

Dear

Since our last meeting, at which we reaffirmed our commitments to the Alberta/Canada Fusion Energy Program, we have been hard at it assembling initiatives and estimating the associated costs for the next year. This letter is a request for your support in cash or in-kind as a contribution to a budget of \$97,500 that will fund the following initiatives, and enable us to build a small reserve in anticipation of a profitable National Conference in 2010. But first, an update:

The Alberta/Canada Fusion Energy Program – Public financing and education

- Doug Horner has responded to our appeal on behalf of the Premier and reaffirmed that the Alberta Government is not in a position to finance our request for a 3-year, \$21M start-up grant to establish the Alberta/Canada Fusion Energy Program. The financial situation of the Alberta Government and the lack of Federal support are cited as the underlying rationale. He did say that he would be seeking the advice of ARIA Board upon completion of the restructuring of Alberta's research and innovation infrastructure.
- We have written to Eric Newell, Chair of CCEMC requesting support for inclusion of fusion energy in Alberta's Climate Change Fund.
- We have received a request to present our proposal to the Edmonton Economic Development Corporation in November and continue to seek opportunities for public education on the merits and imminence of fusion energy.
- We are following up on correspondence received from Lisa Raitt (Minister of Natural Resources) to meet with her representatives to learn more about our proposal for an Alberta/Canada Fusion Energy Program.
- We continue to avoid public dialogue comparing fusion and fission. We have noted when requested, that fission is unsustainable without fuel breeding given the limited feedstock of uranium and that prevailing wind patterns passing into the United States as "the Alberta Clipper", make the location of a nuclear fission plant in Alberta untenable.

Setting Direction for 2010 – Objectives and financing

In the absence of public financing, the Alberta/Canada Fusion Energy Program remains a voluntary initiative conducted through the contributions of its volunteers:

- **International Fusion Network.** Allan Offenberger (University of Alberta) has prepared a budget for the preparation of status reports and travel for remaining engaged with the international fusion energy community and associated projects. Includes a year-end seminar for presenting and evaluating the status of fusion, a recommendation on the socio-economic impact and industry development, and report for the Premier's Economic Strategy Council.
Est. \$77,500
- **National Fusion Energy Conference.** Dini Corbett-Lourenco (Sway Energy) and a team comprised of Brian Kryska (Innovation Management), Klaas Rodenberg (Stantec) and an event management firm (Integra Events) have prepared a proposal for conducting several public forums leading up to a National Fusion Energy Conference in the fall of 2010 for preparing a Canadian action plan for anticipating fusion ignition and its socio-economic implications.
Est. \$10,000 bridge financing, otherwise - a revenue generating initiative
- **Marketing and Communications.** The Alberta Council of Technologies (Perry Kinkaide) provides Secretariat services for coordinating: meetings, communications and marketing support supplementing the City of Edmonton (Gary Woloshyniuk) and NAIT (Stuart Cullum) with media release (Troy Media) and website services (Mediashaker.)
Est. \$10,000 plus in-kind contributions

Help request

We are requesting your support for the 2010 budget in the form of a cash or in kind contribution so that we can establish a trust fund of \$90,000 to support the initiatives proposed for 2010. Additional budgetary details are contained in the attached Appendix. Please contact me with questions and otherwise be prepared to communicate your contribution at our next meeting that we have tentatively scheduled for **Monday, November 30th at 3:30pm** – teleconferencing as per our last meeting compliments of NAIT.

Perry Kinkaide
President – Alberta Council of Technologies
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International Fusion Energy Network

The Fusion Finance Team has established a support network for the AB/Canada Fusion Energy Program. To maintain historical relationships established by Dr. Allan Offenberger and extend awareness and influence of our Program, we propose to link key influencers in Alberta to International leaders in the development of fusion technology. The proposed meetings will facilitate a better understanding of fusion technology for Alberta and Canada, and its importance to the future of power generation and supply. In addition, the visits will assist in securing commitments of speakers for the proposed 2010 Fusion Energy Conference – designed to further the AB/Canada Fusion Energy Program: advancing the commercialization of fusion energy, anticipate the socio-economic impact and secure public confidence in the relevance of the technology for sustaining Alberta's prosperity.

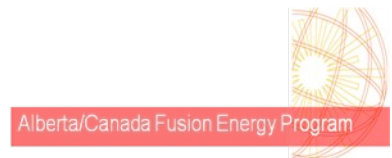
The following estimates are for 1-week visits to international destinations & 4-day trips in Canada. International trips would be either 1 or 2 persons though other Board members and influential public officials will be invited. Others would have to bear their own travel costs unless we find a source of grants to suit that purpose.

USA - 4 trips/\$9,600 (LLNL+other labs)
UK - 2 trips/\$7,000 (RAL-HiPER)
Japan - 2 trips/\$9,200 (ILE+other labs)
France - 2 trips/\$8,400 (LMJ)
Intl Conference & Workshops - 2 trips/\$5,000 (IFSA, APS, etc.)
Canada (Ottawa) - 6 trips/\$9,000
Canada (Other) - 2 trips/\$3,000
Total = \$51,200

International consultancy (trips to Edmonton) - 4 trips/\$10,000

Grand Total = \$61,200

National Fusion Energy Conference



Introduction

Canada has a window of opportunity to become a participant in the global partnership for developing and commercializing fusion energy. By virtue of reputation and strong international working linkages, Canadian based researchers have been invited to participate in the Inertial Confinement Fusion (ICF) research at Lawrence Livermore National Laboratory (LLNL) in California as well as the European (HiPER) and Japanese (FIREX) programs.

