

*The Okanagan Transmission Reinforcement  
(OTR) Project No. 3698488*

**Final Argument of Colin Harlinton  
In support of the Alternate Route**

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## **Introduction.**

The process, culminating in this hearing, has shown that from a number of perspectives FortisBC has squandered an opportunity to work with its customers and the residents of the South Okanagan. Their approach to this reinforcement project has been adversarial and they have treated the residents along the power line route with disdain. From the outset they decided that the upgrade would be over the existing route and geared their initial presentations to reflect this position. By adopting this mindset they wasted valuable time which if used wisely could have saved considerable costs implications that are affecting the project today. In 2005 at the birth of the project they should have taken into consideration the residents living along the route, the negative aspects of running the line through those neighbourhoods and looked at alternatives.

In my opinion the upland route using Option 2B would be the best choice when the pros and cons are fully considered.

### **Support for using the existing ROW.**

**Integrated Land Management Bureau (ILMB)** – Although they support using the existing ROW there is no record of the information they were given before making that decision and there was no community input. The ILMB did however also indicate that would consider an application for the upland route. Their web site links to the map of the endangered species in the valley which makes the uplands route the only obvious choice. Therefore I am sure with the complete information the ILMB would favour the Upland route

### **Penticton Indian Band (PIB)**

They initially supported using the existing ROW but again one has to ask, were they given the complete picture? In the Community Input session Judy Brock when referring to the PIB stated “I feel sad that we weren’t given the opportunity to sit as a community and talk about the concerns within the community along this route”

### **Okanagan Nation Alliance**

While they prefer the existing route they would be quite willing to be part of any discussions regarding the uplands route.

In reality the only part of the OTR project that is in question is in the area associated with Penticton Indian Band and if they agreed to the upland route I feel confident that the Okanagan Nation Alliance would go along with their decision.

### **Golden Hills Strata.**

They support to using the existing ROW, as they are mainly concerned with possible damage to their water supply caused by the easier access to the crown land, should the upland route is used. Golden Hills Strata, although they registered as Intervenors, did not make any submissions, statements/presentations at the hearing. The same water supply they are so concerned about is also used by some of the farms along the ROW who are for the Upland route.

## **Nature's Trust**

At the hearing FortisBC stated that Nature's Trust were against the alternate route. When asked why, the reason given was because they were against having two ROWs through their property. This makes no sense since one assumes that FortisBC would give up the lower route once the upper route was in place. This would be beneficial to Nature's Trust as the lower part of the land is where most of the environmentally endangered species are located and where most of the lambing takes place, while the upper area is range area for the animals. By using the alternate route there would be no occasion for FortisBC to disturb the lower area when carrying out maintenance and/or repairs to the line in the future. On the face of it, this opposition does not make sense until one realizes that one of the Nature's Trust's partners is FortisBC and therefore, in my view, are incapable of an unbiased viewpoint another fact that FortisBC failed to mention.

## **Support for the Upland Route**

### **SOFAR**

This is a group of at least 400 residents from Okanagan Falls to Penticton living near the Power Line Route. Since the petition collecting names for SOFAR was only walked around the houses I am sure there would be many more if it were advertised. They would all like to see the line moved mainly for health and environmental reasons. In addition in many cases we were by the home owner that FortisBC said "it was done deal" or FortisBC said "the lines are being moved", this last comment was repeated many times by those living in the Evergreen Drive area; was this more FortisBC misinformation?

### **City of Penticton**

There support is because a move to the upland route would open up valuable land for residential building, necessary to allow Penticton to grow in a controlled manner.

### **RDOS**

Bill Schwarz Director for Area D stated (Page 16 Community Input Session) "*to support the movement to relocate the line away from human settlements*". The RDOS felt strongly enough to register as an Intervenor at the hearings. On page 18 of the same session Mr. Schwarz added "*that it will require a variance to go above the 15m height restriction..... and that there is a requirement for an environmentally sensitive area development permit*". So the existing ROW is not without its own hurdles. In their Final Argument FortisBC state " .... *Those who chose to buy near the existing right of way can now have it relocated at the expense of others and to the detriment of others*". Bill Schwarz in his presentation wanted to ensure that the current situation does not occur again and stated "*the RDOS will put restrictions in the Community Plan and invoke by-laws to prohibit development within the appropriate distance of the power lines*".

