BEFORE THE STATE OF WASHINGTON
ENERGY FACILITY SITE EVALUATION COUNCIL

In the Matter of:	
APPLICATION NO. 99-01 **SECOND REVISED APPLICATION**	**COUNCIL ORDER NO. 768**
SUMAS ENERGY 2, INC.	**Findings of Fact, Conclusions of Law, and Order Recommending Approval of Site Certification On Condition**
SUMAS ENERGY 2 **GENERATION FACILITY**	

SYNOPSIS: ***The Energy Facility Site Evaluation Council has reviewed Sumas Energy 2, Inc.'s Second Revised Application for site certification, conducted public and adjudicative hearings, and by this order recommends approval of the Application to the Governor of the State of Washington subject to conditions. The Applicant has significantly revised its proposed project to respond to the concerns of EFSEC, parties to the adjudicative process, and the public. It has offered improvements that would result in an energy benefit for the region and that would reduce negative impacts on its neighbors and on the environment. It has offered to provide offsets for much of its air pollution and some of its greenhouse gas emissions and has offered mitigation of impacts of concern as expressed by the Council in its prior Order. In addition, the Council recommends some additional mitigation of those impacts not adequately addressed by the Second Revised Application.***

Nature of the Proceeding: This matter involves an application for certification of a proposed site in the City of Sumas, Washington, for the construction and operation of the

Sumas 2 Generation Facility (S2GF[1]), a natural gas-fired electric generation facility and an associated electric transmission line and natural gas pipeline. Sumas Energy 2, Inc. (SE2 or the Applicant) seeks a Site Certification Agreement (SCA) to construct and operate the natural gas-fired combined–cycle 660 MW electric generation facility, an associated 230 kV electric transmission line, and a natural gas pipeline.

SE2 submitted an application to EFSEC in January 1999 for the S2GF project, requesting expediting processing, and subsequently withdrawing their request. The Applicant submitted a revised application in January of 2000. After review of that first revised application, EFSEC voted at a public meeting in February of 2001 to recommend denial of the project. SE2 asked EFSEC to reconsider its decision prior to its transmittal to the Governor and offered numerous and significant changes to the proposed project. The Council denied the motion for reconsideration, but allowed the Applicant to submit a Second Revised Application with its proposed changes for EFSEC's consideration.

Executive Summary: The Energy Facility Site Evaluation Council (EFSEC or Council) is the state agency charged with making a recommendation to the Governor as to whether a new major energy facility should be sited in the state of Washington. The Council is aware of the region's need for energy and capacity. We are also mindful of our duty to protect the broad public interest. The Council must decide whether this energy facility, at the proposed site, as now configured without the burning of diesel fuel and with the new offers of mitigation of impacts, will produce a net benefit after balancing the availability and costs of energy to consumers and the impact to the environment. Both sides of this equation, the energy benefit and the impacts to the environment, have changed significantly in this newer proposal and the Council concludes that the balance now tips in favor of siting this energy facility.

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[1] While this recommendation consistently refers to the proposed plant as S2GF and its owner as SE2, others who are quoted may refer to both entities as SE2.

The Council determined, upon careful consideration of the state's need for energy at a reasonable cost and the need to minimize environmental impacts, that this facility with its guaranteed long-term contracts and commitment to sell to those who have participated in the Integrated Resource Process, or the equivalent, will provide the region with significant energy benefits while not resulting in unmitigated significant adverse environmental impacts.

In our prior Order No. 754, the Council decided that SE2's analysis of environmental impacts and its proposals for mitigation were insufficient to address the risks associated with oil storage and use and environmental impacts of this facility including: the expected air quality impacts in the Lower Fraser River Valley when the plant was burning diesel oil; greenhouse gas emissions; oil tanker truck traffic hazards; water impacts to local wells; destruction of wetlands, noise; and risk of increased flood hazard. Our prior decision focused on the impacts associated with the use and storage of diesel fuel and the resulting emission levels that would be substantially higher on days when the plant would be operating on back-up diesel oil fuel and we expressed concern about the effect of such levels on the confined airshed of the Lower Fraser River Valley.

The environmental challenges presented by the Applicant's prior proposal to construct an oil tank and use diesel oil as a backup fuel were diverse and widespread, including: air quality impacts that were by far the greatest when the plant would have been operating under oil firing; fire hazards associated with the possible rupture of and spillage from the tank; water quality hazards associated with possible rupture and spillage; danger of spillage associated with transportation of oil via tanker trucks and during filling, leading to concerns over impacts to surface water quality; flooding impacts associated with a berm around the tank; wetlands impacts associated with a berm and tank, which required splitting the proposed wetlands mitigation area into two non-connected parts; impact on oil supply and price associated with a large increase in oil usage during peak times; and impact on traffic flow associated with a large number of tanker trucks moving across the border and through the City of Sumas.

The Second Revised Application is substantially different from the prior proposal presented to the Council that was the subject of our earlier Order No. 754. With its Second Revised Application, SE2 has now offered numerous and important changes to its proposal including: having a certain percentage of its capacity under firm contract before construction; showing consistency with integrated resource planning principles by having a certain amount of capacity sold to purchasers who have adopted an integrated resource plan or its equivalent; eliminating the transportation, storage, and burning of diesel oil; committing to provide 100% offsets in the airshed for its NO_x and particulate matter (PM_{10}) emissions; determining and mitigating the potential adverse impacts on neighboring well owners due to the drawdown of water for the facility; significantly improving the wetland mitigation plan; committing to sophisticated flood modeling and mitigation of adverse impacts caused by filling of the site; offering a much greater monetary offset for its emission of greenhouse gases; committing to more extensive and complete modeling of the noise impacts and to mitigation of those impacts; and providing adequate financial security to guarantee that the site is restored without that responsibility being borne by the taxpayers.

The Council was impressed with the number and quality of the changes that the Applicant has made in the Second Revised Application; the Applicant understood the concerns of the Council articulated in EFSEC Order No. 754 and responded with appropriate changes to the proposed project and offered extensive mitigation of adverse impacts. After preparing a Supplemental Environmental Impact Statement, contracting with its Prevention of Significant of Deterioration (PSD) permit writer to draft a new PSD permit and fact sheet, conducting a second round of adjudicative hearings and public hearings on the reconfigured project, the Council now recommends that the Governor approve the siting of this project as described in this Order and the accompanying Site Certification Agreement.

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Procedural History: On January 11, 1999, Sumas Energy 2, Inc., submitted an application to the Council to construct and operate the Sumas Energy 2 Generation Facility, requesting expedited processing. On June 30, 1999, the Applicant withdrew its request for expedited processing. On January 10, 2000, the Applicant submitted a revised application. After the Council publicly announced that it would recommend denial of site certification to the Governor, the Applicant requested that the Council reconsider its decision and it offered numerous and significant changes to the project that appeared to address each of the Council's articulated reasons for recommending denial. The Council decided that it was unfair to the other parties who opposed part or all of the application to grant the motion for reconsideration without allowing parties to have a fair opportunity to agree with, oppose, or request changes to the Applicant's newly configured project.

Therefore, the Council explained in its Order on Applicant's Motion for Reconsideration, Council Order No. 757, that if the Applicant withdrew its current application and re-filed an application with the modifications proposed in its motion for reconsideration, the Council would immediately schedule a prehearing conference to establish a process to consider the revised proposal. The Council explained that the process would necessarily include some additional opportunity for evidentiary hearings and for public comment. The Council noted that the record on the existing application included much of what the Council would consider in evaluating the revised project. The Council explained that the record could be adopted for purposes of a new proceeding and would need to be supplemented so that the implications of the revised proposal could be fully understood. The Council also recognized that the Applicant sought to present to the Council what it perceived to be changed circumstances in the power market since the time that the record in the case had closed. In Order 757, the Council announced that it was open to considering the Applicant's revised position on need and consistency in the context of further proceedings that would give all parties an opportunity to address such new circumstances as might cause the Council to weigh differently the energy benefits promised by SE2 in its new proposal.

EFSEC's process for review of SE2's first revised application, pursuant to its statutory obligations, occurred in several phases. These included reviewing SE2's application, conducting hearings to determine if the proposal complies with local land use regulations, issuing a Draft Environmental Impact Statement (DEIS) and adopting a Final Environmental Impact Statement (EIS), considering state and federal required permits, and conducting formal adjudicative and public comment hearings. EFSEC duly published all required notices of these proceedings.[2]

Statutory parties to the EFSEC adjudicative hearings include the Applicant and the Counsel for the Environment. The Council received petitions for intervention and granted party status to the Department of Fish and Wildlife, the Department of Ecology, the Department of Community Trade and Economic Development, and the Washington Utilities and Transportation Commission, all of whom are entitled to intervene under Council rules. WAC 463-30-050. The Council also granted intervention to Whatcom County, the City of Sumas, the City of Abbotsford, the Abbotsford Chamber of Commerce, the Northwest Energy Coalition, the Washington Environmental Council, the Bonneville Power Administration,[3] and Constance Hoag. After submission of the Second Revised Application, the Council granted the petition of the Province of British Columbia to intervene as a party.

Prior to the Applicant withdrawing its request for expedited processing of its first Application, the Council conducted an initial public information meeting and land use consistency hearing on March 2, 1999. As noted below, the Land Use consistency hearings were reconvened after submission of SE2's first revised application.

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[2] These include notices of the application, public meetings, land use hearings, intent to hold adjudicative proceedings, notice for filing of petitions for intervention and deadline for filing such petitions, prehearing conferences, adjudicative hearings, determination of significance and request for comments on scope of the environmental impact statement (EIS), Draft Environmental Impact Statement (DEIS) comment hearings, and Prevention of Significant Deterioration (PSD) air emissions permit hearings.

[3] The Bonneville Power Administration later stipulated to withdraw from the adjudication.

As the lead agency for environmental review of SE2's application pursuant to the requirements of the State Environmental Policy Act (SEPA), Chapter 43.21C RCW, on August 10, 1999, the Council issued a determination of significance and request for comments on the scope of environmental impacts. A hearing on the scope of the Environmental Impact Statement (EIS) was held in the City of Sumas on September 16, 1999, and the written comments were accepted.

As noted, the Applicant withdrew its request for expedited processing and filed a new application in January 2000.

EFSEC issued a Draft EIS (DEIS) prepared by an independent consultant on March 15, 2000. Hearings to accept oral comment from the public were held on April 3, 2000, in Bellingham and on April 4, 2000, in Sumas. Forty-nine members of the public commented at the hearings. The deadline for written comments on the DEIS was extended from April 17 to May 2, 2000, upon request. The Council received an additional 198 written comments. The Council adopted and issued a Final EIS (FEIS) on February 7, 2001.

Prior to the formal adjudicative hearings, the Council held prehearing conferences on April 24, May 15, June 12, July 17, and July 24, 2000, and issued Prehearing Orders Numbers one through six (Council Order Nos. 743, 744, 746, 747, 748, and 749).

The Council conducted adjudicative sessions on May 15 and July 17, 2000, to hear testimony in support of various stipulations entered into by some of the parties.

The first round of formal adjudicative hearings were held from July 24 through July 29 in Bellingham, Washington, from July 31 to August 4 in Olympia, Washington, and September 28 and 29, 2000 in Bellingham, Washington. These evidentiary hearings were held in accordance with the provisions of Chapter 34.05 RCW, the Administrative Procedure Act, following due and proper notice. The Council issued two post-hearing orders, Post-hearing Order No. 1 and No. 2 (Council Order No. 750 and Council Order No. 751). On September 28, 2000, the Council also heard further evidence from the Applicant and other

parties regarding the Canadian governmental entities' positions on environmental issues and new evidence raised by the Draft Prevention of Significant Deterioration (PSD) air emissions permit.

The Council received public testimony regarding the project at public witness hearings held July 25, 2000, in Bellingham, and July 27, 2000, in Everson, Washington. The Council held an additional public hearing session on September 27, 2000, in Everson, Washington, to allow those people who were unable to testify during the allotted time on July 27, 2000 to be heard. On July 25 and 27, 2000, the Council also reconvened the land use consistency hearings. The Council published a Draft PSD air emissions permit on August 25, 2000, and the Council held a public hearing to receive comments on the Draft PSD permit on September 28, 2000, in Everson, Washington. The deadline for written comments on the Draft PSD permit was extended, upon request, until October 5, 2000. Post-Hearing Briefing by all the parties was completed by October 20, 2000.

On December 19, 2000, the Council for the Environment and Whatcom County filed a joint motion to reopen the record for the purpose of determining whether recently discovered evidence pertaining to the current seismic activity and threat in Whatcom County and the Sumas Valley should impact the deliberations by the Council on this application. Because the Council decided not to recommend approval of siting of the facility, the Council denied that motion.

On February 12, 2001, the Council issued Council Order No. 754, recommending denial of certification of the SE2 project. The recommendation was unanimous. Council members Carelli, Ray and Haars issued separate concurring opinions indicating that without backup oil firing, full mitigation or offsets of the impacts of this project would be very possible.

On March 5, 2001, SE2 filed a Motion for Reconsideration of Order No. 754, asking the Council to recommend certification of the project subject to a variety of new conditions offered by the Applicant to address the concerns identified in Council Order No. 754. The

proposed changes were numerous and substantial, and included the elimination of the use of diesel oil. The other parties opposed the Applicant's motion, arguing that what the Applicant proposed by its motion was procedurally improper and legally infirm. Many of the parties argued that there were inadequacies with many of the conditions that the Applicant was proposing and sought a procedure to address their positions to the Council.

On April 20, 2001, the Council issued Order No. 757, denying SE2's Motion for Reconsideration, concluding that its procedures did not permit it to consider the many and significant project modifications suggested by SE2 by way of a Motion for Reconsideration and explaining in detail the reason for that decision. The Council considered the arguments of other parties that a motion for reconsideration was not the time for an applicant to suggest new modifications to its project. The Council concluded that by offering changes after the record in the hearing process had closed, the Applicant would deprive the other parties of their opportunity to respond to the Applicant's changed positions if the effectiveness of the changes was decided on a motion to reconsider.

The Council denied the Motion for Reconsideration, but did provide the Applicant a means by which its changed position could be fully and fairly considered. The Council allowed SE2 to submit a revised application and indicated it would consider the revised application through an appropriate process that allowed all parties, and the public, to have an opportunity to prepare adequately and present their positions on the newly configured project. We committed to hear all sides of the matter impartially and to make a decision based on a full record, fairly developed, with consideration for the due process rights of all parties. The Council concluded that given the commitments that the Applicant was now apparently willing to make, the interests of efficiency would be best served by transmitting a recommendation to the Governor that was based on the changes that the Applicant was proposing.

On May 1, 2001, Whatcom County filed its Motion for Reconsideration of Council Order No. 757, requesting the Council to reconsider its decision to allow SE2 to submit a revised application. The Council issued Order No. 758 denying the County's motion, and

concluding that the procedure described in Order No. 757 was appropriate and proper under the circumstances of this case.

On June 29, 2001, SE2 filed a Second Revised Application seeking an SCA to construct a 660 MW electrical generating facility in Sumas, Washington and an associated electrical transmission line and natural gas pipeline. The Second Revised Application eliminated the proposal to use diesel oil back-up fuel, and proposed additional modeling, assessment, and mitigation to address unresolved issues identified in Council Order No. 754.

Prior to the formal adjudicative hearings on the Second Revised Application, the Council held prehearing conferences on July 16, August 1, September 24 and October 18, 2001. The Council issued Order Nos. 759, 760, 761 and 763.

On September 24, 2001, the Council conducted an adjudicative session to hear testimony in support of settlement agreements entered into by some of the parties.

EFSEC duly published notice of the application, public meetings, prehearing conferences, PSD hearings, Draft Supplemental Environmental Impact Statement (D-SEIS) hearings, and the adjudicative hearings regarding the Second Revised Application.

On September 18, 2001, the Council published a D-SEIS, which addressed impacts of the Second Revised Application. The Council held a public hearing regarding the D-SEIS on October 16, 2001 in Everson, Washington and accepted public comments regarding the D-SEIS through October 19, 2001.

The Council held formal adjudicative hearings regarding the Second Revised Application on October 29 through November 2, 2001, in Bellingham, Washington, and on November 13 through November 16, 2001, in Fife, Washington.

The Council held public hearings on the Second Revised Application on October 30, 2001, in Everson, Washington, and on November 1, 2001, in Bellingham, Washington.

The parties were given an opportunity to submit post-hearing briefing regarding the Second Revised Application, which was completed on January 25, 2002.

On January 24, 2002, the Province of British Columbia filed a Motion for Leave to File Brief in Response to City of Sumas's Post-hearing Brief. On February 2, 2002, Constance Hoag filed an objection to the Appellant's brief requesting that the Council strike that portion of the Appellant's brief. The Council issued Order No. 764, denying both motions.

On May 13, 2002, the Council adopted and issued a Final Supplemental Environmental Impact Statement (F-SEIS). On May 16, 2002, the Council issued an Addendum to the F-SEIS.

The proposed project generated significant public interest and controversy. In addition to the public testimony heard at public hearings for many hours, the Council has also received thousands of public comments. The vast majority of public comments received prior to February 2000 regarding the 2000 application opposed certification. Since SE2 filed the Second Revised Application, public comments received by the Council have been more mixed. Many individuals and groups continue to oppose the project and express concerns about environmental impacts. Many other individuals and groups support the revised project, noting substantial changes in the project to address environmental concerns, as well as the economic opportunities presented by the project.

Appearances: The parties were represented in one or both rounds of hearings as follows:

Sumas Energy 2, Inc.: Karen M. McGaffey, Rolf B. Johnson, Elizabeth L. McDougall, Perkins Coie L.L.P., 1201 Third Avenue, Suite 4800, Seattle, WA 98101.

Counsel for the Environment: Mary Barrett, Senior Assistant Attorney General, Office of the Attorney General, 1125 Washington Street S.E., P.O. Box 40100, Olympia, WA 98504-0100.

Washington Department of Fish and Wildlife: William Frymire, Assistant Attorney General, Office of the Attorney General, Highways-Licenses Building, 1125 Washington Street S.E., P.O. Box 40100, Olympia, WA 98504-0100.

Washington Department of Ecology: Joan M. Marchioro, Assistant Attorney General, Office of the Attorney General, P.O. Box 40117, Olympia, WA 98504-0117.

Washington Department of Community, Trade and Economic Development:[4] Jonathan Gurish, Assistant Attorney General, and David Warren and Tony Usibelli, appearing pursuant to WAC 463-30-100 (c), 925 Plum Street, Building 4, P.O. Box 43173, Olympia, WA 98504-3173.

Washington State Utilities and Transportation Commission: Sally G. Johnston, Senior Assistant Attorney General, Office of the Attorney General, 1400 S. Evergreen Park Drive S.W., P.O. Box 40128, Olympia, WA 98504-0128.

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[4] For purposes of clarification, the Council notes that the Washington Department of Community, Trade and Economic Development (CTED) was administratively split by Governor's Directive No. 00-03 on May 15, 2000, subsequent to commencement of these proceedings. The directive created two separate offices within CTED: (1) The Washington State Office of Trade and Economic Development, which includes the Energy Division; and (2) the Washington State Office of Community Development. While CTED continued to retain its legal standing as an agency of state government, the new offices separately operated their respective program and budget areas. On April 30, 2002, the Governor directed the Department of Community, Trade and Economic Development to operate as a single state agency, effective May 31, 2002. Throughout the review of the S2GF Second Revised Application, CTED intervention was coordinated by employees of and counsel to OTED. Accordingly, the order will hereafter refer to this intervenor as the Office of Trade and Economic Development (OTED).

Whatcom County: David M. Grant, Whatcom County Deputy Prosecutor, Whatcom County Prosecutor's Office, 311 Grand Avenue, Bellingham, WA 98225.

City of Sumas: James J. Wright, Smith & Kosanke, 105 Fifth St., Suite 201, P.O. Box 632, Lynden, WA 98264 and David Davidson, City Administrator, City of Sumas, P.O. Box 9, Sumas, WA 98295, appearing pursuant to WAC 463-30-100(c).

City of Abbotsford and Abbotsford Chamber of Commerce: David A. Bricklin, Claudia Newman, Bricklin & Gendler, LLP, Suite 1015 Fourth & Pike Building, 1424 Fourth Avenue, Seattle, WA 98101 during adjudication of the First Revised Application and Peter Andzans, City of Abbotsford, 32315 South Fraser Way, Abbotsford, B.C., Canada, V2T 1W7, appearing pursuant to WAC 463-30-100(c) during adjudication of the Second Revised Application.

Northwest Energy Coalition & Washington Environmental Council: Roger M. Leed, Roger M. Leed, P.S., 2003 Western Ave., Ste. 600, Seattle, WA 98121-2161 and Danielle Dixon, appearing pursuant to WAC 463-30-100 (c).

Bonneville Power Administration: Joyce E. Patton, Sonya L. Baskerville, Bonneville Power Administration, 905 NE 11th Avenue, Portland, OR 97232.

Constance Hoag: *pro se*, 2633 Halverstick Rd, Lynden, WA 98264.

The Province of British Columbia: Paul Jarman, Minister of Attorney General, 4th Fl., 1001 Douglas St., Victoria, B.C., Canada, V7W 9J7, and David A. Bricklin, Bricklin & Gendler, L.L.P., Suite 1015 Fourth & Pike Building, 1424 Fourth Avenue, Seattle, WA 98101.

The Council: Council representatives participating in this proceeding to consider the Second Revised Application are the following: James O. Luce, Council Chair; Linda Crerar, Department of Agriculture; Heather Ballash, Department of Community, Trade and Economic Development; Charles J. Carelli, Department of Ecology; Jenene Fenton,

Department of Fish and Wildlife; Ellen Haars, Department of Health; Maillian Uphaus, Department of Military; Tony Ifie, Department of Natural Resources; Gary Ray, Department of Transportation; Dennis J. Moss, Washington Utilities and Transportation Commission; Dan McShane, Whatcom County; Gerald Richmond, City of Sumas. Nan Thomas, Senior Administrative Law Judge, Office of Administrative Hearings was retained by the Council to facilitate and conduct the hearings.[5]

MEMORANDUM

The Council sets out its findings and conclusions upon contested issues and the Council's reasons and bases therefore in the memorandum portion of this document.

