REPLY ATTACHMENT PDK-1

Public Service Company of New Hampshire
Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-005
Page 1 of 2

Witness: Edward A. Davis
Request from: Time Warner/ Comcast

Question:
As referenced on page 4, lines 2- 5 and footnote 1 of Mr. Davis's testimony, please: a) Explain Mr. Davis's understanding of the term "exogenous events" as defined in PSNH's Settlement Agreement, and provide the specific basis of his understanding. b) Pursuant to the above definition of exogenous events, please state whether it is Mr. Davis's belief that the "just and reasonable" PSNH pole rates proposed by Ms. Kravtin at page 65 Table 4 of her testimony, if adopted by the PUC, would trigger an exogenous event. If his answer is yes, please provide the specific basis for that belief, along with supporting calculations. c)Pursuant to the above definition of exogenous events, please state whether it is Mr. Davis's belief that the pole rates proposed by Mr. Davis on pages 16 through 18 ofhis testimony, if adopted by the PUC, would trigger an exogenous event. If his answer is yes, please provide the specific basis for that belief, along with supporting calculations.

Response:
Exogenous events are defined in the "Settlement Agreement on Permanent Distribution Service Rates" approved by the Commission in Docket No. DE 09-035, Order No. 25,123 dated June 28, 2010 in Docket No. DE 09-035. The Settlement Agreement defines exogenous events, in substantive part, as follows:

> 12.2 For any of the events defined as a State Initiated Cost Change, Federally Initiated Cost Change, Regulatory Cost Reassignment, or Externally Imposed Accounting Rule Change, during the term of this Settlement Agreement, PSNH will be allowed to adjust distribution rates upward or downward (to the extent that the revenue impact of such event is not otherwise captured through another rate mechanism that has been approved by the Commission) if the total distribution revenue impact (positive or negative) of all such events exceeds $1,000,000 (Exogenous Events Rate Adjustment Threshold) in any calendar year beginning with 2010.
>
> > 12.2.1 "State Initiated Cost Change" shall mean:
> > (i) any externally imposed changes in state or local law or regulatory mandates or changes in other precedents governing income, revenue, sales, franchise, or property or any new or amended regional, state or locally imposed fees (but excluding the effects of routine annual changes in municipal, county and state property tax rates and revaluations), which impose new obligations, duties or undertakings, or remove existing obligations, duties or undertakings, and which individually decrease or increase PSNH's distribution costs, revenue, or revenue requirement.

Ms. Kravtin's testimony proposes a change to the methodology used to calculate pole attachmnet rates. If adopted, that change would be a "State Initiated Cost Change" since it would constitute an "externally imposed change...in other precedents governing income, revenue,...which individually decrease[s] PSNH's...revenue..."

PSNH's proposal in this docket is to retain the existing methodology for calculating pole attachment rates until the next rate case, but to update the data used in the formula rate calculation. Therefore, PSNH's proposal would not constitute an exogenous event since it would not be a state initiated cost change, nor would it involve any change to methodology.

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Q-TW-COMCAST-005, Page 2 of 2

Regardless of whether either or both proposals would be deemed an exogenous event by the Commission, in order for PSNH's distribution rates to be changed under the Settlement Agreement, the net impact of all exogenous events must exceed the threshhold level of $1 million annually. Therefore, absent any other exogenous events, it may be a moot point as to whether the proposed changes are deemed exogenous events.

PSNH is proposing an update to the rate calculation to avoid a subsidization by PSNH's customers of attachers to PSNH's facilities. PSNH's proposal is independent of whether such changes are deemed exogenous events.

REPLY ATTACHMENT PDK-2

Public Service Company of New Hampshire
Cost of Service Study
Book Year - Twelve Months Ending December 31, 2008
(All Amounts in $000)

Table 5

	Account IN/OUT	Description	Allocator	TOTAL RETAIL	Rate R Total	PLISH	QR	CWH	LCS/ COPE	Rate G Total	PLISH	QR	CWH	LCS/ COPE
1	A	B	C	D	E	F	G	H	I	J	K	L	M	N
2														
3														
4														
5														
6		OPERATING REVENUES												
7														
8	440-447	Sales Revenue	ASALES_REV	244,217	134,976	130,847	3,729	93	307	58,462	58,298	136	2	26
9	440-447UN	Unbilled Sale Revenue	AUN_REV	(1,248)	(717)	(669)	(51)	(1)	(6)	(315)	(313)	(1)	-	(1)
10	440-447RESALE	Sales Revenue/Resale Customers	A360	4,957	2,197	2,008	120	-	69	1,144	1,141	1	0	2
11	447DistCR	Dist. Credit Sp. Pricing Cust.	ASALES_REV	-	-	-	-	-	-	-	-	-	-	-
12														
13	REV_SAL_Billed	Total Sales Revenue		247,926	136,456	132,186	3,798	92	370	59,291	59,126	136	2	27
14														
15		OTHER OPERATING REVENUES												
16														
17	450	Late Payment Charge	ALATE_PYMNT	2,802	1,574	1,574	-	0	-	508	507	0	0	1
18														
19	451SEC	Service Charge	ASEC_REV	2,728	2,484	2,484	-	-	-	244	244	0	-	0
20	451RCC	Returned Check Charge	ARCC_REV	36	32	32	-	-	-	4	4	0	-	-
21	451IDC	Interval Data Charge	AIDC_REV	49	-	-	-	-	-	-	-	-	-	-
22	451MTC	Meter Translation Charge	AMTC_REV	1	-	-	-	-	-	-	-	-	-	-
23	451LEC	Line Extension Charge	ALEC_REV	492	214	214	-	-	-	287	287	-	-	-
24	451VIC	Rate VIP Interruption Credits	AVIC_REV	-	-	-	-	-	-	-	-	-	-	-
25	451Mis	Misc. Service Revenue	RB_PLT_D_O	53	35	34	1	0	0	10	10	0	0	0
26														
27	REV_OTH_ELEC_451	Misc. Service Revenue		3,359	2,765	2,764	1	0	0	546	545	0	0	0
28														
29	454APP	Apparatus Rental	ARental_REV	2,530	-	-	-	-	-	30	30	-	-	-
30	454CELL	Cell Tower & Misc. buildings Rent	RB_PLT_D_O_360	-	-	-	-	-	-	-	-	-	-	-
31	454MISC	Misc Property Rent	RB_PLT_D_O	-	-	-	-	-	-	-	-	-	-	-
32	454POLE	Pole Attachment & Cable TV Rent	RB_PLT_D_O_364_OH	1,899	1,389	1,389	-	-	-	316	316	-	-	-
33														
34	REV_OTH_ELEC_454	Rental Revenue		4,429	1,389	1,389	-	-	-	347	347	-	-	-
35														
36	456	RRB Servicing fee& mis Rev.	RB_PLT_D_O	1,082	721	699	14	0	7	201	201	0	0	0
37														
38	REV_OTH_ELEC	Total Other Revenue		11,672	6,449	6,427	15	0	8	1,602	1,600	1	0	1
39														
40	REV	Total Revenue		259,598	142,905	138,613	3,812	92	378	60,893	60,726	137	2	28
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Public Service Company of New Hampshire
Cost of Service Study
Proforma - Twelve Months Ending December 31, 2008
(All Amounts in $000)

Table 1B

	Account IN/OUT	Description	LINE REFERENCE	Allocator	TOTAL RETAIL	Rate GV	Rate LG	Rate B	Rate OL	Rate EOL
	A	B		C	D	O	P	Q	R	S
		REVENUE REQUIREMENT								
RB		TOTAL RATE BASE	Pg. 9, Ln 47		777,118	54,890	29,403	3,418	13,592	14,725
		OPERATING REVENUES								
440-447		Sales Revenue	Pg. 11, Ln 8	ASALES_REV	243,533	28,249	13,789	1,167	3,899	3,131
440-447UN		Unbilled Sale Revenue	Pg. 11, Ln 9	AUN_REV	(1,246)	(105)	(87)	(12)	(12)	-
447DistCR		Dist. Credit Sp. Pricing Cust.	Pg. 11, Ln 10	ASALES_REV	397	46	22	2	6	5
440-447Resale		Sales Revenue/Resale Customers	Pg. 11, Ln 11	A360	4,957	937	575	71	14	13
REV_OTH_ELEC		Total Other Revenue	Pg. 11, Ln 38		12,009	2,819	631	26	57	63
REV		Total Revenue	Pg. 11, Ln 40		259,648	31,946	14,930	1,254	3,985	3,212
		OPERATING EXPENSES								
EXP_O&M		Total O&M Expense	Pg. 17, Ln 22		152,454	10,631	6,113	564	2,254	2,766
EXP_DEP		Total Depreciation Expense	Pg. 19, Ln 41		38,679	2,337	1,233	141	1,104	751
EXP_AMORT		Total Amortization Expense	Pg. 19, Ln 45		6,265	398	230	21	70	104
EXP_TAX_OTI		Total Taxes Other than Income Tax	Pg. 21, Ln 28		30,207	2,027	1,081	123	618	579
EXP_NUPER_411		NUSCO Permanent Differences	Pg. 1, Ln 36		(222)	(15)	(8)	(1)	(5)	(4)
4_CUR_TAX		Total Current Adjusted Taxes	Pg. 23, Ln 54		(33,413)	3,550	895	(34)	(1,102)	(1,323)
Post_Tax_Adj_DIT		Provision for Deferred Income Tax	Pg. 25, Ln 18		35,178	2,470	1,321	154	637	668
Post_Tax_Adj_ITC		Investment Tax Credit Adjustment	Pg. 25, Ln 20		(132)	(9)	(5)	(1)	(3)	(3)
OPERATING _EXPENSE		Operating Expense	Lns 21 thru 28		229,018	21,390	10,860	966	3,573	3,539
426		Donations, net of tax		NET_RETURN	283	101	39	3	4	(3)
431		Return on Customer Deposit		NET_RETURN	131	45	17	1	2	(1)
3_OP_EXP_ADJ		Operating Expense, Adjusted	Lns 30+32+33	Formula	229,440	21,536	10,916	970	3,579	3,535
3_OP_INC		Total Operating Income, Adjusted	Ln17 - Ln35	Formula	30,208	10,410	4,014	284	387	(323)
3_NEW_RETURN		CLAIMED RATE OF RETURN	Ln 7*0.08108	Formula	63,009	4,451	2,384	277	1,102	1,194
3_CHG_RETURN		Change in Return	Ln 39 - Ln 37	Formula	32,801	(5,960)	(1,630)	(7)	715	1,516
3_CHG_TAX		Change in Income Tax	Ln 41 * 0.6814	Formula	22,350	(4,061)	(1,111)	(5)	487	1,033
3_CHG_REV		Change in Revenue	Ln 41 + Ln 43	Formula	55,151	(10,021)	(2,740)	(12)	1,203	2,550
3_REVREQ		Revenue Requirement @ 8.108% ROR	Ln 17 + Ln 45	Formula	314,799	21,926	12,189	1,243	5,188	5,762
3_ICE_EXP		Major Ice Storm Costs		RB_PLT_D_O	9,085	615	323	38	201	178
3_REP_EXP		Reliability Enhancement Program		RB_PLT_D_O	4,000	271	142	17	89	79
4_???_EXP		Provision for Ice Storm & REP	Ln 49 + Ln 50		13,085	886	466	55	290	257
3_REV_REQ		Total Revenue Requirement	Ln 47 + Ln 52	Formula	327,884	22,812	12,655	1,298	5,478	6,019
3_D_REVREQ		Dist. Rev. Requirement @ 8.108% ROR	L 54-L12-L13-L15	Formula	312,166	19,161	11,537	1,213	5,398	5,943
3_D_REVREQ		CUSTOMER		Formula	116,016	2,273	1,271	33	3,557	2,983
		CUST_PRI			60,976	153	13	2	85	29
		CUST_SEC			36,531	-	-	-	1,470	2,661
		DEMAND_NCP_P			77,828	13,527	8,980	1,125	226	212
		DEMAND_NCP_S			9,528	-	-	-	39	37
		DEMAND_NCP_DA			2,639	2,144	450	10	-	-
		DEMAND_NCP_MS			3,212	-	-	-	5	5
		DEMAND_COINCIDENT_PEAK			5,437	1,063	823	43	16	16
		REVENUE			-	-	-	-	-	-
				Total	312,166	19,161	11,537	1,213	5,398	5,943

Public Service Company of New Hampshire
Cost of Service Study
Proforma - Twelve Months Ending December 31, 2008
(All Amounts in $000)

Table 5

	Account W/OUT	Description	Allocator	TOTAL RETAIL	Rate R Total	PLISH	OR	CWH	LCS/ COPE	Rate G Total	PLISH	OR	CWH	LCS/ COPE
1														
2														
3	A	B	C	D	E	F	G	H	I	J	K	L	M	N
4														
5														
6		OPERATING REVENUES												
7														
8	440-447	Sales Revenue	ASALES_REV	243,533	134,874	130,749	3,726	93	306	58,424	58,261	135	2	26
9	440-447UN	Unbilled Sale Revenue	AUN_REV	(1,248)	(717)	(659)	(51)	(1)	(6)	(315)	(313)	(1)	-	(1)
10	440-447RESALE	Sales Revenue/Resale Customers	A360	4,957	2,201	2,011	120	-	69	1,146	1,143	1	0	2
11	447DistCR	Dist. Credit Sp. Pricing Cust.	ASALES_REV	397	220	213	6	0	0	95	95	0	0	0
12														
13	REV_SAL_Billed	Total Sales Revenue		247,639	136,578	132,315	3,801	92	370	59,350	59,186	136	2	27
14														
15		OTHER OPERATING REVENUES												
16														
17	450	Late Payment Charge	ALATE_PYMNT	2,802	1,574	1,574	-	0	-	508	507	0	0	1
18														
19	451SEC	Service Charge	ASEC_REV	3,240	2,915	2,915	-	-	-	325	324	1	-	0
20	451RCC	Returned Check Charge	ARCC_REV	36	32	32	-	-	-	4	4	0	-	-
21	451IDC	Interval Data Charge	AIDC_REV	49	-	-	-	-	-	-	-	-	-	-
22	451MTC	Meter Translation Charge	AMTC_REV	1	-	-	-	-	-	-	-	-	-	-
23	451LEC	Line Extension Charge	ALEC_REV	492	214	214	-	-	-	287	287	-	-	-
24	451VIC	Rate VIP Interruption Credits	AVIC_REV	-	-	-	-	-	-	-	-	-	-	-
25	451Mis	Misc. Service Revenue	RB_PLT_D_O	53	35	34	1	0	0	10	10	0	0	0
26														
27	REV_OTH_ELEC_451	Misc. Service Revenue		3,871	3,195	3,195	1	0	0	626	625	1	0	0
28														
29	454APP	Apparatus Rental	ARental_REV	2,531	-	-	-	-	-	30	30	-	-	-
30	454CELL	Cell Tower & Misc. buildings Rent	RB_PLT_D_O_360	-	-	-	-	-	-	-	-	-	-	-
31	454MISC	Misc Property Rent	RB_PLT_D_O	-	-	-	-	-	-	-	-	-	-	-
32	454POLE	Pole Attachment & Cable TV Rent	RB_PLT_D_O_364_OH	1,899	1,390	1,390	-	-	-	317	317	-	-	-
33														
34	REV_OTH_ELEC_454	Rental Revenue		4,430	1,390	1,390	-	-	-	347	347	-	-	-
35														
36	456	RRB Servicing fee& mis Rev.	RB_PLT_D_O	906	602	584	11	0	6	169	168	0	0	0
37														
38	REV_OTH_ELEC	Total Other Revenue		12,009	6,762	6,743	12	0	6	1,553	1,548	1	0	1
39														
40	REV	Total Revenue		259,648	143,339	139,058	3,813	92	376	61,001	60,834	137	2	28
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REPLY ATTACHMENT PDK-3

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-009
Page 1 of 2

Witness: Edward A. Davis
Request from: Time Warner/ Comcast

Question:
Please state whether PSNH has ever increased or decreased its pole attachment rates absent a rate case proceeding before the New Hampshire Public Utilities Commission. If so, please identify the dates when those increases or decreases occurred, and the dollar amount of each rate increase or decrease. Please explain how any such increases or decreases were factored into PSNH's revenue requirements in the Settlement Agreement or in otherwise setting PSNH's electric rates.

Response:
PSNH recalculates its pole attachment rates annually using the Company's latest FERC Form 1 information. The pole attachment rate calculated from the FERC Form 1 data from the Test Year used in the Company's latest rate case resulted in the pole attachment revenues that were factored into PSNH's revenue requirement, for which the ultimate retail electric distribution service rates were determined. The pole attachment revenues included in the rate case were calculated using the same methodology used at the present time. As stated in Mr. Davis's testimony, a change in the pole attachment rate methodology should correspond with a recalculation of all retail electric distribution service rates.

Please see the attached file for the pole attachment rates PSNH issued from 2009 to current.

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Data Request TW-COMCAST-01
Dated 09/28/2012
Q-TW-COMCAST-009, Page 2 of 2

Solely Owned			
		Telecom	
Year	CATV	Urban	Non-Urban
2009	$8.87	$13.42	$20.23
2010	$8.06	$12.19	$18.38
2011	$8.38	$12.67	$19.10
2012	$10.07	$15.22	$22.96

Jointly Owned			
		Telecom	
Year	CATV	Urban	Non-Urban
2009	$4.44	$6.71	$10.12
2010	$4.03	$6.10	$9.19
2011	$4.19	$6.34	$9.55
2012	$5.04	$7.61	$11.48

REPLY ATTACHMENT PDK-4

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-010
Page 1 of 1

Witness: Edward A. Davis
Request from: Time Warner/ Comcast

Question:
Please provide any and all analyses by PSNH that identities or quantifies the "commensurate changes to PSNH's delivery rates" associated with changes in pole attachment rates as referenced on pages 3-4 of Mr. Davis's testimony.

Response:
The Company has not performed a specific analysis of such change. Any change to pole attachment rate methodologies currently employed would result in a change in the unit rate charged to attaching entities. For a given test year, a change in revenues resulting from such change would result in a change in revenue requirements responsibility and, accordingly, delivery rates (i.e., distribution rates) that the Company would seek approval of by the Commission in a contested proceeding.

REPLY ATTACHMENT PDK-5

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-006
Page 1 of 1

Witness: Edward A. Davis
Request from: Time Warner/ Comcast

Question:
As referred to in Mr. Davis's testimony on page 4, lines 18-22, please identify the dollar amount of the pole attachment revenues incorporated in the revenue requirement reflected in the Settlement Agreement. As part of the answer to this request, please identify any and all assumptions that were used by PSNH to quantify the pole attachment revenues incorporated in the revenue requirement reflected in the Settlement Agreement. For each year please break out the amount of revenue attributable to (a) cable attachments and (b) communications attachments separately with respect to Time Warner Cable, Comcast and all other attachers. Please identify all assumptions made by PSNH in developing the amount of these revenues. Provide documentation to support your answer.

Response:
Objection: PSNH objects to the Data Request, calls for information that is presently in the possession of the requesting party, and it seeks information beyond the time period relevant to the issues in this action. In particular, PSNH notes that the Commission has defined the scope of its jurisdiction for this proceeding to "the prospective [pole attachment] rate setting issues in this case...", specifically "the terms of the parties' agreement, with particular emphasis on the rate setting provisions, to determine whether they are just and reasonable in light of the relevant and applicable state and federal law." Time Warner Entertainment Co. Inc. d/b/a Time Warner Cable, Petition for Resolution of Dispute with Public Service of New Hampshire, Order on Jurisdiction, Scope, Interventions and Schedule, Order No. 25,387 (July 3, 2012).

Without waiving objections, the Company states that the total amount of pole attachment rental revenue included in the Company's revenue requirement calculation in DE 09-035 was $1,899,000. The amount of revenue included in the case was obtained from the Company's accounting records from January 1 to December 31, 2008. The Company did not perform any proforma adjustments to pole attachment revenues.

Time Warner Cable and Comcast already possess their own respective billing invoices which were issued to them by PSNH.

REPLY ATTACHMENT PDK-6

Public Service Company of New Hampshire
Docket No. DT 12-084

Data Request SEGTEL-01
Dated: 09/28/2012
Q-SEGTEL-006
Page 1 of 1

Witness: **Edward A. Davis**
Request from: **segTEL, Inc.**

Question:
Please refer to your testimony at page 7, line 12-14. Please identify all decreases in costs that PSNH would experience related to unusable space if no communication attachers occupy the pole.

Response:
Objection: PSNH objects to the Data Request, calls for a hypothetical response, speculation or conjecture. Without waiving objections, the Company is not claiming that the costs related to unusable space would decrease if no communications attachers occupy the pole. Please see Mr. Davis's testimony on page 6, line 15. The Company is advocating that the costs related to unusable space should be shared equally by all attaching entities, including PSNH, since all attachments benefit equally from being supported by this space.

