

# Applying a humanities approach to energy use

*Petroculture describes the current global culture in which we live. It refers to a society which has been organised around the energies and products of fossil fuels and the capacities, situations and contexts it creates. Professor Imre Szeman from the University of Waterloo, co-director of the Petrocultures research group and co-investigator with Future Energy Systems, focuses his research upon energy use and its social, cultural and political implications using a humanities-based approach. Such an approach is particularly novel because questions around energy usage have historically been addressed by the sciences.*

The use and abuse of energy have had a significant impact on the current state of the planet. This is particularly apparent in the use of fossil fuels: coal, oil and natural gas. There is a tendency to perceive energy as being a neutral aspect of social life. However, the forms of energy we use and how we use them influence multiple aspects of society. This impact stretches far beyond how we work (in factories instead of fields) and how we move around (using horsepower instead of horses). The relationship to our dominant energy form is deeper, pervasive, and constitutive: we are inhabitants of a “petroculture”. Our expectations, behaviours and conceptions have all been shaped by the expanded energies of the fossil fuel era. The Petrocultures Research Group, co-directed by Professor Imre Szeman, was established in 2011 with the aim of developing a deeper understanding of the way in which we use energy, using a humanities-based approach. The research group began investigating how fossil fuel energy in the 20th century shaped and influenced developments across human society. The work of Petrocultures has in turn led to the development of the Transition in Energy, Culture and Society project as part of the Future Energy Systems research network at the University of Alberta, which explores the social and cultural transitions that will need to take place in support of energy transition.

## ENERGY AND PETROCULTURE

Energy is a central aspect of our social infrastructure. However, the significance of energy usage both culturally and socially

has yet to be fully recognised. Addressing questions relating to the meaning of living in a petroculture has become increasingly important because of the direct link between energy use and the environment. The rapid expansion of the population and thus the greater use of energy has had a colossal impact on the state of the environment. Burning large amounts of fossil fuels has produced CO<sub>2</sub> emissions, which is the main cause of global warming. There is a need to transition from fossil fuels to forms of renewable energy in order to mitigate the negative consequences of global warming.

## ENERGY TRANSITION

Global society must undergo an energy transition, a shift from an economy and society based on energy derived from fossil fuels, to an economy and society based on a mix of energy forms. This energy transition will constitute one of the greatest social experiments in human history, characterised by a planned, plotted, predetermined and global shift from a petroculture towards a new type of society. This provides both a challenge and an opportunity to transition to a society that is more like the one many of us want to live in – one that is collective, equitable, and just in both its practices and principles.

Some nations, such as Germany, are already heavily engaged in the process of energy transition. In Canada, the concept of energy transition has tended to be conceptualised as being mainly a technological issue, one to be addressed by scientists. However, it is important to acknowledge the way in which energy usage over the past two centuries has fundamentally shaped human relations. As a result, energy transition needs to involve social, political and cultural



Above: Participants in the first After Oil School (2015).



Right: Petrocultures artist Hannah Imlach captures the signs of oil culture in the Canadian Rockies, just outside of Banff National Park.

transition, with attention given towards the way in which energy has influenced us and to the importance of energy to human communities. The most difficult aspects of energy transition are those which are not immediately visible. They impact upon our experiences and expectations we take for granted in daily life. Making the shift from petrocultures to other cultures requires a change in who and what we are – not just energy with which to drive our cars, for instance, but a hard look at why we all need cars and whether we can actually all have cars as part of a sustainable future.

The task involves a re-imagining of modernity and an ability to recreate ourselves as different kinds of beings than the ones who have built a civilisation based upon non-renewable forms of energy. This requires building habits aimed at protecting the environments

## The relationship to our dominant energy form is deeper, pervasive, and constitutive: we are inhabitants of a “petroculture”.

in which we live and those of groups and communities that we do not directly encounter on a daily basis. There is also a need to develop ways of redistributing energy along socially equitable lines, as well as the economic wealth that usually comes with the flow of energy. In breaking the ties between economic growth, human exploitation and environmental degradation, the numerous habits we have formed will become further grounds for transition.

energy sources. 93% of poll participants backed solar energy, 91% approved of hydroelectricity and 86% wanted more wind projects. More than three times as many Canadians reported that the reduction of greenhouse gases should guide the ongoing development of natural resources, rather than the creation of energy jobs (34% to 10%). These results represent a significant shift in a country whose history and economy has been deeply linked to resource extraction.

