

Transition Time?

Energy Attitudes in Southern Saskatchewan

Andrea Olive, Emily Eaton, Randy Besco, Nathan Olmstead, and Catherine Moez



Transition Time? Energy Attitudes in Southern Saskatchewan

By Andrea Olive, Emily Eaton, Randy Besco, Nathan Olmstead, and Catherine Moez Fall 2020

About the Authors

Andrea Olive is an Associate Professor of Political Science and Geography at the University of Toronto Mississauga.

Emily Eaton is an Associate Professor of Geography and Environmental Studies at the University of Regina.

Randy Besco is an Assistant Professor of Political Science at the University of Toronto.

Nathan Olmstead is a PhD student in the Department of Political Science at the University of Toronto.

Catherine Moez is a PhD student in the Department of Political Science at the University of Toronto.

Acknowledgements

We wish to acknowledge funding from the Social Science and Humanities Research Council of Canada. We would like to thank Insightry and the 503 anonymous participants in our survey.

This publication is available under limited copyright protection. You may download, distribute, photocopy, cite or excerpt this document provided it is properly and fully credited and not used for commercial purposes. The permission of the CCPA is required for all other uses.

Printed copies: \$10.00. Download free from the CCPA website.

ISBN 978-1-77125-508-0

Please make a donation ... Help us continue to offer our publications free online. We make most of our publications available free on our website. Making a donation or taking out a membership will help us continue to provide people with access to our ideas and research free of charge. You can make a donation or become a member on-line at www. policyalternatives.ca. Or you can contact the Saskatchewan Office for more information at 2138 McIntyre Street, 2nd Floor, Regina, SK S4P 2R7; phone 306-924-3372.

Introduction

If you woke up in southern Saskatchewan today, chances are it is windy, and the sun is shining. Regina and Saskatoon are among the sunniest cities in all of Canada, and southern Saskatchewan has some of the highest solar photovoltaic potential in North America (Government of Canada nd). It also has some of the highest wind energy potential on the continent (Saskwind nd). Yet there is little solar or wind energy production occurring in the province — indeed, at present, wind contributes 5% and solar contributes less than 3% of energy consumed. Instead, Saskatchewan is known as an oil and gas economy with a dependence on coal for electricity and a deep opposition to carbon pricing. While high oil prices and a shale oil revolution initially led to a "Saskaboom," the tides have quickly turned. With the collapse in oil prices in 2014 and the COVID-19 crisis of 2019-2020, boom has turned to bust, and oil and gas communities are hurting.

The problems with a steady reliance on fossil fuels are twofold: economic and environmental. For starters, an oil and gas economy is a volatile economy. As COVID disruptions revealed, any shock to the system can devastate the industry. When demand fell — as airlines cancelled flights and people lived under lock-down — oil prices tumbled to \$3.50 USD a barrel in April. Pumps across Saskatchewan went idle. Similar slumps were felt during the 2008 global recession and the 2014 global drop in oil prices. When government revenues are closely tied to oil and gas production the fear of the next bust is always — and rightfully — around the corner.

The environmental externalities of fossil fuels are also ever present. Greenhouse gas emissions from fossil fuels like oil, gas, and coal are the leading cause of climate change, including unpredictable weather patterns, such as extreme heat, droughts, and flooding. In 2017, Saskatchewan's emissions were 75% higher than they were in

1990. Today, the province's emissions per capita are the highest in Canada and among the highest in the world (UCS 2018).

While the province has rejected the idea of a price on carbon to curb emissions, it has done little else to reduce its carbon output. Notably, the government has promised a switch to more renewable electricity consumption. In 2017, SaskPower — the provincial crown energy corporation — announced its goal of 50% renewable energy by 2030 with an approximate mix of 30% wind, 15% hydro and the remainder from other sources like solar, biomass, and geothermal. This ambitious plan was motivated by the provincial commitment to reduce greenhouse gas emissions, yet, as argued below, little progress has been made. So even though all provinces have agreed to a phase-out of coal, Saskatchewan faces a greater challenge given that there are few other sources of electrical energy available to consumers.

As the 2020 provincial election gets underway, how to recover our economies from the effects of COVID-19 and how to transition our energy to renewable sources should be front and centre. The questions we ask here are: Do Saskatchewan residents support a transition off of fossil fuels? Do they support a transition to the consumption of renewable sources?