REPLY ATTACHMENT PDK-7

Public Service
of New Hampshire

60 W. Pennacook Street, Manchester, NH 03101

Public Service Company of New Hampshire
P.O. Box 330
Manchester, NH 03105-0330
(603) 669-4000

The Northeast Utilities System

November 5, 2007

Time Warner
380 Union St.
Littleton, NH 03561

Dear Sir or Madam:

Per Appendix I, Attachment Fees and Charges of your Aerial License Agreement, this letter is to inform you of a change in our pole attachment fees. The rates below will become effective on January 1, 2008.

ATTACHMENT RATES					
		COMMUNICATIONS			
TV & Internet Joint	4.43	Non-Urbanized Joint	10.11	Urbanized Joint	6.71
TV & Internet Sole	8.86	Non-Urbanized Sole	20.22	Urbanized Sole	13.41
TV & Internet Tri	2.77	Non-Urbanized Tri	6.32	Urbanized Tri	4.19

If you have any questions, please contact me at (603)634-3502.

Very truly yours,

Marjorie Landry
PSNH Field Services

REPLY ATTACHMENT PDK-8

Time Warner Entertainment L.P. d/b/a Time Warner Cable
NH PUC Docket DT 12-084
Witness: Patricia D. Kravtin
August 17, 2012

PSNH Data Request 12

Referencing page 25, lines 11 – 12, please quantify the impact of pole attachment rental revenues per electric customer. Also, please quantify the impact of pole attachment rental fees per broadband customer and per cable customer.

Response:

The requested analysis using data for PSNH is provided in Attachment PDK-PSNH-12. *See also* corroborating analyses presented in the FCC National Broadband Report at 128-129, and cited in the FCC April 7, 2011 Order at ¶¶ 175, 179.

DT 12-084
PDK-PSNH-12
PAGE 1

PDK-PSNH-12

IMPACT OF HIGHER PROPOSED POLE ATTACHMENT RATE ON AVERAGE BASIC CABLE, BROADBAND, AND ELECTRIC SUBSCRIBER

I.	Impact on BASIC CABLE Subscriber:				
	Year Ending			2010	Source
1	PSNH Proposed	Sole/3AE	$	22.96	PDK Table 4
2	Unified J&R	Sole/3AE	$	10.05	PDK Table 4
3	Difference in Rate		$	12.91	L1-L2
4	Households per Mile			15	FCC Natl Broadband Rpt, p.128.
5	Subs per Mile @%Take Rate	46.5%		6.975	FCC Video Comptn Rpt,¶142.
6	Poles per Mile			35	FCC Natl Broadband Rpt, p.128.
7	Subscribers per Pole			0.20	L5/L6
8	Annual Impact per Basic Cable Sub:		$	**64.78**	L3/L7

II.	Impact on BROADBAND Subscriber:				
	Year Ending			2010	Source
1	PSNH Proposed	Sole/3AE	$	22.96	PDK Table 4
2	Unified J&R	Sole/3AE	$	10.05	PDK Table 4
3	Difference in Rate		$	12.91	L1-L2
4	Households per Mile			15	FCC Natl Broadband Rpt, p.128.
5	Subs per Mile @%Take Rate	30%		4.5	FCC Natl Broadband Rpt, p.128.
6	Poles per Mile			35	FCC Natl Broadband Rpt, p.128.
7	Subscribers per Pole			0.13	L5/L6
8	Annual Impact per Broadband Sub:		$	**100.41**	L3/L7

PDK-PSNH-12

III. Impact on ELECTRIC Subscriber:			
9 Number of Poles		265071	PSNH Filing
10 Avg No Attaching Entities		3	PSNH Filing
11 Avg No. 3rd Party Pole Attachments		530142	L9*(L10-1)
12 Annual Pole Rev at Proposed Rate	$	12,172,060	L11*L1
13 Annual Pole Rev at J&R Rate	$	5,327,927	L11*L2
14 Difference in Pole Revenues	$	6,844,133	L12-L13
15 Avg No Residential Subs		420437	FERC p.304
16 Annual Rev Impact per Sub	**$**	**16.28**	L14/L15
17 Avg Annual KWh per Sub		7467	FERC p.304
18 Annual Rev Impact per Kwh	**$**	**0.0022**	L16/L17

REPLY ATTACHMENT PDK-9

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-011
Page 1 of 1

Witness: **Edward A. Davis**
Request from: **Time Warner/ Comcast**

Question:
Please refer to page 4 of Mr. Davis's testimony and provide any and all analyses by PSNH, its experts and consultants, of the relative rate impact of a change in pole attachment rates on a PSNH electric delivery customer as compared with a cable customer and a broadband customer, as requested of Ms. Kravtin in PSNH Data Request 12. To the extent PSNH's analysis uses input assumptions that differ from those used by Ms. Kravtin in her response to PSNH Data Request 12, please provide any studies, reports, or analyses that support PSNH's assumptions.

Response:
The Company has not performed such impact analysis. However, in reviewing the response to PDK-PSNH-12, the Company notes that there are a number of incorrect assumptions in the calculations shown. The use of an average of 2 attaching entities for all poles, coupled with the assumption that all such entities are subject to the non-urban telecommunications rate of $22.96 grossly overstates the total attachment revenue that would be billed by the Company (i.e., $12.2 M in that data response versus the actual PSNH pole attachment revenue of $1.9 M that is applied to revenue requirements when setting PSNH customer rates, as indicated in response to Q-TW-COMCAST-6). Accordingly, this assumption also grossly inflates the comparison revenue ($5.3 M). It is also not clear from that analysis that the nationwide figures cited from FCC National Broadband Report data provided on page 1 are representative of actual subscribers in New Hampshire or of the electric service customers of PSNH.

REPLY ATTACHMENT PDK-10

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-014
Page 1 of 1

Witness: **Edward A. Davis**
Request from: **Time Warner/ Comcast**

Question:
Please state on cents per kilowatt hour basis, the rate increases that would be required from each customer class if PSNH's current pole attachment rates were the unified broadband rates calculated by using the FCC's cable rate formula as indicated in the pre-filed testimony of Patricia Kravtin dated July 20, 2012 on page 55, Table 3 ($5.03/attachment on jointly owned poles and $10.07/attachment for solely owned poles).

Response:
Objection: PSNH objects to the Data Request, it is overly broad, unduly burdensome, and seeks information that is not within PSNH's possession, custody or control and calls for a special study or the creation of documents that do not currently exist. Without waiving objections, in order to perform such calculation the Company would need a significant amount of additional information that is not known or available to perform the requested calculation. A change in pole attachment rate alone (in this case, a proposed reduction in attachment rates) is insufficient. Given that changes in rates are not typically made on the basis of single issues, but rather would be proposed and submitted to the Commission at the time of a comprehensive distribution rate case (which would not be filed until the end of the Settlement period), additional information associated with the test year for such filing would need to be developed. For a given change in pole attachment rates, the number of attaching entities billed under each such rate, along with any proforma adjustments, would need to be determined in order to calculate pole attachment revenues. Furthermore, an allocated cost of service study and comprehensive set of distributed test year revenue requirements, sales and revenue upon which a rate change filing would be made would need to be developed. Revenues at current rates, along with proforma pole attachment revenue, would need to be developed, allocated among customer classes and compared with revenue requirements of each customer class to determine total cost responsibility and ultimately revenues proposed to be recovered from each class. Any such proposed changes in rates would be subject to review and approval of the Commission before a derivation of the rates requested could be determined.

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-015
Page 1 of 1

Witness: **Edward A. Davis**
Request from: **Time Warner/ Comcast**

Question:
Please state on cents per kilowatt hour basis, the rate increases that would be required from each customer class if PSNH's current pole attachment rates were calculated using the FCC's revised telecom rate formula as codified in 47 C.F.R. §1.1409(e)(2)(i). Please provide your calculations and any supporting documentation.

Response:
Objection: PSNH objects to the Data Request, it is overly broad, unduly burdensome, seeks information that is not within PSNH's possession, custody or control and calls for a special study or the creation of documents that do not currently exist. Without waiving any objections, please see response to Q-TW-COMCAST-014.

REPLY ATTACHMENT PDK-11

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-012
Page 1 of 1

Witness: Edward A. Davis
Request from: Time Warner/ Comcast

Question:
Please state whether Mr. Davis agrees that the price elasticity of demand for broadband services is greater than that of PSNH's electric delivery service. If his answer is anything other than an unqualified yes, please identify the basis of his disagreement with that statement and provide any studies, reports or analyses that support his position.

Response:
Objection: PSNH objects to the Data Request, calls for opinion, speculation or conjecture and for information neither relevant to the claims or defenses in this litigation nor reasonably calculated to lead to the discovery of material and admissible evidence.

REPLY ATTACHMENT PDK-12

INFRASTRUCTURE

CHAPTER 6

JUST AS WIRELESS NETWORKS USE PUBLICLY OWNED SPECTRUM, wireless and wired networks rely on cables and conduits attached to public roads, bridges, poles and tunnels. Securing rights to this infrastructure is often a difficult and time-consuming process that discourages private investment. Because of permitting and zoning rules, government often has a significant role in network construction. Government also regulates how broadband providers can use existing private infrastructure like utility poles and conduits. Many state and local governments have taken steps to encourage and facilitate fiber conduit deployment as part of public works projects like road construction. Similarly, in November 2009, the Federal Communications Commission (FCC) established timelines for states and localities to process permit requests to build and locate wireless equipment on towers.[1]

While these are positive steps, more can and should be done. Federal, state and local governments should do two things to reduce the costs incurred by private industry when using public infrastructure. First, government should take steps to improve utilization of existing infrastructure to ensure that network providers have easier access to poles, conduits, ducts and rights-of-way. Second, the federal government should foster further infrastructure deployment by facilitating the placement of communications infrastructure on federally managed property and enacting "dig once" legislation. These two actions can improve the business case for deploying and upgrading broadband network infrastructure and facilitate competitive entry.

RECOMMENDATIONS

Improving utilization of infrastructure

- The FCC should establish rental rates for pole attachments that are as low and close to uniform as possible, consistent with Section 224 of the Communications Act of 1934, as amended, to promote broadband deployment.
- The FCC should implement rules that will lower the cost of the pole attachment "make-ready" process.
- The FCC should establish a comprehensive timeline for each step of the Section 224 access process and reform the process for resolving disputes regarding infrastructure access.
- The FCC should improve the collection and availability of information regarding the location and availability of poles, ducts, conduits and rights-of-way.
- Congress should consider amending Section 224 of the Act to establish a harmonized access policy for all poles, ducts, conduits and rights-of-way.
- The FCC should establish a joint task force with state, Tribal and local policymakers to craft guidelines for rates, terms and conditions for access to public rights-of-way.

Maximizing impact of federal resources

- The U.S. Department of Transportation (DOT) should make federal financing of highway, road and bridge projects contingent on states and localities allowing joint deployment of conduits by qualified parties.
- Congress should consider enacting "dig once" legislation applying to all future federally funded projects along rights-of-way (including sewers, power transmission facilities, rail, pipelines, bridges, tunnels and roads).
- Congress should consider expressly authorizing federal agencies to set the fees for access to federal rights-of-way on a management and cost recovery basis.
- The Executive Branch should develop one or more master contracts to expedite the placement of wireless towers on federal government property and buildings.

6.1 IMPROVING UTILIZATION OF INFRASTRUCTURE

The cost of deploying a broadband network depends significantly on the costs that service providers incur to access conduits, ducts, poles and rights-of-way on public and private lands.[2] Collectively, the expense of obtaining permits and leasing pole attachments and rights-of-way can amount to 20% of the cost of fiber optic deployment.[3]

These costs can be reduced directly by cutting fees. The costs can also be lowered indirectly by expediting processes and decreasing the risks and complexities that companies face as they deploy broadband network infrastructure.

The FCC has already begun to take important steps in this direction with policies that will speed the deployment of wireless equipment on towers. With regard to other infrastructure such as utility poles, the FCC has authority to improve the deployment process and should use that authority. Lowering the costs of infrastructure access involves every level of government; active consultation among all levels of government will be needed to put in place pro-deployment policies such as joint trenching, conduit construction and placement of broadband facilities on public property.

RECOMMENDATION 6.1: The FCC should establish rental rates for pole attachments that are as low and close to uniform as possible, consistent with Section 224 of the Communications Act of 1934, to promote broadband deployment.

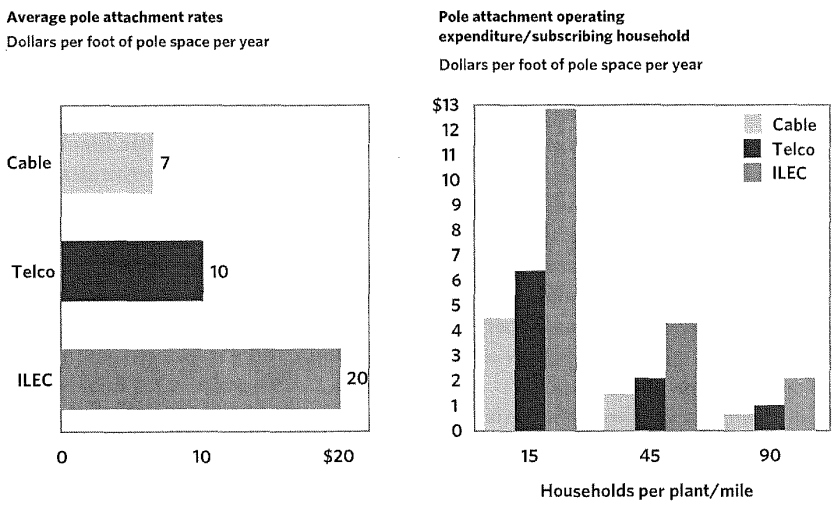
As Exhibit 6-A shows, the rental rates paid by communications companies to attach to a utility pole vary widely—from approximately $7 per foot per year for cable operators to $10 per foot per year for competitive telecommunications companies to more than $20 per foot per year for some incumbent local exchange carriers (ILECs).[4] The impact of these rates can be particularly acute in rural areas, where there often are more poles per mile than households.[5] In a rural area with 15 households per linear mile, data suggest that the cost of pole attachments to serve a broadband customer can range from $4.54 per month per household passed (if cable rates are used) to $12.96 (if ILEC rates are used). If the lower rates were applied, and if the cost differential in excess of $8 per month were passed on to consumers, the typical monthly price of broadband for some rural consumers could fall materially.[6] That could have the added effect of generating an increase—possibly a significant increase—in rural broadband adoption.

Different rates for virtually the same resource (space on a pole), based solely on the regulatory classification of the attaching provider, largely result from rate formulas established by Congress and the FCC under Section 224 of the Communications Act of 1934, as amended ("the Act").[8] The rate structure is so arcane that, since the 1996 amendments to Section 224, there has been near-constant litigation about the applicability of "cable" or "telecommunications" rates to broadband, voice over Internet protocol and wireless services.[9]

To support the goal of broadband deployment, rates for pole attachments should be as low and as close to uniform as possible. The rate formula for cable providers articulated in Section 224(d) has been in place for 31 years and is "just and reasonable" and fully compensatory for utilities.[10] Through a rulemaking, the FCC should revisit its application of the telecommunications carrier rate formula to yield rates as close as possible to the cable rate in a way that is consistent with the Act.

Applying different rates based on whether the attacher is classified as a "cable" or a "telecommunications" company distorts attachers' deployment decisions. This is especially true with regard to integrated, voice, video and data networks. This uncertainty may be deterring broadband providers that pay lower pole rates from extending their networks or adding capabilities (such as high-capacity links to wireless towers). By

Exhibit 6-A: Annual Pole Rates Vary Considerably by Provider Type[7]



expanding networks and capabilities, these providers risk having a higher pole rental fee apply to their entire network.[11]

FCC rules that move toward low rates that are as uniform as possible across service providers would help remove many of these distortions. This approach would also greatly reduce complexity and risk for those deploying broadband.

RECOMMENDATION 6.2: The FCC should implement rules that will lower the cost of the pole attachment "make-ready" process.

Rearranging existing pole attachments or installing new poles—a process referred to as "make-ready" work—can be a significant source of cost and delay in building broadband networks. FiberNet, a broadband provider that has deployed 3,000 miles of fiber in West Virginia, states that "the most significant obstacle to the deployment of fiber transport is FiberNet's inability to obtain access to pole attachments in a timely manner."[12]

Make-ready work frequently involves moving wires or other equipment attached to a pole to ensure proper spacing between equipment and compliance with electric and safety codes. The make-ready process requires not only coordination between the utility that owns the pole and a prospective broadband provider, but also the cooperation of communications firms that have already attached to the pole. Each attaching party is generally responsible for moving its wires and equipment, meaning that multiple visits to the same pole may be required simply to attach a new wire.

Reform of this inefficient process presents significant opportunities for savings. FiberNet commented that its make-ready charges for several fiber runs in West Virginia averaged $4,200 per mile and took 182 days to complete,[13] but the company estimates that these costs should instead have averaged $1,000 per mile.[14] Another provider, Fibertech, states that the make-ready process averages 89 days in Connecticut and 100 days in New York, where state commissions regulate the process directly.[15]

Delays can also result from existing attachers' action (or inaction) to move equipment to accommodate a new attacher, potentially a competitor.[16] As a result, reform must address the obligations of existing attachers as well as the pole owner.

An evaluation of best practices at the state and local levels reveals ample opportunities to manage this process more efficiently. Yet, absent regulation, pole owners and existing attachers have few incentives to change their behavior.

To lower the cost of the make-ready process and speed it up, the FCC should, through rulemaking:

- Establish a schedule of charges for the most common categories of work (such as engineering assessments and pole construction).
- Codify the requirement that gives attachers the right to use space- and cost-saving techniques such as boxing or extension arms where practical and in a way that is consistent with pole owners' use of those techniques.[17]
- Allow prospective attachers to use independent, utility-approved and certified contractors to perform all engineering assessments and communications make-ready work, as well as independent surveys, under the joint direction and supervision of the pole owner and the new attacher.[18]
- Ensure that existing attachers take action within a specified period (such as 30 days) to accommodate a new attacher. This can be accomplished through measures such as mandatory timelines and rules that would allow the pole owner or new attacher to move existing communications attachments if the timeline is not met.
- Link the payment schedule for make-ready work to the actual performance of that work, rather than requiring all payment up front.

These cost-saving steps can have an immediate impact on driving fiber deeper into networks, which will advance the deployment of both wireline and wireless broadband services.

RECOMMENDATION 6.3: The FCC should establish a comprehensive timeline for each step of the Section 224 access process and reform the process for resolving disputes regarding infrastructure access.

There are no federal regulations addressing the duration of the entire process for obtaining access to poles, ducts, conduit and rights-of-way. While the FCC in the past has recognized that "time is critical in establishing the rate, terms and conditions for attaching," current FCC rules only require that a utility provide a response to an application within 45 days.[19] The FCC does not have any deadlines for subsequent steps in the process, which can drag on for months if not years.[20] This causes delays in the deployment of broadband to communities and anchor institutions.[21]

Several states, including Connecticut and New York, have established firm timelines for the entire process, from the day that a prospective attacher files an application, to the issuance of a permit indicating that all make-ready work has been completed.[22] Timelines speed the process considerably in states where they have been implemented,[23] thus facilitating the deployment of broadband.

The FCC should establish a federal timeline that covers each step of the pole attachment process, from application to issuance of the final permit. The federal timeline should be implemented through a rulemaking and be comprehensive and applicable to all forms of communications attachments.[24] In addition, the FCC should establish a timeline for the process of certifying wireless equipment for attachment.[25]

The FCC also should institute a better process for resolving access disputes. For large broadband network builds, the pole attachment process is highly fragmented and often involves dozens of utilities, cable providers and telecommunications providers in multiple jurisdictions. Yet there is no established process for the timely resolution of disputes.[26]

The FCC has the authority to enforce its pole attachment rules, but today it generally attempts to informally resolve attachment disputes through mediation. This process has significant flaws. Under the current system of case-by-case adjudication, the attacher always bears the burden of bringing a formal complaint.[27] The formal dispute rules also do not provide for compensation dating from the time of the injury, so attachers have minimal incentive to initiate costly formal pole attachment cases that may linger for years.

Also, because time is often of the essence during the make-ready process, methods for resolving disputes over application of individual safety and engineering standards may be necessary. Informal local procedures and mediation may sometimes result in satisfactory settlements, but they do not create precedents for what constitutes a "just and reasonable" practice under Section 224 of the Act.

In revising its dispute resolution policies, the FCC should consider approaches that not only speed the process but also provide future guidelines for the industry. Institutional changes, such as the creation of specialized fora and processes for attachment disputes, and process changes, such as target deadlines for resolution, could expedite dispute resolution and serve the overarching goal of lowering costs and promoting rapid broadband deployment. The FCC also could use its authority under Section 224 to require utilities to post standards and adopt procedures for resolving safety and engineering disagreements and encourage appropriate state processes for resolving such disputes. Finally, awarding compensation that dates from the denial of access could stimulate swifter resolution of disputes.

RECOMMENDATION 6.4: The FCC should improve the collection and availability of information regarding the location and availability of poles, ducts, conduits and rights-of-way.

