

1. <u>RFEOI Title</u>	Restructuring of AECL Nuclear Laboratories
2. <u>Lead Organization</u>	Corporation of the Town of Deep River
3. <u>Participating Organizations</u>	N/A
4. <u>Location of Interest</u>	Chalk River, ON

5a. Areas of Interest
e. Other: Ideas on mandate and mission of CRL; ideas on and participation in cost containment, shared services, revenue generation, and value enhancement

5b. Facilities of Interest
h. Other: CRL site as a whole; office space off-site; AECL-owned undeveloped land off-site.

6. How would you propose to participate at the Laboratories?
b. Service Provider
g. Other: Supportive host community and partner in achieving objectives described herein

7. Expertise/Capabilities of the Respondent
Deep River hosts many nuclear S&T experts, including former and current employees of AECL and has over 60 years of experience as a municipal service provider and a partner with AECL in services of mutual interest.

8. Summary of Interest
Deep River is a willing host community with strong support for nuclear science and technology – a valuable asset for any nuclear site. Deep River calls for all stakeholders to cooperate under the leadership of the Government of Canada with respect to restructuring CRL, to achieve a revitalization of CRL as a national laboratory. Beyond this primary concern, there are smaller scale, yet important issues that the Town seeks to address in this EOI. These relate to cooperation to provide municipal services to AECL and to employees to enhance recruitment and retention, disposition of tracts of AECL-owned land within the built-up portion of the Town, provision of space for AECL and spin-off companies of CRL.

9. Benefits expected by Government
If the Government of Canada will partner with all stakeholders to implement the revitalization of CRL, the benefits to Canada will be of enormous value: Saving Canada billions of dollars in electricity costs and ensuring clean air, and to support a wide range of research that could have dramatic long-term effects on prosperity. Further, by partnering with Deep River to implement the ideas herein, AECL can reduce costs while providing other social and environmental benefits to the community, improve employee recruitment and retention, while promoting the development of a local cluster of nuclear companies, ultimately benefiting the economy, and modest revenues can be generated to offset the cost of capital projects.

10. If available, would you be interested in a one-on-one session? Yes

1 Respondent Profile

Deep River is a willing host community with strong support for nuclear science and technology – a valuable asset for any nuclear site.

The Corporation of the Town of Deep River hosts AECL Chalk River Laboratories (CRL) within its municipal jurisdiction, as well as several office buildings that host AECL employees outside of the security area of CRL.

The town site was originally constructed to house the employees of CRL and today hosts a population of about 4200 which still includes the highest number of CRL employees, former employees and their families of any of the local municipalities.

Although CRL currently provides many of its own municipal services, Deep River cooperates with AECL wherever possible to provide services in a cost effective manner, from mutual aid for fire suppression to infrastructure. For example, Deep River partnered with AECL to construct a water-treatment plant that is capable of providing potable water to CRL, and now a project to build the water pipeline to CRL is currently under negotiation between AECL and the Town.

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2 Overview of Areas of Interest

The Town of Deep River, among many other stakeholders, has a role to play in the future of CRL to best position it to deliver value to Canada, representing a supportive host community. The position of the Council of Deep River in support of CRL was expressed in its resolution passed on March 21, 2012 (and a corresponding resolution was passed by Renfrew County Council):

WHEREAS Natural Resources Canada (NRCan) is restructuring AECL (Atomic Energy of Canada Limited), which owns and operates Chalk River Laboratories (CRL);

AND WHEREAS CRL is Canada's premier nuclear science and technology laboratory, is an agent of and advisor to the Government of Canada on matters of public policy including production of isotopes, nuclear waste management, and nuclear safeguards, is a driver of business innovation in nuclear energy and related areas of nuclear science and technology, and is a generator of highly qualified people for Canada's knowledge economy;

AND WHEREAS in providing this value to Canada, CRL relies on the aging National Research Universal (NRU) reactor, which is a national resource for science and industry, enabling research

and development for the Canadian nuclear energy industry (including support for the existing 22 CANDU power reactors in Canada), advanced materials research by researchers from universities and industries across Canada;

AND WHEREAS Eastern Ontario, Ontario, and Canada needs CRL to be revitalized with a renewed mandate and key investments to be made in infrastructure such as a new world-class multi-purpose research reactor that will surpass the current capabilities of the NRU reactor;