Based on a survey with residents across southern Saskatchewan, we find that residents are worried about climate change and there is substantial support for a transition, especially to renewable forms of energy for consumption. Surprisingly, residents of oil-producing communities hold quite similar opinions on these issues. Less surprising, is the substantial opposition to a full transition off fossil fuels, and strong opposition to a carbon tax, especially in oil-producing areas. Nonetheless, we found a preference for renewables, with support for investments in them higher than oil, coal and nuclear. We also found

considerable support for SaskPower promoting renewable energy.

There is a clear contradiction in public opinion: people are worried about climate change, but also support the fossil fuel industry and oppose carbon taxes. This mirrors claims made by industry and political leaders. In anticipation of Prime Minister Trudeau's Fall 2020 Speech from the Throne, Saskatchewan Premier Scott Moe sent him a letter stating "While all Canadians would support a commitment to environmental protection and sustainability, there is significant concern that your 'ambitious green agenda' is code for shutting down our energy industry, a major driver of Canada's economy" (Giles 2020). Statements like this also play into resident's perceptions of economic benefits (and the potential costs of transition) to themselves and their communities. One popular solution is supporting renewable energy, and there is a clear preference for this over fossil fuels and nuclear energy. Saskatchewan does indeed have great potential for expanding renewables, but it is also clear that, at some point, the contradictions in public opinion will have to be addressed.

Just Transition and Energy in Saskatchewan

The Intergovernmental Panel on Climate Change warns that in order to hold global heating under 2°C, global greenhouse gas emissions will need to decline 45% by 2030 and reach net zero by 2050. In order to reach these targets, fossil fuels will need to be phased out across the globe. The consequences of not limiting global heating to below 2°C include widespread species extinction, the loss of entire ecosystems, severe droughts and flooding, catastrophic sea level rise and many more. Thus, a growing number of social movements, academics, and think tanks are advocating for the managed decline of fossil fuel industries (see Carter and McKenzie 2020).

Policymakers are increasingly looking to the idea of a "just energy transition." Originating in the 1980s among unionized workers in the American coal industry, the idea of a Just Transition is rooted in the perceived need to protect workers displaced by new regulations (Abraham 2017; McCauley and Heffron 2018). More recently, the movement has expanded to focus on the environmental, social, and economic impacts of moving towards low-carbon development (Finley-Brook and Holloman 2016; Evans and Phelan 2016).

Limited research has been conducted in relation to a potential total phase-out and transition off fossil fuels, including oil and gas, in Saskatchewan. Yet Saskatchewan is already in the process of phasing out coal production. Climate Justice Saskatoon, a non-governmental organization, conducted a study of the impending coal transition in 2017. They did interviews with coal workers and community members in Estevan and Coronach, where they heard "frustrations, uncertainties, and feelings of isolation across both communities" (Carlson et al. 2018). These feelings emerged in the context of the "wider challenges of rural decline, agricultural trends, and the boom-and-bust cycles of oil and gas" (Carlson et al. 2018). They conclude that the carbon benefits of a transition are imperative and the lack of planning for a Just Transition in the province is a barrier to social acceptance of renewable energy.

In public discourse, attention has been drawn to Saskatchewan's opposition to a carbon tax. For weeks the media provided coverage of the pro-pipeline, anti-carbon tax truck convoys that travelled from Alberta to Ottawa in 2019 (see for example, CBC 2019). Those associated with the oil and gas industry were reported as fearing the personal and economic consequences that a price on carbon might entail. However, there has been little discussion by either the Sask Party or the New Democratic Party about alternatives to the carbon tax for achieving deep cuts to

GHG emissions. Neither party has addressed the necessary role of a fossil fuel phase out for meeting GHG targets.

This is in part because Saskatchewan is a Canadian oil producing giant. In 2018, the province produced almost 5 thousand barrels per day of crude oil, or 10% of the country's total production. Unsurprisingly, fossil fuel production is central to Saskatchewan's provincial economy. In 2019, 5% of the province's revenue was a direct result of the oil and gas industry, while during boom years government revenues from oil and gas were as high as 23%.¹ Furthermore, 17% of the province's GDP came from mining, quarrying, and oil and gas extraction and 4.5% of full-time employment in the province was attributed to those industries (StatCan 2019).

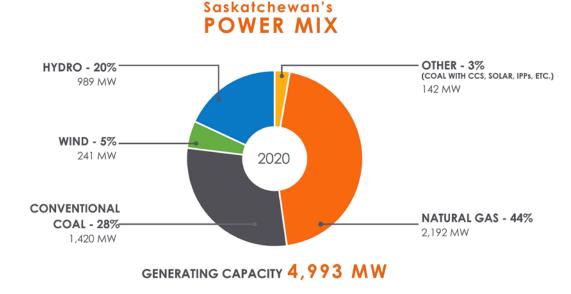
When it comes to energy consumption and electricity, coal and natural gas are the main sources of power in the province. As Figure 1 illustrates, those two sources account for 72% of generated energy, while hydroelectricity is 20%, wind 5% and solar contributes less than 3%. The energy mix has been relatively stable for the past

few decades with little innovation in renewable sources. The province has relied upon its ample supply of coal and natural gas to provide price stability to consumers.

