

### We're not to blame

In Michael Mastromatteo's climate change news item ("Engineers' climate change awareness focus of new study," *Engineering Dimensions*, January/February 2007, p. 22), I was pleased to note that in urging engineers to learn as much as they can about climate change and how to deal with it, there was no reference to the Kyoto Protocol, or to any suggestion that humans are responsible for what is today perceived to be global warming, because, contrary to widespread but uninformed belief these days, we aren't.

The Kyoto Protocol is based on a climate change study by the UN's Intergovernmental Panel on Climate Change (IPCC) circa 1990. The executive summary of this report, which Kyotophiles rely on, was written by a self-appointed group with an environmental agenda who concluded, contrary to the substance of the report itself, that global warming is caused by greenhouse gases, that CO<sub>2</sub> is the principal greenhouse gas, that CO<sub>2</sub> is produced by the human combustion of fossil fuels, and that, ergo, humans are responsible for global warming.

This stunning whitewash of reality totally ignores the overwhelming contribution of CO<sub>2</sub> to the atmosphere by natural causes, notably from decomposing vegetation and from the oceans, the two principal sources of CO<sub>2</sub> in the atmosphere. In fact, the IPCC

has itself determined that each year 210 billion tons of CO<sub>2</sub> are generated naturally and 6 billion tons by human and other animal activity. The human contribution is so relatively small it is within the limit of error in determining the larger number, and is, therefore, mathematically insignificant.

Even if we were to stop using fossil fuels entirely, which certainly isn't going to happen, there would still be more than 97 per cent of the CO<sub>2</sub> in the atmosphere that there is today, which makes the Kyoto Protocol the biggest exercise in tilting at windmills that the world has ever seen. As a Canadian taxpayer, it offends me mightily that public funds would be squandered in such a fruitless venture as trying to decrease the amount of CO<sub>2</sub> in the atmosphere.

We have no choice but to get used to global warming, or cooling, as the case may be, because it is driven by natural forces and processes over which mere mortals have no input or control whatsoever. Let's focus instead on pollution, such as smog in our cities, which humans do cause, and which we can clean up if we're willing to spend the money. Kyoto does not address pollution at all, and is useless against climate change, so the sooner we stop beating ourselves up over global warming and forget Kyoto, the better.

Gerald A. Crawford, PhD, P.Eng.,  
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### Get rid of regulators

Reading the January/February issue, it seems to me that PEO is bogged down in the swamp of regulations, while neglecting its first duty which, to me, is using its prestige and technical expertise to take a stand against the ignorant rantings of environmentalist pressure groups and know-nothing politicians, and to propose sound engineering solutions to the various problems we are facing.

This outburst was sparked by your article about private ventures into space, which I might have missed altogether because of its uninspiring title, "Whose rules?" (*Engineering Dimensions*, January/February 2007, p. 56). My problem is that instead of eulogizing the liberation of space technology and bringing us up to date on the latest developments, your only concern seems to be how to regulate it.

For my money, Burt Rutan is worth more than the entire NASA staff, with its turf wars, obfuscation and top-heavy administration, not to mention constant political interference. A new phase in space technology, indeed a space race finally worth watching, appears to be imminent. To paraphrase Shakespeare, "The first thing we do, let's get rid of all the regulators."

John C. Tysoe, P.Eng., Cheltenham, ON

### Handle with care

In response to Mr. Block-Bolten's letter "An Inconvenient Truth" (*Engineering Dimensions*, January/February 2007, p. 9), I'd first thank him for his explanation. I do agree with the fact that hydrogen has a very wide flammability range in air and I agree the Joule-Thomson (J-T) effect is an inconvenient fact about this fuel. And I agree with the fact that hydrogen has devastating accident potential and it only needs a very little amount of an oxidant to burn. But I'd also like to explain that my response to Mr. Lightfoot's letter was purely to explain simple facts about hydrogen without getting into specific situations or applications. Also, I didn't say that the dT/(-dp) is *always* not enough for self ignition. I said in *most* cases it is not enough, but obviously it is enough in some cases. By consulting testing labs

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### Where no law has gone before

Just a quick letter in response to Michael Mastromatteo's "Whose rules?" article (p. 56) in the January/February 2007 issue of *Engineering Dimensions*. I enjoyed the article very much, having approached the question myself from the criminal law perspective in a paper entitled "Spaceship Sheriffs and Cosmonaut Cops: Criminal Law in Outer Space" (28 *Dalhousie L.J.* 473. Fall 2005).

I would only add that, with any luck, engineering and legal professionals can work side by side to ensure that space is a safer place for all who have the incredible opportunity of visiting it.

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and doing some numerical simulations, you would find that this is a very unlikely scenario, but still not impossible.

Now, considering Mr. Block-Bolten's example of a typical Highway 401 accident. These storage systems are designed to isolate the hydrogen and shut down the whole system in the event that lines break, so minimal amounts of hydrogen are vented. As for the storage bottles, to be used in these applications they first undergo a lot of testing (bonfire, drop test, etc.) where it's assured that they don't just rupture or explode but leak before breaking. I've seen these storage bottles in testing labs being dropped to the ground from the third or fourth floor and fired at (with shotguns) without exploding. Of course, this doesn't cover all scenarios and hydrogen is a fuel that should be handled with a lot of care. But ignoring engineering design would make anything look unsafe and inconvenient.