There are hundreds of private and public entities that own and control access to poles, ducts, conduits and rights-of-way, and an even greater number of parties that use that infrastructure. Accurate information about pole owners and attachments is critical if there is to be a timely and efficient process for accessing and utilizing this important infrastructure.[28] The FCC should ensure that attachers and pole owners have the data they need to lower costs and accelerate the buildout of broadband networks.

Consistent with its current jurisdiction under Section 224, the FCC should ensure that information about utility poles and conduits is up-to-date, readily accessible and secure, and that the costs and responsibility of collecting and maintaining data are shared equitably by owners and users of these vital resources. For example, data could be collected systematically as in Germany, which is mapping fiber, ducts and conduits and is planning to coordinate these data with information about public works and infrastructure projects.[29] Existing industry efforts to collect and coordinate data could be expanded and made more robust.[30] In addition, the participation of all pole owners subject to Section 224 and attaching parties in any such database effort could be regulated and streamlined. These databases should be easily searchable, identify the owner of each pole and should contain up-to-date records of attachments and make-ready work that has been performed. For conduits and ducts, any database should note whether there is space available. Whichever methods are used, data must be regularly updated, secure and accessible in order to further the FCC's efforts to ensure that broadband providers have efficient access to essential infrastructure information.

RECOMMENDATION 6.5: Congress should consider amending Section 224 of the Act to establish a harmonized access policy for all poles, ducts, conduits and rights-of-way.

Even if the FCC implemented all of the recommendations related to its Section 224 authority, additional steps would be needed to establish a comprehensive national broadband infrastructure policy. As previously discussed, without statutory change, the convoluted rate structure for cable and telecommunications providers will persist. Moreover, due to exemptions written into Section 224, a reformed FCC regime would apply to only 49 million of the nation's 134 million poles.[31] In particular, the statute does not apply in states that adopt their own system of regulation and exempts poles owned by co-operatives, municipalities and non-utilities.[32]

The nation needs a coherent and uniform policy for broadband access to privately owned physical infrastructure. Congress should consider amending or replacing Section 224 with a harmonized and simple policy that establishes minimum standards throughout the nation—although states should remain free to enforce standards that are not inconsistent with federal law. The new statutory framework could provide that:

- All poles, ducts, conduits and rights-of-way be subject to a regulatory regime addressing a minimum set of criteria established by federal law.
- All broadband service providers, whether wholesale or retail, have the right to access pole attachments, ducts, conduit and rights-of-way based on reasonable rates, terms and conditions.
- Infrastructure access be provided within standard timelines established by the FCC, and that the FCC has the authority to award damages for non-compliance.

- The FCC has the authority to compile and update a comprehensive database of physical infrastructure assets.

RECOMMENDATION 6.6: The FCC should establish a joint task force with state, Tribal and local policymakers to craft guidelines for rates, terms and conditions for access to public rights-of-way.

Because local, state, Tribal and federal governments control access to important rights-of-way and facilities, a comprehensive broadband infrastructure policy necessarily requires a coordinated effort among all levels of government.

There is wide diversity among state and local policies regarding access to and payment for accessing public rights-of-way. Many jurisdictions charge a simple rental fee. Other jurisdictions use other compensation schemes, including per-foot rentals, one-time payments, in-kind payments (such as service to public institutions or contributions of fiber to city telecommunications departments) and assessments against general revenues.[33] Some jurisdictions calculate land rental rates based on local real estate "market value" appraisals.

Many states have limited the rights-of-way charges that municipalities may impose, either by establishing uniform rates (Michigan) or by limiting fees to administrative costs (Missouri).[34] Other states, including South Carolina, Illinois and Florida, do not allow municipalities to collect rights-of-way fees directly; instead, the state compensates local governments for the use of their rights-of-way with proceeds from state-administered telecommunications taxes.

Broadband service providers often assert that the expense and complexity of obtaining access to public rights-of-way in many jurisdictions increase the cost and slow the pace of broadband network deployment.[35] Representatives of state and local governments dispute many of these contentions.[36] However, nearly all agree that there can and should be better coordination across jurisdictions on infrastructure issues.[37]

Despite past efforts by the National Telecommunications and Information Administration (NTIA) and the National Association of Regulatory Utility Commissioners (NARUC),[38] a coordinated approach to rights-of-way policies has not taken hold. There are limits to state and local policies; Section 253 of the Communications Act prohibits state and local policies that impede the provision of telecommunications services while allowing for rights-of-way management practices that are nondiscriminatory, competitively neutral, fair and reasonable.[39] However, disputes under Section 253 have lingered for years, both before the FCC and in federal district courts.[40]

In consultation and partnership with state, local and Tribal authorities, the FCC should develop guidelines for public rights-of-way policies that will ensure that best practices from state and local government are applied nationally. For example, establishing common application information and inspection protocols could lower administrative costs for the industry and governmental agencies alike. Fee structures should be consistent with the national policy of promoting greater broadband deployment. A fee structure based solely upon the market value of the land being used would not typically take into account the benefits that the public as a whole would receive from increased broadband deployment, particularly in unserved and underserved areas. In addition, broadband network construction often involves multiple jurisdictions. The timing of the process and fee calculations by one local government may not take into account the benefits that constituents in neighboring jurisdictions would receive from increased broadband deployment. The cost and social value of broadband cut across political boundaries; as a result, rights-of-way policies and best practices must reach across those boundaries and be developed with the broader public interest in mind.

To help develop this consistent rights-of-way policy, the FCC should convene a joint task force of state, local and Tribal authorities with a mandate to:

- Investigate and catalog current state and local rights-of-way practices and fee structures, building on NTIA's 2003 compendium and the 2002 NARUC Rights-of-Way Project.
- Identify public rights-of-way and infrastructure policies and fees that are consistent with the national public policy goal of broadband deployment and those that are inconsistent with that goal.[41]
- Identify and articulate rights-of-way construction and maintenance practices that reduce overall capital and maintenance costs for both government and users and that avoid unnecessary delays, actions, costs and inefficiencies related to the construction and maintenance of broadband facilities along public rights-of-way.[42]
- Recommend appropriate guidelines for what constitutes "competitively neutral," "nondiscriminatory" and "fair and reasonable" rights-of-way practices and fees.
- Recommend a process for the FCC to use to resolve disputes under Section 253. Creating a process should expedite resolution of public rights-of-way disputes in areas either unserved or underserved by broadband.

The FCC should request that the task force make its recommendations within six months of the task force's creation. These recommendations should then be considered by the FCC as part of a proceeding that seeks industry-wide comment on these issues.

6.2 MAXIMIZING IMPACT OF FEDERAL RESOURCES

Federal government can also play an important role in directly lowering the costs of future infrastructure deployment. The federal government has already made efforts to simplify access to federal rights-of-way under President George W. Bush,[43] and to improve access to federal government facilities for wireless services under President William J. Clinton.[44] However, policies have generally taken a permissive approach, simply allowing the federal government to take steps, rather than requiring that those steps be taken.

RECOMMENDATION 6.7: The U.S. Department of Transportation (DOT) should make federal financing of highway, road and bridge projects contingent on states and localities allowing joint deployment of conduits by qualified parties.

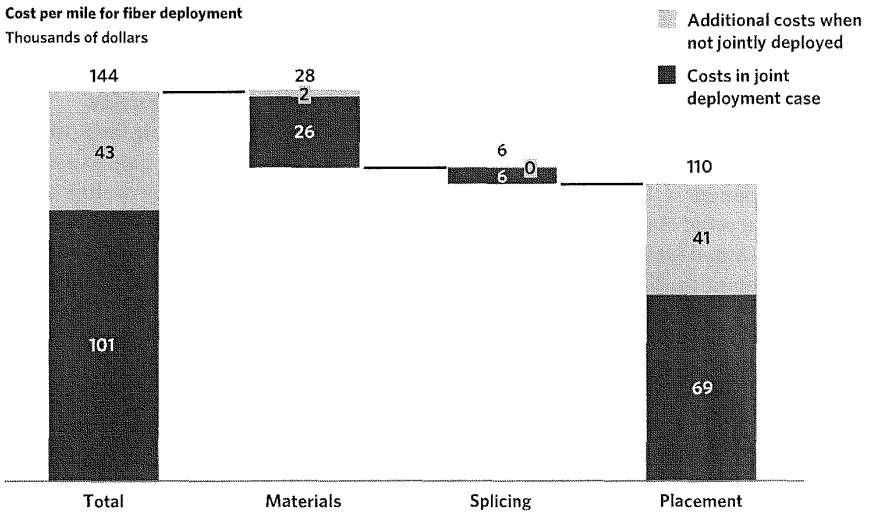
RECOMMENDATION 6.8: Congress should consider enacting "dig once" legislation applying to all future federally funded projects along rights-of-way (including sewers, power transmission facilities, rail, pipelines, bridges, tunnels and roads).

Although pushing fiber deeper into broadband networks considerably improves the performance and reliability of those networks, deploying a mile of fiber can easily cost more than $100,000 (see Exhibit 6-B). The largest element of deployment costs is not the fiber itself, but the placement costs associated with burying the fiber in the ground (or attaching it to poles in an aerial build). These placement costs can, in certain cases, account for almost three-quarters of the total cost of fiber deployment. Running a strand of fiber through an existing conduit is 3–4 times cheaper than constructing a new aerial build.[45]

Substantial savings can be captured if fiber builds are coordinated with other infrastructure projects in which the right-of-way (e.g., road, water, sewer, gas, electric, etc.) is already being dug. For example, the city of San Francisco has a "trench once" policy, in which a 5-year moratorium is placed on opening up a road bed once the trench along that road bed has been closed.[47] San Francisco uses a notification process to ensure that other interested parties have the opportunity to install conduits and cabling in the open trench.[48] The city of Boston has implemented a "Shadow Conduit Policy," in which the first company to request a trench takes a lead role, inviting other companies to add additional empty (or "shadow") conduits for future use by either the city of Boston or a later entrant.[49] The city of Chicago seeks to "inexpensively deploy excess conduit when streets are opened for other infrastructure and public works projects."[50] In the Netherlands, a committee in the city of Amsterdam similarly coordinates digging and trenching activities between the public and private sector.[51]

These policies have clear benefits, as shown by the case of Akron, Ohio. When Akron was deploying facilities and conduit to support its public safety network, it shared those facilities with OneCommunity, a northeast Ohio public-private partnership that aggregates demand by public institutions and private

Exhibit 6-B: Joint Deployment Can Materially Reduce the Cost of Fiber Deployment[46]



broadband service providers. As a result of that coordination, those same facilities and conduits now support health care institutions, schools and Wi-Fi access in Akron.[52] Similarly, along Interstate 91 in western Massachusetts, collaboration among the Massachusetts Department of Transportation, the Massachusetts Broadband Institute and the federal DOT is resulting in the installation of 55 miles of fiber optic cable with 34 interconnection points.[53]

DOT should implement "joint trenching" and conduit policies to lower the installation costs for broadband networks.[54] At a minimum, states and localities undertaking construction along rights-of-way that are partially or fully financed by DOT should be required to give at least 90 days' notice before projects begin. This would allow private contractors or public entities to add conduits for fiber optic cables in ways that do not unreasonably increase cost, add to construction time or hurt the integrity of the project. Opportunities for joint trenching and conduit deployment are varied, from construction of Intelligent Transportation Systems alongside interstates to building and maintenance of recreational rail trails.[55] As a result, information about potential joint trenching and conduit deployment opportunities should be available and accessible to prospective broadband network providers whenever government engages in an infrastructure project, subject to security precautions.

Congress also should consider enacting "dig once" legislation to extend similar joint trenching requirements to all rights-of-way projects (including sewers, power transmission facilities, rail, pipelines, bridges, tunnels and roads) receiving federal funding.

RECOMMENDATION 6.9: Congress should consider expressly authorizing federal agencies to set the fees for access to federal rights-of-way on a management and cost recovery basis.

RECOMMENDATION 6.10: The Executive Branch should develop one or more master contracts to expedite the placement of wireless towers on federal government property and buildings.

The federal government is the largest landowner in the country—650 million acres, constituting nearly one-third of the land area of the United States.[56] The federal government's General Services Administration (GSA) also owns or leases space in 8,600 buildings nationwide.[57] To effectively deploy broadband, providers often need to be able to place equipment on this federally controlled property, or to use the rights-of-way that pass through the property.

Based on an August 1995 executive memorandum by President Clinton,[58] GSA developed guidelines to allow wireless antennas on federal buildings and land.[59] Additionally, since 1989, GSA has run the National Antenna Program to facilitate wireless tower placement on federal government buildings.[60] On more than 1,900 buildings administered by GSA, there are currently antennas covered by approximately 100 leases that result in millions of dollars in revenue for the Federal Buildings Fund annually.[61] For each of the leases managed by GSA, market rent is charged, and the leases are tightly crafted to cover rooftop space, specific equipment and technology.

Even given this progress, the federal government can do more to facilitate access to its rights-of-way and facilities that it either develops or maintains. In many instances, federal law currently requires that rental fees for rights-of-way controlled by federal agencies be based upon the market value of the land. As a result, these fees are often much higher than the direct costs involved.[62] To facilitate the development of broadband networks, Congress should consider allowing all agencies to set the fees for access to rights-of-way for broadband services on the basis of a direct cost recovery approach, especially in markets currently underserved or unserved by any broadband service provider.

The Executive Branch should also develop one or more master contracts for all federal property and buildings covering the placement of wireless towers. The contracts would apply to all buildings, unless the federal government decides that local issues require non-standard treatment. In the master contracts, GSA should also standardize the treatment of key issues covering rooftop space, equipment and technology. The goal of these master contracts would be to lower real estate acquisition costs and streamline local zoning and permitting for broadband network infrastructure.

While reducing the prices for leases on government property may reduce fees paid to governments at the local, state and federal levels, the decline in prices may also greatly increase the number of companies that acquire leases on government property. In any case, the increased deployment of broadband will stimulate investment and benefit society.

CHAPTER 6 ENDNOTES

1 *Petition for Declaratory Ruling to Clarify Provisions of Section 332(c)(7)(B) to Ensure Timely Siting Review and to Preempt Under Section 253 State and Local Ordinances that Classify All Wireless Siting Proposals as Requiring a Variance*, WT Docket No. 08-165, Declaratory Ruling, 24 FCC Rcd 13994 (2009).

2 *See* Letter from Judith A. Dumont, Director, Massachusetts Broadband Initiative, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 09-47, 09-51, 09-137 (Jan. 8, 2010) (Dumont Jan. 8, 2010 *Ex Parte*) at 2 (noting that permitting requirements and procedures for rights of way, poles, conduits and towers "are key to the efficient and streamlined deployment of broadband," and that difficulties in such access "often prove to be the greatest impediment to the efficient, cost-effective, and timely deployment of broadband.").

3 We derive this estimate from several sources. Omnibus Broadband Initiative, The Broadband Availability Gap. (forthcoming) *See* Letter from Thomas Jones, Counsel to FiberNet, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 09-51, WC Docket No. 07-245 (Sept. 16, 2009) (FiberNet Sept. 16, 2009 *Ex Parte*) at 20 (noting average cost for access to physical infrastructure of $4,611–$6,487 per mile); *Comment Sought on Cost Estimates for Connecting Anchor Institutions to Fiber—NBP Public Notice #12*, GN Docket Nos. 09-47, 09-51, 09-137, Public Notice, 24 FCC Rcd 12510 (2009) (*NBP PN #12*) App. A (Gates Foundation estimate of $10,500–$21,120 per mile for fiber optic deployment); *see also* Letter from Charles B. Stockdale, Fibertech, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 09-47, 09-51, 09-137 (Oct. 28, 2009) at 1–2 (estimating costs ranging from $3,000–$42,000 per mile).

4 One wireless carrier has cited instances in which it has been asked to pay a rental rate of $1,200–$3,000 per pole per year. *See, e.g.*, Letter from T. Scott Thompson, Counsel for NextG Networks, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 07-245, RM-11293, RM-11303 (June 27, 2008) Attach. at 11.

5 *See, e.g.*, Am. Cable Ass'n Comments in re National Broadband Plan NOI, filed June 8, 2009, at 8–9; *Amendment of the Commission's Rules and Policies Governing Pole Attachments*, WC Docket No. 07-245, Report and Order, 15 FCC Rcd 6453, 6507–08, para. 118 (2000) ("The Commission has recognized that small systems serve areas that are far less densely populated areas than the areas served by large operators. A small rural operator might serve half of the homes along a road with only 20 homes per mile, but might need 30 poles to reach those 10 subscribers.").

6 This analysis assumes that the customer purchases from an ILEC that rents all of its poles.

7 NCTA Comments in re American Electric Power Service Corp. et al., Petition for Declaratory Ruling that the Telecommunications Rate Applies to Cable System Pole Attachments Used to Provide Interconnected Voice over Internet Protocol Service, WC Docket No. 09-154 (filed Aug. 17, 2009) (Pole Attachments Petition), filed Sept. 24, 2009, App. B at 8–10; Letter from Thomas Jones, Counsel, Time Warner Telecom Inc., to Marlene H. Dortch, Secretary, FCC RM-11293, filed Sept. 24, 2009, at 8; George S. Ford et al., Phoenix Ctr., The Pricing of Pole Amendment: Implications and Recommendations 7 (2008); Independent Telephone and Telecommunications Alliance (ITTA) Comments in re *implementation of Section 224 of the Act; Amendment of the Commission's Rules and Policies Governing Pole Attachments*, WC Docket No. 07–245, Notice of Proposed Rulemaking, 22 FCC Rcd 20195 (2007) (*Pole Attachments NRM*), filed Mar. 7, 2008. As Pelcovits notes, monthly cost assumes 35 poles per mile and a 30% take rate. NCTA Comments in re Pole Attachments Petition, filed Sept. 24, 2009, App. B at 14. Additionally, this analysis assumes that all poles are rented by the broadband provider and not owned by it.

8 The variation in rates charged to incumbent LECs also can arise from the history of pole ownership by the incumbent LECs and certain "joint use" agreements that exist between some incumbent LECs and electric utilities.

9 *See, e.g., Nat'l Cable & Telecom. Ass'n v. Gulf Power Co.*, 534 U.S. 327 (2002).

10 *See, e.g., Alabama Power Co. v. FCC*, 311 F.3d 1357 (11th Cir. 2002); *FCC v. Florida Power Corp.*, 480 U.S. 245 (1987).

11 *See, e.g.*, Letter from Daniel L. Brenner, Counsel, Bright House Networks, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 09-47, 09-51, 09-137 (Jan. 8, 2010) Attach. at 4; Letter from Daniel L. Brenner, Counsel, Bright House Networks, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 09-47, 09-51, 09-137 (Feb. 16, 2010) Attach. (Affidavit of Nick Lenochi) (providing example of how application of higher telecommunications rate for poles would increase expense of deploying Fast Ethernet connections to a large school district by $220,000 annually); NCTA Comments in re Pole Attachments Petition, filed Sept. 24, 2009, at 15–17.

12 tw telecom et al. Comments in re NBP Staff Workshops PN (*The Commission Welcomes Responses to Staff Workshops*, GN Docket No. 09-51, Public Notice, 24 FCC Rcd 11592 (WCB 2009) (*NBP Staff Workshops PN*)), filed Sept. 15, 2009, at 14.

13 FiberNet Sept. 16, 2009 *Ex Parte* Attachs.; Letter from Thomas Jones, Counsel, FiberNet, LLC, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 07-245, GN Docket No. 09-51 (Nov. 16, 2009) (filed by One Communications Corp.) (FiberNet Nov. 16, 2009 *Ex Parte*) at 3 (providing cost estimate breakdown). Similarly, Fibertech reports that it pays pole owners anywhere from $225–$780 to move a single cable on a pole, even though it estimates that it could do the work itself for $60. Fibertech Comments in re NBP PN #12, filed Oct. 26, 2009, at 2–3; *see also* Dumont Jan. 8, 2010 *Ex Parte* at 5–6 (proposing changes to pole attachment regulations so as to "facilitate easier access to existing infrastructure," including reform to the application and make-ready process).

14 FiberNet Nov. 16, 2009 *Ex Parte* Attach. C (providing cost estimate breakdown).

15 Letter from Kelley A. Shields, Counsel, Fibertech and Kentucky Data Link, Inc. (KDL), to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 09-51, WC Docket No. 07-25, RM-11293, RM-11303 (Jan. 7, 2009) Attach. 2 at 2.

16 Letter from Joseph R. Lawhon, Counsel, Georgia Power Co., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 07-245, GN Docket Nos. 09-29, 09-51 (Nov. 17, 2009) Attach. B (noting one example covering 294 poles in Georgia in which the electric utility completed its work within 55 days but in which the process of coordinating with existing attachers took an additional 5 months).