Introduction

The Applicant and the Project

The site certification applicant is Sumas Energy 2, Inc. (SE2 or the Applicant), a special purpose corporation formed to develop, permit, finance, construct, own, and operate the Sumas 2 Generation Facility (S2GF). SE2 is a Washington S-Corporation formed under Title 23B of the Revised Code of Washington, and is wholly owned by the estate of Darrell Jones. Charles Martin is the President of SE2.

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[5] At earlier stages of the proceeding, C. Robert Wallis sat as a member for the Utilities and Transportation Commission, Diane Offord for the Military Department, Constance Hoag for Whatcom County, Michael Quinn and Robert Mitchell for the City of Sumas, and Bob Hilpert for the Port of Bellingham. None of these individuals participated in deliberations on dispositive issues. During the adjudication of the First Revised Application, Deborah Ross served as chair of the Council; Gayle Rothrock participated as the Council member for the Department of Natural Resources; and Dan Jemelka participated for the Department of Agriculture. These three members did participate in deliberations of the First Revised Application, and signed Council Order No. 754, but did not participate in the hearings or deliberations of the Second Revised Application.

SE2 proposed to locate the facility on a 37-acre site in the City of Sumas, Washington, approximately one-half mile south of the Canadian border. Approximately 26 acres of the site have historically been farmed and the remainder of the site is woods or wetlands.

The proposed plant is a 660 MW natural gas-fired combined-cycle combustion turbine generating facility. The facility consists of two separate but identical combustion gas turbine driven generators and one steam turbine driven generator. The exhaust heat from the combustion turbines flows to heat recovery steam generators (HRSGs) to produce steam. Steam flows to the steam turbine and the steam exhausted by the steam turbine flows to the condenser, is condensed, and returns to the HRSG.

The Applicant also seeks certification to construct a new 4.5-mile natural gas pipeline from the United States-Canadian border to the S2GF to deliver gas to the facility. The proposed project also includes the construction of a new 5.9-mile 230 kV transmission line from the facility to the B.C. Hydro Clayburn substation located in British Columbia, Canada. Only the portion of the transmission line located in Washington State, which is approximately 0.6 miles in length, is subject to the Council's jurisdiction.

The proposed plant would use natural gas as its fuel. Low-sulfur distillate fuel oil was proposed as a backup fuel in the First Revised Application. The First Revised application proposed construction of a 2.5 million-gallon distillate fuel oil storage tank on site, which the Applicant offered in its post-hearing briefing after the first round of hearings to reduce to a 1.5 million gallon tank. However, in the Second Revised Application, the proposed diesel oil storage and diesel fuel burning were eliminated; the Second Revised Application seeks to fuel the facility solely by natural gas.

The EFSEC Process

EFSEC was created to assist the Governor to decide which proposed locations are appropriate for the siting of large new energy facilities. Chapter 80.50 RCW. The

Legislature has recognized that the selection of sites will have a significant impact on the welfare of the population, the location and growth of industry, and the use of the natural resources of the state. It is the policy of the state of Washington to recognize the pressing need for increased energy facilities, and to ensure through available and reasonable methods, that the location and operation of such facilities will produce minimal adverse effects on the environment, ecology of the land and its wildlife, and the ecology of state waters and their aquatic life. RCW 80.50.010.

The Council conducted its review of the both of SE2's applications as adjudicative proceedings pursuant to Chapter 34.05 RCW as required by RCW 80.50.090(3) and Chapter 463-30 WAC.

The Council has a comprehensive mandate to balance the need for abundant energy at a reasonable cost with the broad interest of the public. RCW 80.50.010. The Council is charged to protect the health of citizens and recommend site approval for power plants where minimal adverse effects on the environment can be achieved. RCW 80.50.010; *see also* WAC 463-47-110.

The Council is also charged with the responsibility to apply the laws of Chapter 43.21C RCW, the State Environmental Policy Act (SEPA), which provides for the consideration of probable adverse environmental impacts and possible mitigation. WAC 463-47-140. EFSEC is the lead agency for environmental review under the SEPA, RCW Chapter 43.21C, and as Council Manager, Allen Fiksdal is the SEPA responsible official. WAC 463-47-051.

In this proceeding, the Council complied with SEPA requirements by issuing a determination of significance and scoping notice, conducting a scoping hearing, issuing a Draft Environmental Impact Statement (DEIS) for public comment, conducting a public hearing and accepting written comments on the DEIS, and adopting a final environmental impact statement (FEIS). After submission of the Applicant's Second Revised Application, the Council published a Draft Supplemental Environmental Impact Statement (D-SEIS) on

September 18, 2001. The Council accepted public comments regarding the D-SEIS through October 19, 2001, and held a public hearing regarding it on October 16, 2001 in Everson, Washington. The Council adopted and issued a final supplemental environmental impact statement on May 13, 2002. On May 16, 2002, the Council issued an Addendum to the final supplemental environmental impact statement.

A Draft Prevention of Significant Deterioration (PSD) air emissions permit was issued for comment on August 25, 2000 and a public hearing on the Draft PSD was held on September 28, 2000. The Council accepted written comments on the Draft PSD permit through October 5, 2000.

No final PSD permit was issued in 2000 because the Council's Order No. 754 recommended denial of the project.

The Applicant submitted a second revised Notice of Construction/Prevention of Significant Deterioration permit application and BACT evaluation on June 29, 2001. The preliminary approval of PSD/NOC permit No. EFSEC/2001-02 was issued for public comment on September 28, 2001. Public notices of the comment period and of the two public hearings were performed by publication to a number of local newspapers; copies of the draft permit and associated fact sheet were made available for public reference at a number of locations and on EFSEC's web site; and copies were sent to a list of 221 persons and stakeholders interested in this proposal. Public comment hearings were held on October 30, 2001, in Everson, Washington, and comments were received by the Council through November 1, 2001. The Council received 12 written comment letters and ninety-seven persons commented at the public hearings.

EFSEC issued notice of a solicitation for public comments for the S2GF application for water quality certification on September 18, 2001. The 30-day written comment period was open from September 19, 2001, through October 19, 2001. Public comment on the application for water quality certification was also received at a duly noticed hearing on October 16, 2001, in Everson, Washington.

Public Testimony and Comment

The Council is required to hold public hearings where any person is entitled to be heard in support of, or in opposition to, an application. RCW 80.50.090; *see also*, WAC 463-14-030. The application for this power plant generated intense public interest in this country and in Canada. The Council heard many public witnesses during the hearing on the draft Environmental Impact Statement, the Supplemental Draft Environmental Impact Statement and the application for water quality certification, the hearing on the draft PSD permits, and five evenings of public hearings on the proposed project. The Council received oral comments during public witness hearings, as follows: at the July 25, 27, and September 27, 2000, public witness hearings - 133 comments, at the DEIS comment hearing - 49 comments, at the Draft PSD Permit hearing - 20 comments, at the October 16, 2001 Draft SEIS and application for water quality hearing – 43 comments, the October 30 and November 1, 2001 Draft PSD Permit (Second Revised Application) and public witness hearings – 97 comments.

The Council received 798 written comments from members of the public regarding the first revised application, in addition to 198 letters on the Draft EIS, and 28 written comments on the Draft PSD air emissions permit. A number of the written statements to the Council included petitions signed by many people. The majority of the public's testimony and comments during the consideration of the first revised application were opposed to siting the project as proposed.

The Council received 2,148 written comments from members of the public regarding the Second Revised Application, in addition to 36 letters on the Draft SEIS and application for water quality certification, and 14 written comment letters on the Draft PSD (Second Revised Application) air emissions permit. The majority of the public testimony and comments remained opposed to siting the project although public opinion was somewhat more mixed regarding the Second Revised Application.

The Council carefully considered both the specific comments of the witnesses and the topics they addressed as indications of matters significant to the public as well as the written comments submitted by the public. The Council expresses its appreciation for these witnesses' testimony and written comments.

Issues

The Council considered numerous issues during the adjudicative phase considering the first revised application. These included: land use consistency with local regulations; the "need and consistency" requirement; potential or expected environmental impacts on air quality, water quantity, water quality, plants and animals, and wetlands; flooding; stormwater runoff; climate changes caused by the emission of greenhouse gases; noise; fire; effects of diesel oil transportation, storage, and burning; gas pipeline construction and operation; transmission of electricity; socioeconomic impacts; duration of site certification agreements; and site restoration requirements. During the adjudicative proceedings considering the Second Revised Application, the Council also addressed the issue of seismic hazards and reconsidered the other issues in light of the revisions to the project and the offers of mitigation.

Settlement and Stipulations

In connection with the 2000 Application, the Applicant entered into the following settlement agreements and stipulations:

- Partial Settlement Agreement between Washington Utilities and Transportation Commission and Sumas Energy 2 Concerning Natural Gas Pipeline Issues;
- Settlement Agreement between Washington Department of Fish & Wildlife and Sumas Energy 2;
- Partial Stipulation Agreement between City of Sumas and Sumas Energy 2;

- Supplemental Agreement between Washington Department of Fish & Wildlife and Sumas Energy 2 Regarding Wetlands;
- Settlement Agreement between Washington Department of Ecology and Sumas Energy 2; and
- Stipulation and Settlement Agreement between Washington Utilities and Transportation Commission and Sumas Energy 2.

Following the filing of the Second Revised Application, the Applicant, the Washington Utilities and Transportation Commission (WUTC), and the City of Sumas informed the Council that they continued to be bound by the settlement agreements and stipulations entered into regarding the 2000 Application.

The Applicant entered into new settlement agreements with the Washington Department of Fish & Wildlife (WDFW) and the Washington Department of Ecology (Ecology):

- Settlement Agreement Between Washington Department of Fish and Wildlife and Sumas Energy 2 Regarding Second Revised Application; and
- Settlement Agreement Between Washington Department of Ecology and Sumas Energy 2 Regarding Second Revised Application.

By letter dated December 13, 2001, the Applicant, WDFW, and Ecology reaffirmed those agreements considering testimony received during the adjudicative hearings.

The issues regarding transmission of electricity and pipeline construction and safety were settled during the hearing to the satisfaction of the Council. The Applicant and the Washington Utilities and Transportation Commission (WUTC) entered into a Stipulation and Settlement Agreement regarding potential adverse impacts the proposed project might have on the regional transmission grid. Exhibit 10 (Stipulation and Settlement Agreement Between Washington Utilities and Transportation Commission and Sumas Energy 2). The Council agrees with the statement made in the stipulation between the WUTC and the

Applicant that impacts to system transmission reliability and costs are important factors in determining whether to site a facility. The studies performed by the Bonneville Power Administration show that system impacts are minimal, and the Applicant agreed to pay any costs associated with system upgrades that might be necessary as a result of this project.

The Council also accepted the settlement agreement between the WUTC and the Applicant regarding the construction, operation and maintenance of the proposed natural gas pipeline. Exhibit 1 (Partial Settlement Agreement Between Washington Utilities and Transportation Commission and Sumas Energy 2 Concerning Natural Gas Pipeline Issues). Having accepted this agreement during the hearings, the Council also notes that it would endorse it as a satisfactory conclusion of the issues addressed. The Council acknowledges the excellent work of the WUTC and the Applicant in developing the conditions for the pipeline construction and operation.

The Settlement Agreement between the Department of Ecology and the Applicant addressed the issue of stormwater. The Applicant will be required to have a storm water plan that addresses the circumstances of the site since the Council is recommending approval of the project.

The wastewater issue was resolved by contract and standards were set by contract. In the attached Site Certification Agreement, with some changes in the language of the SCA and additional conditions for monitoring, the Council, finds that this resolution by contract is adequate.

Project's Consistency with Land Use Laws

The Council is required to hold a public hearing to determine whether the proposed use of the site is consistent with county or regional land use plans or zoning ordinances at the time of the application. WAC 463-14-030. As noted above, that hearing was held in two sessions, during which city and county officials, as well as members of the public testified.

A Statement of Land Use Consistency from Whatcom County was entered into evidence. Land-Use Hearing Exhibit 1. That document confirmed that the portion of SE2's proposed project within the jurisdiction of Whatcom County is consistent with its comprehensive land use plan, zoning ordinance, critical areas ordinance, shoreline master program, and park and open space plan. Additionally, a Certificate of Land Use Consistency from the City of Sumas was entered into evidence. Land-Use Hearing Exhibit 2. That document found the proposed use as a major industrial facility to be consistent with the planned use of the site as an industrial site within the City of Sumas Comprehensive Land Use Plan and confirmed the site's consistency with the City's comprehensive plan, zoning ordinance, and critical areas ordinance. The SE2 proposal is a utility generation and transmission system and is therefore permitted outright within the Industrial zone. Land Use Hearing Exhibit 2.

Certificates from local authorities attesting to the fact that the proposal is consistent and in compliance with county or regional land use plans or zoning ordinances are regarded as *prima facie* proof of consistency and compliance with such zoning ordinances or land use plans absent contrary demonstration by anyone at the hearing. WAC 463-26-090. The Council concluded with regard to the 2000 Application, that the proposed use of the site was consistent with both city and county land use plans and zoning ordinances. The project, as proposed in the Second Revised Application is at the same location and is also consistent and in compliance with the land use plans and zoning ordinances of the City of Sumas and Whatcom County.

"Need and Consistency" Requirements

"Need and consistency" is a term developed in EFSEC siting proceedings the meaning of which has evolved over time.[6] Since the developers of power facilities no longer can recoup their capital costs from ratepayers, the traditional "need" assessment made during times of regulated development is somewhat changed. In the siting decision, the Council still must balance the increasing demands for energy facility location and operation with the broad interests of the public with consideration given to operational safeguards, protection of the environment, providing abundant energy at reasonable cost, avoiding costs of site restoration, and ensuring timely siting decisions. RCW 80.50.010. While the traditional question of whether consumers "need" a particular plant may be largely obsolete in the market structure where the developers bear the risk of an unsuccessful project, the question whether consumers "need" a plant *at a given location* is still asked considering the environmental costs of that facility at that location. At a minimum, the Council must discharge its statutory obligation to assure that the project provides "abundant power at reasonable cost" while protecting the "broad interests of the public" and "preserving and protecting the quality of the environment". In our previous Order No. 754, we discussed the policy and laws set forth in RCW 80.50.01 and RCW 43.21F-015, and observed that there are a number of ways that "need & consistency" can be shown.

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[6] Prior to the passage of Federal legislation effectively deregulating wholesale power markets, public utilities typically constructed the generating facilities needed to meet their load responsibility. As a consequence, utility's ratepayers assumed full financial responsibility for the facilities. Under such circumstances it was reasonable to require that the utility demonstrate that there is an actual need for the project. If the generation is not needed, the utility's ratepayers will suffer the financial consequences. This is to be distinguished from today's reality where the projects which EFSEC reviews are typically constructed by "Independent Power Producers" such as the applicant in this case. In this circumstance the applicant and not the ratepayers bear the financial consequence and the "need for power" test focuses more on the Council being assured that the project produces public benefits such as promoting long term price stability.

The need and consistency requirement can be satisfied, for example, by demonstrating that a certain percentage of plant capacity is under firm contract before construction, and has been sold to purchasers who have adopted an integrated resource plan (IRP). In considering what benefit a proposed facility might bring to the people, the Council may also consider such factors as whether the Applicant's project will minimize environmental impacts and/or provide offsets that mitigate such impacts.

The Council found in Order No. 754 that the region would be energy or capacity short within, at most, the next three to five years. We also emphasized that one of the resources of choice for meeting need is combined cycle combustion turbines. In Order No. 754, we further found that SE2 had shown that the plant would provide energy benefits in the form of mitigating forecasted energy and capacity constraints and by contributing to reliability on the Western states power grid. However, in light of the absence of any agreement to provide the stability of any long-term contracts, or to sell to purchasers with IRPs, we concluded that the Applicant had not shown that it would confer direct benefits on any segment of the market or lead to lower energy costs.[7]

In the Second Revised Application (and the Applicant's Revised Proposed Site Certification Agreement), the Applicant now offers to enter into agreements for the purchase and sale of at least 60% of the facility's capacity for a term of at least five years. The Applicant also offers:

> 2. **Consistency.** SE2 will ensure that at least one of the following conditions is satisfied prior to beginning construction of the S2GF. For purpose of this provision, "Purchaser" means any entity that has entered into a power

[7] By way of clarification, Council Order No. 754 states that SE2 is a "merchant plant" and that the proponents had made no showing that the plant would produce "direct" energy or economic benefits to consumers or lead to lower energy costs in Washington or in the region. More has been read into this language than was intended. First, the Council evaluates all proposed plants against the same statutory standards. The Council recognizes that in a deregulated wholesale power market, such as currently exists, most new generation is being constructed by independent power producers, where company shareholders and investors, not utility ratepayers, are most at risk.

purchase agreement for SE2, for a term of at least five (5) years, providing for the purchase and sale of more than 40% of the S2GF's design capacity:

a. If the Purchaser has adopted an integrated resource plan: (i) the project is of the type included in the Purchaser's preferred resources acquisition strategy; (ii) the plan has reviewed commercially available supply and demand side resources and evaluated them on a consistent basis; (iii) the plan was developed with public participation; and (iv) the plan was reviewed by the utility's regulatory body.

b. If the Purchaser has not formally adopted an integrated resource plan: (i) the Purchaser has reviewed commercially available supply and demand side resources; or (ii) the Purchaser is located in the service territory of a utility that has an integrated resource plan meeting the criteria set forth in section 2.a. (above), or (iii) the project is consistent with the priorities and principles expressed in the relevant Northwest Conservation and Electric Power plan.

The Energy Division of the Washington State Office of Trade and Economic Development (OTED), the state agency charged with state energy policy oversight, supports this agreement. It is also supported by public interest groups: the Northwest Energy Coalition (NWEC) and the Washington Environmental Council (WEC). The Counsel for the Environment (CFE) supports these conditions, reasoning that long-term contracts enhance stability in the energy market. OTED opines that these provisions do provide some additional assurance that the project benefits would be more likely to accrue to Washington and Northwest residents, and that the project would be consistent with state policies that encourage least-cost planning. The NWEC and the WEC recognize that the need and consistency requirements help ensure that a significant portion of the power from S2GF will be available to meet the needs of state consumers and are consistent with the State Energy Strategy to encourage investments in clean energy. The consistency provision recognizes the importance of integrated resource planning as a tool and one byproduct of effective IRP is an increased likelihood of the development of conservation and renewables. The Council is convinced by the arguments of these agencies and organizations of the value of the Applicant's new offers in the Second Revised Application. These opinions were supported by knowledgeable witnesses with vast experience in the energy field.

James Litchfield, former Director of Power Planning for the Northwest Power Planning Council, testified that long-term contracts tend to provide market stability and more stable prices than reliance on spot market purchases. Tr. 2108 (Litchfield)(2001)[8]. Ronald Eachus, past Public Utility Commissioner for the State of Oregon, also testified that longer-term bilateral contracts provide greater market stability. Tr. 2242 (Eachus)(2001).

The Council reiterates its earlier finding that the record leaves little doubt that the state and the region face a need for increased energy and/or capacity in the very near term. Witnesses for several parties provided testimony, and exhibits were introduced, showing that under a variety of tests, this region will be energy or capacity short within at most the next three to five years. *See, for example*, Exhibits 28, 28.2, 28.4 (Litchfield)(2000), Exhibit 42, 42.2 (Watson)(2000), Tr. 3147-48 (Warren)(2000). Further testimony in the second round of hearings supports the Council's finding that the Northwest is in energy deficit. *See e.g.*, Exhibit 271 at 6 (Litchfield)(2001). These power shortages have led to enormous price volatility in the western power markets and caused numerous large power users to curtail operations, close plants, and have cost thousands of workers their jobs. These economic impacts have been accompanied with significant adverse environmental impacts. Regulations have been waived to allow facilities to increase generation beyond permitted levels, and to allow internal combustion engines to operate on diesel fuel as emergency generation to meet the region's loads. Indeed, the Council was greatly concerned about the risks posed by the use of backup diesel at the proposed site and the potential that air quality regulations might be waived at some future date. There is a fundamental capacity shortage in the region that manifests itself under some conditions, including, but not limited to, when a combination of weather and economic growth cause loads to peak. The most recent Pacific Northwest Utility Coordinating Council (PNUCC) Northwest Regional Forecast finds that the region is still expected to face more than a 2,320 MW energy deficit for operating year 2002. Exhibit 194, at 3, 8, 10, 11, 22 (Litchfield)(2001). The evidence in the record supports the conclusion that the region needs to continue to add capacity.

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[8] At the end of each citation to the record, the cite will indicate whether the reference is to the 2000 or the 2001 record.

As we found in Order No. 754, one of the resources of choice for meeting need is combined cycle combustion turbines. This is due to a combination of reliability, cost effectiveness, competitiveness, efficiency, and environmental impacts that are substantially less than those of other existing fossil fuel technologies. *See, for example*, Exhibit 71 (Usibelli)(2000). Natural gas combustion results in lower emissions of NO_x, SO2, CO, carbon dioxide (CO2), particulate matter, and unburned hydrocarbons than does combustion of other fossil fuels.[9] Final EIS at 3.1.4.2 at p. 3.1-9.

In light of the Applicant's offer of long-term contracts and sales to purchasers that meet IRP criteria, the Council finds that the proposed facility will provide a significant benefit to the western power grid and to the residents and businesses in this region.