As of 2020, SaskPower oversees six wind producing facilities. The largest is the 150 MW Centennial Wind Power Facility near Swift Current. The rest, all south of the #1 highway, each produce less than 25 MW annually (Sask Power, System Map, nd). These facilities alone will not be enough to reach the 30% target by 2030. There are some wind projects in the development stage, including the 200 MW Golden South Wind Energy Facility near Assiniboia that should be operational in 2021. Potentia Renewables is paying for the facility and SaskPower is slated to buy the produced energy (CBC News 2019).

The province is woefully lagging on solar development. Future developments include the 10 MW Highfield Solar Project (close to Swift Current), which will be the first large-scale solar generation project. It is set to be operational in 2021. But again, an independent company,

Figure 1: Energy Generation in Saskatchewan by Source (SaskPower 2020)



¹ This figure for 2009 was compiled by Dr. Angela Carter using the Public Accounts, Volume 1 Available at http://www.publications.gov.sk.ca/deplist.cfm?d=15&c=268 and data provided on the resource surcharge from Jeff Welke, Ministry of Finance

Saturn Power, will supply energy and SaskPower will purchase it for the grid.

Recently, SaskPower has moved away from renewable energy targets, instead committing to reducing GHG emissions by 40% below 2005 levels by 2030. The switch from a renewable energy to a GHG emissions target would allow the corporation to meet its goal through nuclear energy. Indeed, despite obvious wind and solar potential, the Saskatchewan government has become increasingly attracted to nuclear power, particularly in the form of small modular reactors. Environment Minister Dustin Duncan points to jobs, enhanced value-chains for the province's uranium, and "made-in-Saskatchewan climate policy" as the benefits of nuclear energy (Hunter 2020). To facilitate nuclear development, in June 2020 the government established a "nuclear secretariat" to coordinate nuclear policy and program work within the Ministry of Environment.

Relying on small modular nuclear reactors to provide a 'baseload' of power for Saskatchewan's grid is also appealing to SaskPower. Their adoption would require the fewest changes to its business model and electrical grid, as SaskPower could simply replace coal and gas-fired plants with small nuclear reactors and continue to generate electricity at centralized locations and sell it to people across the province. By contrast, scaling up renewable energy will require significant modernization of the provincial grid to make it possible for individuals and small producers to transfer and sell power to the grid and so that the utility can better manage the intermittent supply of different forms of energy (Enoch and Eaton, 2020). According to Doug Ospeth, director of generation asset management and planning for SaskPower, the corporation will be watching closely the costs of small modular reactors as they are adopted in Ontario and New Brunswick,

and will make a decision about adoption in Saskatchewan based on the price per kilowatt hour against renewable options (Saskatchewan Chamber of Commerce, 2020).

Government support for energy technology like small modular nuclear reactors sends mixed signals to the public. On the one hand, the government recognizes the need to reduce emissions, but on the other hand, refuses a price on carbon. The government and NDP opposition are also resistant to winding down fossil fuel production because the provincial economy is intimately tied to oil and gas. There seems to be a prevalent view that increased oil and gas production is reconcilable with effective climate action. The extent to which this belief has permeated public attitudes is the motivation for this current study.

Methodology

The analysis draws on an online non-probability sample of 502 Saskatchewan residents, residing in one of 9 communities: Saskatoon, Regina, Moose Jaw, Swift Current, Kindersely, Shaunavon, Weyburn, Estevan, or Lloydminster. The sample was provided by Insightrx, a market research firm based in Saskatoon. The survey data was then weighted to Census proportions (age, gender, education, and geography) using raking.²

Results

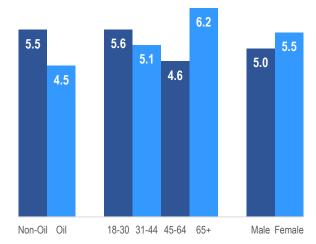
The survey asked over 80 questions concerning knowledge and attitudes about energy, the economy, and climate change. Here we present results most germane to the potential for a just transition away from fossil fuels. The results are broken down into five broad categories: climate change, transition, regional differences, energy production, and SaskPower.

