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May 2, 2000
Sent via Fax and surface mail

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SUBJECT: Comments on the Sumas Energy 2 Generation Facility Draft Environmental Impact Statement (DEIS)

Dear Mr. Fiksdal:

Thank you for this opportunity to comment on the DEIS, and for extending the comment period 15 days. In general, the DEIS is not a suitable foundation for a Final Environmental Impact Statement. The DEIS contains inaccuracies, misleading statements, and serious omissions. Another DEIS needs to be prepared prior to issuance of a Final Environmental Impact Statement.

The DEIS is fundamentally flawed. The intents of the State Environmental Policy Act (SEPA) and the National Environmental Policy Act (NEPA) are thoroughly circumvented by this biased and insufficient DEIS. The general and resource specific comments in this letter amply illustrate the bias of the DEIS. Further, the DEIS contains too much technical jargon for the non-technically oriented person to provide informed review, and far too little supporting information for people with a technical background to critically evaluate the proposal. The only logical conclusions that can be drawn from the gross misrepresentation of the potential impacts of this project are 1) Jones and Stokes [J&S] are project proponents, and/or 2) that J&S did not do a complete job because the missing information would have made the project much more difficult, if not impossible, to allow. EFSEC should contract with a truly unbiased company to produce a second DEIS which accurately describes the range of impacts and benefits associated with this project. 1

If EFSEC continues through the certification process with this DEIS, EFSEC should deny the Sumas Energy 2 Generation Facility project (S2GF), because there is far too little information in this DEIS to make an informed decision. If EFSEC certifies the project without re-doing the DEIS, then EFSEC is in violation of its mission—to balance the demand for new energy facilities with the broad interests of the public, including protection of the environment. 2

There is a significant difference between "one-stop-shopping" (which I endorse), and being a project proponent. THIS DEIS MAKES EFSEC APPEAR TO BE A PROJECT ADVOCATE.

The bias of J&S was evident in the presentation made by their representative at the April 3, 2000 Public Hearing in Bellingham, Washington. The following are statements made by J&S which demonstrate this bias: 1) that 230kV lines are not allowed in Whatcom County, 2) that "tons" of pollutants will emitted, and 3) that nothing can be done about EMF. In addition, in the presentation and materials handed out at the meeting, 230kV towers were shown to be smaller than 115kV poles. The truth of the matter is that; 1) 230kV lines are allowed in Whatcom County in existing 230kV line corridors, 2) 2.4 million tons of CO_2 and 769 tons of other pollutants will be released annually, six orders of magnitude more than an unqualified "tons" implies, 3) EMF can be reduced by changing the load on the line, and placing it farther from homes. Finally, all the 230kV towers I've seen (including in Canada) have been much larger than 115kV lines.

Below are the problems I found while reviewing the Water, Air, Socioeconomic, Health and Safety, and Energy sections of the DEIS.

A. WATER

1. Pages 3.2-24 and 25 of the DEIS address the potential for lowering of the ground water levels due to increased pumping from two wellfields that Sumas operates. The DEIS summarily dismisses the United State Geological Survey finding that:

   "*Together, this information suggests that the long-term trend of declining water levels observed in observation wells near the Sumas-Abbotsford pumping center is real and related to the pumpage of ground water*" (USGS 1999).

   The DEIS states--without any supporting information--

   "However, there are not sufficient data to substantiate the cause of this trend or to evaluate the magnitude of impact that additional pumping of the City wells might cause in the long term." 3

   The required data are not difficult to obtain; appropriately designed pump tests could be performed on the City well field to determine this effect. The fact that the needed studies have not been performed indicates that either the proponent does not want to know the answer, or has not acted in good faith with the permitting requirements [WAC 463-42-322(4)]. The identification by the USGS of a potential problem requires that the applicant substantially address the problem, not merely dismiss it for lack of data. The burden is clearly on the applicant to demonstrate that there will not be a problem where a peer-

reviewed report (USGS 1999) documents potential for significant problems.