Charles Martin, President of SE2, stated in his testimony during this second round of hearings that SE2 would be willing to discuss, and has been discussing with OTED, a process that could be established to provide a preference and first opportunity for qualified Northwest "utilities" to bid on energy and capacity to be purchased under a cost-based formula. Exhibit 270, at 29 (Martin)(2001). In OTED's final brief, it notes that Mr. Martin had expressed this willingness to work with OTED and that OTED is willing to continue discussions. Nothing in this Order requires or forbids such continuing negotiations.

Air Quality

A significant focus of interest by the parties was the air pollution that would result in the Lower Fraser Valley airshed from the operation of the proposed facility. The Lower

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[9] The Council fully supports meeting our deficit first with conservation and renewable, such as wind and hydro. These are resources over which the Council lacks jurisdiction. Testimony to the Council recognized that even with increased reliance on these resources, there will still be a need for central station thermal generation. The cleanest type of such generation is the combined cycle gas turbine.

Fraser Valley airshed is an area shared by the British Columbia Lower Mainland and Whatcom County in Washington State.

EFSEC is charged with protecting the people's health and welfare and with reviewing proposed power plants to assure minimal adverse effects on the environment. RCW 80.50.010; *see also,* WAC 463-47-110. Additionally, EFSEC is charged with responsibility to apply the laws of Chapter 43.21C RCW, the State Environmental Policy Act (SEPA), which provides for the consideration and mitigation of probable adverse environmental impacts. WAC 463-47-140. The Council carefully considers public comment on proposed power facilities. RCW 80.50.090; WAC 463-14-030.

The Council is a siting council and has the duty to assist the Governor in making a decision with respect to each location proposed for an energy facility. RCW 80.50.010. It is not enough for the Council to find that a power project is a good project in the abstract;

rather, it is our duty to decide if the project has been sited in the proper location for the protection and welfare of citizens. RCW 80.50.010[10].

It was the totality of probable negative impacts and risks that led the Council to recommend denial of SE2's First Revised Application. As discussed below, in addition to the Council's concerns about a plant that had the capacity to burn diesel oil in a confined airshed, the plant as configured with diesel oil also posed traffic, noise, flood, fire, and ground and surface water hazards to local residents.

During the first round of hearings, the Council recognized that the proposed plant met all U.S. federal and state air quality standards. However, we were concerned with the Applicant's plans to burn diesel oil and especially with the short-term peaking emissions that would occur when the plant was burning oil. We believed that the project could have had significant adverse environmental impacts that posed potential health hazards. The 2000 Fact Sheet for the Prevention of Significant Deterioration permit stated that the plant had a

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[10] The legislature has stated with respect to the selection and utilization of sites for energy facilities and identification of a state position with regard to each proposed site:

> It is the intent to seek courses of action that will balance the increasing demands for energy facility location and operation in conjunction with the broad interests of the public. Such action will be based on these premises:
>
> (1) To assure Washington state citizens that, where applicable, operational safeguards are at least as stringent as the criteria established by the federal government and are technically sufficient for their welfare and protection.
>
> (2) To preserve and protect the quality of the environment; to enhance the public's opportunity to enjoy the esthetic and recreational benefits of the air, water and land resources; to promote air cleanliness; and to pursue beneficial changes in the environment.
>
> (3) To provide abundant energy at reasonable cost.
>
> (4) To avoid costs of complete site restoration and demolition of improvements and infrastructure at unfinished nuclear energy sites, and to use unfinished nuclear energy facilities for public uses, including economic development, under the regulatory and management control of local governments and port districts.
>
> (5) To avoid costly duplication in the siting process and ensure that decisions are made timely and without unnecessary delay.

RCW 80.50.010.

potential to emit: nitrogen oxides[11] (NO_x) at 2 parts per million dry volume (ppmdv) when gas burning, but 6 ppmdv when oil burning; carbon monoxide (CO) at 2 ppmdv on gas, but 12 ppmdv on oil; sulfur dioxide (SO_x) at 1ppmdv on gas, but 10 ppmdv on oil; and volatile organic compounds (VOCs) at 6 ppmdv on gas, but 10 ppmdv on oil. Exhibit 170.2 (Fact Sheet for Prevention of Significant Deterioration, hereafter 2000 PSD fact sheet) at 3-4, n. 1.

Additionally, there were other significant concerns and hazards associated with the burning of diesel oil in this particular airshed. The Council was not satisfied by the Applicant's analysis of potential impacts of oil burning on visibility or whether pollution during oil firing would be likely to degrade air quality in the Sumas-Abbotsford area. A principal flaw in the Applicant's analysis was the assumption that oil burning was likely to occur only during a "cold snap" in Sumas when temperature conditions resulted in less than the maximum potential ozone[12] production and prevailing wind conditions (*i.e.*, wind from the North or Northeast) would disperse the plant's pollution plume away from the Fraser Valley. In fact, under the Applicant's proposed draft SCA, oil burning could have occurred whenever gas supplies were constrained. Elevated gas demand anywhere on the gas pipeline company's extensive system might have triggered the need for S2GF to switch to oil to avoid curtailing production. The Applicant's offer to restrict oil burning to six months of the year did not alleviate our concern on this matter. Extreme and protracted cold weather may occur on the gas pipeline's system many hundreds of miles away from Sumas at times when conditions in Sumas were ideal for ozone production. Thus, we found that the potential impact of oil burning should be considered under a "worst case" scenario, not the "best case" scenario urged by SE2. We found that the Applicant had not proved its contention that the

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[11] NO_x is a precursor of ozone that is a component of smog, which is a serious health and aesthetic issue. Exhibit 99 at 2 (Jaffe)(2000); Tr. 1260 (Quiring)(2000).

[12] Ozone refers to an oxygen compound (O3) occurring in the form of a gas in the atmosphere at ground level that has been shown to have significant adverse effects on human health and the environment. Exhibit 159.4 at 2 (Canada Wide Standards for Particulate Matter and Ozone); Exhibit 159.5 at 13-5 (National Ambient Air Quality Objectives for Ground-Level Ozone, Science Assessment Document)(2000); *see also*, Tr. 1260-61 (Quiring)(2000). Ozone is a component of smog. NO_x is one of the precursors to ozone. Exhibit 99 at 2 (Jaffe)(2000); Tr. 1260 (Quiring)(2000).

increased level of pollution caused by oil firing would only occur when the pollution levels were relatively low in the Fraser Valley airshed.

The Council was also concerned that the Applicant's proposed Site Certification Agreement differed from the assumptions used in the air modeling done by the Applicant, in expressing the maximum oil firing in terms of hours, rather than days. We noted that the proposed right to burn oil for a few hours on many days of the year is substantially different from a proposal to burn oil only for a few days in any given year. Under those circumstances, we were unable to fully assess the potential environmental consequences from oil burning as proposed by the Applicant.

Another matter that concerned the Council in connection with SE2's proposal to have oil burning capacity was the potential that economic conditions in the energy sector, or other circumstances, might easily change in a way that would prompt SE2 to propose to expand its use of oil. We considered this to be a potential future threat since the pollutant emissions would have been dramatically higher with the plant running on diesel rather than on natural gas. In light of the use of highly polluting energy sources during the recent episodes of electricity shortages, this was a realistic concern and could have had significant adverse effects in the airshed. *See e.g.*, Exhibit 194 at 17-18 (Litchfield)(2001).

With the elimination of oil burning capacity at the S2GF plant, these hazards and uncertainties no longer exist. The topography in the airshed has not changed, but the Applicant's offer to eliminate the burning of diesel oil with its much higher emissions has significantly decreased the peak emissions of the facility. It was the short-term emissions from oil burning, rather than the annual emissions, that were of the greatest concern to the Council. The elimination of oil, together with the Applicant's more specific offset[13] mitigation offer, convinces the Council that there are no air quality issues that should prevent the project from being sited in Sumas generally under the conditions of the Second Revised

[13] Offsets are a reduction of emissions from a different source of pollution that would serve to offset the emissions of the proposed facility. *See,* Exhibit 131 at 28 (Sagert)(2000).

Application and specifically under the conditions of this Order and the attached Site Certification Agreement.

The Applicant's prior offset offer was only to pay for voluntary offsets for some part of the emissions that the proposed project would cause and the offer contained no set amount of monetary alternative payment. It was uncertain what portion of offsets the Applicant was willing to implement or fund. The offer by the Applicant is significantly changed in the Second Revised Application.

The Applicant now offers, within twelve months of the effective date of the SCA, that SE2 shall submit to EFSEC for approval a plan for offsetting the NO_x and particulate matter emissions smaller than 10 microns (PM_{10})[14] from the S2GF by reducing actual emissions in the Fraser Valley airshed. For purposes of this provision, the "Fraser Valley airshed" is defined as the triangle-shaped Fraser Valley delta, including both United States and Canadian territory, between the Strait of Georgia and the City of Hope, bounded on the north by Coastal Mountains, and on the south by the Cascade Mountains to the northern slope of the Alger Hills south of Bellingham. *See*, SE2's Revised Proposed Site Certification Agreement, at 15. The Company's president, Charles Martin, and SE2's expert witness on air quality, Eric Hansen, have both confirmed that the offer is to offset (by reducing actual emissions in the airshed) 100% of the NO_x and PM_{10} that is emitted from the plant. Tr. at 15 (Martin)(2001); Exhibit 180, at 8 (Martin)(2001); Exhibit 182, at 3 and 12 (Hansen)(2001). At the adjudicative hearings, evidence showed that NO_x and particulate matter were the two pollutants of primary concern regarding hazards to health and the environment. Under this newer proposal, SE2 would continue to attempt to identify and implement a project or projects that would reduce NO_x and PM_{10} emissions sufficiently to offset the emissions from

[14] PM_{10} refers to airborne particles that are 10 microns or less in diameter; $PM_{2.5}$ refers to airborne particles that are 2.5 microns or less in diameter. Exhibit 159.4 at 2 (Canada Wide Standards for Particulate Matter and Ozone)(2000). Particulates give smog its color and affect visibility. Exhibit 183.9 at 1 (Particulate Matter and Ozone Canada-wide Standards)(2001). Significant adverse health effects have been demonstrated for $PM_{2.5}$. Exhibit 98 at 2 (Koenig)(2000); Tr. 1198 et seq. (Koenig)(2000).

the S2GF project. If SE2 is able to implement such a project(s), the net effect of the S2GF project would be no change in the total emission of NO_x and PM_{10} emissions and no overall impact on air quality with respect to these pollutants. Exhibit 182, at 12 (Hansen)(2001). The Council considers this a responsible pro-active offer by the Applicant.

The second part of the Applicant's offer is that, in the event that SE2 is unable to privately negotiate offset projects or to obtain the Council's approval of proposed projects, SE2 may satisfy its obligation to offset, by the payment of $1,500,000 (U.S.) at the commencement of Facility operations into a fund to be administered jointly by the Washington Department of Ecology and the British Columbia Ministry of Water, Land and Air Protection, and to be used for the improvement of air quality in the Fraser Valley Airshed. *See*, SE2's Revised Proposed Site Certification Agreement, at 15; see also Draft Site Certification Agreement at Article IV. E. 2. In the SCA, the Council will provide for the possibility of administration by another appropriate entity in the event that the named agencies are unable or unwilling to administer the funds.

Based upon evidence in the record, the Council finds that these funds are likely to be adequate to effectuate appropriate airshed offsets. *See*, Exhibit 180, at 10 (Martin)(2001); Exhibit 162.2 (Emission Calculations for Council of Forest Industries of British Columbia)(2000). In like kind, the Council finds arguments that the 1.5 million dollars is inadequate to fund such offsets unconvincing. The other local governmental entities (or private parties) concerned about air quality impacts have the choice, and are encouraged, to work with SE2 to locate, evaluate, and allow SE2 to actually implement 100% of offsets for NO_x and PM emissions. If other parties believe that the 1.5 million dollars is inadequate, then they will be motivated to cooperate in assisting SE2 to implement its offer to provide 100% offsets. The Council assumes, and will assure, that the Applicant has made a good faith effort to implement actual offsets in the airshed before it is allowed to rely on the monetary alternative. The SCA will require that SE2 issue a Request for Proposals (RFP) in order to locate appropriate offsets in the airshed. EFSEC staff is available to assist the Applicant in drafting such an RFP and EFSEC will retain the right to approve or reject it. As indicated in Order No. 754 and in this Order, the Council is very concerned with protecting

the airshed, which does have some topographical features that may exacerbate pollution. Therefore, EFSEC will retain oversight of identifying and implementing the offsets.

The Council has a duty under statutes and regulations, and pursuant to intergovernmental accords and memoranda of understanding, to consider public concerns regarding air pollution. RCW 80.50.090(3); WAC 463-14-080. The Air Quality Accord and the Memorandum of Understanding entered into between governments and agencies of the United States and Canada commit Canada and the United States, and Washington and British Columbia, to consult on activities such as this project, that might cause significant trans-boundary air pollution. *See*, Exhibit 7 (The Air Quality Accord between the Governments of Canada and the United Stated and the Interagency Agreement among the State of Washington Department of Ecology, State of Washington Northwest Air Pollution Authority, the Province of British Columbia Ministry of Environment, Lands and Parks and the Greater Vancouver Regional District.

The Council heard extensive testimony on the subject of air pollution from the general public and from representatives of Canadian governmental entities during public comment hearings that the council held during these proceedings. We recognize that the governments of British Columbia and the City of Abbotsford continue to oppose the S2GF power plant in this airshed. However, as reconfigured without any diesel oil burning and with total offset of NO_x and particulate matter, this facility will cause only very slight impacts to air quality in the Lower Fraser Valley airshed. This plant will have emissions that are as low as, or lower than, other power facilities in Washington and British Columbia. In addition, if the 100% proposed offset of NO_x and particulate matter is achieved, it will mitigate the health and environmental effects from the pollutants of greatest concern.

The S2GF is to be located in an attainment area[15]. The modeled maximum criteria pollutant concentrations attributable to the operation of S2GF are below the defined Class II significance levels for all pollutants on both short-term (24 hour average or less) and long-term (annual average) bases. The modeled maximum criteria pollutant concentrations attributable to the operation of the S2GF are below the proposed Class I significance levels for all pollutants on both short and long-term bases. The ozone impact analysis performed to evaluate the contribution of the project in the adjoining Lower Fraser Valley during the last round of hearings indicated, "Increases in ozone episode intensity… will be small and localized." The Canadian agencies joint summary concluded that "it is unlikely that the facility emissions will cause additional exceedences of the new Canada Wide Standard for ground level ozone… or result in an increase in ozone concentrations where (the standard) is already exceeded or…close to being exceeded." Both of these analyses were made using the higher emission levels estimated for the previous PSD permit application (January, 2000). The relevant pollutant emissions are now slightly lower based on annual figures in the current application. Exhibit 282.1 (2001 PSD fact sheet) at 5. The emissions are very significantly lower than they were expected to be when these conclusions were drawn when considering short-term peaking emissions. Exhibit 170.2 (2000 PSD fact sheet) at 3-4, n.1; Exhibit 182, at 5 (Hansen)(2001).

The 2001 PSD fact sheet reports that SE2 analyzed the pollutant emission impact of the plant relative to the Canada-Wide Standards (CWS) and Canadian National Ambient Air Quality Objectives as well as the objectives established by British Columbia and Greater Vancouver Regional District (GVRD). The area modeled included the Fraser Valley. The CWS are similar to the United States' National Ambient Air Quality Standards (NAAQS) and the Washington Ambient Air Quality Standards (WAAQS) in that they establish limits on ambient air pollutant concentrations that must not be exceeded. However, the CWS are targeted for phase in by 2010 whereas the NAAQS and the WAAQS are currently fully applicable. The Canadian "objectives" are guidelines intended to assist Canadian federal,

[15] Attainment status is a measure of whether air quality in an area complies with the United States health-based national ambient air quality standards. Final EIS, at 3.1.3, at 3.1-6.

provincial, and local government in decision-making. There are three levels of Canadian objectives:

- Maximum desirable: Long-term goals that provide a basis for an anti-degradation policy for the unpolluted parts of Canada and for continuing development of control technology. The related pollutant concentrations are roughly equal to one-third to one-half the NAAQS.
- Maximum acceptable: Intended to provide adequate protection against adverse effects on humans and the environment. The related pollutant concentrations are roughly equal to the NAAQS.
- Maximum tolerable: Time-based concentrations beyond which immediate action is required to protect public health.

The modeled maximum criteria pollutant concentrations that could result when background concentrations are combined with those from S2GF are below the Maximum

Desirable Air Quality Objectives. Exhibit 282.1 (Draft Fact Sheet for Prevention of Significant Deterioration, September 28, 2001) at 5-6.[16]

Best available control technology (BACT) [17], as required under WAC 173-400-113(2), and toxic best available control technology (T-BACT), as required under WAC 173-460-040(4), will be used for the control of all air pollutants which will be emitted by the proposed project. EFSEC agrees with its permit writing contractor's conclusion that considering total pollutant removal capability does not justify the SCONOx process for application to SE2. Exhibit 282.1 at 12 (2001 PSD fact sheet). Best Available Control Technology (BACT) for NO_x is Selective Catalytic Reduction (SCR). BACT for CO is catalytic oxidation. Good combustion practice, using only natural gas with a maximum

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[16] In Canada, the Federal/Provincial Working Group on Ambient Air Quality Objectives and Guidelines is required to identify an ambient "Reference Level," defined as a level above which there are demonstrated effects on human health and the environment. Exhibit 159.3 at 14-1 (National Ambient Air Quality Objective for Particulate Matter, Science Assessment Document; A Report by the CEPA/FPAC Working Group on Air Quality Objectives and Guidelines)(2000). However, we note that "reference levels" are not air quality standards used for air permitting decisions; Canada-wide Standards and air quality objectives are used for permitting. *See, e.g.*, Exhibit 182 at 19 (Hansen)(2001); Exhibit 264.2 (Canadian National Ambient Air Quality Objectives: Process and Status)(2001) (Explains that National ambient air quality objective (NAAQOs) are the benchmark against which Canada assesses the impact of anthropogenic activities on air quality and ensures that current emission control policies are successfully protecting human health and the environment)(2001); Exhibit 183.8 at 1 (Canada-wide Standards-Overview)(2001) (Generally, CWSs are developed using a firm scientific foundation and a risk-based approach. CWS development and implementation also considers socio-economic factors and issues of technical feasibility); Exhibit 183.9 at 1 (Particulate Matter and Ozone Canada-wide Standards) (Canada-wide standards represent a balance between achieving the best health and environmental protection possible and the feasibility and costs of reducing the pollutant emissions that contribute to PM and ground-level ozone in ambient air); Exhibit 183.6 at 12 (Lower Fraser Valley Ambient Air Quality Report, 1999); Exhibit 183.7 (Workshop Discussion Paper: Options for Canada-Wide Standards for PM and Ozone); Exhibit 183 at 20 (Petrovic)(2001).

[17] All new sources of air emission regulated by the Clean Air Act Prevention of Significant Deterioration Program are required to utilize Best Available Control Technology (BACT). BACT is defined as an emissions limitation based on the maximum degree of reduction for each pollutant subject to regulation, emitted from any proposed major stationary source or major modification, on a case-by-case basis, taking into account cost effectiveness, economic, energy, environmental and other impacts. 40 CFR 52.21(b)(12). *See,* Exhibit 170.2 at 6 (Fact Sheet for 2000, Prevention of Significant Deterioration); Exhibit 282.1 at 6 (Fact Sheet for 2001 PSD).

sulfur content of 2 grains per 100 cubic feet is BACT for VOC, PM_{10}, sulfur oxides and organic toxic air pollutants control. SCR with a 5 ppmdv ammonia slip limit is BACT for ammonia control. Draft Site Certification Agreement, Attachment 4, No. EFSEC/2001-02 Final Approval of the Prevention of Significant Deterioration and Notice of Construction; *see also*, Exhibit 282 (Draft Approval of the Prevention of Significant Deterioration and Notice of Construction, No. EFSEC/01-02), Exhibit 282.1 (2001 PSD fact sheet) at 12-14.

In its Order No. 754, the Council noted that the draft PSD permit developed in August of 2000 had inadequately addressed the issue of emissions during startup and shutdown of the facility. Startup and shutdown conditions are short-term events. During these events, the emissions control equipment cannot operate at full efficiency. Consequently, it is unreasonable to set emission limits that are as stringent as those determined to be best available control technology (BACT) under normal operating conditions. Nonetheless, New Source Review guidance requires that emission limits be set that assure no violation of the NAAQS. The 2001 PSD permit has added a new section on emission limits for startup and shutdown conditions to ensure that the period of uncontrolled NO_x and/or CO emissions would be relatively short, and unlikely to encompass the full period of startup or shutdown. The VOC emissions would be below modeled levels even under inferior combustion conditions of startup or shutdown because 75% of VOC emissions are attributable to operation of the duct burners and operation of duct burners would be very unlikely during startup or shutdown. EPA guidance indicates that if the emission limits specified for normal operation are not feasible under startup or shutdown, PSD permits must specify startup and shutdown emission limits that do not result in a violation of the NAAQS. The 2001 PSD permit has specified such conditions. Exhibit 282 at 9-12 (Draft Approval of the Prevention of Significant Deterioration and Notice of Construction, No. EFSEC/01-02); Exhibit 282.1 at 14-15 (2001 PSD fact sheet); *see also* Draft Site Certification Agreement, Attachment 4, No. EFSEC/2001-02 Final Approval of the Prevention of Significant Deterioration and Notice of Construction, at Approval Condition 11.

