

## Solution in search of a problem

This is in response to the letter from Tim Middleton, P.Eng., concerning the Ministry of Municipal Affairs and Housing's (MMAH) building code knowledge testing, which was published in the last issue of *Engineering Dimensions* (March/April 2005, pp. 8-9).

In his letter he stated: "But the frequency with which I and my colleagues encounter engineering work falling far short of accepted standards is appalling." Since every professional engineer has an ethical duty to report such unprofessional conduct, I must assume that he has filed complaints with PEO against those practitioners whose work he deems unacceptable. If not, his allegations of substandard engineering work on the part of others are just so much loose talk, and he himself is in breach of PEO's Code of Ethics for failing to "expose before the proper tribunals unprofessional, dishonest or unethical conduct by any other practitioner" (R.R.O. 1990, Reg. 941, s. 77).

PEO cannot fulfill its mandate to regulate the practice of professional engineering and govern its members if acts of professional misconduct, such as failing to adhere to accepted codes and standards, go unreported. Disciplinary action against just a few individuals can have a substantial deterrent effect across the board and result in improved standards of practice. However, PEO can't take disciplinary action if no one reports the misconduct and files a complaint.

The fact of this matter is that no one thus far has produced any evidence of a systemic failure on the part of professional engineers to "make responsible provision for complying with applicable statutes, regulations, standards, codes, by-laws, and rules ...," including building codes. If we had such evidence, PEO Council would have no choice but to act to tighten our regulation of the profession in the appropriate areas. But in spite of our having given the government of Ontario numerous opportunities to tell us about problems we need to address, the politicians and officials involved continue to reassure us that

the building code knowledge testing measures are purely administrative in nature and have nothing to do with the practice of engineering or any perceived deficiencies therein. In the face of such reassurances, it is hard for us to justify imposing additional regulatory measures on PEO members.

I applaud Mr. Middleton's concern for maintaining high standards of practice within our profession. Perhaps from his position as an engineer in the employ of government he can help us on PEO Council to understand (i) the nature of the deficiencies that he sees in the work of his professional colleagues, and (ii) how PEO can effectively and proactively address those deficiencies in terms of its regulatory powers. We are not opposed to doing whatever is necessary to ensure that our members discharge their professional obligations properly. But since we do not have an adequate definition of the problem we are trying to solve, we are unwilling to internalize what we believe is a fundamentally flawed approach to regulation.

PEO might be more sympathetic to the MMAH's building code knowledge testing scheme if we could see a connection between it and improved code compliance or building quality. But it is Council's view that the building code knowledge testing measures will accomplish little to improve the quality of submissions for building permits insofar as professional engineers are concerned. It is more likely that they will serve only to further delay the permitting process and increase its associated costs through expanded bureaucracy. Moreover, they will accomplish nothing in terms of public safety, as the ministry has misrepresented. In short, what we have here is the worst possible example of a solution in search of a problem.

I believe that there are improvements that can be made to the building permitting and inspection processes that would serve to clarify the responsibilities of the parties involved, improve the quality and safety of buildings, and better protect building owners and municipalities against faulty design and construction. This subject needs to be revisited as we move

toward the introduction of objective-based building codes. PEO is ready and willing to participate, together with architects, building officials, and representatives of all levels of government, in the development of a better solution.

In the meantime, we will continue to press the government to exempt P.Engs from the building code knowledge testing requirements.

*George R. Comrie, P.Eng., CMC  
PEO Past President*

## Flawed Kyoto

I was pleasantly relieved to read David Lapp's article about climate change ("Engineers and climate change: What you need to know," March/April 2005, pp. 51-53), without any mention of the popularly and erroneously held belief, aided and abetted by the Kyoto Protocol, that we humans are responsible for what is widely held these days to be global warming. What he seems to be saying instead, quite rightly, is that engineers need to be figuring out what they can do to mitigate the effects of it. If we've got it, let's get used to it, because we can't get rid of it, but maybe there are certain things we can do to minimize the effects of it.