2. The DEIS states that there will be a short term drawdown of the potentiometric surface. The area where one foot drawdown is predicted (no information provided on type of model or aquifer characteristics used) encompasses one irrigation well, five domestic wells, and Johnson Creek. The predicted drawdown area also extends into Canada, but absolutely no discussion of impacts to Canadian ground water is provided (and there is no reference to any reports specific to Canadian water resource impacts). The amount of recovery (if any) from the short-term one-foot drawdown is not discussed. Without this information, it is impossible to predict impacts from the increased withdrawals for the S2GF. The studies required to gain this information are not difficult to perform. 4

3. Water level impacts to Johnson Creek and local streams from the increased ground water extraction for S2GF are dismissed for lack of data. Johnson Creek is within the area of a predicted one foot drawdown. Dewatering, or lowering of the water level in Johnson Creek could have a profound impact on fish use of Johnson Creek. In Section 3.5, it is shown that coho salmon, chum salmon, steelhead trout, and coastal cutthroat trout use Johnson Creek, and that Johnson Creek is one of the major producers of Coho in the Sumas basin. Further, there is potential that bull trout may rear in Johnson Creek. AGAIN, if the proponent were to perform the required pump tests, and a few habitat inventories, there would be sufficient information to evaluate impacts to local steams. The fact that the applicant has not performed these studies does not mean that there will be no impact. It likely means that the applicant does not want to know the answer. There is no information to show that there will be no impact. 5

4. Impacts to water levels during worst-case conditions are not discussed. The withdraw of 849 gpm at peak use will occur when ambient air temperatures are over 59°F, which will be in the summer when recharge is lowest and existing non-project related demands are greatest. The proponent needs to characterize short, seasonal, and long term ground water impacts to accurately and adequately describe potential adverse effects. The fact that this information is not in the DEIS is unacceptable. 6

5. One of the more blatant examples of the inadequacy of the DEIS is the manner in which the DEIS addresses potential increases in nitrate concentrations due to ground water extraction. The DEIS clearly states that nitrate levels in the municipal wells have been increasing, and that there are multiple likely sources within the capture zone. However, this issue is dismissed with the following statements, 7

   "While the monitoring results from the Sumas wells provide useful information on nitrate concentrations, these data are not sufficient to predict long-term trends or to evaluate whether increased pumping would result in an increase of nitrate concentrations in the Sumas well fields. Although the USGS reports that nitrate concentrations in the Sumas

aquifer appear to be generally increasing in some areas, this trend is attributed to nitrate loading rather than groundwater use. The USGS report indicates that nitrate concentrations tend to vary seasonally in response to nitrate loading rather than in response to pumping (USGS 1999)."

The problems with the above statement are manifold. 1) General ground water principles indicate that increased pump rates can change existing conditions. In this case the existing condition is an increasing nitrate concentration. The conservative and common-sense approach would be to assume that increased pumping would accelerate the rate of nitrate level increases. To interpret otherwise would both be foolish from a public health perspective, and would have to based upon the hope that the increased pumping may capture less contaminated water to dilute the contaminated water. Clearly, data are required to address this problem, not hope. 2) The implication that land-use alone is responsible for elevated nitrate concentrations in wells is deliberately misleading. Pumping can change the ground water gradient such that more sources of contamination are captured, and that ground water from captured contaminated areas may arrive more quickly than at reduced pumping levels. 7

The existing data clearly indicate that nitrate levels in the municipal (potable) water supply are increasing. Increased pump rates could both accelerate an increase in nitrate concentrations, and/or capture more contaminated sources. The burden is clearly on the applicant to demonstrate that there will not be an impact. Instead, the applicant dismisses the issue for lack of data. Particularly where there is a direct threat to human health (elevated nitrate levels can kill infants), the burden is on the applicant to perform tests sufficient to quantify potential impacts. The fact that nitrate levels are already increasing at the existing level of pumping is more than sufficient rationale to suspect that increased pumping may make the situation worse. The land-use connection is valid in that if the loading is reduced or eliminated, increased pumping may not have an effect, but no information is provided to suggest that nitrate loading rates will decrease. In fact, nitrate loading to ground water may be increasing due to the increased emphasis on eliminating contributions of fecal coliform (and consequently nitrate) to surface water (e.g., direct injection of manure into the ground) in Whatcom County.

6. The DEIS states,

"In summary, there is no clear indication that increased groundwater extraction would result in any change in nitrate levels in the City wells. However, if groundwater quality deteriorated as a result of pumping, any impact resulting from this project would be incremental and might occur over time with or without this project as the City finds other uses for its groundwater resource."

