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June 3, 2016

VIA ELECTRONIC FILING

Public Utility Commission of Oregon
Attention: Filing Center
201 High Street SE Suite 100
Post Office Box 1088
Salem, Oregon 97308-1088

Re: UM 1750 – Investigation of NW Natural’s WARM Program

Dear PUC Filing Center:

Attached for filing is an electronic copy of Joint Exhibits (Joint/101-103) to the Joint Testimony (Joint/100) filed in this docket on May 23, 2016. These exhibits were inadvertently left off the filing with the Joint Testimony.

If you have any questions, please do not hesitate to contact our office.

Sincerely,

/s/ Zachary D. Kravitz

Zachary D. Kravitz
Associate Counsel
NW Natural

Attachments

BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON

UM 1750
Investigation of NW Natural's
WARM Program

EXHIBIT A IN SUPPORT OF
JOINT TESTIMONY

Date: June 3, 2016

Joint Testimony Filed: May 23, 2016

WARM Year	Start Month	End Month	Weather Zone	Total Number of Opt-In Bills Issued w/WARM		Opt-In WARM Deferral	
				Res	Com	Res	Com
2010	12/1/2009	5/15/2010	Totals	2,727,803	289,660	\$ 466,390	\$ 719,315
2011	12/1/2010	5/15/2011	Totals	2,700,647	280,852	\$ (113,228)	\$ (341,703)
2012	12/1/2011	5/15/2012	Totals	2,732,637	285,416	\$ (76,850)	\$ (209,020)
2013	12/1/2012	5/15/2013	Totals	2,748,000	287,351	\$ 67,978	\$ 215,873
2014	12/1/2013	5/15/2014	Totals	2,837,213	292,953	\$ (30,644)	\$ (65,140)
2015	12/1/2014	5/15/2015	Totals	2,903,033	297,513	\$ 1,359,877	\$ 2,976,929

Data from NWN's CIS system

BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON

UM 1750
Investigation of NW Natural's
WARM Program

EXHIBIT B IN SUPPORT OF
JOINT TESTIMONY

Date: June 3, 2016

Joint Testimony Filed: May 23, 2016

Sch. 2 Residential

	WARM DEFERRAL AMOUNT									
Incremental Change in Avg. Bill by Month	(\$2,000,000)	(\$1,500,000)	(\$1,000,000)	(\$500,000)	\$500,000	\$1,000,000	\$1,500,000	\$2,000,000	\$2,000,000	\$0.29
	-\$0.29	-\$0.22	-\$0.14	-\$0.07	\$0.07	\$0.15	\$0.22	\$0.29		

*The starting average bill by month from the 2015-16 PGA is \$57.56 for schedule 2 residential customers using 53 therms. This analysis assumes all other impacts to rates will be held constant and only the WARM deferral amounts drive the incremental decrease/increase.

Sch. 3 Commercial

	WARM DEFERRAL AMOUNT											
Incremental Change in Avg. Bill by Month	(\$3,000,000)	(\$2,500,000)	(\$2,000,000)	(\$1,500,000)	(\$1,000,000)	(\$500,000)	\$500,000	\$1,000,000	\$1,500,000	\$2,000,000	\$2,500,000	\$3,000,000
	-\$4.40	-\$3.67	-\$2.93	-\$2.20	-\$1.47	-\$0.73	\$0.73	\$1.46	\$2.20	\$2.93	\$3.66	\$4.40

*The starting average bill by month from the 2015-16 PGA is \$220.02 for schedule 3 commercial customers using 233 therms. This analysis assumes all other impacts to rates will be held constant and only the WARM deferral amounts drive the incremental decrease/increase.

BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON

UM 1750
Investigation of NW Natural's
WARM Program

EXHIBIT C IN SUPPORT OF
JOINT TESTIMONY

Date: June 3, 2016
Joint Testimony Filed: May 23, 2016

Individual WARM Bill Calculation Example

Rate Schedule 02 - "Warmer than Normal"

