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## The Road to Low/Zero Carbon Heating Systems: Policies and Approaches for Success

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4 October 2018, 12:00 -14:00 UTC

The combustion of fossil fuels (such as oil, coal and natural gas) is a primary source of heat production, which results in nearly 40% of energy-related CO<sub>2</sub> emissions.<sup>i</sup> Space and water heating consume nearly half of this produced heat<sup>ii</sup>, and energy demand for heating purposes is expected to continue to grow in the future<sup>iii</sup>. Increasing efficiency of heating systems and reducing dependency on fossil-fuel burning technologies present significant opportunities to lower anticipated CO<sub>2</sub> emissions.<sup>iv</sup> Heat pump technologies, including those designed to operate more efficiently in cold climates are an integral part of this shift.<sup>v</sup> However, there are many factors, including low consumer awareness, inadequate government policy, low energy prices, and insufficient access to efficient technologies, that hinder the deployment of these energy efficient technologies.

This SEAD Policy Exchange forum (SPEX), hosted in collaboration with the International Energy Agency (IEA) will examine the challenges to adopting low/zero carbon heating systems in the residential sector, different approaches that have been taken to tackle these challenges, and the opportunities for success in the future.

The IEA will introduce energy efficient heating systems, discuss barriers to heat pump promotion, and share perspectives on how different policies can successfully transition to low/zero carbon heating. Three case studies will explore these policies in more detail, highlighting national and regional experiences, challenges, and lessons learned. Firstly, Natural Resources Canada will present their challenges and successes in deploying cold-climate heat pumps, through different national actions and policies. The European Commission will then discuss how current minimum energy performance standards and labels have contributed to promoting low/zero-carbon heating products across the European Union, and where they see potential opportunities for improvement. Finally, the Swedish Energy Agency will share their efforts to promote heat pumps through innovative incentives and policies. The presenters will address issues such as:

- What are the major barriers and challenges to promoting and adopting low/zero carbon heating systems and cold-climate heat pumps?
- How can countries use policy tools and incentive programs to promote the adoption of high-efficiency heating systems, including cold-climate heat pumps?
- Where are the biggest opportunities for reducing potential emissions within residential heating systems? What could help to achieve these opportunities?



- Who are the agents of change (e.g. national governments, utilities, consumers)?
- What are the lessons learned from your country or region's experience?

Webinar participants will have the opportunity to ask questions, share their perspectives and lessons learned, and engage in discussions with policymakers and experts from around the globe. Participants are encouraged to consider and share thoughts on the following:

- What are the major barriers to promoting high-efficiency heating systems and cold-climate heat pumps? How should governments and industry address these challenges and what types of resources or assistance are required?
- What policies and policy mechanisms can be effective in overcoming these barriers?
- What are effective economic incentives that can drive wider adoption of low/zero carbon heat pumps?
- Is there an opportunity or appetite for collaboration? Between regions, countries, or governments, industry and civil society? What could collaboration involve?
- Is there a need for additional research? Who is best placed to do this research? SEAD? Others?
- Could a collaborative campaign help drive the transition to efficient heating? What would this look like?<sup>vi</sup>

For more information on the SPEx and to find out how to participate, visit the SEAD website: [www.superefficient.org/about-us/sead-policy-exchange-forum](http://www.superefficient.org/about-us/sead-policy-exchange-forum)

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<sup>i</sup> Collier, U., Renewable heat policies - Delivering clean heat solutions for the energy transition, OECD/IEA, 2018

<sup>ii</sup> Ibid.

<sup>iii</sup> Eisentraut, A. and Brown, A. Heating without global warming - market developments and policy Considerations for Renewable Heat, IEA, 2014

<sup>iv</sup> Mission innovation, Affordable Heating and Cooling of Buildings Innovation Challenge, <http://mission-innovation.net/our-work/innovation-challenges/heating-cooling-challenge/>

<sup>v</sup> IEA, Energy Efficiency 2017,

[http://www.iea.org/publications/freepublications/publication/Energy\\_Efficiency\\_2017.pdf](http://www.iea.org/publications/freepublications/publication/Energy_Efficiency_2017.pdf)

<sup>vi</sup> See, for example, the Global Lighting Challenge or the Advanced Cooling Challenge under the Clean Energy Ministerial, <http://www.cleanenergyministerial.org/campaign-clean-energy-ministerial/advanced-cooling-challenge>