In summary with the exception of a small group all of the local residents, the City of Penticton and RDOS are for a move to the upland route.

### **Pole Selection**

It was established at the hearing that none of the selected poles can be upgraded to take a higher voltage rating. FortisBC also indicated that any upgrade on the existing ROW is not possible due to the restriction on the width of the ROW. Option 2B has two lines running side by side on smaller separate wooden structures, similar to the single poles we have now, on a 60m ROW. The smaller poles are less obtrusive and being wooden actually helps, so I am told, in the BC Government's carbon emission reduction plan.

FortisBC in their Final Argument made the point that if the existing ROW is used then Messrs Advocaat and Danninger would prefer the 100ft steel poles. That is true but only because it is the lesser of the evils over the existing ROW. Due to the limited width of the existing ROW the smaller poles in Option 2B the preferred solution cannot be used.

### **Property Values.**

FortisBC expert witness stated that in his opinion using the existing ROW, property values would not be affected just because of the power lines. There is some validity to that position where the existing power lines are concerned but not the proposed ones from Option 1A. These proceedings have shown that Power Line emissions and health has become a major issue with the public in general. More people today are aware of the possible health dangers and that affects their decisions where they buy property, Mrs Fehr gave an example in her statement at the Community input session where someone walked away and lost their deposit rather than live near the proposed **new** HV Power Lines.

The Commission has seen the existing power lines and will note that it is especially difficult for the uninformed to tell if the line is an HV Power line or a distribution line due to the similarity of the structures. People are used to distribution lines and generally feel they are not a health hazard (even if they can be) and are just concerned about HV Power Lines. By putting in 100ft+ steel poles you are advertising the fact that these are HV lines and this will most surely influence property values.

One final point on property values, FortisBC in their final argument stressed that those living near the lines paid less for their land due to the presence of the power lines. This is totally untrue and would be obvious if they had cared to check with the realtors who sold the lots back in 1995/7. FortisBC then took a throw away comment by Bob Advocaat about him making a low bid, to assume that we all bought cheap. I bought in Heritage Hills in 1996 and the land and houses were the same as those in areas of Penticton, Mr. Advocaat's lot had been on the market for some time, perhaps the owner was anxious to sell hence the reduced price.

### **Options Costs**

When comparisons were made between the various options, both the FortisBC expert Mr. Sam and Mr. McIntosh insisted that one has to compare option 1A with 2A, this makes no sense. The object of the power lines is to transport power from Point A to Point B how this is achieved is in some ways immaterial. By comparing option 1A with option 2B it was agreed that there was only an NPV of \$700,000. FortisBC have indicated that there may be many "Brown Outs" if any option on the alternative route is chosen due to the delay in project completion. This assumes protracted negotiations not necessarily a fact.

The point was raised that if FortisBC managed the project so that construction of the other facilities went ahead while negotiations were ongoing, for the alternate route, this project completion delay could be minimized. FortisBC response of “anything is possible” was to say the least neither informative nor helpful. While it is admitted that there would be costs involved due to equipment being in place but not used and perhaps some due to quantity ordering, they would be minimal compared to the difference in costs of the two options. With current trends in the market place, metals are increasing in price while timber is not which should make Option 2B even more attractive.

Looking at the two routes there seems to have been no accounting for the savings involved with options 2A, 2B or 3 when compared to options 1A or 1B due to the fact that they would be much safer as they could complete the installation “Cold” rather than “Hot”. This means they could completely install the new line, test it, before finally switching power over from the existing line. The “Cold” install should also speed up the installation process further reducing costs.

At the hearing Mr. Sam explained some of the problems putting in the new line over the existing ROW and the fact that there will have to be some outages to ensure worker safety. With Options 2A or 2B or Option 3, this would not occur and those installing the line would have a much safer environment in which to work, a cost saving by preventing injuries to workers.

