

BEFORE THE ENERGY FACILITY SITING COUNCIL
OF THE STATE OF OREGON

In the Matter of the Review of)	
Northwest Natural Gas Company's)	ORDER
Application for a Natural Gas)	
Pipeline Site Certificate)	

I.

BACKGROUND

A. Procedural History and Evidentiary Rulings

1. This application was filed by Northwest Natural Gas Company (NNG) on February 5, 1988. The Energy Facility Siting Council (EFSC or Council) issued notice of the receipt of the application for a site certificate for a 16-inch diameter pipeline, known as the South Mist Feeder Pipeline (pipeline), on March 1, 1988. The Secretary of State published the notice on March 15, 1988. By an order entered May 21, 1987, the Council appointed Clarissa Beatty as the hearing officer to preside over the review of this application and to take all necessary actions consistent with EFSC's statutory authority to develop a full and complete record.

2. In Order No. 3 entered on April 28, 1988, the hearing officer appointed the Columbia and Washington County Commissioners as members of the Special Advisory Council as required by ORS 469.480. EFSC sent copies of the application and testimony in support of the application to the relevant state and local agencies as required by ORS 469.350(3). EFSC

received responses from these agencies, including the members of the Special Advisory Council. (EFSC Ex Nos. 1-10A and the City of Vernonia's Ex 1.) Correspondence from Washington County also is contained in NNG Exhibit 7C, and correspondence from Columbia County is contained in NNG Exhibit 7D. None of the agencies opposed the application; however, a number of agencies made recommendations regarding the application and proposed specific conditions that should be included in any site certificate issued for the pipeline. (EFSC Ex Nos. 1-6, 9, 10A.)

3. Petitions to intervene, requesting full party status, were filed pursuant to OAR 345-015-016 and OAR 137-03-005 by Northwest Industrial Gas Users, Oregon Steel Mills, Inc. (OSM), Northwest Pipeline Corporation, Northwest Fuel Development, Inc., and Dairy Creek Valley Association, Inc. The petitions were granted on April 13, 1988, April 28, 1988, and May 23, 1988 (Order Nos. 2, 4, 7). The Vernonia Area Chamber of Commerce (VACC) filed a petition to intervene, requesting limited party status, on July 7, 1988. The petition was granted in Order No. 11 entered on July 14, 1988. Interested agency status was granted, under the provisions of OAR 345-15-026 and OAR 137-03-007(1) and (2), to the Oregon Public Utility Commission (PUC), the Oregon Department of Energy (ODOE), and the City of Vernonia (Vernonia) by Order

Nos. 5, 6, and 10 entered on May 15, 1988, April 19, 1988,¹ and July 9, 1988.

4. On March 15, 1988, the first pre-hearing conference was held at the Department of Environmental Quality's (DEQ) offices at 811 S.W. Sixth Avenue in Portland. A second pre-hearing conference was held at the same location on June 3, 1988. Public hearings on the application were held in Vernonia and North Plains, Oregon on June 1, 1988 and June 2, 1988, respectively. Transcripts of the hearings are received as EFSC Exhibits 10A and 10B. Written testimony and other evidence submitted for these hearings are received as EFSC Exhibits 10C through 10G. Letters received after the hearing from Richard and Mary Anne Harrold and from Cynthia Scanlon are received as EFSC Exhibits 11 and 12. The contested case hearing was held on July 21, 1988, in Salem, Oregon. Notice of the contested case hearing was issued on June 6, 1988, pursuant to the provisions of OAR 345-15-006.

5. All objections to exhibits and testimony offered during the hearings are denied. All testimony and exhibits are received.

6. EFSC finds that it is not in the public interest to make public disclosure of the location and contents of archaeological sites identified in NNG Exhibit 15A, Part II and Executive Summary or in NNG Exhibit 15B, Part II and Executive

¹ Order No. 6 is dated April 19, 1988. It was in fact issued on May 19, 1988.

Summary. Therefore, to the extent allowed under ORS chapter 192 and other applicable provisions of law, NNG Exhibit 15A, Part II and Executive Summary and NNG Exhibit 15B, Part II and Executive Summary shall be sealed.

7. The record in this proceeding consists of all documents listed in Appendix A, which is attached and incorporated herein by reference.

B. Description of the Proposed Pipeline and Its Related and Supporting Facilities

1. NNG proposes to construct a 16 inch diameter natural gas pipeline, known as the South Mist Feeder Pipeline (pipeline), between Miller Station, near Mist, Oregon and West Union Road, west of Portland, Oregon. (NNG Ex 4A; NNG Ex 16; NNG Ex 17; NNG Ex 26.) The pipeline is approximately 49 miles long.

2. The route for the pipeline begins at Miller Station, in Section 11, Range 5 West, Township 6, North, Willamette Meridian, near the community of Mist, Columbia County, and traverses southerly on private lands to Mist and State Highway 47, thence southerly on private land easements and the public right-of-way of State Highway 47 for about 12 miles to the vicinity of Pittsburg, thence southerly on easements adjacent to private logging roads for about nine miles to an intersection with Bacona Road near the Washington County line, thence southerly on easements and along Bacona Road for about eight miles to Meacham Corner, thence southerly on private easements adjacent to Dairy Creek Road and Mountaindale Road

for about nine miles to just north of North Plains, thence easterly to State Highway 26, thence easterly on private easements near State Highway 26 to Jacobsen Road and West Union Road for about three miles to an intersection with a powerline easement near N. W. 185th Avenue, thence easterly along the easement, which crosses N. W. West Union Road, to an existing 16 inch diameter high pressure pipeline in Section 20, Range 1 West, Township 1 North. (NNG Ex 4A.)

3. The pipeline corridor along the route is 440 yards wide, 220 yards on each side of centerline. (NNG Ex 26.) In placing the pipeline within the route corridor, NNG proposes to take into account landslide hazards, environmentally sensitive areas and known and encountered cultural resources. (NNG Opening Brief, Attach. 2 "Proposed Site Certificate," App. II; NNG Ex 7A, 7B, 12, 13E, 14, 15B, 20 and 27.) Landowners' recommendations to mitigate the impact of the pipeline on their property may also affect the location of the pipeline within the route corridor. (NNG Ex 3, p 2.)

4. The pipeline consists of 16 inch diameter steel pipes of various wall thicknesses designed to satisfy the class location requirements of 49 CFR, Part 192. The related and supporting facilities for the pipeline include seven block valves, four pig taps and two regulator stations. Placement of the block valves are also designed to comply with the requirements of 49 CFR, Part 192. (NNG Ex 16 and 17; PUC Ex 1.)

II.

RULINGS ON INTERVENORS' REQUESTS FOR CONDITIONS

Vernonia, VACC and OSM all seek to have EFSC impose service requirements on NNG as a condition of issuing a site certificate for the proposed pipeline. Vernonia and VACC ask that the site certificate be conditioned to require gas service to Vernonia businesses and residences. OSM asks that the certificate be conditioned to require NNG to offer gas storage service at the Mist Storage Facility and transmission to NNG's gas transportation customers. OSM also asks that EFSC reopen the Mist Storage Facility site certificate granted on June 19, 1981, to require reservation of firm storage capacity at the facility for its transportation customers. For the reasons that follow all of these requests are denied.