SCENARIO WARM ADJUSTMENT LIMITS						
	No Ceiling/Floor	\$12 Ceiling	25% Ceiling	\$12 Floor	25% Floor	Scenario Billed Amount
WARM Adj.	\$ 14.65	\$ 12.00	\$ 12.39	\$ (12.00)	\$ (12.39)	\$ 12.00
Equivalent therms	32.94	26.98	27.86	(26.98)	(27.86)	26.98
Cent/therm Adj.	\$ 0.27640	\$ 0.22642	\$ 0.23378	\$ (0.22642)	\$ (0.23378)	\$ 0.22642
WARM Billing Rate	\$ 1.21153	\$ 1.16155	\$ 1.16891	\$ 0.70871	\$ 0.70135	\$ 1.16155
Usage	53.0	53.0	53.0	53.0	53.0	53.0
HDDs from Normal	-200	-200	-200	-200	-200	(200.0)
Total Bill	\$ 64.21	\$ 61.56	\$ 61.95	\$ 37.56	\$ 37.17	\$ 61.56
WARM DEFERRAL						
		\$ Ceiling	\$ 2.65			
		% Ceiling				
		\$ Floor				
		% Floor				

Rate Schedule 03 - "Warmer than Normal"

SCENARIO WARM ADJUSTMENT LIMITS						
	No Ceiling/Floor	\$35 Ceiling	25% Ceiling	\$35 Floor	25% Floor	Scenario Billed Amount
WARM Adj.	\$ 60.56	\$ 35.00	\$ 48.40	\$ (35.00)	\$ (48.40)	\$ 35.00
Equivalent therms	170.88	98.75	136.55	(98.75)	(136.55)	98.75
Cent/therm Adj.	\$ 0.27529	\$ 0.15909	\$ 0.21998	\$ (0.15909)	\$ (0.21998)	\$ 0.15909
WARM Billing Rate	\$ 1.15522	\$ 1.03902	\$ 1.09991	\$ 0.72084	\$ 0.65995	\$ 1.03902
Usage	220.0	220.0	220.0	220.0	220.0	220.0
HDDs from Normal	-200	-200	-200	-200	-200	(200.0)
Total Bill	\$ 254.15	\$ 228.58	\$ 241.98	\$ 158.58	\$ 145.19	\$ 228.58
WARM DEFERRAL						
		\$ Ceiling	\$ 25.56			
		% Ceiling				
		\$ Floor				
		% Floor				

Rate Schedule 02 - "Colder than Normal"

SCENARIO WARM ADJUSTMENT LIMITS						
	No Ceiling/Floor	\$12 Ceiling	25% Ceiling	\$12 Floor	25% Floor	Scenario Billed Amount
WARM Adj.	\$ (14.65)	\$ 12.00	\$ 12.39	\$ (12.00)	\$ (12.39)	\$ (12.00)
Equivalent therms	(32.94)	26.98	27.86	(26.98)	(27.86)	(26.98)
Cent/therm Adj.	\$ (0.27640)	\$ 0.22642	\$ 0.23378	\$ (0.22642)	\$ (0.23378)	\$ (0.22642)
WARM Billing Rate	\$ 0.65873	\$ 1.16155	\$ 1.16891	\$ 0.70871	\$ 0.70135	\$ 0.70871
Usage	53.0	53.0	53.0	53.0	53.0	53.0
HDDs from Normal	200	200	200	200	200	200.0
Total Bill	\$ 34.91	\$ 61.56	\$ 61.95	\$ 37.56	\$ 37.17	\$ 37.56
WARM DEFERRAL						
	\$ Ceiling					
	% Ceiling					
	\$ Floor		\$ (2.65)			
	% Floor					

Rate Schedule 03 - "Colder than Normal"

SCENARIO WARM ADJUSTMENT LIMITS						
	No Ceiling/Floor	\$35 Ceiling	25% Ceiling	\$35 Floor	25% Floor	Scenario Billed Amount
WARM Adj.	\$ (60.56)	\$ 35.00	\$ 48.40	\$ (35.00)	\$ (48.40)	\$ (35.00)
Equivalent therms	(170.88)	98.75	136.55	(98.75)	(136.55)	(98.75)
Cent/therm Adj.	\$ (0.27529)	\$ 0.15909	\$ 0.21998	\$ (0.15909)	\$ (0.21998)	\$ (0.15909)
WARM Billing Rate	\$ 0.60464	\$ 1.03902	\$ 1.09991	\$ 0.72084	\$ 0.65995	\$ 0.72084
Usage	220.0	220.0	220.0	220.0	220.0	220.0
HDDs from Normal	200	200	200	200	200	200.0
Total Bill	\$ 133.02	\$ 228.58	\$ 241.98	\$ 158.58	\$ 145.19	\$ 158.58
WARM DEFERRAL						
	\$ Ceiling					
	% Ceiling					
	\$ Floor		\$ (25.56)			
	% Floor					