The public opinion captured in this poll has not yet resulted in a shift in government policy. Both federal and provincial governments, however, have acknowledged the need for a transition but no such energy transition policy currently exists. Such a policy could address the need to shift from fossil fuels to renewable forms of energy and could outline interventions that would allow this to happen sooner.

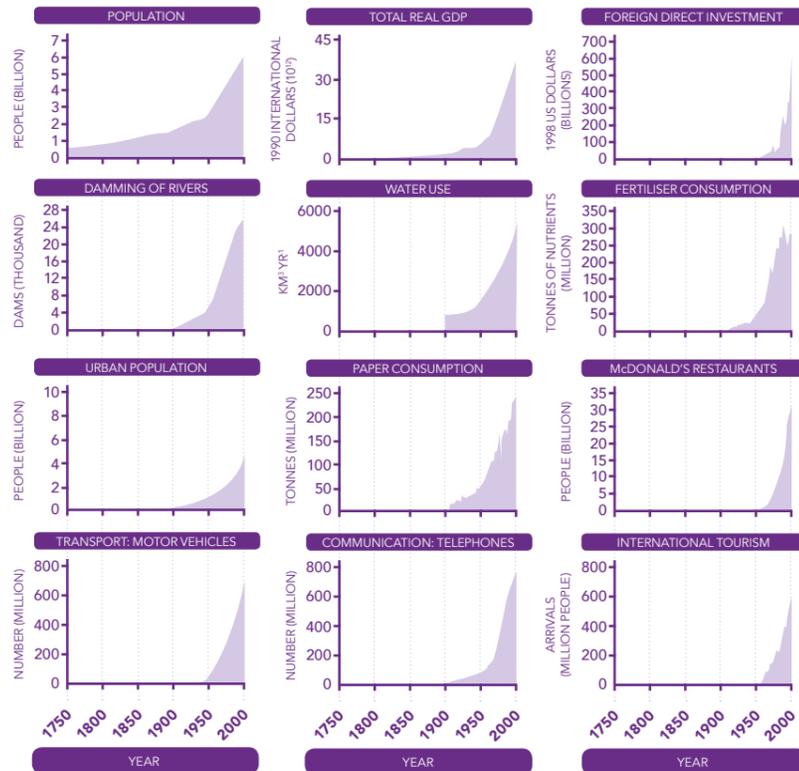
## THE NEED FOR A CANADIAN ENERGY TRANSITION POLICY

Professor Imre Szeman's work has highlighted the need for a Canadian transition policy. In Canada, changes in public attitudes toward the environment appear to be changing. In January 2018, a poll conducted by Environics Research revealed that the majority of Canadians supported the growth and development of the country's renewable



Professor Imre Szeman has written several books around the topic of Petrocultures.

## The Great Acceleration: Consumption and Production, Post-1945



The period following World War II saw an unprecedented acceleration in everything from fertiliser consumption to the number of people served in McDonald's restaurants. This expansion, sometimes called the Great Acceleration, was made possible by cheap, readily available fossil fuels, which have been consumed in ever-increasing amounts since 1945.

This transition cannot be left to the energy market or be shaped by the price of energy. Carbon pricing does very little to transform a country's energy landscape and does not sufficiently capture the carbon liabilities that arise from fossil fuel extraction.

A recent report from the Canadian Centre for Policy Alternatives has outlined a range of mechanisms that the Canadian government could take to ensure that everyone in the country could benefit from energy transition. This includes enhanced social security programmes for workers in areas currently dependent on fossil fuel extraction and investment in training programmes that would allow workers to shift towards jobs which are

needed in a renewable energy economy. Energy workers themselves have taken the initiative by outlining a range of ways that they and their communities could make the shift away from fossil fuels toward a more sustainable future. The Transition in Energy, Culture and Society project will focus on developing further insights into the challenges and benefits that energy transition promises over the next several decades.

### AFTER OIL

One of the projects spearheaded by Szeman is "After Oil: Explorations and Experiments in the Future of Energy, Culture and Society," a collaborative, interdisciplinary research partnership designed to explore, critically and

creatively, the social, cultural, and political changes necessary to facilitate a full-scale transition from fossil fuels to new forms of energy. In August 2015, thirty-five artists and researchers came together in Edmonton in Alberta, Canada for the inaugural After Oil School. (A second After Oil event will be held in Montreal in May 2019.) They were invited to think collectively about the challenges that living in a petroculture poses for energy transition, including how one might trigger transition, energy impasses, and what our energy futures might look like. The key issues relating to each of these questions are strategy, agency, representation and futures.

