

A low-angle photograph of three tall, cylindrical brick chimneys against a clear blue sky. The chimneys are made of dark red brick with horizontal white bands. The largest chimney is on the left, and two smaller ones are to its right. The text is overlaid on the image.

PEO GIVES
THUMBS UP
TO NEW
MANUFACTURING
INITIATIVE

THE ENGINEERING REGULATOR HAS JOINED FORCES WITH OTHER GROUPS IN AN AMBITIOUS CAMPAIGN TO WIN BACK LOST MANUFACTURING OPPORTUNITIES TO ONTARIO.

By Michael Mastromatteo

Ontario's engineering regulator is throwing its weight behind a bold initiative aimed at bolstering Ontario's manufacturing sector.

Take Back Manufacturing (TBM) is a campaign launched by the Toronto chapter of the Society of Manufacturing Engineers (SME), which it describes as a multi-faceted effort to persuade government, the public, industry and other stakeholders of manufacturing's significance to Ontario's long-term prosperity and economic competitiveness.

The ultimate goal of TBM is to implement economic policy changes to enable the recovery of a declining manufacturing sector. SME believes the trend in the last two decades to under-capitalize local manufacturing technology, reduce capability and related education, and allow extensive migration of production to offshore sources has harmed Ontario and the rest of the country by leading to severely unbalanced import-export trade that is counterproductive to the Canadian economy as a whole.

PEO council endorsed PEO's support of the TBM initiative at its September 2011 meeting on the basis that migration of Ontario's manufacturing sector to offshore locations has taken a toll on the engineering profession, including the technical deskilling of members and the lack of the employment opportunities engineering graduates need to become licensed.

The Ontario Society of Professional Engineers (OSPE) also supports TBM.

Nigel Southway, operations manager for TBM, says that while the problems have been identified, there has been little action to shore up the manufacturing sector.

"The goal of TBM is to raise awareness of this issue and ensure that industry, government and the educating bodies get it together to correct the decline and support a sustained recovery," Southway told *Engineering Dimensions* November 14. "It's clear that the globalized economic picture now looks very bleak for emerged economies and this has clearly proved our point that a TBM approach is the only way to reverse this picture."

TBM includes a full roadmap of activities, such as publicity, crafting its message to specific audiences, and a skills development component, aimed at promoting new entrants to the field through four career stages: trade, technician, technologist and engineer.

The initiative emphasizes reducing imports and bringing manufacturing home (reshoring), or rebuilding local capacity to better support local demand. It also seeks to develop "the correct infrastructure" by way of education and training. In fact, phase 3 of TBM includes such proposals as a joint apprenticeship and training board, a professional retraining program, career development activities, and a technology development effort to ensure the province can sustain the manufacturing opportunities starting up in or flowing back to Ontario.

Southway says talk of Ontario as a leader in innovation or the epicentre of a resource-based or service economy is meaningless without a solid, sustainable manufacturing base.

"A lot of nonsense has been talked about innovation as a critical imperative for our collective success," he says, "but without manufacturing, how is it going to work?"



He adds that current employment patterns have proven false the notion that Ontario can replace manufacturing with service industries. As for Canada and Ontario becoming a resource-based economy, Southway says: "All that the resource-based [model] has done has inflated our currency and made us more dependent on other countries to take our resources. Let's hope they can continue to take them."

Southway suggests that by supporting TBM, PEO might bring regulatory clarity to the problem of outsourcing of engineering work.

"I would say the erosion of jobs and career opportunities due to globalization started at the trade and shop floor skill levels, but is clearly moving into the middle management and professional ranks of society and will accelerate as we lose the critical mass of manufacturing and when product development also moves offshore," he says. "In fact, human capital is far more portable than manufacturing plant capital, so we will see virtual development labs in the global sense expand very rapidly and they won't be centred here. Outsourcing of engineering work is a reality now, and I do not believe PEO has a handle on how that will be regulated."