A. Requests for Conditions

ORS 469.300 et seq sets forth the general considerations and concerns to be evaluated in determining whether a site certificate should be granted by EFSC. The policy to be effectuated by a site certificate determination is set forth in ORS 469.310, which provides in pertinent part:

"the siting, construction and operation of energy facilities shall be accomplished in a manner consistent with protection of the public health and safety and in compliance with the energy policy and air, water, solid waste, land use and other environmental protection policies of this state."

Under this provision and other provisions of ORS chapter 469 and OAR 345, Division 125, public health and safety, environmental impact, and the need for energy facilities are the overriding considerations in determining whether, and under what conditions, siting of a facility will be allowed. With respect to intervenors' requests, it is the need for energy facility standard that is relevant to our determination.

EFSC's jurisdiction to make an energy facility need determination somewhat parallels and overlaps PUC's authority to make a similar determination. PUC's regulatory authority over public utilities, such as NNG, is broadly stated to include transmission and delivery of natural gas, (ORS 757.005(1)(a)(A) and ORS 758.400(3)), but is read in the context of specific authority, to "protect * * * customers, and the public generally, from unjust and unreasonable exactions and practices and to obtain for them adequate service at fair and reasonable rates." ORS 756.040(1). EFSC, similarly, is concerned with conditions of construction and operation. The focus of its inquiry, however, is more directly related to planning for adequate energy supplies to meet expected need and to determine that the public health, safety, welfare and environment are adequately protected from the construction and operation of the facility. Unlike PUC's authority, EFSC's authority is not predicated on whether a facility will benefit or harm a particular customer economically, but rather on whether

projected need should be satisfied by a facility and whether impacts of the facility are satisfactorily mitigated. If, on the basis of the record before it, EFSC can determine that the facility will be needed - i.e., used - and that the facility is prudent - i.e., a reasonable way to meet the need - it need not determine what particular levels of service to particular customers are appropriate, nor must it determine how the rates for such service should be calculated.

As shown by the Findings of Fact and Conclusions of Law, NNG has demonstrated that there will be customers for the gas supplied by this pipeline and that the pipeline is an economically reasonable method of supplying service to those customers. NNG has established that there is a need for the facility whether or not Vernonia and OSM are served in the way they request. With respect to Vernonia's request, the record shows that providing service to the city is not presently economically feasible. However, NNG is committed to supplying service when Vernonia has a firm prospect for industrial development to support such service. Also, neither Vernonia nor OSM have shown that construction or operation of the pipeline has such impact on them that extension of the service they request is necessary to mitigate the impact.

It is possible to imagine situations in which a facility could only be justified if a requirement to serve particular customers were added as a condition of the certificate. In those situations, EFSC will exercise its jurisdiction and

impose service conditions in the certificate. Here, however, need has been demonstrated without regard to particular customers and there is no need to mitigate impacts on Vernonia or OSM by requiring NNG to provide them the services they request. Consequently, as a matter of policy, EFSC believes that in this case PUC is in the best position to determine what, if any, services should be provided to Vernonia and OSM.

B. Request for Reopening of Storage Site Certificate

OSM requests that EFSC reopen the Mist Storage Facility site certificate granted by EFSC on June 19, 1981, to impose new requirements on the operation of that facility, in conjunction with the operation of the pipeline under consideration here. OSM argues that the storage certificate implicitly grants it, as an interruptible, propane backed transmission customer, the right to have conditions attached to this certificate granting it storage and transportation services. We reject both its request and its argument.

The conditions under which the site certificate for the Mist Storage Facility may be reopened have not been met here. The June 1981 Underground Storage Facility Site Certification Agreement for the Mist Site allows for amendment if "unforeseen developments cause the construction or operation of the underground storage reservoir or related or supporting facilities to present a danger to public health, safety or welfare or if Federal law requires a change * * *." (Emphasis added.) This language was intended to allow unilateral

amendments to the storage site certificate if federal law required more stringent health and safety standards for operation of the storage facility. OSM concedes that changes in federal law upon which it relies only allow different kinds of service to NNG customers than were allowed in 1981. Permissive changes in federal law do not require reopening the storage certificate nor allow EFSC to make unilateral changes in the certificate as part of the current, or any other, proceeding absent a showing that public health and safety is at risk. In addition, OSM does not rely on any public health or safety risk in making its request.

OSM also argues that the storage certificate implicitly requires NNG to provide OSM with "reliable" service at interruptible customer rates, because it was an NNG customer when the storage certificate was granted. Its argument relies on EFSC's observation in its Order that the storage facility "will allow [NNG] to increase the reliability and efficiency of its service * * *." (Emphasis added). (Mist Storage Facility Order, p 4.) Increased reliability was not imposed as a condition of the certificate, however. Customers purchasing the same service from NNG now as they did in 1981 (i.e., firm sales), will likely have a more reliable and efficient supply of gas with the completion of both the storage and pipeline facilities. The storage certificate in no way implies, however, that customers now purchasing a less reliable kind of service from NNG may claim a vested right to service from the

facility on the basis of having been a firm customer in 1981. For these reasons, we deny the request to reopen the storage certificate.

III.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

RELATING TO EFSC'S STANDARDS

A. Need For Facility (OAR 345-125-040)

"(1) In order to issue a site certificate for a facility, the Council must find that the facility will be needed and that the facility is a prudent method of meeting such need.

"(2) For purposes of this rule, a facility is deemed a prudent method of meeting need if:

"(a) It will be required within five years following its proposed in-service date, to enable the natural gas pipeline system of which it is a part to satisfy peak demands which are reasonably expected to occur in the service area or areas serviced by the facility; or

"(b) Its construction and operation will be economically reasonable, in comparison with the alternatives identified in the site certificate application, or by the Council pursuant to OAR 345-125-055. The application shall include the alternative of not constructing the project as a minimum.

"(3) For purposes of this rule, peak demand in the service area or areas to be served by the proposed facility shall be presumed, subject to rebuttal, to be twice the average annual demand to be serviced by the proposed facility.

"(4) To this end applicants may provide evidence based on the Council's "need for power" rule (OAR 345-78-030) or proceedings before the Public Utility Commissioner or other reasonable evidence."

Findings of Fact

1. The proposed pipeline is designed to transport approximately 120 million standard cubic feet per day (SCFD).

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(NNG Ex 1 and 17.) This capacity coupled with existing pipeline capacity on NNG's existing North Coast Feeder will provide 140 million SCFD of pipeline capacity from the Mist area to NNG's Portland service territory. (NNG Ex 1, p 8.)

2. The pipeline will connect to NNG's existing Mist Underground Storage Facility at Miller Station. (NNG Ex 1, p 8.) The gas output from the Mist area will be transported through the pipeline to the Portland metropolitan area, NNG's primary load center. (NNG Ex 1, p 8.)

3. NNG plans to use the Mist Underground Storage Facility as a base resource. It is desirable for NNG to have pipeline capacity beyond what now exists between Miller Station and Portland because additional capacity will allow NNG the opportunity to fully use the capacity of Mist Storage as a base resource in its gas supply system. (ODOE Ex 1; NNG Ex 1, p 19; NNG Ex 21, p 2.)

4. The peak capacity to absorb gas from Mist in the Portland area is at least 140 million SCFD. (7-21-88 Hearing Tr 29-31.)