17 The FCC has already decided that utilities cannot discriminatorily prohibit such techniques when they use those techniques themselves. *See Salsgiver Commc'ns, Inc. v. North Pittsburgh Tel. Co.*, Memorandum Opinion and Order, 22 FCC Rcd 20536, 20543–44 (EB 2007); *Cavalier Tel. v. Virginia Elec. and Power Co.*, Order and Request for Information, 15 FCC Rcd. 9563, 9572 (EB 2000). One provider asserts that rules allowing these practices more generally in Connecticut has allowed it to deploy many more miles of fiber in its Connecticut markets. Fibertech & KDL Comments in re Pole Attachments NPRM, filed Mar. 25, 2009, at 7–8.

18 Letter from John T. Nakahata, Counsel to Fibertech and KDL, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 07-245, RM 11293, RM 11303, GN Docket Nos. 09-29, 09-51 (July 29, 2009) at 7.

19 *Implementation of Section 703(e) of the Telecommunications Act of 1996; Amendment of the Commission's Rules and Policies Governing Pole* Attachments, Report and Order, 13 FCC Rcd 6777, 6787–88, para. 17 (1998) (*1998 Pole Attachment Order*).

20 *See, e.g.*, Crown Castle Comments in re Pole Attachments NPRM, filed Mar. 11, 2008, at 7 (12 month delay); Sunesys Comments in Petition for Rulemaking of Fibertech Networks, LLC, RM-11303 (Dec. 7, 2005) (Fibertech Petition), filed Jan. 30, 2006, at 11 (15 months); The DAS Forum Comments in re Pole Attachments NPRM, filed Mar. 7, 2008, at 11 (3 years); T-Mobile Comments in re Pole Attachments NPRM, filed Mar. 7, 2008, at 7 (4 years).

21 *See, e.g.*, Fibertech & KDL Comments in re Pole Attachments NPRM, filed Mar. 25, 2009, at 4 (describing project to construct fiber to three rural school districts in Kentucky that KDL was unable to complete because of pole access delays); *1998 Pole Attachment Order*, 13 FCC Rcd. at 6788, para. 17 (delays in resolving access disputes can "delay a telecommunication's carrier's ability to provide service and unnecessar[ily] obstruct the process").

22 *Order Adopting Policy Statement on Pole Attachments*, Case 03-M-0432 (New York Pub. Serv. Comm'n 2004) (*New York Timeline Order*) (requiring that all work be completed in 105 days), *available at* http://documents.dps.state.ny.us/public/Common/ViewDoc.aspx?DocRefId={C0C4902C-7B96-4E20-936B-2174CE0621A7}; *Review of the State's Public Service Company Utility Pole Make-Ready Procedures*, Decision, Docket No. 07-02-13 (Conn. Dep't of Pub. Util. Control, Apr. 30, 2008) (*Connecticut Timeline Order*) *available at*

CHAPTER 6 ENDNOTES

http://www.dpuc.state.ct.us/dockhist.nsf/8e6fc37a54110e3e852576190052b64d/69ccb9118f035bc38525755a005df44a/$FILE/070213-043008.doc (90 days or 125 days when poles must be replaced).

23 *See, e.g.*, Fibertech Comments in re NBP PN #12, filed July 21, 2009, Attach. (noting that since implementing timelines, in Connecticut it takes pole owners an average of 89 days to issue licenses and New York pole owners average 100 days for Fibertech's applications, compared to longer intervals elsewhere).

24 *See, e.g.*, Connecticut *Timeline Order; New York Timeline Order*; Utah Admin. Code § R746-345-3; Vermont Public Service Board, Rules 3.708; *See also Utility Pole Make-Ready Procedures*, Docket No. 07-02-13 (Conn. Dep't of Pub. Util. Control, 2008), *available at* http://www.dpuc.state.ct.us/dockhist.nsf/8e6fc37a54110e3e852576190052b64d/69ccb9118f035bc38525755a005df44a?OpenDocument; Sunesys Comments in re National Broadband Plan NOI, filed June 8, 2009, at 6 ("By permitting pole owners to have an uncapped and unspecified period of time in which to issue a permit, many pole owners have caused tremendous delays in the process, thereby undermining broadband deployment."); Letter from Jacqueline McCarthy, Counsel, Broadband & Wireless Pole Attachment Coalition, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 07-245 (Feb. 23, 2009) at 1–5.

25 Wireless providers assert that negotiations with pole owners to attach wireless devices "often face a period of years in negotiating pole agreements." PTIA—The Wireless Infrastructure Association & The DAS Forum Comments in re National Broadband Plan NOI, filed June 8, 2009, at 7. As telecommunications providers, wireless providers have the right to attach to poles under Section 224 of the Act to provide service.

26 Letter from Joshua Seidemann, Vice President, Regulatory Affairs, ITTA, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 07-245, RM-11293, WC 09-154 (Dec. 22, 2009) (ITTA Dec. 22, 2009 *Ex Parte*) at 3 (noting a pole attachment dispute pending before a state for five years before the parties settled).

27 *See* 47 C.F.R. §§ 1.1404–1.1410 (pole attachment complaint procedures).

28 *See, e.g.*, ITTA Dec. 22, 2009 *Ex Parte* at 3 (noting that one provider alone deals with 600 separate entities and that the "lack of uniform rules, standards, and oversight makes negotiating reasonable attachment terms very difficult and extremely time consuming").

29 Fed. Ministry of Econ. & Tech., Gov't of Germany, The Federal Government's Broadband Strategy 12 (2009), *available at* http://www.bmwi.de/English/Redaktion/Pdf/broadband-strategy,property=pdf,bereich=bmwi,sprache=en,rwb=true.pdf.

30 For example, many pole owners utilize the National Joint Utilities Notification System (NJUNS) for maintaining and communicating data about their pole infrastructure. *See generally* National Joint Utilities Notification System—NJUNS, Inc., http://www.njuns.com/NJUNS_Home/default.htm (last visited Mar. 2, 2010).

31 NCTA Comments in re Pole Attachments Petition, filed Sept. 24, 2009, App. B (Declaration of Dr. Michael D. Pelcovits) Attach. 2 (Methodology and Sources) at 1–3.

32 Nineteen states and the District of Columbia (representing approximately 45% of the U.S. population) have exercised this type of "reverse preemption" and have certified that they directly regulate utility-owned infrastructure in their regions. *See Corrected List of States That Have Certified That They Regulate Pole Attachments*, WC Docket No. 07-245, Public Notice, 23 FCC Rcd 4878 (WCB 2008). Section 224(a)(1) expressly excludes poles owned by cooperatives from regulation, an exemption that dates back to 1978. According to the National Rural Electric Cooperative Association, electric co-operatives own approximately 42 million poles. Letter from David Predmore, National Rural Electric Cooperative Association, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 09-47, 09-51, 09-137, WC Docket No. 09-245 (Feb. 26, 2010). The exclusion of co-operatives from Section 224 regulation may impede broadband deployment in rural areas. For instance, one small broadband cable company claims that it ceased offering service in two rural communities in Arkansas because of an increase in pole attachment rates by unregulated electric cooperatives that owned the poles in those communities. Letter from Bennett W. Hooks, Jr., Buford Media Group, LLC, to Bernadette McGuire-Rivera, Assoc. Adm'r, Office of Telecom. & Info. Admin., Dep't of Comm. (Apr. 13, 2009) at n.2, 3, *available at* http://www.ntia.doc.gov/broadbandgrants/comments/79C5.pdf.

33 For a review of various approaches to state and local rights of way policies, see NTIA, State and Local Rights of Way Success Stories, *available at* http://www.ntia.doc.gov/ntiahome/staterow/ROWstatestories.pdf.

34 In 2003, the NTIA compiled a comprehensive survey of state rights-of-way approaches that may be found at NTIA, Rights-of-Way Laws by State, http://www.ntia.doc.gov/ntiahome/staterow/rowtableexcel.htm (last visited Feb. 18, 2010). In 2002, the National Association of Regulatory Utility Commissions undertook a similar project and issued a comprehensive report. *See* NARUC, Promoting Broadband Access Through Public Rights-of-Way and Public Lands (July 31, 2002).

35 *See, e.g.*, Level 3 Comments in re National Broadband Plan NOI, filed Jun. 8, 2009, at 19; Windstream Comments in re National Broadband Plan NOI, filed Jun. 8, 2009, at 2; Verizon Comments in re National Broadband Plan NOI, filed June 8, 2009, at 66; Qwest Comments in re National Broadband Plan NOI, filed June 8. 2009, at 27. Sunesys urges the FCC to "clarify the standards related to timely and reasonably priced access to necessary governmental rights of way." Sunesys Comments in re NBP PN #7 (*Comment Sought on the Contribution of Federal, State, Tribal, and Local Government to Broadband—NBP Public Notice #7*, GN Docket Nos. 09-47, 09-51, 09-137, Public Notice, 24 FCC Rcd 12110 (WCB 2009) (*NBP PN #7*)), filed Nov. 6, 2009, at 4.

36 *See, e.g.*, NATOA et al. Reply in re NBP PN #30, (Reply Comments Sought in Support of National Broadband Plan—NBP Public Notice #30, GN Docket Nos. 09–47, 09–51, 09–137, Public Notice 25 FCC Rcd 241 (2010) (NBP PN #30) filed Jan. 27, 2010, at 12–13; NATOA et al. Comments in re NBP PN #7, filed Nov. 7, 2009, at 46–47; City of New York Comments in re NBP PN #7, filed Nov. 6, 2009, at 8; City and County of San Francisco Comments in re NBP PN #7, filed Nov. 6, 2009, at 16–20. *But cf.* Dumont Jan. 8, 2010 *Ex Parte* at 2 (noting that "difficulties involved in negotiating and gaining access to the rights of way often prove to be the greatest impediment to the efficient, cost-effective, and timely deployment of broadband.").

37 For example, the Broadband Principles adopted by the National Association of Telecommunications Officers and Advisors (NATOA), an organization for local government agencies, staff and public officials, states that "[t]he desired development of high capacity broadband networks and broadband services will require extensive collaboration among parties: local communities, regions, state governments, national government, the private sector, interest groups, and others." NATOA et al. Comments in re National Broadband Plan NOI, filed Jun. 8, 2009, at 3; *see also* Gary Gordier, CIO and IT Director, El Paso, Texas, Remarks at the FCC State and Local Government Workshop 161 (Sept. 1, 2009) ("There needs to be a lot better coordination across all jurisdictional levels to economize and share jointly in the infrastructure"), *available at* http://www.broadband.gov/docs/ws_19_state_and_local.pdf; Ray Baum, Comm'r, Oregon Pub. Util. Comm'n, Remarks at FCC State and Local Government Workshop 61 (Sept. 1, 2009) ("[W]e have a lot of infrastructure out there owned by utilities[,] both public and private[,] that sitting there that could be better utilized than it is today"); Lori Sherwood, Cable Adm'r, Howard County, Maryland, Remarks at the FCC State and Local Government Workshop 120 (Sept. 1, 2009) ("We have an opportunity to do this right and 25 years from now we don't want to say that we should have done a better job coordinating and talking to each other. For development of a national policy, the FCC should draw on its decade of government experiences including local governance.").

38 *See* note 34, *supra*.

39 *See* 47 U.S.C. § 253(c).

40 A public record search by FCC Staff revealed that since passage of the 1996 Act, the FCC has taken an average of 661 days to resolve Section 253 disputes filed before it, and federal district court litigation of similar disputes has taken an average of 580 days to conclude. Disputes often extend further through review by courts of appeal, as well.

41 *See* NATOA et al. Reply in re NBP PN #30, filed Jan. 27, 2010, at 38 (recommending that the FCC "consider creating a special task force" of rights-of-way experts that would "catalog federal, state, and local right-of-way practices and fees in an effort to identify and articulate existing best practices being employed by federal, state, and local authorities for different categories of public rights of way and infrastructure."). As proposed by NATOA, the task force "could also examine and report to the Commission regarding the advantages and disadvantages of alternative forms of compensation for use of public rights of way, and other rights of way

CHAPTER 6 ENDNOTES

related infrastructure, such as poles and conduits." *Id.* at 39.

42 *See* NATOA et al. Reply in re NBP PN #30, filed Jan. 27, 2010, at 38–39.

43 Memorandum on Improving Rights-of-Way Management Across Federal Lands to Spur Greater Broadband Deployment, 40 WKLY. COMP. PRES. DOC. 696 (May 3, 2004).

44 Memorandum on Facilitating Access to Federal Property for the Siting of Mobile Services Antennas, 31 WKLY. COMP. PRES. DOC. 1424 (Aug. 10, 1995).

45 *See* Letter from Thomas Cohen, Counsel for the Fiber to the Home Council, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 09-51 (Oct. 14, 2009).

46 "Splicing" includes splice kit, installation of splicing enclosure, and splicing of fiber. Splice kit is excluded from "materials" cost. Cost of construction in joint deployment case refers to construction of a single 1-mile, 2" conduit containing 216-count fiber, when coordinated with a road construction project. Additional costs reflect the same project independent of road construction. Letter from Matthew R. Johnson, Legal Fellow, NATOA, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 09-51 (Sept. 17, 2009) (attaching COLUMBIA TELECOMM. CORP. BRIEF ENGINEERING ASSESSMENT: EFFICIENCIES AVAILABLE THROUGH SIMULTANEOUS CONSTRUCTION AND CO-LOCATION OF COMMUNICATIONS CONDUIT AND FIBER tbls. 1, 2 (2009)).

47 Moratoria on re-opening streets for further telecommunications facilities could impede broadband deployment in certain circumstances.

48 DEP'T OF PUBLIC WORKS, CITY AND COUNTY OF SAN FRANCISCO, ORDER NO. 176,707 (RVSD): REGULATIONS FOR EXCAVATING AND RESTORING STREETS IN SAN FRANCISCO § 5 (Mar. 26, 2007), *available at* http://www.sfgov.org/site/uploadedfiles/sfdpw/bsm/sccc/DPW_Order_176-707.pdf; *see also* City and County of San Francisco Department of Public Works, Coordinating Street Construction, http://www.sfgov.org/site/sfdpw_page.asp?id=32429 (last visited Jan. 4, 2010).

49 Pub. Improvement Comm'n, City of Boston, Policy Relating to Grants of Location for New Conduit Network for the Provision of Commercial Telecommunications Services (Aug. 4, 1988), as amended.

50 Hardik V. Bhatt, CIO, City of Chicago, Remarks at FCC State and Local Governments: Toolkits and Best Practices Workshop (Sept. 1, 2009), *available at* http://www.broadband.gov/docs/ws_19_state_and_local.pdf; *see also id.* at 94 ("we have now started knowing every time a street gets dug up either for putting in a traffic signal interconnect, or putting some street light interconnects, or maybe a private utility has dug up the street, we have an opportunity to see if we could leverage that digging up of the street and maybe put conduit or if conduit is there to put fiber there").

51 Gordon Cook, *Amsterdam's Huge FTTH Build*, BROADBAND PROPERTIES, Sept. 2006, at 68.

52 NATOA et al. Comments in re NBP PN #7, filed Nov. 9, 2009, App. at 14.

53 Dumont Jan. 8, 2010 *Ex Parte* at 3.

54 Dumont Jan. 8, 2010 *Ex Parte* at 4 (recommending "a mechanism to ensure that all U.S. Department of Transportation projects are deploying conduit, and that space is created for four cables").

55 Dumont Jan. 8, 2010 *Ex Parte*.

56 United States Department of the Interior, National Atlas of the United States, http://www.nationalatlas.gov/printable/fedlands.html (last visited Jan. 7, 2010).

57 General Services Administration, GSA Properties Overview, http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentType=GSA_OVERVIEW&contentId=8513 (last visited Jan. 7, 2010).

58 Memorandum on Facilitating Access to Federal Property for the Siting of Mobile Services Antennas, 31 WEEKLY COMP. PRES. DOC. 1424 (Aug. 10, 1995).

59 *See* Siting Antennas on Federal Property, 41 C.F.R. §§ 102-79.70–.100.

60 GSA, *GSA's National Antenna Program Wins Vice President Al Gore's Hammer Award Agency's National Antenna Program Fosters Innovation and Saves Tax Dollars, Showing Government Can Work Better and Cost Less*, GSA #9552 (press release), Jan. 13, 1999 (GSA, *GSA's National Antenna Program*), http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentType=GSA_BASIC&contentId=9125.

61 GSA, *GSA's National Antenna Program*. These facts have been confirmed via follow-up e-mails and conversations with GSA.

62 NTIA, IMPROVING RIGHTS-OF-WAY MANAGEMENT ACROSS FEDERAL LANDS: A ROADMAP FOR GREATER BROADBAND DEPLOYMENT 31–33, *available at* http://www.ntia.doc.gov/reports/fedrow/frowreport (discussing applicable statutes and agency procedures). For example, the Federal Land Policy Management Act of 1976, which applies to the Department of Interior Bureau of Land Management and National Forest Service, requires that "fair market value, as determined by the Secretary." 43 U.S.C. § 1764(g). In addition, OMB Circular A-25 (rvsd), § 6(a)(2)(b) requires that agencies assess "user charges based on market prices," although exceptions can be granted.

REPLY ATTACHMENT PDK-13

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-057
Page 1 of 2

Witness: Edward A. Davis
Request from: Time Warner/ Comcast

Question:
Please provide the derivation and supporting documentation for the number of attaching entities of2.4 as referred to in Table 5 of Mr. Davis's testimony.

Response:
Page 2 of this response provides the calculation of the average number of attaching entities of 2.4 which is utilized to illustrate the calculation of the uniform pole attachment rate recommended by the Company. This average amount is based on the actual number of billed third party attachments (on both fully owned and solely owned poles) at year end 2011, the total number of poles utilized in calculating the current pole attachment rate (see detail, submitted to the Commission in this docket on June 8, 2012), and an assumption that both PSNH and ILEC's each have one attachment per pole for poles in which they have an ownership interest (i.e., PSNH has 1 attachment on all poles, and ILEC's have 1 attachment on all jointly owned poles).

Calculated Average # of Attachers - 2011

Number of Attachments		
3rd Party Attachers		
Fully owned pole	12,334	
Jointly owned pole	255,618	
PSNH (assumes 1 attachment per pole) *		
Fully owned pole	93,211	
Jointly owned pole	344,523	
ILEC (assumes 1 attachment per pole) *		
Jointly owned pole	344,523	
Total number of attachments	**1,050,209**	(a)
Total number of poles	**437,734**	(b)
Average number of attachments	**2.40**	(c) = (a) / (b)

* Assumes PSNH and ILEC's who jointly own poles with PSNH each have 1 attachment on each pole

REPLY ATTACHMENT PDK-14

Table in Support of Figure 1
Estimated Rate Impact on
Average PSNH Electric Subscriber and Average Broadband Subscriber
Of PSNH's Higher Proposed Pole Attachment Rates Vis-à-vis Cable Rate

	PDK-PSNH-12*	Updated based on Davis Testimony & Responses**		
PSNH PA Methodology	FCC Old Telecom	Davis Table 5	Davis Table 6	Davis Table 7
Sole/Joint Owned Pole	$22.96	$39.87/$19.94	$29.21/$14.61	$20.68/$10.34
FCC Cable Rate	$10.05	$10.05/$5.03	$10.05/$5.03	$10.05/$5.03
Difference in PA Rates	$12.91	$29.82/$14.91	$19.16/$9.58	$10.63/$5.32
Difference in Revenues	$6,844,133	$4,179,064	$2,685,140	$1,489,720
Estimated Rate Impact on Average Electric Subscriber ($ Rate Reduction):				
Annual $ /Kwh	$0.0022	$0.00133	$0.00086	$0.00047
Annual $/ Sub	$16.28	$9.94	$6.39	$3.54
Estimated Rate Impact on Average Broadband Subscriber ($ Rate Increase)				
Ann $ /Sub – Wtd Avg		$121.30	$77.94	$43.24
Ann$/Sub – Sole Own	$100.41	$231.93	$149.02	$82.68
Ann$/Sub – Joint Own		$115.97	$74.51	$41.34

* Original analysis provided in PDK-PSNH-12 based on PSNH calculations of FCC non-urban sole owned telecom rate and average number of attaching entities per PSNH 6/8/12 filing (AE= 2.0).
** Updated analysis based on PSNH proposed PA rates per Davis Testimony, weighted for sole and jointly- owned poles, and number of attachments on sole and jointly- owned poles per PSNH Response to TW-Comcast-057 (AE = 1.0). Detailed calculations presented in Attachment ** to this testimony.