The costs for any of the uplands routes have been escalated due to the possible delay while negotiations with stake holders take place. Throughout testimony, reference is made to First Nations and the impression that negotiations could be difficult creating a “fear factor” that we would all be suffering from power outages as a result. In their Final Argument FortisBC have done it again by throwing in a reference to a Supreme Court decision, as though that will definitely mean long and arduous negotiations causing costly delays.

This attitude is in my view and the view of several members of the community who attended the hearings, derogatory to First Nations and quite honestly is offensive. The First Nations band that has the most stake is the Penticton Indian Band, although more traditional than some Bands they are always open to discussions and negotiations which are reasonable and fair. They have always worked well with the community, the RDOS and the City of Penticton and they have been a great help in some projects. If the right approach (a community approach) is made these negotiations may not take the protracted length of time that FortisBC wants us to believe, thereby reducing costs

The forecasts of the demand by FortisBC are just that, theoretical assessments of future growth, which if low would mean an earlier need for a further reinforcement, project not possible on the existing ROW. FortisBC also denied there were any plans in place to sell power to the USA. That may well be their current position but with the encouragement from the current Minister of Energy and the need for “Green” power in the USA this may well change. If this occurs then much more power is required which would mean another upgrade, and as stated, this is not possible over the existing route, but option 2B with its wider ROW would lend itself to an upgrade.

### **Resident Contribution to costs.**

If there is to be a change in routes, who is to pay? While not all the residents have agreed to pay at this stage, nor has any amount been agreed upon by those prepared to pay, but we are proactive enough to go ahead and investigate if the Commission considers it practical. One of the major concerns the residents have is the fact that the price keeps changing. Comparing Option 1A with Option 2A on the upland route the difference is up to \$20,000,000 a significant change compared to statements by FortisBC at the Open House of 40cents on every \$100 of each consumer's bill or the \$5 to \$10 million figure given to Bob Advocaat as he stated in his opening statement

If the Upland route is chosen all the additional costs should not be laid at the doorstep of the residents along the power line route; some must be placed squarely on the shoulders of FortisBC. Bob Advocaat in his opening statement commented that at the concept of the project FortisBC should have taken into consideration the residents and looked at alternatives to using the current ROW. This was not done resulting in their first "Open House" which gave no alternatives and as I mentioned in my opening statement had FortisBC staff subjecting some residents to rebuke and ridicule for suggesting alternatives.

The treatment of residents by FortisBC was compounded by the misleading comments at the Open Houses, which seem now to have been a way of deflecting any opposition. This was a lost opportunity to open a dialogue with the residents and look for a solution that whilst perhaps not ideal, was derived from meaningful discussions with those affected.

In their Open House presentations FortisBC indicated they would be filing their CPCN in late June 2007 and will start construction in early 2008 for completion late 2009 or early in 2010. They did not file the CPCN until December 2007 and are now contemplating starting construction in early 2009 a delay of almost a year. Why should we pay the increased costs incurred because of that delay? I am sure FortisBC will argue that having to investigate the alternate route caused the delay but they should have considered this when they first looked at the project in 2005. Mr. Wiltse who also had discussions with FortisBC commented at the hearing on the large increase in estimates from \$400,000 to approx \$3,000,000.

FortisBC can make all the excuses they wish but either they need a new estimator or the figures are slanted to ensure the selection of Option 1A. I also note that there appears to have been no cost allowance given for possible compensation to FortisBC for giving up the existing ROW.

This atmosphere of distrust has made it impossible for us to feel confident that FortisBC is being honest over the costs and I feel that may well be the reason for reluctance by some residents to sign on to any payment plan. If it was decided that the residents are able to pay **part** of the costs and they all agreed, then why not increase the standing charge on the meters of the houses affected. Since FortisBC say the project is good for 40 years the amount amortized over that period of time would not be significant. As it is a standing charge it could stay with the property and not the individual.

## **Environment**

In their final submission, FortisBC takes issue with the remarks in Bob Advocaat's opening statement regarding the amount of trees on the upland route. While it may be true there is some new growth in the area that was burnt, it is not significant. In addition FortisBC do not seem to have taken into consideration the mountain pine beetle. This pest which is destroying trees in the Interior is already evident in the South Okanagan and the main thrust of its approach is still to come and most of the Ponderosa Pine on the upland route will probably fall victim to the beetle.

