The Comparative Politics of Climate Change Policy

Robert O. Keohane

2016 Balzan Prize for International Relations: History and Theory

Balzan GPC Adviser: Salvatore Veca
Project Director: Roberto O. Keohane
Deputy Supervisor: Thomas Hale
Researchers: Hanna Breetz, Sarah Bush, Amanda Clayton, Jared Finnegan, Nikhar Gaikwad, Federica Genovese, Jessica Green, Jennifer Hadden, Thomas Hale, Phillip Lipscy, Paasha Mahdavi, Florence Metz, Jonas Meckling, Matto Mildenberger, Leah Stokes, Dustin Tingley
Affiliated Institutions: Princeton University; Center for Advanced Study in the Behavioral Sciences (CASBS), Stanford University
Period: 2018-

Robert O.Keohane is Professor Emeritus of International Affairs at Princeton University.

The Project and its Future

The Comparative Politics of Climate Change Policy is a project funded with half of the amount of the award that Robert O. Keohane received with the 2016 Balzan Prize for International Relations: Theory and History, in accordance with the rules and regulations governing the prize. Initiated under the auspices of the Social Science Research Council Working Group on Climate Change (whose mandate ended in early 2020) and the Center for Advanced Study in the Behavioral Sciences of Stanford University (CASBS), Princeton University has provided additional financial resources as well as administrative support. The project is guided by these principles, as established at the outset in 2018:

> *This project was designed to be non-hierarchical and collaborative. My role is to convene a group of scholars working on climate change and/or comparative politics; set the agenda; offer advice and guidance to the scientific investigators; and decide which projects that emerge should be funded and at what level. The investigators will have constructed their own theories and hypotheses, and will use methods that they find appropriate, as long as they are social scientific and comparative. They will publish their work under their own names and with collaborators of their own choosing. They will also commit to freely sharing their ideas and findings with other members of the research group,*
>
> *Although guided by theory, the project is also deeply empirical. It is evidence-based social science, conducted according to scientific principles that require specification of theory, deriving the observable implications of theory, specifying hypotheses that embody these observable implications, and testing the hypotheses with relevant data, which may be qualitative as well as quantitative. Our motivations are to a great extent normative, but the research itself is positive. It could involve any kind of social scientific method, ranging from agent-based simulations to experimental work, statistical modelling and data analysis, comparative case studies, and ethnography. This project seeks to develop systematic knowledge about the sources of variation in climate policies and outcomes, and to galvanize a neglected field of political science: the comparative politics of climate change policy.*[1]

[1] Report in the International Balzan Prize Foundation – "Prize" archives.

The original definition of "the comparative politics of climate change" included an analysis of contemporary political actions because, although climate change is one of the most important long-term problems facing the world as a whole, social scientists do not know as much as they should about the conditions under which governments take it seriously, and what leads them to pursue one set of policies or another. Nor do they have a satisfactory understanding of why other organizations – provinces, cities, or corporations, for example – adopt pro-active climate change or energy policies while others do not. In the first two years of the project, a new focus was added: *the politics of decarbonization.* Scientific reports, the IPCC (Intergovernmental Panel on Climate Change), and other scientific organizations have made it clear that to avoid disastrous outcomes, the world needs to decarbonize entirely by 2050 or shortly thereafter. Since the world's carbon emissions are still increasing, and carbon is deeply embedded in modern industrial society, achieving this goal will be extremely difficult to say the least. Achieving it would generate immense technological, economic, and political disruption.

Originally, the 2020 session to planned be the final one for the Balzan Climate Project. However, this workshop generated many innovative ideas and resulted in the creation of a vibrant network of young scholars working on climate change and talking with one another in a mutually beneficial way. Since more funding from other sources will be available, the workshop of this group at CASBS will continue. Thus, the Balzan Foundation not only has supported excellent research; it has also served as a catalyst for building an institutionalized network with staying power.

The 2020 Workshop

In line with this added attention to the politics of decarbonization, the 2020 workshop was divided between sessions that focused on the contemporary politics of climate change, featuring social science analysis of individual preferences, corporate behavior, and government activity or inactivity on the one hand, and sessions that sought to develop analyses of future decarbonization politics on the other.

Before this new focus on decarbonization, former workshops[2] fell more readily within the boundaries of conventional political science, and through publications in mainstream political science journals, will contribute to the goal of vastly expanding the attention to climate change in the field of political science. The 2020 meeting focused on empirical issues of contemporary climate politics, and again, the young political scientists of the Balzan network have made their mark by seeking to publish their theoretically interesting work addressing key cross-disciplinary questions like the following:

- How does policy vary cross-nationally?
- What are the conditions under which elites can impose costs on publics or persuade publics to accept such costs?
- What are the political strategies of corporations?
- How does gender and societal wealth affect public policy preferences?

