Oregon
John A. Kitzhaber, MD, Governor

Public Utility Commission
3930 Fairview Industrial Dr SE
Mailing Address: PO Box 1088
Salem, OR 97308-1088
Consumer Services
1-800-522-2404
Local: (503) 378-6600
Administrative Services
(503) 373-7394

August 19, 2013

Via Electronic filing

OREGON PUBLIC UTILITY COMMISSION
ATTENTION: FILING CENTER
PO BOX 1088
SALEM OR 97308-1088

RE: Docket No. UM 1654 – In the Matter of
NORTHWEST NATURAL GAS COMPANY, dba NW NATURAL,
Investigation of Interstate Storage and Optimization Sharing.

Enclosed for electronic filing in the above-captioned docket is the Public Utility Commission Staff's Reply Testimony.

/s/ Kay Barnes
Kay Barnes
Filing on Behalf of Public Utility Commission Staff
(503) 378-5763
Email: kay.barnes@state.or.us

c: UM 1654 Service List (parties)

PUBLIC UTILITY COMMISSION OF OREGON

UM 1654

STAFF REPLY TESTIMONY OF

ERIK COLVILLE

In the Matter of
NORTHWEST NATURAL GAS COMPANY, dba
NW NATURAL,
Investigation of Interstate Storage and Optimization Sharing.

August 19, 2013

CASE: UM 1654
WITNESS: ERIK COLVILLE

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 100

REPLY TESTIMONY

August 19, 2013

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is Erik Colville. I am a Senior Utility Analyst for the Public Utility Commission of Oregon. My business address is 550 Capitol Street NE Suite 215, Salem, Oregon 97301-2551.

Q. WHAT IS THE PURPOSE OF YOUR REPLY TESTIMONY?

A. The purpose of my reply testimony is to address the series of unsettled issues raised by Staff that were set aside in the Second Partial Stipulation[1] in the Northwest Natural Gas Company (NWN) rate case, Docket No. UG 221. The testimony also addresses the same issues in reply to NWN testimony filed July 15, 2013 in this Docket No. UM 1654 (NWN/100 White and NWN/200 Friedman).

Q. DID YOU PREPARE EXHIBITS FOR THIS DOCKET?

A. Yes. I prepared Staff/102 Staff Suggested Revisions to Tariff Schedules 185 and 186.

Q. PLEASE SUMMARIZE YOUR CONCLUSION.

A. I conclude that the remaining issue from Staff's testimony in Docket No. UG 221 is the sharing percentage for use of core utility customer assets in Schedules 185 and 186 optimization activities. I recommend 67 percent to core utility customers/33 percent to NWN remain as the optimization sharing

[1] October 2, 2012, Second Partial Stipulation of NW Natural, Staff, CUB, NWIGU, and NWEC filed in NORTHWEST NATURAL GAS COMPANY: (Docket No. UG 221) Request for a General Rate Revision.

percentages for revenue derived from use of core utility customer assets in optimization activities.

Q. What is the origin of this Interstate Storage and Optimization Sharing docket?

A. The origin of this docket is the Second Partial Stipulation in the NWN rate case, Docket No. UG 221. A series of unsettled issues raised by Staff were set aside in the Second Partial Stipulation to be addressed in a separate docket with a decision by the Commission requested to be issued by December 31, 2013.

Q. What issues were raised by Staff in the NWN rate case, Docket No. UG 221?

A. The issues raised by Staff in the NWN rate case were:

Regarding Tariff Schedule 185 -

1. Since no cost studies have been prepared by NWN since 2000 regarding the use of Mist storage to provide off-system sales and the sharing of revenues from such services between NWN and its customers, new studies are needed to justify continuing the current sharing percentages. (Staff/1000 Zimmerman/17-18).
2. NWN claims that the prospective return from NWN's shareholder investment in an interstate storage offering is highly sensitive to the assumption regarding price. However, Staff believed this was incorrect. NWN’s interstate sales of storage and related transportation from Mist under §284.224 are governed, established and approved by Federal

Energy Regulatory Commission (FERC). These rates are cost-based, not market-based. Consequently, NWN could lose money on its build-out of Mist for the interstate market only if it failed to sell at the level assumed in the FERC-approved rates. And NWN has never experienced difficulty in marketing its Mist capacity in the interstate market. The current sharing sends 20 percent of net revenues to NWN customers while allowing NWN to retain 80 percent of net revenues. It appeared the risk to NWN of this service is minimal and the sharing percentages needed to be changed to reflect this. (Staff/1000 Zimmerman/18).

3. Tariff Schedule 185 adds a credit to customers for their share of the net margin revenues received by NWN for core storage optimization activities. These margin revenues are shared on a 67/33 basis; 67 percent will be shared with customers through the credit provided for in these schedules, and 33 percent will be retained by NWN. This provision seemed duplicative since Schedule 186 already makes provision for a 67/33 sharing of revenues from NWN's optimization of its core storage. The core storage optimization provision should be deleted from Tariff Schedule 185. (Staff/1000 Zimmerman/14-15).