AND WHEREAS if CRL is revitalized as a national laboratory with a new world-class multipurpose research reactor, Canada will not only be able to continue to support its existing fleet of CANDU power reactors, saving Canada billions of dollars in electricity costs and ensuring clean air, but also to develop the next generation of advanced power reactors, and to support tens of thousands of research projects with wide ranging applications, including health, environment, energy, natural resources, nanotechnology, aerospace, automotive, and manufacturing. The advances of technology in these areas could have dramatic long-term effects on the well-being of all Canadians;

AND WHEREAS NRCan has invited expressions of interest in AECL with a goal to reduce federal contributions to AECL;

AND WHEREAS there are many stakeholders in AECL and in CRL specifically, including but not limited to federal, provincial, and municipal governments, publicly-owned electricity generation utilities and private businesses both in the nuclear sector and beyond, and institutions for research and education;

NOW THEREFORE BE IT RESOLVED THAT the Council of the Corporation of the Town of Deep River requests that the Government of Canada partner with all stakeholders to implement the revitalization of CRL, establish the post-restructuring mission of CRL as a national laboratory, and proceed as expeditiously as possible with the development of a new world-class multi-purpose research reactor that will meet the research and development needs of Canadian stakeholders for the next 50 years;

AND FURTHER THAT the Council of the Corporation of the Town of Deep River circulate this resolution to all municipalities in the County of Renfrew, the Eastern Ontario Warden's Caucus, Prime Minister Stephen Harper, Ontario Premier Dalton McGuinty, Cheryl Gallant, MP, Renfrew-Nipissing-Pembroke, and John Yakabuski, MPP, Renfrew-Nipissing-Pembroke.

Beyond the question of the future mandate of CRL and need for all stakeholders to cooperate under the leadership of the Government of Canada with respect to restructuring CRL, there are smaller scale, but important issues that the Town seeks to address in this EOI. These relate to cooperation to provide municipal services to AECL and to employees to enhance recruitment and retention, disposition of tracts of AECL-owned land with the built-up portion of the Town, provision of space for AECL and for spin-off businesses from CRL. These are addressed in the sections below.

3 Ideas for Governance and Management

Before governance and management can be settled, the mission and mandate of CRL must be determined. Deep River supports the concept of CRL as a national laboratory for nuclear and related sciences that will serve Canada. For a detailed description of this national lab concept beyond what is stated in the resolution above, the Town would refer interested parties to a vision set out by a grass-roots non-partisan committee of members of the broader CRL community, including residents of Deep River, acting under the name CREATE (Chalk River Employees *Ad hoc* Taskforce for a national laboratory). Their vision is set out in their report on their website (www.futurecrl.ca), the abstract of which is re-produced here:

Chalk River National Laboratory (CRNL): A Vehicle for Mobilizing Science and Technology to Canada's Advantage

In response to the restructuring of AECL and to the need for a new, multi-purpose research reactor, the Chalk River Employees Ad hoc Taskforce for a national laboratory (CREATE) proposes a vision for the future mission of Chalk River as a national laboratory that will serve Canada. CRNL will be Canada's premier laboratory for nuclear and related sciences. It will be a resource for researchers from across a broad spectrum, from fundamental sciences to industrial applications, including, but not limited to, research and development (R&D) that supports the nuclear energy sector in Canada. The new mission of CRNL will be very outward looking, partnering and impacting at all levels of Canadian society. That outward focus includes several new functions: leading diverse research programs beyond nuclear energy; partnering broadly with universities, industries, and government; commercializing knowledge; providing a training ground for Canada's future generation of research scientists and engineers; and fostering a science and technology (S&T) culture in Canada. By serving as a unique, major resource for science and industry, CRNL will deliver enduring value for Canada.

The governance should reflect the mission. For example, the governance model of a national laboratory that serves many stakeholders will require strong federal participation and should include appropriate mechanisms for all stakeholders to voice their priorities for the lab.

4 Participation in the Laboratories

4.1 Cooperation on Municipal Services

The Town of Deep River can help reduce the costs of AECL to provide municipal services through further cooperation in key areas. For example, Deep River partnered with AECL to construct a water-treatment plant that is capable of providing potable water to CRL. AECL contributed roughly \$900,000 as the capital cost of providing the additional capacity. A project to build a water pipeline to CRL is currently under negotiation between AECL and the Town.

CRL has no source of potable water on site; instead bottled water is trucked into the site for its 2700 employees. Deep River believes that provision of water through the proposed pipeline will greatly reduce this cost to AECL, and will be more cost-effective than building a water treatment plant on site.

