

I'm a retired professional engineer, having graduated from UBC in 1962 and spent over 35 years practicing engineering in BC. I appreciate the opportunity to contribute to this long-overdue review of BC's Professional Reliance way of doing business. In answer to the basic questions:

1. What do I think about the current PR model in B.C.?

It's good for facilitating industry-based projects and saving the government regulation time, effort, \$'s, and responsibility, but as far as economic, social, environmental, technical, and safety sensibility from the public's point of view is concerned it's not working. Others have listed examples, and I'll put forward another later.

The model needs to be revised immediately.

2. Changes needed to improve public trust in the professional reliance model?

The idea of using qualified professionals to evaluate the social, environmental, economic, technical, and safety impacts of projects is good – be sure to keep that part in.

Abandon the idea of relying on QP's hired by proponents to evaluate the costs, risks, and benefits of proposed projects. Because such QP's have the proponent's interest at heart, this is akin to hiring foxes to design/build hen-houses

The body that should hire the QP's to help it evaluate projects is the body that's deciding on behalf of the public whether or not said projects should proceed; ie – the government.

The cost to the government of hiring the QP's to evaluate projects should be borne by the proponent – an entirely sensible cost of doing business in BC.

The QP or QP's chosen by the government to evaluate projects should be named and fully accountable – the long standing Professional(s) of Record concept.

The evaluation process should be transparent and open to public scrutiny/comment.

QP's hired by the government for the evaluation should be directly accessible, with full transparency, to QP's in the community who have questions and/or concerns about various matters.

No project should be given the go ahead until disagreements on various matters between QP's representing the proponent and QP's representing the community are resolved. If such controversy arises and the proponent wishes to continue with the project, the government should commission, at the proponent's expense, the relevant professional association(s) to provide opinion and be guided by it.

If and when the governing body of any professional association becomes involved in a resolution process as just described, the full membership of the association must be included in the process leading to the association's expressed opinion. This is ultimately peer review – a concept I'm very much in favour of.

3. Do I have other observations/recommendations?

Yes, and I'll introduce what I have to say by describing the situation in which I first became involved 4 years ago. It has to do with the implementation of BC Hydro's Advanced Metering Infrastructure ('smart meter') program.

That there might be problems with electronic meters – by which I mean the first generation digital meters and their 'smart' (radio-on and radio-off) successors - was first brought to my attention about 4 years ago by an electrical engineer friend and former BCH employee. With BCH having recently installed a first generation digital meter on his home, he was both shocked and puzzled when, for a 2-month period during which he and his family had been away with all electrical loads but for fridge and freezer turned off, he received a bill from BCH \$600(!) higher than the bill he'd received during the same billing period the previous year. He told me he spent some time trying to figure out what had gone wrong, came up with what he thought was the answer (the new meter had responded to electrical noise coming from the arcing that had resulted when power lines near his place came down in a windstorm while he was away), and called one of his former colleagues at BCH to let him know about the problem and get his \$600 back. His former colleague agreed with his analysis and authorized the refund.

Not too long after that, this same friend told me he was now concerned with the fire non-safety of electronic meters - his concerns centering around the meters being made of combustible materials with lithium batteries and with the customer's meter base and protective enclosure not being designed, tested, and CSA approved for use with meters that can catch fire.

A short while after that the two of us (now united in our professional ethic to warn of potential safety problems) were put in touch with two other practicing electrical engineers who had independently become concerned about the safety and other aspects of the new technology and how it was being imposed in such an all-out way on the public – which of course included ourselves. Together we spent several weeks investigating and discussing sm's, noting several concerns.

In the course of this study, we as individuals brought various we thought obvious concerns to the attention of BCH, the government, and the BCUC. To make a long story short, we didn't get a meaningful/relevant/satisfactory response from any of them. Of interest was that the BCUC claimed the wording of the Clean Energy Act along with the government's Directive 4 prevented it (with its mandate for reviewing the safety of public utility projects) from interfering with the implementation of the smart meter program,

We as well made several attempts to correspond directly with BCH engineers, but in every case unsatisfactory and sometimes nonsensical answers came back through middle-persons who obviously didn't know the first thing about the technicalities involved. In other words we were denied access to our fellow BCH engineers. Similarly we tried to communicate with the meter manufacturer's engineers, and similarly we were denied access . . . in this case because names are personal information and can't be revealed.

We as a group then decided to take our concerns to APEGBC, believing the association with its regulatory authority would review our findings and pass on any of the concerns it found valid to the government (which was spear-heading the project, the proponent in this case).

To our surprise/dismay APEGBC replied saying they couldn't do anything for us because their present day mandate doesn't allow them to investigate complaints to do with corporations(!) . . . they can investigate only complaints to do with named engineers. This

stopped us in our tracks (prevented our safety concerns going forward) because BC Hydro has (unbelievably), been allowed (it seems on the grounds of Professional Reliance) to keep its professional engineers distant from the smart meter program, relying instead on the meter manufacturer for assurances of safety. In other words, we could find no BCH p.eng. to name in a complaint to APEGBC.

I'd like to point out that none of us was willing to go public with our concerns because our doing so could be interpreted as professional advice and challenged, possibly involving us in SLAPP suits and the like which none of us wanted to become involved in at this time of our lives.

With that as another example of PR gone wrong, I will now add the following additional comments to this review:

* BC's public utilities need to be added to the list of 27 regulatory regimes listed as using a form of professional reliance to facilitate projects.

* The government shouldn't under any circumstances be allowed to exempt public utility related projects from BCUC review.

* When citizen QP's have concerns about projects, they should be free to express them without fear of retribution; ie – a definite yes to whistle-blower protection.

* When independent QP's bring concerns about projects to the attention of corporations and regulatory bodies, these corporations and regulatory bodies should be required to reply with meaningful/relevant answers . . . coming directly from the responsible QP's if necessary.

* EGBC (formerly APEGBC) must be re-mandated to allow investigation of complaints to do with engineering practice within corporations (and not just that of named individuals), and the same for other professional associations wherever applicable. Please know the Association of Professional Engineers and Geoscientists of Alberta has regulations governing corporations as well as individual engineers.

I'm sure there's more, but that's enough for now. If I can be of further assistance please let me know.

Sincerely –

Bob McKechnie
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