Regarding Tariff Schedule 186 –

1. Staff recommended adding deliverability optimization to the core storage and pipeline services covered by Tariff Schedule 186. Deliverability is the amount of gas that can be delivered during one day's time. Core

customers should receive the benefits of deliverability optimization as well. (Staff/1000 Zimmerman/19).

2. Staff recommended altering the sharing percentage in Tariff Schedule 186 from 67/33 to 90/10 with core utility customers receiving 90 percent of the revenues from NWN's optimization of core storage and pipeline assets. In all instances, as a public utility NWN is obligated to optimize the use of core utility storage and pipeline capacity, particularly that owned by NWN, and to credit all of the benefits in terms of revenue from such optimization activities to its core utility customers. (Staff/1000 Zimmerman/19).

Q. What conclusion have you reached related to the Tariff Schedule 185 cost studies that were prepared by NWN in 2000 regarding use of Mist storage to provide off-system sales and the sharing of revenues from such services?

A. The studies in 2000 referred to by Staff in its rate case testimony were actually presentations of various sharing methodologies. These presentations were attached to a Staff Report dated April 18, 2000, for the April 25, 2000, public meeting. As discussed below, the current optimization sharing percentage was not established based upon these presentations, but rather the then current weighted average cost of gas (WACOG) sharing percentage adopted for the Purchased Gas Adjustment (PGA) arrangement. While there may be marginal value in refreshing these sharing methodology presentations, I do not see the need to refresh the presentations to resolve the issues in this docket unless new and relevant information affecting the sharing mechanism is offered.

Q. What conclusion have you reached regarding the NWN claims that the prospective return from NWN's shareholder investment in an interstate storage offering is sensitive to the assumption regarding price?

A. NWN states that “contrary to previous claims made by Staff in Docket No. UG 221, the interstate storage contracts NWN currently has, or has had in the past, are not priced at the full FERC cost-based rate. All of these contracts, without exception, have had to be discounted from the FERC-approved maximum rate in order to meet the market price. Because NWN has always been required to discount its FERC cost based rate to meet market prices, the difficulty is not in *whether* the capacity can be sold, but rather *at what price*.” (NWN/100 White/12-13). In Docket No. UG 221 testimony NWN provided exhibit NWN/2702 White presenting data from its 2011 Annual Report of Interstate and Intrastate Gas Storage and Optimization Activities. This exhibit showed a significant discounting of interstate storage services in 2011 compared to the pre-2011 period average. I consulted NWN’s Annual Report of Interstate and Intrastate Gas Storage and Optimization Activities filed each year with the PUC since 2000 and confirmed that the contract prices for interstate storage have been substantially discounted from the maximum monthly rate allowed in its FERC Tariff. From my analysis, I conclude that NWN has experienced difficulty in marketing its Mist capacity at full FERC cost-based rates. Based on my review of NWN's annual reports, the substantial discount in monthly rate is an indication that the Company experiences a risk in its interstate storage optimization activities that is not minimal. Therefore, Staff's testimony in Docket No. UG 221 (Staff/1000 Zimmerman/18) providing justification for changing the interstate storage optimization sharing percentage was not accurate. As a result, I find no reason for revising the storage optimization sharing percentage.

Q. What conclusion have you reached regarding Tariff Schedule 185 adding a duplicative credit to customers for their share of the net margin revenues received by NWN for core storage optimization activities?

A. In March or April each year NWN files with the Commission an Annual Report of Interstate and Intrastate Gas Storage and Optimization Activities. The confidential spreadsheets filed with these annual reports show that Tariff Schedule 185 captures sharing for Mist related activities while Tariff Schedule 186 captures sharing for non-Mist related upstream activities, thus there is no duplicative credit. I recommend NWN revise the wording of Tariff Schedules 185 and 186 to more clearly state what optimization revenues each schedule captures. I also recommend NWN consider including in Tariff Schedules 185 and 186 a figure or table depicting how the sharing percentages are applied to each of the optimization revenue streams. My suggested revisions to Tariff Schedules 185 and 186 are provided in Staff/101.

Q. What conclusion have you reached regarding adding deliverability optimization to the core storage and pipeline services covered by Tariff Schedule 186?

A. There is no need to add deliverability optimization to Schedule 186. Schedule 185 already provides that NW Natural will share with eligible customers the net margin that is attributable to optimization of Mist storage capacity (i.e., deliverability). Net margins from Mist storage optimization are shared (a) 20 percent to customers/80 percent to NWN for the proportion of non-utility Mist capacity not included in the rates and, (b) 67 percent to core utility customers /33 percent to NWN for the proportion of core Mist capacity that is included in the rates. (NWN/100 White/10). I conclude deliverability is already included in the storage optimization services. Because the purpose of pipelines is deliverability, and NWN already derives value from pipeline optimization, core utility customers are already receiving value for that activity.