One aspect of the environment that is especially important to those who live in the Okanagan is the aesthetic beauty of the valley. This was taken into account when the first line was installed as mentioned by Judy Brock in her statement "*that the poles used blended in with the natural vegetation*". This would not be the case with Option 1A the poles, despite the FortisBC assurance, would be very visible from both sides of the lake. The valley is extremely narrow at this point and therefore any large visible power line infrastructure would spoil the image of nature that the valley currently gives it visitors.

## **Health**

### **Corona Ions**

These are a health hazard. Evidence C3-29 explains in detail the phenomena of the Ion emission, how they become small ions and how they attracts pollutants which in this valley could include the diesel particulates, emissions from wood burning stoves, to chemical sprays used on the farms. C3-29 goes further to show how these charged pollutants are carried away from the line with the wind. The charged pollutants are then inhaled by people living near the lines and as they are charged they stick in the lung working in much the same way an inhaler operates. This means that the people downwind of the line will be subjected to increased pollution from the Power Lines. C3-29 cites another study which showed that when a charge was attached to pollutants it resulted in a 2 to 3 fold increase in deposition in the lung and a possible cause of serious health problems.

During the Commission's short stay here you will have noticed that we get quite a lot of wind although very rarely for the East which means the charged pollutants are blown over the residential areas. What the Commission did not experience during their stay is the inversion layer that sometimes descends on the valley typically in the winter. This traps the pollutants in the valley making the problem of the Corona Ion emissions that much worse.

The Draper study on childhood leukemia in 2005 quoted in the Exponent report showed that there was a 1.79 (almost double) risk of contracting leukemia which dropped as the distance from the line increased up to 400m. The risk then increased up to 1.36 some 600 metres from the line. Professor Henshaw suggested that this anomaly could well be due to Corona Ions as they take a finite amount of time for the pollutants to become associated with the charged ions and all the time the wind is moving them away from the line

### **EMF**

FortisBC and their expert use the Exponent Report as their guideline to the safe level of EMF. In that report Exponent state: "In this assessment, we focus on the weight-of-evidence reviews published December 1, 2005 – August 31, 2007 by the national and international scientific panels

that have considered this issue (SCENIHR, 2007; SSI, 2007; WHO, 2007)". It is important to emphasise there is no unique weight-of-evidence (WOE) approach and the Exponent approach should not be taken as absolute.

Additionally the report relies heavily on the bodies mentioned and their analysis of the various scientific reports and papers. In both my evidence C3-18 and my opening statement I have specifically mentioned the possible conflict of interest by some scientists working for the WHO, SCENIHR and SSI. If the Commission looks at the preamble of the WHO Monograph 2007 that is quoted by Exponent and being used by FortisBC as a basis for levels of EMF, they will see the same names I mentioned as having a conflict of interest appearing with great regularity. In addition checking the list of "Observers" it can be seen that Exponent are there along with Hydro Quebec from comments in my C3-18 evidence neither is interested in human health. By the Exponent report only considering these organisations WOE reviews, the outcome is slanted before they start and therefore should not be used by the Commission as a guide to the health problems associated with EMF.

The FortisBC expert Dr Bailey though extremely well qualified and knowledgeable made statements that I am sure even his supporters wondered about. It is generally accepted by all reasonable scientists and even the WHO, that the levels quoted by the ICNIRP should accompanied by precautionary measures so for Dr. Bailey to state that 833mgauss is perfectly safe is nonsensical. Dr. Bailey then further reduced his credibility by trying to diminish the importance of the BioInitiative report stating that it had not been peer reviewed, this was totally inaccurate. It seemed to me that even though he is obviously a very well qualified scientist he tried to discredit any alternative to his way of thinking which makes him a poor and not very credible scientist.

In an effort to downplay the effectiveness of the BioInitiative, report FortisBC had stated that the authors were a group of ad hoc scientists. Dr Bailey elaborated to say he meant they not affiliated. The scientists who wrote the report are leaders in the field of EMF, and they are not affiliated to any industry and thus not open to influence of any kind. All political bodies, which includes the UN and its subsidiaries, are open to influence as are scientists working with grants from industry. In the past these same or similar organizations have led the unwary public, who believed they were protected, to sickness and death by the organisations reluctance to impose strict limits on the excesses of industry e.g. Tobacco, Asbestos, DDT etc. To have these people set standards is not in the best interest of the general public. Governments or world bodies may set the standards but those advising them should be scientists unfettered by associations with industry, not the case at the moment.