There are some basic facts that need to be clarified about the pathetically flawed Kyoto Protocol:

- Climate change is NOT caused by CO<sub>2</sub>. Water vapour, which is roughly 30 to 50 times more prevalent in the atmosphere than CO<sub>2</sub>, is the principal atmospheric driver of climate;
- Humans are NOT responsible for climate. More than 95 per cent of the CO<sub>2</sub> in the atmosphere derives from plant life and from the oceans. The human contribution is 2.5 to 5 per cent at most;
- CO<sub>2</sub> is NOT a pollutant, but rather a staff of life and the foodstuff of our oxygen supply;
- The Kyoto Protocol is NOT about pollution (it doesn't even mention the word). It is strictly and solely about climate change and CO<sub>2</sub>.

We humans are certainly responsible for pollution and we certainly can do something about it if we want to and are willing to pay for it. And we should. But we don't need Kyoto to fight pollution. It can't do a thing to affect the climate, so we should just scrap it.

The problem is that Kyoto is not a scientific issue but rather a political one. Politicians are notoriously reluctant to admit they might have made a mistake, so we shouldn't hold our breath for common sense to prevail. While many misinformed and gullible Canadians—including, I'm sad to say, some members of PEO—have apparently been hoodwinked by the Kyoto mantra, I'm glad to see that David Lapp is apparently not among them. I trust others will pay heed to his sensible comment.

*Gerald A. Crawford, PhD, P.Eng., Mississauga, ON*

### Climate conference

"Engineers and climate change: What you need to know" (March/April 2005, pp. 51-53) should serve as a wake-up call for engineers. The issues surrounding climate change technology require engineers to become more proactive. The ongoing debate regarding the greenhouse gas impact (CO<sub>2</sub> is non-toxic, so why bother?) on climate change misses the point. Those claiming that we cannot predict the weather past a few days state, "How

can we predict 50 years from now?" This is like the proverbial ostrich's-head-in-the-sand approach. The fallout from implementing the Kyoto Protocol (economic and other issues) pales in comparison to the contribution that engineers can bring to address the real problem associated with climate change, and to the welfare of our citizens, in the process. Given the technical and geopolitical issues surrounding climate change, it is now becoming critical for engineers to come forward to address these challenges.

To deal with the need to adapt to (and mitigate against) the negative effects of climate change, and recognizing that such is the role of engineering, the Engineering Institute of Canada (EIC) and its nine member societies are introducing a major conference: **Climate Change Technology—Engineering Opportunities and Challenges in the 21st Century, on May 9-12, 2006** to be held at the Ottawa Congress Centre. Visit [www.CCC2006.ca](http://www.CCC2006.ca) for details. (PEO is a partner in this event.)

For the first time in Canadian history, climate change being a multi-disciplinary challenge, all engineering societies (civil, geotechnical, electrical, chemical, mechanical, nuclear, engineering management, marine and senior engineers) are providing volunteers and seed funding to mount this event. Moreover, the Canadian Council of Professional Engineers, the Canadian Academy of Engineering, and several provincial engineering associations are also supporting the conference. At this very early stage, we have received more than 100 paper and presentation proposals. The call for papers and presentations, the backgrounder, and a table of sponsorship opportunities can also be found at [www.CCC2006.ca](http://www.CCC2006.ca). The new timeline for paper and presentation submission is September 2005 and will be promulgated in the coming months. Abstracts are encouraged to be submitted early.

Climate changes! Don't ignore it, deal with it! We look forward to seeing you in Ottawa May 9-12, 2006.

*John Grefford, P.Eng., Carp, ON*

### Leading the way

David Lapp's comment, "As engineers, we don't necessarily care why climate change is happening," is very worrisome (see "Engineers and climate change: What you need to know," March/April 2005, pp. 51-53).

