

# TheVoice

ONTARIO SOCIETY OF PROFESSIONAL ENGINEERS

## A Simple Technology Yielding Complex Results

Technology touches nearly all aspects of our lives, defining how we live, work and communicate.

But how can a technology simple to build and costing only \$80 have the power to secure a community's food supply and improve the livelihoods of its farmers? Engineers Without Borders (EWB) is working in Zambia with the treadle pump, a technology that does just that, benefiting rural communities throughout the country.

David Damberger and Paul Slomp are Canadian engineers working with EWB in poverty-stricken Zambia to encourage the use of the treadle pump, a simple irrigation technology. Treadle pumps, valued at approximately \$80, consist of two metal cylinders with pistons that are operated by a stepping motion on two pedals. The upward stroke on the piston creates negative pressure in the cylinder that draws water in through a one-way valve. The downward stroke then pushes water through a second one-way valve and out to fields of up to one hectare at a rate of one liter per second.

Since alternative irrigation methods generally involve a rope and bucket, the treadle pump increases the effectiveness and ease of irrigation. The pump can be manufactured by Zambian metalworkers, maintained with standard replacement parts, operated by anyone and, for some farmers, has increased yields by 600%.

David and Paul are working in rural communities, directly with often skeptical Zambians, to assess farmers' needs and encourage use of the pumps.



To build the trust of community members and strengthen communication, David and Paul live in similar conditions to local populations and have learned their language.

Yet despite attempts to integrate, David and Paul recognize they remain outsiders in Zambia so their ability to influence is much less than that of community members. They are therefore

*See "Borders", Page 2*

# QBS – Society Works towards resolving outdated procurement system

As we reported on in our last edition of *The Voice*, the City of London has taken the innovative step of implementing Quality Based Selection (QBS) for procuring engineering and design services in the city.

OSPE has been speaking to a number of government Ministries about QBS, and in a recent letter to the Premier, the Society pointed out that continual innovation is being put at risk by an outdated provincial procurement system for engineering and design services.

In an effort to respond to numerous demands for public accountability and transparency over the years, the Society pointed out that the procurement system has evolved into one that focuses on the lowest price. Instead of project costing being measured by the life cycle costs of a major construction project (i.e. the inclusion of operating and maintenance costs), the current system inevitably concentrates on the short term (i.e. just design and construction) in order to keep costs down.

Another major challenge with the procurement system is the number of Ministries that are presently charged with making capital expenditures. While some Ministries are experienced in planning and managing large capital projects, there are other Ministries that lack

the expertise needed to ensure the Ontario taxpayer is well served.

Not surprisingly, when you combine inexperience with the current procurement system you begin to set the stage for failure. Instead of the Ontario taxpayer receiving innovative, cost effective projects that are completed on time and on budget, Ontarians are forced to swallow endless delays, extra costs and projects that lack any innovation or cost effectiveness.

Specifically, the Society pointed out that centralizing the planning and implementation of capital projects into one Ministry would ensure that projects will be planned and managed by those with current expertise in the area.

Much to the Society's delight, the Minister of Public Infrastructure Renewal, David Caplan announced the creation of a new agency on May 9th. The Ontario Infrastructure Projects Corporation (OIPC)'s mandate will be to provide expertise and implement best business practices for all areas of infrastructure planning, financing, construction, and management.

The Society's Quality Based Selection task force will now be working with the Ministry of Public Infrastructure Renewal and will offer to play a key role in advising the new Corporation.

## Borders in need of engineers

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creating opportunities for those who own a pump to share their successes with the community to inspire others to make the investment. This participatory approach is key, according to David, "for change to occur from the inside out."

The treadle pump project in Zambia illustrates the complexities of development. By partnering with community members, David and Paul have created interest in the technology. Though the integration

of these devices takes time, slowly burnt-out fields of maize are being converted into crops, securing livelihoods, nourishing people, and providing the foundation for an emergence out of poverty.

OSPE proudly supports Engineers Without Borders, the charity of choice for OSPE. For more information please visit [www.ewb.ca/ospe](http://www.ewb.ca/ospe).

*This story was provided by Brenna Donoghue, Director of Communications, Engineers Without Borders*

# View from the Chair

## Looking to the future

I really enjoyed attending OSPE's Annual General Meeting in May. I found the discussions stimulating and invigorating, and I'm looking forward to working on behalf of Ontario Engineers as OSPE's new Chair for 2005/2006.

