

# Intelligence MEMOS



From: David Popp  
To: Governments in Alberta, Ontario, and across Canada  
Date: July 19, 2016  
Re: THE FIVE RULES FOR GOVERNMENTS THAT WANT TO GO GREEN

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Governments across Canada are rolling out plans to support the deployment of low-emission technology. Ontario will begin a cap-and-trade market as of January 1, 2017, but the province's Climate Change Action Plan includes up to \$375 million of research and development (R&D) support for low-carbon technologies, and billions more for subsidies to encourage consumers and businesses to use low-emission technology. Alberta's government is proposing a carbon tax, with some revenues devoted to supporting low-emission technology. The federal government's policies include a \$2 billion Low Carbon Economy Trust to support projects that reduce carbon emissions.

There are five rules your governments – and others considering similar plans – should follow to get the most of your plan.

## #1 Carbon price, carbon price, carbon price

Supporting technology development means not only investing in new technologies but also creating demand for clean technologies throughout the economy. Without policies that reflect the social cost of damages caused by pollution, newly developed low-emission technologies will not spread through the marketplace.

## #2 Limit subsidies for technology adoption

When faced with a mandate to provide alternative energy, firms focus their innovative efforts on the technology that is closest to market. Incentives for commercialization and adoption provide less incentive than R&D subsidies do to develop technologies with longer-term needs.

## #3 Use research and development funding to complement private sector activity

Government R&D potentially crowds out private R&D efforts when governments target applied research topics. Government R&D will be most effective if it focuses on breakthrough technologies that are not yet close to market. One-time grants to small young firms that would otherwise have difficulty financing the fixed costs of commercialization also help complement private sector activity.

## #4 Don't go it alone

Foreign markets are many times larger than the domestic market for low-emissions technology. On average, increases in foreign demand have twice the impact on low-emissions innovation as domestic demand. The ability of Canadian firms to compete in global markets will be most important for developing a Canadian clean energy technology sector.

## #5 A mix of policies work best, but a carbon price is most important

While combining both R&D subsidies and carbon prices yields the largest economic benefit, a policy using only the carbon tax achieves 95 percent of the benefits of the combined policy. In contrast, using only a R&D subsidy attains just 11 percent of the benefits of the combined policy.

It's time that you take a look at your plans for rolling out low-emissions technology to make sure they follow these five rules. If not, your policies are going to be an overly costly way to reach Canada's long-term greenhouse gas emissions reduction targets.

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