



**A SUBMISSION
TO THE
HEBRON PUBLIC REVIEW COMMISSION**

Submission By:

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CEO and Registrar

PROFESSIONAL ENGINEERS & GEOSCIENTISTS
NEWFOUNDLAND & LABRADOR

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On behalf of Professional Engineers and Geoscientists Newfoundland and Labrador (PEGNL) thank you for the opportunity to make this submission.

My name is Geoff Emberley; I am CEO and Registrar and have been a Professional Engineer for 35 years. Accompanying me today is Leo White, P.Eng. Professional Standards Director with PEGNL

PEGNL believes it is especially important that it address you on general matters of engineering and geoscience. Our purpose here today is to brief you on the role and mandate of PEGNL and to encourage you to ensure that only properly qualified professional people both undertake the work on the Hebron project and recognize their professional responsibilities in doing that work. It is our belief that it is in best interests of the proponents, the governments of Canada and Newfoundland and Labrador, and the general public that the project is safely done by properly qualified and competent people. Canada and other industrialized countries have recognized that requiring professional responsibility for engineering and geoscientific work is in the best interests of society and ensures an important measure of public safety and welfare is met by regulating these areas of expertise. In fact, it is the law in all Canadian provinces and territories that engineering work be the professional responsibility of licensed engineers. The same is true for geoscience with the practice of geoscience now being regulated in nine Canadian provinces, including the Province of Newfoundland and Labrador.

I note that your review of the Hebron Development Application will include:

- considerations of human safety and environmental protection incorporated into the proposed design and operation of the Project;
- the general approach to the proposed and potential development and exploitation of the petroleum resources within the Hebron Significant Discovery Area;
- the resulting benefits that are expected to accrue to the Province of Newfoundland and Labrador and to Canada, having particular regard to the requirements for a Canada Newfoundland and Labrador Benefits Plan; and
- a consideration of the matters dealt with in the Development Plan Guidelines and the Benefits Plan Guidelines.

PEGNL's comments will apply to all elements of your review.

Engineers and geoscientists are involved in the Hebron project in all these areas to varying degrees, often in senior management positions.

For the record, I will describe to the Commissioner the roles of professional regulatory bodies as they apply to engineering and geoscience, and in particular, the roles of PEGNL. As was noted in the 1997 Newfoundland Provincial Government White Paper on regulated occupations, self regulating professional organizations such as PEGNL exist for the specific purpose of ensuring that public safety and welfare are protected in the practice of those professions. As a self regulating professional organization, PEGNL elects a board of directors from those it licenses to practice with three additional members of the Board being ministerial appointees. The board is charged with the responsibility to administer the Engineers and Geoscientists Act in the best interests of the people of the province. PEGNL is not an advocacy body for those it licenses.

PEGNL therefore has the privilege and responsibility to regulate those individuals who practice within its jurisdiction. PEGNL ensures that those given the right of using the designation engineer or geoscientist meet specific criteria in terms of both formal education and experience. In general, this means that such a qualified person must have a minimum of 4 years of qualifying university education and a minimum of 4 years of work experience to qualify for a professional designation in Newfoundland and Labrador, and most other Canadian provinces. Further, the person must have passed a professional practice and ethics exam. Similar requirements are necessary in most parts of the developed world. Canadian engineering and geoscience regulatory organizations are party to bilateral and multi-lateral agreements with other countries and their professional regulatory bodies that recognize engineering and geoscience credentials between countries.

In addition to certification, professional engineering and geosciences bodies also discipline members who violate standards of professional practice, and that includes malpractice in both technical and ethical areas. Others who are not licensed to practice and attempt to do so are notified to stop and brought to court if necessary to stop them from practicing.

In Newfoundland and Labrador the practice of both engineering and geoscience is regulated through the provincial statute: An Act Respecting The Practice of Engineering and Geoscience; or more commonly known as the Engineers and Geoscientists Act (2008). Within the Act, there is a definition of the practices of engineering and geosciences. I will repeat a shortened version here but the complete definition is available in the act.

"practice of engineering" means reporting on, advising on, evaluating, designing, preparing plans and specifications for or directing the construction, technical inspection, maintenance or operation of a structure, work or process

"practice of geoscience" means reporting on, advising on, evaluating, interpreting, processing, geological and geophysical surveying, exploring, classifying reserves or examining activities related to the earth sciences or engineering-geology

Most of the work on the Hebron project will be done through corporate entities, each of which must ultimately assume responsibility for their part of the project. However, individual engineers and geoscientists, as well as organizations or corporations practicing the professions of engineering and geoscience as defined in our Act, are also professionally responsible for their work on the project.

Professional responsibility for PEGNL licensees is governed by a Code of Ethics as noted in PEGNL's Bylaws (attached). Licensees are held accountable to the Code of Ethics. The first item in the code of ethics is that licensees should "hold paramount the safety, health and welfare of the public and the protection of the environment and promote health and safety within the workplace." This means that for these professionals, the interests of the employees and their clients are secondary to the public's interests.

In major projects such as the Hebron Development, it is necessary that expertise be brought together from many parts of the world. Many of these experts will be engineers and geoscientists; some will relocate temporarily to Newfoundland and Labrador; others are or will become permanent residents of the province or other parts of Canada. To ensure the objectives of human safety in design and operations, environmental protection, etc., are best achieved, it is important that these engineers and geoscientists become licensed. In doing so their qualifications are assessed and they can be held accountable for their professional work.

In fact, in Newfoundland & Labrador, it is the law through the Engineers and Geoscientists Act that those providing or offering engineering or geoscience services in the province or for use in the province must be licensed to practice through PEGNL.