The Council finds this data in the PSD permit and fact sheet from its contract permit writer, the Department of Ecology, and the testimony of Eric Hansen to be credible and

persuasive on the topic of emissions from startup and shutdown. The emissions from startup and shutdown would not significantly alter the total emissions reported, in part because the startup and shutdown events would be associated with periods of zero emissions. Additionally, some emissions are lower during startup and shutdown events. Particulate matter emissions are lower during startup and shutdown than during comparable periods of base load operation. While NO_x emissions are higher during part of the startup period than during base load operation, that part of the startup period would only last an hour or two, and it follows a period of zero emissions when the plant has been off-line. The net effect on NO_x emissions depends upon how long the plant has been offline, i.e. whether it is a cold, warm or hot start. The net effect on NO_x emissions for a cold and warm start is a reduction in NO_x emissions. During a hot start, the plant is off-line for less than 8 hours, and when the plant is down for only 4 hours, the net effect is an increase in NO_x emissions. However, the NO_x emission controls meet the legal requirement to be protective of all NAAQS standards at all times, be it during start-up and shut-down periods, or during normal operation of the facility. Exhibit 282.1 at 15 (2001 PSD fact sheet). Even the higher rate of NO_x emissions during part of the startup period is not near the level that might threaten the short-term NO_x objectives in Canada, or create a ground-level ozone problem. *See,* Exhibit 282.1 at 14-15 (2001 PSD fact sheet); Exhibit 274, at 7-14 (Hansen)(2001). The Council notes the testimony of Sanya Petrovic that startup and shutdown do not raise additional health concerns since they will not have significant effects on the ambient concentration of pollutants attributable to the facility. Exhibit 275 at 6 (Petrovic)(2001). The Council finds that the conditions set by the PSD permit with regard to startup and shutdown adequately protect the air quality in the region.

Limiting increases in ambient concentrations to maximum allowable increments prevents significant deterioration of air quality. Both the 2000 and 2001 PSD fact sheets concluded that ambient impact analysis indicates that all regulated pollutants are well below ambient air quality standards established to protect human health and welfare. In addition, as discussed above, this revised S2GF project adds safety factors to this conclusion by eliminating the more polluting oil burning and by providing for total offsets for PM_{10} and NO_x or a cash trust fund to purchase those offsets.

Washington State regulates emissions of toxic and known carcinogenic air pollutants from new and modified air pollution sources (Chapter 173-460 WAC). This regulation establishes acceptable outdoor exposure levels called Acceptable Source Impact Levels (ASILs) for each of more than 500 substances. The ASILs are set conservatively to protect human health; for each "known, probable and potential" human carcinogenic pollutant (the Class A toxic air pollutants), the ASIL limits the risk of an additional cancer case to one in one million. Final EIS at 3.1.2.6, at p. 3.1-5. EFSEC requires an ambient air quality analysis of toxic air pollutants (TAPs) emissions in accordance with WAC 173-460 (Controls for New Sources of Toxic Air Pollutants). The TAPs are evaluated for both acute (24 hour) and chronic (annual) effects. EFSEC's PSD permit writer concluded that ambient concentrations of all toxic air pollutants were found to be well below the acceptable source impact levels (ASILs) and on average, anticipated TAP emissions are less than 10% of the ASILs. At 5 parts per million dry volume (ppmdv), the maximum modeled ammonia concentration outside the boundary of S2GF is about 3% of the ASIL and therefore, well below concern. Exhibit 282.1 at 16 (2001 PSD fact sheet); *see also*, Draft Site Certification Agreement, Attachment 4, Final Approval of PSD/NOC, Finding Number 16.

The analysis of visibility has changed with the elimination of oil burning because the worst impacts occurred with oil firing. *See e.g.*, Final EIS at 3.1.4.2, at p. 3.1-26, p. 3.1-28. With oil burning and under the right temperatures and conditions, the S2GF could have caused a 7-8% reduction in visibility in Olympic National Park, North Cascades National Park and Mt. Baker Wilderness. Exhibit 170.2 at 17 (2000 PSD fact sheet); *see also,* Exhibit 182, at 21 and Exhibit 274, at 18-19 (Hansen)(2001). However, with only gas burning, the plant's effects do not rise to the "significance level" and it is unlikely to have a significant impact on visibility in Class I areas. If SE2 were burning oil, there would be a 25% chance that visibility from Abbotsford along various lines-of-site would be perceptibly reduced. Exhibit 170.2 at 17-18 (2000 PSD fact sheet). With only gas burning, there is less than a 10% chance that the plant will contribute significantly to perceptible visibility reduction along lines-of-site in Abbotsford. Exhibit 282.1 at 18 (2001 PSD fact sheet).

The Council has again carefully considered the positions of all parties, the public, and the Canadian governmental entities and has studied the voluminous record and the thousands of public comments and has deliberated at length. The Council finds that the plant, as now proposed, without the burning of diesel oil and with mitigation of 100% offsets for nitrogen oxides (NO_x) and particulate matter less than 10 microns (PM_{10}) and with the added limitations in the Prevention of Significant Deterioration permit, will have a minimal adverse effect on the ambient air quality in the Lower Fraser Valley airshed.

Water Quantity

The Sumas-Abbotsford aquifer supplies water to the City of Sumas wells and to the municipal wells in Abbotsford and to private and commercial wells in the Sumas and Abbotsford area. The City of Sumas originally agreed to supply an annual maximum of 1,053 acre-feet of nonpotable water to S2GF at a peak rate of 849 gallons per minute. The amount of nonpotable water the City agreed to supply was later changed to 1,025 acre-feet per year. Exhibit 80 at 2 (Davidson)(2000). This large volume of groundwater would be extracted from the Sumas City well fields to supply the Applicant with the water that the project would require. The City of Sumas has issued a Certificate of Water Availability to the Applicant and indicated its willingness to provide water for the power plant. *See*, Exhibit 4 at 2 (Partial Stipulation Agreement Between City of Sumas and Sumas Energy 2). After the first round of hearings, the Final EIS and testimony identified the effects on local wells from the quantity of groundwater to be extracted as issues of concern.

In Order No. 754, the Council explained that it afforded substantial deference to the City regarding how it had chosen to allocate its water and understood its wish to perfect its water rights. However, the FEIS had concluded that the large volume of groundwater that would be extracted from the Sumas City well fields to supply the plant would result in increased drawdown in the areas surrounding the well fields. While there was potential for water levels in private wells to be lowered by the pumping, the FEIS concluded that there was no sufficient hydrogeologic information to determine how much the additional drawdown would be in any particular location or whether existing well uses would be

affected. The Council found that SE2 had not fully evaluated the impacts of large amounts of groundwater withdrawal on wells located within the cone of influence and that there had been a lack of well-defined offers of mitigation of the impacts on other water users in the area of the proposed water withdrawal.

In the Second Revised Application and during the second round of hearings, SE2 has agreed to: confirm the zone of influence; perform a baseline survey of all wells within the potential zone of influence prior to operation, including wells on both sides of the international border; install dedicated monitoring wells to continuously monitor both near and distant water level responses; monitor wells on a monthly basis for the first year after start of operation, and submit a report of monitoring results to the Council; in the event an adversely impacted well is identified, submit to the Council a mitigation plan to replace lost well production and prevent further loss; and conduct semi-annual monitoring and submit annual reports on monitoring to the Council for years two through five of operation. *See,* Supp. EIS, at 3.3.4, at p. 3.3-4-5; Applicant's Proposed SCA, at 39. SE2 has represented to the Council that in the event of negative well impacts, an owner would be "put back in their original position as much as possible." Tr. 18 (Martin)(2001). The Applicant has explained that the additional monitoring program SE2 now proposes is designed to confirm that the withdrawal during the actual operation does not adversely affect nearby wells and, if it does, to mitigate those effects. Given the Applicant's detailed monitoring and reporting plan, and its offer to mitigate adverse impacts, the Council finds that the potential for negative effects on well owners is no longer a reason militating against siting the plant in the location chosen by the Applicant. The Council finds that the Applicant's offer is sufficiently detailed and is adequate to determine impact and describe appropriate mitigation.

In response to other parties' arguments that the Applicant should have engaged in further study or monitoring prior to the second round of hearings, the Council concludes that its ongoing jurisdiction is sufficient to monitor this issue so that all water users are protected while at the same time not requiring premature or unnecessary monitoring. Some of the specifics of the analysis of impact and mitigation are most effectively left to decide at a later period, so long as the Council is convinced that reasonable mitigation is possible and has

been committed to by the Applicant. We conclude that the project's modifications and mitigation commitments address the substantive concerns outlined in the Council's decision on the original project proposal.

With regard to any current lack of information, we note that the Council maintains on-going authority to review plans, evaluate monitoring data, and adapt mitigation requirements to ensure that the public interest is protected. RCW 80.50.040(9); Chapter 463-54 WAC; WAC 463-54-020; s*ee also*, 80.50.071(1)(c). At this stage, the Council needs enough information to determine that potential impacts can be mitigated to a sufficient degree to justify certification. This concept also applies with regard to a number of the other issues discussed in Council Order No. 754, including noise, flooding, and seismic analysis.

The Supplemental EIS explains that based on the 1999 City of Sumas Comprehensive Water Plan, the water supply that is available from its well fields is adequate to meet SE2's and the City's 20-year projected requirements. Final Supplemental EIS at § 3.3.1, p. 3.3-1. The Council will not second-guess the City of Sumas' decision on how, and to whom, to allocate its water rights.

With regard to the question about stream flow in Johnson Creek caused by S2GF's water use, the Department of Ecology already addressed this issue when it granted the City its water rights. In permitting the May Road well field, Ecology determined the pumping will not affect flow on the main stem of Johnson Creek, but that the pumping could result in an impact of approximately 18 gpm on the spring-fed unnamed stream for every 100 gpm pumped. Therefore, Ecology required 18% of all water the City pumped from the May Road well field to be returned to the spring. In these hearings, Ecology did not raise the issue of surface water impacts or contend that any further mitigation was appropriate.

The F-SEIS, indicates that increased pumping would reduce the natural discharge of groundwater to Johnson Creek in the immediate vicinity of the well field. However, this reduction would be mitigated by compliance with the condition of the City's water right, which requires that 18% of the water extracted be returned directly to the stream. Because of

this mitigation, any reduction to baseflow in Johnson Creek is not likely to be significant. Because there are no surface water bodies other than Johnson Creek within the theoretical zone of drawdown interference from both of the City's well fields, there is not likely to be any significant impact to other nearby streams. Although there would likely be a small reduction of groundwater available for baseflow discharge to the Sumas River, considering the distance from the City's well fields to the river and the large area that provides recharge to that system, the impact is not likely to be perceptible. Final Supplemental EIS at 3.3.3, p 3.3-4. Hence, no mitigation of stream flow, beyond that already imposed by the Department of Ecology on the City, is appropriate.

Water Quality

The Council expressed two concerns regarding water quality in Order No. 754. First, the Council concluded that the Applicant had provided incomplete and inadequate information on the dangers of an oil spill during the transportation and storage of diesel fuel. During the time that diesel would be used for an extended period of time at S2GF, the surrounding roads would have experienced a tanker truck loaded with diesel oil passing through approximately 60 times a day and such trips could occur during harsh winter road conditions. The Council found that the Applicant had provided inadequate analysis regarding the dangers of accidents and the impacts on surface water that would occur as a result of an oil spill from tanker truck accidents. Second, the Council expressed concern whether increased pumping from the City well fields would result in nitrate exceedences in the wells of those residents who do not use City water.

The Council has reconsidered its statement in Order No. 754 regarding SE2's responsibility to provide mitigation for possible nitrates in private wells. The nitrate problems that exist in the water supply are caused by agricultural practices, not by any action of SE2. While SE2 has offered to help the City to address a nitrate contamination problem if it arises and to provide the City with $25,000 a year to use for aquifer protection and water rights acquisition during the period that S2GF operates, that commitment to help the City was voluntary and should not give rise to a duty to solve problems that it did not cause and is unlikely to exacerbate.

It is unknown what, if any, effect increased pumping would have on migration of nitrates. The Final Supplemental EIS explains that the primary source of nitrate in the aquifer include the storage and application of barnyard manure, application of nitrogen fertilizers to crops, and the use of domestic septic systems. Elevated concentrations of dissolved nitrates are common within the Sumas-Abbotsford aquifer and in some areas are sufficiently high to restrict the use of the water for human consumption. However, the distribution of nitrates in the aquifer is not readily predictable. They are highly variable over

time and by location and no long-term overall trend in nitrate concentrations can be discerned. Groundwater containing elevated nitrate concentrations could be either accelerated toward, or redirected away from, a private or commercial well in response to the pumping. Because of the complexity of the groundwater system with respect to nitrate fate and transport, for any given well it is not possible to know whether this could actually occur or whether it would be a beneficial or adverse impact. Even if the nitrate concentration in a well changed after project startup, it is unlikely that ascertaining the cause of the change would be possible. Final Supplemental EIS, at 3.2, pp. 3.2-1--3.2-7. In light of these facts, the Council finds that mitigation, beyond what the Applicant has voluntarily offered to the City, would not be appropriate for possible nitrate problems.

The other, more significant concern that the Council had about ground water quality involved impacts caused by the transport and storage of large quantities of diesel oil. The Second Revised Application eliminates the 2.5 (later changed to a 1.5) million-gallon above ground tank that was originally proposed for storage of diesel fuel at the site. This change eliminates the risk of diesel migrating to groundwater as a consequence of a potential tank rupture or of releases during transportation or refueling.

Wastewater will be discharged to the City sewer system and comply with regulatory requirements. Ecology has stipulated to the adequacy of the stormwater treatment system and no other party has raised concerns. The Council finds that there are no longer water quality concerns that militate against siting the plant in Sumas.

Wetlands

In Order No. 754, the Council noted it had accepted the stipulations with Ecology and Fish & Wildlife but explained that it was unlikely to have been satisfied with those requirements. Specifically, the parties had not agreed on the definition of wetlands under state and federal law. We were also unsatisfied with the mitigation ratios and with the fact that the oil tank split the wetlands area into two sections, making the mitigation plan less effective. We also expressed concern with whether the buffers met regulatory guidelines.

However, we did not base our recommendation for denial on the wetlands issue since those impacts were amenable to mitigation.

The Second Revised Application significantly changes the wetland mitigation plan. By eliminating the large diesel oil tank, the Applicant was able to reconfigure the facility to reduce the area of fill, and to leave more property for wetland mitigation. SE2 will permanently fill 9.45 acres of wetlands that have been frequently disturbed by agricultural activity. Those wetlands provided little hydrological function and little habitat value. The Applicant is now proposing a 21.56-acre mitigation package with areas bridged together by a stormwater detention system. In new settlements with Ecology and Fish & Wildlife (WDFW), SE2 has committed to working with those agencies to develop the final detailed wetland mitigation plan that will be submitted to EFSEC for approval prior to construction.

The functional values assessment demonstrated that the proposed mitigation would result in a net improvement in wetland function. Both Ecology and WDFW have agreed that the new plan fully mitigates the wetland impacts of the project. The downward adjustment in ratios is justified by the fact that the existing wetlands were low quality and degraded and that Ecology's general ratios are not necessary to fully replace the functions lost due to the project. Wetland functions will be more than fully replaced. Also, downward adjustment from ratios is allowed when there has been a demonstration of likely success, as in this plan. Exhibit 184 at 26 (Every); Tr. of Stipulation Hearing September 24, 2001, at 115 (Stockdale).

The Final Supplemental EIS confirms the agencies' and Applicant's conclusions that the wetlands at the plant site are low quality and previously degraded by agricultural activities. Impacts would be mitigated through proposed creation, enhancement and preservation measures. Loss of 9.45 acres of wetlands would be replaced by 21.56 acres of created, enhanced, and preserved wetlands with upland forest interspersed in the mitigation sites. EFSEC will require a final mitigation plan to be presented and approved by the Council. It would address: mitigation objectives linked to measurable performance standards; monitoring methods and preparation of as-built plans; restrictive covenants that

ensure long-term preservation of the mitigation areas; contingency measures specifying who would be responsible for conducting monitoring, evaluation of compliance with performance standards, and design of specific remedial actions as needed to ensure the mitigation is successful. EFSEC will require that the Applicant address these elements of the final mitigation plan using guidance provided by Washington State in publications from Ecology and the Washington State Department of Transportation. Final Supplemental EIS, at 3.5.4.3, p. 3.5-11-15; 3.5.5, p. 3.5-15.

The Applicant's proposed SCA provides for the preparation of a revised wetland mitigation plan to include a combination of enhancement and creation. The final plan is to be submitted to EFSEC for approval and to Ecology and WDFW for review and comment. The SCA includes a condition that SE2 will execute and record a restrictive covenant for the western and eastern wetland mitigation areas.

The Council has acknowledged the importance of buffers in Order No. 754. On the east side of the property, the edge of the wetlands are adjacent to the road, so no fill is proposed to create buffers. Tr. of Stipulation Hearing September 24, 2001, at 69 (Every). Instead, Ecology, WDFW and the Applicant propose to incorporate buffering features in the final design of the wetland mitigation area.

An issue arose during the second round of hearings that requires some clarification. As part of the wetland mitigation plan, SE2 proposed to plant trees in the median strip between Haul Road and State Route 9. This enhancement was shown on figures in the SE2's wetland mitigation report, but it was never included in the functional assessment calculation or the mitigation ratio calculations. Exhibit 202 (Summary of Wetlands)(2001); Tr. Stipulation Hearing, at 65 (2001). During the hearings, it was learned that because of utilities buried in the median strip, trees could not be planted there. The Council requested written confirmation from SE2, Ecology and WDFW that the previously submitted settlement agreements were unaffected by the inability to plant trees in the median strip. Ecology, WDFW and SE2 have agreed that during the development of the final detailed wetland mitigation plan, SE2 and the agencies will work together to ensure that the final

design provides some buffering along the south edge of the mitigation area, even without planting trees in the median strip. Ecology, WDFW and SE2 have agreed to address this issue in the final wetland mitigation plan which must be prepared pursuant to Ecology Agreement section II.B.2 and WDFW Agreement section II.D.1. Both Assistant Attorneys General for Ecology and for WDFW have reaffirmed their agency's commitments to the settlement agreements. Both agencies affirm that even without trees in the median strip, SE2's wetland mitigation proposal mitigates the project's impacts to wetlands. (Letter of December 13, 2001 from Karen McGaffey, Joan Marchioro, and William Frymire).

The two state agencies with jurisdiction over wetlands in this proceeding have agreed that the mitigation proposal fully mitigates wetland impacts. *See*, Exhibits 200; 203. In the analysis in the Supplemental EIS, the Council concludes that the wetland mitigation plan, as delineated in the Applicant's proposed SCA, is acceptable.

Flooding

The Applicant proposes to construct the S2GF power plant on the overflow corridor of the 100-year floodplain of the Nooksack River. During large floods, floodwater from the Nooksack River overflows into the Sumas basin and flows to the Sumas area. Exhibit 91 at 2 (Cooper)(2000); FEIS at section 3.2.2.3, page 3.2-12. In the industrial area where SE2 seeks to site the plant, the 100-year flood elevation is approximately four to five feet higher than existing natural ground. FEIS at section 3.2.2.3, page 3.2-6. The Sumas area has experienced several floods from the Nooksack River in recent years, including in 1984 and 1990. Exhibit 150 at 3 (Carlton)(2000). Flood damage to properties in the overflow corridor have been, and will probably continue to be, extensive. Exhibit 91 at 3 (Cooper)(2001). Expert evidence corroborated the testimony of public witnesses regarding the extensive past flooding in this area. During the first round of hearings, public witnesses and Whatcom County raised concerns about the potential impacts that the filling of the S2GF site and the construction of the facility and its oil storage tank would have on the flow and the elevation of floodwaters flowing to other properties during a flood event.

During the first round of hearings, the County agreed that the impacts of the construction of the plant might be insignificant in relation to a 100-year flood event, but the County was concerned with relatively smaller and more frequently occurring floods, such as 10 and 25-year flood events. It argued that, given the lesser volume of water in the smaller flood events, the amount of water that would be displaced by the filling of the plant site could be significant. The small overflow events are where the potential impacts could be greater than during a large event because the storage may be more important for a small event; in a much larger flooding event, the small amount of fill for the S2GF project could be irrelevant.

The Council found in Order No. 754 that the modeling done for the City of Sumas in 1996-97 used a steady state model to evaluate the impacts of the fill for the project. Tr. 1080 (Cooper)(2000); Exhibit 150 at 3 (Carlton)(2000). Expert evidence in the first hearings indicated that steady-state models route only a peak flow rate and can only account for the differences in flood levels and velocities resulting from loss in floodplain conveyance. The effects of the loss in floodplain storage are not inherently accounted for in steady-state analyses. Unsteady flow models route an entire flood hydrograph through the floodplain system, and can simulate the relative differences in flood conditions resulting from filling floodplain areas due to the loss of both floodplain storage and conveyance. Exhibit 91 at 4 (Cooper)(2000). The Final Supplemental EIS corroborated this opinion. *See,* Supp. EIS, at 3.6.1, p. 3.6-2. The expert witness for Whatcom County, Paula Cooper, opined that in order to determine whether, and how seriously, the filling of the S2GF property would worsen flooding, an unsteady flow modeling analysis would need to be used. She explained that an analysis with an unsteady flow model would allow an evaluation of whether or not other floodplain properties would be adversely affected by the filling of the site for the S2GF project. She pointed out that the impacts of the fill in displacing the temporary storage of floodwaters were not reflected in the model results performed for the City in 1997. She testified that if an unsteady flow model indicated that adverse off-site impacts would be expected, measures such as compensatory storage could be used to mitigate those negative impacts. Exhibit 91 at 4 (Cooper)(2000); Tr. 1067-87 (Cooper)(2000).

Noting that the past flooding in this area has been severe, the Council found in Order No. 754 that it had been presented with insufficient evidence to decide the effect of site filling on potential flooding events and the consequent effect on other properties in the area. The Council found that the studies, considered in the first round of hearings, were inadequate to assess either the effect of the project on a flooding event or what mitigation might be effective and appropriate for impacts from the construction of the plant.[18] The Council concluded that the Applicant had not met its burden to adequately describe the potential for flooding problems created by S2GF or the protective measures to prevent increased flood damage. *See*, WAC 463-42-322(3). The uncertainty surrounding the potential flooding impacts of the S2GF project was one of the many factors that contributed to the Council's decision not to recommend the siting of the plant.

