

## PEO sanity check

My employer is in the business of systems integration and we have a Certificate of Authorization (C of A). We have a sprinkling of licensed engineers on staff, along with CETs, computer grads and other scientifically minded people. In the time I have had my licence (16 years), I have only once been called upon to use my “stamp” and the fact that I have a licence or that my firm has a C of A is irrelevant. The “engineering brand” is poorly defended/promoted by CCPE [now Engineers Canada], so really, I can’t say I feel the term “engineer” has much brand value.

My main point, however, is this ridiculous C of A survey you sent out. I thought the annual fee was enough punishment, and now you ask about accreditation.

*Listing of number of licensed members on staff:* Not likely. This would be a competitive disadvantage. We don’t offer anything that needs a C of A, but it looks nice in the boardroom.

*Discipline-specific seals:* Not likely. How are you possibly going to evaluate us? What exactly is my discipline? I do systems engineering, but it is a huge field. I wouldn’t know my way around a substation, but many systems engineers would. They, in turn, wouldn’t know their way around a SCADA system.

*Declaration of competence:* For heaven’s sake, we’re professionals. If I didn’t know what I was doing in my specific field, I’d have to look for work elsewhere. Our customers are looking for competence and cost-effective solutions, not how many licences we hold—no solution, no projects, no job.

*Primary/secondary discipline seals:* Now you’re somehow going to evaluate me and give me a special seal (that I never use). Does that mean if my seal says “systems engineer—PLC/SCADA programming” but I have to work on a DCS, I can’t? Or do I have to use a different email signature (the only place my P.Eng. title really shows up) and put, “Not a P.Eng. for the purposes of DCS programming today. Sorry, call back on Monday.” Or I could

tell a fib and hope that the web-based records aren’t checked.

*C of A form:* This has been a beef of mine for years. The annual ritual of filling in the photocopy of an old ditto form is really silly. Get the web-based form!

*C of A competent licence holders:* Who is going to evaluate my firm and the thousands of others to make sure we can exactly program PLCs or design substations or whatever? We’re not suddenly going to stamp a bridge drawing or a snow-loading calculation. Please don’t punish us with more paperwork and higher fees for the blue pages gang.

I propose a new designation: “e.P.Eng.” The “e” means eligible but too busy making a living and raising a family to actually go through the laborious and expensive process of acquiring a licence. Or I can just put my degree there—“B.Eng.” means hard work and accomplishment. My firm’s reputation in the marketplace isn’t enhanced by the C of A; it’s made from the hard work of all our staff. Either way I save a few hundred a year for my licence and a lot more money for the C of A for my firm.

*Ranjan Acharya, P.Eng.,  
Waitakere, New Zealand*

## Blue pages transparency

Gazette, which outlines discipline hearings, takes up a dozen or more blue pages in *Engineering Dimensions*. Often the results of only three hearings are printed within these pages, and each hearing’s material goes on, ad infinitum, with minute detail. I ask: What is the purpose of printing each whole episode, and

who benefits? Surely, for each case, a summary can be printed showing complaint, plea and penalty. The cases almost always are basically the same: misconduct or incompetence, and almost always civil-oriented building or structural situations. Surely you can show the whole “trial” document on the website for those interested in getting all the nitty-gritty. Then there would be space in Gazette for more cases, especially such as those negotiated settlements regarding high-profile firms which, for some reason, were deemed confidential and not printed, making one wonder how many other confidential resolutions have been kept out of the public’s and fellow engineers’ eyes. It seems that a previously unknown “little guy” is treated differently than well-known public firms and their representatives. Transparency? Not! So, print more case summaries, put the whole story on the website for details, and insist that supposedly confidential negotiated decisions also be printed, even if high-profile firms are involved.

*William Este, P.Eng., Garson, ON*

## Serving time

This is my first letter ever to *Engineering Dimensions* in the 45 years I have been a member of APEO/PEO. I must admit that over that time I have quickly read all publications, voted when asked, and generally paid little attention to the issues being discussed. Along with many of my manufacturing-employed peers, we belong to PEO for the cheaper insurance and the fact we can put “P.Eng.” after our names!

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***Transparency? Not!”***

*William Este, P.Eng., Garson, ON*

I feel the need to support now Past President Quinn's points regarding PEO governance ("Laying the groundwork," March/April 2007, p. 3).