5. Pipeline capacity above 140 million SCFD from the Mist area may be needed to provide peaking services to NNG's transportation customers (NNG Ex 21, pp 3-4) and for other local gas distribution companies in the Pacific Northwest. (NNG Ex 1, pp 8-9, NNG Ex 21, p 4.) The extent to which pipeline capacity in excess of 140 million SCFD is required depends upon further development of the Mist Underground Storage Facility (7-21-88 Hearing Tr 160), future negotiations

with potential users (7-21-88 Hearing Tr 27-28; NNG Ex 21, pg. 4), and appropriate regulatory approvals. (NNG Ex 23, pg. 5.)

6. The Mist area is expected to be able to supply at least 100 million and up to 130 million SCFD of gas at peak upon completion of the proposed pipeline. About 80 million SCFD of this supply is expected to be provided by Mist Storage and used as a broad base of supply. (NNG Ex 21, p 2.) Mist Storage is also expected to be able to supply an additional 10 to 30 million SCFD of short-term (15 to 20 days) peaking capability. (7-21-88 Hearing Tr p 41.) Production gas from the Mist area now peaks at 13 million SCFD and has been as high as 20 million SCFD historically. (ODOE Ex 2, Discovery 1, App 1.)²

7. The supply of gas from the Mist area during periods of peak production may increase to more than 140 million SCFD. Storage beyond the initial development may be undertaken within the next five years. (ODOE Ex 2, Discovery 1, p 5.) This increase could occur from increased capacity from the existing Mist field or from additional gas storage volumes from the development of additional underground reservoirs. (ODOE Ex 2,

² Peak daily delivery for any month was calculated from Appendix 1 by dividing the total production therms for the month by the number of days in the month. For example, in 1987, the month of highest production was January, when 3,904,160 therms of gas were produced. Dividing this amount of gas by the number of days in the month gives the average daily gas production during the peak month of 1987 (3,904,160 divided by 31 = 126,000 therms per day). There are 100,000 Btu per therm, and a cubic foot of gas contains about 1,000 Btu. Therefore, 126,000 therms per day convert to 12.6 million SCFD.

Discovery 1, p 5.) Up to 40 million SCFD of production gas may be developed. (7-21-88 Hearing Tr p 38; ODOE Ex 2, Discovery 1, p 4.)

8. The cost to construct the pipeline is estimated at \$15,460,000. (NNG Ex 5, p 6.) Construction of the pipeline, because of its location, will reduce by \$800,000 the cost to NNG of constructing its new Forest Grove lateral. (NNG Ex 1, p 18.) The construction of the pipeline may also provide up to \$500,000 worth of gathering services for existing and future natural gas production that may occur along the pipeline route. (NNG Ex 1, p 10; NNG Ex 21, p 6; 7/21/88 Hearing TR p 94.) System security would also be provided by having two pipeline routes into the Mist area. (NNG Ex 21, pp 5-6.)

9. Alternative pipeline configurations that would create at least 130 million SCFD of pipeline capacity between Mist and Portland would cost about the same or more than the proposed pipeline. These cost comparisons take into account the extra cost of archaeological mitigation to expand the North Coast Feeder and the savings to the proposed pipeline from reducing the cost to build the Forest Grove lateral. (NNG Ex 5, p 6; ODOE Ex 2, Discovery 2, p 2; and Tr 94.)

10. The proposed pipeline will allow capacity additions above 140 million SCFD at lower cost than the alternatives by reserving incremental capacity expansions on the North Coast Feeder for anticipated future need. (NNG Ex 21, p 6.)

11. The use of Northwest Pipeline Corporation's (NPC) existing interstate pipeline system also would provide

sufficient pipeline capacity to satisfy NNG's requirements. In order for NNG to use this pipeline system, it would have to replace 4.77 miles of pipeline on the North Coast Feeder through Clatskanie and install sufficient compression at Deer Island to elevate the gas pressure above the operating pressures of NPC's system. (NNG Ex 5, p 7.) The annual cost of these new facilities, plus the annual NPC transportation rates for the use of its system would be approximately \$8,200,000. (NNG Ex 1, pp 13-16.) This compares to an annual cost to construct and operate the proposed pipeline of approximately \$3,100,000. (NNG Ex 1, p 18.)

12. The impact of not developing the additional pipeline capacity between Mist and the Portland area would limit NNG's use of its Mist Underground Storage Facility as a base resource. Or, it would force NNG to use the higher cost interstate pipeline alternative or sell the storage facility to some other entity that would not need the pipeline. (ODOE Ex 1, p 5.) Any of the above would preclude NNG customers from the potential economic benefits of Mist Storage.

Ultimate Findings of Fact

And Conclusions of Law

1. For the reasons set forth in Findings of Fact III A1-A4, EFSC finds that the proposed pipeline will be needed to allow NNG to use its Mist Underground Storage Facility as planned.

2. For the reasons set forth in Findings of Fact III A4-A12, EFSC finds that the construction and operation of the pipeline will be economically reasonable in comparison with alternatives capable of providing 140 million SCFD of capacity between the Mist area and Portland, while reserving inexpensive options to increase capacity above 140 million SCFD should it be needed in the future.

3. Under the provisions of OAR 345-125-040(2)(b), the facility is an economically reasonable, and, therefore, prudent method to meet the need of using NNG's Mist Underground Storage Facility as planned.

B. Public Health and Safety (OAR 345-125-065)

"In order to issue a site certificate for a facility the Council must find that:

"(1) Pipelines will be constructed in accordance with the requirements of the U. S. Department of Transportation as set forth in Title 49, Code of Federal Regulations, Part 192 in effect on the date of the application.

"(2) The facility will be designed so that noise resulting from operation of compressor stations and related facilities shall not violate standards specified by the Oregon Department of Environmental Quality in OAR 340-35-035, Noise Control Regulation, as of the effective date of the application.

"(3) The facility has mechanical structures that allow the pipeline to be sealed off, in the event of leakage, in a manner that will minimize the release of flammable materials. This is rebuttably presumed to be satisfied by the requirements of Title 49, Code of Federal Regulations, Part 192.

"(4) A program can be developed using the best available practicable technology to monitor the facility, to ensure protection of public health and safety.

"(5) In support of assessments required in this specific standard, the applicant shall submit: An engineering study, including but not limited to:

"(a) Pipeline diagrams, including information on material strengths, pressures and temperatures of operation and design standards.

"(b) Seismic data which describes active faults over or through which the pipeline will pass.

"(6) In support of this specific standard, the applicant shall submit a copy of incident reports involving the certified pipeline required under 49 Code of Federal Regulations 192.709 in effect on the date of the application."

Findings of Fact

1. The final design study for the pipeline, which includes an analysis of pipeline wall thickness, steel specifications, design stresses, test pressures, line valve spacing, blowdown sizing, welding procedures, non-destructive testing, field bends, pipe cover corrosion protection, and river crossing, was submitted as NNG Exhibit 17. The design study was reviewed by the Oregon Public Utility Commission, which is charged with the responsibility of administering the U. S. Department of Transportation's natural gas pipeline safety regulations as set out in 49 CFR, Parts 191, 192 and 193. (PUC Ex 1, pp 2-3.) The PUC's review, which was conducted by its Gas Supply Engineer, concluded that the design of the pipeline meets the requirements of 49 CFR, Part 192. (PUC Ex 1.)