In response to the Council's Order, SE2 committed in its Second Revised Application to perform unsteady state flood modeling and has begun that effort.[19] SE2 has committed to complete unsteady state flood modeling of the site for selected flood events in consultation with the County Public Works Department, River and Flood Section, and the City of Sumas. The project will create a calibration model, a base conditions model, and a proposed condition model (which modifies the base conditions model by adding the fill that is

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[18] After the second round of hearings, the Council has a much greater understanding of the City's prior decision to allow fill of the City's industrial site. That decision was based upon substantial expertise. David Davidson, City Administrator for the City of Sumas, testified regarding the extensive process that the City engaged in to make the determination that steady state modeling provided sufficient information to allow filling in the City's industrial area. Specifically, the City of Sumas provided in the second round of hearings more evidence that describes the process it engaged in, beginning in 1996, in cooperation with the Whatcom County Flood Engineer, the engineering director for the City of Abbotsford, and the Department of Ecology field office manager. The process resulted in the selection of a steady state flood model to determine the impact of filling the Sumas industrial area. Exhibit 230 (Davidson)(2001). However, the City of Sumas also recognizes that different kinds of models are built for different purposes and at different levels of detail. Exhibit 230 at 4 (Davidson)(2001).

[19] Contrary to the expert testimony during the first round of hearings about the ease of adapting an unsteady state flood model to analyze the impacts at this site, it has proved time-consuming and complex. *See,* Exhibit 265 (Shumuk) at 7; Exhibit 230 (Davidson) at 6; Exhibit 186 (Chang) at 4-6.

proposed for S2GF). Hydrographs for two historic flood events, the November 1990 flood and the November 1995 flood, will be run at 50%, 100% and 150% on all three models.

In light of Ms. Chang's explanation of why 500-year flood events are not as useful as the criteria selected, Exhibit 278 at 2-4 (2001), the Council finds that it is not necessary to have the unsteady state modeling changed to include 500-year events. WAC 463-42-322 provides that "the applicant shall describe potential for flooding, identify the five, fifty, one hundred, and five hundred year flood boundaries, and all protective measures to prevent possible flood damage to the site and facility." This does not mandate modeling of 500-year floods and it speaks to damage "to the site or facility" and not to all surrounding country. Council Order No. 754 explained that the County agreed that the impact of the construction might be insignificant in relation to a 100-year flood; rather the County was concerned with relatively smaller floods, such as 10 and 25-year events. Order No. 754, at 35. The new modeling contemplates that six different flood scenarios on each of the three models keyed off of two severe historical flood events will be run. This will enable the modelers to evaluate what impacts the S2GF project would have on flooding based on a wide range of potential flood events and hydrographic profiles. Exhibit 278 at 6 (Chang)(2001). In fact, as noted above, during small overflow events the potential impacts could be greater than during a large event because the storage may be more important for a small event.

SE2's flood modeler, Hseuh-Ju Chang, has been working with the County's expert, Paula Cooper, on the modeling effort. Testimony from Ms. Chang and from Doug Sovern based on the evidence to date indicates that the likely impact of the S2GF fill will be minimal. Exhibit 278 at 8 (Chang)(2001); Exhibit 187 (Sovern) at 4; Exhibit 277 (Sovern) at 2-3. The unsteady flood modeling will either confirm this information, or, if it demonstrates a potential adverse impact, the unsteady modeling will provide the necessary data regarding magnitudes and locations for appropriate mitigation measures. Exhibit 187 at 4-5 (Sovern)(2001). The model can be used to assess the effectiveness of any contemplated mitigation. Exhibit 278 at 8 (Chang)(2001); Exhibit 242 at 3 (Cooper)(2001). Expert testimony indicates that there is no reason to anticipate any measurable increase in flood levels downstream, *i.e.*, in British Columbia. However, in the event that this is incorrect, the

modeling being performed would reveal the impacts. Exhibit 277 at 3, 4 (Sovern)(2001). The Applicant argues that any impacts can be mitigated relatively easily. Mr. Sovern's testimony supports that conclusion. Exhibit 187 at 5-6 (2001).

Some parties argue that the Applicant should have completed the unsteady state flood modeling prior to the conclusion of the adjudicative hearings. The Council had anticipated the modeling would be complete and presented at the hearings at the time they were scheduled. However, given the new evidence (see footnote 18 supra) on how complex and time-consuming it is to develop and run an unsteady-flow model, and the Council's mistaken belief, based on expert testimony, that it would be a simple matter to run such a model, the Council declines to prolong the process based upon the Applicant's failure to complete the modeling prior to the reconvened hearings. As noted above, the Council maintains on-going authority to evaluate modeling data and to adapt mitigation requirements to ensure that the public interest is protected. At this stage, the Council needs enough information to determine that potential impacts can be mitigated to a sufficient degree to justify certification. Based upon all of the evidence introduced in the second round of hearings, the Council finds that any adverse flood impacts from the S2GF fill can be mitigated. *See*, Exhibit 187 at 5-6 (Sovern)(2001); Exhibit 277 at 5 (Sovern)(2001); Tr. 975, 994-95 (Chang). The unsteady state model can be used to identify and evaluate any reasonable mitigation that may be required to compensate for adverse effects.

Climate Change / Greenhouse Gas Emissions

CO_2 emissions from electric power generation are influenced by the efficiency with which fossil fuels are converted into electricity. Exhibit 222.8 at 8 (Carbon Dioxide Emissions from the Generation of Electric Power in the United States, July 2000, from the Department of Energy, Environmental Protection Agency); Supp. EIS, at 3.1.2, p. 3.1-3. In the size category of facilities such as the S2GF, natural gas-fired combined-cycle turbine power plants are recognized to be the most efficient form of fossil-fuel power generation in terms of energy efficiency and greenhouse gas emissions. However, the S2GF plant would still increase the amount of CO_2 emissions generated in Washington State by up to 2.4

million tons each year. SE2 Application, Appendix B-6 at p. 2-1; Exhibit 41 at 3 (Gammon)(2000). This is about a three-percent increase relative to current Washington State annual emissions of approximately 74 million tons of CO_2. Exhibit 41 at 3 (Gammon)(2000); Exhibit 222 at 3 (Gammon)(2001).

There is a consensus in the international scientific community that various byproducts of human activity, including CO_2 and other gaseous emissions produced by the combustion of fossil fuels, contribute to global atmospheric warming via the so-called greenhouse effect.[20] Exhibit 41 at 3-4 (2000) and Exhibit 222 (Gammon)(2001); Tr. 2086-87 (Gammon)(2000); Exhibit 123 at 3 (Mote)(2000); Exhibit 120 at 6-7 (Hirsch)(2000); Exhibit 222.5 (Summary for Policymakers - Third Assessment by the Intergovernmental Panel on Climate Change: Climate Change 2001, The Scientific Basis: Contribution of Working Group I to the Third Assessment Report of the IPCC-TAR 2001, hereafter IPCC 2001 Report); Exhibit 222.6 (Climate Change Science by the National Academy of Sciences National Research Council, 2001).

The more recent scientific research, admitted during the second round of hearings, also confirms that there is a broad consensus among atmospheric scientists that anthropogenic emissions are causing a rise in global temperatures.

Although there is uncertainty with regard to the precise impacts and the speed of onset, it is well understood that global warming has significant impacts on our climate and potentially significant consequences for people, including the citizens of Washington State. Tr. 2083-85 (Gammon)(2000); Exhibit 40 at 4-5 (Smith)(2000); Exhibit 123 at 2-7 (Mote)(2000). Dr. Gammon testified that "[m]ost people on balance feel that the total impacts for the United States will be overall negative and much more negative for the developing world than for us." Tr. 2084(Gammon)(2000). Dr. Gammon expects that there

[20] Although our focus here is on CO_2 we recognize that other emissions from the proposed plant also are in the category of greenhouse gases.

will be severe economic impacts associated with the expected climatic changes. Tr. 2085-86 (Gammon)(2000).

Extrapolating from global models to the Pacific Northwest, Dr. Mote discussed in some detail the scenario most consistent with current scientific thought. Exhibit 123 at 3-6 (Mote)(2000). The scenario includes decreased summer precipitation, increased winter precipitation, and reduced snow pack. Dr. Mote testified that:

> The consequences of climate change in the Pacific Northwest are likely to include both positive and negative changes. The most fundamental consequence for the region's ecosystems and human endeavors is likely to be the reduction in summer water supply caused by a diminishing snowpack. This is likely to have profound impacts on irrigated agriculture, forests, salmon, and hydropower, among other things.
>
> Exhibit 123 at 2 (Mote)(2000).

To its credit, SE2 recognizes the problem and it offers mitigation. Tr. 270 (Jones)(2000). SE2 included in its first revised application a Greenhouse Gas Offset Strategic Plan ("GHG Offset Plan"). SE2 Application, Appendix B-6. In our Order No. 754, we recognized SE2's initiative in offering to provide $100,000 per year for 10 years to promote greenhouse gas offset as being directionally correct.[21] However, we found SE2's GHG Offset Plan to be less than fully satisfactory. We concluded that S2GF, albeit a superior design relative to existing fossil fuel generating facilities, would add significant quantities of greenhouse gases to the atmosphere. SE2's proposed GHG Offset Plan, based in significant part on an unsubstantiated assumption and containing no performance levels or evaluation criteria, was inadequate. We discussed in Order No. 754 why we did not accept the Applicant's theory that economic dispatch would mitigate its emission of greenhouse gases. While economic dispatch is real, the evidence does not support a finding that the

[21] Intervener OTED calculated the net present value of the proposed $1,000,000 to be $572,163, assuming a 5.57 percent discount rate (the current 10 year bond rate) and payments beginning on June 1, 2001. OTED Brief at 17, note 2.

S2GF would force more polluting plants out of operation. The Climate Trust does not afford credit for such theoretical dispatch unless supported by contracts insuring real mitigation. Tr. 1983-84 (West)(2001). However, the Council does recognize that adding new efficient CT plants, such as S2GF, will over time be part of the solution to reducing greenhouse gas.

In its Second Revised Application, SE2 has significantly changed its offer of mitigation for the S2GF emissions of greenhouse gases. This offer of mitigation is significant in that non-EFSEC projects require no mitigation and this is the first new power plant proposal in Washington state to offer any such mitigation. The Applicant has chosen to look to the Oregon standards as guidance in fashioning its offer of mitigation. It has offered to mitigate and offset greenhouse gas emissions from the S2GF based on the monetary path payment requirements of the Oregon Energy Facility Siting Council, Oregon Administrative Rules chapter 345, as it existed on June 29, 2001, except that ninety days prior to commencing operation of the plant, SE2 would submit for EFSEC's approval a calculation of the monetary path payment according to the methodology set forth in Oregon Energy Facility Siting Council's Standards for Energy Facilities that Emit Carbon Dioxide. The calculation would be based on a price per ton of carbon dioxide of 57 cents and would not include a surcharge for administrative expenses. Upon EFSEC's approval of SE2's calculation and the commencement of commercial operation, SE2 would make the first of five equal payments totaling the amount due under this provision to an organization approved by the Council. SE2 would make each of the four subsequent payments on annual intervals. The total payments offered under this new proposal have been approximated to be between 5.3 and 9.2 million dollars. Exhibit 180 at 23 (Martin)(2001). The Supplemental EIS approximates the offer at 8.04 million dollars. Supp. EIS, at 3.1.3.2, p. 3.1-8. This is a much more substantial offer than the 1 million dollars offered during the first round of hearings.

In light of the consensus of scientists about the seriousness of climate changes caused by the emission of greenhouse gases, such as CO_2, and EFSEC's statutory duties, it is appropriate *to begin* to address the issue of the large emissions from power facilities. The difficult question is how to allocate the costs of mitigation of greenhouse gases in an equitable and effective manner. States are in the early process of fashioning ways to

apportion financial responsibility for emissions of greenhouse gases. *See*, Exhibit 272.3 (2001); Exhibit 222 at 3 (Gammon)(2001). It must be remembered that power facilities are only one of many kinds of human activity that contribute to the problems of global warming. One of our statutory duties is to use all practicable means, consistent with other essential considerations of state policy, to fulfill the responsibility of each generation as trustee of the environment for succeeding generations. WAC 463-47-110(1)(b)(i). Another goal of state policy that we must not lose sight of is the people's need for power at reasonable cost; all sectors of our society, the rich and the poor, must continue to have access to power to lead normal lives. To this extent, electricity is more than a commodity; it is a necessity. If greenhouse gas mitigation so increased the cost of power, or dissuaded project developers from building new generation, prices would continue to rise. This would further exacerbate existing supply and demand imbalances. The resulting financial impacts would fall most heavily on those who can least afford them, and on energy reliant businesses that provide jobs for many in our society.

Accordingly, it would not be a fair or wise option to impose an inordinate amount of mitigation on the shoulders of only a few new developers.[22] After carefully considering all of the evidence and the arguments of the parties, with their widely divergent viewpoints, the Council concludes that the Applicant's offer is a reasonable one. While mitigating approximately three to five percent of its greenhouse gas emissions, Supplemental EIS, at 3.1.3.2, p. 3.1-9, the commitment is a monetarily substantial one, which is expected to cost between five and nine million dollars. While advocates of full offset consider this amount to be negligible, the Council concludes that the greenhouse gas mitigation proposal, voluntarily offered by the Applicant and roughly based on the Oregon monetary path standard, is reasonable.

[22] Reasonable estimates are that requiring the Applicant to "fully offset" the greenhouse gas emission 100% would cost between approximately 135 and 363 million dollars. Such a facility would be almost impossible to finance. Exhibit 273 at 1-8 (Keefe)(2001).

The Council is convinced that the implementation of greenhouse gas mitigation plans necessarily entail the incurrence of some administrative costs. The Council further believes that, as a general proposition, it is appropriate for a Site Certification holder to help to pay such administrative costs. While the Council possesses the legal authority to impose such a payment obligation on Site Certification holders in appropriate circumstances, it is not satisfied that the evidentiary record in this case provides it with a principled basis to specify what level of administrative costs SE2 should bear. Thus, the Council will not require SE2 to fund the payment of administrative costs separate and apart from the 57 cents per ton in mitigation payments that is provided for in the Site Certification Agreement. However, the Council emphasizes that it will require Site Certification holders to pay administration costs where the Council has a sufficient evidentiary record to do so.

While it is premature to decide what specific projects will be funded by greenhouse gas offset funds, the Council is cognizant of the fact that evaluation criteria are essential to determining credible and reliable offsets. It will be necessary to correctly evaluate CO_2 mitigation projects, quantify the offsets, and know how reliable the offsets can be. *See,* Exhibit 251 at 6 and 9 (West)(2001). The Council will require SE2 to retain a qualified contractor to administer the fund and to ensure that established criteria are applied in a competitive selection process. In line with the suggestions of all parties addressing the issue, the Council will require that, to the extent feasible, preference be given to effective mitigation projects that are in geographical proximity to the S2GF site or within the State of Washington. While the problem is a global one, the secondary effects of a greenhouse gas project may be beneficial to the local community.

Noise

The proposed facility will have a number of potential noise sources, including generators, exhaust stacks, and cooling fans. Supplemental EIS at 3.4 at 3.4-1—3.4-8. Credible evidence showed that noise pollution can have significant physical, and psychological, impacts, in particular at the low frequency end of the range. Following the first round of hearings, the Council found that the computer modeling conducted by the

Applicant was insufficient to assess the probable noise level that would be emitted from the proposed plant, whether that noise would comply with relevant legal standards, and what effect it might have on the health and comfort of the local population. This finding was based on the expert testimony of Jerry Lilly, Dr. David Lipscomb, Ph.D., Ioana Park, and Dr. Nathan Kronenberg M.D. Exhibit 130 (Lilly)(2000); Tr. 2237-2310 (Lilly)(2000); Exhibit 96 (Lipscomb)(2000); Tr. 1454-95 (Lipscomb)(2000); Exhibit 92 (Park)(2000); Tr. 1495-1521 (Park)(2000); Exhibit 142 (Kronenberg)(2000); Tr. 1536-46 (Kronenberg)(2000). Additionally, testimony of the Applicant's expert witness on noise pollution indicated that while it is known that the distance that noise travels is affected by atmospheric conditions such as wind, the Applicant's noise study did not consider wind. Tr. 1375-79 (Hansen)(2000). The Applicant's study of noise considered only four receptor locations while Mr. Lilly indicated that many more receptors should be considered for the analysis of a project of this magnitude. *Compare*, Tr. 1375-76 (Hansen)(2000) *with* Exhibit 130 at 2-3 (Lilly)(2000). We also noted in Order No. 754 that the Applicant's proposed SCA did not conform to its offers to address low frequency noise or tones.

It was not possible, based on the evidence offered by the Applicant, to know whether mitigation after construction would be feasible. The Council concluded that the Applicant had failed in its burden to describe the means to mitigate the possible adverse impacts on the community from noise that would be emitted from the plant. *See*, WAC 463-42-085. The Applicant's failure to adequately assess and address the impacts of noise on neighbors and to offer meaningful mitigation measures contributed to our decision in Order No. 754 to recommend denial of its application.

However, in response to the Council's decisions in Order No. 754, the Applicant has committed to meet promulgated regulations and to ensure that the facility will not result in reasonably objectionable low frequency noise or tones. For preparation of the Second Revised Application, SE2 has developed a model that predicts noise in octave bands between 31.5 and 8000 Hz. The predicted levels--octave band and A-weighted--are used to identify possible noise problems and then to select the noise controls needed. This includes low frequency and tonal noise. Exhibit 191 at 3 (Brittain)(2001). Additional evidence indicates

that low frequency noise is unlikely from a combined-cycle power plant and that tonal sources of noise can be controlled by specifying low-noise equipment during equipment purchase or by providing add-on noise controls, such as barriers or silencers. With proper attention[23] to noise during the detailed design phase of S2GF, tones are unlikely to pose problems for the community. Exhibit 191 at 4 (Brittain)(2001). However, there was still expert disagreement about whether SE2 would be successful in adequately mitigating the noises of the plant. In lieu of further *predictive modeling*, which is the subject of considerable debate, SE2 now has committed to actual modeling before and after operation, and to effective mitigation. The Applicant has committed to engage in an iterative process of equipment selection, design, modeling, and mitigation in order to avoid reasonably objectionable noise. This is appropriate because equipment suppliers and specifications are not determined until the detailed design phase of a power plant. Exhibit 191 at 7 (Brittain)(2001).

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[23] Some parties have criticized the language "proper attention to noise during the detailed design phase" as being without meaning. However, the Applicant's expert witness has given meaning to this language:

> A noise control engineer with experience in designing combined-cycle power plants to meet community noise limits must be assigned to the design team. This engineer must perform the following tasks:
>
> - Determine noise limits for each major piece of equipment and noise source;
> - Develop and update the noise prediction model as equipment noise data are obtained;
> - Prepare noise specifications for equipment procurement, including limits and other requirements;
> - Determine additional noise reductions needed;
> - Review noise controls for effectiveness and practicality;
> - Select add-on noise controls to provide the needed noise reductions;
> - Review supplier bids for noise;
> - Specify and procure add-on noise controls.
>
> It should be noted that most of these tasks are iterative. As the design changes and new information, including noise source data, is received from suppliers, the noise model is revised, and any changes in noise controls are made. Successful noise control necessitates the noise control engineer and the rest of the project team work closely together. Exhibit 191 at 6-7 (Brittain)(2001).

SE2 has agreed to perform pre-construction and post-construction monitoring to verify compliance with applicable noise limits. A minimum of 12 monitoring locations up to a distance of 3.5 miles from the facility will be selected, some on both sides of the United States-Canada border. The locations will be selected in consultation with staff from the City of Sumas, Whatcom County, the City of Abbotsford, and British Columbia. The locations will focus on residential properties. The Applicant commits to evaluate A-weighted sound levels and low frequency noise and tones, including gathering of 1/3 octave band data during both the pre-and post-construction monitoring. SE2 will provide the results of pre-construction noise monitoring to EFSEC, the City of Sumas, Whatcom County, the City of Abbotsford, and the Province of British Columbia. The monitoring following commencement of commercial operation will be performed according to a plan developed during the pre-operating noise monitoring. A preliminary noise monitoring report will be prepared and submitted to the Council within 60 days after commencement of commercial operation. Copies of the report will also be provided to the City of Sumas, Whatcom County, the City of Abbotsford, and the Province of British Columbia.

The Applicant has also assured the Council that it is possible to design the facility to avoid reasonably objectionable low frequency noise or tones and that it will do so. During design and construction, SE2 will make allowances for the possibility that it may be required to install additional noise mitigation measures after commencement of operation including, where appropriate, providing space to accommodate additional noise attenuation equipment or sound barriers. If, at any time, monitoring indicates that the plant is not in compliance with the City of Sumas or the Department of Ecology noise regulations or that the plant generates low frequency sounds or tones that EFSEC determines are "reasonably objectionable", SE2 engineers will investigate the source of the noise and identify, develop, and implement one or more means of mitigating the noise.

While there are no state or county ordinances that regulate other than broad-band noise, the Supplemental EIS has suggested looking to some other quantitative regulatory limits on low-frequency noise and tonal noise for guidance on what would be "reasonably objectionable" noise. Supplemental EIS, at 3.4.3.3, pp. 3.4-5-7. At the time of consideration

by the Council of any alleged unreasonable low frequency or tonal noise, parties may address the Council regarding criteria for determining if a low frequency or tonal noise is "reasonably objectionable."

At the end of the plant's first operational year, SE2 will submit for the Council's approval a report providing the pre-and post-operational monitoring results and any mitigation plan found to be necessary. The report also will be provided to the Cities of Sumas and Abbotsford, Whatcom County, and the Province of British Columbia. Once post-operational monitoring indicates that the plant is in compliance with both the City of Sumas and the Department of Ecology noise regulations and that there are no reasonably objectionable low frequency noises or tones, the post-operation noise-monitoring program will be deemed complete. However, because some noise control measures may deteriorate over time, SE2 will be required to repeat operational noise monitoring in the 5th year of facility operation, and at 5-year increments of facility operation thereafter, to confirm that noise generated by the facility has not changed substantially.