I have had extensive experience serving on not-for-profit and provincially mandated boards of governors. These include our local YMCA, hospital and St. Lawrence College. On each of these, I have served as chair at one point or another. In each case, the organization's by-laws say, or by standard practice, the chair serves at least two years. As Quinn points out, a one-year term for the President really keeps the status quo. There is no way a President can campaign on an issue, and expect it to be done, or even get nicely started, in one year in an organization as large as PEO!

I'm not familiar with the licensing bodies of other provincial professions, but I'm sure some of them require more than a one-year term for their governance leadership.

With respect to the profile of engineering by the public, it is there, but most people see it as a well-paying profession that deals with "things," and to the uninitiated, can be very "dry." As long as buildings, bridges and other infrastructure stay in place doing what they are supposed to do, or that inventions come to fruition—planes fly, and electricity, water and sewage flow, and electronic items work—then nobody notices.

I don't have the magic solution to this, other than getting engineers out in the public domain, volunteering (as they are trained to make unique decisions, and in many cases take a leadership role), working with schools to keep students with the interest and ability to stay in the sciences, even though it may not be the "cool" thing to do, run or act as judges at

local science fairs, and do mentoring where appropriate. And lastly, ensure the public communications processes are in place to recognize engineers' technical and social achievements.

Enough said. Hopefully PEO Council will see the wisdom to change the Regulation and have Presidents serve for at least a two-year term.

*Wilsie Hatfield, P.Eng., Brockville, ON*

## CO<sub>2</sub> influx

Gerald Crawford ("We're not to blame," *Engineering Dimensions*, March/April 2007, p. 8) may be correct when he states that the amount of CO<sub>2</sub> "generated naturally" vastly outstrips the amount added to the atmosphere by human activity, but he is being disingenuous. The naturally generated CO<sub>2</sub> that he refers to is that which is constantly exchanged between the ocean

and the atmosphere and between plant life, both growing and decaying, and the atmosphere. Such exchanges of CO<sub>2</sub> are largely in balance; it is the human-generated CO<sub>2</sub> that comes from clearing the land and burning fossil fuels, etc. that is increasing atmospheric CO<sub>2</sub> and, along with increasing levels of the other greenhouse gases, leading to global warming.

*Peter R. Smith,*

*P.Eng., Bright's Grove, ON*

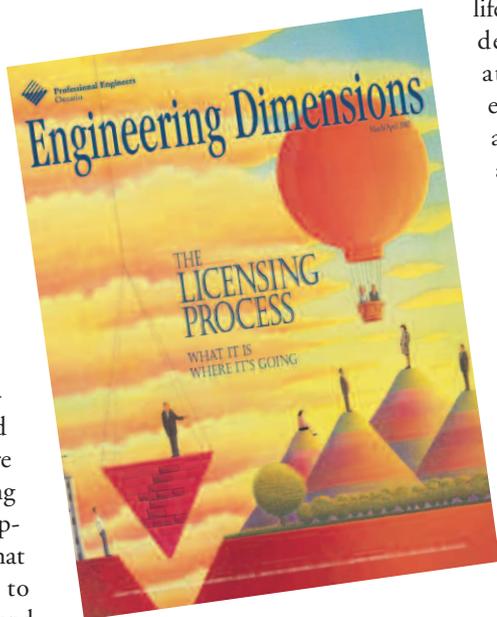
## A few comments

I have just read the March/April issue of *Engineering Dimensions*. I've a couple of comments:

1. Regarding Mr. Crawford's position on CO<sub>2</sub> and global warming ("We're not to blame," p. 8), I think it would be wise if PEO developed an official position on the matter. Either Mr. Crawford is correct in his assertion

that our SUVs are insignificant regarding causation of the current climate change, or they are not. It would seem to me to be an important service to the public if we develop and present an authoritative paper on this topic—one endorsed by referendum by the members. This is one way PEO could *earn the respect* that we crave, by actually *being of service to the public*.