Understanding these issues will contribute both to our understanding of climate politics and to the politics of public policy in general.

Six papers or draft chapters focusing on empirical issues of contemporary climate politics were discussed at the 2020 meeting. The sessions on decarbonization directly address the central public policy question raised by climate change: *How can industrial societies – at various stages of economic development – achieve the rapid decarbonization that the health of our planet requires?* Since they seek to look into the future, they are necessarily less empirical and more conceptual or typological than the first set of papers. Their authors include senior scholars who have more scope for more speculative work, as well as bold younger scholars who have figured out ways to study "leading edge" issues and therefore investigate problems that illuminate the future in empirically compelling ways.

[2] See "The Comparative Politics of Climate Change Policy. Robert O. Keohane, 2016 Balzan Prize for International Relations: History and Theory," *The Balzan Prizewinners' Research Projects: An Overview 2018.* Milan: Fondazione Internazionale Balzan, 2018, pp. 27-32.

The Contemporary Politics of Climate Change

The core participants at the 2020 meeting are doing research on projects funded by the 2016 Balzan Prize, and include the following scholars who were also involved in 2019: Amanda Clayton (Vanderbilt University), Jared Finnegan (London School of Economics), Nikhar Gaikwad (Columbia University), Jennifer Hadden (University of Maryland), Thomas Hale (Oxford University), Philip Lipscy (Stanford University), Paasha Mahdavi (University of California, Santa Barbara), Jonas Meckling (University of California, Berkeley), and Dustin Tingley (Harvard University). Four of these researchers participated remotely: Professor Federica Genovese (University of Essex), Sarah Bush (Yale University), Jessica Green (University of Toronto), and Florence Metz (University of Enschede, Netherlands). In addition, a research team composed of Hanna Breetz (Arizona State University), Matto Mildenberger (UC Santa Barbara), and Leah Stokes (UC Santa Barbara) was also created, and members participated in the 2020 workshop.

Several more senior scholars participated actively in the discussions, including Margaret Levi (Director of the Center for Advanced Study in the Behavioral Sciences), Michael Ross (UCLA), Kenneth Scheve (Stanford University), Michael Tomz (Stanford University), and David G. Victor (University of California, San Diego). Their participation provided continuity since Professors Levi, Scheve, and Victor had attended previous workshops in 2018 and 2019, and Professors Ross and Tomz had attended the workshop in 2018. In addition, Professor Jeff Colgan from Brown University and Valerie Karplus from MIT joined the 2020 workshop. Several observers were also present, including four CASBS fellows and staff members and one graduate student from Stanford. The papers presented and the discussions are described below.

Transition, Hedge or Resist: Understanding Political and Economic Behavior toward Transition in the Oil and Gas Industry

For authors Jessica Green, Thomas Hale, Jennifer Hadden, and Paasha Mahdavi, the unit of analysis is the firm, in particular large oil and gas firms, whose strategy toward decarbonization varies along two dimensions, their business behavior and their political behavior. As for the business dimension, firms can seek to continue to develop carbonized oil and gas assets, exploring for assets that will not be productive for decades, or they can shift investments toward low-carbon sources or toward zero-carbon sources such as solar power. In terms of the political dimension, they can seek to deny climate change or the contribution of their activities to it or they can publicly endorse measures to limit climate change.

During the year preceding the workshop, Green, Hale, Hadden, and Mahdavi gathered extensive new evidence about oil companies using information from such sources as earnings calls and financial disclosure reports. On their metrics, company political activity varies more than their operational behavior. In general, companies headquartered in Europe and with large European markets score somewhat better than US-based companies. In their data there is still much inter-company variation in business practices, although some commentators argued that with better metrics and interviews with industry leaders and insiders, more variation may emerge than appears at the time of writing. The authors are making great progress but there is more work to be done.

A sort of active peer review followed, with discussion on how to develop the analysis and the theory. The most promising direction for theory focuses on differential skill sets and adjustment costs: firms whose skill sets make it easier for them to adjust can be expected to follow more progressive business practices. Some firms are increasingly in the gas business, so can invest in carbon capture and storage (CCS) and biofuels. Firms involved in deep water petroleum extraction can build offshore wind platforms at competitive costs, while those committed to enhanced oil recovery have incentives to invest in direct air capture (DAC). By contrast, major oil firms are uniformly bad at onshore renewables since they have no prior skill set in that business. Refining investment could be an important explanatory variable predicting unwillingness to move out of fossil fuels since these are huge, fixed investments. The more firms emphasize business lines that are close to what one would need in a decarbonized world – CCS, biofuels, DAC – the more easily one would expect them to be able to adjust.