The Applicant's offer to perform more accurate monitoring and its commitment to mitigate the potential low frequency and tonal noises is an improvement over the Applicant's prior proposals. In recognition that not all impacts to the public can be completely identified with attendant mitigation planned with specificity prior to final design, or even prior to construction and operation, EFSEC will exercise its continuing jurisdiction to monitor the success of the noise modeling and mitigation plans. Rather than mandating more predictive modeling at this stage in the planning of the facility, the Council concludes that community's right to be free of unreasonable noise is better protected if the Applicant is allowed to engage in the iterative process to determine noise problems and engineer the appropriate mitigation on a continuing basis.

Fire

Following the conclusion of the first round of hearings, the Council explained that an Applicant for a SCA has the burden to describe any potential for fire and what measures will be made to mitigate any such risk. The Council found that, in light of the storage of huge quantities of diesel oil, the Applicant had not provided adequate information to allow the Council to assess the potential hazards to the community. The Council concluded that the Applicant had not carried its burden to describe the potential for fire during construction or operation and what measures could be used to mitigate any risk of fire as required by WAC 463-42-352(2) and WAC 463-42-085. The inadequate fire protection plans contributed to our decision in Order No. 754 to recommend denial of the site certification. However, with the elimination of the diesel oil storage, this hazard has been largely eliminated and the Council concludes this issue has been adequately addressed.

Fuel Supply

During the first round of hearings, several parties raised issues about the effects that this project might have on diesel oil supplies and prices. Exhibit 72 (Lazar); FEIS section 3.9.6. One expert testified that, during oil firing, the daily consumption of diesel by S2GF would be equal to approximately 25% of the total daily distillate fuel oil consumption in the state. The short-term disruption of the transportation and home heating oil market if diesel demand suddenly increased by 25% could have been significant; expert testimony concluded that the plant could have had a severe impact on the availability and cost of diesel fuel for other purposes in this state. Exhibit 72 at 13-15 (Lazar)(2000). The elimination of the plant's use of diesel oil eliminates this concern.

Counsel for the Environment and OTED now ask the Council to impose conditions in the SCA that the Applicant must secure long-term supply in new reserves or an ownership interest in reserves of natural gas and secure a contract with a pipeline for newly developed firm capacity. Alternatively, OTED recommends that prior to commencing construction of

the proposed facility, SE2 be required to provide funds to EFSEC to conduct a Cumulative Impact Assessment on the project's contribution to the cumulative price and supply impacts of this facility and other permitted natural gas-fired electrical generating facilities to the citizens and businesses in Washington state on the price and supply of natural gas. We decline to impose these conditions. We will not micromanage the company or mandate its decisions on supply. We also will not impose a duty on the Applicant to fund a study for which a much wider group of interests should share the cost.

The issue of natural gas supply involves broad policy issues that need to be addressed at a national or regional level and are not appropriately addressed in a specific siting recommendation. EFSEC declines to engage in the regulation of the business relationships between this energy facility and its suppliers. As SE2 points out, it will need to make arrangements for its gas supply and transportation based upon the power sales contracts that are negotiated. Some arrangements may require the purchaser of power to be responsible for providing natural gas to the plant. If the gas is not available, the plant will not be financed or will not continue to operate and the risks of these contingencies fall on the developers, and not on the taxpayers.

Earthquake Hazards

After the record in first round of hearings closed, the Counsel for the Environment and Whatcom County filed a motion to reopen the hearing record to present new scientific evidence about an earthquake fault in Sumas. Those parties argued that the newly discovered earthquake fault made the siting of the project more hazardous than was represented at the first adjudicative hearings. Given our decision to recommend denial of certification, we denied the motion to reopen the record. However, when the Council decided to consider the project described in the Second Revised Application, the Council allowed evidence on the issue of seismic risks. The Council heard a number of very knowledgeable witnesses regarding seismic risks.

WAC 463-42-302 provides that the Applicant shall include the results of a comprehensive geologic survey showing conditions at the site, the nature of foundation materials, and potential seismic activities. WAC 463-42-265 provides that the applicant shall describe the means employed for protection of the facility from earthquakes.

Earthquake related damage to structures could occur from surface rupture along a fault[24], slope failures, liquefaction[25] of soils, or ground shaking. Slope failure is not a realistic risk at the S2GF site. There is no evidence of surface rupture along a fault at or near the site. However, liquefaction and ground shaking are significant risks.

The potential for damage to plant site or pipeline by fault rupture is considered highly unlikely because of the lack of evidence of geologically recent surface faulting in the project vicinity. Lacking evidence of fault rupture during the last 10,000 years, the likelihood of a surface rupture in the project vicinity during the life of the project is considered very low. Generally, faults that have had a surface rupture during the Holocene time (the last 10,000 years) or multiple ruptures during the Pleistocene epoch (10,000 to 1.8 million years before present) are considered to have a potential for future fault rupture. The few known faults within the Puget Sound region that fit either of these categories are located far from the site. Although recent studies (Robertson 1999; Easterbrook et al. 2000, unpublished) have inferred seismic activity along two postulated nearby Quaternary faults, the inferred surface traces of these faults do not underlie any of the proposed project facilities. Moreover, there is no known evidence of surface rupture along either of these faults. Even if a surface rupture were to occur, it would not directly affect the S2GF facilities because they do not overlie the trace of the fault as inferred by Easterbrook, et al. (2000, unpublished). Supplemental EIS at 3.7.1.2, at 3.7-3; 3.7.2, at 3.7-8; *see also*, Exhibit 241.3 at 7 (Sumas

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[24] Ground rupture refers to an uplifting or shifting of the earth along a fault line during an earthquake. Exhibit 190 at 9 (Porush).

[25] Liquefaction is the transformation of a saturated granular soil from a solid to a liquefied state as a result of increased pore-water pressure (Youd, 1973). Exhibit 189 at 19 (Molinari). Liquefaction means that during an earthquake, certain soils will behave as if they are a liquid. Exhibit 241 at 3 (Easterbrook).

Council Meeting Minutes December 11, 2000)(2001); Exhibit 189 at 17, 21 (Molinari)(2001); Exhibit 281 at 10, 18-20, 28-9 (Molinari)(2001).

The project site is situated in a broad, flat-lying valley and the topography on and near the site consists of stable natural slopes with less than 5% grade. Therefore, seismically induced slope failures are not a concern at the site or along the pipeline corridor. Supplemental EIS at 3.7.2, p. 3.7-9; *see also,* Exhibit 189 at 21-22 and 24 (Molinari)(2001); Exhibit 281 at 11-12, 20-21 (Molinari)(2001); Exhibit 280 at 5-6 (Porush).

Most of the Sumas Valley is characterized as having a moderate to high liquefaction potential. Exhibit 189 at 5 (Molinari)(2001). Although only limited subsurface investigations have been performed at the site, earthquake-induced liquefaction and associated lateral spreading and ground failures appear to be a significant potential hazard at the site. The site is underlain by a relatively thick alluvial sequence of saturated, loose to medium dense sand and silty sand. Similarly, alluvial deposits also underlie the pipeline corridor. All of these soils are generally susceptible to liquefaction if they are subjected to strong ground motion during an earthquake. Supplemental EIS at 3.7.2, at 3.7-9; Exhibit 189 at 18-21 (Molinari)(2001); Exhibit 190 at 9 (Porush)(2001).

However, addressing liquefaction and ground shaking is usually possible for most sites and structures. Exhibit 190 at 15-18 (Porush)(2001). Mr. Porush, a structural engineer for 40 years specializing in the design of structures to resist earthquakes, states that he is quite confident that the seismic risks that may reasonably be assumed to be present at the S2GF site can be addressed through engineering design. The liquefaction potential at the site should be addressed in the design of the power generating facility. Exhibit 280 at 3-4 (Porush)(2001). Liquefaction only occurs down to a certain depth, and below that depth the soil retains its ability to carry load. Depending on the soil strength and depth, a typical situation might require that piles extend about 15 to 20 feet deeper than the deepest liquefiable layer. At some length, piles would carry loads at the S2GF site into material that is not liquefied; it is almost always possible to design to resist liquefaction. If the potential liquefaction is extensive, then the foundation (such as piling) may be extensive and

expensive. During the last decade, designing for the effects of liquefaction has become fairly common. Mr. Porush opined that a design can be developed for the S2GF site that will make failure very unlikely and damage, if not prevented, minimized and controlled. Exhibit 280 at 14-15 (Porush)(2001).

This is an area of high seismic hazard due to the potential for strong earthquake ground motion. The site is in Seismic Zone 3 of the 1997 Uniform Building Code, which is next to the highest for seismic activity and greatest expected damage. Exhibit 190 at 6 (Porush)(2001). Therefore, damage from ground shaking is a potential hazard that must be addressed during the design phase of construction. However, it is not as high a hazard as is very commonly designed for in most of coastal southern California. Mr. Porush testified that the basic knowledge and technology exist to adequately design structures such that, to a very high probability, they will not fail in an earthquake that is comparable in intensity to that of the "design" earthquake. The "design" earthquake is the level of shaking intensity that the engineering seismologist determines to have the required probability for that site. This "design" earthquake is determined by conducting a site-specific probabilistic seismic hazard assessment ("PSHA"). Exhibit 280 at 9 (Porush)(2001).

The Applicant has committed to undertaking a geotechnical soils investigation and a probabilistic seismic hazard assessment and has included those conditions in its proposed Site Certification Agreement. A detailed geotechnical investigation would be undertaken by a qualified consultant to establish the areas and extent of liquefiable soil layers at the site of the facility, gas pipeline and the transmission lines; a report, with recommendations, would be submitted to EFSEC. This would be considered with the probabilistic seismic hazard assessment. In areas of saturated liquefiable soils, some form of in situ densification may be used to improve the liquefiable soils. Whenever depth to non-liquefiable soils is not too great, over-excavation and replacement with non-liquefiable soils may be used. Alternatively, pile foundation support may be used to transfer loads to competent soils below liquefiable layers.

Prior to construction, the Applicant would also have a qualified consultant perform a PSHA based on site specific and Whatcom County geologic and seismologic conditions and submit a report, with recommendations to EFSEC. The PSHA must include further assessment of the Sumas fault and the presence and recency of any seismic activity or surface displacement. The PSHA must be conducted in coordination with and take account of the information and data produced by the geotechnical soils investigation.

SE2 has explained that in its final project design, it will develop site-specific seismic design criteria for the foundation and major equipment design based on the findings of the PSHA and the geotechnical soils investigation. At a minimum, the plant will be designed to comply with the Seismic Zone 3 standards of the Uniform Building Code.

There are numerous natural gas pipelines in the Sumas area, both transmission lines and local distribution lines, as well another natural-gas fired generating facility. The S2GF facility and pipeline, like these other pipelines will be designed to comply with the safety requirements of applicable state and federal regulations, as well as a variety of emergency shut-off protections. *See* Exhibit 1 and 1.1 (Partial Settlement Agreement Between Washington Utilities and Transportation Commission and Sumas Energy 2 Concerning Natural Gas Pipeline Issues, and Appendix A, to Settlement Agreement between WUTC and SE2). With the exception of natural gas, there are not significant quantities of hazardous materials stored at the site. There is an aqueous ammonia tank, but the tank volume is such that it does not present a hazard to the general public. The tank would be surrounded by a containment area. Exhibit 280 at 18 (Porush)(2001). As part of visual inspections conducted after any abnormal seismic activity, the Supplemental EIS recommends that areas where any hazardous materials are stored also be inspected immediately following abnormal seismic activity to verify that containment systems are operating as designed. This requirement is included in the proposed SCA as a condition for certification.

Some parties have argued that the lack of a comprehensive study of the geology of the site prior to conclusion of the hearings should cause the Council to reject the application because the Council cannot fully understand the seismic hazards of the site before

recommending certification. We disagree. We have adequate expert evidence to conclude that landslides and surface fault rupture, which usually cannot be designed for, are not serious concerns for the site. Liquefaction during ground shaking is an issue, but the degree of risk can be identified by the geotechnical investigation and can be mitigated through engineering design. Shaking and liquefaction can be assessed and the structure can be engineered to deal with those hazards.

It is common for a detailed seismic hazard assessment to be performed as part of the final design process. For industrial projects such as the S2GF, a probabilistic seismic hazards assessment (PSHA) is typically performed after initial siting and permitting studies and preliminary design has been completed. The results are then used for the final project costing and design. Typically, as here, there is sufficient data and information available to assess the site suitability and feasibility of a planned facility without performing the more time-consuming and costly PSHA and detailed design. The information provided by the PSHA is needed by the structural engineers doing the more detailed design, which is not usually performed until it is certain that the project is going to be constructed. Exhibit 189 at 25 (Molinari)(2001). Allan Porush, with 40 years of experience in designing facilities in more seismically active locations than this, testified that the seismic risks at the site would be delineated more precisely during the PSHA and could then be adequately addressed during the final project engineering. Exhibit 190 (Porush)(2001); Exhibit 280 (Porush)(2001).

Based upon expert witnesses' testimony, the Council finds that the Applicant's proposal to conduct a detailed geotechnical investigation to identify liquefiable soils and to perform mitigation meets the concerns about hazards due to liquefaction. Ground shaking risks can be addressed though engineering design; the Appellant's proposal to conduct a seismic risk assessment or PSHA, addresses this concern. *See, e.g.*, Exhibit 280 at 9, 14-15 (Porush)(2001). The Council need not require more expensive and time-consuming studies and assessments prior to the Applicant reaching the stage where they are needed to develop final design. The Council retains the authority to ensure compliance and monitoring by certificate holders. RCW 80.50.040(9); RCW 80.50.071 (1)(c); Chapter 463-54 WAC. The seismic risks have been adequately assessed using available data to determine the geologic

and seismic suitability of the site for the planned facility within the requirements of WAC 463-42-265 and WAC 463-42-302.

Expert testimony has convinced the Council that surface rupture hazard and landslide hazard are extremely unlikely at the S2GF site. Typical seismic hazard assessment and design methods can characterize and mitigate the potential ground shaking and liquefaction hazards. Exhibit 189 at 8 (Molinari)(2001); Exhibit 280 (Porush)(2001). The Council finds that engineering solutions can be developed for the broad range of reasonably possible seismic events at the site and the facility can be designed so as to not be subject to structural failure. Whether those engineering solutions are economically viable will be a decision for the developer and its financiers. In light of gas pipeline shutoff safety features and the lack of any diesel tank at the site, the major hazard of an earthquake is damage to the structure if it is inadequately designed. This is a financial issue for the owner rather than a public safety hazard.

The Council concludes that seismic issues do not make the Sumas site an inappropriate one for the siting of the proposed facility.

Traffic and Transportation

After the first round of hearings, the Council had serious concerns about the potential traffic problems and transportation hazards involved during periods when S2GF would be operating in an oil-firing mode. In order to refill a two and a half million-gallon oil tank for a 15-day period, it would have taken 900 trips by oil tanker trucks. Many of these trips could have occurred under harsh winter conditions on small roads. During the time that diesel was being used at S2GF, the local roads and communities would have experienced a tanker truck

passing through 120 times a day.[26] The Council found that there had been inadequate analysis conducted regarding the impact of this traffic on local roads and communities. Impact analysis resulting from potential accidents and diesel oil spills was inadequate to address the risks to surface water, the aquifer, Johnson Creek, and the Cities of Abbotsford and Sumas. The lack of analysis of the traffic impacts and hazards, or of any possible mitigation of them, contributed to our recommendation to deny certification.

However, with the elimination of the storage and burning of diesel fuel, the hazards of transporting diesel also were eliminated. While the Council considers back-up fuel capacity to be a positive attribute for a plant in some locations, there were a number of reasons why diesel burning, transportation, and storage were particularly problematic at the site chosen by the Applicant. The Council finds that traffic impacts and transportation hazards are no longer considerations that weigh against siting at the proposed site.

Decommissioning Plan / Site Restoration

At the end of the first round of hearings, the Applicant's site restoration plan was only a set of assurances and did not include any guarantee that there would be adequate financing to assure the site would be made safe for the community at the end of the plant's use. Tr. 3173-75 (Martin)(2000); *see* Application at section 7.3(2000). As a special-purpose corporation, the Applicant owns only the development assets of this project. The Applicant expects that any debt incurred to finance S2GF would be solely the responsibility of SE2. Tr. 3229-30 (Martin)(2000).

[26] The proposed change in tank size from 2.5 million to 1.5 million gallons, which was suggested after the end of the proceedings in SE2's post hearing brief, added another dimension to the application that had not been analyzed. Consequently, there was no evidence of the environmental impacts of this new proposal on traffic, roads, surface water, the aquifer, Johnson Creek, the Cities of Sumas and Abbotsford and the border crossing.

WAC 463-42-655 requires an Applicant to provide a plan for site restoration in sufficient detail to identify, evaluate, and resolve all major environmental and public health and safety issues presently anticipated. The rule requires that the plan address provisions for funding or bonding arrangements to meet the site restoration or management costs. The Council determined that the site restoration plan offered in the First Revised Application and during the first hearings was insufficient to assure that the cost of restoration would not fall on the taxpayers. The Applicant did not show that the insurance it proposed to purchase for environmental releases would fund the decommissioning and site restoration when the plant ceased operation. The Applicant failed to include any provision for financial guarantees to ensure restoration would occur in the event of cessation of operation of the facility either during or after completion of construction. The lack of a viable plan for site restoration with any provision for funding or bonding was one of the many reasons that the Council recommended denial of certification.

However, SE2 now specifically recognizes that it is responsible for site restoration under EFSEC rules. It has offered to submit a plan that will provide for the funding of restoration at the end of the plant's useful operating life or in the event of being terminated before it has completed its useful life, including cessation during construction. The Applicant's proposed SCA agrees to provide financial assurances to ensure that funding is available for site restoration and will include pollution liability insurance coverage in an amount not less than ten million dollars and a site closure bond in an amount justified in the Initial Site Restoration Plan. The plan would include provisions regarding demolishing facilities, salvaging equipment, disposing of waste materials, regrading as necessary, and would also include remediating hazardous contamination, if any, at the site.[27]

The Council finds the Applicant's current proposal to be reasonable. The Council will require financial security in an amount that EFSEC determines is justified considering

[27] The site need not be restored to suitability for its prior use as agricultural land; the site is within the industrial area of the City and it is sufficient if it is remediated to be consistent with the industrial use designations in the City's comprehensive land use plan and zoning ordinance.

the Initial Site Restoration Plan. We note that the CFE and OTED had suggested such a study by the Applicant in the first round of hearings. The Applicant must obtain approval from the Council of the site restoration plan, including the method and amount of the financial security prior to commencing construction. The proposal for a site restoration plan, including both pollution insurance and financial security for closure costs is adequate to protect the interests of the public.

Term of the Site Certification Agreement

SE2 asks for the Site Certification Agreement (SCA) to have a ten-year term. It argues that there are advantages of having projects permitted even if they are not constructed immediately; if permits have been issued, then developers can construct facilities relatively quickly when more generation is needed. The Applicant also argues that it has spent a great deal of money to secure EFSEC approval and that if a permit is too short, the applicant's investment is lost.

Other parties argue that since technological improvements occur over time, without a limited build window, a developer who delays construction will be building with less than the best current technology. Other parties also argue that having short build windows will provide EFSEC with certainty about the status of Washington's energy supply.

The Council has considered the appropriate duration of any SCA in light of the length of time and cost required for an applicant to secure certification, the risk of building plants that have outdated technologies or mitigation plans, the consideration that the PSD permit already has an 18-month life within which to build, the planning needs of the state and EFSEC regarding future energy generation, and the potential advantages of having plants permitted that can quickly move to construction in the event of forecasted need for energy. The Council also understands that applicants may need to obtain permits from other entities once EFSEC has made a decision before they may commence construction. For example, in this case, Canada's National Energy Board has stayed its proceedings pending EFSEC's permitting decision. *See*, Tr. 456 (Eaden)(2000); Tr. 3246-47 (Martin)(2000).

As discussed above, the project is subject to federal Prevention of Significant Deterioration (PSD) regulations under Title 40 Code of Federal Regulations (CFR) 52.21. It must therefore meet best available control technology (BACT) and toxic best available control technology (T-BACT) for the control of air pollutants that would be emitted. One of the provisions of the PSD permit (that will be sent to the Governor with this Order) is that the approval shall become invalid if construction of the project is not commenced within 18 months after receipt of final approval or if construction of the facility is discontinued for a period of 18 months, unless EFSEC extends the 18 month period upon a satisfactory showing that an extension is justified pursuant to 40 CFR 52.21(r)(2) and applicable EPA guidance. Draft Site Certification Agreement, Attachment 4, No. EFSEC/2001-02 Final Approval of the Prevention of Significant Deterioration and Notice of Construction, Approval Condition 22. If the PSD permit becomes invalid, then the Applicant would have to again show that its project meets then-current BACT and T-BACT. The relatively short term of the PSD Permit effectively protects the public from the potential for a plant to be built with outdated technology with regard to air emissions.

Additionally, the Council finds that there is a benefit to the public to have permitted facilities that meet standards ready to move toward operation in times when it becomes known that generation is needed. The greater number of efficient, less polluting facilities that can be quickly brought on line, the less the state will need to rely on old, less efficient, and dirtier facilities when capacity is inadequate to meet demand. *See e.g.*, Tr. 2145-46; 2174-81 (Litchfield)(2001); Exhibit 271 at 7, 11 (Litchfield)(2001). Such contingency resources could come on line in approximately one-half of the time that it would take a facility to be both permitted and constructed. Tr. 2176 (Litchfield)(2001). If the electrical loads that are not currently being powered in the Northwest come back on line, as has been projected, then the more plants permitted and ready to move into construction, the faster it will be that some of them could be providing new power. *See*, Tr. 2174-75 (Litchfield)(2001); *see also*, Exhibit 271 at 11 (Litchfield)(2001).

