



CANADIAN GLOBAL AFFAIRS INSTITUTE
INSTITUT CANADIEN DES AFFAIRES MONDIALES

Understanding the Shift in Energy Security

by Petra Dolata
April, 2017

ENERGY SERIES

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Prepared for the Canadian Global Affairs Institute
1600, 530 – 8th Avenue S.W., Calgary, AB T2P 3S8
www.cgai.ca

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ISBN: 978-1-988493-31-2



Global shifts in government policies and in public opinion with regards to energy transitions and energy security will affect the demand for fossil fuels produced in Canada and elsewhere. In order to understand and respond to these changes, it will be crucial to differentiate between short-term and long-term trajectories.

LONG-TERM TRAJECTORIES

For over a decade now, energy security has been recalibrated to increasingly include sustainability and efficiency objectives. Both the International Energy Agency (IEA) and the European Union (EU) insist that energy security not only means “the uninterrupted availability of energy sources at an affordable price” (IEA) but also “clean and sustainable energy” (EU). Government policies such as the German *Energiewende* or the EU 20-20-20 targets have introduced a gradual shift away from fossil fuels. A similar development can be expected in China, which has already introduced laws that address air pollution and climate change. Even OPEC producers are planning for a low-carbon future for their own energy consumption, intending to use their sovereign wealth funds to finance these shifts. While most of these policies stipulate an increase in renewable energies, they also leave room for natural gas as a bridge or transitional energy resource, especially for heating purposes. Power plants will be refitted to phase out CO₂-intensive coal.

Nuclear power, while undergoing a revival in some countries and being introduced in the oil-producing countries in the Gulf region, could potentially play a larger role in the long-term future, especially if CO₂ reduction goals cannot be met as envisioned. However, the current lack of investment in new nuclear power plants, public opposition and long lead times make it difficult for nuclear power to make such inroads in the future energy mix. Renewables will also need new infrastructure, but the more decentralized character of some of these sources will make construction more flexible and achievable in the mid-term.

As renewables increase their share in the energy mix, energy grids and systems will become more decentralized and will allow for small-scale local solutions. While peripheral areas such as Canada’s northern and Arctic regions will welcome this because the access to energy may help overcome current energy insecurities (energy poverty), it will also mean that business, and especially large-scale energy corporations, will lose consumer markets in the core segment of their commercial activities. Investments will be redirected to industries and activities that provide renewables technology as well as energy infrastructure. With the exception of transport, where oil will continue to play a crucial role, fossil fuels will become less of an internationally tradeable commodity and possibly lose some strategic significance. As economic actors compete more fiercely for diminishing markets, (global) public opinion might be able to play a more deciding role. As we have seen with the discussions on offshore Arctic drilling, some of the big multinationals such as Total have already decided to accommodate public resistance to drilling in the Arctic. In general, broader public discussions on energy justice and energy poverty will further redefine the meaning of energy security. They will address questions of equal access to energy as well as increased community involvement in energy matters. Here is where local and



global activism potentially impacts business activities. Discussions such as those focusing on free, prior and informed consent may attract increasing attention in such a scenario.

Besides focusing on the supply side through championing renewables, demand-side measures, including energy efficiency targets, will become more important. These have the potential to considerably lower energy demand, but they are not easy to accomplish, as they would add to job losses in established coal, oil and gas industries. However, they will also provide new opportunities for technological innovation and entrepreneurship. At the same time, they may create new global inequalities as they depend on existing strengths in STEM education and research as well as favourable investment climates for small and medium-sized enterprises.

Long-term prognoses such as the above are difficult to substantiate and there may be legitimate skepticism about the expected shift toward renewables and a low-carbon future. However, the fact that discussions on sustainability and efficiency have continued and even picked up while oil prices were low — and thus did not necessitate the search for alternatives — shows the longer term and possibly irreversible trend toward an increasingly decarbonizing world.