DAVIS TABLE 5 RATE

Calculation of Rate Impact per Broadband Subscriber:

		PSNH			
Year Ending		2010			
		Solely-Owned	Jointly-Owned	Wtd Avg	
1 Utility Proposed		$39.87	$19.94		Davis Table 5
2 Unified J&R		$10.05	$5.03		PDK Tables 4,5
3 Difference in Rate		$29.82	$14.91		Calc
4 Households per Mile		15	15		Natl BB Rpt
5 Subscriber per Mile@	0.3	4.5	4.5		Natl BB Rpt
6 Poles per Mile		35	35		Natl BB Rpt
7 Subscribers per Pole		0.13	0.13		Calc
8 Ann.Rate Impact per BB Subscrib		$231.93	$115.97	$121.30	Calc
9 Mo. Rate Impact per BB Subscrib		$19.33	$9.66		Calc

Calculation of Rate Impact per Residential Electricity Customer:

Avg No. 3d Party Pole Att.	12334	255618	267952	Resp TWC-Com 057
Ann. Pole Rev at Prop Rt	$491,757	$5,095,745	$5,587,501	Calc
Ann.. Pole Rev at J&R Rt	$123,957	$1,284,480	$1,408,437	Calc
Difference in Pole Rev	$367,800	$3,811,264	$4,179,064	Calc
Avg No Residential Customers			420437	FERC p.304
Annual Rev Impact per Customer			$9.94	Calc
Monthly Rev Impact per Customer			$0.83	Calc
Avg Annual KWh per Customer			7467	FERC p.304
Revenue Impact per Kwh			$0.00133	Calc

DAVIS TABLE 6 RATE

Calculation of Rate Impact per Broadband Subscriber:

		PSNH			
Year Ending		2010			
		Solely-Owned	Jointly-Owned	Wtd Avg	
1 Utility Proposed		$29.21	$14.61		Davis Table 6
2 Unified J&R		$10.05	$5.03		PDK Tables 4,5
3 Difference in Rate		$19.16	$9.58		Calc
4 Households per Mile		15	15		Natl BB Rpt
5 Subscriber per Mile@	0.3	4.5	4.5		Natl BB Rpt
6 Poles per Mile		35	35		Natl BB Rpt
7 Subscribers per Pole		0.13	0.13		Calc
8 Ann.Rate Impact per BB Subscriber:		$149.02	$74.51	$77.94	Calc
9 Mo. Rate Impact per BB Subscriber:		$12.42	$6.21		Calc

Calculation of Rate Impact per Residential Electricity Customer:

Avg No. 3d Party Pole Att.	12334	255618	267952	Resp TW-Comc 057
Ann. Pole Rev at Prop Rt	$360,276	$3,733,301	$4,093,577.03	Calc
Ann.. Pole Rev at J&R Rt	$123,957	$1,284,480	$1,408,437	Calc
Difference in Pole Rev	$236,319	$2,448,820	$2,685,140	Calc
Avg No Residential Customers			420437	FERC p.304
Annual Rev Impact per Customer			$6.39	Calc
Monthly Rev Impact per Customer			$0.53	Calc
Avg Annual KWh per Customer			7467	FERC p.304
Revenue Impact per Kwh			$0.00086	Calc

DAVIS TABLE 7 RATE

Calculation of Rate Impact per Broadband Subscriber:

	Year Ending		PSNH 2010 Solely-Owned	Jointly-Owned	Wtd Avg	
1	Utility Proposed		$20.68	$10.34		Davis Table 7
2	Unified J&R		$10.05	$5.03		PDK Tables 4,5
3	Difference in Rate		$10.63	$5.32		Calc
4	Households per Mile		15	15		Natl BB Rpt
5	Subscriber per Mile@	0.3	4.5	4.5		Natl BB Rpt
6	Poles per Mile		35	35		Natl BB Rpt
7	Subscribers per Pole		0.13	0.13		Calc
8	Ann.Rate Impact per BB Subscriber:		$82.68	$41.34	$43.24	Calc
9	Mo. Rate Impact per BB Subscriber:		$6.89	$3.44		Calc

Calculation of Rate Impact per Residential Electricity Customer:

Avg No. 3d Party Pole Att.	12334	255618	267952	Resp TW-Comcast 057
Ann. Pole Rev at Prop Rt	$255,067	$2,643,090	$2,898,157	Calc
Ann.. Pole Rev at J&R Rt	$123,957	$1,284,480	$1,408,437	Calc
Difference in Pole Rev	$131,110	$1,358,610	$1,489,720	Calc
Avg No Residential Customers			420437	FERC p.304
Annual Rev Impact per Customer			$3.54	Calc
Monthly Rev Impact per Customer			$0.30	Calc
Avg Annual KWh per Customer			7467	FERC p.304
Revenue Impact per Kwh			$0.00047	Calc

REPLY ATTACHMENT PDK-15

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-013
Page 1 of 1

Witness: **Edward A. Davis**
Request from: **Time Warner/ Comcast**

Question:
Please state whether Mr. Davis agrees that many, if not most, of PSNH's electric service delivery customers are also existing or potential broadband service customers. If his answer is anything other than an unqualified yes, please identify the basis of his disagreement with that statement and provide any studies, reports, and analyses that support his position.

Response:
Objection: PSNH objects to the Data Request, calls for opinion, speculation or conjecture and for information neither relevant to the claims or defenses in this litigation nor reasonably calculated to lead to the discovery of material and admissible evidence. Without waiving objections, the Company states that PSNH's electric distribution service customers may be potential consumers of an array of "broadband service" options. However, the broadband service a potential customer chooses may not be related to wired pole attachments in PSNH's territory. The services (television, telephone, and internet) the consumer chooses may include delivery via satellite (DirectTV, DISH Network) or wireless 4G-LTE based wireless home internet offerings such as those offered by Verizon.

REPLY ATTACHMENT PDK-16

Time Warner Entertainment L.P. d/b/a Time Warner Cable
NH PUC Docket DT 12-084
Witness: Patricia D. Kravtin
August 17, 2012

PSNH Data Request 5

Referencing page 7, lines 1 – 6, if an electric utility is not a competitor in the communications marketplace, what would be the impact on the economic analysis of adopting a single pole attachment rate or reaching an economically efficient rate structure for pole attachments? Does this conclusion affect your current analysis?

Response:

The key point being made in the referenced passage at page 7, lines 1-6 of Ms. Kravtin's testimony is that the cable rate formula is best suited to promote the widespread deployment of advanced broadband services and competition in the increasingly convergent communications industry. This finding has been recognized by the FCC and the majority of certified states who have adopted a unified approach for setting pole attachment rates based on the cable rate formula or a close variation of it. The various economic and public policy rationales underlying this finding, and described at length in Ms. Kravtin's testimony (*see, e.g.*, PDK Testimony at pages 21-22, and 26-28) holds true independent of whether the electric utility is or is not currently competing in the communications marketplace. The key facts underlying Ms. Kravtin's testimony in the referenced passage are (1) the communications industry is an increasingly convergent one in which service providers in historically separate industries are now competing for the same customers in the provision of voice, video, broadband data and wireless service offerings; and (2) pole-owning electric utilities have the opportunity to compete in the convergent marketplace.

However, whether or not in any given market, or at any given point in time, the electric utility pole owner chooses to exercise that opportunity to compete in the convergent communications market – either directly (*e.g.*, smart grid) or through a communications affiliate, or via an arrangement with any other company with which the utility may have an interest or business association – does not impact the validity of (1) the underlying economic and public policy rationales for adopting an economically efficient unified broadband rate given the convergent marketplace; or (2) the fundamental opportunity and incentive for the utility, as monopoly owner of the pole network, to leverage its market power over poles into the downstream communications market. The potential of electric utility competition simply reinforces and emphasizes the importance, and if anything, the increasing relevance of the monopoly pole owner's leverage in the evolving communications market of today and in the future.

REPLY ATTACHMENT PDK-17

Time Warner Entertainment, L.P. d/b/a Time Warner Cable
Petition for Resolution of Dispute with Public Service Company of New Hampshire
PSNH Data Requests to Comcast – Set 1

Received: August 3, 2012
Request No. PSNH – 15

Date of Response: August 17, 2012
Witnesses: Glenn Fiore and
Christopher Hodgdon

PSNH Data Request No. 15:

For each community in which Comcast provides service in New Hampshire, please list each company that directly competes with Comcast and the market penetration (percent) of each viable competitor. Please segregate the competitors into those that compete with Comcast for traditional cable customers, internet access or communications access services.

Objection and Response:

Subject to, and without waiver of the General Objections, Comcast competes in all of its New Hampshire service territories with a vast array of competitive voice, video and data providers: satellite, wireless, wireline and over-the-top VoIP voice and Internet video providers such as FairPoint, Verizon Wireless, Sprint, T-Mobile, AT&T Wireless, US Cellular, Google Phone, Lingo, Magic Jack, netTalk, Ooma, Skype, MySoftPhone, Vonage, SegTel, Bay Ring, Granite State Communications, TDS Communications, G4, Earthlink, HULU, RedBox, I-Tunes, Netflix, DirecTV, Apple TV, Dish, YouTube, GoogleTV, Excede Broadband Internet (formerly Wildblue), HughesNet Satellite Internet, Skycasters Satellite Internet to name just a few that compete with Comcast across all lines of business.

Comcast does not maintain the requested penetration information on each and every marketplace competitor and objects to the request for such information as it is irrelevant to the issues in this proceeding and is not calculated to lead to the discovery of material or admissible evidence, seeks confidential, proprietary and competitively sensitive information and is beyond the jurisdictional scope of this proceeding.

Comcast deems all of these above-mentioned providers as viable competitors to our Comcast Xfinity voice service, high speed Internet service and video services and we compete with them for the same customer base within the state of New Hampshire.

REPLY ATTACHMENT PDK-18

Time Warner Entertainment, L.P. d/b/a Time Warner Cable
Petition for Resolution of Dispute with PSNH
Date of Response: August 17, 2012
Witness: Julie Laine, TWC

PSNH Data Request No. 7:

Referencing page 6, line 10, "Moreover, the market for provision of broadband services in New Hampshire is highly competitive", for each community to which TWC provides service in NH, please list each company that directly competes with TWC and the market penetration (percent) of each viable competitor segregated into those that compete with TWC for traditional cable customers, internet access or communications access services.

Response: Objection: burden, information equally available to PSNH. Without waiving objections, TWC states that the New Hampshire Broadband Mapping & Planning Program shows that the state has broadband service from cable systems, including TWC, as well substantial areas served also by providers of DSL service, Fixed Wireless broadband service, and Mobile Wireless broadband. The New Hampshire Broadband Mapping & Planning Program states it "is a collaboration of multiple partners representing UNH, regional planning agencies, state agencies, and private, non-profit entities" engaged in "a comprehensive, multi-year effort that seeks to understand where broadband is currently available in NH, how it can be made more widely available in the future, and how to encourage increased levels of broadband adoption and usage." *See* New Hampshire Broadband Mapping & Planning Program website at "About NHBMPP" tab (available at http://iwantbroadbandnh.com/about-nhbmpp). An interactive tool on this site allows users to find which service providers and technologies are available in a given community, and demonstrate substantial competition in many TWC communities. For example, this tool shows that in Plymouth, TWC faces competition from: AT&T Mobility, FairPoint Communications, G4, Hughes, Metrocast, Sprint, Starband, US Cellular, Verizon Wireless, Wave Comm LLC, and WildBlue Communications, Inc. *See* New Hampshire Broadband

Time Warner Entertainment, L.P. d/b/a Time Warner Cable
Petition for Resolution of Dispute with PSNH
Date of Response: August 17, 2012
Witness: Julie Laine, TWC

Mapping & Planning Program maps (available at http://iwantbroadbandnh.com/where-is-broadband).

More specifically, TWC competes with FairPoint Communications, the largest local exchange carrier in New Hampshire. FairPoint's most recent Annual Report (SEC Form 10-K) asserts that "[a]s of December 31, 2011, nearly all of our central offices are capable of providing broadband services through DSL technology, cable modem and/or wireless broadband." FairPoint Communications Inc. SEC Form 10-K, Annual Report at p. 11 (filed March 9, 2012) (available at http://phx.corporate-ir.net/phoenix.zhtml?c=122010&p=irol-irhome) (under "SEC Filing"). In addition, FairPoint recently has reported substantial ongoing investment in broadband service upgrades in New Hampshire and New England. *See, e.g.,* News Release "FairPoint Communications Brings More Broadband to New Hampshire," August 9, 2012 (company news release reporting ongoing broadband expansion in New Hampshire and that "Since April 2008, FairPoint has invested more than $179 million in the communications infrastructure and technology to bring broadband to northern New England, including building more than 3,100 miles of new fiber optics.") (available at http://www.fairpoint.com/global/fp-newsroom/tcm:12-19747).

In addition to broadband competition with FairPoint and other wireline service providers, all or nearly all households have access to digital video broadband satellite service of some form from DirecTV and DISH Networks. *See Annual Assessment in the Status of Competition in the*

Delivery of Video Programming, Fourteenth Annual Report, MB Docket 07-269, FCC 12 - 81 at p. 16 Table 1 & n. 80 (most recent FCC report to Congress on video competition shows that these two providers pass 130 million homes and that FCC assumes the service is available to every household); *id.* at p. 40 & n. 260 (explaining that "DIRECTV and DISH Network have cooperative arrangements with telephone and broadband companies to provide Internet access and telephone service.") (released July 20, 2012) (available at http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db0723/FCC-12-81A1.pdf).

Finally, a large number of competitive satellite, wireless, wireline and over-the-top VoIP voice, Internet and video providers compete with TWC across all lines of business including but not limited to: Apple TV, AT&T Wireless, Bay Ring, DirecTV, Dish, G4, Earthlink, Excede Broadband Internet, Google Phone, GoogleTV, Granite State Communications, HughesNet Satellite Internet, HULU, I- Tunes, Lingo, Magic Jack, Netflix, Ooma, RedBox, SegTel, Skycasters Satellite Internet, Skype, Sprint, TDS Communications T-Mobile, US Cellular, Verizon Wireless, Vonage, and YouTube.

REPLY ATTACHMENT PDK-19

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-016
Page 1 of 1

Witness: Edward A. Davis
Request from: Time Warner/ Comcast

Question:
Referring to Mr. Davis's testimony on page 8, lines 2-4 and 8-10, please state whether it is his contention that no costs associated with the unusable space on a pole are included in the FCC cable formula. If Mr. Davis's answer is yes, is the basis of Mr. Davis's contention that the cable formula uses a proportional use allocator based on the ratio of amount of space occupied to usable space? If not, what is the basis of his contention?

Response:
The FCC formulas are made up of three basic components: Net Cost of a Bare Pole, Carrying Charge and Space Factor. The net cost of a bare pole and the carrying charge portions of the calculation are the same, no matter which formula is used. What is different, however, is the calculation of the space factor. Mr. Davis stated that the unusable space of the pole is not considered when performing the calculation of the space factor. The costs attributable to the unusable space are found within the overall calculation (in the Net Cost of a Bare Pole), but it is Mr. Davis's position that not enough of these costs are being allocated to the attacher via the space factor.

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-017
Page 1 of 1

Witness: Edward A. Davis
Request from: Time Warner/ Comcast

Question:
Please state whether Mr. Davis agrees that the space allocation factor of 7.41% in the FCC cable formula is applied to the annual costs associated with the entire pole (including the unusable space and the safety space). If not, please state the basis for his disagreement with this statement.

Response:
Mr. Davis agrees that the space allocation factor is being applied to the annual costs associated with the entire pole as determined under the FCC methodology.

REPLY ATTACHMENT PDK-20

Time Warner Entertainment L.P. d/b/a Time Warner Cable
NH PUC Docket DT 12-084
Witness: Patricia D. Kravtin
August 17, 2012

PSNH Data Request 1

Referencing page 6, lines 5 – 8, please explain how the "cable formula is designed in a manner that is fully consistent and transparent with respect to the underlying economic theory, including the principles of cost causation and economically efficient marginal cost pricing." Please include any workpapers and assumptions used.

Response

A full explanation of how "the cable formula is designed in a manner that is fully consistent and transparent with respect to the underlying economic theory, including the principles of cost causation and economically efficient marginal cost pricing" is provided in the body of Ms. Kravtin's testimony. *See, e.g.*, Pre-filed Direct Testimony of Patricia D. Kravtin on behalf of Time Warner Entertainment Company L.P. d/b/a Time Warner Cable, Comcast Cable Communications Management, LLC, Comcast of New Hampshire, Inc., Comcast of Massachusetts/New Hampshire, LLC, and Comcast of Maine/New Hampshire, LLC ("PDK Testimony") at page 37, line 15 – page 38, line 5; page 41, line 19 – page 42, line 5; and page 43, line 8 – page 46, line 7.

As explained in Ms. Kravtin's testimony, under the economic principle of cost causation, costs are properly attributed to the entity causally responsible, i.e., the entity but for whose existence (or action) a cost would not have been incurred. Section 224(d), on which the FCC cable formula is based, is fully consistent with this key principle in that it links the pole attachment rental for cable operators to "additional" or marginal costs associated with or "caused by" an attachment, by establishing a range of reasonableness that has marginal costs as a lower bound, and fully allocated cost as an upper bound.

Economic theory is definitive in its preference for pricing as close to marginal cost, i.e., the competitive market outcome, as possible as marginal cost produces the most efficient use of societal resources and other desirable performance attributes (e.g., lower prices, greater choices, innovation). *See, e.g.*, F.M Scherer and David Ross, Industrial Market Structure an Economic Performance, Third Edition, Houghton Mifflin Company, Boston (1990) at 15-21 In a competitive market, there would be multiple pole owners with their own infrastructure, each vying for buyers to rent space on their poles, such that prices would tend to be bid down to levels approximating marginal cost.

In the absence of competitive market conditions, the FCC cable methodology, by charging cable companies a recurring rate closer to (but still well in excess of) marginal cost (especially in combination with make-ready fees) than the telecom rate or other per-capita based formulas (for which the cost causative linkage is much less transparent), is the relatively more efficient rate – one that more closely mimics a competitive market outcome.

REPLY ATTACHMENT PDK-21

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-037
Page 1 of 1

Witness: Edward A. Davis
Request from: Time Warner/ Comcast

Question:
Please refer to Page 10 of Mr. Davis's testimony and state whether a) It is Mr. Davis's contention that costs associated with the safety space are not allocated to attachers under the FCC telecom formula. b) If the answer to (a) is yes, please state whether it is Mr. Davis's contention that the telecom formula's use of a proportional based allocator does not
apportion the costs associated with the usable space on the pole. If the answer is yes, please explain.

Response:
Please see the Company's response to Q-TW-COMCAST-016. The answer is the same for the safety space. It is not included in the calculation of the space factor portion of the calculation.

REPLY ATTACHMENT PDK-22

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-029
Page 1 of 1

Witness: Edward A. Davis, David L. Bickford
Request from: Time Warner/ Comcast

Question:
Please refer to page 8 lines 4-7 and page 13 of Mr. Davis's testimony and provide all documents, including any studies that demonstrate that PSNH routinely installs taller poles throughout its network to satisfy its own needs and anticipated third party attachment demand.

Response:
PSNH installs taller poles to meet the requirements of PSNH electric customer demand and to accommodate a joint owner as outlined in their respective joint ownership agreements. PSNH does not routinely install taller poles for anticipated third party demand.

REPLY ATTACHMENT PDK-23

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-030
Page 1 of 1

Witness: Edward A. Davis, David L. Bickford
Request from: Time Warner/ Comcast

Question:
Please provide all studies demonstrating that PSNH's investment in taller poles would not have been made "but for" the communications attachers, excluding any joint owner.

Response:
No such study has been prepared by the Company.

REPLY ATTACHMENT PDK-24

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-031
Page 1 of 1

Witness: Edward A. Davis, David L. Bickford
Request from: Time Warner/ Comcast

Question:
For any such study, please identify where PSNH has separately quantified (a) the additional investment in taller poles made in anticipation of third party communications attachers that was not recovered in make-ready fees and (b) the additional investment in taller poles that was recovered in make-ready fees.

Response:
Please see the Company's response to Q-TW-COMCAST-030.

REPLY ATTACHMENT PDK-25

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-032
Page 1 of 1

Witness: Edward A. Davis, David L. Bickford
Request from: Time Warner/ Comcast

Question:
For any such study provided in response to question 31 above, please (a) identifY the additional investment required to accommodate third party attachers on a per pole per attacher basis; and (b) provide all documents or other explanation ofthe analytical techniques used by PSNH, as well as an explanation of what data PSNH sampled.

Response:
Objection: PSNH objects to the Data Request, it is overly broad, unduly burdensome, seeks information that is not within PSNH's possession, custody or control and calls for a special study or the creation of documents that do not currently exist. Without waiving objections, please see the Company's response to Q-TW-COMCAST-030.

REPLY ATTACHMENT PDK-26

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-038
Page 1 of 1

Witness: Edward A. Davis, David L. Bickford
Request from: Time Warner/ Comcast

Question:
Please state the basis for Mr. Davis's contention on page 10 at lines 3-4 that space on PSNH poles is space "reserved specifically" for attaching entities, and provide documentation to support his position, including cites to pole attachment agreements, FCC rules or other specific authority.

Response:
Please see the Company's response to Q-SEGTEL-009.

Public Service Company of New Hampshire
Docket No. DT 12-084

Data Request SEGTEL-01
Dated: 09/28/2012
Q-SEGTEL-009
Page 1 of 2

Witness: Edward A. Davis, David L. Bickford
Request from: segTEL, Inc.

Question:

Please refer to your testimony at page 8.

a. Please define the "safety space" and provide the amount space required for the communication worker safety zone for each height of utility pole utilized by PSNH.

b. To the extent that the communication worker safety zone space is identical for each pole size, is it Mr. Davis's contention that taller poles have a higher cost burden due to the communication worker safety zone?

