



Geoscience: Changes to the Definition of the Practice of Geoscience

Improved Public Interest

To better protect the public interest, the definition of the practice of geoscience should be updated in the *Engineering and Geoscience Professions Act* (the Act) to reflect current practice areas and advances in technology.

Background

- As a result of technological advances, the practice of geoscience has changed since the current Act was introduced in the early 1980s.
- Prior to 2011, the Act contained definitions for the practice of geology and practice of geoscience. When the Act was changed to consolidate geology and geophysics into geoscience, the definition of the practice of geoscience did not capture all of the required elements from the two previous definitions.
- The current definition does not encompass new areas that involve the practice of geoscience and that should be regulated in the public interest.

Why this is important

- The practice of geoscience has changed in the past 30 years, and to protect the public interest, the definition should be updated to reflect these changes.
- Geoscience modelling (and the authentication of those models) is an activity that should be included in the definition of the practice. This is important as these models are now widely used for decision making and risk assessment.
- Geohazard-risk assessment is an emerging activity in the field of geoscience and should also be included in the definition.

Proposed
Legislative
Change

It is recommended that the Act be amended to update the definition of the practice of geoscience to read:

“practice of geoscience” means:

(i) acquiring, investigating, analyzing, processing, interpreting, evaluating, consulting, applying, modelling, assessing, managing, or reporting related to any activity:

(A) that relates to the Earth sciences or the environment,

(B) that is aimed at the understanding of Earth materials, geobodies, natural resources, energy fields, geohazard risks, or processes, and

(C) that requires in that acquiring investigating, analyzing, processing, interpreting, evaluating, consulting, applying, managing, or reporting the professional application of the principles of geology, geophysics, physics, chemistry, mathematics, or biology,

or

(ii) teaching geoscience at a university.

Effect of proposed
change

- The updated definition will more accurately reflect the modern practice of geoscience and will allow APEGA to better regulate that practice in the public interest.

This chart compares the old 2011 legislation with the current legislation and the proposed new legislation.

	Engineering, Geological and Geophysical Professions Act - 2011 Legislation	Engineering and Geoscience Professions Act – 2015 Current Legislation	Proposed Future Legislation
Definition	<p>Act</p> <p>1 In this Act,</p> <p>(r) “practice of geology” means</p> <p>(i) reporting, advising, evaluating, interpreting, geological surveying, sampling or examining related to any activity</p> <p>(A) that is aimed at the discovery or development of oil, natural gas, coal, metallic or non-metallic minerals, precious stones, other natural resources or water or that is aimed at the investigation of geological conditions, and</p> <p>(B) that requires in that reporting, advising, evaluating, interpreting, geological surveying, sampling or examining, the professional application of the principles of the geological sciences, or</p> <p>(ii) teaching geology at a university;</p> <p>(s) “practice of geophysics” means</p> <p>(i) reporting on, advising on, acquiring, processing, evaluating or interpreting geophysical data, or geophysical surveying that relates to any activity</p> <p>(A) that is aimed at the discovery or development of oil, natural gas, coal, metallic or non-metallic minerals or precious stones or other natural resources or water or that is aimed at the investigation of sub-surface conditions in the earth, and</p>	<p>Act</p> <p>1 In this Act,</p> <p>(r) “practice of geoscience” means</p> <p>(i) reporting, advising, evaluating, interpreting, processing, geoscientific surveying, exploring, classifying reserves or examining related to any activity</p> <p>(A) that relates to the earth sciences or the environment,</p> <p>(B) that is aimed at the discovery or development of oil, natural gas, coal, metallic or non-metallic minerals, precious stones, other natural resources or water or that is aimed at the investigation of surface or subsurface conditions of the earth, and</p> <p>(C) that requires, in that reporting, advising, evaluating, interpreting, processing, geoscientific surveying, exploring, classifying reserves or examining, the professional application of the principles of mathematics, chemistry, physics or biology through the application of the principles of geoscience,</p> <p>Or</p> <p>(ii) teaching geoscience at a university;</p>	<p>Act</p> <p>1 In this Act,</p> <p>(#) “practice of geoscience” means</p> <p>(i) reporting, advising, evaluating, acquiring, investigating, analyzing, processing, interpreting, geoscientific surveying, exploring, classifying reserves or examining, evaluating, consulting, applying, modelling, assessing, managing, or reporting related to any activity</p> <p>(A) that relates to the earth sciences or the environment,</p> <p>(B) that is aimed at the discovery or development of oil, natural gas, coal, metallic or non-metallic minerals, precious stones, other natural resources or water or that is aimed at the investigation of surface or subsurface conditions of the earth, understanding of Earth materials, geobodies, natural resources, energy fields, geohazard risks, or processes, and</p> <p>(C) that requires, in that discovery or development of oil, natural gas, coal, metallic or non-metallic minerals, precious stones, other natural resources or water or that is aimed at the investigation of surface or subsurface conditions of the earth, acquiring, investigating, analyzing, processing, interpreting, evaluating, consulting, applying, managing, or</p>

	Engineering, Geological and Geophysical Professions Act - 2011 Legislation	Engineering and Geoscience Professions Act – 2015 Current Legislation	Proposed Future Legislation
	(B) that requires in that reporting, advising, evaluating, interpreting, or geophysical surveying, the professional application of the principles of the geophysical sciences, or (ii) teaching geophysics at a university;		reporting , the professional application of the principles of geology, geophysics , physics, chemistry, mathematics, or biology through the application of the principles of geoscience, or (ii) teaching geoscience at a university