

APEGGA

*The Association of
Professional Engineers, Geologists
and Geophysicists of Alberta*

*The Practice and
Regulation of
Engineering,
Geology and
Geophysics*

*A Position Paper
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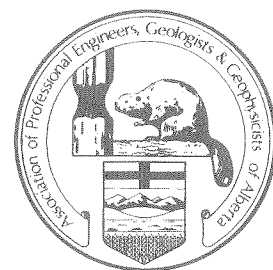


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THE PRACTICE AND REGULATION OF ENGINEERING GEOLOGY AND GEOPHYSICS

1. WHAT ENGINEERS, GEOLOGISTS AND GEOPHYSICISTS DO

Professional engineers, geologists and geophysicists work in the knowledge-based industry. They apply science and technology to the betterment of society. They explore and interpret the earth; they plan, design, build, operate and manage projects. Some example areas of practice are:

- natural resource developments
- civic infrastructure
- buildings
- industrial facilities
- transportation facilities
- manufacturing
- communications
- finding economical solutions to difficult problems

2. SOCIETY BENEFITS FROM THE PRACTICE OF ENGINEERS, GEOLOGISTS AND GEOPHYSICISTS

Every aspect of civilization is affected by their efforts. Most of the results are beneficial and create wealth for society. Public safety, including environmental protection, is a prime consideration. Continuous improvement enables practitioners to cope with changing technology and changing public expectations. It also keeps Alberta industry competitive in the global market.

Our future economy will depend on the intelligent application of technology. Consequently the services offered by APEGGA members will play an important role in our future economy.

3. RIGHTS AND RESPONSIBILITIES OF APEGGA MEMBERS

The work of APEGGA's members affects everyone. When services are properly applied, everyone benefits. If the services are improperly applied, they can adversely affect the public, including physical danger, financial loss and negative environmental impact.

APEGGA members enjoy exclusive right to title and to practice. Engineering, Geological and Geophysical practitioners must be members of APEGGA to practice. To maintain their membership in APEGGA, they are obliged to practice in accordance with APEGGA's legislation, Code of Ethics and practice guidelines.

The activities of APEGGA and its members effectively protect the public.

6. APEGGA - AN UMBRELLA ORGANIZATION

APEGGA was the first association in Canada to incorporate the services of three professions — engineering, geology and geophysics — under one Act. However, with 25 primary disciplines in engineering and with each discipline in engineering, geology and geophysics having several sub-specialities, APEGGA is a multi-disciplinary umbrella organization regulating hundreds of separate areas of practice.

7. THE SERVICE RECORD

Alberta has benefited greatly from the practice of APEGGA members.

Much of the province's wealth and safe infrastructure can be attributed to this practice. The incidence of failure is very limited, suggesting that the system works.

Is the public satisfied with the performance? We believe so. The annual number of complaints about questionable practice averages one per thousand members. That compares favorably with the average of one in ten public complaints against some other professions.

8. HOW THE PUBLIC INTEREST IS PROTECTED

The public interest is protected through APEGGA's regulation of professional practice and through the actions of the individual members as they practice.

APEGGA regulates practice on behalf of the public — not its members. APEGGA is able to regulate practice effectively because the Act restricts practice to APEGGA members or to individuals working under the direct supervision of an APEGGA member.

APEGGA also requires corporations that use the services of its members to have a permit to practice. The permit to practice obliges those corporations to provide a professional work environment, develop and use a quality control system that is appropriate for their business, and coordinate the activities of the different professionals.

The accountable efforts of individual practitioners over the life of an assignment are also an important component of public protection. Individual practitioners are stewards of APEGGA's guidelines for ethical behaviour and professional practice.

The market also encourages safe practice. Unsafe practice can result in costly litigation or a damaged reputation that makes future employment difficult.

The activities of APEGGA itself are monitored by the government through:

- public members, appointed by the government, who sit on the main councils and committees of APEGGA,
- APEGGA's annual report to the government.

9. HOW MEMBERS PRACTICE

The majority of APEGGA members work as employees, although that is changing as industry restructures through downsizing and outsourcing.

Practice is often through teams that are assembled to deal with a specific assignment. Team membership varies to provide the requisite skills. Often teams are multi-disciplinary, involving APEGGA members as well as members of other professions. Support staff, including junior professionals, technologists and technicians, are valuable members of most teams.

All practice by APEGGA members is subject to review for compliance with APEGGA's ethical and practice guidelines.

10. COMPETITIVE SERVICE

APEGGA members practice in a highly competitive market. There are nearly 28,000 members to choose from in Alberta. They are a part of the 150,000 practitioners across Canada with similar qualifications, most of whom would qualify to register and practice in Alberta.

Members compete successfully in the global market because their services are in demand world wide.

The market exerts a strong influence on keeping the cost of service competitive, the practice up to date, and the approach ethical. It also ensures that the optimum mix of professionals and support staff are used. In this environment, it is not possible for APEGGA members to become monopolistic or self serving.

11. INTERNATIONAL CHARACTER OF PRACTICE

Trade forms an important part of the Alberta economy and is becoming increasingly global in nature.

The practice of APEGGA members affects the marketing of services and goods for export. As a result it is important that practice standards be compatible with those in potential trading jurisdictions.

Reciprocity agreements between licensing bodies in other jurisdictions allow free trade in professional services. Practice standards must be compatible with each other if there is to be effective free trade in goods and services.