Technology, designed and implemented by engineers, is the fundamental cause of climate change. It is incumbent on us as professionals to ensure that technologies we promote are as benign as possible, and implemented as responsibly as possible. Energy-efficient design and development of renewable sources of energy need to be pursued aggressively to provide more sustainable alternatives to our current practices, and engineers are best positioned to lead this. It is the propagation of our current lifestyles and technologies to the rest of the world that poses the greatest threat to us all; we must find better options.

Likewise, as community leaders, our personal lifestyle choices should model sustainable behaviour. As engineers, we need to take a systemic view of the issue and realize that we are each part

of the problem, as well as (hopefully) the solution.

By all means, let's anticipate the changes that are now clearly inevitable, but we do need to care enough to provide leadership and mitigate what we can.

*Eve Wyatt, P.Eng., East York, ON*

## Deserving of respect

The late great American comic, Rodney Dangerfield, always lamented in handdog fashion that he "can't get no respect." His wife, kids, and strangers would impose on his mild good nature and trample on his dignity.

That sure seems to apply to engineers in Ontario. The new government timidly offers billions in extra pay to doctors via the Ontario Medical Association and, at the same time, slaps engineers with a humiliating Bill 124, requiring remedial code exams. Imagine doctors letting bureaucrats tell them to pass special new exams before letting them write prescriptions. After all, don't Ontario doctors have a college that rigorously enforces extremely high standards of competence and ethics? But doctors stick together. You won't hear doctors "dissing" their fellow practitioners as engineers regularly do in *Engineering Dimensions'* letters.

Engineers also have a "college," PEO, that metes out very stern punishment to licensed engineers who make mistakes or try to cut corners. If you read the blue pages of *Engineering Dimensions*, you will find that engineers are held to account severely if they do so much as allow a garden wall to be built without concrete footings. How many doctors lose their licence for killing a few patients now and then? It took 10 years for Wai-Ping, the famous Ajax surgeon, to botch enough operations (over 100) to lose his Ontario licence.

Engineers seem to be held to a very high standard, indeed. Compare building engineers to builders in the matter of Bill 124 and BRRAG. The idea of building reform was to increase public safety and accountability in the face of many consumer complaints about shoddy products. To this end, all participants in the building industry were to be adequately certified and regulated. This would have meant that everybody, from the designer to the drywaller, would be

tested and held accountable. Something went wrong.

The home and commercial construction companies, who together employ hundreds of thousands of skilled and unskilled workers, enjoy enormous political power, and enjoy using it. Look at the Council of Ontario Construction Associations' website ([www.coca.on.ca](http://www.coca.on.ca): "we make sure your voice is heard at Queen's Park"). Thanks to their voice being heard, builders were quietly exempted from the code exams and insurance burdens newly imposed on designers and engineers. Why were builders exempted? Aside from the obvious answer that there are more votes from carpenters than from engineers, the legislature simply did not believe that engineers are educated, competent, and trustworthy. The legislature was happy with the New Homes Warranty Program (ONHWP) and what it required of builders.

The legislature also trusted anyone to design safely without benefit of code knowledge (R.R.O. 305/03, section 2.17.4.1) if the "building is owned by that person," because owners are exempted from code exams. Engineers are not exempted from code exams and extra insurance—even though they are strictly held to account by PEO, and are already insured. An engineer would not last very long if the engineer didn't know how to read the OBC. On the

other hand, the builder and the builder's workers are given a lot of rope. Once they have apprenticed and passed courses, including narrow sections of applicable codes, tradespeople are never tested again. If they make errors or cut corners for the builder, they will never be punished by any government or trades body, unlike engineers.

Engineers are not perfect. But they do take a very rigorous set of courses in university, have to gain years of experience before being allowed to get a licence, and more years to be designated as a Consulting Engineer. The notion that they cannot read and understand the OBC as well as an untutored builder/owner is absurd. Bill 124 is a farce, and R.R.O. 305/03 is a danger to the public and an insult to consumers in Ontario. Public safety will be best served by having the MMAH rewrite this legislation to exempt licensed engineers from humiliating code exams and redundant insurance requirements.

*Fred Bealle, P.Eng., Willowdale, ON*

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