Q. What conclusion have you reached regarding altering the sharing percentage in Tariff Schedule 186 from 67/33 to 90/10 with core utility customers receiving 90 percent of the revenues from NWN's optimization of core storage and pipeline assets?

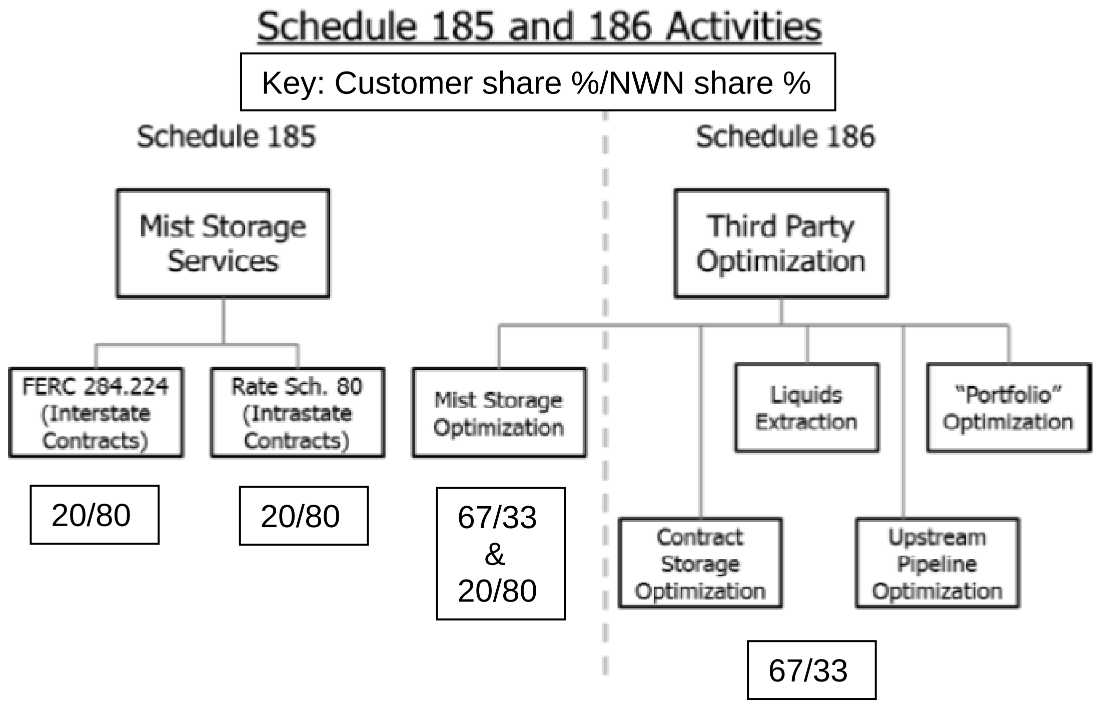
A. I have concluded that the remaining issue from Staff's testimony in Docket No. UG 221 is the sharing percentage for use of core utility customer assets in Schedule 185 and 186 optimization activities. This issue is addressed in the remainder of my testimony.

Q. What core utility customer assets are used in NWN's Schedule 185 and 186 optimization activities?

A. Core utility customer assets used in Schedule 185 and 186 optimization activities include: Mist storage (core customer portion); transmission and distribution pipelines; gas supply and pipeline capacity contracts; and NWN staff.

Q. What Schedule 185 and 186 optimization activities use core utility customer assets?

A. Schedule 185 and 186 optimization activities that use the core utility customer assets include, but may not be limited to: Mist Storage Optimization; Liquids Extraction Optimization; Portfolio Optimization; Contract Storage Optimization; and Upstream Pipeline Optimization. These activities are depicted in the figure below (base figure from NWN/100 White/11). The current sharing percentages are also shown in the figure.



Q. What optimization sharing percentage do you advocate for use of core customer assets?

A. My starting position in considering the sharing percentage for using core utility customer assets is that customers should receive 100 percent of the optimization revenue. This is because, as a public utility, NWN is obligated to optimize the use of core utility customer assets, and to credit all of the benefits in terms of revenue from such optimization activities to its core utility customers.

Q. Does NWN have an unlimited obligation to optimize the use of core customer assets?

A. No. Having stated my starting position for the optimization sharing percentage, I realize that NWN's obligation to optimize the use of core utility customer assets is not unlimited. In other words, NWN is not required to engage in potentially risky activities that are not directly related to providing regulated services to NWN's core utility customers.