There are several areas and issues where I want to concentrate, but before I start talking about our plans for the future, I want to congratulate our new Board members and thank our departing ones.

I've enjoyed working with Jennifer S. Moylan and John F. Clayton over the last few years, and their contributions should be appreciated by all engineers in Ontario. To our new Board members, Michael Monette, Michael Santaluce and John Schindler, thank you for stepping up to the plate. Your credentials are impressive, and I'm looking forward to getting to know you personally at OSPE meetings and functions.

Congratulations also, of course, to Walter Bilanski on his successful re-election to our Board.

Helping to set directions is a major role for any Chair, and I'm pleased OSPE's new strategic plan is ready to guide us through the next year and beyond. The Board has developed six strategic goals to transform our current organization into one that fits our vision for 2008.

First, we want to become the leading organization in advocacy on engineering issues. That means continuing to develop strong and useful relationships with civil



*Chris Cragg, M.A.Sc., MBA, P.Eng.,  
President and Chair*

servants and their political leaders. Our aim is to be talking to policy analysts and decision makers while they're researching an issue; before they've made recommendations and decisions, not after.

Our second goal is to protect the practice of engineering from external intervention.

There's pressure to open our profession up, allowing non-engineers and unlicensed engineers to carry out work now done by engineers. Clearly, an aggressive stance is required to halt this erosion of our profession, and we are already taking steps to deal with it.

Third, we want to develop new policy processes and mechanisms to maximize member participation.

We need to engage our members in discussions of policy issues, and get them involved at earlier stages of government policy development and law making. At the same time, we have to expand our early warning system, and increase our agility so we can better respond to fast-breaking issues.

Our fourth strategic goal is to ensure affinity programs and services are relevant to members. We're planning to ask our members what services and programs they'd find most useful, and then offer them what they want.

The fifth goal is simple yet ambitious: build membership in all categories.

We are looking at innovative strategies for marketing OSPE. We have to tell potential members about our services and communicate the benefits of membership. Then we have to ask them to join, in a compelling way.

Last, we want to nurture the growth of a community of professional engineers.

Professional engineers are busy people. We tend to be wrapped in our work and the daily business events, and that makes it tough to keep in touch with our broader engineering community.

Fortunately, engineers are comfortable with new technologies, so OSPE is planning to expand and promote on-line discussion forums offered on our website. We also plan to stimulate interaction by fostering alliances and networks within and outside our profession.

Plans that are filed away to be opened a year later at report time often fail to achieve their full potential, and this plan is too good to suffer a fate like that. Details are available on our website's members section for all to review.

# Building High Performers and High Potential

When OSPE hosted Ontario's first Industry Forum for employers of engineers on April 25-26, 2005, employers agreed that continuing professional development of engineers helps generate employees who are high performers, technically strong, or have high potential as business leaders.

The event, the first of its kind for OSPE, was very well attended and garnered praise from participants.

OSPE offers a wide variety of technical and non-technical courses throughout the year to prepare engineers to be the best in their respective fields and meet the needs of their employers. Now, courses are also available during the summer to meet the demands of our members and their tight schedules. For example, since the extension of the implementation deadline of Bill 124 from July 1, 2005 to January 1, 2006, we have added more Building Regulatory Courses on our website.

Currently, OSPE offers a wide range of customized and public programs, including technical courses, preparatory courses for PEO exams, project management, marketing and team building programs and more. OSPE also offers the innovative Master of Engineering in Design and Manufacturing program, in collaboration with the Advanced Design and Manufacturing Institute (ADMI). OSPE members can save 5 per cent for each course in the program.

Depending on the course or program, OSPE members can save up to \$150 on a course, and those who



*A packed room at the first Industry Forum for employers of engineers hosted by OSPE in collaboration with CCPE on April 25-26, 2005.*

register before an early bird date can save even more. A complete listing of OSPE course offerings with pricing and registration instructions is available at [www.ospe.on.ca/pd](http://www.ospe.on.ca/pd), or contact staff at [pd@ospe.on.ca](mailto:pd@ospe.on.ca) or (416) 223-9961, ext. 230, for more information.