Furthermore, there are other social and environmental benefits to cooperation to shared infrastructure. Since much of the costs of operating a water distribution system are fixed, provision of additional water to CRL will reduce the overall unit cost of water for all users of the water system, and the per unit environmental footprint will also be reduced accordingly. On the other hand, if AECL constructs its own water plant at CRL, the Town will be left with higher operating cost of its water plant due to the additional installed capacity.

Therefore, the Town of Deep River strongly recommends that NRCan encourage AECL to consider the broader social and environmental benefits of shared water infrastructure in its procurement process, not just the financial cost.

Other shared interests in municipal services include emergency services, such as Police and Fire. On-going mutual aid agreements are in place, but further cooperation may be beneficial to both parties.

4.2 Revenues from Sales of Residential Land

The RFEOI requests ideas on how additional investment might be attracted to the Laboratories. AECL owns some tracts of land within the built up areas of the Town. These are undeveloped properties that are designated for residential development in the Town's Official Plan and Zoning bylaw.

Deep River faces a housing shortage and prices of homes have risen accordingly in the past several years. AECL could generate modest revenues to offset some of its capital projects at CRL if it sold these properties to developers. Development of these properties could also address the housing needs of many AECL retirees who require apartments, condos, or other forms of seniors housing, allowing them to age gracefully in their home community.

4.3 Provision of Space for AECL and its spin-offs

A bright future for nuclear science and technology in Canada would feature active research programs at CRL that lead to spin-off companies that are sited locally to take advantage of technologies and expertise at CRL, resulting in a local nuclear cluster of employment opportunities. The Town of Deep River owns some property that might be used to host these firms, and to encourage third-parties to provide the spaces needed, the Town is more than willing to use planning tools such as zoning, site planning and development incentives, and to cooperate with the neighbouring municipality, Laurentian Hills, as appropriate.

Similarly, the Town can work with local developers to facilitate access to leased office space for AECL, which will save on long-term investments in buildings and infrastructure. AECL is in need of space in the short-term and may continue to require extensive space off-site over longer periods, as a result of on-going infrastructure renewal at CRL.

4.4 Services to Employees to Enhance Recruitment and Retention

Deep River provides substantial recreation infrastructure above what is typical for a community of 4,200 to help AECL recruit and retain highly skilled employees in a remote area. The Town subsidizes an arena, a swimming pool, a marina, and parks and provides or supports many other recreation programs and

community activities. Other services, such as police, fire, and winter road maintenance have also been maintained at significantly higher levels, in part, to support this objective. To the extent that the mandate of CRL will continue to require highly skilled employees to operate in a cost effective manner and deliver value to Canada, these services are contributions to that future. In partnership with AECL, Deep River would be willing to evaluate the effectiveness of these services in recruiting for AECL and determine ways to maximize impacts from the Town's investment in these services.

5 Benefits to AECL and Government

As described above, if the Government of Canada will partner with all stakeholders to implement the revitalization of CRL, establish the post-restructuring mission of CRL as a national laboratory, and proceed as expeditiously as possible with the development of a new world-class multi-purpose research reactor, the benefits to Canada will be of enormous value: Canada will not only be able to continue to support its existing fleet of CANDU power reactors, saving Canada billions of dollars in electricity costs and ensuring clean air, but also to develop the next generation of advanced power reactors, and to support tens of thousands of research projects with wide ranging applications, including health, environment, energy, natural resources, nanotechnology, aerospace, automotive, and manufacturing. The advances of technology in these areas could have dramatic long-term effects on the well-being of all Canadians.

Beyond this main objective, by sharing infrastructure and services with the Town, AECL can reduce costs while providing other social and environmental benefits to the community. Further cooperation may result in savings on office space, improved employee recruitment and retention while promoting the development of a local cluster of nuclear companies that will contribute to a prosperous nuclear industry, ultimately benefiting the Government of Canada. Modest revenues can be generated to offset the cost of capital projects at CRL through sales of land, which will also help meet the housing needs of the local community.

6 Implementation Timeline

The town is available to engage AECL or NRCAN on the issues mentioned herein at any time. Completion of a water pipeline and all upgrades to the water distribution system to supply water to CRL is expected to take a couple of years. While the timing of implementation of the other issues will vary on a case by case basis, it is reasonable to suppose that significant progress can be made well within a target date of 2016.

7 Risk Management

8 Future Procurement Processes