Thanks for the enlightening discussion.

*Joseph Attia, P.Eng., Markham, ON*

### Some solicited advice

I have been a P.Eng. for more than 30 years and am now retired. Since becoming a P.Eng., every second year at election time the mantra has been:

- We get no respect; and
- We don't make the money we deserve.

The candidates change, but the whining stays the same.

And for 25-plus years, *Engineering Dimensions* has carried essentially the same content. The focus continues to be:

- governance;
- discipline;
- Certificate of Authorization;
- government relations; and
- public relations.

The November/December 2006 issue of *Engineering Dimensions* has sent me over the edge. The first thing I see is the President's Message, which is a rambling diatribe covering such eclectic topics as: why did I run again for President?, rat poop, fessing up when you screw up, other political musings, and the benefits of garnishing the engineering education by including arts and humanities in the engineering curriculum.

Editor Coombes distances herself from Quinn's ramblings, admits the

strategic plan is still in a state of flux, and then asks if anyone out there has any bright ideas.

The rest of the publication is a regurgitation of the same five focus items we have been treated to for over 25 years. The only breath of fresh air was the insight of Jack Welch as interpreted by George Comrie into the PEO context.

Well Ms. Coombes, in your Editor's Note you asked for input. As the saying goes, be careful what you ask for, because you might get it:

In developing the strategic plan, the basic question to be addressed before all the other pieces are put in place is, "What is an engineer?" Sounds trivial, but this is key. Many assume that an engineer is a technical expert and problem solver who has been licensed as such. True, in part, but wide of the mark. An engineer, in my view, is a professional who gets things done. Yes, science and math are key ele-

differentiate the professional engineer from technologists or other applied science specialists in public perception, except that the P.Eng. has the stamp? What is the clearly identified unique value that the engineer brings to the table?

In interviewing co-op students at Waterloo over the past few years, I didn't see any profound change in the curriculum content versus what I had taken at Waterloo over 30 years ago.

Respect and the rewards that go along with it are earned, not granted. By collaborating with business and universities in continuing to support the generation of hordes of talented techno-weenies, the process of condemning the majority of these bright graduates to a career as an employee is cemented.

P.Engs need to clearly establish themselves as independent practitioners of their craft capable, in most cases, of running their own businesses, or being part of a

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*John Fryer, P.Eng., Mississauga, ON*

ments, but what about other key competencies that enable the engineer to become a true and independent professional: project management, human resource management, accounting and finance, general management, engineering cost studies, taxation, government incentives, sales and marketing, WHMIS and environmental issues?

Those are the kinds of other skill sets that engineers should have included in their education right from the get-go. No, they need not be experts in these fields, but should have enough grounding to assure a reasonable expectation of being able to set up as an independent practitioner, or to run a small enterprise.

And therein lies a big problem. For if the focus is substantially on science, math and technology, what is there to clearly

larger engineering enterprise. This is how most doctors, lawyers and accountants operate. Until this happens, public perception will be unclear as to what an engineer really is.

The musings of President Quinn not only show a disturbing detachment from the real issues, it also shows he and others at PEO have no clue how to elevate the status of engineers.

It is time to step up to the plate and heed the words of Jack Welch to control your destiny, or someone else will. We need to get back to the basics of defining the P.Eng. as a true professional. Only then will we be able to elevate the status of engineers. And that should be the primary focus of the strategic plan. I don't see it.

*John Fryer, P.Eng., Mississauga, ON*

### Full disclosure, please

Reading Gazette in the January/February 2007 issue of *Engineering Dimensions*, I found the lack of full disclosure in the notices of resolution regarding the Greer Galloway Group Inc. and J.L. Richards and Associates Ltd./Guy Cormier, P.Eng., very concerning.

As I understand the disciplinary process, a complaint is vetted through the Complaints Committee to ensure it warrants a hearing. As such, I can only assume there was substance to the complaints lodged against the two firms and individual for hearings to be ordered. Yet if the results of the negotiations and/or pre-hearing conferences were such that the complaints were unfounded, presumably this should have been published and all would have been vindicated. Surely any engineer or firm wrongly accused of misconduct would want the full circumstances

of the situation revealed to remove any doubt. And yet the negotiated resolutions were deemed confidential and there was no admission of misconduct from either party. The circumstances would lead any reasonable person to speculate that something must have been amiss.

I would suggest that the lack of transparency in this process has served no one: not the public, not the profession, not even the firms and individual who have hardly been “vindicated.” On the one hand, the lack of full disclosure continues to cast a pall on their reputations because it inevitably fosters speculation. On the other hand, it casts doubt on the integrity of the disciplinary process—I can only wonder if the Complaints Committee is adequately screening complaints if they can be so readily withdrawn. All such speculation could have been avoided with full disclosure.

Many have observed a decline of public trust in professionals and institutions of all stripes—arguably for good reason: more and more frequently we hear of instances where closing ranks has resulted in serious consequences. From the perspective of PEO, continuing this lack of transparency in the disciplinary process will only fuel speculation, suspicion and, ultimately, cynicism—hardly a recipe for maintaining (or is it regaining?) the public’s confidence in the profession.

*Darlene Conway, P.Eng., Ottawa, ON*

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