Q. Please describe the Schedule 185 and 186 optimization activities that use core utility customer assets?

1. Mist Storage Optimization is deriving value from the sale and trading of excess Mist storage capacity. (NWN/100 White/6). All Mist storage capacity is reserved either for core firm sales service or interstate/intrastate service customers. However, when Mist is not fully utilized by either or both of these groups, NWN has the opportunity to generate additional revenues through optimization. The optimization opportunity is primarily a function of gas injection or withdrawal rates, which in turn have some relationship to the total amount of working gas in Mist storage on any given day. Injection and withdrawal rates are inversely correlated, i.e., the more gas that is being injected for customers, the more optimization capability exists to do withdrawals, and vice versa. (NWN/200 Friedman/9).
2. Liquids Extraction Optimization is deriving value from the sale of liquids separated from the natural gas. Liquids refer to certain heavier hydrocarbons like ethane, propane, and butane that are associated with methane production, methane being the primary component of natural gas. Liquids typically have a market value somewhere between that of methane and oil. The market value can make the extraction of the liquids from methane profitable, depending on the spread between methane and

Natural Gas Liquids (NGL) prices, the relative proportion of the different NGLs in the gas stream, and the cost-effectiveness and efficiency of the extraction facilities. (NWN/200 Friedman/12).

NWN purchases gas out of Alberta, where a significant amount of extraction activities take place outside the production fields and after NWN has taken possession of the gas. For this reason, NWN is in a position to participate in liquids extraction by employing a processing company to perform the extraction on NWN's behalf. (NWN/200 Friedman/13);

3. Portfolio Optimization involves wholesale trading activities such as the exchange of gas commodity contract purchases at different trading locations. (NWN/100 White/6). It is also known as price arbitrage between trading points. These exchanges are made during periods when NWN's upstream pipeline capacity and gas commodity contracts open up opportunities for gas movements in new directions...this requires a large and nimble trading staff with systems to track and act quickly on such opportunities. (NWN/200 Friedman/13).
4. Contract Storage Optimization is price arbitrage opportunities similar to those discussed above for Mist storage, but applied to Jackson Prairie and any other storage contracts held by NWN. (NWN/200 Friedman/15).
5. Upstream Pipeline Optimization refers to the process where a third party trading partner aggregates pipeline requirements over a much larger market area and potentially combine the pipeline capacity with some of

the other activities mentioned above yields a better result than the LDC could achieve on its own. Pipeline capacity on its own represents a fairly small opportunity for optimization. (NWN/200 Friedman/15).

Q. What risks and complexities are unique to the Schedule 185 and 186 optimization activities?

A. In addition to the normal business risks associated with any venture, there are several risks and complexities unique to the Schedule 185 and 186 optimization activities. One major risk specific to Optimization Activities is regulatory risk. To discourage anticompetitive behavior by market participants, FERC has enacted a complex framework of policies and regulations governing the types of optimization activities that NWN can be engaged in. (NWN/100 White/12).

1. Mist Storage Optimization

The price spreads between months are not static but widen and narrow on a day-by-day, minute-by-minute basis. By anticipating these movements, i.e., speculating, NWN's optimization partner can use these same volumes in multiple transactions. These activities reflect the fact that the price of natural gas is constantly moving up or down over time and at each location where gas is traded. The ability to take advantage of these price movements requires sophisticated trading systems and a large trading staff to analyze and act quickly when transactional opportunities arise. NWN does not employ such systems or staff in serving its utility customer needs, and as such cannot engage in this kind of speculative activity on its own. (NWN/200 Friedman/11-12).

2. *Liquids Extraction Optimization*

To take advantage of the economics of liquids extraction requires expertise in different fuels and different markets than would be typical for a gas LDC. (NWN/200 Friedman/13).

3. *Portfolio Optimization*

Portfolio Optimization can also be thought of as price arbitrage between trading points, but by directly utilizing LDC gas supply contracts rather than storage capabilities. These exchanges are made during periods when NWN's upstream pipeline capacity and gas commodity contracts open up opportunities for gas movements in new directions. As with other trading activities previously mentioned, this requires a large and nimble trading staff with systems to track and act quickly on such opportunities. (NWN/200 Friedman/13-14).

4. *Contract Storage Optimization*

Price arbitrage opportunities similar to those discussed above for Mist storage, but applied to Jackson Prairie and any other storage contracts held by NWN. (NWN/200 Friedman/15);

5. *Upstream Pipeline Optimization*

Using a third party trading (optimization) partner that can aggregate requirements over a much larger market area and potentially combine the pipeline capacity with some of the other activities mentioned above yields a better result than the local distribution company (LDC) could achieve on its own. Pipeline capacity on its own, however, represents a fairly small opportunity for optimization. (NWN/200 Friedman/15).

Q. Are the Schedule 185 and 186 optimization activities that use core utility customer assets potentially risky, and not directly related to providing regulated services to NWN's core utility customers?

A. Yes. Based on the activity descriptions above I conclude the Schedule 185 and 186 activities are potentially risky, and are beyond the normal course of an LDC business model or what would be expected of an LDC to serve core utility customers.

Q. Are core utility customers subjected to risk from these optimization activities?

A. No. Based on the wording used in Schedules 185 and 186 if the optimization activities result in a loss the credit to core utility customers will be zero.

Q. Since the Schedule 185 and 186 optimization activities are beyond what would be expected of an LDC is it appropriate to share some portion of the associated revenue with NWN?