2. The related and supporting facilities to the pipeline will consist of seven block valves, four pig taps and

two regulator stations. (NNG Ex 17.) No compressor stations will be built as part of the pipeline. (NNG Ex 6, p 2.) Normal operation of the pipeline and its related and supporting facilities will be essentially noiseless. (NNG Ex 6, p 2.) The only noises traceable to the pipeline will be noises associated with its construction and the monitoring of the pipeline by aircraft and motor vehicle when it becomes operational. (NNG Ex 6, pp 2-3.)

3. The seven block valves that will be installed on the pipeline will incorporate blowdown valves. These will allow the five sections of pipeline to be depressurized in the event of an emergency. (NNG Ex 5, p 3.) The locations of the block valves along the pipeline are determined by the density of structures and population along the route. (NNG Ex 5, p 2.) The proposed locations of the valves are consistent with the requirements of 49 CFR Part 192. (NNG Ex 16; NNG Ex 17; PUC Ex 1, pp 3-4.)

4. In addition to the block valves that will be installed on the pipeline, NNG will install telemetry equipment at three locations on the pipeline route. The locations of such equipment will be at Miller Station and West Union Road, the termini of the pipeline, and at North Plains, Oregon. (NNG Ex 5, p 3.) The telemetry equipment will allow NNG continuously to monitor operating conditions, particularly pressure, of the pipeline 24 hours a day. (NNG Ex 5, p 3.) In the event of damage to the pipeline, the change in operating

pressure will be detected. NNG has the option of isolating the damage by closing the block valves on both sides of damage or closing down the entire pipeline by closing the block valves at the termini of the pipeline. (NNG Ex 5, p 3.)

5. No evidence was introduced to show that compliance with the provisions of 49 CFR, Part 192 is insufficient to allow the pipeline to be sealed off in a manner that will minimize the release of flammable materials.

6. Once the pipeline becomes operational, NNG will inspect the pipeline for indications of leaks, construction activities and other factors affecting safety and operations. These inspections will be conducted at least twice annually for the section of the pipeline in the Sunset Corridor and once a year for the remainder of the route. (NNG Ex 5, p 4.)

7. The pipeline route was investigated for active faults. The investigation found the route does not cross any active faults. (NNG Ex 6, p 4; NNG Ex 7A.)

Ultimate Findings of Fact

And Conclusions of Law

1. For the reasons set forth in Findings of Fact III B1, B3 and B5, EFSC finds that the pipeline will be constructed in accordance with the requirements of the U. S. Department of Transportation as set forth in 49 CFR, Part 192, now in effect.

2. For the reasons set forth in Findings of Fact III B2, EFSC finds that the pipeline and its related and supporting facilities comply with the standards specified by the Oregon

Department of Environmental Quality in OAR 340-35-035, now in effect.

3. For the reasons set forth in Findings of Fact III B3 and B5, EFSC finds that the pipeline will have mechanical structures that allow it to be sealed off, in the event of leakage, in a manner that will minimize the release of flammable materials.

4. For the reasons set forth in Findings of Fact III B3-B6, EFSC finds that NNG can develop a program using the best available practicable technology to monitor the facility to ensure protection of public health and safety.

5. The proposed pipeline meets the public health and safety requirements of OAR 345-125-065.

C. Standards Relating to Environmental Impact
(OAR 345-125-070)

"In order to issue a site certificate for a facility, the Council must find that:

"(1) Except as provided in section (2) of this rule, the proposed facility will not be located in one of the designated natural resource areas listed below and the proposed facility is not likely to produce significant adverse impacts on any such area including:

"(a) National Parks, National Monuments and National Wildlife Refuges;

"(b) State of Oregon Parks, Waysides, Wildlife Management Areas and Dedicated Natural Heritage Conservation Areas;

"(c) Wilderness areas established under federal law; and areas under formal consideration by federal agencies for designation as wilderness;

"(d) Bureau of Land Management Area of Critical Environmental Concern established under federal law;

"(e) Research Natural Areas established by federal agencies;

"(f) Scenic Waterways designated pursuant to ORS 390.825;

"(g) Federally-designated Wild and Scenic Rivers established under federal law;

"(h) Experimental areas established by the Rangeland Resources Program, School of Agriculture, Oregon State University;

"(i) Areas having unique or significant wildlife, geologic, historic, botanical, research or recreational values as lawfully designated by the state agency having jurisdiction over such values.

"(2) Where the facility will be constructed as underground pipeline, construction and operation of the proposed facility would not be inconsistent with the designated uses of the following special management areas as determined by the Council after considering the recommendations of the landowner or managing agency: State of Oregon Parks, Waysides and Wildlife Management Areas. Above ground facilities associated with an underground pipeline shall not be located within the special management area.

"(3) The facility will be designed, constructed and operated so that water quality in Oregon meets the criteria established by OAR 340 Division 41. Where these standards authorize the Department of Environmental Quality to grant exceptions, such exceptions shall be subject to review and approval by the Council.

"(4) Areas within the project boundary with unstable or fragile soils have been identified and appropriate measures will be employed to reduce adverse impacts such as compaction and erosion.

"(5) The facility, including acceptable mitigation, is not likely to result in significant adverse impact to aquatic life or aquatic habitat.

"(6) The facility, including acceptable mitigation, is not likely to result in significant adverse impact to wildlife or wildlife habitat.

"(7) The facility, including acceptable mitigation, is not likely to result in significant adverse impact to plant or animal species which are:

"(a) Designated, or officially proposed, as threatened or endangered by the U. S. Fish and Wildlife Service pursuant to the Endangered Species Act of 1973; or

"(b) Identified by the Oregon Natural Heritage Data Base as endangered, threatened or limited in Oregon (species on List 1, taxa threatened with extinction throughout their entire range; List 2, taxa threatened with extirpation from Oregon; or List 3, taxa limited in abundance and/or distribution in Oregon or throughout their range.)

"(8) The facility, including acceptable mitigation, is not likely to result in significant adverse impact to wetlands as defined by OAR 141-85-010(20).

"(9) The facility, including acceptable mitigation, is not likely to result in significant adverse impact to prime farm lands (as defined in the Federal Register. Vol. 43, January 1978) or to prime forest land (potential yield of 85 cubic feet per acre of mean annual growth).

"(10) The facility, including acceptable mitigation, is not likely to result in significant adverse impact to natural communities or geological features which are identified by the Oregon Natural Heritage Data Base as endangered or threatened in Oregon."

Findings of Fact

1. The pipeline will not be located in any of the designated natural resource areas listed in OAR 345-125-070(1). (NNG Ex 12, p 8; NNG Ex 13-E, p 2.) No natural communities or geological features, classified by the Oregon Natural Heritage Data Base as endangered or threatened in Oregon, are affected by the pipeline. (NNG Ex 13-E, p. 2.)

2. Review of records of species officially designated or proposed by the U. S. Fish and Wildlife Service as endangered or threatened, or identified by the Oregon Natural Heritage Data Base as endangered, threatened or limited in Oregon shows that two species occur in the vicinity of the pipeline route. The species are the spotted frog, Rana pretiosa, and the male fern, Dryopteris felix-mas. (NNG Ex 12, p 9; NNG Ex 13-E, p 3.) A search for the spotted frog was conducted on Ford Creek near Miller Station, where the frog was found in 1976. The results of the search found no frogs of any species in Ford Creek. (NNG Ex 13-E, p 3.) The search for the male fern was conducted along the pipeline route. No specimen of this species was found. However, specimens of Dryopteris arguta, a closely related species that is not designated as of special concern, were found just north of the Bacona landfill site. (NNG Ex 13-E, p 3.)

