MEMORANDUM

DATE: 9/9/99

TO: Liz Tanken – Northwest Ecosystem Alliance
Mike Peterson – Lands Council
Pat Rasmussen – Leavenworth Adopt-A-Forest
David Foecke

FROM: David Baylon

RE: Chumstick Powerline Environmental Assesment

Given the relatively short time to review and comment on this assessment, I have done a cursory review and have a few comments that are relevant to the development of a response and challenge to this environmental assessment. There are a few points that should be clarified:

The first is that the proposal as described here does not significantly impact the marketability of Rock Island Power to the Western part of the state either through Puget Sound Energy (PSE) or Seattle City Light. As far as the assessment is concerned the power line is terminating at the edge of Lake Wenatchee and does not continue across the Cascades. Because of this, marketing or remarketing the power to PSE or other Western WA utilities is irrelevant.

The role of this relatively small power line in the overall transmission capacity across the Cascades is fairly insignificant because two major transmission lines run across the state at Snoqualmie and Stevens Pass and connect to Bonneville substations along the Columbia River. All of the power from Rock Island could be transmitted this way and would serve either PSE, Seattle City Light or another utility through this grid of long distance power lines. Presumably the line in question is a back up and subsidiary line to the major cross-mountain transmission system.

In recent years the system has been upgraded to support peak demands in the Seattle - Tacoma area. The capacity of these lines has been upgraded to meet a fairly large fraction of these demands. The main transmission grid which is a federally owned and operated serves Western Washington and provides transmission facilities for the mid Columbia and lower Columbia dams. All the dams, including Rock Island, are connected to this system and have the capacity to provide energy to the federal transmission system.

At 110 KVA this is not a significant overall component of the cross-mountain transmission and presumably this is why PSE uses the line rarely, if at all. No significant demand on the line, besides that placed on it by Chelan County PUD, is present.

The power from Rock Island dam is partly assigned under long-term contract by PSE. This contract would, under other circumstances, provide a full load on this line. The long-term contract was put in place in the 50's and expires between 2005 and 2010. At that point the contract would be renegotiated. From the environmental assessment it seems clear that PSE actually owns the power line in question although the size of the line is such that it provides a relatively limited resource for the PSE electrical system.

This is why the utility has not found the line useful in the recent past and also why an inadequate amount of space has been available for voltage support in the Lake Wenatchee area.

Alternatives for Energy Supply to the Lake Wenatchee Area

It is clear from the environmental assessment, that the proposed transmission line is designed as an enhancement of the current system to supply the Lake Wenatchee and the Chumstick Valley. At this stage 110 megawatts of capacity is available from this line that more than meets any foreseeable demand. Alternatives stack the deck towards the addition of a line and there are several alternative methods that warrant discussion.

Reallocation of Line Capacity

The first is that power allocation on the line itself be renegotiated between PSE and Chelan County PUD. While this may have already been attempted, there is no effort to discuss any allocation of power from this line or any potential reallocation of its capacity. Given the status of PSE's long-term contract, the PUD utility is in a relatively good position to secure the necessary transmission capacity merely by renegotiating the status of the current line. While this alternative may have been attempted already, nothing in the environmental assessment suggests this negotiation has taken place.

Upgrade Existing Transmission Lines

Two, the upgrade of the existing transmission corridor is dismissed through a fairly complicated and questionable analysis. The argument is that in the process of upgrading the transmission line between Rock Island and Chumstick, the power line would have to shut down. This would mean that the power line needs and voltage needs of the Lake Wenatchee area would have to be supplied from the other side of the mountains. The implication is that this is impractical because there is an inadequate amount of electricity at the other end of the line or that the line itself is physically incapable of carrying this amount of electricity backwards. This is absurd.

The Northwest system is an AC system with an AC lines, through which power flows both ways at all times. The line is adequate to handle 110 KVA, therefore it will be adequate to handle 110 KVA whichever direction the power is "flowing". There may be additional line losses beyond those normally experienced by the utilities in these areas but these line losses should not exceed 10% of the requirement. More likely, the utilities

are hesitant to purchase power from the other side of the Cascades because the going rate for this power is considerably higher than the cost of generating its own power.

Overall power rates from Bonneville Power are about 3 cents a kWh. This is approximately eight times the cost of Chelan County PUD generating the same electricity from the Rock Island Dam and its other facilities. Some accommodation, using wheeling agreements with Bonneville Power, to circumvent the portion of the line being upgraded would be possible. But such a negotiation has not been attempted or mentioned in the process of describing this system or developing alternatives.

This alternative has been dismissed out of hand as though there is no negotiation possible for this route. Given the number of alternatives to transmit power across the Cascades, this is a large oversight. It's true that the cross Cascades transmission system could be over subscribed under extremely cold peak conditions. These conditions are unlikely in the near future as the current cross Cascade transmission capacity is designed to be sufficient to the year 2006. The addition of twenty-seven additional megawatts of load off of that system would certainly be possible to accommodate the existing capacity.

Given this situation the use of one of the aforementioned systems for enhancing the existing lines using the current transmission towers would not only be more feasible, but less costly and less environmentally damaging than the current proposal.

Demand Side Management

The growth of the Lake Wenatchee area is indisputable. It is well known that this area is among the fastest growing areas in Chelan County. It should be pointed out that the utility is not without resources in managing this growth.

For example: the utility could assist in enhancing the energy efficiency of residences built in the Lake Wenatchee / Plain area. Through the use of energy conservation techniques the demand from individual households could be reduced by a substantial fraction. It seems that the utility is assuming that each new home would be heated with electricity or with some combination of electricity, wood and propane and would have substantial peak capacity requirements because of the electric heat component alone. In addition, the kilowatt capacity requirement of lighting and other appliances are assumed and represent the current average stock of the housing in the area. As the utility well knows, energy conservation and demand side management can reduce the loads due to appliances and lights by about a factor of two. Eliminating or carefully managing both existing and future electric use could reduce the overall capacity requirements by a similar amount. These two attempts together could allow the Lake Wenatchee / Plain area to increase its population by approximately 50% and actually reduce the overall capacity requirements currently used in the area.

To accomplish this, the utility would have to develop incentives to enhance the existing residents in the area. Such enhancements may well be more cost effective than the cost of a major new transmission line as proposed in the environmental assessment. The use of

these conservation techniques would actually offset both the capacity requirements and energy requirements of the area. The power freed by this device would be available for the utility to sell on the primary or secondary market to Western Washington utilities or to other utilities connected to the federal power transmission system.

However, given the current market conditions for this power, particularly during peak winter months, these sales could be more cost effective to the utility than selling it to the homes in the Lake Wenatchee area. Such a strategy would not only improve the functioning of homes and business in the Lake Wenatchee area but also provide cost effective additional revenue to the utility as a result of its investment in the energy efficiency of homes.

Conclusion

The environmental assessment as described in the U.S. Forest Service is inadequate because it has failed to review both cost effective and technically feasible alternatives. This is because the utility did not see fit to analyze or prove the analysis to the Forest Service.

In order to have a full assessment of the possible alternatives to a new transmission corridor, these alternatives must be reviewed. The assessment as written does not provide even the most elementary description of the possible alternatives or even a direct analysis. Were such an analysis presented, it could be shown that the transmission enhancements proposed by the utility represent an unnecessary intrusion on the environment and transmission corridor of the Chumstick area, and an unnecessary expenditure of utility resources when better and more cost effective alternatives are available.