises and the telephone company's DSL Access Service Connection Point SWC are all located within the serving territory of the telephone company, and the end user customer's premises is equipped with tariffed ADSL or SDSL access service with upstream and downstream capabilities of 10 Mbps or greater provided by the telephone company as described above. Two-Way ETS MM-VCCs do not increase the bandwidth capacity of any other ETS elements purchased by the ETS customer and the transmission speed across the Two-Way ETS MM-VCC and related A/SDSL access service is not guaranteed.

Monthly rate banded and nonrecurring charges apply for each Two-Way ETS MM-VCC established by the telephone company in addition to applicable AOCs. The ETS customer may order multiple 10 Mbps increments in a single Two-Way ETS MM-VCC to an individual A/SDSL end user location. For example, an ETS customer may order an additional 40 Mbps of two-way bandwidth capacity to one of its A/SDSL end user customers. On its Access Order, the ETS customer would specify the end user customer premises address and order one Two-Way ETS MM-VCC made up of four 10 Mbps increments. In this example, the ETS customer would be billed an AOC, one nonrecurring charge for the single Two-Way ETS-MM-VCC and a monthly charge for the single Two-Way ETS MM-VCC calculated by multiplying the two-way 10 Mbps increment rate by four. The ETS customer may also order multiple Two-Way ETS MM-VCCs to multiple end users' locations on a single Access Order, in which case only one AOC would apply for that order in addition to the applicable nonrecurring charge for each Two-Way ETS MM-VCC established.

The Two-Way ETS MM-VCC monthly rate will be waived when the local exchange telephone service, A/SDSL access service and Two-Way ETS MM-VCC are all provided from the same serving wire center where the telephone company has located its DSL Access Service Connection Point. The ETS MM-VCC NRC will apply. When an ETS customer elects to change the bandwidth capacity of an existing Two-Way ETS MM-VCC, remove an existing ETS MM-VCC from its associated A/SDSL access service line, or convert from a One-Way ETS MM-VCC to a Two-Way ETS MM-VCC or the reverse, the ETS MM-VCC NRC will not apply. In lieu of this charge, the ETS Design Change Charge will apply.

Other existing regulations for One-Way ETS MM-VCCs as specified in Section 16.3.4(A)(6)(a) of NECA Tariff F.C.C. No. 5 will apply for the Two-Way ETS MM-VCC. ETS rate banding will apply to the new Two-Way ETS MM-VCC.

3. Proposed Rates and Charges

Monthly uniform rates are shown below for new elements. Uniform rates are average rates for the TS pool that takes into account rate band assignments. Proposed tariffed rates for each element for specific rate bands are shown in NECA Tariff F.C.C. No. 5 Sections 17.4.9(H) for DSL and 17.4.8(C) for ETS.

3.1 SDSL 10/10 Mbps and 100/100 Mbps

The monthly uniform recurring rates for the SDSL Voice-Data and Data-Only 10/10 Mbps and 100/100 Mbps speed options are shown in the table below:

Proposed Retail, WPP Monthly and WPP Term Plan Rates

Option	Retail	WPP Monthly Plan	WPP Term Plan	
Term Commitment	N/A	N/A	1 Year	3 Year
SDSL Voice-Data	Uniform Rates			
10/10 Mbps	\$45.28	\$44.20	\$24.26	\$17.11
100/100 Mbps	\$98.24	\$95.66	\$58.17	\$45.24
SDSL Data-Only	Uniform Rates			
10/10 Mbps	\$105.79	\$104.68	\$93.59	\$90.55
100/100 Mbps	\$198.00	\$195.00	\$148.00	\$135.00

The nonrecurring rate for SDSL Voice-Data 10/10 Mbps and 100/100 Mbps speed options is \$185.00 for all rate bands. The nonrecurring rate for SDSL Data-Only 10/10 Mbps and 100/100 Mbps speed options is \$211.00 for all rate bands.