As a result of this active peer-reviewing process, the authors decided to divide the paper into two outputs. The first, a research note, would entail a descriptive paper showing what political science analysis can say about oil and gas firms' decarbonization strategies. The second, more theoretical paper would launch a causal hypothesis, to be tested using the observational data described above.

Vulnerability, Compensation, and Support for Climate Policies

This study by Nikhar Gaikwad, Federica Genovese, and Dustin Tingley involved the US and India, and has three main goals: 1) to understand whether and to what extent compensation of people affected by climate change, or policies to combat climate change, affect their willingness to support climate change policies; 2) to understand how individuals in communities that are differently vulnerable to climate change and to policies to combat climate change are sensitive to different designs of climate policy; and 3) to discover how individuals will prefer to allocate funds from a fee assessed on carbonized fuels.

Answers to these questions will be critical in decisions about what sorts of compensation policies will be more politically acceptable, for instance, compensation payments to affected individuals versus adaptation funding for affected communities. These issues are becoming increasingly policy-relevant, as controversy over the current German plan to close coal plants and compensate those who are affected suggests. The findings will be comparable with findings in some other areas of political science research, such as the investigation of trade adjustment assistance and welfare policies targeting individuals or communities. The unit of analysis for this study is the individual, and the methodology is that of survey experiments.

After completing their US survey experiments, the authors have made some novel and interesting discoveries. They drew three samples from the US population: 1) a national representative sample; 2) a sample of people from coastal areas that produce fossil fuel; and 3) a sample of people from coal country. Each sample was asked how they would allocate funds from a fossil fuel tax at one of three levels: $16, $64, and $256 per household. At the $64 level, the general population and the coastal sample favored investments in green energy, closely followed by equal rebates to all households. Not surprisingly, people in coal country preferred compensation to coal and oil workers for losses of jobs and income. It is interesting, although perhaps not surprising, that if the price of carbon is extremely high ($256), people in all samples want refunds.

Two points stand out. First, coal is distinctive in that people in coal country are highly community oriented. One does not find the same results among people in oil-producing coastal areas. The reasons are not entirely clear. It might be that coal is fundamentally different from oil, either because it is clearly disappearing or because coal workers work together so closely and have always been organized. Second, there is a major policy lesson. *If policy requires a high carbon price to drive adjustment to a carbon-free economy, refunds are essential for democratic assent.*

For further research, the most interesting group is the group in oil-producing coastal areas, who may be cross-pressured. The researchers may need a sample of people who are vulnerable to climate change (sea level rise) but not involved in oil production in order to understand perceptions (or lack thereof) of vulnerability among these people.

Work in India is still in progress, and results are expected to be available this spring. The inclination of the researchers is first to publish the US paper – there are complexities that will take some time to explain, and US-focused referees can understand them. After that, a second paper comparing the India findings with the US paper's findings can be published.

Facing Change: Identity and Cross-National Responses to Climate Change

In exploring issues of gender and climate change on standard surveys, Professors Sarah Bush and Amanda Clayton discovered an apparently puzzling fact. In developing countries, the degree of concern about climate change expressed by men and women is similar. However, as countries become richer, a gap appears, with women expressing more

concern. This phenomenon relates to average incomes within countries rather than to differential incomes: in rich countries, women express more concern than men about climate change irrespective of their levels of personal income.

The field surveys the authors conducted in six Latin American countries and in the United States and the extensive focus groups they formed in Peru and the United States also corroborated this finding, showing that as countries become richer, men become strikingly less and less concerned about climate change. This "advanced country gender gap," in particular the men's shift in attitudes, needs to be explained. The authors hypothesize that the costs of action are higher in rich countries since more lifestyle changes are required. However, the survey question asks how "concerned" people are, which does not necessarily indicate costs.

The creation of focus groups in Peru and the United States turned out to be an innovative move that enriched their data. United States participants were restricted to Republicans in order to hold party affiliation (which is so polarizing in the United States) constant. In the focus groups, the authors discovered a strong correlation between measures of masculine identity – such as opposition to feminism and a sense of "linked fate" with other men – on the one hand, and lack of concern about climate change on the other.