The Applicant here understands that there is another safeguard in the present system to assure that power plants are not built with outmoded requirements. The President of SE2, Mr. Martin, testified correctly that the Council has previously required that after five years from the time of approval of the SCA, if the plant has not commenced construction, the project is subject to review by the Council. *See*, Tr. 2278 (Martin)(2001). The language in Article II (B) of the Chehalis Generation Facility's Site Certification Agreement for example contains such a condition. The Council finds that such a provision should be contained in the SCA for the S2GF. The site certification agreement for the S2GF will be valid for 10 years, with a 5-year provision for review.

Conclusion

The Council has carefully considered its statutory duties, applicable administrative rules, and all of the facts of this case in exercising its duty to balance the state's need for energy at a reasonable cost with the need to protect the environment and the health and safety of the residents of the area.

One of our principal duties is to ensure that the location of energy facilities will produce minimal adverse effects on the environment. We have listened at length to both expert witnesses and to the public and considered thousands of pages of evidence and the FEIS and Supplemental EIS on whether this plant, as proposed, is appropriate for this location. As now reconfigured, and with new mitigation for a number of impacts, the plant would have a minimal impact on the environment. The Council is also aware that one of our duties is to ensure that the supply of energy, at a reasonable cost, is sufficient to ensure people's health and economic welfare; the record before us now shows that this facility would serve those goals. For all of the reasons discussed in the body of this Order, we can now recommend to the Governor that this project be approved for site certification.

FINDINGS OF FACT

Having discussed in detail above the facts relating to the material matters, and having stated findings and conclusions, the Council now states the following summary of those facts. Those portions of the findings pertaining to the Council's findings and conclusions stated below are incorporated by reference.

The Application, the Applicant, the State Environmental Policy Act (SEPA) Process and the Adjudicative Hearing Process

1. On January 11, 1999, Sumas Energy 2, Inc. (SE2 or the Applicant) applied to the council for certification to construct and operate the facility in Sumas, Washington, as well as an associated electric transmission line and natural gas pipeline.

2. SE2 is a special purpose corporation formed to develop, permit, finance, construct, own and operate the Facility. SE2 is a Washington S-Corporation formed under Title 23B of the Revised Code of Washington. It is wholly-owned by the Estate of Darrell Jones. Charles Martin is the President of SE2.

3. EFSEC is the lead agency for environmental review under the SEPA, RCW Chapter 43.21C. As Council Manager, Allen Fiksdal is the SEPA responsible official. WAC 463-47-051.

4. The Council issued a determination of significance and request for comments on the scope of environmental impacts on August 10, 1999. The Council held a hearing on the scope of the Environmental Impact Statement (EIS) in the City of Sumas on September 16, 1999. The deadline for written comments on the scope of the EIS was October 1, 1999.

5. SE2 withdrew its request for expedited processing of the application that it had submitted in 1999 and filed a revised application on January 10, 2000 (the 2000 Application).

6. SE2's 2000 Application sought a Site Certification Agreement to construct and operate a 660 MW combined-cycle combustion turbine electric generating facility, and an associated 230 kV electric transmission line, and a natural gas pipeline. The facility's primary fuel would have been natural gas, but would also have had the ability to operate on low sulfur distillate fuel oil (diesel) up to 15 days per year.

7. EFSEC duly published notice of the application, public meetings and hearings, prehearing conferences, land use hearings, PSD hearings, DEIS hearings, and the adjudicative hearings regarding the 2000 Application.

8. EFSEC conducted a land use consistency hearing on March 2, 1999, which was reconvened on September 25, and 27, 2000.

9. The Council issued a Draft Environmental Impact Statement (DEIS) on March 15, 2000. The Council accepted public comments regarding the DEIS through May 2, 2000, and held public hearings regarding the DEIS on April 3, 2000, in Bellingham, Washington, and on April 4, 2000, in Sumas, Washington.

10. Prior to formal adjudicative hearings on the 2000 Application, the Council held prehearing conferences on April 24, May 15, June 12, July 17 and July 24, 2000, and issued Prehearing Orders number 1 through 6 (Council Orders Nos. 743, 744, 746, 747, 748 and 749).

11. The Council conducted adjudicative sessions on May 15 and July 17, 2000, to hear testimony in support of various settlement agreements entered into by some of the parties regarding the 2000 Application. The Council held formal adjudicative hearings regarding the 2000 Application on July 24-29, 2000, in Bellingham, Washington, July 31-August 4, 2000, in Olympia, Washington, and September 28-29, 2000, in Bellingham Washington. The Council issued two post-hearing orders, Post-Hearing Orders No. 1 and No. 2 (Council Orders Nos. 750 and 751).

12. The Council held public hearings regarding the 2000 Application on July 25, 2000, in Bellingham, and on July 27 and September 27, 2000 in Everson, Washington.

13. The Council published a draft Prevention of Significant Deterioration (PSD) air emissions permit on August 25, 2000, and held a public hearing on the draft PSD permit on September 28, 2000, in Everson, Washington.

14. The parties were given an opportunity to submit post-hearing briefing regarding the 2000 Application. Final post-hearing briefing was completed on October 20, 2000.

15. On February 7, 2001, the Council adopted the Final Environmental Impact Statement (FEIS).

16. On February 12, 2001, the Council issued Council Order No. 754, recommending denial of certification of the S2GF project. The recommendation was unanimous.

17. On March 5, 2001, SE2 filed a Motion for Reconsideration of Order No. 754, asking the Council to recommend certification of the project subject to a variety of conditions intended to address the concerns identified in Council Order No. 754.

18. On April 20, 2001, the Council issued Order No. 757, denying SE2's Motion for Reconsideration. The Council concluded that its procedures did not permit it to consider the project modifications suggested in SE2's Motion for Reconsideration after the adjudicative hearings had closed because of the extensive nature of the changes to the project, but allowed SE2 to submit a revised application, and indicated it would consider the revised application through an appropriate process.

19. On May 1, 2001, Whatcom County filed a Motion for Reconsideration of Council Order No. 757, requesting the Council to reconsider its decision to allow SE2 to submit a revised application.

20. On May 16, 2001 the Council issued Order No. 758 denying the County's motion, and concluding that that the procedure described in Order No. 757 was appropriate and proper under the circumstances of this case.

21. On June 29, 2001, SE2 filed a Second Revised Application seeking an SCA to construct a 660 MW electrical generating facility at Sumas, Washington as well as

an associated electrical transmission line and natural gas pipeline. The Second Revised Application eliminated the proposal to use oil back-up fuel, proposed to sell power on long-term contracts to buyers who had engaged in integrated resource planning, and proposed additional assessment and mitigation to address issues identified in a Council Order No. 754.

22. Prior to the formal adjudicative hearings on the Second Revised Application, the Council held prehearing conferences on July 16, August 1, September 24, and October 18, 2001. The Council issued Orders No. 759, 760, 761 and 763.

23. On September 24, 2001, the Council conducted an adjudicative session to hear testimony in support of settlement agreements entered into by some of the parties.

24. EFSEC duly published notice of the application, public meetings and hearings, prehearing conferences, settlement hearings, PSD hearings, Draft Supplemental Environmental Impact Statement (D-SEIS) hearings, and the adjudicative hearings regarding the Second Revised Application.

25. On September 18, 2001, the Council published a Draft Supplemental Environmental Impact Statement (D-SEIS). The Council held a public hearing regarding the D-SEIS on October 16, 2001 in Everson, Washington and accepted public comments regarding the D-SEIS through October 19, 2001.

26. The Council held formal adjudicative hearings regarding the Second Revised Application on October 29 through November 2, 2001, in Bellingham, Washington, and on November 13 through 16, 2001, in Fife, Washington.

27. The Council held public hearings on the Second Revised Application on October 30, 2001, in Everson, Washington, and on November 1, 2001, in Bellingham, Washington.

28. The parties were given an opportunity to submit post-hearing briefing regarding the Second Revised Application. Final post-hearing briefing was completed on January 25, 2001.

29. On January 24, 2002, The Province of British Columbia filed a Motion for Leave to File Brief in Response to City of Sumas's Post-hearing Brief.

30. On February 2, 2002, Constance Hoag filed an objection to the Appellant's brief requesting that the Council strike that portion of the Appellant's brief.

31. On February 7, 2002, the Council issued Order No. 764, denying the January 24 and February 2, 2002, motions.

32. The Council adopted the Final Supplemental Environmental Impact Statement (F-SEIS) on May 13, 2002. The Council issued an Addendum to the F-SEIS on May 16, 2002.

33. In addition to public testimony heard at public hearings, the Council has received thousands of public comments. The vast majority of public comments received prior to February 2000 regarding the 2000 Application opposed certification. Since SE2 filed the Second Revised Application, public comments received by the Council have been more mixed. Many individuals and groups continue to oppose the project and express concern about environmental impacts. At the same time, many individuals and groups support the revised project, noting substantial changes in the project to address environmental concerns, as well as the significant economic opportunities presented by the project.

Project Description

34. The proposed facility is a 660 MW natural gas-fired combined-cycle combustion turbine generating facility. It consists of two separate but identical combustion turbine driven generators and one steam turbine driven generator. The exhaust heat from the combustion turbines flows to heat recovery steam generators (HRSGs) to produce steam. Steam flows to the steam turbine and the steam exhausted by the steam turbine flows to the condenser, is condensed, and returns to the HRSG. The Second Revised Application seeks to fuel the facility solely by natural gas.

35. The Second Revised Application also seeks authorization to construct a natural gas pipeline, approximately 4.5 miles in length, from the United States-Canada border to the facility. SE2 seeks to construct the pipeline adjacent to an existing natural gas pipeline that is owned, operated and maintained by a corporate affiliate of SE2.

36. SE2 proposes to transmit electricity produced by the Facility via a 230 kV transmission line, approximately 5.9 miles in length, to be constructed from the Facility to the existing B.C. Hydro Clayburn substation located in British Columbia, Canada. Only the portion of the transmission line located within Washington, which is approximately 0.6 miles in length, is subject to the Council's jurisdiction.

Stipulations and Settlements

37. In connection with the 2000 Application, the Applicant entered into the following settlement agreements and stipulations: (a) Partial Settlement Agreement between Washington Utilities and Transportation Commission and Sumas Energy 2 Concerning Natural Gas Pipeline Issues; (b) Settlement Agreement between Washington Department of Fish & Wildlife and Sumas Energy 2; (c) Partial Stipulation Agreement between City of Sumas and Sumas Energy 2; (d) Supplemental Agreement between Washington Department of Fish & Wildlife and Sumas Energy 2 Regarding Wetlands; (e) Settlement Agreement between Washington Department of Ecology and Sumas Energy 2; and (f) Stipulation and Settlement Agreement between Washington Utilities and Transportation Commission and Sumas Energy 2.

38. Following the filing of the Second Revised Application, the Applicant, the Washington Utilities and Transportation Commission (WUTC), and the City of Sumas informed the Council that they continued to be bound by the settlement agreements and stipulations entered into regarding the 2000 Application.

39. The Applicant entered into new settlement agreements with the Washington Department of Fish & Wildlife (WDFW) and the Washington Department of

Ecology (Ecology): Settlement Agreement Between Washington Department of Fish and Wildlife and Sumas Energy 2 Regarding Second Revised Application; and Settlement Agreement Between Washington Department of Ecology and Sumas Energy 2 Regarding Second Revised Application.

40. By letter dated December 13, 2001, the Applicant, WDFW and WDOE reaffirmed those agreements in light of testimony received during the adjudicative hearings.

Site Characteristics

41. The Applicant seeks to locate the facility on an approximately 37-acre site in Sumas, Washington. The legal description of the site is contained in section 2.2.2.1 of the Second Revised Application.

42. The proposed site is located within the designated industrial zone of the City of Sumas, and a portion of the natural gas pipeline corridor is located in unincorporated Whatcom County.

43. Approximately 26 acres of the site have historically been farmed with a variety of crops, and the remainder of the site is woods or wetland that is not cultivated.

44. The proposed Facility will occupy less than 20 acres of the proposed site.

Land Use Consistency

45. In connection with the 2000 Application, the Council found in Order No. 754 that the proposed use is consistent with the land use plans and zoning ordinances of the City of Sumas and Whatcom County.

46. The project as proposed in the Second Revised Application is also consistent with the land use plans and zoning ordinances of the City of Sumas and Whatcom.

Need and Consistency

47. There is a need for new energy and capacity to meet state and regional demands.

48. One of the resources of choice for meeting need is gas-fired combined cycle combustion turbines due to a combination of reliability, cost competitiveness, efficiency and lower environmental impact than other existing fossil fuel technologies.

49. SE2 has agreed that, prior to commencing construction, it will enter into one or more power purchase agreements that provide in the aggregate for the purchase and sale of at least 60% of the design capacity of the S2GF. Any such power purchase agreement shall have a term of at least five years.

50. Prior to commencing construction, SE2 will ensure that any purchaser of 40%, or more, of its output must certify that it has an Integrated Resource Planning process or the equivalent.

51. In light of the Applicant's commitment to entering into long-term contracts of five years or more for 60% of its output and to selling to purchasers of 40% or more who have an Integrated Resource Plan or its equivalent, SE2 has demonstrated that the energy that the proposed plant would produce would assist the State of Washington and the Northwest region in meeting their energy needs at a reasonable cost.

52. Washington residents benefit from having more generating facilities permitted so that plants can be built more quickly in response to an anticipated energy shortage.

Air Quality

53. The SE2 Facility is subject to federal and state air emissions control requirements: Notice of Construction Approval, Prevention of Significant Deterioration (PSD); New Source Performance Standards (NSPS); and air toxic standards.

54. The SE2 Facility would be a major new source of air pollution under the PSD program because it has the capacity to emit more than 100 tons per year of any one of the following: nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compounds (VOCs), or particulate matter (PM10).

55. SE2 proposes to use Selective Catalytic Reduction (SCR) as an emissions control technology. With the use of SCR, the NOx emissions would be limited to 2 parts per million (ppm). Ammonia emissions will not exceed 5 ppm. SE2 proposes to use catalytic oxidation to reduce CO emissions to 2 ppm. The Applicant proposes to use natural gas firing and good combustion practice for VOC and PM10 emissions, which are not expected to exceed 6 ppm, and 24 lbs/hr per turbine, respectively.

56. The Council's permitting contractor has opined that the proposed emission control would be Best Available Control Technology (BACT).

57. The Applicant has made considerable efforts to reduce emissions from the facility. In particular, eliminating diesel firing has substantially reduced the maximum short-term emissions, and somewhat reduced annual emissions.

58. The Facility will emit criteria and toxic pollutants into an airshed, sometimes referred to as the Fraser Valley airshed, that encompasses a large area in both the United States and Canada. As a result of the Facility's location near the U.S.-Canada border, the Facility's air emissions are expected to flow to the airshed on both sides of the border.

59. Whatcom County is an attainment area for air quality, meaning that ambient air concentrations of air pollutants are below National and Washington Ambient Air Quality Standards (NAAQS/WAAQS).

60. The Lower Fraser Valley is a confined airshed where mountains act to confine the air mass and the topographic features cause the retention of pollutants.

61. Epidemiological studies have correlated levels of pollution that are below established ambient air quality standards with statistically significant health effects. It is not possible to eliminate all health risks associated with airborne pollutants. Regulatory agencies have, however, established ambient air quality standards that reflect both scientific information about health risks and policy judgments about the acceptable level of risk. S2GF meets or exceeds the standards.

62. The Applicant's consultants have performed extensive air quality modeling to determine the impact of the reduced emissions from the modified S2GF facility on ambient air quality on both sides of the border. The modeling reveals that the emissions will have only slight effects on ambient air quality on the worst days and the worst locations, and that the effects of the facility's emissions will typically be very slight. Considering the Applicant's commitment to providing offsets for NOx and PM, the effects of the facility's emissions will be very slight.

63. Environment Canada performed sophisticated regional ozone modeling regarding the 2000 Application. This analysis indicates that the modified Facility is unlikely to result in exceedences of the Canada Wide Standard for ground level ozone, and it is not likely to result in any increase in peak ozone levels.

64. Although it may be possible to calculate a statistical health risk associated with the slight change in air quality resulting from the Facility's emissions, the evidence indicates that the Facility would cause no measurable adverse effect on public health.

65. The Applicant's consultants have performed sophisticated regional modeling to determine the effect of the modified S2GF Facility on regional haze and visibility. The modeling indicates that the Facility emissions will have no effect on regional haze, and virtually no effect on visibility.

66. The Applicant's proposal to implement offset projects in the airshed or, in the alternative, to fund $1.5 million (U.S.) in air quality improvement programs will substantially mitigate any effect of the Facility on air quality.

Water Quantity

67. The proposed S2GF facility would require a maximum of 1,025 acre feet per year and a maximum peak instantaneous amount of 802 gallons per minute (gpm) of water. During normal operations, the facility will require an annual average of 635 gpm.

68. The S2GF facility will obtain its water from the City of Sumas, pursuant to the City's valid existing water rights.

69. SE2 has committed to perform pre- and post-operation monitoring and mitigation, of local wells both in the United States and Canada that may be impacted by pumping from the City of Sumas's well fields to meet the water requirements for S2GF. The monitoring program proposed by SE2 will adequately identify any impacted wells, and SE2 has committed to mitigating impacts, if any, to those wells.

70. Pumping at the City of Sumas's well fields to meet S2GF's water requirements will not adversely impact surface stream flows. The Department of Ecology's prior condition on the City of Sumas' water rights that requires that 18% of all water the City pumps from the May Road well field to be returned to the stream adequately protects stream flow.

Water Quality

71. Wastewater from the Facility will be discharged to the City of Sumas sewer system, and eventually treated at the JAMES Treatment plant in British Columbia.

72. The S2GF facility will include a stormwater detention and drainage system. A system of surface grading, catch basins, and underground storm drains will collect runoff from the filled S2GF plant site and direct it to the detention and treatment pond area south of the project site. The detention and treatment pond area will consist of two cells. The first cell is designed to provide treatment for stormwater runoff. The second cell is designed to provide some biological treatment for stormwater but will act primarily as a detention or storage area. The second cell

will also have a small island in the center that can provide a resting area for wildlife. From the ponded area, treated, detained runoff will discharge to a grass-lined channel that leads to an existing storm sewer outfall.

73. The stormwater drainage design plan conforms to WDOE's recently finalized Stormwater Management Manual, as set forth in its settlement agreement with Ecology.

74. WDOE has approved SE2's conceptual stormwater drainage design plan. SE2 will prepare a detailed stormwater drainage design plan to be submitted to the Council for approval and, at the same time, to Ecology for review and comment.

75. The facility will not use or discharge nitrates. There is, however, some nitrate contamination in the aquifer as a result of agricultural practices in Canada and Whatcom County. Some evidence was introduced that withdrawal of water for the facility could accelerate the movement of nitrate-contaminated water already in the aquifer toward Sumas. However, there is no certainty where nitrates would migrate and whether the movement would be beneficial or adverse in its impact to any particular well. It appears from recent studies that the nitrate levels in the aquifer are declining as result of changes in agricultural practices.

76. SE2 has agreed to pay the City of Sumas $25,000 per year to fund aquifer protection efforts and water rights acquisition. SE2 has also agreed to fund a nitrate treatment facility if nitrate levels exceed federal, state or local standards at any time while S2GF is in operation.

77. The elimination of the storage of huge amounts of diesel oil at the site eliminates the risk of diesel migrating to groundwater, which was an issue prior to the elimination of diesel oil storage.

Wetlands

78. Construction of S2GF would require the permanent filling of 9.45 acres of wetlands. The affected wetlands are highly degraded, frequently disturbed by agricultural activity, and have little functional value.

79. In order to compensate for the loss of these wetlands, SE2 has proposed a 21.56-acre wetland mitigation area, consisting of 17.83 acres of wetland that will be significantly enhanced, and 3.73 acres of wetlands that will be created from upland meadows.

80. The Department of Ecology's wetland functional assessment methodology demonstrates that the proposed mitigation area will more than compensate for the functional values lost by filling the existing wetlands.

81. The Council accepts the stipulations between the Applicant and Washington Department of Fish and Wildlife and Washington Department of Ecology as establishing requirements that should be incorporated in the Site Certification Agreement to ensure that wetland impacts are avoided or fully mitigated.

82. In the new settlement agreements with Ecology and WDFW, SE2 has committed to working with those agencies to develop the final detailed wetland mitigation plan that will be submitted to EFSEC for approval prior to construction. Ecology, WDFW, and SE2 intend to incorporate buffering features in the final design of the wetland mitigation area.

83. A commitment for SE2 to execute and record a restrictive covenant for the western and eastern wetland mitigation areas is necessary to protect the wetland areas in the future.

Flooding

84. The site of the plant is located within the 100-year flood plain, and approximately 20 acres of the site will be filled for the Facility. This fill could result in the

diversion of flood waters adversely affecting other properties. The Council believes additional modeling is needed to fully evaluate the potential impacts.

85. The Sumas area has experienced severe flooding in the past. During the last decade, the flood damages to properties in the overflow corridor have been extensive. Experts expect flooding to continue to be a hazard for this area.

86. Potential flood impacts from construction of the Facility are being evaluated using one-dimensional, unsteady-state flood models recommended by and developed in consultation with Whatcom County's flood expert. A calibration model, base conditions model and proposed conditions model will be developed to assess before-and-after effects of the Facility on flood conditions as well as the cumulative effects of fill in the Sumas area since the early-1990s. The hydrographs for two large historical floods will be run at 50%, 100% and 150% of peak flood volumes on all three models. If adverse impacts are identified, the Applicant will propose mitigation, and the modeling will be used to assess the effectiveness of proposed mitigation.