² This methodology is now widely used in both academic and private sector polling (for a review see Cornesse et al 2020, on Canada see Breton et al 2015).

Climate Change

To contextualize energy attitudes we asked a series of questions about climate change. Overall, 40% of respondents are worried about climate change (7 or greater on a 1 to 10 scale). See Figure 2. In terms of risks associated with climate change, 20% are extremely worried (10/10) about extreme heat while other risks were still relevant. With a 7 or greater on the scale, 30% are worried about drought, 51% are worried about flooding, 50% worried about a water shortage, 49% about wildfires, 41% are worried about reduced snowpack, and 40% about tornadoes. 34% of respondents agree with the statement "I have personally experienced the effects of climate change."

Figure 2: Worried About Climate Change – Demographic Groups



Note: Average level of worry among each group, 0-10 scale.

As Figure 2 illustrates, women, university-educated respondents, and young people (in the 18-30 cohort) are more worried about climate change than other respondents. Looking at age, we see concern about climate change declines with age, with the 45-64 cohort having the least concern — but those over 65 are actually the most concerned of any age group.

Despite all this reported concern, a price on carbon, and carbon taxes specifically, are widely rejected. 47% of our respondents strongly disagree that Saskatchewan needs a price on carbon emissions to reduce the use of fossil fuels such as coal, oil, or natural gas. Similarly, 43% strongly disagree that Canada needs to have a carbon tax that applies across the country.

It is clear that residents of Saskatchewan want to find ways other than a transition off of oil and gas to address climate change. Indeed, when asked if "Phasing out oil and gas production is unfair to people in provinces that produce it," 69% agreed, while only 23% disagreed. Furthermore, 55% agree that a phase out of fossil fuels is unnecessary because "new technologies will dramatically reduce emissions from oil and gas."

Overall, 31% strongly disagreed that "it is necessary for Canada to phase out oil and gas production as our contribution to mitigating climate change." In fact, over 50%³ of respondents disagreed while only around 37% agreed with the statement. A strong majority of our respondents agreed that "Canada can continue to develop fossil fuels such as oil sands in Alberta and still meet its climate commitments"; 65% agreed with the statement while only 18% disagreed.

Transitions

Although Saskatchewan boasts the highest per capita GHG emissions in Canada, and indeed, the world, 55% of our respondents felt that Saskatchewan is already doing its fair share to address climate change. It is perhaps a little surprising then that only 13% of our respondents said they would not "support a transition to the consumption of 100% renewable energy for Saskatchewan." In fact, 33% were in favour of a

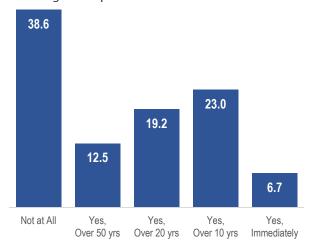
³ The agree/disagree percentages below include multiple categories. "Agree" includes "strongly agree" and "somewhat agree" while "disagree" includes "strongly disagree" and "somewhat disagree."

10 year timeframe for such a transition, which is quite ambitious.

While there was considerable support for transitioning the consumption of energy, there was more caution about phasing out fossil fuel production. We asked "Would you support the phase out of fossil fuel (oil, gas, coal) production for the Saskatchewan economy?" As Figure 3 shows below, nearly 40% replied that they would not support it at all. But 60% of our respondents did support a phase out, including 23% over 10 years.

Figure 3: Support for Phasing Out Fossil Fuels in Saskatchewan

Percentage of Respondents



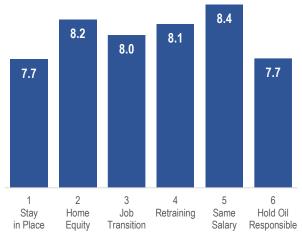
Perhaps unsurprisingly given their worries about climate change, younger people were supportive of quicker timelines for a transition to the consumption of 100% renewable energy — 22% want a transition immediately, quite a bit higher than other groups. Indeed, only 2% in the 30-44 cohort, 4% in the 45-64 ages, and 3% in the 65+ cohort want an immediate phaseout. The age gap is remarkable. In particular, the attitudes in the 65+ cohort suggest that

concern for climate change does not translate into support for an immediate fossil fuel phase-out. However, it should be noted that 60% in the cohort support a 10 or 20 year timeframe for a phase-out. Looking at those who do not support a transition at all, the 31-44 cohort is 41% and the 45-64 cohort registered at 48%. This suggests major opposition in these cohorts.