3.2 ADSL Data-Only 25/50 Mbps and 50/100 Mbps

The monthly uniform recurring rates for the ADSL Data-Only 25/50 Mbps and 50/100 Mbps speed options are shown in the table below:

Proposed Retail, WPP Monthly and WPP Term Plan Rates

Option	Retail	WPP Monthly Plan	WPP Term Plan	
Term Commitment	N/A	N/A	1 Year	3 Year
ADSL Data-Only	Uniform Rates			
25/50 Mbps	\$160.78	\$149.58	\$127.17	\$122.69
50/100 Mbps	\$198.00	\$195.00	\$148.00	\$135.00

The nonrecurring rate for ADSL Data-Only 25/50 Mbps and 50/100 Mbps speed options is \$211.00 for all rate bands.

3.3 Two-way ETS MM-VCC

The proposed monthly uniform recurring rate for the Two-Way ETS MM-VCC is shown in the table below:

Two-Way ETS MM-VCC	
Monthly	Per 10 Mbps increment
Uniform Rate	\$ 5.40

The nonrecurring rate for the Two-Way ETS MM-VCC is \$7.00 for all rate bands. The nonrecurring charge is applied per Two-Way ETS MM-VCC regardless of the number of 10 Mbps increments ordered in a single Two-Way ETS MM-VCC.

4. Revenue, Cost, and Demand Support

NECA used previous Rate Development Task Group (RDTG)¹ surveys to develop the monthly unit costs underlying the introduction of the SDSL Voice-Data and Data-Only speed options of 10/10 Mbps and 100/100 Mbps and ADSL Data-Only speed options of 25/50 Mbps and 50/100 Mbps using both fiber-based and copper-based technologies. NECA also used previous studies to develop the monthly unit cost of a Two-Way ETS MM-VCC.

Exhibit 1, Lines 1 and 2 display the average unit investments previously collected in NECA's surveys for fiber-based and copper-based DSL technologies. The unit investment is multiplied by the Direct Cost Factor described in Volume 5, Section 3.B of the *2014 Annual Filing*² and divided by 12 to arrive at the monthly unit direct costs. Then the monthly unit transport cost is added to the monthly unit direct cost of the SDSL Voice-Data 10/10 Mbps and 100/100 Mbps speed options to arrive at the total monthly unit cost for the fiber-based and copper-based SDSL Voice-Data speed options, displayed in Exhibit 1, Lines 18, 19, 22, and 23.

For the SDSL Data-Only 10/10 Mbps and 100/100 Mbps speed options, the monthly unit loop cost is added to the monthly unit direct cost of the SDSL Voice-Data 10/10 Mbps and 100/100 Mbps speed options to arrive at the total monthly unit cost for the fiber-based and copper-based SDSL Data-Only speed options, displayed in Exhibit 1, Lines 20, 21, 24, and 25.

¹ 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 pooling companies and to facilitate the rate development process and provide supporting information for NECA tariff filings.

² See National Exchange Carrier Association, Inc., Transmittal No.1423, filed June 16, 2014 (*2014 Annual Filing*).

For the new ADSL Data-Only speed options of 25/50 Mbps and 50/100 Mbps, the monthly unit loop cost is added to the monthly unit direct cost of the ADSL Voice-Data 25/50 Mbps and 50/100 Mbps speed options to arrive at the total monthly unit cost for the fiber-based and copper-based ADSL Data-Only speed options, displayed in Exhibit 1, Lines 12, 13, 16, and 17.

Exhibit 2 displays the investments and monthly unit costs for the Two-Way ETS MM-VCC. The unit investment for the Two-Way ETS MM-VCC is the same as the One-Way ETS MM-VCC unit investment. NECA converted investment to a direct cost per unit using the “Direct Cost Factor” from the *2014 Annual Filing*, Volume 5, Exhibit 4, Workpaper 1.

Using an RDTG survey,³ NECA asked companies to project new demand and demand expected to migrate from current DSL options to the proposed new speed options. NECA also asked the RDTG to project demand for the proposed Two-Way ETS MM-VCC. Based on data gathered from the survey, NECA anticipates demand for the new services will develop over time.