These statements are horribly misleading. 1) The first sentence suggests that sufficient data have been examined to make this determination. This is not the case, and is a gross misrepresentation which could render a public water supply unfit for consumption and threaten public health. 2) The second sentence states the impact would be incremental. The increment is enormous. The use of the word "incremental" is not appropriate and suggests that it is a small part of the total water use and potential impact, which it is not. If water use were to slowly increase (over years to decades) to the level required by S2GF by many projects, then the use of "incremental" for each project might be appropriate. 3) If ground water quality will deteriorate as a result of S2GF, it is unlikely that the deterioration would occur over time without the S2GF. The reasoning is simple--smaller increases in ground water use would allow for close examination of impacts to water quality, which would ensure that deterioration would not occur, or would not reach critical levels. The scale of water use by S2GF may result in ground water contamination well beyond what would occur with smaller and more gradual increases in water use. 8

7. Due to the paucity of information in the DEIS, I reviewed the January 10, 2000 Revised Application for Site Certification (Application) to EFSEC. However, it merely contains assertions that the aquifer has been examined sufficiently to determine potential impacts as quoted below.

"Offsite water impacts include the City of Sumas wellfields drawdown of the potentiometric surface in the Sumas aquifer and the possible reduction to baseflow in vicinity creeks and springs. The well water use is within the planned development of the municipal supply (City of Sumas Water System Comprehensive Plan, 1999). The potentiometric impact is evaluated in the model developed for the City of Sumas Wellhead Protection Plan (adopted in 1996). Actual aquifer testing has been performed for the May Road by Robinson & Noble Inc. (1992), with subsequent studies in 1992 and 1999." 9

The results of these tests are not provided. The fact that the DEIS states repeatedly that there is insufficient evidence to determine potential impacts indicates that the testing that has been done is inadequate. It is dishonest to imply that the aquifer has been adequately studied, and then state elsewhere that there is insufficient data to determine potential adverse impacts.

8. Another misleading statement in the Application is:

"Any deficit in the vicinity groundwater budget potentially created by the use of City wells for on-site operational waters can be off-set by the increase in winter infiltration that draw down in the potential metric (sic) surface by these wells creates."

(Note, it is not clear if this statement is intended only for impacts to the area of the S2GF footprint, or for impacts within the area that will be affected by the operational water use of S2GF from the City wells. It is likely that the statement refers to the vicinity impacted by the drawdown of the water table associated with S2GFs water use at the City wells).

Not only was this section not proof read--"potential metric" should be potentiometric--it is an enormous unsupported and incorrect assertion. It may be possible that during the recharge season there is little impact to the ground water quantity due to this phenomenon. However, other limiting factors may diminish this effect during the wet season, such as the infiltration rate/capacity of the soil, the duration and intensity of rainfall, and whether or not the aquifer is confined. The Sumas aquifer is confined at the City wells and in much of the surrounding area, which means that infiltration based recharge will be severely limited. If the infiltration capacity of the soil is exceeded there will be runoff and not increased infiltration. During the summer, when recharge diminishes, which will coincide with maximum use by both the project and existing users, there will not be water to recharge the pore space above the lowered potentiometric surface. In other words, water levels in vicinity wells and streams will likely drop in the summer if there is a depression in the potentiometric surface created by the water needs of S2GF. In summary, the statement is unlikely to be true for winter conditions, and it is false for summer conditions. 10

In summary, the types of tests required to identify potential problems with increased ground water use are required prior to evaluating potential impacts. The tests required are neither difficult nor expensive to conduct relative to the project cost, projected project profit, and potential significant adverse impacts. The simple fact is that both the application process and environmental review process require that adequate data be collected to address potential problems. The regulations do not state that is okay to dismiss reasonable potential problems due to a lack of existing data. There is too little information in this DEIS from which to make informed decisions about the impact of the S2GF on water resources. 11

B. AIR

1. The analysis of the impact of S2GF on the extinction coefficients for North Cascades National Park (NCNP) is flawed. 1) It appears that the background data used was from Marblemount, WA, which is in a different airshed than the northern portion of NCNP. 2) Based upon figures 6.1-24 to 29 in Application, the modeling of the S2GF impact on regional extinction coefficients is inaccurate.

1.1 Air quality in Marblemount is likely to be vastly different than the air quality in the Northern portion of NCNP. The air quality at Marblemount is measured at approximately 300 ft. above mean sea level (msl) in a valley bottom. Nearly all the ground in the northern portion of NCNP is 2,000 ft. above msl or higher. Where perceptible changes in visibility (extinction coefficient) are going to be most noticed are along the ridgelines and peaks, which range in elevation from 5,000 ft. to over 9,000 ft. The air is likely to be much clearer at these elevations than in Marblemount, WA. I do not believe that there is air quality information collected in the northern portion of NCNP, with the exception of summer fire weather data (meteorological) on Copper Ridge. 12

The view of Mt. Shuksan (which is within NCNP) from the proximity of the Mt. Baker Ski area (which is within the Mt. Baker-Snoqualmie National Forest) is one of the most popular scenes in the country. The impact of S2GF on the extinction coefficient needs to be examined for this area. The scene is appreciated by people throughout the year.