3. Twelve wetland areas were identified along the initial pipeline route. (NNG Ex 13-E, p 2.) Centerline alignment of the route as shown in NNG Exhibit 26 shows that a number of these wetland areas now have been avoided. For those wetland areas that will be disturbed by construction, mitigation measures contained in NNG Exhibit 13-E, Appendix A and NNG's Proposed Site Certificate (NNG Opening Brief, Attach 2, App II) will be employed. Those measures require, among other things, replacement of soils to their original position, restoration of disturbed surfaces to original grade, and

replanting of disturbed areas. These measures will avoid any significant impact on wetlands. (NNG Ex 12, pp 7-8; NNG Ex 13-E, App A.)

4. Fish and aquatic habitat will be disturbed by construction of the pipeline. The pipeline route crosses five areas that are identified as potential spawning habitat for salmonid fish. The route also crosses several locations that fish likely use for rearing and/or passage. (NNG Ex 13-E, App B; NNG Ex 26.) Impact to fish can be limited by timing construction activities to avoid periods when fish are spawning, rearing or passing through the area. (NNG Ex 13-E, App B, pp 2-3; EFSC Ex 2 and 9.) Impact to spawning habitat that would be disturbed can be mitigated by restoring those areas to near original conditions of gradient and substrate. Impact to other aquatic habitat, including areas used by fish for rearing and passage, can be mitigated by restoring stream bed and banks and replanting them with appropriate plants. This will prevent erosion and increased turbidity downstream. (NNG Ex 13-E, App B, pp 2-3; EFSC Ex 2 and 9.) Each of these measures is included in NNG's proposed Site Certificate. (NNG's Opening Brief, App II to Att 2.)

5. The pipeline will cross farm and forest lands. (NNG Ex 6, p 7.) The pipeline will cross prime farm lands in the Tualatin Valley. In this area, the pipeline will be buried four or more feet below the surface so that cultivation and

harvest activities, including irrigation and field tilling, will not be affected by the pipeline. The pipeline is not expected to change the fertility or drainage of these farm lands. (NNG Ex 6, p 7.)

The pipeline will remove approximately 6 acres of prime forest land along the route. Between Fern Flat and Bacona Roads, approximately 2.5 acres of prime forest land will be impacted. The remaining 3.5 impacted acres are adjacent to existing logging roads. (NNG Ex 6, p 7.) The economic impact of the pipeline on prime forest land will be an annual revenue loss of \$813 and a loss of .07 supported jobs. (EFSC Ex 4.)

6. The restoration of the pipeline route and the short time of construction activities in any one location should prevent significant adverse effect on wildlife or wildlife habitat. (NNG Ex 12, p 9; NNG Ex 13-E, p 4.)

7. The primary water quality criterion related to the construction and operation of the pipeline is turbidity caused during the construction of the pipeline. (NNG Ex 13-E, App B, p 3.) Turbidity standards for the Willamette and North Coast/Lower Columbia basins, the two basins affected by the pipeline, allow no more than a 10 percent increase in natural stream turbidity from a turbidity causing activity. DEQ allows this standard to be exceeded for a limited time if (1) the turbidity is caused by necessary construction, (2) all practicable turbidity control techniques are applied, and (3) a removal-fill permit is secured from the Division of State

Lands. (NNG Ex 13-E, App B, p 3.) The mitigation steps outlined in NNG's Proposed Site Certificate require NNG to use turbidity control techniques developed in consultation with the Division of State Lands and the restoration of stream banks to avoid future erosion and long-term increases in turbidity. (NNG Opening Brief, Att 2, App II.)

8. The pipeline route was investigated for unstable or fragile soils. (NNG Ex 7-B; NNG Ex 27.) Two types of unstable soil conditions were identified. One is found where the route follows the base of steep sidehill cuts along existing logging roads. Construction of the pipeline could destabilize these cut slopes and cause local slope instability or small landslides. The other is found where the route crosses ancient landslide areas. The investigation located three segments (Segments 9, 11 and 12) of the pipeline route that would cross two old, non-active landslides. (NNG Ex 7-B, pp 7-8). The route was modified to avoid one of these areas. (NNG Ex 27.) Any potential problem areas along the new route will be mitigated during final siting of the route when it is surveyed for construction. (NNG Ex 27, p 3.) Other potential soil hazards encountered during construction will be monitored as part of the procedures set out in NNG's proposed site certificate. (NNG Opening Brief, Att 2, App II.)

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Ultimate Findings of Fact

And Conclusions of Law

1. Based on Findings of Fact III C1, EFSC finds that the pipeline will not be located in any of the designated natural resource areas listed in OAR 345-125-070(1). Therefore, the pipeline is not likely to produce significant adverse impacts on any such area.

2. Based on Findings of Fact III C4 and C7, EFSC finds that the pipeline will be designed, constructed and operated so that the water quality meets the criteria established by OAR 340, Division 41.

3. Based on Findings of Fact III C8, EFSC finds that areas within the pipeline route with unstable or fragile soils have been identified. While merely monitoring soils hazards areas may not be sufficient to prevent or reduce adverse impact, EFSC finds that a requirement in the site certificate to mitigate adverse impact is sufficient to ensure that appropriate measures will be employed to reduce adverse impacts from the construction of the pipeline.

4. Based on Findings of Fact III C4 and C7, EFSC finds that the pipeline, including acceptable mitigation, is not likely to result in significant adverse impact to aquatic life or aquatic habitat.

5. Based on Findings of Fact III C5 and C6, EFSC finds that the pipeline, including acceptable mitigation, is not

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likely to result in significant adverse impact to wildlife or wildlife habitat.

6. Based on Findings of Fact III C1 and C2, EFSC finds that the pipeline, including acceptable mitigation, is not likely to result in significant adverse impact to plant or animal species designated or officially proposed as threatened or endangered by the U. S. Fish and Wildlife Service or identified by the Oregon Natural Heritage Data Base as endangered, threatened or limited in Oregon.

7. Based on Findings of Fact III C3 and C4, EFSC finds that the pipeline, including acceptable mitigation, is not likely to result in significant adverse impact to wetlands as defined by OAR 141-85-010(20).

8. Based on Findings of Fact III C5, EFSC finds that the pipeline has a minimal impact on prime farm and prime forest lands. With acceptable mitigation, the pipeline is not likely to result in significant adverse impact to prime farm and prime forest lands.

9. Based on Findings of Fact III C1, EFSC finds that the pipeline is not likely to result in significant adverse impact to natural communities or geological features that are identified by the Oregon Natural Heritage Data Base as endangered or threatened in Oregon.

10. The proposed pipeline, with acceptable mitigation, meets all the environmental requirements of OAR 345-125-070.

D. Standard Relating to Historic, Cultural and Archeological Resources (OAR 345-125-072)

"In order to issue a site certificate for a facility the Council must find that the facility, including acceptable mitigation, is not likely to result in significant adverse impact to historic, cultural or archeological resources which are on, or are eligible for inclusion on, the National Register for Historic Places."

Findings of Fact

1. NNG undertook an indepth field investigation in accordance with procedures set forth in 36 CFR 800. (NNG Ex 12, p 3; NNG Ex 14, p 4.) The investigation found 23 cultural resource sites in the vicinity of the initial route. These properties include 12 prehistoric sites and 11 historic sites. (NNG Ex 15B, Part II, pp 3-4.)