The BioInitiative Report authors recommended a limit of 1mgauss at the edge of the ROW. This is a massive difference from the WHO yet they stand by their proposed standard. The evidence submitted by SOFAR included the Sage report which recommended a 60m "Set-back" from power lines and in my opening statement I gave the example of Sweden recommending a 200m "Set-back". Cities and States in USA and Canada plus other countries around the world are imposing "Set-backs" from Power lines. These recommendations were made by groups wanting to protect the health of its citizens, despite the fact that the levels of EMF emanating from the Power Lines were far below the INCIRP 833mgauss (1000mgauss at 50Hz). The BioInitiative report reinforces their findings.



Dr Bailey and the FortisBC team would have us believe that all these scientists and bodies are wrong in adopting these “precautionary measures”. In the case of the UK (Sage report) it was a remarkable recommendation due to the lack of available land in that country. Here we have the land and even though the Penticton Indian Band has logging rights, I am certain they would be open to discussions when the health of residents in the area is at stake.

Bob Advocaat in his opening statement suggested that the Commission should adopt the precautionary principle and went further saying “*It should not be the community that must prove that EMR is harmful to human health, rather the Commission to put the onus on utility companies to prove they are not*”. Quoting WHO guidelines does not prove they are not a health risk it merely avoids the question.

The current levels of EMF at the edge of the ROW and the forecasted new levels given by FortisBC have to be questioned. Mrs Fehr in her statement said her neighbour had measured levels of approx 6mgauss away from the edge of the ROW on a low power consumption day/time; this disagrees with the FortisBC chart which is 3.5mgauss at the edge of the ROW. As I said the day and time these readings were taken was such that probably no home heating/cooling, lights or cooking was taking place a very low power day. Since the readings were away from the edge of the ROW the readings show a level more than double that quoted by FortisBC. FortisBC state that the average EMF of the new lines would be 1mgauss at the edge of the ROW which everyone agrees is unlikely to be a problem. The question is – are these average readings going to be accurate; unlikely based on past performance by FortisBC in other locations. As Dr Blank said in his testimony, “it depends what parameters you put into the modeling equations”. If, once installed, the new lines emit EMF levels greater than forecast, what recourse do the residents have? Far better to choose Option 2B and then there are no worries for the residents now or in the future.

With unbiased and unfettered scientists making new discoveries regularly, it is in my view only a matter of time before the link between serious health problems and low level EMF is made, just the way they eventually proved tobacco to be a killer. If the lines are installed over the existing ROW will FortisBC remove them **when** that link is found, I fear not. The question the Commission has to ask itself is, who will take responsibility for the numerous people who may well suffer possibly tragic health problems and/or whose homes are not worth what they owe the bank due their proximity to the lines once that link is found?

### Conclusions

Option 2B gives the best of both worlds.

- It is much safer to install than Option 1A
- It is similar in cost to Option 1A.
- It lends itself to further upgrade whether that is 10 years or 25 years in the future.
- By implementing the change of route now the City of Penticton can grow in an orderly manner.
- The release of the current ROW would allow the RDOS to permit some much needed growth potential in the area
- There are no concerns regarding the health effects on humans of Corona Ions and EMF.
- By coming to an arrangement whereby the residents, Wiltse Holdings and FortisBC share the cost of the difference in Options 1A and 2B the actual cost to FortisBC is significantly reduced.
- If move to an upland route is left till an upgrade is required then all the costs will be borne by FortisBC, or should I say the ratepayers and be significantly higher.

Should the Commission go ahead and recommend Option 2B, I suggest that FortisBC work with Bill Schwarz of the RDOS and the members of the community when entering negotiations and discussions with the Penticton Indian Band.

Respectfully submitted

A handwritten signature in cursive script that reads "Colin Harlingten".

Colin Harlingten