1.2 With the partial exception of figures 6.1-27 and 28 from the January 10, 2000 application, the models used do not reflect local topographic control upon airflow. The Application states that the model used does consider topography, but it is not apparent from the results. The topographic information used is at too coarse a scale to be effective. Figures 6.1-27 and 28 do a better job of dealing with local terrain controls, but are still inaccurate--they do not reflect the impact of the Chilliwack Valley system channeling air into NCNP. I used to work for NCNP as a Ranger on Copper Ridge in the northern portion of NCNP. I have witnessed the effect of topographic control, as regional haze moves into lower Silesia Creek, and with the afternoon up-valley winds the haze gets drawn into NCNP and over Copper Ridge. It is readily apparent to me that S2GF emissions could easily and directly get into NCNP. 13

The lack of accurate local topographic control in the pollution dispersion models also calls into question the results of all the other analyses based upon these models.

2. Figures 6.1-13 to 15 in the application do not accurately portray air movement. This is apparently due to a lack of consideration of local topographic influence. Again, this calls into question all results based upon this modeling. Page 6.1-59 states that land use and terrain data were obtained from USGS 1:250,000 scale data sets. Based upon the results, these data are too coarse for accurate rendering of local topographic controls. In addition, much more accurate topographic data are readily available from the USGS. 14

3. The discussion of impacts of NO_x and SO_2 to NCNP is incomplete. There is no specific discussion of NO_x and SO_2 deposition impacts to aquatic resources, although aquatic resources are mentioned in the Subsection title (page 3.1-21, "Vegetation, Soils, and Aquatic Resources"). There are many alpine lakes which could be impacted by S2GF (e.g., Copper Lake, Price Lake, Bear Lake). These lakes are likely to be very susceptible to acid deposition. In addition, NO_x and SO_2 deposition from October through April will likely be released very quickly into aquatic systems with the onset of snowmelt. 15

4. Page 6.1-16 of the Application indicates that the meteorological data set used for modeling was from 1985 to 1989. There is no basis for using such a narrow dataset. The longest period of record available should be used. To do otherwise is very likely to bias the dataset towards a more narrow range of climatic conditions than would occur over the projected life of S2GF. If these are the only data available, this should be explicitly stated. 16

C. SOCIOECONOMIC

1. Under WAC 463-42-535, the applicant is required to submit a detailed socioeconomic impact study which identifies primary and secondary and positive as well as negative impacts on the socioeconomic environment. No negative socioeconomic issues were identified. Subsection 3.8.7 states that,

   "The proposed action would have no significant unavoidable effects on the socioeconomic health of the project region. Any adverse effects can be mitigated to less than significance."

   However, absolutely no analysis of negative impacts was performed upon which to base this conclusion. The DEIS authors and applicant have both failed to identify a very serious and obvious socioeconomic impact: There will be very little water left for creation of jobs or tax revenue. The S2GF precludes significant growth in the Sumas area, for only 23 full-time long-term jobs. The 849 gpm proposed for use by S2GF for 23 long-term jobs could be used by other industries which employ more people and pollute less. This impact needs to be examined. For instance, instead of S2GF, a manufacturing plant could utilize the site, require 250 gpm and create 300 jobs at an average wage of $38,483/year. The economic benefit of the manufacturing plant would far outstrip S2GF, 17

but could not occur if S2GF were built. This Section of the DEIS appears to be taken directly from the proponent's Application, clearly not a critical review. This is a blatant example of the pro-S2GF bias of the DEIS.

2. At the April 3, 2000 Public Hearing, it was mentioned that Sumas Energy 2 Inc. had indicated that S2GF was going to be an addition to the Sumas Cogeneration Company LP No. 1 Generation Facility (SCCLP). Page 2-27 of this DEIS indicates that S2GF is an expansion of the SCCLP. Under existing regulations, local utilities are required to purchase SCCLPs power at above market rates. If this is the case, there will be a rate increase for all of Puget Sound Energy's customers due to S2GF. Not only will they be breathing more polluted air, they will be paying for it as well. The economic benefit of increased tax revenue to the region will be diminished because it will be paid by the local power customers. It is not clear in the DEIS if local utilities will be required to purchase the power produced (there are currently no buyers identified for the electricity [page 3.9-3]). If local utilities are likely to be required to buy power from S2GF, the impact of this needs to be addressed. 18