Bush and Clayton intend to extend their survey research to high/middle income European/North American countries, including Portugal, Spain, the UK, Italy, France, and Canada. They need data points between Latin America and rich countries and since the US is often idiosyncratic, it is necessary to know how general the rich country finding is.

This study is going very well indeed, and a much-cited paper that not only is relevant to climate change but to the analysis of gender-based attitudes is anticipated. It could easily launch a more extensive research program in which investigators employ focus groups in other countries to understand better the relationship that appears to exist between masculine identity and skepticism about the importance of climate change.

The Institutional Sources of Energy Transitions: from the Oil Crises to Climate Policy

In this study by Jared Finnegan, Phillip Lipscy, Jonas Meckling, and Florence Metz, the unit of analysis is the country. The 1970s oil price shocks generated the first major episode of policy-induced decarbonization on a large scale, although the purpose of the policies was not decarbonization but energy security. The policy shocks were exogenous and generated policy responses by all OECD member countries; however, the policies of some countries were more effective – and longer lasting – than those of others.

The authors' thesis is twofold. First, countries with proportional representation insulate politicians better against reprisals for costly, vigorous action than countries with majoritarian electoral systems. Second, countries with corporatist institutions provide more effective compensation for losers from rapid adjustment, thereby reducing political resistance.

The authors had extended their analysis from the 1970s oil shocks to contemporary climate policy, which in the view of commentators, led to a loss of focus. In asking why some governments are more effective than others, it was argued that the authors moved too quickly to an institutional account. Other factors could be involved. Politicians' preferences could be different across systems. Other resources available to governments may vary. For instance, France moved quickly to nuclear power in the 1970s not because of its government bureaucracy but because it already had a major nuclear program.

The insulation argument is questionable. Ruling parties may be more vulnerable to defeat in a PR system, except in cases of knife-edged majorities since marginal shifts make more difference in coalitions than in a majoritarian system where the majority party has a comfortable majority.

The authors have a bold and potentially important argument, but they may have run somewhat ahead of their evidence. In response to the criticisms, they indicated that they would scale the paper back to focus more tightly on the oil crisis. Commentators suggested also that they should focus more in the paper on their strong findings that PR and corporatism affect policy, rather than the weaker evidence that they have major impacts on policy. No doubt, this valuable and important paper will be improved as a result of the frank discussion.

Two Related Papers

The workshop discussed two papers whose research was not funded by the Keohane's Balzan Prize, but that intersect in interesting ways with the funded work.

Jeff Colgan is writing a book on international subsystems, with emphasis on energy, calling attention to authority relationships. He argues that, at the broadest theoretical level, "issue-area," is too broad a category. For instance, in discussing international energy issues, issue-area conflates economic-production and security issues. In the climate issue-area, Colgan identifies four subsystems, organized around authority relationships:

1) What quantity of emissions is each state allowed to produce?
2) How are climate-related assets treated as capital?
3) How should negative-emissions technologies be incentivized and managed?
4) How should trading and protectionism be arranged?

Paasha Mahdavi, Cesar B. Martinez-Alvarez, and Michael Ross presented an analysis of government subsidies and taxes on fossil fuels. This strong, important paper asks a fundamental question: When do governments impose visible costs on citizens? Although fundamental to a discussion of fiscal policy in modern states (quite apart from climate change), the paper does not provide an explanation of its findings, especially that policy does not vary so much across time within country but does vary a great deal across countries. During the ensuing discussions, the working group proposed several potential hypotheses involving electoral insulation, the strength of political opposition, budgetary needs, and general attitudes towards public goods.

The Politics of Decarbonization

The Politics of Deep Decarbonization: Comparative Studies of Electricity Sector Transformation: A Memo

The project of Leah Stokes, Matto Mildenberger, and Hannah Breetz was added to the Balzan group's portfolio after the 2019 meeting, so it is therefore at an early stage of research. This exciting research project explores an issue that is not present in the literature: political conflict late in the cycle, after a new technology becomes economically competitive. The argument is that even here, success is not automatic since incumbents may resist and set up barriers. If we are to understand the politics of decarbonization, we have to understand this process of *reconfiguration.* The authors build on their excellent 2018 paper to push this agenda forward.[3] In the current project, they propose two innovations with respect to their earlier paper: more intense focus on the late stages in decarbonization, and an emphasis on compensation – the role of buying off distributive losers. The emphasis on compensation intersects with the abovementioned study by Gaikwad et al., *Vulnerability, Compensation, and Support for Climate Policies*.