Exhibit 3 shows projected new demand stimulation caused by introducing the new speed options. Survey respondents projected new subscriptions for the proposed new speed options. Based on the survey data, NECA estimated average monthly new demand during the remaining ten months of the current test period. NECA expects new demand to occur in the DSL WPP 3 Year Term option with 15% Volume Pricing Plan discount, which most DSL customers are currently using. Exhibit 3 Column A shows the overall projected average new demand quantity for each proposed option. In Exhibit 3 Column C, new demand quantities are multiplied by rates for the proposed option (Column B) to arrive at estimated new revenue for the sample companies for the remaining ten months of the 2014-2015 test period.

To estimate revenue for all participants in NECA’s DSL tariff, NECA used an expansion factor based on the ratio of DSL revenue for the companies in the NECA DSL tariff to DSL revenue for the sample companies who were surveyed, as displayed in Row 10 of Exhibit 3. Using the expansion factor, NECA estimated the new demand revenue for the remaining months of the 2014-2015 test period, which is displayed in Exhibit 3, Line 11.

Exhibit 4 shows migration revenue from the existing ADSL speed options to the proposed speed options (NECA expects de minimis revenue impact from converting any existing WPP Pricing Plan A subscribers to the new consolidated WPP). In the survey described above, NECA asked the companies to estimate migration from the current options to the new ADSL and SDSL options. The survey respondents indicated that most migration would occur from the current ADSL Voice-Data 1/6 Mbps and 3/15 Mbps speed options to the new SDSL 10/10 or 100/100 speed options Voice-Data during the remainder of the test period. NECA assumed one-tenth of migrations will

³ 2014 NECA DSL Data Request.

occur each month during the remaining current test period and migrations from the existing speed options to the new speed options will progress at an equal pace. Exhibit 4 Column B Lines 1 through Line 13 shows the estimated net migration revenue for the sample companies. These net migration revenues represent the difference between revenue under the current speed options and revenue under the new speed options. NECA used the current rate (Column C) and proposed rate (Column D) based on the DSL WPP 3 Year Term option with 15% Volume Pricing Plan for each speed option, which most NECA DSL tariff customers are currently using.

To estimate net migration revenue for all participants in NECA's DSL tariff, NECA used the same expansion factor as described above. Using the expansion factor, NECA estimated the net migration revenue for the remaining months of the 2014-2015 test period, which is displayed in Exhibit 4, Line 18.

Exhibit 5 displays a summary of projected revenue impacts attributable to the introduction of the proposed new services. NECA projects the total net revenue impact from these proposed changes for the remaining ten months of the 2014-2015 test period to be \$1.69 M as shown in Exhibit 5 Line 3. This indicates a 0.26% revenue increase from the filed special access revenue projection shown in Exhibit 5 line 4.