2. Mr. Quinn makes the point that it is difficult to make progress within our organization because of things that "fuel the destructive divisions at Council" ("Laying the groundwork," p. 3). Comments like that, by an outgoing President, are asinine, and lead me to again promote the idea of firing every current member of Council and replacing them with members chosen by lottery—like jury duty. Entrenched positions, courtesy of members who "care enough" to run for Council, may be of less use to the organization in the long run than fresh, and perhaps naïve, positions that may be taken by randomly recruited new Councillors. Let's at least try!
3. Our disciplinary process appears to me to be fatally flawed, as illustrated by the Katsoulakos case (pp. 33-39, example only). This case reads as though an Ontario P.Eng. took engineering responsibility for some drawings that were produced out-of-province, and was negligent in reviewing them against the *Ontario Building Code*, putting the public at risk. The penalty is a reprimand. Now, if this decision was reviewed by a member of the public, do you really think that they would respect PEO? (See point one above: respect is earned.)
4. Regarding the licensing of foreign educated people, PEO's licensing model requires a combination of education and experience. That certain special interest groups whine that our process is broken does not mean that the process is broken. When I worked in the U.S., I was offered the chance to write exams to *prove that I had an adequate grasp of the required body of knowledge that they demanded of a P.E.*



Our model is different. We require that a person's education is sufficient to teach a body of knowledge, and that we have some relevant experience. Foreign trained people have a harder time demonstrating to the satisfaction of the licensing body that the course content of their partial differential equations course was indeed equivalent to one from University of Toronto or Queen's or wherever, which have been audited and shown to be adequate. Our process is adequate for Canadian-educated engineers. I have seen no evidence that we need to allow foreign trained engineers to prove their competence by "lightening the exam load" on their path to licensure. If it is "difficult for highly educated new Canadians to enter the regulated professions," has anyone considered that it might just have to be difficult? Is being difficult, in and of itself, reason to relax established standards? If we are so eager to relax our standards, who will safeguard the public? The politicians have no such mandate. They are too busy buying the votes of the new Canadians to safeguard the public. PEO has a duty to do so.

*Tom Hamilton, P.Eng., Chatham, ON*

## Engineers and the environment

The controversy over the world's climate appears to be coming to a head. This polemic provides the engineering profession with an exceptional opportunity to use its time-honoured, rational methods to clarify the issues in the debate and as a result raise its public profile and gain respect. The profession is without doubt the best one to address the issues in a realistic manner as engineering is based upon the "hard" sciences along with an uncompromising approach to any "assumptions." Assumptions within engineering are only made in order to establish their probability for representing reality within specified limits.

Climatology, on the other hand, does not have the same methodology as engi-

neering—despite having "hard" physical sciences as ingredients, it typically treats assumptions in a totally different manner. Assumptions are habitually not rigorously tested before they are used as a foundation for yet further assumptions until a theory is established based upon a farrago of conjectural assumptions. One of the reasons climatologists (and other soft scientists) readily use this methodology is that the consequences of being wrong, and the probability of being found responsible, are radically less than in many branches of engineering.

When working in the area of the environment, the two professions come face to face. The question must be asked: Whose mindset and methodology will be adopted? It is my opinion that if engineering wishes to remain a distinctive and noble profession, no compromise can be made with respect to the established engineering method. PEO, through *Engineering Dimensions*, should show leadership on this matter. To get the ball rolling, I suggest:

- emphasizing, at frequent intervals, the fundamental principle of "rational engineering";
- focusing on principles more than specifics (note that I have not offered any opinion related to the facts of the debate in this letter);
- requiring that any article by an expert in climatology (or any conjectural science, for that matter) enumerate any

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and all assumptions that are relied upon for any finding or opinion;

- providing rebuttal opportunity for any article that has been based upon one or more assumptions, preferably in the same edition; and
- restricting armchair experts to the Letters section.

*Geoff Francis, P.Eng., Oakville, ON*

## A note of humour

As a retired, old-school mechanical engineer, I had to smile at the illustrated gear train on page 64 of the March/April 2007 issue. That poor guy, obviously a senior manager, is trying to get it going with a big can of oil. I'm afraid he will never make those gears move even with a wrench like the guys on page 62 are wielding.

If this gear train was designed by a good, old Canadian-born engineer, we probably should be looking seriously at the admissions process for foreign trained engineers... Hmmmmmmm?

*David E. Close, MSE, BSME, P.Eng.,  
Georgetown, ON*

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