

SUMAS 2 vs. Anthropogenic (Human) Sources Emissions that Affect Human Health in BC's Fraser Valley Airshed

Since 1993, Sumas Energy Inc. has operated an electrical generation plant (Sumas 1) in Sumas, Washington, just south of the Canadian border. Using natural and diesel gas-fired steam turbines, it produces 125 megawatts of power for the local area.

In 1999, Sumas Energy 2 Inc. submitted an application to Washington State's Energy Facility Site Evaluation Council (EFSEC) to build a second plant (Sumas 2), capable of producing 660 megawatts, over five times that of Sumas 1. At the same time, they applied to the National Energy Board of Canada for a permit to construct and operate the Canadian portion of an International Power Line that would link Sumas 2 to BC Hydro's Clayburn substation in Abbotsford.

Washington State's EFSEC initially denied the application, but upon reapplication, the project was approved in 2002. The Province of BC, the Sumas First Nation, local municipalities, and several community groups petitioned the National Energy Board to deny Canadian approval of the International Power Line, due to concerns about how emissions would affect air quality in the Fraser Valley airshed. In March 2004, the National Energy Board denied the Sumas 2 application. In fact, the Board denied the proposal because they were not satisfied that the power line was necessary or beneficial for Canadians.

Can this be considered a victory for defenders of air quality in the airshed? When one looks closely at the projected annual health-related emissions from Sumas 2, they would contribute a significantly smaller amount to the airshed than anthropogenic sources produced in the Lower Mainland (e.g., motor vehicle emissions), as projected in the following table. Plans for further residential development in the Fraser Valley to absorb double the population over the next 20 to 30 years halve the percentage of emissions contribution by a Sumas 2.

Projected yearly emissions by Sumas 2 and Vehicle emissions in tonnes,*** Lower Fraser Valley, 2000

Source	VOC	SO _x	NO _x	PM ₁₀
Sumas 2	138	62	131	189
Light-Duty Mobile*	25,770	775	22,712	431
Municipal Lower Mainland**	70,911	8,706	82,501	10,064

* Generated using data for light duty vehicles operated by gasoline and diesel.

** Includes all municipality/electoral areas, and marine areas.

*** Tonnage, though not specific to a particular time or place, is useful on a broad comparison level.

The effect of a Sumas 2 plant in the Fraser Valley airshed, though significant, is relative. Of more importance is our own contribution of emissions from passenger vehicles and housing developments. With regard to housing, our interest in residential development contrasts with the negative reactions to industrial development. Similarly, the convenience of personal motorized transportation seems to outweigh the impacts vehicles have on air quality. In 2002, British Columbians purchased approximately 107,000 passenger cars and 87,500 light trucks. Over ten years, these vehicles will produce six times more health-related emissions than a single Sumas 2.

While the evaluation of the environmental impact of new industry point source development on our airsheds is essential, other human sources play a larger role. Responsibility for clean air does not only lie with government and industry, but with individuals as well.

"To make an impact on the health effects of our mountain airshed we must take a keener interest in our own backyard, house, and driveway." (Corneil, 2004).