**AUGUST 15, 2014 NECA ACCESS CHARGE FILING
DSL SERVICES UNIT INVESTMENTS AND COSTS**

EXHIBIT 1

LINE	ITEM	AMOUNT	DESCRIPTION and SOURCE
	<u>Unit Investment Costs</u>		
1	Unit Investment Cost for DSL using FTTP	\$649.52	NECA 2008 FTTP Data Request ¹
2	Unit Investment Cost for DSL using VDSL	\$614.50	NECA 2008-2009 DSL Data Request ¹
3	Unit Investment Cost for Fiber Loops in FTTP	\$2,060.12	NECA 2008 FTTP Data Request ¹
	<u>Direct Cost Factor</u>		
4	Direct Cost Factor	0.148636	2014 NECA Annual Filing V5 EX 4 WP 1
	<u>Monthly Unit Loop Costs</u>		
5	Unit Direct Cost for a Copper Loop	\$26.86	2014 NECA Annual Filing V5 EX 6 WP 5
6	Unit Direct Cost for a Fiber Loop in FTTP	\$25.52	(LINE 3 * LINE 4) / 12
	<u>Monthly Unit Transport Cost</u> ²		
7	ETS EVC Unit Investment, per Mbps	\$54.10	2014 NECA Annual Filing V5 EX 7 WP 16
8	ETS EVC Monthly Unit Cost, per Mbps	\$0.67	LINE 7 * LINE 4 / 12
9	ETS EVC Monthly Unit Cost, per Mbps, per DSL subscriber	\$0.03	LINE 8 / 20
	<u>Monthly Unit Costs for DSL Access Services</u> ³		
10	ADSL Voice-Data (25/50 Mbps) using FTTP	\$9.72	(LINE 1 * LINE 4 / 12) + (LINE 9 * 50)
11	ADSL Voice-Data (25/50 Mbps) using Copper	\$9.29	(LINE 2 * LINE 4 / 12) + (LINE 9 * 50)
12	ADSL Data-Only (25/50 Mbps) using FTTP	\$35.24	LINE 10+ LINE 6
13	ADSL Data-Only (25/50 Mbps) using Copper	\$36.14	LINE 11+ LINE 5
14	ADSL Voice-Data (50/100 Mbps) using FTTP	\$11.40	(LINE 1 * LINE 4 / 12) + (LINE 9 * 100)
15	ADSL Voice-Data (50/100 Mbps) using Copper	\$10.96	(LINE 2 * LINE 4 / 12) + (LINE 9 * 100)
16	ADSL Data-Only (50/100 Mbps) using FTTP	\$36.91	LINE 14+ LINE 6
17	ADSL Data-Only (50/100 Mbps) using Copper	\$37.82	LINE 15+ LINE 5
18	SDSL Voice-Data (10/10 Mbps) using FTTP	\$8.38	(LINE 1 * LINE 4 / 12) + (LINE 9 * 10)
19	SDSL Voice-Data (10/10 Mbps) using Copper	\$7.95	(LINE 2 * LINE 4 / 12) + (LINE 9 * 10)
20	SDSL Data-Only (10/10 Mbps) using FTTP	\$33.90	LINE 18+ LINE 6
21	SDSL Data-Only (10/10 Mbps) using Copper	\$34.80	LINE 19+ LINE 5
22	SDSL Voice-Data (100/100 Mbps) using FTTP	\$11.40	(LINE 1 * LINE 4 / 12) + (LINE 9 * 100)
23	SDSL Voice-Data (100/100 Mbps) using Copper	\$10.96	(LINE 2 * LINE 4 / 12) + (LINE 9 * 100)
24	SDSL Data-Only (100/100 Mbps) using FTTP	\$36.91	LINE 22+ LINE 6
25	SDSL Data-Only (100/100 Mbps) using Copper	\$37.82	LINE 23+ LINE 5

1. 2008 NECA FTTP Data Request surveyed NECA's Rate Development Task Group (RDTG) and three other study areas. Unit investment cost for ADSL using FTTP includes Central Office Optical Line Terminal (OLT) equipment in Serving Wire Centers, OLT Field Terminal Equipment, interoffice or other transmission facility upgrades, FTTP Network Interface Devices, and engineering and installation.

NECA supplemented the 2008-2009 DSL Data Request, which surveyed the RDTG, with vendor information. Unit investment cost for ADSL using copper-based VDSL technology includes Digital Subscriber Line Access Multiplexer (DSLAM) equipment in Serving Wire Centers, DSLAM Field Terminal Equipment, CO Terminal, engineering and installation.

2. Transport costs are based on the use of packet transport to carry traffic from DSL Connection Points to DSL end-users. For Ethernet transport, the value of 20 for oversubscription is based on data received from the 2011 RDTG Broadband data request.

3. Transport cost is scaled by the appropriate bandwidth for the service.

4. The numbers in this exhibit have more significant digits than shown. As a result, the numbers in Line 10 through 25 may be slightly different from the numbers calculated by using the displayed numbers.

AUGUST 15, 2014 NECA ACCESS CHARGE FILING
ETHERNET TRANSPORT SERVICE
TWO-WAY ETS MULTIMEDIA VIRTUAL CIRCUIT CHANNEL (MM-VCC)
INVESTMENTS AND COSTS

EXHIBIT 2

LINE NO.	DESCRIPTION			UNIT INVESTMENT ² (A)	MONTHLY UNIT COST (B) = (A * Line 2) / 12
	TWO-WAY ETS MM-VCC				
1	MM-VCC with 10 Mbps Capacity, per end user ¹			\$26.86	\$0.33
2	Direct Cost Factor ³				0.148636

¹ NECA Transmittal No. 1157, February 2, 2007, which introduced Ethernet Transport Service, describes how investment was developed.