Findings from this research demonstrate the multiple ways in which energy shapes society. It highlighted the fallacy of the assumption that renewables can merely substitute fossil fuels in a world which has been made by fossil fuels. Furthermore, whilst energy transition brings inevitable challenges, involving technological, economic and environmental elements, it also provides opportunities for large-scale social and political change.

### CONCLUSIONS

Society has remained comfortable imagining energy, specifically fossil fuels, as a necessary but fairly insignificant feature of human societies. We are aware of the fuel used for cars, in our homes and the coal used for electricity that powers our high-tech world. The idea that fossil fuels have had a substantial impact on the shape and character of our societies is not something of which we have previously been aware. The work of Professor Imre Szeman and the Petrocultures research group demonstrates the necessity of understanding how, where, why, and to what degree energy influences social belonging and individual being. There is a need to conceptualise our societies as oil societies and our modernity as a petro-modernity to better grasp who and what we are. We are entering a period in which we will undergo a transition from being oil societies to no longer being oil societies. Learning about the ways in which energy shapes society is essential to undertaking this transition and draws attention to issues that we have previously avoided addressing.

**Making the shift from petrocultures to other cultures requires a change in who and what we are.**



# Behind the Research

## Prof Imre Szeman

E: [iszeman@uwaterloo.ca](mailto:iszeman@uwaterloo.ca) T: +1 519-888-4567 ext. 37621 W: [www.crculturalstudies.ca](http://www.crculturalstudies.ca)  
@szemanimre

### Research Objectives

Professor Szeman is co-director of the Petrocultures research group and co-investigator on the Transition in Energy, Culture and Society project with Future Energy Systems. These research projects look at questions around energy use and their social, cultural and political implications – taking a humanities-based approach to an area that has historically been associated with the sciences.

### Detail

Imre Szeman  
Department of Communication Arts  
University of Waterloo  
200 University Avenue West  
Waterloo, ON N2L 3G1  
Office: ML-241 / 519-888-4567 ext. 37621

### Bio

Imre Szeman is University Research Chair and Professor of Communication Arts at the University of Waterloo. Co-director of the Petrocultures Research Group, he is one of the founders of the field of energy humanities. A collection of his essays, *On Petrocultures*, will appear later this year.

### Funding

Canada Research Chair; Canada First Research Excellence Fund; University of Waterloo

### Collaborators

- Dr Mark Simpson and Dr Sheena Wilson are Professor Szeman's long time partners on Petrocultures and Future Energy Systems.
- Dr Graeme McDonald (Warwick), Janet Stewart (Durham) and Rhys Williams (Glasgow) are the organisers of this year's Petrocultures conference.



### References

- After oil. (2016) Professor Imre Szeman interview by Anne-Sophie Garrigou. *The Beam* 3: 54-59.
- Petrocultures Research Group. (2016). *After Oil*.
- Szeman, I., & Boyer, D. (Eds.). (2017). *Energy Humanities: An Anthology*. JHU Press.
- Szeman, I., Wenzel, J. and Yaeger, P. (Eds.) (2017) *Fueling Culture: 101 Words for Energy and Environment*. Fordham UP.

### Personal Response

**Why do you think that we have largely failed to acknowledge the numerous ways in which energy has shaped our society?**

It's hard for any creature to see the habitat in which they live from the outside. We live in an energy-rich habitat that has shaped and formed every aspect of our lives. We expect to have greater access to energy each year and to use more of it to enhance our personal freedoms. It's only because the energy we use causes damage to the environment that we are beginning to recognise the petrocultural habitat we live in, and to worry about its future. But we are stuck in old patterns and habits that make real change difficult.

**What single thing could we all do that would have the greatest impact in terms of our effect on the Earth?**

It's the obvious thing. We need to fully eliminate the use of fossil fuels as soon as possible, and do so across the planet. What is perhaps less obvious is that, at the same time, developed nations have to make renewable energy technologies available to developing countries quickly and for free. It's the only way forward for a planet that will be stuck with the CO<sub>2</sub> already in the atmosphere for centuries to come. In reality, what has to come before any of this is a public acknowledgment that energy matters for what and who we are.