SHORT-TERM TRAJECTORIES

In the short term, partisan politics affect energy policies, particularly in democracies, and so do geopolitical crises. Currently, the two most influential developments are the rollback of climate change-related energy measures in the U.S. in the name of job creation and European discussions of energy independence from Russia. Since the mid-2000s, new NATO and EU members in Central and Eastern Europe have pushed for the inclusion of European energy security because their high dependency on Russian energy supplies made them more sensitive to their energy vulnerabilities and more willing to define them as a matter of national security. While they were muted towards the end of the decade, these traditional energy security concerns were revived as a result of events in Ukraine since 2014. This caused the EU to pass an energy security plan which proposes a number of strategies, one of which is to diversify supplier countries and routes. As long as these supply dependencies and vulnerabilities to disruption persist in the region, diversification strategies will prompt European countries to look for alternative suppliers. This is where natural gas from Canada shipped through LNG facilities in the East could become attractive for European markets.

The direction of energy policy under the new Trump administration is more important for Canada in the immediate future. The official America First Energy Plan prioritizes creating coal jobs, ensuring prosperity for American workers and guaranteeing U.S. energy independence. President Donald Trump's March 28 executive order confirms this by repealing many of former president Barack Obama's energy policies that address climate change and pledges to "review existing regulations that potentially burden the development or use of domestically produced energy resources and appropriately suspend, revise, or rescind those that unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with the law." Experts agree that the U.S. coal industry cannot create many more jobs, since increasing mechanization has taken most of these. Nor can it



compete internationally against foreign coal (lower priced Columbian coal) or nationally against domestic energy sources (natural gas through fracking). Despite these challenges, Trump will pursue this kind of energy policy, as energy security is now defined as meaning job security and translated into a push for domestic energy production at any price. The emphasis on U.S. domestic production will result in a strengthening of small, medium-sized and independent producers who traditionally are more active with respect to upstream activities within the U.S. and production from unconventional sources. There will be new discoveries in offshore regions including the Arctic; however, these will be increasingly developed by mid-size independent producers and/or relative newcomers to these oil and gas plays.

To summarize: In the short term, energy security will continue to mean ensuring energy independence and a secure supply of oil and gas. In addition to this traditional understanding of the concept, the U.S. will increasingly define it as ensuring job security. In the long run, however, energy security will include sustainability and efficiency targets as well as address issues of energy justice and energy poverty.

RECOMMENDATIONS

- Support natural gas as a transitional energy resource. This includes facilitating infrastructure (pipelines and LNG facilities). In the short term, LNG shipments could also be attractive for Europe which hopes to diversify its natural gas intake away from Russia;
- Differentiate between short-term pressures on energy policies due to their significance for the creation of jobs as well as their strategic and geopolitical implications and long-term redefinitions toward energy efficiency and sustainability goals;
- Engage in public discussions which combine a mid-term solution of natural gas with longer-term trajectories toward renewables and explain how both are part of the path toward a low-carbon society;
- Create a favourable investment climate for small and medium-sized enterprises that can push the shift toward renewable energy through technological innovation and providing infrastructure needs;
- Encourage technological and entrepreneurial solutions to local and decentralized energy supply (northern and Arctic regions, Indigenous communities) as best practice;
- Engage in circumpolar and global discussions on free, prior and informed consent by highlighting best practices with regards to existing co-management arrangements in Canada;
- Engage internationally in discussions on energy justice (equal access to energy) and energy insecurities (energy poverty).

About the Author

Dr. Petra Dolata is Associate Professor and Canada Research Chair (Tier II) in the History of Energy at the University of Calgary. She is a Senior Research Fellow at the Centre for Military, Security & Strategic Studies and co-convenor of [Energy In Society](#), a working group at the Calgary Institute for the Humanities. Her research focuses on energy security, European and North American energy history after 1945, and the role of energy in the circumpolar Arctic.

Canadian Global Affairs Institute

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