² From 2014 Annual Filing Volume 5 Exhibit 7 Workpaper 19.

³ From 2014 Annual Filing Volume 5 Exhibit 4 Workpaper 1.

**AUGUST 15, 2014 NECA ACCESS CHARGE FILING
SPECIAL ACCESS REVENUE
PROJECTED NEW DEMAND AND REVENUE FOR NEW DSL SPEED OPTIONS AND TWO-WAY ETS MM-VCC**

EXHIBIT 3

LINE	NEW DSL SERVICE	AVERAGE MONTHLY NEW DEMAND ¹ (TP1415) (A)	PROPOSED NEW SERVICE RATE ² (B)	REVENUE IMPACT AMOUNT (C = A*B*10 MONTHS)	SOURCE
	SDSL 10/10 Mbps				
1	SDSL 10/10 Mbps Voice-Data	391	\$14.54	\$56,851	
2	SDSL 10/10 Mbps Data-Only	105	\$76.97	\$80,819	
	SDSL 100/100 Mbps				
3	SDSL 100/100 Mbps Voice-Data	32	\$38.45	\$12,304	
4	SDSL 100/100 Mbps Data-Only	1	\$114.75	\$1,148	
	ADSL 50/100 Mbps				
5	ADSL 50/100 Mbps Data-Only	6	\$114.75	\$6,885	
	TWO-WAY ETS MM-VCC				
6	TWO-WAY MM-VCC	1,210	\$5.40	\$65,330	
7	subtotal			\$223,337	
8	Projected Revenue for Sample Study Areas:			\$16,787,156	
9	Projected Revenue for DSL Tariff Participants:			\$278,470,317	
10	Expansion Factor (= LINE9/ LINE8)			16.59	
11	Revenue Impact for the remaining 10 months of the current test period			\$3,704,775	LINE 7 * LINE 10

NOTE: 1. 2014 NECA DSL Data Request surveyed NECA's Rate Development Task Group (RDTG) members. NECA used the survey to estimate projected new demand revenue for the remaining 10 months of the current test period.

2. Proposed rate for DSL Wholesale Pricing Plan 3 Year Term with 15% Volume Pricing Plan.

3. Given the waiver provision for the non-recurring charge, NECA projects *de minimis* non-recurring revenue associated with the demand in this exhibit.

**AUGUST 15, 2014 NECA ACCESS CHARGE FILING
SPECIAL ACCESS REVENUE
MIGRATION TO NEW SPEED OPTIONS FROM THE EXISTING SPEED OPTIONS**

EXHIBIT 4

LINE	CURRENT DSL SERVICES (Upstream / Downstream Speed)	TOTAL MIGRATION DEMAND AT THE END OF THE TEST PERIOD BY SAMPLE COMPANIES ¹ (TP1415) (A)	AVERAGE MONTHLY MIGRATION DEMAND ² (MONTHLY LINES) (TP1415) (B)	CURRENT DSL SERVICE RATE ³ (C)	NEW DSL SERVICE (Upstream / Downstream Speed)	PROPOSED NEW SERVICE RATE ⁴ (D)	MIGRATION REVENUE IMPACT AMOUNT (E = (D-C)*B*10 MONTHS)	SOURCE
					SDSL 10/10 Mbps			
1	ADSL 1/6 Mbps Voice-Data	3,594	1,976	\$14.54	SDSL 10/10 Mbps Voice-Data	\$14.54	\$0	
2	ADSL 3/15 Mbps Voice-Data	2,901	1,596	\$21.55	SDSL 10/10 Mbps Voice-Data	\$14.54	-\$111,848	
3	ADSL 25/50 Mbps Voice-Data	250	137	\$23.14	SDSL 10/10 Mbps Voice-Data	\$14.54	-\$11,801	
4	ADSL 1/6 Mbps Data-Only	3,594	1,976	\$76.97	SDSL 10/10 Mbps Data-Only	\$76.97	\$0	
5	ADSL 3/15 Mbps Data-Only	2,901	1,596	\$81.25	SDSL 10/10 Mbps Data-Only	\$76.97	-\$68,290	
					SDSL 100/100 Mbps			
6	ADSL 1/6 Mbps Voice-Data	212	117	\$14.54	SDSL 100/100 Mbps Voice-Data	\$38.45	\$27,879	
7	ADSL 3/15 Mbps Voice-Data	150	83	\$21.55	SDSL 100/100 Mbps Voice-Data	\$38.45	\$13,943	
8	ADSL 25/50 Mbps Voice-Data	316	174	\$23.14	SDSL 100/100 Mbps Voice-Data	\$38.45	\$26,609	
9	ADSL 50/100 Mbps Voice-Data	32	18	\$38.45	SDSL 100/100 Mbps Voice-Data	\$38.45	\$0	
10	ADSL 5/50 Mbps Data-Only	6	3	\$104.29	SDSL 100/100 Mbps Data-Only	\$114.75	\$345	
					ADSL 50/100 Mbps			
11	ADSL 1/6 Mbps Data-Only	2	1	\$76.97	ADSL 50/100 Mbps Data-Only	\$114.75	\$416	
12	ADSL 3/15 Mbps Data-Only	6	3	\$81.25	ADSL 50/100 Mbps Data-Only	\$114.75	\$1,106	
13	ADSL 5/50 Mbps Data-Only	3	2	\$104.29	ADSL 50/100 Mbps Data-Only	\$114.75	\$173	
14	subtotal						-\$121,470	
15	Projected DSL Revenue for Sample Study Areas:						\$16,787,156	
16	Projected DSL Revenue for DSL Tariff Participants:						\$278,470,317	
17	Expansion Factor (= LINE16/ LINE15)						16.59	
18	Revenue Impact for the remaining 10 months of the current test period						-\$2,014,976	LINE 14 * LINE 17