2. Eight of the 23 cultural resource sites will not be affected by the pipeline. Eight sites, which were affected by the original route, have been avoided by realignment of the route. The realigned sections were studied to ensure that cultural sites outside of the initial right-of-way would not be affected. Significant impact can be avoided at four sites if the pipeline right-of-way is confined within limits identified during the cultural resources evaluation. Three sites will be affected by the route. Specific mitigation measures are identified for each of these sites in the cultural resources evaluation. These measures will prevent or adequately mitigate adverse impact to all known significant cultural resource sites (NNG Ex 15-B, Part II.) NNG has proposed monitoring and mitigation that incorporate these measures in its proposed site certificate. (NNG's Opening Brief, Att 2, App II.)

3. Additional buried archaeological sites may be encountered during construction. Human remains may exist at several locations that have been subject to alluviation in recent times. (NNG Ex 15B, Part II, p 25.) Monitoring these suspect locations as outlined in NNG's testimony and proposed site certificate will provide a mechanism to deal with any additional sites found during construction. (NNG Ex 15B, Part II, p 25; NNG Opening Brief, Att 2, App II, pp 5-6.)

Ultimate Findings of Fact and Conclusions of Law

1. Based on the Findings of Fact III D1-D3, EFSC finds that the pipeline, including acceptable mitigation, is not likely to result in significant adverse impact to historic, cultural or archaeological resources. Therefore, the standard of OAR 345-125-072 is met.

E. Standards Relating to Water Rights (OAR 345-125-075)

"In order for the Council to issue a site certificate for a facility the Council must find that the requirements for water used in construction and operation of the facility can be met without infringing upon the existing water rights of other persons."

Findings of Fact

Only small amounts of water for drinking and construction uses will be needed during construction. (NNG Ex 6, p 7.) A large amount of water will be required for hydrostatic testing of the pipeline before it becomes operational. The 419,000 gallons of water needed for this test will be obtained under a temporary water right permit issued by the Department of Water

Resources or the water will be secured from domestic sources and trucked to the pipeline. (NNG Ex 6, pp 7-8.) We infer from the fact that NNG is willing to secure temporary water right permits or truck in the large amount of water needed for testing that the company also will apply for a temporary water rights permit or truck in the small amount of water necessary for drinking and construction purposes if that becomes necessary.

Conclusions of Law

Based on the above Finding of Fact, EFSC finds that the requirements for water used in construction and operation of the pipeline can be met without infringing upon existing water rights of other persons. The standard of OAR 345-125-075 is met.

F. Land Use (OAR 345-125-080)

"In order to issue a site certificate for a natural gas pipeline the Council must find either that:

"(1) The Land Conservation and Development Commission has acknowledged, pursuant to ORS 197.251 (1979 replacement part), the comprehensive land use plan(s) and implementing measures of the general purpose local government(s) having land use planning jurisdiction over the site of the facility; and that the facility has been determined by the local government(s) to be consistent with the plan(s) and measures; or

"(2) If the local government(s) having land use planning jurisdiction over the site of the facility has not completed a land use review of the facility prior to approval of a site certificate as required by section (1) of this rule, or if such local government has denied that the facility is consistent with applicable statewide planning goals and land use

plans and measures, the Council has determined that the application is consistent with the statewide planning goals. Provided, however, that a site certificate authorizing the construction within the boundaries of an incorporated city shall be conditioned on compliance with city ordinances in effect on the date of the application of the site certificate as required by ORS 469.400(6)."

Findings of Fact

1. The pipeline will be located in Columbia and Washington counties. (NNG Ex 4-A.) Both counties have land use plans acknowledged by the Land Conservation and Development Commission. (NNG Ex 6, p 8.)

2. NNG's plan to develop the pipeline was presented to both counties. (NNG Ex 6, p 8) In Washington County, the acknowledged land use plan permits the construction of the pipeline as an accepted use and does not require conditional use approval. (NNG Ex 7-C and EFSC Ex 3.) In Columbia County, the acknowledged land use plan requires a conditional use permit to construct the pipeline. Such a permit was secured for the pipeline on March 7, 1988. (NNG Ex 7-D; EFSC Ex 6.)

Ultimate Findings of Fact and Conclusions of Law

1. Based on Findings of Fact III F1, EFSC finds that Columbia and Washington counties have land use plans acknowledged by the Land Conservation and Development Commission.

2. Based on Findings of Fact III F2, EFSC finds that the pipeline has been determined by Columbia and Washington counties to be consistent with their approved land use plans.

3. The standard of OAR 345-125-080 is met.

G. Socio-Economic Impacts (OAR 345-125-085)

"In order to issue a site certificate for a facility the Council must find:

"(1) The applicant has identified the major and reasonably foreseeable socio-economic impacts on persons and communities located in the vicinity of the facility resulting from construction and operation, including, but not limited to, anticipated need for increased governmental services or capital expenditures; and

"(2) The applicant and the affected local government can provide adequate resources to mitigate the impacts identified pursuant to section (1); and

"(3) The applicant has an adequate process for periodically updating, during construction and operation, its assessment of anticipated impact of the facility."

Findings of Fact

1. The pipeline will take approximately six months to construct. (NNG Ex 6, p 9.) Approximately 200 construction workers and supervisors will be required to build the pipeline. (NNG Ex 6, p 11.) Approximately 70 percent of the workers will be made up of NNG employees and workers from local labor sources. (NNG Ex 6, pp 11-12.) The remaining work force will be from outside the greater Portland metropolitan area. (NNG Ex 6, p 12.)

2. The 60 workers likely to come from outside the Portland metropolitan area can find public lodging and

restaurant facilities without overloading local facilities during the six-month construction period. (NNG Ex 6, p 12.) The short construction period would not encourage many of these workers to bring their families. (NNG Ex 6, p 12.)

3. Workers will be split between three different construction areas over six months. (NNG Ex 6, p 12.)

4. NNG's experience in constructing large pipelines in western Oregon has not shown a significant impact on local government services. (NNG Ex 6, pp 9-10.)

5. During construction of the pipeline, additional requirements will be imposed on local governments to monitor traffic and construction practices. (NNG Ex 6, p 10.) Construction may require additional traffic controls in the vicinity of public roads. NNG will assign full-time flag persons to route traffic around construction congestion. (NNG Ex 6, p 10.) Local or State highway maintenance personnel may be needed to inspect reconstruction of ditch and culvert crossings. (NNG Ex 6, p 10.)

6. During construction, additional requirements will be imposed on local governments to provide increased fire protection in conjunction with the development of the Mist storage field and natural gas production. (EFSC Ex 10A, pp 56-57.)

7. During construction of the pipeline, additional requirements will be imposed on local governments to coordinate emergency response planning. (EFSC Ex 6.)

8. NNG, in its proposed order (NNG Opening Brief, Att 1, pp 30-31) and its proposed site certificate (NNG Opening Brief, Att 2, p 10) agrees to provide annual contributions for seven years to the Mist-Birkenfeld Rural Fire Department to offset the cost of increased fire protection in the Mist area.

