

Governments should support solar power manufacturing: study

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Joshua Pearce feels governments should be aggressively supporting large-scale solar power manufacturing plants.

Canadian and provincial governments could spend \$2.4 billion to build a large scale solar photovoltaic manufacturing plant and then give it away for free and still earn a profit in the long run, according to a financial analysis conducted by the Queen's University Applied Sustainability Research Group.

Queen's University Mechanical Engineering Professor Joshua Pearce conducted the study – to be published in the August edition of the academic journal *Energy Policy* – to find out if it makes economic sense for governments to support solar cell manufacturing in Canada. He was surprised to discover the answer is an overwhelming yes even in extreme situations and feels governments should be aggressively supporting this industry to take advantage of the financial opportunity.

"This study uses hard financial numbers. Everything we did is transparent and all our equations are in the study," says Professor Pearce. "The benefits of encouraging solar manufacturing in Canada are clear and massively outweigh the costs."

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The report looked at six different scenarios: everything from building a plant and giving it away or selling it to more traditional and less costly loan guarantees or tax holidays for a private sector company to construct the plant. In all the scenarios, both federal and provincial governments enjoyed positive cash flows in less than 12 years and in many of the scenarios both governments earned well over an eight per cent return on investments ranging from hundreds of millions to \$2.4 billion.

The revenues for the governments of nearly \$500 million a year, were determined from taxation (personal, corporate and sales), sales of panels, and saved health, environmental and economic costs associated with offsetting coal-fired electricity.

Queen's started the study last summer, before the Ontario government announced a \$7-billion power production and manufacturing deal with Samsung in January. Some criticized the deal but Professor Pearce says Canadians are the winners.

"Canada will really make out if Samsung comes through with what they said they are going to do. We gave them a little bit of incentive and Samsung will give us a lot of jobs, less pollution, and a long term substantial source of revenue. We are absolutely winning on this deal – there is no question," Professor Pearce says. "The market is much larger than the Samsung deal. The question now is how to bring even more photovoltaic manufacturers to the province."

The Energy Policy report, co-authored by Queen's student Kadra Branker, studied the financial impact in Ontario but Professor Pearce says the numbers can apply to all provinces in Canada.

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