12. CONTINUING COMPETENCE

APEGGA regards continuing competence to be the responsibility of the individual member. Practitioners are expected to keep their skills up to date and to only practice in areas of personal competence. This is enforced through disciplinary action in response to complaints, as well as through market forces. Those who fail to keep up to date risk disciplinary action by APEGGA. They also risk becoming unemployable.

That approach has worked to date. Evidence of success is the small incidence of failure resulting from unskilled practice.

In response to changing public expectations, APEGGA is developing more proactive options to deal with continuing competence.

13. ENVIRONMENTAL PROTECTION

The efforts of APEGGA members often impact the environment. As practitioners in knowledge-based industries, APEGGA members play a major role in environmental protection and in finding cost effective solutions.

In recent years standards and public expectations regarding environmental impacts have changed. Some expectations and cures recommended by advocacy groups have the potential to consume the public treasury without achieving the desired benefits. There is a need for continuing input from APEGGA and its members to help ensure responsible action in environmental protection..

In recognition of changes underway, APEGGA published the Guideline for Environmental Practice under the Code of Ethics. The Association subsequently received an Emerald Award from the Alberta Foundation for Environmental Excellence for these guidelines.

14. TECHNOLOGISTS

Technologists are valuable members of the practice team. Their minimum qualifications include a two-year diploma and relevant experience. Today they practice extensively, but with APEGGA members accepting professional responsibility for their work.

The technologists are seeking better recognition for what they do. They have requested a legislated independent scope of practice to be administered by their own association. There has been no need for an independent scope of practice for technologists to date. Overlap with the scope of practice for APEGGA members has the potential to deregulate the professions of engineering, geology and geophysics. Such deregulation represents a serious threat to public safety.

APEGGA supports the goal of better recognition for technologists and is working with them to find an acceptable solution. One goal is paramount — the solution must benefit society and cannot compromise public safety.

15. CHANGES IN PRACTICE

Alberta, with the highest concentration of professional practitioners in Canada, is at the forefront of change in professional practice.

Members practice in a complex knowledge-based industry that is constantly changing. Improvements in computer and communication technology have substantially increased the productivity of the individual worker. Computers are replacing much of the standardized and repetitive work previously performed by support staff. The explosion in the knowledge-based industry is increasing the demand for sound professional judgment.

Structural changes are changing the traditional mode of practice. Some of the significant changes include:

- downsizing and outsourcing of corporate professional services
- a trend to employment through short-term contracts for specific skills
- a trend to multidisciplinary work teams
- blurring of professional boundaries
- greater demand for mature, professional judgment as a result of:
 - an increasingly complex society and work environment
 - constantly expanding technical knowledge
 - a trend to practice standards that specify end results (instead of how-to-do-it specifications that often do not work in a complex world)
 - a trend to a more litigious society

All of the changes affect professional practice. Many of the changes are positive and represent opportunities. The challenge is to recognize and correct trends that could adversely affect the public interest.

One mechanism that protects the public interest is responsible practice by individual professionals. Some changes that are reducing the effectiveness of the individual and that therefore could impact public safety include:

- less professional input to define the scope for professional services
- the growing use of short-term contracts, which results in
 - team members who do not know each other or their capabilities
 - lack of continuity
 - lack of feedback
- loss of the safety check provided by experienced, older practitioners who have retired prematurely

The diminishing effectiveness of the individual professional increases the need for an effective corporate permit to practice to protect the public interest.

16. WHAT THE PROFESSIONS NEED TO ENHANCE THEIR SERVICES

Society benefits from effective practice by APEGGA members. Accordingly it is important for society to understand and provide conditions that enable effective practice. Ten enabling conditions are outlined below.

1. Practice should be governed by one Act, and the regulation of practice should be administered by one association.
2. The Act should grant an exclusive right to practice that is enforceable. It is not in the public interest to allow unprofessional practice.
3. The Act should clearly require corporations to obtain and honour a permit to practice.
4. The mandate to practice should be broad and enabling. Today APEGGA regulates hundreds of areas of practice under one umbrella Act. The broad mandate allows practitioners to explore new areas and approach the boundaries of their discipline where invention occurs. Jurisdictional aspects are managed by the practitioners themselves in a manner that does not confuse or involve the public. It has been suggested that an exclusive scope of practice should only be granted for narrowly defined areas. We believe that society is unlikely to benefit from a change to narrow scopes of practice because:

- they will stifle continuous improvement
 - practice will be inefficient
 - they can be confusing and be very difficult to regulate
 - public safety will be compromised by the confusion over who should do what
5. Practice standards and the approach to regulating practice in Alberta should be compatible with other jurisdictions in Canada and with those of our international trading partners.
 6. The concept of *professionalism* should be encouraged. It includes:
 - linking the right to practice with responsibility for practice
 - maintaining an ethical and professional approach to practice
 - continually upgrading practice standards to protect the public
 - continuous improvement to cope with increasingly complex demands
 7. Performance specifications should allow the introduction of new technology and continuous improvement, both of which are beneficial to society. Legislative how-to-do-it specifications should be phased out because they stifle improvement.
 8. Employment that offers continuity and feedback to practitioners should be encouraged because it allows practitioners to influence the safe outcome of their work. It also provides needed training.
 9. Remuneration systems that recognize value-added rather than the cost of service should be encouraged and implemented.
 10. Interference with the competitive market should be avoided unless it can be shown that action is needed to protect the public.



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