9. NNG, in its proposed site certificate (NNG Opening Brief, Att 2, pp 9-10) proposes to develop an emergency response plan that will provide for a coordinated program of response within Columbia County for emergencies resulting from construction and operation of the pipeline. NNG will consult with Columbia County and the Mist-Birkenfeld Rural Fire Department in developing the plan.

10. NNG has additional capability to mitigate unforeseen impacts experienced by local governments. (NNG Ex 6, pp 10-11.) It has a staff of 400 in its Operations Department. Staff is on duty 24 hours per day to respond to routine and unforeseen events. NNG can also call on emergency assistance from gas companies in other states. (NNG Ex 6, p 11.)

11. Once constructed, the pipeline will be integrated into NNG's existing network of pipeline facilities. Monitoring of the pipeline during its life will not impose any additional staff requirements on NNG. (NNG Ex 6, p 10.) Fire protection and emergency response planning will continue throughout the life of the pipeline. (EFSC Ex 6; NNG Exhibit 6, pp 10-12.) The pipeline will increase taxable utility property that the

county may tax to generate extra revenue to cover additional costs. (EFSC Ex 10A, testimony of Tom Linhares, Columbia County Assessor, following p. 60.)

12. A combination of emergency response planning, increased fire protection, and NNG's monitoring procedures and ability to respond to emergencies along the pipeline will provide an appropriate process for addressing anticipated impacts of the pipeline. (NNG Ex 5, pp 2-3; NNG Ex 6, pp 12-13; NNG Opening Brief, Att 2; EFSC Ex 6.)

Ultimate Findings of Fact and Conclusions of Law

1. Based on Findings of Fact III G1-G7, EFSC finds that NNG has identified the major and reasonably foreseeable socio-economic impacts on persons and communities located in the vicinity of the pipeline resulting from construction and operations, including, but not limited to, anticipated need for increased governmental services and capital expenditures.

2. Based on Findings of Fact III G8-G10 EFSC finds that NNG and the affected local governments can provide adequate resources to mitigate the identified impacts.

3. Based on Findings of Fact III G11-G12, EFSC finds that NNG has an adequate process for periodically updating, during construction and operation, its assessment of anticipated impacts of the pipeline.

4. The standards of OAR 345-125-085 are met.

H. Organization, Managerial and Technical Expertise
(OAR 345-125-090)

"In order the Council to issue a site certificate for a facility the Council must find that the applicant has the organization, managerial, and technical expertise to construct, operate, and retire the facility. To this end, the applicant may present evidence relating to:

"(1) The applicant's previous experience, if any, in constructing, operating, and retiring similar facilities;

"(2) The qualifications of the applicant's personnel who will be responsible for constructing, operating and retiring the facility; and

"(3) If applicable, the qualifications of any architect-engineer, major component vendor, or prime contractor upon whom the applicant will rely in constructing, operating, and retiring the facility."

Findings of Fact

1. NNG has been providing gas service for almost 130 years. NNG's Operations Division, which includes the Engineering and Distribution departments, will provide the organizational structure for the design and construction of the pipeline. (NNG Ex 3, p 7.) These departments, which are managed by registered civil and mechanical engineers, will do the actual design of the pipeline and provide direct supervision of its construction. (NNG Ex 3, pp 7-8.)

2. NNG has in the past constructed similar pipeline structures throughout its service territory. (NNG Ex 3, p 8.) In addition, NNG personnel are continually modifying existing high pressure pipelines on its system to accommodate relocations, extensions and retirements. (NNG Ex 3, p 8.)

3. The operation of the pipeline will be incorporated into NNG's 8,000 miles of various size pipelines currently being operated throughout its system. (NNG Ex 3, p 8.) The actual operation and maintenance of the pipeline will be carried out under the provisions of the U. S. Department of Transportation's safety standard, 49 CFR, Part 192. (NNG Ex 3, pp 8-9; PUC Ex 1, pp 2-4.)

4. The pipeline will be retired in the same fashion as all other pipelines on NNG's system. The pipeline will be abandoned in place, isolated from the remaining system, purged of all natural gas, and then sealed. (NNG Ex 3, p 9.)

Ultimate Findings of Fact and Conclusions of Law

Based on Findings of Fact III H1-H4, EFSC finds that NNG has the organization, managerial and technical expertise to construct, operate and retire the pipeline. Therefore, the standards of OAR 345-125-090 are met.

I. Financial Assurance (OAR 345-125-095)

"In order to issue a site certificate for a facility the Council must find that the applicant, together with all co-owners, possesses or has reasonable assurance of obtaining the funds necessary to cover estimated construction costs, operating costs for the design lifetime of the facility, and the estimated costs of retiring the facility."

Findings of Fact

1. The total cost of constructing the pipeline is estimated to be \$15,460,000. (NNG Ex 8, p 2.) The annual cost to operate the pipeline is estimated not to exceed \$5,000 in

1987 dollars. Its estimated retirement cost is \$20,000 in 1987 dollars. (NNG Ex 8, pp 3-4.)

2. NNG's total net assets on December 31, 1987 were \$495,521,281, of which \$372,257,776 were net utility plant assets. In 1987, net operating revenues were \$136,447,000 on a rate base of \$303,366,000. (NNG Ex 9A, pp 24-26.)

3. The cost of constructing the pipeline will be integrated into NNG's construction budgets for 1988 and 1989. Funding for the construction budgets will be made up of internally generated funds and outside sources. (NNG Ex 8, p 2.) It is anticipated that for 1988 and 1989, over 50 percent of construction funding will come from internally generated funds. (NNG Ex 8, p 3.) Internally generated cash has been the primary source of funding for NNG's construction program during the last three years. Cash from operations less dividends paid, was \$27 to \$30 million during 1985, 1986 and 1987. NNG uses short-term borrowing to supplement normal cash flow. Short-term borrowing is replaced periodically by long-term financing. (NNG Ex 9A, p 21.)

4. The remaining construction funding will be raised through NNG's sale of common and preferred stock and long-term debt, estimated to generate \$75 million. The sale is anticipated to occur during 1988-1989. (NNG Ex 8, p 3.) From 1985 through 1987, NNG raised between \$32 to \$44 million per year from the sale of common stock and long-term borrowing. (NNG Ex 9A, p 27.)

5. Subject to PUC approval, the cost of operating and retiring the pipeline will be covered with funds recovered through NNG's rates. (PUC Opening Brief, p 1; NNG Ex 8, pp 3-4.)

Ultimate Findings of Fact and Conclusions of Law

1. Based on Findings of Fact III 11-15, EFSC finds that NNG possesses, or has reasonable assurance of obtaining, the funds necessary to cover the estimated construction costs, operating costs for the design lifetime of the pipeline, and the estimated cost of retiring the pipeline. The standards of OAR 345-125-095 are met.

J. Alternatives (OAR 345-125-055 and 345-125-056)
OAR 345-125-055 provides:

"(1) Not later than 60 days after receipt of a site certificate application or a voluntary notice of intent to file a site certificate application for a facility, the Council shall, by rule identify the reasonably available specific physical alternatives and/or specific programmatic alternatives to the facility taking into account those alternatives identified in the voluntary notice of intent or site certificate application.

"(2) In order for the Council to issue a site certificate for a facility, the Council must find that the applicant has conducted a study of each of the alternatives identified in section (1) of this rule in which the current and planned land uses and environmental impacts of each alternative have been compared based on the standards set out in OAR 345-125-070 and 345-125-080 using known available information.