A. Yes. Sharing some portion of the optimization revenue with NWN is appropriate because optimization activities use core utility customer assets but are beyond what would be expected of an LDC.

Q. What is the current sharing percentage for Schedule 185 and 186 optimization activities that use core utility customer assets?

A. The current sharing of optimization revenue with core utility customers for use of their assets is 67 percent, with NWN retaining the remaining 33 percent.

Q. What is the origin of the 67 percent core utility customer sharing?

A. NWN testimony (NWN/100 White/9) states "that customers receive 67% because, at that time, that allocation matched the weighted average cost of gas (WACOG) sharing percentage adopted for the Purchased Gas Adjustment arrangement (PGA) for its internal normal utility optimization of gas supply resources. Matching the 67% WACOG sharing was important because the Optimization Activities were at their infancy, and NWN felt by using the PGA sharing percentage, it could eliminate any concerns of potential gamesmanship regarding classification of activities as Optimization Activities versus normal utility gas supply WACOG savings." Staff confirmed that the optimization sharing was indeed established based on the then current WACOG sharing percentage.[2]

Q. What would the core utility customer optimization sharing percentage be using the same logic used originally to set it at 67 percent?

A. The current WACOG sharing percentages are 90/10 or 80/20 (customer sharing percent/NWN sharing percent). Following NWN's original logic for setting the optimization sharing would result in either 90/10 or 80/20, but not 67/33.

Q. Does the WACOG sharing percentage reflect activities that are beyond NWN's obligation to serve its core utility customers?

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[2] December 18, 2002 Interstate Storage Services OPUC Staff Briefing, presentation slides 2, 7 and 9. Also, December 31, 2002 email from Keith White, NWN to Bobbie Tatom, OPUC Staff.

A. No. I recognize that the 90/10 or 80/20 WACOG sharing percentages reflect activities that are part of NWN’s obligation to serve its core utility customers while the optimization activities are beyond what would be expected of an LDC to serve core utility customers.

Q. Do you recommend matching the optimization sharing percentage to the WACOG sharing percentage?

A. No. Because the optimization activities are beyond basic LDC expectations, the sharing percentage should reflect this difference, and be greater for NWN than 90/10 or 80/20.

Q. Is there another reason you do not recommend matching the optimization and WACOG sharing percentages?

A. Yes. The potential “gamesmanship” concern when the optimization activities were at their infancy is no longer a concern. The optimization activities are mature and proven to benefit both core utility customers and NWN. In addition, the optimization activities occur under an Asset Management Agreement (AMA) between NWN and their optimization partner making tracking more transparent.

Q. Could the optimization sharing percentage be changed to benefit core utility customers more than they currently are?

A. Yes. The customer share of optimization revenue could be increased beyond 67 percent.

Q. What would justify changing the optimization sharing percentage?

A. While there are many possible justifications for changing the optimization sharing percentage I would look for significant changes in business conditions and risks since the sharing percentage was established. Examples of condition changes include, but are not limited to, changed optimization activity risk, increased expectations of an LDC to serve core utility customers, decreased optimization activity complexity, increased core utility customer participation in optimization activities, or “gaming” of the optimization sharing process would provide justification.

Q. Do you find justification for changing the optimization sharing percentage?

A. No. As noted by NWN (NWN/100 White/15) the sharing arrangement was intended to provide a sufficient profit opportunity to justify NWN taking on the more speculative optimization activities and their associated incremental costs and risks. Under the existing sharing arrangement, core utility customers receive the majority of the optimization revenue without any exposure to additional risk or incremental costs, and NWN is incented to continue these activities. Further, I am not aware of any significant changes in business conditions and risks associated to this activity. In short, the sharing arrangement works well to benefit core utility customers and NWN, and I do not see any reason to change the sharing percentage.

Q. What optimization sharing percentage do you recommend?

A. As discussed above, the Tariff Schedule 185 and 186 optimization activities are beyond basic LDC expectations. Without a change in conditions from when the core utility customer optimization sharing percentage was set at 67 percent, I recommend 67/33 remain as the optimization sharing percentages for revenue derived from use of core utility customer assets in these optimization activities.

Q. Does this conclude your testimony?

A. Yes

CASE: UM 1654
WITNESS: ERIK COLVILLE

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 101

Witness Qualifications Statement

August 19, 2013

WITNESS QUALIFICATION STATEMENT

NAME: Erik E. Colville, P.E.

EMPLOYER: Public Utility Commission of Oregon

TITLE: Senior Utility Analyst/Electric Rates and Planning

ADDRESS: 550 Capitol Street NE Suite 215, Salem, Oregon 97301-2115.

EDUCATION: Bachelor of Science in Agricultural Engineering
Washington State University, Pullman, WA, 1979

Master of Business Administration
City University, Seattle, WA, 1989

Licensed Professional Engineer since 1984, and licensed as such in Oregon since 1997

EXPERIENCE: I have been employed by the Public Utility Commission of Oregon since June of 2010. I am a Senior Utility Analyst in electric rates and planning for the Electric and Natural Gas Division of the Utility Program. Current responsibilities include lead analyst for integrated resource planning, resource acquisition, the renewable portfolio standard, and environmental related matters.