NOTE: 1. 2014 NECA DSL Data Request surveyed NECA's Rate Development Task Group (RDTG) members. NECA used the survey to estimate demand migration to new speed options and net revenue impact for the remaining 10 months of the current test period.

2. Migration from the existing DSL options to a new speed option is assumed to progress at an equal pace for the remaining months of the current test period. For example, 3,594 total ADSL 1/6 Mbps Voice-Data subscribers will migrate to SDSL 10/10 Mbps Voice-Data by June 30, 2015. But, one-tenth of 3,594 will occur in each month. Migration adjusted average monthly subscription for SDSL 10/10 Mbps Voice-Data from the existing ADSL 1/6 Mbps Voice-Data is estimated at (1/10 + 2/10 + 3/10 + 4/10 + 5/10 + 6/10 + 7/10 + 8/10 + 9/10 + 10/10) x 3,594 x 1/10 = 1,976. The lines in Column B Line 1 through Line 13 reflect the progressive migration.

3. Based on NECA 2014-2015 Annual Filing, Vol. 5 Exhibit 8 Workpaper 3 and 4, NECA used current rates for DSL Wholesale Pricing Plan B 3 Year Term with 15% Volume Pricing Plan for each speed option, which most NECA DSL Tariff Participants are currently using.

4. Proposed rate for DSL WPP 3 Year Term with 15% Volume Pricing Plan.

5. Given the waiver provision for the non-recurring charge, NECA projects *de minimis* non-recurring revenue associated with the demand in this exhibit.

AUGUST 15, 2014 NECA ACCESS CHARGE FILING
SPECIAL ACCESS REVENUE SUMMARY
TEST PERIOD: JULY 1, 2014 - JUNE 30, 2015

EXHIBIT 5

LINE	DESCRIPTION	AMOUNT	SOURCE
1	Projected Revenue for New Demand by DSL Speed Options and Two-Way ETS MM-VCC	\$3,704,775	EXHIBIT 3 LINE 11
2	Proposed Net Revenue for Migration to New DSL Speed Options from the Existing DSL Speed Options	(\$2,014,976)	EXHIBIT 4 LINE 18
3	Total Proposed Revenue Change	\$1,689,799	LINE 1 + LINE 2
4	Projected Special Access Revenue in NECA 2014-2015 Annual Filing	\$774,492,973	2014 Annual Filing: VOL 5 EX 9 WP 15 LINE 14
5	Revenue Impact for the remaining 10 months of the current test period	0.26%	LINE 3 / (LINE 4 x 10 /12)