Response:

a. The "safety space" is defined as the amount of space required to ensure the proper safeguarding of persons during the installation, operation or maintenance of overhead supply and communication lines and their associated equipment. The space shall meet or exceed the amounts defined under the National Electric Safety Code and are defined in the attached table.

b. The safety space is not necessarily the same for every pole. Given that pole attachment rate methodologies are applied using the combined cost of all poles regardless of actual safety space of individual poles, any variation of cost among poles is averaged.

This Standard specifies the minimum vertical clearance between conductors at the pole. ***However, conductor over conductor clearances in the span usually determine the required separation at the pole.*** The Construction Standards are designed to meet or exceed these requirements, within the "LIMITS ON OVERHEAD STANDARDS DESIGN" as defined in **DSEM Section 06.23.** If the clearances in the span will permit and it is absolutely necessary to reduce the separation between conductors at the pole, this separation may be reduced to the preferred ("PRFD") dimension shown below, but shall never be less than the "NESC" dimension.

Voltages are phase-to-ground for MGY circuits and phase-to-phase for delta and UGY circuits.

Conductors Usually at Upper Levels / Conductors Usually at Lower Levels	Minimum Vertical Clearance In Inches PRFD = NU's Preferred Clearances NESC = NESC Minimum Required Clearances						
	Supply Cables	All NU Open Supply Conductors NOTE 2					
	As Defined in NOTE 1	0 To 8.7 kV	8.7 To 14.4 kV	19.9 kV	23 kV UGY	27.6 kV UGY	34.5 kV UGY
Communications Company Conductors As Defined in **DSEM Section 06.23**	42 PRFD 40 NESC	42 PRFD 40 NESC	43	45	47	49	52
NU Supply Conductors As Defined in NOTE 1	16	60 PRFD 16 NESC NOTE 4	60 PRFD 19 NESC	21 NESC	60 PRFD 23 NESC	60 PRFD 25 NESC	60 PRFD 28 NESC
Open Wire 750V – 8.7 kV		26 PRFD 16 NESC	30 PRFD 19 NESC	21 NESC	31 PRFD 23 NESC	31 PRFD 25 NESC	36 PRFD 28 NESC
8.7 kV – 14.4 kV			30 PRFD 19 NESC	21 NESC	31 PRFD 23 NESC	31 PRFD 25 NESC	36 PRFD 28 NESC
19.9 kV				21 NESC	N/A	N/A	N/A
23 kV UGY					31 PRFD 23 NESC	31 PRFD 25 NESC	36 PRFD 28 NESC
27.6 kV UGY						31 PRFD 25 NESC	36 PRFD 28 NESC
34.5 kV UGY							36 PRFD 28 NESC

Notes

1. a. **CATEGORY 1** and **CATEGORY 2** conductors as defined in **DSEM Section 06.23**, and
   b. Insulated, non-shielded cable operated at not over 5 kV phase-to-phase or 2.9 kV phase-to-ground, supported on and cabled together with an effectively grounded bare messenger.
2. Clearances for spacer cable are shown on **DTR 04.231**. Special conditions should be referred to Distribution Material & Construction Standards.
3. Open wire secondaries shall have the following clearances between conductors: 0-250-foot span = 8 inches, 251-300-foot span = 12 inches
4. The preferred clearance (PRFD) between open wire secondary and "Conductors As Defined In NOTE 1" is 16 inches.
5. There shall be a minimum of 2-inch clearance between all hardware to avoid radio and TV interference. Where this is not possible, all hardware shall be bonded together.

ORIGINAL 7/30/75 APPROVED 1/2/01	**MINIMUM VERTICAL CLEARANCE BETWEEN CONDUCTORS ON THE SAME POLE – BASED ON NESC RULES 230 AND 235**			
	NORTHEAST UTILITIES	DESIGN & APPLICATION STANDARD	**DTR 04.225**	**17**

REPLY ATTACHMENT PDK-27

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-018
Page 1 of 2

Witness: **Edward A. Davis, David L. Bickford**
Request from: **Time Warner/ Comcast**

Question:
Please refer to page 10 lines 2-5 of Mr. Davis's testimony and define the term "safety space." Please state whether it is Mr. Davis's position that no attachment by PSNH can be made in the "safety space." If this is Mr. Davis's position, please provide the basis for that assertion, including any citation to the National Electrical Safety Code provisions that support Mr. Davis's position that no such placement by PSNH is allowed.

Response:
Please refer to Q-SEGTEL-009 for the definition of "safety space". PSNH may attach street light brackets and luminaries in the safety space so long as they meet or exceed the requirements of the National Electric Safety Code. Please see page 2 of this response for the Company's standards for minimum clearance requirements between luminaires (and associated equipment) and communications equipment.

GENERAL – This Standard defines the minimum clearance requirements of brackets, support wires, drip loops and supply equipment cases from communications equipment.

DEFINITIONS – Equipment – The non–current carrying metal parts of equipment, including: metal supports for cables or conductors, metal support braces, which are attached to metal supports or are less than 1 inch from transformer cases, or hangers which are not effectively grounded.

NU EQUIPMENT CASES – Effectively grounded NU equipment cases shall be separated from communications company equipment by 30 inches. If the NU equipment case is not effectively grounded, the clearance from communications companies equipment shall be determined from **DTR 04.225** as the clearance between NU open supply conductors and communications conductors.

DRIP LOOPS TO LUMINAIRES – The lowest point of a drip loop feeding a luminaire shall be at least 12 inches above the communication cable or its thru bolt. If the drip loop is covered with a nonmetallic covering, then this minimum clearance requirement can be reduced to 3 inches. See **DTR 21.061** for detail.

SUPPORT WIRES AND BRACKETS – To be effectively grounded, the support wire or bracket must be bonded to the neutral with a #4 or #6 copper ground wire in accordance with **DTR 21.061**. Where the secondary is supplied by a delta or unigrounded primary, the support wire and bracket are effectively grounded only if the secondary neutral is grounded in accordance with **DTR 16.411** at the transformer. Streetlight bracket installations must meet the clearance requirements of *both* the drip loop as well as the bracket.

Vertical Clearance in Inches From Communications Conductors of Support Wires and Brackets Used for Carrying Luminaires			**Vertical Clearance in Inches From Communications to Supply Cable Drip Loop**	
Attachment Point of Bracket or Span Wire	Not Effectively Grounded	Effectively Grounded	Without Covering	With Covering
Above communication support arms	20 – Note 1	20 – Note 1	12	3
Below communication support arms	40 – Note 2	24	Note 6	Note 6
Above messengers carrying communication cable	20 – Note 1	4	12	3
Below messengers carrying communication cable	40 – Note 3	4	Note 6	Note 6
From terminal box of communications cable	20 – Note 1	4	12	3
From communications brackets, bridle wire rings or drive hooks	16 – Note 1	4	12	3

Notes
1. May be reduced to 12 inches for either span wires or metal parts of brackets at points 40 inches or more from the pole.
2. May be reduced to 24 inches for luminaires operating at less than 150 volt to ground.
3. May be reduced to 20 inches for luminaires operating at less than 150 volt to ground.
4. There shall be a 2–inch minimum clearance between all hardware to avoid radio and TV interference. Where this is not possible, the hardware shall be bonded together.
5. The clearances shown above equal or exceed the requirements of the *National Electrical Safety Code*, ➤(Rule 238).
6. Streetlight brackets **shall not** be mounted below communications conductors or supports.

ORIGINAL 11/29/88 APPROVED 9/11/12	**MINIMUM VERTICAL CLEARANCE FROM COMMUNICATIONS FACILITIES TO EQUIPMENT CASES & FACILITIES ASSOCIATED WITH LUMINAIRES**			
	NORTHEAST UTILITIES	DESIGN & APPLICATION STANDARD	**DTR 04.226**	**5**

Public Service Company of New Hampshire

Docket No. DT 12-084

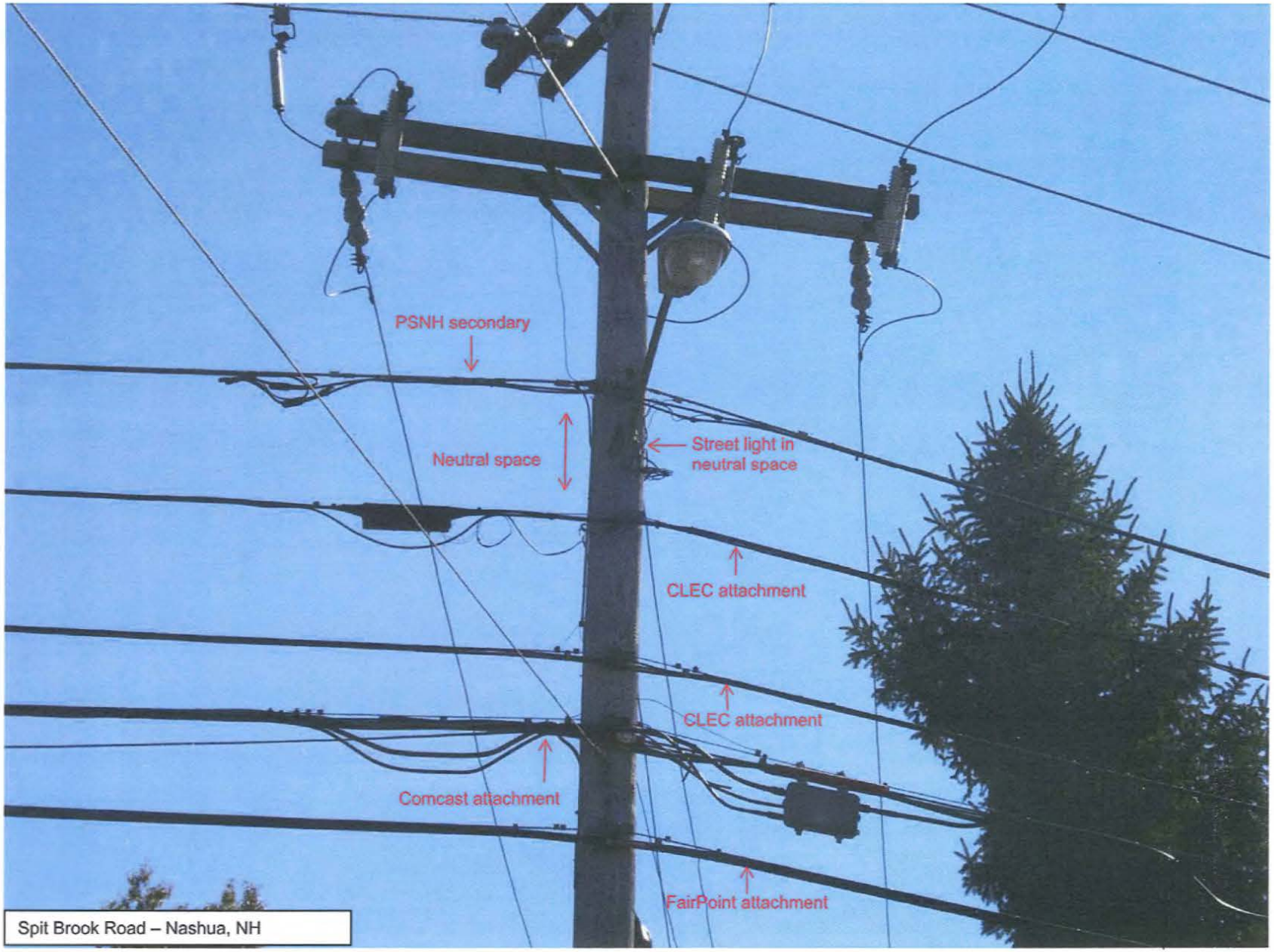
Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-019
Page 1 of 1

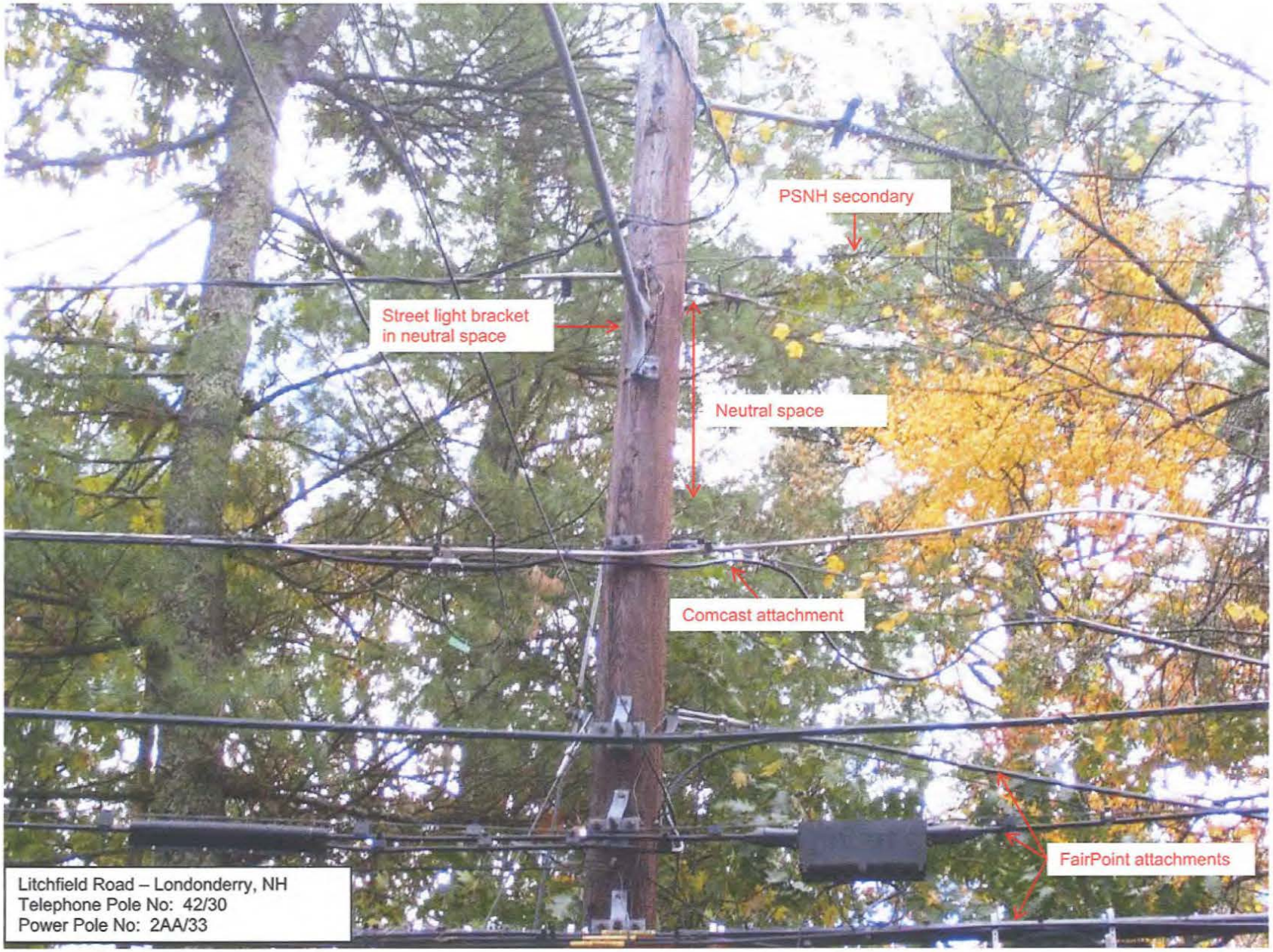
Witness: Edward A. Davis, David L. Bickford
Request from: Time Warner/ Comcast

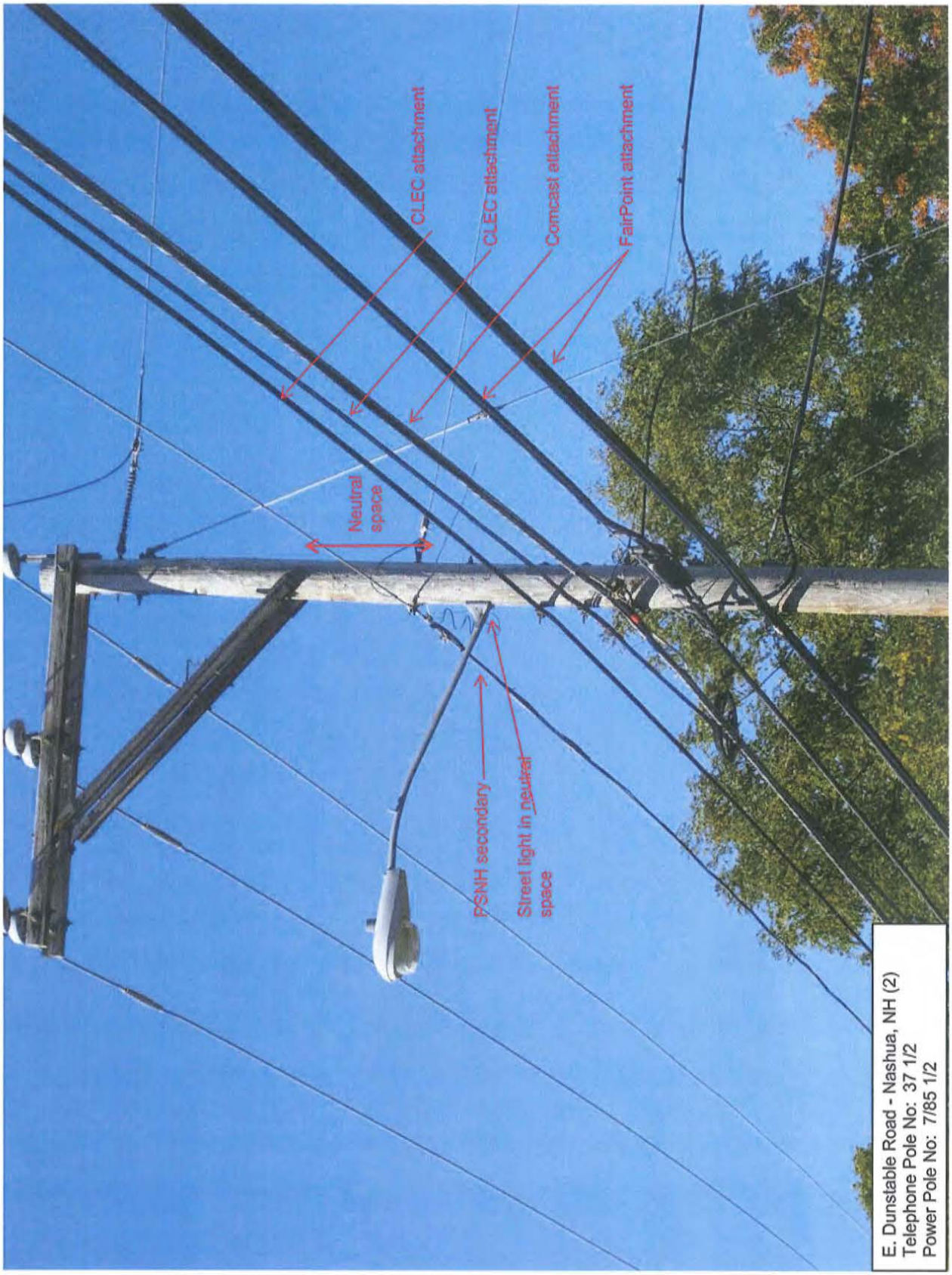
Question:
Please state whether Mr. Davis acknowledges the ability of electric utilities to place street lights and other equipment, including PSNH's own fiber in the safety space. If the answer is anything other than an unqualified yes, please explain the answer.