I have approximately 32 years of professional engineering experience, including approximately 23 years:

- Relating to air, water and soil environmental issues; and
- Evaluating, planning, permitting, designing, and supporting construction of energy facilities

CASE: UM 1654
WITNESS: ERIK COLVILLE

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 102

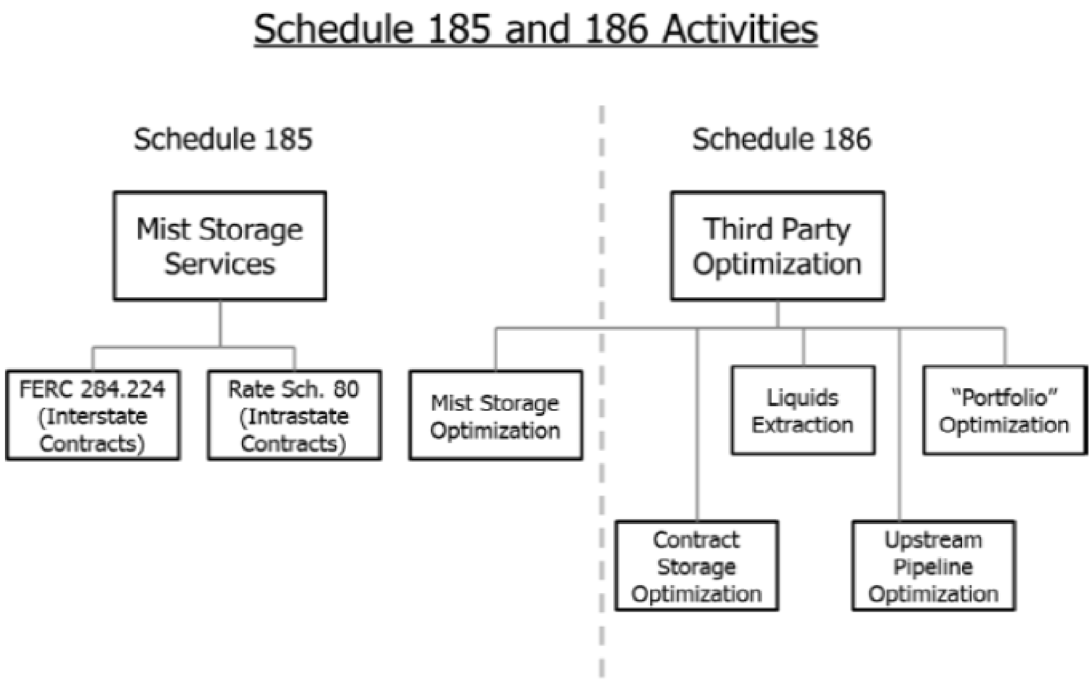
Exhibits in Support
Of Reply Testimony

August 19, 2013

SCHEDULE 185
SPECIAL ANNUAL INTERSTATE AND INTRASTATE STORAGE AND TRANSPORTATION CREDIT
(MIST STORAGE OPTIMIZATION ACTIVITIES)

PURPOSE:

To credit customers served under the below-listed Rate Schedules for the Oregon share of revenues received by NW Natural for (a) interstate storage and related transportation service provided under a Limited-Jurisdiction Blanket Certificate from FERC granted under FERC Regulations, 18 C.F.R. § 284.224 (hereafter referred to as § 284.224 service), (b) intrastate storage activities under **Rate Schedule 80** ~~core storage optimization activities~~; and (c) core utility customer Mist storage optimization activities~~intrastate storage activities under~~ ~~**Rate Schedule 80**~~. Schedule 185 is related to but distinct from Schedule 186.



APPLICABLE:

The credit under this Schedule shall apply to customer bills issued during the June billing cycle of each calendar year, or such other time period as the Commission may approve. The credit shall apply to the following Sales Service Rate Schedules of this Tariff: **Schedule 2**; **Schedule 3**, and; **Schedules 31** and **32** – Firm Sales only.

CREDIT: Effective Billing Cycle: June 2012

The bill credit to be applied to Customer bills during the effective billing cycle will be calculated by multiplying the following per therm credit by the customer's actual gas usage billed during the period January 1, 2011through December 31, 2011:

Rate Schedule 2 ($0.00573) per therm
Rate Schedule 3 ($0.00604) per therm
Rate Schedule 31 CSF ($0.00249) per therm
Rate Schedule 31 ISF ($0.00249) per therm
Rate Schedule 32 CSF ($0.00249) per therm

Rate Schedule 32 ISF ($0.00249) per therm

SPECIAL CONDITIONS:

1. NW Natural will share with customers served under the Rate Schedules listed above, the net margin received from interstate and intrastate (non-core utility customer) storage service on an 80/20 basis; 80% will be retained by NW Natural, and 20% will be shared with customers through the credit provided for in this schedule. For this purpose, net margin is defined as revenues less incremental operating and maintenance (O&M) expense, less incremental capital related costs, on a before income tax basis. Incremental capital-related costs include depreciation, interest, property taxes, and any other costs customarily relating to a utility investment other than return on equity. The imputed capital structure for this purpose shall be 50% debt and 50% equity, with the cost of debt defined as the average long-term cost of debt authorized by the OPUC in Docket UG 132.