SECTORS IN DECLINE

Long celebrated as Canada's manufacturing heartland, Ontario in recent years has suffered with globalization-inspired moves to locate manufacturing and assembly plants in developing countries. While much of this offshoring is done to save on labour costs—and provide ostensibly cheaper consumer goods in North America—the practice has seriously undermined Canada's traditional manufacturing sector.

Statistics Canada's *Manufacturing: The Year 2010 in Review* reported that despite some modest gains in the previous 12 months, Canada and particularly Ontario's manufacturing sectors have experienced significant declines over the last decade.

A similar Statistics Canada manufacturing report for 2009 found that manufacturing sales in Canada declined more than 17 per cent in 2008, the largest annual decrease since the manufacturing data series began in 1992.

"Every province and territory posted lower sales in 2009," the Statistics Canada report suggests. "Ontario remained the largest province in factory output. Its manufacturing sales decreased 18.5 per cent to \$223.4 billion, the lowest level since 1996. Ontario held a 45.2 per cent share of total manufacturing sales in Canada in 2009, down from more than 55 per cent in 1999."

According to Statistics Canada, 322,000 manufacturing jobs disappeared from the Canadian economy between 2004 and 2008.

Southway says there is real value in having PEO and its partners in the engineering profession endorse TBM, especially in terms of lending substance to the initiative and providing an established

forum for helping influence government policy in an area crucial to both the public and engineering practitioners.

“Our clear concern is that without a healthy manufacturing base in Ontario, we will be disadvantaged as practising engineering professionals, as manufacturing is very often the outcome of an engineering journey, and is also the stimulation and incubator for the generation of innovative products and engineering solutions in the future,” Southway says. “In other words, it’s a ‘requirement’ for the survival of the overall engineering profession—unless you want a society full of local engineers who just service the consumers of products someone else develops and makes.”

Marie Laird, chair of SME’s Toronto chapter, says that as one of the most affected stakeholders, PEO is a key player in the TBM effort.

“We have been very pleased and excited to have PEO’s support for this important initiative,” she told *Engineering Dimensions* November 2. “The entire purpose of Take Back Manufacturing is to get all the groups with a vested interest in the success of manufacturing in Ontario working together to support its revitalization. Though the role each organization will play may vary, we are all coming from the same vantage point that strong manufacturing in Ontario will work to everyone’s benefit and we must work together to ensure its success and overcome the challenges we face.”

EXPERIENCE AND AUTHORITY

Laird said that as the licensing and regulating body for Ontario engineers, PEO brings experience and authority to TBM. “[PEO] will also help make clear to those outside the TBM forum that this initiative is a serious effort and that the work being done is credible. We look forward to working with PEO and to the success of the Take Back Manufacturing initiative.”

Indeed, PEO’s involvement in TBM complements its preparations for the repeal of the industrial

exception, which allowed non-licensed individuals to oversee an act that is within the practice of professional engineering in relation to machinery or equipment, other than equipment of a structural nature, for use in the facilities of the person’s employer in the production of products by the person’s employer (see “Exception serves to cloud licensing situation in Ontario,” p. 38.). The repeal of this exception is one of the changes to the *Professional Engineers Act* as a result of the provincial government’s *Open for Business Act, 2010*. Because implementation of the repeal will be at a future date, PEO’s involvement in TBM will provide it an additional opportunity to work with existing manufacturers to ensure they understand and are ready for the change, as well as ensure new manufacturers understand clearly Ontario’s licensing requirements.

To fully activate its participation, PEO will send a PEO councillor to act as an observer at TBM events to keep council updated on the initiative’s progress. The Government Liaison Committee will also keep abreast of developments so that the PEO Government Liaison Program can be used “for maximum leverage.” TBM has yet to approach the provincial government, but is working with partners to fine-tune the message.

Among the next steps, PEO’s West Toronto Chapter is co-sponsoring a Take Back Manufacturing forum January 25 at the University of Toronto’s mechanical engineering building in downtown Toronto as part of PEO’s commitment to publicize its support for the program. Σ

See the SME website at www.sme-tbm.org for more details on the Take Back Manufacturing initiative.