If an engineer or geoscientist is already licensed in other provinces of Canada, licensure in Newfoundland and Labrador can be very quickly obtained. If licensed in a jurisdiction outside Canada with which PEGNL has mobility agreements, licensure usually can be done over a short period of time. The licensure process in other cases will be lengthier, since it requires a more extensive review of academic background and professional work experience.

Another important element is ensuring that professional engineering and geoscience responsibility are taken by those that understand the work and who are closest to the work as it is being done. It would not be appropriate that one or two people at the top of an organization are the only ones taking professional responsibility but that it is the people who really understand the work, are the ones held professionally liable and make the professional decisions. It is also important that those at any levels of an organization who are exercising engineering or geoscience judgment also take responsibility for their professional judgments, be qualified to do so, and be licensed to practice.

Several hundred engineers and geoscientists licensed with PEGNL were directly and indirectly employed during the design and construction phases of the Hibernia, Terra Nova and White Rose projects, and many have continue to be involved in the operation and maintenance phases. These include locally established and resident licensees as well as other Canadian and non Canadian engineers. Some of these other Canadian and non Canadian engineers remain in Newfoundland and Labrador; other foreign engineers will remain elsewhere in Canada or return to their country

of origin. Some of these engineers and geoscientists have already played or will play a future role in the Hebron Development.

While the primary mandate of PEGNL is the regulation of the professions of engineering and geoscience PEGNL also has a strong interest in the viability and sustainability of these professions in our province. In order for our professional expertise in this province to grow and mature so as to be able to fully contribute to the economy of Newfoundland and Labrador we believe it to be essential that significant elements of the engineering and geoscience on major projects such as Hebron be performed in the province. This approach would allow for the maximization of participation in the work by Newfoundlanders and Labradorians thereby allowing them to acquire skills and knowledge in new and emerging industries. More importantly, as we have built engineering and geoscience skills locally in government, academia and industry, we have better capability to better develop and manage the industry in the best interests of the people of Newfoundland and Labrador. We must continue to do so.

It is not the intention of PEGNL to ensure that all engineering and geoscientific work associated with this project, is done within the province. While that might be in the best interests of our licensees, it is not part of the mandate of PEGNL. PEGNL believes that it is in the best interests of Newfoundland and Labrador that increased levels of engineering and geoscientific expertise be developed in this province. PEGNL also believes that ExxonMobil as the company responsible for the current offshore oil and gas project must provide opportunities for the local development of this expertise as well as support and encourage the development of engineering and geosciences capacity at all stages in the talent pipeline.

PEGNL has met with representatives of ExxonMobil regarding the Hebron Project. In that meeting we discussed the framework in which the design process would ensure that licensed professional engineers would review and approve drawings specific to the Hebron project. Further to that meeting PEGNL discussed the same framework with Worley Parsons and Kiewit Aker, major design contractors for the project. PEGNL has approved applications from these organizations for professional licensure regarding the project, some of whom work in this province and some of whom work in other parts of the world.

As the project proceeds, PEGNL will work with the proponents to ensure that properly qualified engineers and geoscientists, licensed as appropriate under the PEGNL Act in their work address the construction, operations, maintenance and technical inspection phases of the project.

We ask for your support in noting the importance of having properly qualified engineers and geoscientists working in all phases of the project for purposes of the public safety, public welfare and the environment. One measure of ensuring this is requiring the people who apply professional engineering and geoscience judgments to apply for licensure within Newfoundland and Labrador.

I note that you have a number of specialists that form part of your team. Much of the information that you are evaluating as a commissioner has significant depth, both in terms of science and engineering. I am encouraged that you have hired both engineers and scientists to help you weigh the information that you are receiving. I note that you

have three engineers as part of that team and no doubt that will be of significant assistance. I assume that if you require geoscience expertise in this work that you will seek out specialist help from licensed geoscientists.

In summary, I think it is important to bear in mind that over the past three decades Newfoundland and Labrador has been building a reputation for offshore development. The process continues today though the Hebron Public Review and events such as these hearings. It's important that we maintain and continue to develop a positive reputation for our ability in Newfoundland and Labrador to handle major offshore oil projects as well as other developments. Part of that reputation will involve concern for safety, public welfare and the environment, and a good record of protection of the public interest in these areas. Part of this process will be enhanced by ensuring that companies and individuals maintain a positive and proactive attitude toward the importance of professional responsibility, professional regulation and licensure for people working as engineers and geoscientists.

Some closing comments in summation:

1. It's in the interests of the public that all the engineering and geoscience work that is undertaken by this project be the responsibility of properly qualified engineers and geoscientists and that those so qualified be licensed to practice in their specialty in Newfoundland and Labrador as is required by the Engineers and Geoscientists Act. Engineers and geoscientists at the management level must also indicate their professional responsibility through their personal registration and encouragement of their peers and subordinates to seek professional registration;
2. That such professional responsibility is taken by those who are closest to the work from an organizational perspective whether or not a professional seal is required to indicate that responsibility. Wherever in the organizational structure of the Hebron Project, professional engineering and geosciences judgments are made; those making the judgments should be properly qualified and licensed;
3. That the companies involved in the project are required to keep a specific record of those professionally responsible for such work and that it is available to regulatory organizations or others. This involves not only the design portion of the project, but also the construction, operation and maintenance portions;
4. That the companies involved in the project should inform those with professional responsibility for the work that this responsibility applies to both the company for which they work, their profession, and most importantly the public;
5. We ask that you specifically note these items in your final report as recommendations.

I've attached to this application, a copy of the Engineers and Geoscientists Act (2008) the associated Regulations (2011) and the Code of Ethics for your information.

On behalf of Professional Engineers and Geoscientists Newfoundland and Labrador thank you for the opportunity to speak here today and we wish you well in your deliberations.