

# BUILDING A SUSTAINABLE AND PROSPEROUS ONTARIO

**The Issue:** Climate change is perhaps the biggest threat facing our planet today, setting challenges that affect every corner of the globe and demand action from everyone on it, including universities. Ontario's universities recognize that they must be active partners in the fight against climate change, in order to ensure all Ontarians benefit from a sustainable and prosperous future.



## KEY FACTS

# 17/21

The number of Ontario universities that have added research initiatives or institutes on sustainability since 2013

### The background

- Protecting our environment and building a sustainable future requires a commitment from all industry sectors.
- It requires a commitment to clean energy and energy efficiency. According to recent studies, "less than 40 per cent of primary energy production typically ends up in the form of useful energy."<sup>1</sup>
- Ensuring buildings new and old are up to the highest environmental standards is central to reducing emissions. Two-thirds of greenhouse gas reductions will come from retrofits to existing building stock, according to a recent study.<sup>2</sup>
- Ontario's universities are actively engaged in enhancing sustainability. A survey of 17 campuses found that 12 generate on-site renewable energy and all surveyed universities have buildings built to Leadership in Energy and Environmental Design (LEED) Standards.
- Technology is also essential to facing climate change. University research is helping create smart technologies that reduce energy use, while partnerships with industries are resulting in sustainable new ways of working that help create a green economy.
- Building a sustainable province also requires changes to personal behaviour.<sup>3</sup> On our campuses, it is often our students who guide the way. Further research and social innovation can develop new approaches to help Ontarians build the path to sustainability.
- By partnering across sectors to perform this wide range of work, Ontario can build a future that's both sustainable and prosperous. As the Federation of Canadian Municipalities has argued, the benefits of a green economy "would be spread across Canada, in both large and small communities, rather than being isolated in one or a few pockets."

**“Canada has certain advantages in facing this transition [to a low-carbon economy]. It is already a large producer of renewable energy, notably hydroelectric power. And, given our highly educated population, Canada has the capacity to innovate in green technologies.”**

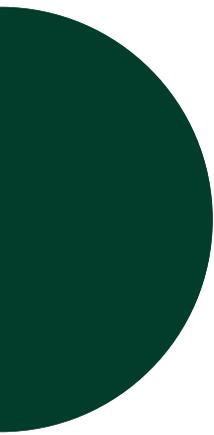
– Timothy Lane, Deputy Governor of the Bank of Canada

<sup>1</sup> Israel, Benjamin and Ralph Torrie, David B. Layzell and Bastiaan Straatman. "Visualizing Canada's Energy Systems: You Can't Manage What You Can't See!" Canadian Energy Systems Analysis Research, December 13, 2016.

<sup>2</sup> Frappé-Sénéclauze, Tom-Pierre, Dylan Heerema, Karen Tam Wu. Deep emissions reduction in the existing building stock: Key elements of a retrofit strategy for B.C. The Pembina Institute, 2017.

<sup>3</sup> Federation for the Humanities and Social Sciences. "Making Inclusive Innovation a Reality." September 2016.

<sup>4</sup> Thompson, David and Shannon A. Joseph. "Building Canada's Green Economy: The Municipal Role." Federation of Canadian Municipalities, 2011.



#### KEY FACTS

# 12/17

Surveyed Ontario universities that generate on-site renewable energy

Every year, Ontario's universities release the Going Greener report, highlighting how every institution is helping fight climate change

#### CONTACT US

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### What Ontario's universities are doing

Ontario's universities are drawing on the broad strengths and expertise of our students, staff, researchers and faculty to help address Ontario's environmental challenges. Some of the work taking place includes:

- Increasing the energy efficiency of older buildings and other initiatives that ensure our campuses meet the highest environmental standards. Students' passion for environmental change also helps drive our initiatives, leading to great ideas like sustainable, green-roofed pavilions and bicycle shelters powered by solar panels, in an effort to shrink university campuses' carbon footprint.
- Collaborative work is also underway between universities, local government agencies and other organizations to help communities adapt to a changing climate. For example, this work is helping address flood risk in homes and helping municipalities plan for and address extreme weather events.
- Since 2013, 17 of Ontario's 21 universities have added new research initiatives or institutes on sustainability. Research on new biofuels and clean energy sources, electric vehicles and related technology, construction and low carbon homes are ongoing, and are just some of the ways that Ontario's universities work directly with industry and government to ensure tomorrow's economy is both sustainable and prosperous.

### How government can help

To build a clean and green Ontario, the Ontario government should:

- Support advancements in clean technology and climate science that will move the results of university research into businesses and communities, helping all Ontarians bring greater energy efficiency and sustainability into their homes and offices.
- Encourage conservation and energy efficiency through funding to repair or retrofit aging infrastructure, with dedicated investments to postsecondary institutions.

### Partnering for a green Ontario:

Through the Centre for Hybrid Automotive Research and Green Energy, the University of Windsor is partnering with companies such as Ford Canada and D&V Electronics to develop next-generation battery and engine technology to advance the development of electric vehicles.

At the Centre of Excellence for Sustainable Mining and Exploration, the mining industry is collaborating with Lakehead University to ensure exploration and extraction is sustainable and done in consultation with First Nations and Métis communities.

For more examples of how universities are helping build a clean and green future, visit [ontariosuniversities.ca](http://ontariosuniversities.ca).

### Partnering for a better future

- By supporting energy efficiency, developing new technology, implementing green policies and sparking partnerships across all sectors, Ontario can become a world leader in sustainability and ensure that Ontarians in the future benefit from a thriving green economy and clean rivers, forests, lakes and parks for all to enjoy.

### Stay informed

- Go to [ontariosuniversities.ca](http://ontariosuniversities.ca) to learn more about how to build a sustainable and prosperous Ontario.