"(3) The Council must also find after evaluating the applicant's comparison study that:

"(a) The applicant's initial proposal will not result in unreasonable environmental impacts in comparison with the other alternatives; or

"(b) One of the alternatives or a combination of alternatives (which may include segments of the route initially proposed by the applicant) can meet the standards set out in OAR 345-125-060. At the request of or with the approval of the applicant, a site certificate may be issued for an alternative or combination of alternatives which may be different from the applicant's initial proposal.

"(4) The Council shall waive the requirements of section (2) for those segments of the proposed facility which the applicant agrees to route within a corridor containing at least one natural gas pipeline of 8 inches or greater diameter and which has operated at a pressure of 125 psig."

The rule required under OAR 345-125-055(1) was adopted as
OAR 345-125-056:

"Consistent with OAR 345-125-055, in order for the Council to issue a site certificate for a natural gas transmission facility from Mist to Portland, the Council must find that the applicant has conducted a study of each of the following alternatives:

"(1) The use of the existing Northcoast Feeder gas pipeline without expansion;

"(2) The use of the existing Northwest Pipeline Corporation interstate pipeline;

"(3) The use of alternative sizes of pipe and/or pipe configurations to expand the capacity of the existing Northcoast Feeder;

"(4) The use of alternative sizes of pipe for the proposed South Mist Feeder;

"(5) Providing the potential for gas service to new customers to the greatest extent possible."

Rule Interpretation, Findings of Fact
and Conclusions of Law

OAR 345-125-055 requires that EFSC find that the applicant did a study comparing the environmental and land use impacts of

alternatives to the applicant's proposal, using known available information. Subsection (3) of the rule requires that, based on the comparative study, EFSC find that the proposed project has no unreasonable environmental impact.

There are several purposes for these requirements, including the purposes of helping to assure that all reasonable alternatives have been considered and that no good alternatives have been overlooked. However, the overriding purpose of these requirements, when read together with the requirements of OAR 345-125-070 and 345-125-080, is to help assure that environmental and land use impacts of proposed facilities are minimized. Because the purpose of the requirements is to minimize, not eliminate, environmental and land use impacts, we interpret OAR 345-125-055 and rules implemented under its provisions to grant EFSC considerable latitude in determining the sufficiency of the applicant's comparative studies. The detail with which alternatives need to be studied will vary according to the severity of the impacts of the proposed project. It may also vary according to the likelihood that an alternative realistically would or could be used. Where, as here, EFSC finds, under its OAR 345-125-070 and 345-125-080 analysis, that the proposed project, including acceptable mitigation, creates no significant adverse environmental or land use impacts, the comparative studies may be much less detailed and comprehensive than would be required if the proposed project created substantial environmental and land use

impacts or created impacts that could not be mitigated.

With this interpretation in mind, we make the following findings of fact and conclusions of law.

Findings of Fact

1. Alternative (1) is a no project alternative. Because it would have no environmental or land use impact other than those that exist, EFSC finds that it needs no further study.

2. Alternative (2) uses an exiting interstate pipeline. It would require upgrading the existing North Coast Feeder to handle higher pressure, replacing 4.77 miles of pipe through Clatskanie with high pressure pipe, and building a new compressor station at Deer Island. (NNG Ex 5, p 7.) The record shows that this alternative is substantially more expensive than the proposed pipeline. (NNG Ex 1, p 18; ODOE Ex 3, Response to Question 2.) Therefore, NNG did not specifically study the environmental and land use impacts of this alternative. EFSC finds that the study done by NNG is sufficient as long as this alternative is not selected.

3. Alternative (3) is to expand the capacity of the existing North Coast Feeder by replacing sections of small diameter pipe with larger diameter pipe. This would require substantial construction activity and could result in adverse environmental impacts. The environmental and land use impacts of this alternative were studied by NNG in detail. (NNG Ex 12, 13-D, 14, 15-A, 18, and 19.)

4. Alternative (4) is to follow the route of the proposed pipeline, but to consider using both a smaller and a larger diameter pipe. This is to ensure that the proposed pipe diameter is the best size to use. The environmental and land use impacts of this alternative would be the same as those for the applicant's proposed project because the same route would be followed. NNG studied the environmental and land use impacts of the proposed route in detail. (NNG Ex 6, 12, 13-E, 14, 15-B, and 18.) Therefore, it need not make additional studies.

5. With respect to Alternative (5), EFSC intended to require consideration of the economic feasibility of extending gas service to Vernonia. (EFSC Ex 6.) NNG is committed to providing gas service to the City of Vernonia when there is a firm prospect of industrial development to support it. (NNG Ex 23, p 7; EFSC Ex 10A, pp 13-17; EFSC Ex 6, Letter to Margaret Weil.) There may be state funding to offset the cost of extending the pipeline to Vernonia, if such development occurs. (NNG Ex 23, p 7.) At present, however, the demand for service in Vernonia, and its size, would not allow extending gas service without additional financial contribution from existing NNG stockholders or ratepayers. (ODOE Ex 1, pp 14-16.) Because this alternative is not economically feasible, EFSC will not require NNG to do further study on the land use or environmental effects of such extension.

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Ultimate Findings of Fact and Conclusion of Law

1. Based on Findings of Fact III J1-J5, EFSC finds that NNG has undertaken adequate comparative studies of the environmental and land use impacts of the alternatives set out in OAR 345-125-056.

2. Based on the record as a whole, EFSC finds that the proposed pipeline will not result in unreasonable environmental impacts compared with other alternatives.

3. The standards of OAR 345-125-055 and OAR 345-125-056 are met.

K. Compliance with OAR 345 Division 40 and ORS 469.470(2).

1. ORS 469.470(2) requires EFSC to designate areas that are suitable or unsuitable for use as sites for certain types of energy facilities. Affected facilities include nuclear-fueled and fossil-fueled thermal power plants greater than 200 megawatts capacity and geothermal power plants. EFSC may designate other types of facilities, but it has not done so. OAR 345, Division 40, implements the law.

2. The proposed pipeline is not a facility identified in ORS 469.470(2) or OAR 345, Division 40. Therefore, NNG does not have to comply with OAR 345, Division 40 and ORS 469.470(2).

IV

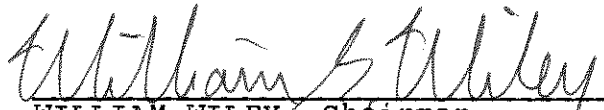
ORDER

The Council, having considered the briefs and arguments in this case, and based on the Findings and Conclusions contained in Parts I through III above,

HEREBY ORDERS:

1. The requests for site certificate conditions by the City of Vernonia, the Vernonia Area Chamber of Commerce and Oregon Steel Mills are denied.
2. Oregon Steel Mill's request to reopen the Mist Underground Storage Facility Site Certificate is denied.
3. The time limits imposed under ORS 469.390 are waived; and
4. A site certificate, consistent with the language and conditions of the attached site certificate, shall be issued to Northwest Natural Gas Company for the construction of a natural gas pipeline between Miller Station near Mist, Oregon and West Union Road, west of Portland as described and subject to the conditions in the site certificate. The site certificate shall be effective upon execution by both parties.

DATED this 4th day of October, 1988.


WILLIAM WILEY, Chairman
Energy Facility Siting Council

NOTE: This order may be appealed to the Supreme Court in the manner provided in ORS 469.400.