

**From:** hdcoby@telus.net  
**Subject:** Fwd: Establishing Tangible Anmore-Uvic Links  
**Date:** April 4, 2007 9:29:28 PDT (CA)  
**To:** Hal <hal\_weinberg@sfu.ca>  
2 Attachments, 202 KB

----- Forwarded message from Lawrence Pitt <lpitt@uvic.ca> -----  
Date: Wed, 4 Apr 2007 12:09:05 -0700  
From: Lawrence Pitt <lpitt@uvic.ca>  
Reply-To: Lawrence Pitt <lpitt@uvic.ca>  
Subject: Establishing Tangible Anmore-Uvic Links  
To: Doug Colby <hdougcolby@telus.net>

Doug,

Here are some of my thoughts (plus a serious request) following the series of phone calls we've had.

First, the main points contained in the letter (attached) in support of your funding request to Western Economic Diversification (WD), are still very germane. In fact we have moved towards a stronger position on these points because:

1) our Integrated Renewable Energy Project (IRENE) is producing its first batch of experimental data and we have formed a collaboration, including financial support, with the building systems modelling group at NRCan Ottawa. BC Hydro and Carmannah are also interested parties in this project. This is a laboratory version of what is envisioned at Anmore and we are learning a lot about such systems every day. We are completing an assessment of run of river potential on Vancouver Island and have some wave and tidal work under way. So we have developed expertise in renewables in addition to the usual suspects of wind and solar. We dominate in hydrogen and fuel cells so we rock, as the students say.

2) our work with First Nations has expanded to another community and involves energy related design implications for housing. This gives us an interesting perspective on some non-integrated area issues. BC Hydro, other communities and government agencies are keen on having new solutions in this area.

3) the proposed Design Chair in Sustainable Energy Systems Design mentioned in the above Letter of Support (July 2005) has now been established and the timing for linking up with the Anmore Renewable Energy Project is ideal. This creates a pool of talented undergraduate students, in addition to our graduate students, to entice towards Anmore related projects.

Second, one of our significant new research efforts at IESVic over the last five years is directed towards examining the role of a large-scale deployment of renewable energy systems. Our work has identified energy storage as a key technology, not only for renewable systems in particular like wind and solar, but also from a reliability view point of the electricity grid in general. Energy storage is also important in other energy systems as well. For example, natural gas grids and in

transportation systems (i.e. hybrid vehicle architecture). Energy storage really cross-cuts much of the energy system spectrum and can be an interesting, unifying research theme that breaks new ground in linking many existing efforts. This why I suggest that energy storage could be the underlying theme of Anmore. It presents multiple opportunities for innovation that is not just more of the same: e.g.. Solar panels on roof tops, wind turbines some where, or a small hydro system. The typical focus of many existing efforts of gov't, industry or university folks seems dominated by thinking about new generation schemes. Fine. But we think integration is really the key. Storage is the under-exploited technology. Even without renewables, storage will have an important role for the grid. And there is growing synergy with transportation systems. Cool...

I share your enthusiasm for getting the Anmore Project launched asap. I think you've snared, arm-twisted, and in my case, charmed, a very credible group of folks. You've prevailed at WD to get your initial funding (which is no easy task as we know). This funding is a significant first credibility step. Hence the sudden interest from BCIT, for example.

At this stage, I would like to establish tangible links between the Anmore Foundation and UVic. I am certain this will add to the momentum and create additional credibility. Here are the my suggested links that I would like you consider:

1) I will call this the Feasibility Study on Multiple Renewable Source Integration for the Anmore Renewable Energy Project. Integrating wind, solar, run of river hydro. You mentioned that there a budget of approx \$ 2 - 3 K for this. I propose that we under take this for you and I would get one of the first teams of senior undergraduate engineers from the new Design Chair program working on the project this summer (May -July 2007 term). We will have to act quickly to get this established. After thinking about our conversation yesterday, I would recommend holding off on the \$20K or so expenditure of solar panels on the existing town site until this study is complete. You may be firing precious bullets too early.

2) IESVic is a major participant in establishing an NSERC (Natural Science and Engineering Research Council) Strategic Research Network on Wind Energy Systems involving several university research groups and utilities from across Canada. This project, if approved would be a five-year research program beginning in April 2008. We are leading the research involving integration issues, which is now one of the four main network research themes. My proposal to Anmore is to take step towards the funding link that we have talked so often about: funding in support of graduate students. To this end, I am asking that Anmore contribute a Letter of Intent (see attached draft) that says Anmore will seriously consider funding support for the equivalent of one graduate student over the five-year project. This is \$25K per year for five years for a total of \$125K. As this is a LETTER OF INTENT, there are suitable caveats that allow a comfort zone for you. I think the time line is in keeping with the ramp up of Anmore and the initial fund raising goals.

By establishing these two links, we will accomplish significant step. The first is a very tangible and early-results kind; the second being of the 'we've scratched your back (WD Letter), you scratch mine' variety but very vital to our efforts (i.e.. My colleagues will notice!). The wind network,

which is getting lots of positive vibes, will put the Anmore Foundation along side utility supporters from across Canada at the table. Bragging rights I'd say.

3) I will commit to heading up the research component of the Anmore Project. By this I mean coordinating, cajoling and encouraging a wide range of people from various institutions and companies to participate. As I have stated clearly before, I do not see this as a UVic exclusive opportunity. In fact I think it imperative that the efforts come from a constantly changing group of people: universities, colleges, communities and companies. That would be fun. At this stage, I can make myself available for presentations (I am a very good public speaker and enjoy engaging people of energy related topics). Hence, I can help sell the whole package.

In summary, let's get one with it. The timing is excellent.

But I do need fast responses on 1) and 2) above. Deadlines etc.

Very best regards,

Lawrence

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Anmore- W....pdf (174 KB) Suggested D...doc (27.5 KB)