## OSPE CAREER CENTRE – more exciting workshops and the 2005 OSPE Employer Compensation Survey

The Career Centre offers a variety of popular Shift Your Career Into High Gear workshops, available during the week and Saturday mornings. Here are some workshops now available:

- Interviewing in a Competitive Job Market (Sept. 24, 2005)
- Negotiating the Right Job Offer (Oct. 29, 2005)
- Selling Yourself in a Competitive Job Market (Jan. 28, 2006)
- Engineers Breaking Free: Exploring Contracting & Consulting Realities! (Feb. 25, 2006)
- Exploring Career Options for Engineers: What Next? (April 22, 2006)
- Internet as a Work Search Tool (May 27, 2006)

## 2005 Employer Compensation Survey – Participate Now!

In addition to providing valuable resources for engineers seeking jobs, the Career Centre offers a variety of services for employers looking to hire engineers, such as job posting, resume mining, salary information and more.

This summer, OSPE is conducting its 2005 Employer Compensation Survey. This comprehensive survey is being conducted for OSPE in partnership with Mercer Human Resource Consulting. Conducted for over 50 years, it's a popular and valued source of reliable information on engineers' pay. Engineering employers have been contacted by Mercer to participate in the survey, and results will be collected over the summer. Survey results will be

*See "Career Development Options", Page 7*

# Queen's Park extends Bill 124 Implementation to January 2006

Professional engineers busy preparing for the new building code exams have been given a six month extension. The extension announced in May comes in response to concerns raised by stakeholders about the ability of building officials and designers to meet the new building code requirements by July 1, 2005.

As a result the government has passed Ontario Regulation 236/05 which amends the Building Code to extend the implementation period from July 1, 2005 to January 1, 2006 for:

- Qualification requirements for building officials and designers (e.g. P.Engs)
- Registration requirements (i.e. qualified staff and insurance) for designers
- Timeframes for the review of building permit applications by municipalities
- Commencement of the first reporting period for the annual building permit fee report to be prepared by municipalities.

While the government has moved to address stakeholder concerns with respect to the Building Code there are still elements that will be implemented July 1, 2005.

More details on these elements can be found on our website at [www.ospe.on.ca](http://www.ospe.on.ca).

OSPE is a member of the Bill 124 Stakeholders group, which includes a number of associations, including Professional Engineers Ontario (PEO), Consulting Engineers Ontario (CEO), Ontario Association of Architects (OAA), the Ontario Association of Certified Engineering Technicians and Technologists (OACETT), the Residential Construction Council of Central Ontario (RESCON), the Ontario Building Officials Association (OBOA) and others. We have recently requested that the Ministry of Municipal Affairs and Housing accelerate the timetable for estab-

lishing the Building Advisory Council, a Council which was contemplated in the original BRRAG Report of 2000.

The Council would provide advice to the government on the implementation of Bill 124 in the short-term, and in the long-term provide advice to the government on policy, technical and administrative issues related to the Building Code Act, the Building Code, and other building-related matters.

## OSPE concerned about treatment of Professional Engineers by Hydro One

On April 25th OSPE voiced its concerns to the Minister of Labour, the Honourable Chris Bentley about the treatment of professional engineers by Hydro One.

In a letter to the Labour Minister, former OSPE Chair Annette Bergeron stated "We sincerely hope that it is not the intention of the government to allow Hydro One to endanger the safety of the power system by allowing the work of these experienced professional engineers to be done by unlicensed or inexperienced replacement workers".

Ms. Bergeron also pointed out in the letter that increasing the hours of its current professionals and reducing the compensation of future hires (young university graduates and immigrant professionals) while having provided substantial increases to senior management was unfair.

Ms. Bergeron urged the Labour Minister to step in and assist with resolving this dispute.

# Inside the Society

*Sharon L. Glover, M.B.A., Chief Executive Officer*

Volunteers are the lifeblood of any volunteer organization, and OSPE is no exception.

Serving your profession as a volunteer doesn't mean you have to give up a lot of your time. For example, we welcome comments from our members on issues that are developing in their particular sectors or industries. We take pains to monitor events and trends affecting our profession, but our eyes and ears are greatly extended through our members.

It can be as easy as sending me an email, or writing a more-detailed paper, it's up to you.

Another way you can help your profession is to participate in OSPE's policy work by sitting on one of our task forces or committees.