To understand the dynamics of what a transition might entail, we asked participants to explain how important different aspects of a just transition are to them. Specifically, the questions stated: "A transition completely off of fossil fuels (coal, oil, and gas) for the Saskatchewan economy would mean, for example, stopping all oil and gas extraction and replacing coal power plants with wind or solar energy." And we then asked "how important are each of the following to you" with six issues: (1) new employment opportunities allow you to stay in your current community; (2) you don't lose equity in your house/property; (3) there is assistance to transition you/family to another job; (4) support is available for retraining or transitioning into new roles; (5) your new job has similar benefits and salary; and, (6) oil, gas, and coal companies be held responsible for decommissioning and remediating their projects and impacts.

As Figure 4 illustrates, salary and house value were the most important issues for our respondents. However, all categories scored above a 7.5 average on a 1 to 10 scale. Job retraining or transitioning were rated 8/10 while being able to stay in one's home community was close behind at 7.7/10. Even holding oil and gas companies responsible was considered a priority by respondents.

Figure 4: Importance of Economics and Place in an Energy Transition



Note: Average importance for each issue, 0-10 scale. Respondents rated each option separately.

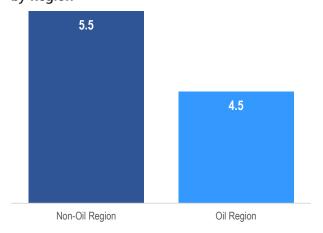
Oil-Producing Regions

Since oil deposits vary by geography, there might be differences in opinion by region. Given that our first-past-the-post electoral system also has a geographical basis, regional differences in opinion can be extraordinarily important. To examine this we divide respondents into oil-producing regions (self-reported residence in or near Swift Current, Weyburn. Estevan, Lloydminster, Kindersley, and Shaunavon) and non-oil-producing regions (Regina, Moose Jaw, and Saskatoon).

There are clearly some differences in opinion — concern about climate change is lower in oil-producing regions. However, the difference is relatively small, and roughly the same as differences between men and women in Figure 2 above, but not nearly as large as differences by university education.

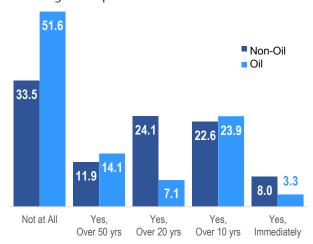
Turning to support for an energy transition, there is clearly much more resistance to phasing out fossil fuel production in areas where there is oil production. Compared to non-oil regions, about 20 percent more of the population in oil-producing regions say they think we should never

Figure 5: Worried About Climate Change by Region



Note: Average level of worry, 0-10 scale.

Figure 6: Phasing Out Fossil Fuels by Region
Percentage of Respondents

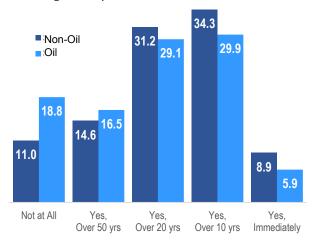


phase out fossil fuel. However, we shouldn't overstate this — even in these oil-producing areas, half of the population does agree with phasing out fossil fuels, and 30% within 10 years or less.

Conversely, differences by region in attitudes about switching to 100% renewable energy are even smaller. While oil-producing regions are less positive, with about 10 percentage points more saying "not at all," non-oil producing regions have more respondents supporting quicker transitions. Overall, however, these are quite minor differences.

Figure 7: Transition to 100% Renewable Energy by Region

Percentage of Respondents



Note: Average level of support for each type of energy generation, on 0-10 scale. Respondents rated each

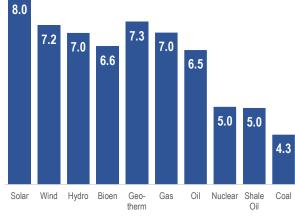


Figure 8: Support for Different Types of Energy

Energy Production and SaskPower

Which types of energy generation do people in Saskatchewan prefer? We asked respondents "In general, to what extent do you support or oppose further development of the following energy sources in Saskatchewan." As Figure 5 illustrates, we find the most support for renewable energies — especially solar, geothermal, hydro, and wind. Coal, shale oil, and nuclear energy garner the least support. Outside of renewable energy, there was considerable support for natural gas and oil, which have long been stable back-bones to the economy.