Calculations show that fusion will occur and can be sustained and while computer simulations are very promising, ignition needs to be proved experimentally. The ignition facility at LLNL and Laser Megajoule Facility in France are expecting to give this proof in the next 2-3 years. Similar work is underway in Japan and China. Once experimental proof of ignition is realized and the enabling technologies developed, a demonstration facility can be designed, built and commissioned.

Fusion Energy Symposiums

The objective of hosting a series of fusion energy symposiums in Edmonton is to establish Canada's position as a major partner in the quest for realizing fusion energy as an ideal solution for meeting the world's primary energy requirements.

The inaugural symposium would draw on the academic relationships and contacts of Allan

Offenberger, Prof Emeritus and recognized expert in the field. Subsequent symposiums would expand attendance to government and industry.

Science and technology is a cultural endeavour where the sharing of ideas, often through serendipitous encounters, lead to breakthroughs. Social events such as a symposium encourage formal and informal sharing of knowledge and ideas and strengthen the community of people dedicated to a common goal. In the case of fusion energy, a symposium will add substance to an idea surrounded by scepticism and an opportunity to showcase fusion's progress to the general public.

As a host of the ***fusion energy symposium***, Edmonton has the opportunity to become the centre of fusion knowledge, reinforce Alberta's position as an energy super power, and ensure Canada's participation just like it did with the space program by developing the Canadarm and training astronauts. The symposium would be the catalyst to pull together the scientist and the funding.

Symposium Structure

- 2 Day symposium with a social event at the end of the first day
- Inspirational key note speaker – *who is the recognized leader/promoter?*
- Technical and poster sessions highlighting the progress of ignition and enabling technologies
- Technical sessions will be a mixture of single presenters and panel discussions on various topics – *what are the current topics under discussion?*
- Workshops for government and industry to educate them on the basics and opportunities of fusion and laser fusion. This will build the foundation for future funding and investment.

Why they should care:

- Federal government – ensuring our seat at the table. Invest in basic research.
 - Provincial government – solidifying their role as an energy power and evidence show that they are exploring opportunities beyond Oil & Gas (financial & environmental)
 - City of Edmonton – enhancing its position as “host to the world” beyond sports and into science and technology. Building an economy on ideas (opportunity to build on EXPO 2017 bid)
 - University of Alberta – supporting its bid to become a top 20 University in the World (currently ranked 59) the Canada Fusion Energy Program will provide them with publicity and interest from researchers as well as proving learning and networking opportunities for their faculty and students.
 - Energy providers (EPCOR, ENMAX, TransAlta, etc.) – if this works as we believe it will, these organizations will be the operators of the plants (distribution infrastructure will remain in place). Modest investments at this time will assure them of a seat at the table and industry input. As well it is good public relations to be perceived as looking for CO₂ free options.
 - Other industry players – to be identified
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- A media event to make the public aware of the initiative and how it could change their future. Provide hope of a solution beyond cutting back. If the public supports the effort then investors will be easier to convince.
 - Virtual connections to exports unable to attend in person. Webcasts from the symposium or speakers to the symposium.
 - Public outreach component to be added in future years to create interest from secondary and post secondary students.

Financials

Well planned and implemented conferences and symposiums can recover their costs or even earn a modest profit – enough to provide organizational operating funds and invest in future events.

Revenue comes from attendee fees (\$500 for a single day / \$750 - \$1,000 for 2 days) and sponsorship from government, institutions and industry partners. Attendees pay for their own transportation and accommodation costs.

- 50 attendees x \$500 = \$25,000 (\$37,500 @ \$750)
- 100 attendees x \$500 = \$50,000 (\$75,000 @ \$750)
- 150 attendees x \$500 = \$75,000 (\$112,500 @ \$750)
- 200 attendees x \$500 = \$100,000 (\$150,000 @ \$750)

Sponsorships average \$5,000 (receive logo recognition and free attendance passes.) Create a tiered sponsorship package based on amount received.

Expenses include hard costs for speaker fees and travel, space, meals, promotion, audio visual, event management, etc.)

Proposed budget

- Revenue: 100 paid attendees @ \$750 = \$75,000 + 5 sponsors @ \$5,000 = \$25,000.
Gross revenue \$100,000.
- Costs: meals \$150/person = \$15,000 + speakers \$20,000 + venue \$5,000 + Audio Visual \$5,000 + event management \$10,000 + promotion \$10,000 + misc. \$10,000 =
Gross costs \$75,000

Timing

The Fusion Energy Symposium should be an annual event with a speaker series in between so that we learn from the inaugural event and build momentum towards the achievement of ignition is anticipated in less than 2 years and then extending into the research and development of enabling technologies towards 2030(20 year timeline parallels Challenge 2030 by Ed Mazria). Based on the demographics of the attendees research can be done to further flush out the best time period

Explore producing the inaugural event to be in August. This is outside of the usual spring and fall seasons for conferences (due to vacations). Based on the demographics of the attendees research can be done to further determine out the best time period.

However this timing has some advantages:

- Availability of venues, especially at the University or institutions like NAIT or MacEwan
- Availability of residences to provide accommodation for attendees (rather than a hotel)
- August is summer festival season in Edmonton so we can promote for attendees to bring their families and take a few more days
- Can hold outdoor events

Questions

How many people will Allan Offenberger be able to attract to the inaugural event? Who attends will affect final pricing and date of event.

Who would be potential sponsors? How much would they give?

Develop a theme for the event.

How do we approach the Federal and Provincial governments? *Perry?*

How do we approach the U of A for support? *Allan?*

How do we approach the Oil & Gas Industry?

How do we approach the energy provider industry?

Can we approach the EEDC for tourism support? (Family event will bring people in from out of town)

Would there be some seed money available?

How do we build an organization that will ensure this is more than just a onetime event? Must ensure we build on the foundation of the event by continually building the global network.

What about *General Fusion* in Vancouver?

Images