2. The interstate and intrastate annual service credit shall be based on the net margin as described in paragraph 1 above, and as filed with the Commission. This credit shall be applied to customers' bills, or placed in an interest bearing deferred account, on June 1 of each year, or at a date other than June 1 for reasons and on terms as the Commission may approve.

3. If the net margin for the year is negative (a loss) then the credit will be zero.

4. In addition to the interstate and intrastate storage service sharing, NW Natural will share with customers served under the Rate Schedules listed above, net margin revenue that is attributable to optimization of core utility customer Mist storage~~and related transportation services~~ on a 67/33 basis; 33% will be retained by NW Natural, and 67% will be shared with customers through the credit provided for in this schedule. For this purpose, net margin is defined as revenues less incremental operating and maintenance (O&M) expense.

5. As provided under "OUT-OF-CYCLE TRANSFERS" provision set forth in Rate Schedules 31 and 32, a Customer that exercises the Capacity Release Option may only be eligible to receive one-half of the above-listed credit.

PRIOR YEAR BALANCES:

The Company will include any remaining balance from the prior year's credit in the calculation of the current year's credit.

TERM OF SCHEDULE:

Application of the § 284.224 service credit under this Schedule is contingent upon continued FERC approval of NW Natural's § 284.224 Limited Jurisdiction Blanket Certificate.

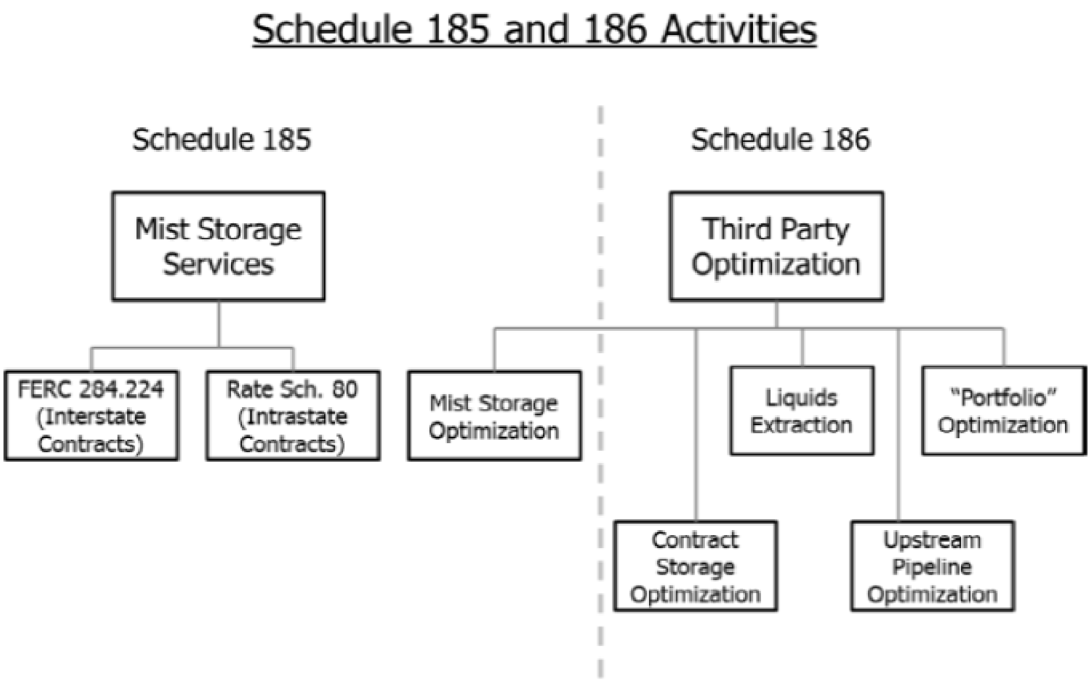
GENERAL TERMS:

This Schedule is governed by the terms of this Schedule, the General Rules and Regulations contained in this Tariff, any other Schedules that by their terms or by the terms of this Schedule apply to service under this Schedule, and by all rules and regulations prescribed by regulatory authorities, as amended from time to time.

SCHEDULE 186
SPECIAL ANNUAL CORE PIPELINE CAPACITY
OPTIMIZATION CREDIT
(NON-MIST STORAGE, UPSTREAM OPTIMIZATION ACTIVITIES)

PURPOSE:

To credit Sales Service Customers served under the below-listed Rate Schedules for the Oregon share of revenues received by NW Natural for (a) liquids extraction activities from core utility customer gas supplies; (b)~~the~~ optimization of the core utility customer gas supply portfolio; (c) optimization of core utility customer contract storage capacity; and (d) optimization of core utility customer upstream ~~P~~pipeline ~~and Storage~~ capacity. Schedule 186 is related to but distinct from Schedule 185.