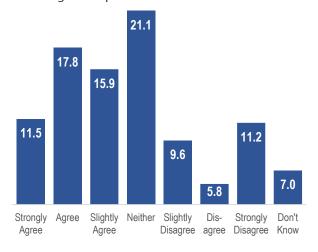
Since increased renewable production could create public revenues (surface lease payments on crown lands, for example), we asked respondents their attitudes toward revenue sharing with Indigenous groups in the province. The policy of sharing extractive resource revenues with Indigenous communities was dropped by the NDP after it not polling well in their 2011 election platform. Thus, we were surprised to find significant levels of agreement that Indigenous communities should share in the

revenues created by such projects. While the plurality (21%) of our respondents neither agreed nor disagreed with renewable energy revenue sharing, 45% were agreeable to it and 27% were opposed. Moreover, there was significant support for Indigenous communities receiving government support for renewable energy projects on reserve lands at 49%, while only 30% disagreed.

Figure 9: Indigenous Communities Sharing in Renewable Energy Revenues

Percentage of Respondents

option separately.



With the provincial government's enthusiasm for small scale nuclear reactors, we also wanted to know about our respondents' support for nuclear energy. Despite its average score of 5.8/10, lower than other energy options, there is still sizeable strong support for nuclear energy: 22% of respondents rated it 10 out of 10. But there are mixed views on whether generating more nuclear energy is a good strategy for addressing climate change. Respondents were relatively equally distributed 35% agreeing and 34% disagreeing that nuclear energy is among the best ways of addressing climate change.

Finally, SaskPower is a provincial crown corporation that generates and distributes electricity across the province. Only Saskatoon and Swift Current, two cities that maintained ownership of their electrical utilities, operate outside of SaskPower's monopoly. The two cities, both represented in our sample of respondents, buy the vast majority of their electricity from SaskPower, but do have the capability to generate and supply their own.

In terms of how some Saskatchewan residents view the provincial Crown corporation, 36% of our respondents agreed that it is beneficial to the people of Saskatchewan to have a Crown corporation responsible for all energy production and distribution, with 25% in disagreement and the rest registering a "maybe" response. 44% of our respondents agreed or somewhat agreed that SaskPower should "continue to produce and price energy so as to make money for the corporation, which is invested back into government programs and projects", with only 22% disagreeing. Yet 72% of our respondents also agreed that "SaskPower should invest more in renewable energy, even if it means reduced revenues to the Crown corporation."

Figure 10: Nuclear Energy to Addressing Climate Change

Percentage of Respondents

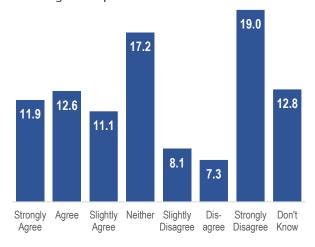
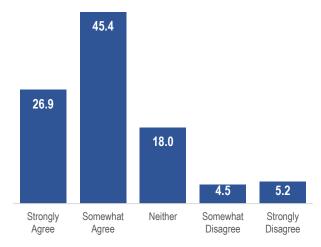


Figure 11: SaskPower Investing in Renewable Energy

Percentage of Respondents



Discussion

There remains a mismatch between public policy and opinion and the need for a global energy transition away from fossil fuels. Our respondents are worried about climate change, especially risks associated with flooding and droughts. In total, 34% claim to have personally felt the effects of climate change in their lives. Yet, industry and government continue to propagate the belief that Canada can continue to produce and even expand fossil fuel production and still achieve its climate commitments. We saw this reproduced in the responses to our survey. There was significant opposition to a price carbon and to the idea of phasing out fossil fuels to meet climate targets. Many of our respondents — indeed, a majority — believe that it is not necessary for Canada to phase out oil and gas production as our contribution to mitigating climate change.

Yet we also see some glimmers of hope in the public opinion polling we conducted. Over 85% of respondents support a transition to 100% renewable sources for energy consumption and 60% support a complete transition off fossil fuels. In the consumption context, a third support a 10-year timeframe for a transition, while almost a quarter support a ten year transition in the case of a fossil fuel transition.

Younger respondents, those in the 18-30 cohort, are most worried about climate change and most likely to support a transition. The significant concern that younger people in Saskatchewan share about climate change, and their sense of urgency about the need for an energy transition, could be converted into political pressure. An increasingly mobilized and aware youth cohort might even force political parties to offer more rigorous energy transition platforms in the future.

Yet, there is also surprisingly similar beliefs among seniors (65+) — they are very concerned about climate change, supportive of renewables, and willing to transition off fossil fuels. This might be

driven by a desire to leave a better world for later generations, or a lack of immediate employment concerns. In any case, the fact that this group of high-turnout voters clearly places a high priority on the environment should catch the attention of politicians.

