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Facing up to climate change

To be honest, on this dreary March day, the thought of a little global warming doesn't seem all that bad.

But thinking of the destruction that will be caused to our planet—vanishing coastlines, widespread drought, crop failure—I'll take our current climate, thank you very much. Unfortunately, none of us will have a choice in the matter. Climate change seems to be on an unstoppable course. "World leaders need to recognize that climate change is the single most important long-term issue that the planet faces." This warning comes from Stephen Byers, co-chair of the task force that produced a report on behalf of the Institute for Public Policy Research in Britain, the Centre for American Progress in the U.S., and the Australian Institute.

According to most experts, North America's feeble efforts to remedy climate change will likely do little but slow down the inevitable. In Canada, we seem to be all talk and no action in terms of the Kyoto Protocol, which went into legal effect on February 16. President George W. Bush has rejected Kyoto outright, arguing that its requirements would damage the American economy. So, it seems, all that can be done is to get ready.

As professions go, engineering will likely be the hardest hit by climate change. There will be huge changes in the way engineers approach building and infrastructure design, risk management, and probably countless other factors that nobody has even considered yet. With climate change barreling down on us, there is no time like the present to

help engineers prepare to respond. In our first feature (p. 51), David Lapp, P.Eng., outlines some of the serious implications, and the mitigation and adaptation strategies engineers will need to adopt, to adjust to our changing world.

Our environment issue wouldn't be complete without an update on the *Brownfields Statute Law Amendment Act*. The cleanup and redevelopment of industrial and commercial sites through Brownfields legislation continues, although there is ongoing controversy over who is considered a qualified person (QP) to sign Records of Site Condition. Our Brownfields feature (p. 54), includes an update on PEO's efforts to have limited licence holders be recognized as QPs, and a discussion of some of the barriers to the redevelopment of these potentially contaminated sites.

With regard to the environment, not all the news is depressing. Steps to help the environment are being taken by professional engineers in Ontario. Cases in point: Heather MacLean, P.Eng., and Elizabeth Edwards, P.Eng., both of the University of Toronto. Heather MacLean, an assistant professor at the department of civil engineering, is studying the life cycle of light-duty vehicles to measure their impact on the environment and the economy (p. 48). Her work will help policymakers make regulatory changes that will affect greenhouse gas emissions and air quality. Elizabeth Edwards, who heads up a lab in the chemical engineering department, is conducting research on bioremediation—using organisms to break down contaminants in soil and groundwater (p. 58).

One thing is clear: Our planet is changing. It's really anybody's guess as to what sort of world we'll end up with, but it will be up to engineers to make sure the public's health and safety are protected as well as possible.

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