APPLICABLE:

This credit shall apply to customer bills issued during the June billing cycle of each calendar year, or such other time period as the Commission may approve. The credit shall apply to the following Sales Service Rate Schedules of this Tariff:

Rate Schedule 2 Rate Schedule 31 ISF Rate Schedule 32 ISF
Rate Schedule 3 Rate Schedule 31 CSF Rate Schedule 32 CSI
Rate Schedule 32 CSF Rate Schedule 32 ISI

CREDIT: Effective Billing Cycle: June 2012

The bill credit to be applied to Customer bills during the effective billing cycle will be calculated by multiplying the following per therm credit by the customer's actual gas usage billed during the period January 1, 2011 through December 31, 2011:

($0.00901)

SPECIAL CONDITIONS:

1. NW Natural will share with customers served under the Rate Schedules listed above, the amount of net margin revenue that is attributable to optimization of core utility customer (a) gas supply liquids extraction activities; (b) gas supply portfolio; (c) contract storage capacity; and (d) upstream pipeline capacity~~Pipeline and Storage capacity~~ on a~~n~~ 67/33 basis; 33% will be retained by NW Natural, and 67% will be shared with customers through the credit provided for in this Schedule. For this purpose, net margin is defined as revenues less incremental operating and maintenance (O&M) expense.

2. The annual credit shall be based on the net margin as described in paragraph 1 above, and as filed with the Commission. This credit shall be applied to customers' bills, or placed in an interest bearing deferred account, on June 1 of each year, or at a date other than June 1 for reasons and on terms as the Commission may approve.

3. If the net margin for the year is negative (a loss) then the credit will be zero.

4. As provided under "OUT-OF-CYCLE TRANSFERS" provision set forth in Rate Schedules 31 and 32 a Customer that exercises the Capacity Release Option may only be eligible to receive one half of the above-listed credit.

PRIOR YEAR BALANCES:

The Company will include any remaining balance from the prior year's credit in the calculation of the current year's credit.

GENERAL TERMS:

This Schedule is governed by the terms of this Schedule, the General Rules and Regulations contained in this Tariff, any other Schedules that by their terms or by the terms of this Schedule apply to service under this Schedule, and by all rules and regulations prescribed by regulatory authorities, as amended from time to time.

CERTIFICATE OF SERVICE

UM 1654

I certify that I have, this day, served the foregoing document upon all parties of record in this proceeding by delivering a copy in person or by mailing a copy properly addressed with first class postage prepaid, or by electronic mail pursuant to OAR 860-001-0180, to the following parties or attorneys of parties.

Dated this 19th day of August, 2013 at Salem, Oregon

Kay Barnes

Kay Barnes
Public Utility Commission
3930 Fairview Industrial Drive SE
Salem, Oregon 97302
Telephone: (503) 378-5763

UM 1654
SERVICE LIST (PARTIES)

CABLE HUSTON BENEDICT HAAGENSEN & LLOYD (W)	
TOMMY A BROOKS	1001 SW FIFTH AVE, STE 2000 PORTLAND OR 97204-1136 tbrooks@cablehuston.com
CABLE HUSTON BENEDICT HAAGENSEN & LLOYD LLP (W)	
CHAD M STOKES	1001 SW 5TH - STE 2000 PORTLAND OR 97204-1136 cstokes@cablehuston.com
CITIZENS' UTILITY BOARD OF OREGON (W)	
OPUC DOCKETS	610 SW BROADWAY, STE 400 PORTLAND OR 97205 dockets@oregoncub.org
ROBERT JENKS **(C) (W)**	610 SW BROADWAY, STE 400 PORTLAND OR 97205 bob@oregoncub.org
G. CATRIONA MCCRACKEN **(C) (W)**	610 SW BROADWAY, STE 400 PORTLAND OR 97205 catriona@oregoncub.org
MCDOWELL RACKNER & GIBSON PC (W)	
LISA F RACKNER	419 SW 11TH AVE., SUITE 400 PORTLAND OR 97205 dockets@mcd-law.com
NORTHWEST NATURAL (W)	
E-FILING	220 NW 2ND AVE PORTLAND OR 97209 efiling@nwnatural.com
MARK R THOMPSON **(W)**	220 NW 2ND AVE PORTLAND OR 97209 mark.thompson@nwnatural.com
PUBLIC UTILITY COMMISSION OF OREGON	
ERIK COLVILLE **(C) (W)**	PO BOX 2148 SALEM OR 97308-2148 erik.colville@state.or.us
PUC STAFF--DEPARTMENT OF JUSTICE	
JASON W JONES **(C) (W)**	BUSINESS ACTIVITIES SECTION 1162 COURT ST NE SALEM OR 97301-4096 jason.w.jones@state.or.us