Regional divides always matter in Canadian politics, and there is some evidence of one here. Oil-producing regions are substantially less supportive of phasing out fossil fuels — although even in those areas there is a surprising amount of support. However, on related questions, such as worrying about climate change, or supporting a transition to 100% renewables, regional differences are quite small. It seems quite plausible that people in oil-producing regions are concerned about the idea of closing an industry that provides economic benefits to themselves and their communities, even as they recognize the importance of the need to address climate change.

There is an opportunity to garner more support for climate change initiatives by focusing on supporting fossil fuel workers rather than industries. There is support, even in non-oil producing urban areas like Regina and Saskatoon, for retraining fossil fuel workers for the new economy. And spending that is currently going to prop up fossil fuel industries, such as Premier Moe's COVID relief package for the oil and gas industry (Government of Saskatchewan 2020) and other longstanding subsidies, could be redirected to ensuring fossil fuel workers transition to good jobs with comparable pay and benefits.

There is most support for investments in solar, geothermal, hydroelectricity and wind energy. This is accompanied by a real openness to revenue sharing with Indigenous groups and government investment in that arena. This suggests that even though the idea of revenue sharing with Indigenous communities was dropped by the NDP, there may be much more

openness in 2020 to sharing the benefits of renewable energy. There is much less support for future investment in coal, shale, and nuclear energy — three energy sources the dominant political parties in Saskatchewan have strongly supported in the past.

Lastly, there is broad support for SaskPower and its mandate in the province. Our respondents value its role in helping to fund government programs and projects. However, our survey identifies significant support for the corporation to operate differently, to sacrifice revenues in order to invest more heavily in renewable energy. Overall, the significant support for renewable energies in Saskatchewan, along with an awareness of the benefits of retaining SaskPower as a crown corporation could be harnessed to fast track a transition.

Conclusion

Saskatchewan needs to transition off of fossil fuels. The reasons for this transition are both economic and environmental. In order to avoid the boom and bust cycle associated with the oil and gas economy, the province needs to invest in more stable and more sustainable energy production to meet its own energy needs. It is unlikely that oil prices will ever return to their pre-2008 peak of over \$150 per barrel. As the world turns to renewable energies and as investors continue to divest from fossil fuels it makes economic sense for the province to start planning for a new economy.

Furthermore, Saskatchewan has a moral imperative to do its part in the global fight against climate change. Global emissions must be reduced by at least 45% over the next 10 years in order to limit warming to 2°C, a critical threshold for avoiding catastrophic environmental consequences (IPCC 2018).

Our survey of communities in Saskatchewan makes clear that there is an urgent need for honest climate change leadership in the province. The fossil fuel industries have attempted to obstruct a transition to zero-carbon economies by suggesting that climate change can be tackled while continuing to produce fossil fuels, a belief widely held in Saskatchewan and propagated by both the government and the official opposition. Moreover, the Saskatchewan Party government's narrative that Saskatchewan is already doing its fair share, and that the province is a negligible producer of GHGs must be challenged. This view was reflected in the opinions of our respondents, even though Saskatchewan's per capita emissions are some of the highest in the world. An obvious first step in addressing climate change in Saskatchewan is for political leaders, NGOs, and others to begin talking frankly and honestly about the scale and the scope of both our emissions and the effort needed to do our part in mitigating global climate change.

References

- Abraham, J. (2017). Just Transitions for the Miners: labor environmentalism in the Ruhr and Appalachian Coalfields. *New Political Science*, 39(2), 218-240.
- Allan, J.I., & Hadden, J. (2017). Exploring the framing power of NGOs in global climate politics. *Environmental Politics*, 26(4), 600-620.
- Bailey, I. (2017). Spatializing climate justice: justice claim-making and carbon-pricing controversies in Australia. Annals of the American Association of Geographers, 107(5), 1128-1143.
- Breton, C., Cutler, F., Lachance, S., & Mierke-Zatwarnicki, A. (2017). Telephone versus Online Survey Modes for Election Studies: Comparing Canadian Public Opinion and Vote Choice in the 2015 Federal Election. Canadian Journal of Political Science, 50(4), 1005-1036. doi:10.1017/S0008423917000610
- Carlson, H., Fisher, J., & Malena-Chan, R. (2018).
 Bridging the Gap: Building bridges between
 urban environmental groups and coal-producing
 communities in Saskatchewan. Climate Justice
 Saskatoon. Saskatoon, Saskatchewan.
- Carter, Angela V. & Janetta McKenzie (2020): Amplifying "Keep It in the Ground" First-Movers: Toward a Comparative Framework, Society & Natural Resources, DOI: 10.1080/08941920.2020.1772924
- CBC News. (2019). New wind farm near Assiniboia, Sask., to double province's wind energy production." https://www.cbc.ca/news/canada/saskatoon/new-wind-farm-near-assiniboia-sask-1.5253552
- CBC News. (2019). National protest convoy rolls through Saskatchewan https://www.cbc.ca/news/canada/saskatoon/national-truck-convoy-saskatchewan-1.5021464
- CCPA Sask Office. (2015). The Wrong Track: A Decade of Privatization in Saskatchewan 2004 2015. https://www.policyalternatives.ca/sites/default/files/uploads/publications/Saskatchewan%20Office/2015/10/The_Wrong_Track_SK_Privatization.pdf
- Coleman, Cory. (2019). SaskPower annual report details \$197M net revenue, increased outages in Regina area. CBC News Online https://www.cbc.ca/news/canada/saskatchewan/saskpower-annual-report-released-1.5202250