3. Tourism is an increasingly important industry in the area. Increases in pollution levels, particularly those that impact views, will decrease the attraction of the area to tourists. This potential negative impact needs to be examined. 19

D. HEALTH AND SAFETY

1. No discussion is provided of potential health impacts of the air emissions from S2GF. Compliance with the Clean Air Act does not mean that there will be no public health impacts due to emissions from S2GF. This information is necessary to evaluate the costs and benefits of S2GF to Whatcom County. The fact that EMF as a public health threat is addressed (which I did not critically review) indicates that air pollution impacts to the surrounding populations also need to be addressed. 20

E. ENERGY

1. Although studies are cited in the Summary Chapter of the DEIS, they do not specifically identify a need for electricity, they merely point out that there <u>may</u> be a need for additional electricity seasonally. This plant is being proposed on speculation; 1) the need for S2GF is not certain, 2) the transmission of energy to the existing grid is uncertain [none of the transmission routes have been approved, and there is significant public opposition to them in both the U.S. and Canada], and 3) there are currently no buyers for the electricity [page 3.9-3]. 21

2. Assuming S2GF is built and connected to the grid, it appears that the electricity generated will be used in the "West," including Canada (pages 3.9-3 and 5). The implication is that the electricity is not needed locally. This should have been discussed in the Socioeconomic Section, because the cost/benefit of S2GF to the community is very different if S2GF is not supplying locally needed electricity--the locals pay the price in decreased growth capacity and increased pollution, just because there may be a need for electricity elsewhere. 22

3. Subsection 3.9.3.3, Conservation and Renewable Resources is about as pro-S2GF as one can get. Because S2GF is 53 percent efficient, it conserves natural gas. This is true relative to less efficient plants, but not to non-fossil fuel burning alternatives such as conservation. An enormous amount of natural gas will still be used and wasted.

   The discussion of providing power to hydroelectric and wind generation when their production is low as a benefit to conserving resources is not well thought out. Conservation would do far more to benefit natural resources but is not discussed. 23

   Conservation is in the title of the Subsection, but is not even mentioned in the context for which it is intended. What would be the effect of electricity conservation by end-consumers on the need for additional power? Would there be any need for S2GF at all? This needs to be part of the discussion.

F. RECENT EVENTS

1. The Canadian government, business, and public are strongly opposed to S2GF (*Bellingham Herald*, April 29, 2000). The mayor of Abbotsford, British Columbia stated that the people of Abbotsford are opposed to S2GF in "every way, shape and form." Canadians are very concerned about air pollution impacts, because they are likely to receive the brunt of air pollution. Abbotsford may refuse to take the wastewater effluent from S2GF. If Canada will not accept wastewater from S2GF, the project and the DEIS need to be amended.

   The statement on page 2-30 of the DEIS, 24

   "All indications are that Abbotsford and FRVD will welcome S2GF's flows as an additional revenue source to help pay for already-planned collection and interceptor system improvements in Canada, benefiting Sumas, Huntington, and Abbotsford."

   Obviously the DEIS did not examine many indicators. This statement should not be made by an independent consultant reviewing the project, it is the type of statement a project proponent makes.

G. SUMMARY OF COMMENTS

1. There is too little information in this DEIS to make an informed decision about the potential adverse impacts of S2GF.

2. The inadequate review of impacts to water resources, faulty modeling of airflows, lack of discussion about negative socioeconomic impacts, lack of discussion of pollution impacts to public health, lack of substantive discussion of conservation, and the expressed expectation that Canadians will welcome the project, all illustrate that the DEIS was designed to show S2GF as an overwhelming benefit to the community.

3. The DEIS is not a suitable foundation for a Final Environmental Impact Statement. The DEIS contains inaccuracies, misleading statements, and serious omissions. Another DEIS needs to be prepared prior to issuance of a Final Environmental Impact Statement.

4. The DEIS makes EFSEC appear to be a project proponent. This is a clear violation of the EFSECs mission. EFSEC should either require a second DEIS (from a truly independent contractor), or deny the S2GF.

Again, thank you for the opportunity to comment on this DEIS.

Sincerely,

Andy Ross

Andy Ross

Reference

United States Geological Survey (USGS), 1999. Hydrogeology, ground-water quality, and sources of nitrate in lowland glacial aquifers of Whatcom County, Washington, and British Columbia, Canada. Water-Resources Investigations Report 98-4195.

cc: Senator Georgia Gardner
Representative Kelli Linville
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Pete Kremen, County Executive
Whatcom County Council Members
Mary Barrett, Counsel for the Environment