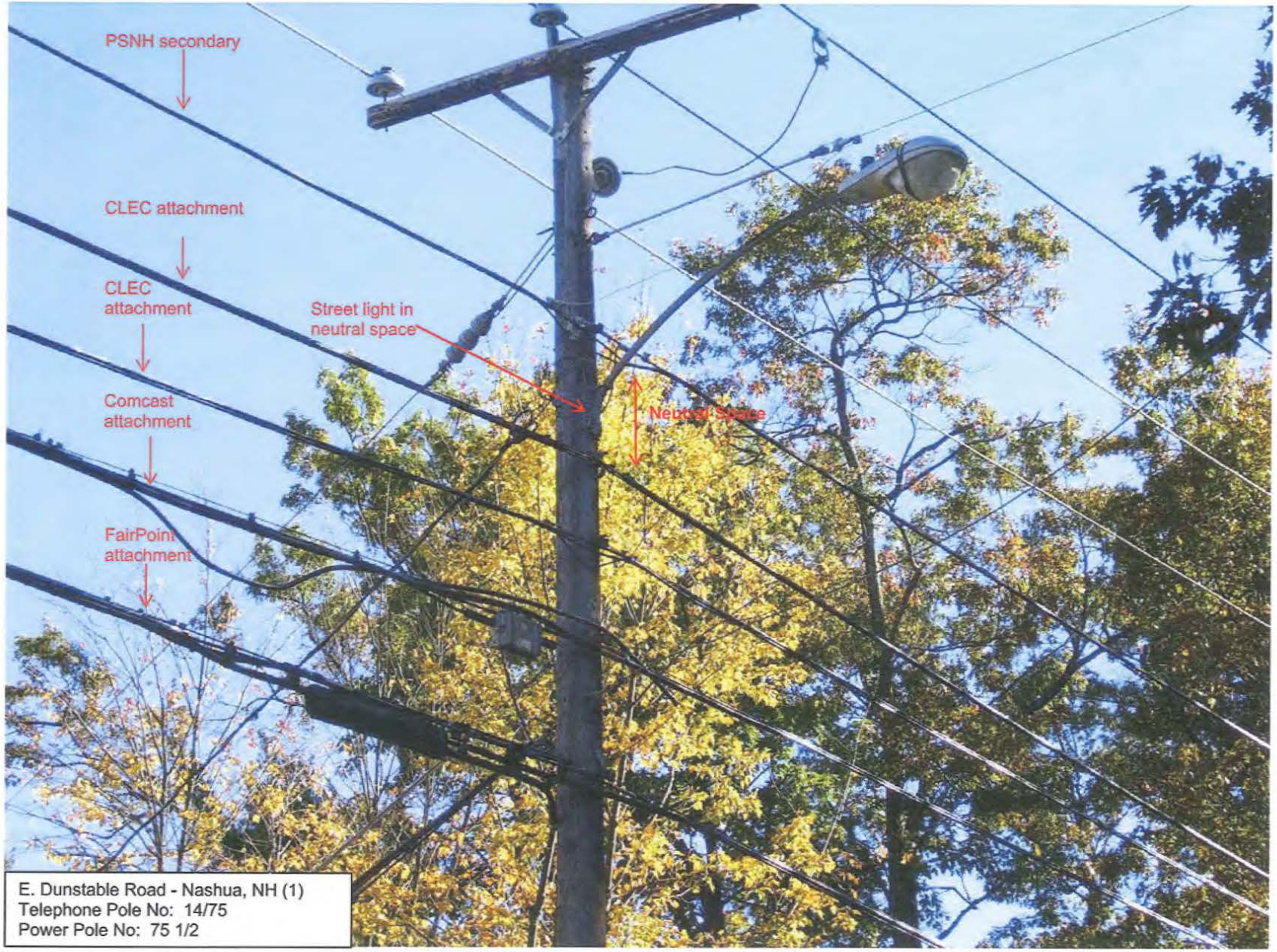
Response:
As indicated in Q-TW-COMCAST-018, PSNH acknowledges the ability of electric utilities to place street lights in the safety space. PSNH control cables, defined as conductors that are 120/240 volts or greater, are considered to be power supply lines throughout the traffic signal system and occupy the lowest position within the power company space on the pole if space is available on the pole for their attachment. PSNH low voltage cables, defined as conductors operating at nominal voltages of 90 volts or less, are considered to be communications conductors and occupy a portion of the communications company space on the pole.

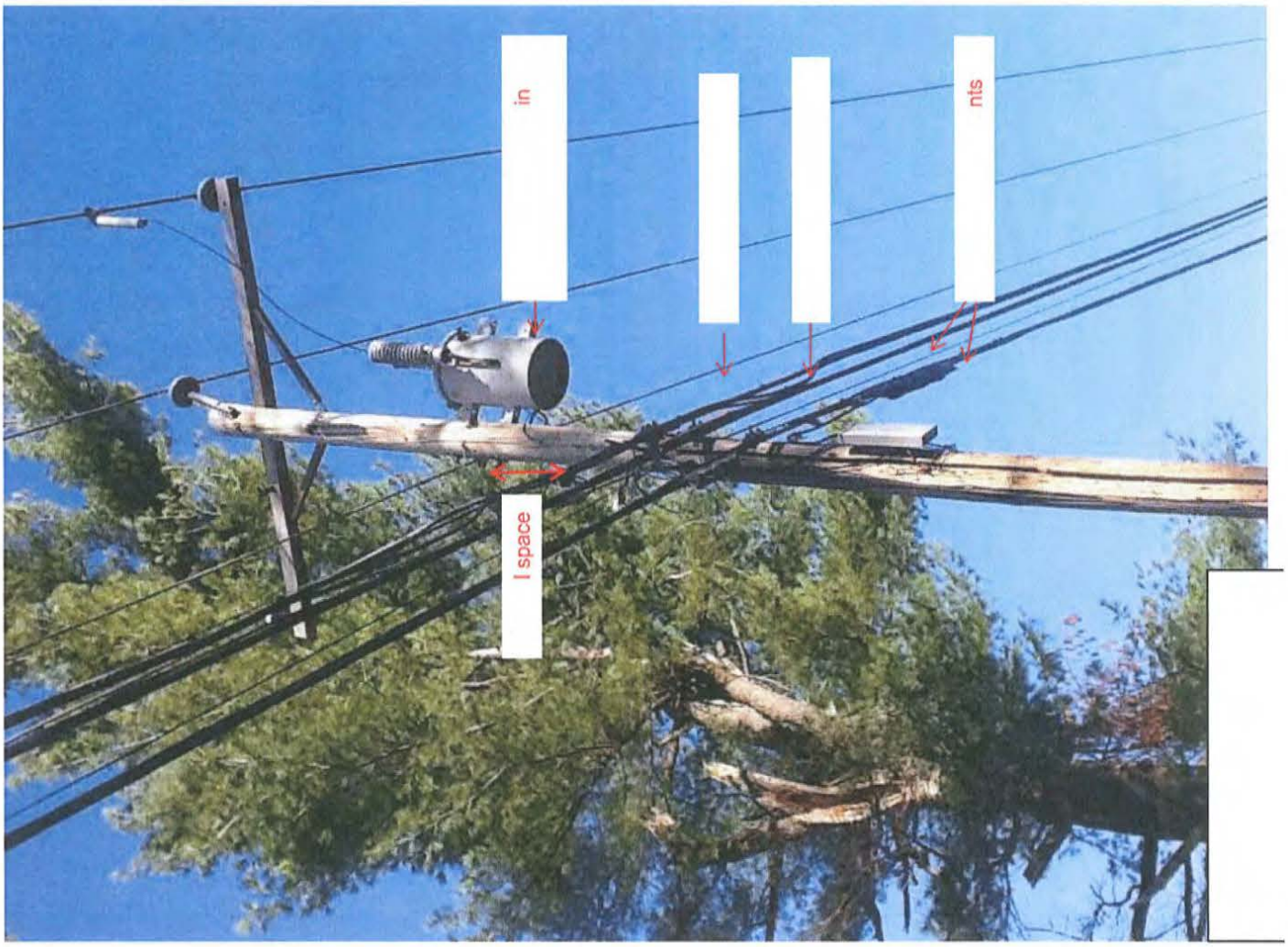
REPLY ATTACHMENT PDK-28

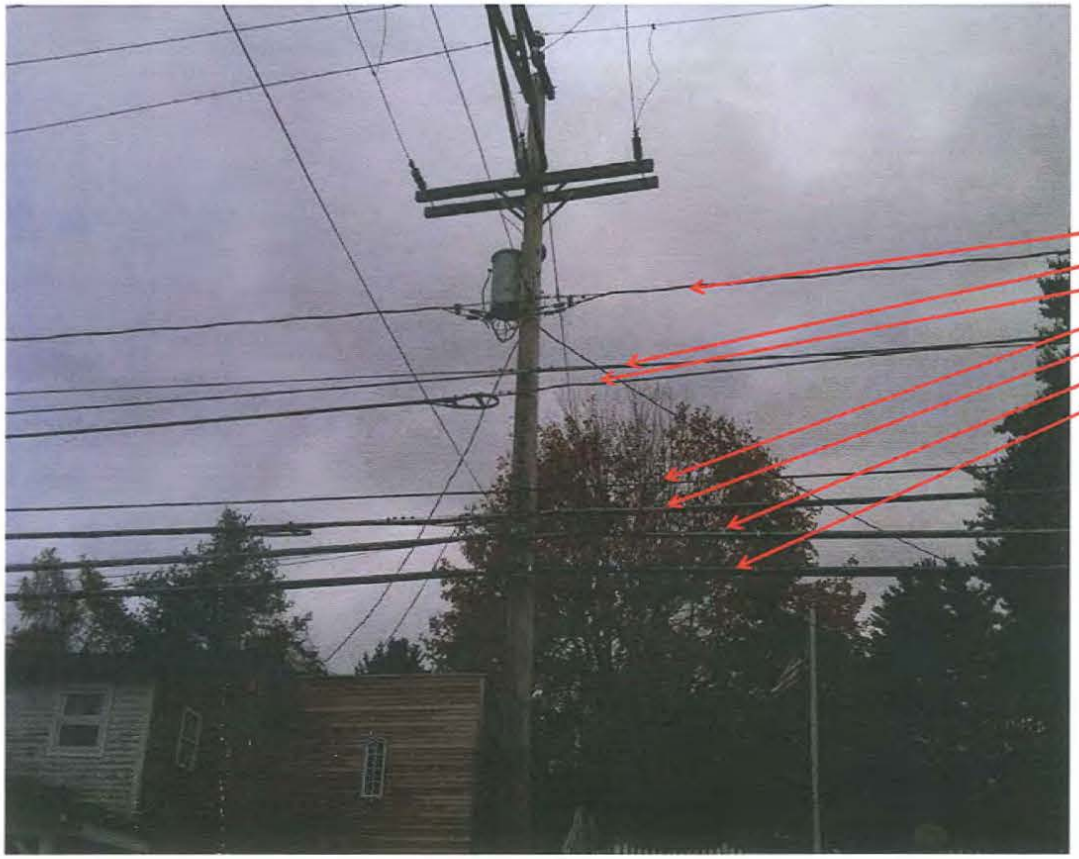

PSNH secondary
Neutral space
Street light in neutral space
CLEC attachment
CLEC attachment
Comcast attachment
FairPoint attachment
Spit Brook Road – Nashua, NH

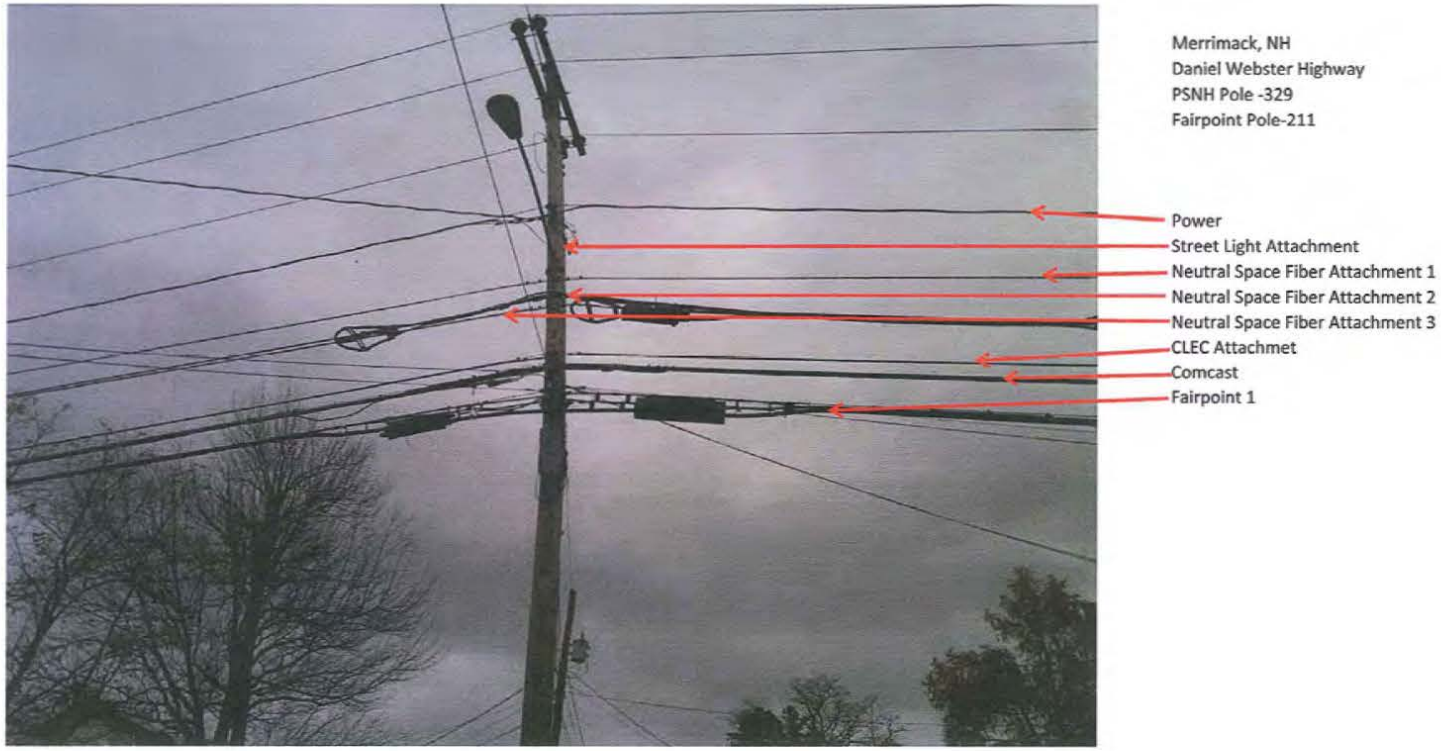

PSNH secondary
Street light bracket
in neutral space
Neutral space
Comcast attachment
FairPoint attachments
Litchfield Road – Londonderry, NH
Telephone Pole No: 42/30
Power Pole No: 2AA/33


CLEC attachment
CLEC attachment
Comcast attachment
FairPoint attachment
Neutral space
PSNH secondary
Street light in neutral space
E. Dunstable Road - Nashua, NH (2)
Telephone Pole No: 37 1/2
Power Pole No: 7/85 1/2


PSNH secondary
CLEC attachment
CLEC attachment
Comcast attachment
FairPoint attachment
Street light in neutral space
Neutral Space
E. Dunstable Road - Nashua, NH (1)
Telephone Pole No: 14/75
Power Pole No: 75 1/2


in
nts
l space


Merrimack, NH
Daniel Webster Highway X Church Street
PSNH Pole -330
Fairpoint Pole-9/10
Power
Neutral Space Fiber Attachment 1
Neutral Space Fiber Attachment 2
CLEC Attachmet
Comcast
Fairpoint 1
Fairpoint 2


Merrimack, NH
Daniel Webster Highway
PSNH Pole -329
Fairpoint Pole-211
Power
Street Light Attachment
Neutral Space Fiber Attachment 1
Neutral Space Fiber Attachment 2
Neutral Space Fiber Attachment 3
CLEC Attachmet
Comcast
Fairpoint 1

REPLY ATTACHMENT PDK-29

States Certified by the FCC to Regulate Pole Attachments for Investor-Owned Utilities

State	Pertinent Statute(s)	Key Rule(s) and/or Order(s)	Basic Format/Methodology[1]
Alaska	Alaska Stat. §§ 42.05.151, 42.05.311, 42.05.321	Alaska Admin. Code, Title 3 § 52.900 – 940; *Consideration of Rules Governing Joint Use of Utility Facilities and Amending Joint-Use Regulations Adopted Under 3 ACC 52.900 – 3 AAC 52.940*, Order Adopting Regulations, 2002 Alas. PUC LEXIS 689 (2002)	FCC Cable
Arkansas	Ark. Code §§ 23-4-1001 through 23-4-1006	*Rulemaking Proceeding to Establish Pole Attachment Rules in Accordance with Act 740 of 2007*, Docket No. 08-073-R, Order No. 5 (July 30, 2008), available at: http://www.apscservices.info/pdf/08/08-073-r_59_1.pdf.	No specific formula methodology
California	Cal. Pub. Util. Code § 767.5	*Order Instituting Rulemaking on the Commission's Own Motion into Competition for Local Exchange Service*, Decision 98-10-058, 1998 Cal. PUC LEXIS 879 (1998)	FCC Cable
Connecticut	Conn. Gen. Stat. §§ 16-1, 16-19, 16-332	*Application of Southern New England Telephone Co. to Amend its Rates and Rate Structure*, Docket No. 92-09-19, Decision, 1993 Conn. PUC LEXIS 5 (1993); Decision, Petition of the United Illuminating Co. for a Declaratory Ruling regarding Availability of Cable Tariff Rate for Pole Attachments by	FCC Cable

[1] Each reference to the FCC Cable formula methodology herein indicates application of the FCC cable formula or a close variation of the FCC cable formula.

		Cable Systems Providing Telecommunications Services and Internet Access, Docket Number 05-06-01, Dec. 14, 2005.	
Delaware	Del. Code Ann. Title 26 §§ 201, 209	Code Del. Regs. §§ 26-1000-1004	Other
District of Columbia	D.C. Code Ann. § 34-1253.03	D.C. Mun. Regs. Title 15-1600 through 15-1699	No specific formula methodology
Idaho	Idaho Code § 61-538	*Washington Water Power Co. v. Benewah Cable Co.*, Case No. U-1008-206, Order No. 19229, 1984 Ida. PUC LEXIS 100 (1984)	FCC Cable
Illinois	220 Ill. Comp. Stat. 5/7-102, 5/9-101	83 Ill. Admin. Code § 315.20	FCC Cable
Kentucky	Ky. Rev. Stat. Ann. § 278.040 and 278.280(2)	*Adoption of a Standard Methodology for Establishing Rates for CATV Pole Attachments*, Case. No. 251, Order, 49 P.U.R. 4th 128 (Ky. PSC, Sept. 17, 1982); 807 Ky. Admin. Regs. 5:006 (Sec. 21)	FCC Cable
Louisiana	La. Const. Art. 4, § 21(b); La. R.S. 45:1163	*Agreements for the Joint Utilization of Poles and Facilities by Two or More Utilities;* Order No. U-14325, 1980 La. PUC LEXIS 93 (1980); *Review of LPSC Orders U-14325, U-14325-A and General Order dated December 17, 1984 Dealing with Agreements for Joint Utilization of Poles and Facilities by Two of More Entities*, Docket No. U-22833, General Order, 1999 La. PUC LEXIS 13 (1999)	FCC Cable
Maine	35-A Me. Rev. Stat. § 711	Code Me. Rules 65-407-880	Other
Massachusetts	Ma. Gen. Laws ch. 166, § 25A	Mass. Regs. Code Title 220 § 45.00 –	FCC Cable

		45.11; *Cablevision of Boston Co., et al. v. Boston Edison Co.*, D.P.U./D.T.E. 97-82 (April 15, 1998); *Order Establishing Complaint and Enforcement Procedures to Ensure that Telecommunications Carriers and Cable System Operators Have Non-Discriminatory Access to Utility Poles, Ducts, Conduits and Rights-of-Way*, D.T.E. 98-36-A, Order Promulgating Final Regulations, 2000 Mass. PUC LEXIS 21 (2000)	
Michigan	Mich. Comp. Laws Stat. § 460.6g (regulating electric poles); Mich. Comp. Laws Stat. § 484.2361 (regulating telecom poles)	*Application of Consumers Power Co.*, Case Nos. U-10741, U-10816 and U-10831, Opinion and Order, 1997 Mich. PUC LEXIS 26 (1997)	FCC Cable
New Hampshire	N.H. RSA 374:34-a	N.H. Code of Admin. Rules Ch. PUC 1300	No specific formula methodology
New Jersey	N.J. Stat. Ann. §§ 48:5A-20, 48:5A-21	N.J. Admin. Code 14:18–2.9; *West Jersey Tel. Co.*, Docket Nos. CO85121263 *et al.*, 77 PUR 4th 89 (Sept. 2, 1986)	FCC Cable
New York	N.Y. Pub. Serv. Law § 119-a	*Certain Pole Attachment Issues Which Arose in Case 94-C-0095*, Opinion No. 97-10, 1997 NY PUC LEXIS 364 (1997)	FCC Cable
Ohio	Ohio Rev. Code Ann. §§ 4905.02, 4905.71	*Columbus and Southern Ohio Electric Co.*, Case Nos. 81-1058-EL-AIR, 82-654-EL-ATA, 50 PUR 4th 37 (Nov. 5, 1982)	FCC Cable
Oregon	Or. Rev. Stat. §§ 757.270 – 290 and 759.650 – 675	Or. Admin. Rule 860-028-0110 and 860-028-0230; *Rulemaking to Amend Oregon Admin. Rules Relating to Safety*	FCC Cable

		and Attachment Standards, Order No. 01-839; AR 401, 2001 Ore. PUC LEXIS 483 (2001)	
Utah	Utah Code Ann. § 54-4-13	Utah Admin. Code R. § 746-345-5	FCC Cable
Vermont	30 Vt. Stat. Ann. §§ 225, 226	Vt. Public Service Board Rule 3.706	FCC Cable[2]
Washington	Wash. Rev. Code §§ 80.54.010 – 80.54.040		FCC Cable

[2] While Vermont uses the FCC Cable formula, a higher usable space presumption applies to attachments deemed to provide "local exchange telephone service," resulting in a higher attachment rate.

