



Progress Report #8

October 28th, 2014

I am pleased to bring you up to date on CREEN's activities and related events of importance, since our last Progress Report of September 12th. CREEN's profile among industry and international parties continues to rise.

Federal Funding Support

On October 7, 2014, CREEN had the opportunity to appear before the House of Commons Standing Committee on Finance, as part of its Pre-budget Consultations 2014.

CREEN informed the Committee and the Canadian Government about the compelling opportunity for the strategic and economic benefits for Canada. CREEN highlighted three key messages:

- Canada has the real opportunity to secure a leadership position and its commensurate economic benefits in the global rare earth supply chain outside China. Canada has the best undeveloped rare earth resources and some of the most advanced development projects in the world.
- There are challenges unique to rare earth projects that must and can be resolved through collaboration to enable industry to bring them into production.
- Government support through research, innovation and demonstration is necessary if Canada is to compete effectively with other countries with similar aspirations and capitalize on the unique opportunity that Canada's rich mineral endowment provides.

Full transcripts of the Committee meeting are available at:

<http://www.parl.gc.ca/HousePublications/Publication.aspx?DocId=6720877&Language=E&Mode=1&Parl=41&Ses=2>. Video and audio recordings are available at:
<http://parlvu.parl.gc.ca/ParlVu/ContentEntityDetailView.aspx?contententityid=12106&date=20141007&lang=en>.

CREEN Outreach

Canada's REE efforts are increasingly being recognized at national and international fora:

COM14 REE Symposium, was held in Vancouver over Sept 28th – Oct 1st; 44 papers were presented from a dozen plus countries and about 150 delegates attended. Constantine Karayannopoulos, Chairman of Molycorp, Professor Chu Hua Yan, REE scientist, Vice Provost of Graduate Education at Peking University and member of the

Chinese Academy of Science, and I, invited as CREEN's Chair, delivered the keynote addresses

Mr. Karayannopoulos noted that:

- environmentally progressive production is the new paradigm;
- the success of any new producers will be dependent on addressing customer needs and not simply the quality of individual deposits;
- there will be an increasing emphasis on vertical integration; and
- demand growth will be primarily enabled by vehicle fuel efficiency and emission control regulations, required under increasingly stringent energy efficiency policies.

Prof Yan walked the delegates through the development and application of a novel solvent extraction process for separating heavy rare earths. I spoke on the significant advances and growing membership of CREEN; the priority pre-competitive projects identified by Canadian technical leaders; and the increasing attention that CREEN is receiving.

NATO Applied Vehicle Technology Panel – CREEN was invited to participate in a two-and-a-half day workshop convened in Brussels October 13th-15th. The international group and NATO specialists discussed demand and supply chain risks and opportunities for REEs as related to aeronautics, hybrid tech, fuel production and wearable technology. NATO has since advised that: it will keep this team together in order to further communicate, collaborate, and continue to work toward possible solutions; finalize the meeting proceedings and develop a lecture that can be further disseminated to specific organizations and nations within NATO; and, they will create a policy and guidance document that can be used to communicate the issue and recommended courses of action within the NATO organization.

ERECON – CREEN attended the ERECON (European Rare Earth Competency Network) meeting on Oct 16th, at which they released their draft report titled, *Strengthening the European Rare Earth Supply Chain – Challenges and policy options*. CREEN participated on a panel with Alex King US-based (US-based Critical Materials Institute), Australia's Dudley Kingsnorth and Japan's METI, under the banner – *What are the tasks for policy makers? What contribution can international cooperation make?* CREEN reinforced its message of 'cooperation, collaboration, innovation and cross-Investment', essentially noting that the West could build reliable and secure REE supply chains as an alternate to those offered by China; Supply chains where trading partners focus on developing specific areas where they have mutually beneficial resources and expertise. For example, Canada could meet European semi-processed materials with Europeans focusing their efforts on more downstream processing, applications and recycling technologies. CREEN also reiterated one line in the Report "Low current prices do not reflect long term supply security in volatile REE markets, which remain dependent on a small number of sources of supply and vulnerable to government intervention". Essentially, cautioning the 150 delegates that while prices have been low and markets are relative clam now, we are presented with a real window of opportunity to Plan, Enable and Take Action before the next inevitable disruption.

Financial Management & Project Selection

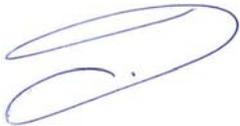
CREEN now has 25 pledged members. The CREEN Steering Committee met on October 21st, to flesh out financial management and formal R&D project selection processes.

As mentioned in the previous report, 1-2 page descriptions of the projects identified at the Technical Workshop are to be completed by the end of November. CREEN will distribute these to the Technology Workshop attendees for review and validation. The next step is to invite project champions to flesh out 10-15 page Project Terms of Reference, with target completion date of March 2015 (aligned to federal funding decisions). These Terms of Reference will be used to secure formal proposals from qualified co-sponsors and technical teams. Proposal evaluation and selection would be based on the ability of the proponent's team, facilities, performance record, and perhaps on proposed (supplementary) funding. This stage is intended to focus R&D funding on only those areas that are of importance thereby reducing the likelihood of projects that later need to be halted, unless of course results are below expectations.

Impartial review of proposals or service providers is critically important. Recognizing that the industry is relatively small, disclosure and conflict rules will need to be clearly established and adhered to.

As for Project funding, it is currently being contemplated that Industry proponent contributions (cash and in-kind) would be leveraged 1:1 with federal support, increasing to 1:5 where the R&D is more innovative or further away from commercialization.

As always, I hope you find these progress reports helpful. Please feel free to contact CREEN with any suggestions you may have.



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