Right now, we're looking for engineers who have some background or experience with brownfields. The assessment and use of brownfields – contaminated industrial lands – will have a significant

impact on the engineering profession in Ontario. The definition of "qualified person" in the proposed Brownfields Regulation 153/04 is of particular interest to us, because this will affect how much work can be carried out by professional engineers or others.

We're also looking for members who want to assist in our review of the Professional Engineers Act. This legislation hasn't been significantly reviewed or revised in over 20 years, and it's starting to show its age, so we're looking for volunteers to help determine what changes need to be made.

The required time commitment for this review will be relatively short, because we want to have recommendations for change in place as soon as possible.

So, if you think you might want to help your profession in either of these areas, or on some other topic, please drop me a line, give me a call or visit the OSPE website at [www.ospe.on.ca](http://www.ospe.on.ca) for more information. We're always looking for qualified volunteers, and we're always ready to hear your thoughts. That's what volunteer-based organizations are all about.



# Bergeron Addresses Forum

OSPE's former Chair Annette Bergeron was invited to participate at a recent Premier's Leaders Forum on Strategic Growth, held in Toronto May 12. As one of 35 Ontario business leaders invited, Ms. Bergeron was asked to provide an engineer's perspective on some of the challenges affecting infrastructure renewal in Ontario.

Attendees included such luminaries as Premier McGuinty, Deputy Government House Leader and Minister of Public Infrastructure Renewal David Caplan, CIBC CEO John Hunkin and Conference Board of Canada head Anne Golden.

"I was really pleased I could speak early in the forum, and I think my remarks helped set the tone for these high-level discussions," says Ms. Bergeron. "I was also encouraged to hear Minister Caplan say he wants to see proper engineering with an appropriate procurement process in place, and that's something we've been pushing the government on for many months."

"We heard a lot about innovative approaches to infrastructure renewal, and I was able to deliver OSPE's message that introducing a Quality Based Selection model to the government's procurement process is the demonstrated way to facilitate engineering innovation."

Ministry of Municipal Affairs and Housing Minister John Gerretson was also present at the forum, and Ms. Bergeron was able to speak to him at length about OSPE's position on changes to the Building Code in Bill 124.

The timing of the leaders forum was significant, given recent news about government investments. On May 9, as mentioned in our QBS story, Mr. Caplan announced the formation of the new Ontario Infrastructure Projects Corporation (OIPC), an independent agency reporting to the Minister of Public Infrastructure Renewal. Its mandate will be to provide expertise and implement best business practices for all areas of infrastructure planning, financing, construction and management, with a focus on Alternative Financing and Procurement (AFP) projects.

The framework for the new agency laid out five fundamental principles for public infrastructure projects:

- The public interest is paramount.
- Value for money must be demonstrable.
- Appropriate public ownership and control must be preserved.
- Accountability must be maintained.
- All processes must be fair, transparent and efficient.

Over the course of the next five years, the government and its partners plan to invest more than \$30 billion in public infrastructure in Ontario. The government is concentrating its investments in areas Ontarians have said are their priorities: health care, education and economic prosperity.

## Career Development Options

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available in the fall. Participating employers can take advantage of substantial savings on the purchase of the survey results – 60 per cent. The survey results will be available in PDF format, as well as Mercer's PayMonitor®.

If you're an employer of engineers and would like to find out more about the survey, visit [www.imercer.ca/ospe](http://www.imercer.ca/ospe), or contact Mercer at

[info.services@mercer.com](mailto:info.services@mercer.com) or by phone at 1-800-631-9628. Completed questionnaires were due to Mercer by June 30, 2005.

For more information about OSPE's Career Centre, visit [www.careercentre.ospe.on.ca](http://www.careercentre.ospe.on.ca) or contact us directly at 416-223-9961 ext. 232, or by email at [careercentre@ospe.on.ca](mailto:careercentre@ospe.on.ca).

### WANT TO KEEP UP TO DATE WITH EVEN MORE SOCIETY NEWS...

Did you know that OSPE publishes a monthly e-newsletter called *Society Notes*? Keep up to date on the latest OSPE news, events and offers by making sure that you are opted-in to receive *Society Notes*. Simply visit your online profile in our Members Only section on our website at [www.ospe.on.ca](http://www.ospe.on.ca) and check-off the opt-in to receive *Society Notes* box and you're done. It's that easy! Be sure to check that your email address is correct and that your profile is up to date.

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