REPLY ATTACHMENT PDK-30

Time Warner Entertainment L.P. d/b/a Time Warner Cable
NH PUC Docket DT 12-084
Witness: Patricia D. Kravtin
August 17, 2012

PSNH Data Request 8

Referencing page 14, lines 12 – 13, please explain how the pole attachment rental rate could influence the electric utility's investment in pole plant. Would you have reached the same conclusion if the electric utility does not compete in the communications marketplace? If your answer is yes to the prior question, please explain why the FCC explicitly noted the entrance of electric utilities into the "increasingly convergent communications marketplace" when adopting its new pole attachment rate formula.

Response:

The two key points being made in the cited passage of Ms. Kravtin's testimony are (1) that rates derived using the cable rate formula (and especially including make-ready charges that apply in addition to the formula rate) provide contribution to the utility over and above economically efficient prices; and (2) cable formula rates have been proven over time not to affect the utilities' investment in pole plant. These facts – corroborated in numerous court decisions and in rulings by the FCC since the passage of the Pole Attachment Act in 1978 – demonstrate that neither utilities nor their ratepayers have been negatively impacted by the pole rates set using the cable rate formula. Most recently, the FCC, in April 7, 2011 Order at para. 151, stated:

> In this regard, we note that for many years the majority of third-party pole attachments subject to Commission regulation have been priced at the cable rate, and there is nothing in the record to suggest that there is, or ever has been, a shortage of pole capacity arising from the utilities' cost recovery at that level. In addition, because there are far more attachments by cable operators than by telecommunications carriers paying the telecom rate, the number of attachments for which there is an actual change in utilities' current pole attachment cost recovery by virtue of the new telecom rate is likely to be relatively modest. Accordingly, we conclude that the pole owner will have appropriate incentives to invest in poles and provide attachments to third-party attachers, carrying forward under our new approach to the telecom rate. Moreover, this approach will significantly reduce the marketplace distortions and barriers to the availability of new broadband facilities and services that arose from disparate rates.

See also FCC April 7, 2011 Order at ¶ 148:

> We also observe that pole owners have the opportunity to recover through make-ready fees all of the capital costs actually caused by third-party attachers. As a result, pole owners need not bear any significant risk of unrecovered pole investment undertaken to accommodate a third party attachment.

For similar reasons as Ms. Kravtin explains in response to Request No. 5, whether or not in any given market, or at any given point in time, the electric utility pole owner chooses to exercise its opportunity to compete in the convergent communications market does not impact the validity of these facts – other than to reinforce and emphasize their importance and if anything, increasing relevance in the evolving communications market of today and in the future. Accordingly, Ms. Kravtin would have reached the same conclusions, and similarly, the FCC's rationales for abandoning the old telecom rate which are driven largely by objectives to increase deployment of broadband services and competition (see cited passage above and as cited in Ms. Kravtin's response to Request No. 7) hold true regardless of individual business case decisions of any given utility to compete at any given point in time.

REPLY ATTACHMENT PDK-31

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-039
Page 1 of 1

Witness: **Edward A. Davis, David L. Bickford**
Request from: **Time Warner/ Comcast**

Question:
Please state whether PSNH routinely charges third party attachers, including specifically Time Warner Cable and Comcast, for the cost of a pole replacement that is necessary to accommodate a new attachment. If not, please provide any documents that demonstrate that PSNH absorbs pole replacement costs when performed to accommodate third party attachers, including specifically with respect to Time Warner Cable and Comcast.

Response:
Objection: PSNH objects to the Data Request, it is overly broad, unduly burdensome, seeks information that is not within PSNH's possession, custody or control and calls for a special study or the creation of documents that do not currently exist, and calls for information presently in the possession of the requesting party. Without waiving objections, the Company states that PSNH routinely charges a third party, including Time Warner and Comcast, to accommodate a new attachment through the third party make ready survey process and any subsequent make ready work required to accommodate such attachments.

REPLY ATTACHMENT PDK-32

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-050
Page 1 of 1

Witness: Edward A. Davis
Request from: Time Warner/ Comcast

Question:
Please state Mr. Davis's understanding ofthe definition of incremental cost. Please provide cites to the economic or regulatory literature that supports his understanding.

Response:
Objection: PSNH objects to the Data Request, calls for opinion, speculation or conjecture, and information neither relevant to the claims or defenses in this litigation nor reasonably calculated to lead to the discovery of material and admissible evidence. Without waiving objections, incremental costs are generally additional costs associated with providing an incremental service or product. The definition of incremental cost may vary depending upon the type of cost analysis being performed. For purposes of reviewing costs associated with pole attachments on the Company's poles incremental cost includes any cost associated with pole attachments that the Company would not incur absent the attachment as well as the costs of adding pole plant that attaching entities use but that are not paid for through make-ready charges. Embedded within these costs are operating costs associated with third party pole attachments and costs of additional plant and expenses associated with attachment related facilities.

Literature in which incremental costs are discussed that were relied upon when reviewing pole attachment rate methodologies included the following: *Principles of Public Utility Rates*, Bonbright, Danielson and Kamerschen, Public Utility Reports, Inc., 1988; *Electric Utility Rate Economics*, Caywood, McGraw-Hill Book Company, 1968; various costing and pricing articles, including *Lingering Myths on Costs and Pricing Telephone Service*, Yale Journal on Regulation, Steven G. Parsons, 1994 ; *Electric Utility Cost Allocation Manual*, National Association of Regulatory Utility Commissioners, January 1992; various FCC rule makings, reports and orders, and reports and filings made by parties pursuant to or referenced in those orders.

REPLY ATTACHMENT PDK-33

Public Service Company of New Hampshire
Docket No. DT 12-084

Data Request SEGTEL-01
Dated: 09/28/2012
Q-SEGTEL-006
Page 1 of 1

Witness: **Edward A. Davis**
Request from: **segTEL, Inc.**

Question:
Please refer to your testimony at page 7, line 12-14. Please identify all decreases in costs that PSNH would experience related to unusable space if no communication attachers occupy the pole.

Response:
Objection: PSNH objects to the Data Request, calls for a hypothetical response, speculation or conjecture. Without waiving objections, the Company is not claiming that the costs related to unusable space would decrease if no communications attachers occupy the pole. Please see Mr. Davis's testimony on page 6, line 15. The Company is advocating that the costs related to unusable space should be shared equally by all attaching entities, including PSNH, since all attachments benefit equally from being supported by this space.

REPLY ATTACHMENT PDK-34

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-048
Page 1 of 1

Witness: Edward A. Davis
Request from: Time Warner/ Comcast

Question:
Referring to Mr. Davis's testimony at page 12lines 15-16, please provide any PSNH studies isolating and quantifying the effect of third party attachment demand on PSNH operating expenses. a) Please provide all documents describing the analytic techniques PSNH used in any studies identified in question 48 above, and explain specifically what data was sampled by PSNH. b) For any such study identified in question 48 above, please explain whether (i) PSNH has calculated the operating expenses, if any, that would not have been made "but for" the communications attacher; and (ii) PSNH has calculated the operating expenses incurred annually for third party attachers on a per pole basis and on a per pole per attacher basis.

Response:
Objection: PSNH objects to the Data Request, it is overly broad, unduly burdensome, seeks information that is not within PSNH's possession, custody or control and calls for a special study or the creation of documents that do not currently exist. Without waiving objections, the Company states that no such study has been prepared. However, note that the carrying costs referred to in Mr. Davis' testimony on page 12 lines 15-16 are those that are included in the calculation of the pole attachment rates.

REPLY ATTACHMENT PDK-35

Public Service Company of New Hampshire
Docket No. DT 12-084

Data Request SEGTEL-01
Dated: 09/28/2012
Q-SEGTEL-001
Page 1 of 1

Witness: **Edward A. Davis**
Request from: **segTEL, Inc.**

Question:
Please refer to your testimony at page 2, lines 21-23. To the extent that PSNH has contended that it embeds subsidies for communications attachers, is it Mr. Davis's testimony that this embedding is intentional or accidental?

a. To the extent that it is intentional, please provide the date that the determination to subsidize attachments was made and the rationale for doing so.
b. To the extent that it is accidental, please provide the date of the discovery of these accidental subsidies and describe any acts taken to rectify.

Response:
By virtue of the requirement to provide rental space on the Company's poles for use by third party pole attachments, the Company developed pole construction standards that include said space (i.e. embed) within the cost of our poles and therefore represents a subsidy.

Not only is there a subsidy because of the construction standards that the Company has developed, there are also subsidies within the formula used to develop the rates that are charged to attaching entities as discussed in Mr. Davis's testimony on pages 6 through 11. In addition, depending on how the Company books certain storm-related expenses, these costs may not be included in the pole attachment calculations at all if they are not included in the accounts used to calculate the rate.

For example, if a storm cost is deferred, those costs attributable to said storm may never be booked to Account 593, Overhead Line Maintenance, which is used to calculate the appropriate Carrying Charge. Subsequently, the attachers will never contribute to the storm recovery and will therefore avoid cost responsibility.

REPLY ATTACHMENT PDK-36

PSNH-segTEL 4. Reference page 4, line 7, relative to PSNH, please provide facts, details and supporting data regarding your statement that "there are many attachments throughout New Hampshire that are made either at no charge to the attaching party and sometimes attachments are made without the knowledge of the pole owner".

ANSWER:

segTEL is aware of at least fifteen New Hampshire municipalities that maintain pole attachments without paying annual rental to pole owners, without being licensed by pole owners, and without pole attachment agreements similar to those that exist for CLECs and CATV.

segTEL has been on field surveys with PSNH personnel where PSNH personnel have noted certain attachments that were made without PSNH's knowledge.

Further segTEL has seen many instances in the field of municipalities that fail to maintain facilities in accordance with the National Electric Safety Code.

REPLY ATTACHMENT PDK-37

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-033
Page 1 of 1

Witness: **Edward A. Davis, David L. Bickford**
Request from: **Time Warner/ Comcast**

Question:
Please refer to page 14 of Mr. Davis's testimony and provide all documents, including any studies that demonstrate that the terrain in New Hampshire requires installation by PSNH of poles taller than the FCC's presumptive 37.5 foot average height to maintain required clearances.

Response:
No such study exists. PSNH installs poles utilizing the applicable policies, standards and clearances required for the specific location where the pole is being installed.

REPLY ATTACHMENT PDK-38

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-053
Page 1 of 1

Witness: **Edward A. Davis**
Request from: **Time Warner/ Comcast**

Question:
With respect to Mr. Davis's testimony beginning at page 14line 18, please explain the basis for using the 10%/90% weighting factor. Is there any basis for PSNH's application of the 10%/90% weighting factor in its proposed cable rate formula other than the fact that it was adopted in the 1993 Connecticut DPUC decision cited inn. 5 of Mr. Davis's testimony?

Response:
The origin of the 10%/90% factor is the referenced 1993 decision, and a review performed by the Company of the sizes and costs of poles recently installed on its distribution system. Given the significant number of new poles installed and included in the Company's pole plant that have lengths greater than the average height of poles in the Company's records, and that are greater than the presumptive lengths utilized in conventional pole attachment methodologies, there is merit in factoring in the cost of a "marginal" 40 foot pole into the net cost of a bare pole, as discussed in testimony.

REPLY ATTACHMENT PDK-39

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-055
Page 1 of 2

Witness: **Edward A. Davis**
Request from: **Time Warner/ Comcast**

Question:
Please provide all studies as to PSNH pole replacement costs, including studies or analyses that support the replacement cost figure used in the derivation of Table 4 of Mr. Davis's testimony.

Response:
Page 2 of this response provides the analysis performed by the Company to calculate the net cost of a bare pole provided in Table 4 of Mr. Davis's testimony.

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-055
Page 2 of 2

PUBLIC SERVICE OF NEW HAMPSHIRE
2012 Pole Attachment Rates
Calculations using 2010 FERC Form 1 Data

NET POLE INVESTMENT

A. Net Pole Investment = Gross Pole Investment (Account 364) - Accumulated Depreciation (Account 108) (Poles) - Accumulated Deferred Income Taxes (Account 190,281-283) (Poles)

= 208,842,716 - 62,277,835 - 25,871,978

= 120,692,902

B. Net Cost of a Bare Pole (Embedded Electric) = 0.85 x Net Pole Investment / Number of Poles

= 0.85 x 120,692,902 / 265,071 = 102,588,967 / 265,071

= $387.02

C. Marginal Cost of an Average 40 Ft. Fully Owned Pole

	Total Cost	Poles
40 FT Wood Pole	14,706,964.63	25,668
40 FT Steel Pole	1,310.44	10
	14,708,275.07 +	25,678 = $572.80

D. Combined Cost

90% Embedded = $348.32
10% Marginal = $57.28

= $405.60

REPLY ATTACHMENT PDK-40

Time Warner Entertainment, L.P. d/b/a Time Warner Cable
Petition for Resolution of Dispute with Public Service Company of New Hampshire
PSNH Data Requests to Comcast – Set 1

Received: August 3, 2012
Request No. PSNH – 10

Date of Response: August 17, 2012
Witnesses: Glenn Fiore and
Christopher Hodgdon

PSNH Data Request No. 10:

Referencing your response to data request 9, please indicate what actions or investment Comcast has planned during 2012, 2013 and 2014 in New Hampshire in order to meet the objectives of the 2008 Broadband Action Plan. Please provide any supporting plans and documents.

Objection and Response:

Subject to, and without waiver of the General Objections, budgetary decisions including investments in infrastructure, introduction of new products and the enhancement of existing products are made on a yearly basis so it is not possible to provide this information for 2013 and 2014. Nevertheless, if such information existed, it would be proprietary, confidential and competitively sensitive. Comcast objects to providing the requested investment information for 2012 on the basis of its general objections, and because the requested information is confidential, proprietary, and competitively sensitive financial information. With respect to the request for "actions" planned during 2012, without waving its objections, Comcast responds as follows: During 2012 Comcast has doubled the speeds of three of our broadband service tiers at no additional charge or price increase to the customer. Specifically, Xfinity Blast! customers will now get download speeds of up to 50 Mbps (formerly 25 Mbps), and Extreme 50 customers will now receive speeds of up to 105 Mbps (formerly 50 Mbps). In addition, in September, 2012, new Extreme 305 Mbps service will also be available in New Hampshire. This is the seventh time since 2002 that Comcast has increased speeds for its customers.

Comcast will also accept enrollment in its Internet Essentials program, as discussed in the Prefiled Direct Testimony of Glenn Fiore and Christopher Hodgdon at page 23 and Response to PSNH Data Request 32, through 2014. In addition, students and families who enter the program and continue to be eligible for the National Free and Reduced Lunch Program may participate in the program until they graduate from high school. This means that qualifying children entering the program in 2012 in first grade will continue to receive internet service at $9.95 per month until they graduate from high school in 2024. More information about the Internet Essentials program is found at the following website: http://internetessentials.com/default.aspx.

REPLY ATTACHMENT PDK-41

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-014
Page 1 of 1

Witness: Edward A. Davis
Request from: Time Warner/ Comcast

Question:
Please state on cents per kilowatt hour basis, the rate increases that would be required from each customer class if PSNH's current pole attachment rates were the unified broadband rates calculated by using the FCC's cable rate formula as indicated in the pre-filed testimony of Patricia Kravtin dated July 20, 2012 on page 55, Table 3 ($5.03/attachment on jointly owned poles and $10.07/attachment for solely owned poles).

Response:
Objection: PSNH objects to the Data Request, it is overly broad, unduly burdensome, and seeks information that is not within PSNH's possession, custody or control and calls for a special study or the creation of documents that do not currently exist. Without waiving objections, in order to perform such calculation the Company would need a significant amount of additional information that is not known or available to perform the requested calculation. A change in pole attachment rate alone (in this case, a proposed reduction in attachment rates) is insufficient. Given that changes in rates are not typically made on the basis of single issues, but rather would be proposed and submitted to the Commission at the time of a comprehensive distribution rate case (which would not be filed until the end of the Settlement period), additional information associated with the test year for such filing would need to be developed. For a given change in pole attachment rates, the number of attaching entities billed under each such rate, along with any proforma adjustments, would need to be determined in order to calculate pole attachment revenues. Furthermore, an allocated cost of service study and comprehensive set of distributed test year revenue requirements, sales and revenue upon which a rate change filing would be made would need to be developed. Revenues at current rates, along with proforma pole attachment revenue, would need to be developed, allocated among customer classes and compared with revenue requirements of each customer class to determine total cost responsibility and ultimately revenues proposed to be recovered from each class. Any such proposed changes in rates would be subject to review and approval of the Commission before a derivation of the rates requested could be determined.

REPLY ATTACHMENT PDK-42

Public Service Company of New Hampshire

Docket No. DT 12-084

Data Request TW-COMCAST-01
Dated: 09/28/2012
Q-TW-COMCAST-047
Page 1 of 1

Witness: Edward A. Davis, David L. Bickford
Request from: Time Warner/ Comcast

Question:
Please identify each entity (including any telephone company, fire alarm company, municipality, governmental entity, private user and cable system) which occupies and/or has the right to attach to PSNH poles, specifying the contract or other arrangement defining each such entity's rights and obligations, including the number of attachments and the pole rental rate charged to such entities. a) Please identify each agreement, including any relevant amendments, governing the joint ownership and/or use of poles between PSNH and any other entity, including any telephone company. b) Please state the number of PSNH owned poles to which any entity other than PSNH has attached facilities, specifying, if possible, the number of poles with two, three, four, etc. attachments of such entities. c) Please state the number ofPSNH-owned poles to which (1) Comcast facilities are attached; and (2) Time Warner Cable facilities are attached. d) Please provide the average number of entities, including PSNH and any joint owner, that are attached to PSNH poles to which Comcast and Time Warner Cable are attached respectively.

Response:
Objection: PSNH objects to the Data Request, it is overly broad, unduly burdensome, seeks information that is not within PSNH's possession, custody or control, calls for a special study or the creation of documents that do not currently exist, calls for information that is unreasonably cumulative or duplicative, obtainable from some other source that is more convenient, less burdensome or less expensive or is presently in the possession of the requesting party, and seeks confidential and proprietary information. Without waiving objections, the Company directs both Comcast and Time Warner Cable to refer to its pole attachment license agreements with PSNH and joint owners, invoices from PSNH that include charges for pole attachments, and any records they may have regarding their attachments on specific poles for information associated with items in item c).

REPLY ATTACHMENT PDK-43

Time Warner Entertainment, L.P. d/b/a Time Warner Cable
Petition for Resolution of Dispute with PSNH
Date of Response: August 17, 2012
Witness: Julie Laine, TWC

PSNH Data Request No. 8:

Referencing page 6, line 11, "Accordingly, TWC is not in a position to flow through higher pole [attachment] costs to its customers." Please provide a detailed analysis of TWC's annual operating costs, for each of the past 5 years, by category and clearly indicate the cost of pole attachment rental fees as a percent of the total cost of doing business.

Response: Objection: relevance, burden, outside the scope of discovery. Without waiving objections, TWC will produce certain confidential operating cost information. *See* Time Warner Entertainment Company, L.P. d/b/a Time Warner Cable Motion for Confidential Treatment filed herewith.

In addition, TWC states that the FCC has found that "Collectively, the expense of obtaining permits and leasing pole attachments and rights-of-way can amount to 20% of the cost of fiber optic deployment," and that "[t]he impact of these rates can be particularly acute in rural areas." *FCC, Connecting America: National Broadband Plan*, at 109 - 110 (2010) (available at http://www.broadband.gov).

REPLY ATTACHMENT PDK-44

Time Warner Entertainment, L.P. d/b/a Time Warner Cable
Petition for Resolution of Dispute with Public Service Company of New Hampshire
PSNH Data Requests to Comcast – Set 1

Received: August 3, 2012
Request No. PSNH – 30

Date of Response: August 17, 2012
Witnesses: Glenn Fiore and
Christopher Hodgdon

PSNH Data Request No. 30:

Reference page 21, line 23, please confirm that if the Commission determines that higher attachment rates are just and reasonable in New Hampshire, Comcast is unlikely to further expand its broadband facilities in the future. Please list any projects that would be affected.

Objection and Response:

Comcast objects to this Data Request on the basis of the General Objections, including that the request calls for speculation and conjecture. Notwithstanding these objections, Comcast notes that the lower, cable pole attachment rate is not only the appropriate rate for Comcast's facilities, but this lower rate, consistent with current FCC and New Hampshire broadband deployment policy, has helped enable Comcast to deploy its advanced broadband network ubiquitously within its service territories in the State of New Hampshire. Any increases in the costs of pole attachments, especially significant increases as those proposed by PSNH which would essentially double the pole rental costs per pole for the identical attachment, will add significant cost to the business that will need to be considered as Comcast is looking for areas throughout New England and the rest of the country in which to further expand its network.

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REDACTED

Time Warner Cable

Home Phone
The Case for Introducing Lifeline Service

Julie Laine & Jeff Lindsay

April 4th, 2012

[redacted]

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REDACTED