87. The proposed flood modeling will adequately identify any potential adverse impacts from construction of the S2GF facility and will be used to evaluate the effectiveness of proposed mitigation, if any.

Climate Change – Greenhouse Gases

88. Operation of the S2GF will result in the annual emission of 2.4 million tons of carbon dioxide (CO2). This is about a three percent increase relative to current Washington State annual emissions of approximately 74 million tons of CO2.

89. There is a consensus in the international scientific community that various byproducts of human activity, including CO2 and other gaseous emission produced by the combustion of fossil fuels, contribute to global atmospheric warming through the so-called "greenhouse effect." Although there remains uncertainty with regard to the precise impacts and speed of onset, it is well understood that global warming

has potentially profound consequences for all people, including citizens of Washington State.

90. There is also a consensus that in the near term, one of the cost-effective ways to reduce greenhouse gas emissions is to increase the efficiency of electrical generation. In particular, major organizations involved in climate change issues recommend the increasing use of natural gas combined cycle combustion turbine facilities.

91. In the Second Revised Application, SE2 has proposed to provide funding to be used to implement greenhouse gas offset projects. The amount of funding is to be calculated according to the Oregon monetary path standard, as it existed at the time the Second Revised Application was filed, and without any surcharge to cover administrative expenses.

92. The Council finds that the Applicant's proposal creates an appropriate balance between encouraging the development of efficient generating facilities and requiring a large energy generation facility to address the effects of its operations on global warming.

Noise

93. The proposed facility includes gas turbines, gas turbine generators, heat recovery steam generators (HRSGs), steam turbines, a cooling tower and other components that all generate noise which must be mitigated to meet noise regulations. SE2 has incorporated noise attenuation features in the preliminary S2GF design. SE2 has also committed to paying particular attention to noise during the final design process, and in particular, to engage in an iterative process of equipment selection, design, modeling and mitigation to avoid reasonably objectionable noise.

94. The City of Sumas noise ordinance and WDOE regulation establish a 50-dBA nighttime noise limit at residentially zoned receiving properties.

95. SE2 has agreed with the City of Sumas to perform pre- and post-construction monitoring to verify compliance with that limit. A minimum of 12 monitoring locations up to a distance of 3.5 miles from the Facility will be selected, some on both sides of the US-Canada border. The locations will be selected in concert with staff from the City of Sumas, Whatcom County and the City of Abbotsford, British Columbia, focusing on residential locations.

96. If SE2 is found to exceed the City of Sumas noise ordinances once operational, SE2 has committed to installing additional noise abatement measures to bring the noise into compliance with code requirements.

97. It is possible to design the Facility to avoid reasonably objectionable low frequency noise and tones. SE2 has committed to mitigating any low frequency noise or tones that EFSEC concludes are reasonably objectionable.

98. The Applicant has also agreed to conduct post-operation monitoring and to submit those results to the Council. Post-operation monitoring will focus both on sound metrics related to demonstrating compliance with City and County noise ordinances and on evaluation of any low frequency noise or tones emitted by the Facility.

Natural Gas Supply

99. The Facility will be fueled by natural gas.

100. The increasing use of natural gas to generate electricity has resulted in a substantial increase in natural gas consumption throughout the country. Demand for natural gas is increasing partly because of its environmental advantages over other fossil fuels.

101. The increasing use of natural gas throughout the state and region may at times create situations of tight gas supply or limited available capacity on natural gas pipelines. These are circumstances that will be likely to occur whether or not the Facility is certified.

102. It is not the Council's role to regulate the sorts of contractual relationships SE2 may enter into with its suppliers. It would be neither fair nor effective to try to resolve this complex issue of gas supply on a plant-by-plant siting basis. If gas is not economically available, the plant will not be financed or will not continue to operate, and the risks of these contingencies fall on the developers, and not on taxpayers.

103. The issue of natural gas supply involves policy issues that are more effectively addressed at the national or regional level and are not appropriately addressed in EFSEC's siting recommendations.

Seismic

104. Earthquake related damage to industrial facilities, such as the S2GF facility and gas pipeline, typically arises from landslides, surface fault rupture, ground shaking and liquefaction.

105. The Northwestern Washington and Southwestern British Columbia region is characterized as one of high seismic hazard due to the potential for strong earthquake ground motion. It is rated "Zone 3" under the Uniform Building Code.

106. The S2GF site is located near two faults, the Vedder Mountain and Sumas faults. Experts disagreed about whether these faults might be active.

107. The possibility of a landslide or surface fault rupture impacting the site is remote.

108. Ground shaking, even of a very high intensity, can generally be mitigated through seismic engineering design. The appropriate means for assessing the magnitude of the risk of ground shaking to a structure is to perform a site-specific probabilistic seismic hazard assessment (PSHA). SE2 has committed to conduct a PSHA prior to final design and to build the S2GF facility to conform to the site specific criteria established by the PSHA or the Uniform Building Code's Zone 3 seismic design standards, whichever are more stringent.

109. Soils underneath the site have been generally characterized as having liquefaction potential. Substantial evidence also demonstrates that liquefaction, like ground shaking, can in most cases be addressed through seismic engineering design. The appropriate means for identifying the location, extent and susceptibility of soils to liquefaction is to perform a detailed geotechnical investigation of the site. SE2 has committed to conducting a detailed geotechnical investigation of the proposed facility's site, gas pipeline and transmission lines to identify the areas and extent of liquefiable soil layers, if any, and to mitigate for such soil conditions as necessary.

Site Restoration – Decommissioning Plan

110. In the Second Revised Application, SE2 has outlined an initial site restoration plan. As described in the plan, after the useful life of the facility, the equipment would be removed and the Facility would be converted for other industrial use. The absence of significant hazardous material use on site makes it unlikely that substantial clean-up costs would be associated with decommissioning and site restoration.

111. The Applicant proposes to maintain a site closure bond, or other financial security as required by the Council, in an amount to be determined by the Council and to maintain at least $10 million in environmental liability insurance. Together, these commitments provide sufficient assurance that site restoration could occur even if SE2 is itself not in a position to finance restoration activities in the future.

112. The Applicant proposes to submit a more detailed site restoration plan to the Council for its approval prior to commencing operations. The Council has followed this same process for other projects under its jurisdiction.

Term of the Site Certification Agreement

113. There is a benefit to the public to have permitted facilities that meet standards to be ready to move toward operation in times when it becomes known that generation is needed.

CONCLUSIONS OF LAW

Based on the foregoing findings of fact, the testimony received and evidence admitted during the adjudicative hearing, the environmental documents and environmental determinations made by the Council, and the record in this matter, the Council makes the following conclusions of law:

1. The Washington State Energy Facility Site Evaluation Council has jurisdiction over the persons and the subject matter of Application No. 99-1, pursuant to Chapter 80.50 RCW and Chapter 34.05 RCW.

2. The Council conducted its review of the SE2 First Revised Application and its review of the SE2 Second Revised Application as adjudicative proceedings pursuant to Chapter 34.05 RCW as required by RCW 80.50.090(3) and Chapter 463-30 WAC.

3. EFSEC is the lead agency for environmental review of SE2's application pursuant to the requirements of Chapter 43.21C RCW. Because the SEPA responsible official determined that the proposed action may have a significant adverse environmental impact, an environmental impact statement (EIS) was legally required. The Council complied with Chapter 43.21C RCW, Chapter 197-11 WAC, and Chapter 463-47 WAC, by issuing a determination of significance and scoping notice, conducting a scoping hearing, issuing a draft environmental impact statement (DEIS) for public comment, conducting a public hearing and accepting written comments on the DEIS, and adopting a final environmental impact statement (FEIS). Because the SEPA responsible official determined that the action proposed in the Second Revised Application may have a significant adverse environmental impact, a Supplemental Environmental Impact Statement (SEIS) was legally required. The Council complied with Chapter 43.21C RCW, Chapter 197-11 WAC, and Chapter 463-47 WAC, by issuing a determination of significance and scoping notice, conducting a scoping hearing, issuing a draft Supplemental Environmental Impact Statement (D-SEIS) for public comment, conducting a public hearing and accepting written comments, and adopting a final Supplemental Environmental Impact Statement (F-SEIS).

4. The Prevention of Significant Deterioration (PSD) air emissions procedure is established in Title 40, Code of Federal Regulation (CFR), 40 CFR Part 52. Federal rules require PSD review of new air pollution sources that meet certain criteria, which includes this project. The Council is the PSD permitting authority for energy facilities greater than 350 MW sited in the State of Washington per Chapter 463-39 of the Washington Administrative Code (WAC). The Council's permit contractor from the Washington Department of Ecology prepared a Draft PSD permit, which the Council issued for public comment. The Council has issued a Final PSD Permit as a part of the Site Certification Agreement it recommends the Governor execute.

5. The Council is required to determine whether a proposed site is consistent with county or regional land use plans or zoning ordinances. RCW 80.50.090; WAC 463-14-030. The Council concludes that the proposed use of the site is consistent and in compliance with city and county land use plans and zoning laws.

6. Legislative guidance on energy policy is provided in RCW 43.21F.015, which provides in relevant part:
   It is the policy of the state of Washington that:
   (1) The development and use of a diverse array of energy resources with emphasis on renewable energy resources shall be encouraged;
   (2) The supply of energy shall be sufficient to insure the health and economic welfare of its citizens;
   (3) The development and use of energy resources shall be consistent with the statutory environmental policies of the state;
   (4) Energy conservation and elimination of wasteful and uneconomic uses of energy and materials shall be encouraged, and this conservation should include, but is not limited to, resource recovery and materials recycling; …

7. The legislature has recognized that the selection of sites for new large energy facilities will have a significant impact upon the welfare of the population, the location and growth of industry, and the use of the natural resources of the state. It is

the policy of the state of Washington to recognize the pressing need for increased energy facilities, and to ensure through available and reasonable methods, that the location and operation of such facilities will produce minimal adverse effects on the environment, ecology of the land and its wildlife, and the ecology of state waters and their aquatic life. RCW 80.50.010.

8. The Council concludes that the certification of S2GF, as described in the Second Revised Application, would further the legislative intent to provide abundant energy at reasonable cost. At the same time, the mitigation measures and the conditions of the proposed Site Certification Agreement ensure that available and reasonable methods are used to minimize adverse effects to the environment.

ORDER AND RECOMMENDATION

Based on the foregoing Memorandum decision, findings of fact and conclusions of law, the parties' briefs, and the record in this matter, the Council issues the following Order.

1. The Council recommends that the Governor of the State of Washington approve certification for the construction and operation of the Sumas 2 Generation Facility (S2GF) at Sumas, Washington.

2. The Council orders that its recommendations as embodied in the above memorandum, findings of fact and conclusions of law, together with the Site Certification Agreement appended hereto be reported and forwarded to the Governor of the State of Washington for consideration and action.

SIGNATURES

DATED and effective at Olympia, Washington, this 24th day of May 2002.

James Luce, Chair

Linda Crerar,
Department of Agriculture

Heather Ballash,
Department of Community, Trade and Economic Development

Charles J. Carelli,
Department of Ecology

Jeneene Fenton,
Department of Fish and Wildlife

Ellen Haars, Ph. D., Department of Health

Tony Iltie, P.E., Department of Natural Resources

Gary Ray, Ph. D.,
Department of Transportation

Dennis Moss,
Utilities and Transportation Commission

Maillian Uphaus,
Department of the Military

Dan McShane,
Whatcom County

Gerald Richmond,
City of Sumas

NOTICE TO PARTIES: This is a final order of the Council for purposes of RCW 34.05.470 (1). Administrative relief may be available through a petition for reconsideration, filed within ten days of the service of this order, pursuant to RCW 34.05.470 and filed with the Council Manager pursuant to WAC 463-30-335.

Concurring Opinion: Charles Carelli

This facility, as it is proposed, establishes a new and higher standard for applications for Site Certification for Gas Fired Combustion Turbine Power Plants. As such, I vote with the Council in recommending that the Governor approve certification for the construction of the Sumas 2 Generating Facility.

Energy Facility Site Evaluation Council (EFSEC) Order, 754 issued February 12, 2001, detailed concerns of EFSEC with respect to the Revised Application for Site certification for the Sumas Energy 2 Power Plant in Sumas Washington. The many concerns of the EFSEC Council focused around the issue of using diesel fuel as a backup fuel source for the otherwise natural gas-fired generating facility. Diesel fuel, its use, storage, higher emission rates, transportation and inherent risk of spill and fire, combined with overall air quality concerns, noise, flooding, wetlands, water quality, and water use proved to be more than the Council could overcome in order to grant approval, of the project.

The Applicant, when submitting their request for reconsideration and subsequently a Second Revised Application for Site Certification, understood all of the concerns voiced by the Council in Order 754 and provided a new application that addressed the areas that the Council found deficient in its earlier denial of the project. That being the case, it was not difficult for most of the Council members to approve the Applicant's Second Revised Application for Site Certification. Of particular note is the willingness of the Applicant to offset and mitigate impacts resulting from the construction and operation of the facility.

I differ with the majority of the Council members on one issue, which is the need and appropriateness of having the Applicant pay a surcharge or fee for administrative expenses associated with mitigation or offset proposals. The Applicant has offered the most extensive set of offsets ever to come before the EFSEC Council and is to be commended for setting such a high threshold for others to follow. Their offer includes offsets for greenhouse gases, nitrogen oxides, and particulate matter smaller than 10 micrograms. The offsets that the Applicant is proposing can, in part, be carried out by the Applicant. However, at some point another party must get involved and assist in the securing and implementation of the actual offsets. In the case of their offer to offset greenhouse gases, the Applicant chose the Oregon monetary path as a model. Although the Oregon Model includes a surcharge for administrative costs, the Applicant does not include that consideration in their greenhouse gas mitigation offer. Likewise, the Council was unwilling to assess a surcharge to cover the expenses associated with administration of this very complicated offset program. There is evidence that administrative costs easily equal, and in most instances exceed, ten percent of the costs of providing offsets. The Council should assess administrative fees for conducting mitigation and offset programs, and those fees should be based upon actual costs necessary for any given organization to manage such a program.

Charles J. Carelli,
Department of Ecology

Concurring Opinion: Dan McShane

I vote with the Council in recommending that the Governor approve certification for the construction of the Sumas 2 Generation Facility. However, I partially disagree with the Council Order regarding air quality and climate change/greenhouse gas emissions.

Air Quality

I disagree with the Council Order of allowing for a monetary path option if the applicant is unable to provide a plan for offsetting 100% of the NO_x and PM_{10} emissions. The purpose of the Site Certification Agreement should be clear to all parties – 100% offset. This will leave little room for debate as to the expectations of the Council. It will set a clear goal for the Applicant to achieve; a goal that the Applicant has expressed a willingness to accomplish. And it will send a clear message to those living in the airshed that S2GF will not be allowed to cause a degradation of air quality in regards to ozone and particulate matter.

SE2 has the opportunity to find offsets on either side of the international border within the airshed. Both the United States and Canada have market economies, and the Applicant should be free to approach any NO_x or PM_{10} emission(s) sources to obtain offsets that would be acceptable to the Council. If the British Columbia government or Washington State agencies would like to aid in this endeavor, that would certainly be preferable.

In the Council Order, the Council states that "If other parties believe that 1.5 million dollars is inadequate, then they will be motivated to cooperate in assisting SE2 to implement its offer to provide 100% offsets. The Council assumes, and will assure, that the Applicant has made a good faith effort to implement actual offsets in the airshed before it is allowed to rely on the monetary alternative". This approach presumes that the British Columbia Ministry of Water, Land and Air Protection, or the Washington State Department of Ecology will have the capacity to fully assist SE2. Furthermore, there is no evidence that the British

Columbia Ministry of Water, Land and Air Protection, and Washington State Department of Ecology will be able to administer the funds to improve air quality in the airshed. The Order simply assumes that this will happen.

Hence, while I fully agree with the intent of the Council, I believe that the intent of the Council will not take place with the Order as written.

In addition, the Council Order needs to specify the timing of offsets. The Order should require that the Site Certification Agreement require summertime NO_x emissions from S2GF be offset by eliminating an equal amount of existing summertime NO_x emissions from the airshed. NO_x emissions lead to the creation of ground level ozone. Ozone is a pollutant of concern during summer months. This is of particular concern up the Fraser Valley in the Hope, British Columbia area and within the northern reaches of North Cascades national Park. Therefore, NO_x offsets must take place in the summer or the offset program will fail to prevent incremental increases in ground level ozone in the airshed.

Climate Change/Greenhouse Gas Emissions

I agree with the conclusion of the Council Order that it is appropriate to begin to address the issue of large emissions of greenhouse gasses. The Council was unwilling to go beyond the level of greenhouse gas offset payment proposed by the Applicant. Based on the record from our hearings, it is my opinion that the lack of an administrative fee and the amount of money offered by the applicant are inadequate.

The Council uses an argument of economic impact of the cost of CO_2 mitigation and how the impacts of those costs will fall most heavily on those who can least afford those costs. Council did not take into account the testimony that those costs would not be exceedingly high. If, as the Council states, energy is more than a commodity, it is a necessity, it is likely that some regulatory controls and assistance will be provided to those most in need. A significant and undisputed part of the record before the Council is that there will be very real impacts from global warming caused by greenhouse gasses. These impacts

will be wide spread and the huge economic impacts of global warming will certainly fall heavily on those who can least afford them. These impacts in all likelihood will fall on succeeding generations for whom we are trustees. To not begin addressing greenhouse gas emissions is to fail in our role as trustees to future generations.

The record before the Council strongly suggests that greenhouse gasses should be fully mitigated. However, it would be fundamentally unfair to require SE2 or any other energy company to fully offset greenhouse gas emissions if smaller generators not under EFSEC jurisdiction or generators in other states are not required to offset greenhouse gasses. The lack of policy leadership on this issue by Washington State and the United States governments, should not cause EFSEC to place a burden solely on those under its jurisdiction. However, the lack of sound greenhouse gas policy will only be continued if the evidence in the record before EFSEC is disregarded.

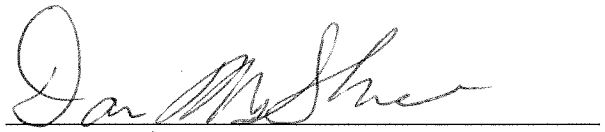
A fair greenhouse gas mitigation level then becomes a matter of balancing the need for energy and the impacts of creating that energy. The Council Order is unwilling to go beyond the offer made by the Applicant. The Council states in the Order that it is convinced that implementation of greenhouse gas mitigation plans entail some administrative costs. However, the Council chose to allow the Applicant to ignore those costs. I believe that an administrative fee of 10% is appropriate and should be part of the costs paid by the Applicant. In the overall cost of building this plant, the administrative fee represents a very small cost to the Applicant.

The Oregon greenhouse gas mitigation level is currently being changed. The Applicant has offered to follow the Oregon model as of June 29, 2001. I am of the opinion that the Applicant should follow the new level set by the State of Oregon. Setting the standard at the level of the Oregon model will put S2GF on an equal footing with any plant built in Oregon in regards to greenhouse gas mitigation. This level is appropriate and fair.

The Applicant has argued that because the proposed plant is efficient it will likely displace other older plants that produce more greenhouse gasses per kilowatt-hour than

S2GF. This argument is a sound argument, but should S2GF be built without having to meet the Oregon greenhouse gas mitigation standard, it is just as likely to displace the construction of plants that would be required to meet the Oregon standard. Furthermore, it will likely displace power generation that produces no greenhouse gasses.

Requiring SE2 to follow the current Oregon standard will set a precedent. But it is a precedent that is fair given that the State of Oregon has established that level already and plants are under construction in that state. SE2 should be willing to pay an equitable share of the environmental costs associated with building this plant at this site.



Dan McShane,
Whatcom County

Concurring Opinion: Gerald Richmond

Sumas Energy 2, Inc. (SE2) has now designed the S2GF to meet the required standards and conditions for a natural gas-fired electric generating facility. I believe the members of the Energy Facility Site Evaluation Council have conscientiously determined that the Second Revised Application for this facility complies with the requirements in law, regulation and conditions, required by EFSEC as the Energy Facility Siting Authority for the State of Washington.

However, concurrence with this decision is difficult because this is a polluting facility. The plant will burn natural gas and the discharge from this burning, no matter how treated, will be released into the atmosphere. Since SE2 has been unable to obtain offsets, the mitigation programs will revert to a monetary line. This does not reduce the discharge at the stack or compensate for it at a local level. The discharge adds to the pollution enveloping Sumas and the surrounding area. Another difficulty is the large amount of water and other services dedicated to this plant.

The reason for local acceptance of this development is monetary. The City of Sumas has no need for the power produced. Its power needs are provided for under contract with The Bonneville Power Administration. Not only the tax bases but also the sale of municipal services will be a welcome increase in revenues to the City. The business community of Sumas will welcome the infusion of revenue from construction wages and expenditures. There are also a number of permanent jobs, twenty-five to thirty, associated with the facility when it is operational. These are compelling arguments in the current economic recession presently being experienced by the City of Sumas. I agree that a project of this size will provide economic advantage for this community.

However, my conviction, developed after becoming involved in this process, is that our fossil fuel resources are depleting and our dependency on them is growing greater. The development of energy self-sufficiency is a national imperative. The development of renewable energy resources is an important component in accomplishing the goal of energy

self-sufficiency. I understand the state government has made a commitment to the development of renewable energy. This facility will be a large user of natural gas, a nonrenewable energy resource. It appears, in spite of our goal of developing renewable resources, that we are sending the message that there is, in fact, no monetary feasibility in renewable energy.

The resources devoted to the development of this natural gas fired electrical generating facility could better have been used for the development of renewable energy resources. I understand the development of energy policy is a function of the State legislature and the Governor, and not of EFSEC. I therefore reluctantly concur in the Council's decision.

Gerald Richmond,
City of Sumas