- Cornesse, Carina, Annelies G. Blom, David Dutwin, Jon A. Krosnick, Edith D. De Leeuw, Stéphane Legleye, Josh Pasek et al. "A review of conceptual approaches and empirical evidence on probability and nonprobability sample survey research." Journal of Survey Statistics and Methodology 8, no. 1 (2020): 4-36.
- Eaton, Emily, Andrea Olive, and Angela Carter (2020). "Why the Real Climate Change Fight is in Saskatchewan." Policy Options https://policyoptions. irpp.org/magazines/june-2020/why-the-real-climate-change-fight-is-in-saskatchewan/
- Enoch, Simon and Emily Eaton. (2020). Fighting with One Hand Tied Behind Their Back: Renewing Sask Power for a Renewable Regina. https://behindthenumbers. ca/2020/07/23/fighting-with-one-hand-tied-behind-their-back/
- Evans, G., & Phelan, L. (2016). Transitions to a postcarbon society: Linking environmental justice and Just Transitions discourses. *Energy Policy*, 99(1), 329-339.
- Finley-Brook, M., & Holloman, E.L. (2016). Empowering Energy Justice. *International Journal of Environmental Research and Public Health*, 13(9), 926.
- Giles, David. (2020). Premier Scott Moe calls on Trudeau to pause federal carbon tax ahead of Supreme Court appeal. Global News. https://globalnews.ca/news/7336544/carbon-tax-oil-gas-scott-moe-justin-trudeau-throne-speech/
- Government of Saskatchewan. (2020). Provincial Support for Saskatchewan's Oil Industry. https://www.saskatchewan.ca/government/news-and-media/2020/april/14/oil-industry-support
- Government of Saskatchewan. (No date). Oil Production Dashboard. https://dashboard.saskatchewan.ca/business-economy/business-industry-trade/oil-production
- Government of Canada. (No date). Market Snapshot: Which cities have the highest solar potential in Canada? https://www.cer-rec.gc.ca/nrg/ntgrtd/mrkt/snpsht/2018/06-03ctsslrptntl-eng.html
- Hunter, Adam. (2020). Sask. government continues push for small modular nuclear power. CBC News Online. https://www.cbc.ca/news/canada/saskatchewan/sasknuclear-power-1.5625487
- IPPC. (2018). Special Report: Global Warming of 1.5C. Available at: https://www.ipcc.ch/sr15/

- McCauley, D., & Heffron, R. (2018). Just Transition: integrating climate, energy, and environmental justice. *Energy Policy*, 119(1), 1-7.
- Meyer, Carl. (2019). Oilsands Polluted More than Entire Economies of B.C. or Quebec. National Observer. https://www.nationalobserver.com/2019/04/16/news/oilsands-polluted-more-entire-economies-bc-or-quebec
- SaskChamber Youtube. (2020). Energy Series with SaskPower Regina. https://www.youtube.com/watch?v=_ jeNaX81FCc&feature=youtu.be
- SaskPower (2017). Powering Saskatchewan to a Cleaner Energy Future. Retrieved from: https://www.saskpower.com/about-us/our-company/current-reports

- SaskPower. (No date). System Map. https://www. saskpower.com/Our-Power-Future/Our-Electricity/ Electrical-System/System-Map
- SaskPower. (2020). Balancing Supply Options. https://www.saskpower.com/Our-Power-Future/Our-Electricity/Electrical-System/Balancing-Supply-Options
- Saskwind. (No date). Wind Resource and Wind Forecasting. https://www.saskwind.ca/wind-atlas-sk
- Union of Concerned Scientists. (2018). Each Country's Share of CO2 Emissions. https://www.ucsusa.org/global-warming/science-and-impacts/science/each-countrys-share-of-co2.html