The question of getting a panel of experts to tell the authors where there are likely to be stranded assets was discussed. This would indicate areas about which to be alert to political struggles over who bears the cost of stranded assets. Issues of moral hazard also came into the discussion, for example, investments made in the assurance of bailout. Are there first-mover advantages for utilities? In the long, probing debate on methods that took place, the authors identified the three tasks they have at this point:

- *Conceptual.* What are the key issues with respect to stranded assets, compensation, moral hazard, first mover advantages?
- *Typological.* What types of conflict arise and how do they sequence? Some game theoretic analysis might be helpful.

[3] Hanna Breetz, Matto Mildenberger, and Leah Stokes, "The Political Logics of Clean Energy Transitions," *Business and Politics* 2018:1-31.

- *Descriptive.* What patterns of change do they observe? How much variation is there among their US state or comparative country cases? Does commonality overwhelm variation or *vice versa?* There will eventually be a fourth stage of causal inference and rigorous comparison.

Accelerating the Carbon Transition

This extensive, detailed report by David G. Victor, et al. makes a sustained argument about the integration of industrial sectors as essential for effective action on decarbonization. Systemic and sectoral approaches ae complementary and both are needed, but at different phases in the process. A carbon price would help with making use of energy more efficient and would help with sectors where there is little uncertainty, but it does not help where intensive investment is needed to get new technologies started in a niche. Furthermore, recent evidence from political scientists suggests that putting a price on carbon is politically difficult.

To generate rapid technological change, one needs a sectoral focus when new technologies are seeking a niche, and these technologies need nurturing to ensure that the various interconnected pieces of the puzzle are all worked on together. Otherwise, progress will stall for lack of essential reinforcing progress. Later, after niche applications have taken off and reconfiguration is an economy-wide activity, carbon prices will become more important. The policy instruments needed for diffusion and reconfiguration are intrinsically economy-wide, like carbon taxes and carbon performance standards. It is important to keep the three-phase distinction in the report in mind — niches, diffusion, reconfiguration — and to explore how the politics shift in moving from one phase to the next.

The big political problem with the sectoral strategy is capture by industry. There is a tradeoff between working effectively with incumbents to solve climate issues and giving them oligopolistic power that can be used to thwart more radical change.

Decarbonization will be disruptive and there will be resistance, as the Breetz-Mildenberger-Stokes memo indicates. Incentives for important political actors will be critical. Strategies of sectoral coordination will vary by sector, but in general hybrid action, focused both on incumbents and outsiders, should be sought.

The Political Economy of Climate Change: Suggestions for a Research Program – A Memo

The premise of Robert O. Keohane's memo is that major efforts at decarbonization will create major disruption in any major capitalist economy and that insights from the classic political economy literature – including Adam Smith, Karl Marx, Karl Polanyi, and Charles E. Lindblom – will be important sources of insight in understanding the combination of change and continuity that emerges.

As one participant in the meeting said, Keohane's approach turns the conventional approach on its head. The conventional approach is to ask how modern capitalism is generating climate change. Keohane's memo asks how climate change will change modern capitalism. The paper to be written will be theoretical, not empirical. It will be open-ended, not deterministic. A zero-emissions political economy could look like contemporary capitalism without emissions but maintaining similar capital markets and corporate structures, or it could look radically different. In any case, climate change disruption will be inserted into a political economy characterized by deep inequality and undergoing radical change in labor relations with artificial intelligence and robotization. The process will destroy a tremendous amount of capital, thereby producing stranded assets.

Some Reflections: The Project's Legacy

The initial purpose of project devised for the second half of Robert O. Keohane's 2016 Balzan Prize was to sponsor first-rate political science research on the politics of climate change, some of which would appear in major journals, and which would signal that top-flight political science research was being done in this field. Four initial projects

were designed toward that end. Almost two years after the first meeting, when the ideas for these papers were generated, it seems that this purpose will be achieved. Two of the papers are close to the point at which they could be submitted, with good prospects of success, to top journals; two others are on the path to that outcome, somewhat more distant with greater uncertainty. This is a good record.

In the course of the project, another purpose has emerged: to initiate the study of decarbonization in political science as the world seriously needs to begin decarbonizing now. As the present report indicates, one funded project and two other pieces of work have taken on this challenge.

The third accomplishment of this program was the result largely of serendipity. It is now clear that the project has resulted in the creation of a viable network of scholars of climate politics who know each other and are in frequent contact and collaboration. This network includes not only the young scholars supported by the Balzan Prize, but also some top-level political scientists. Margaret Levi is Director of the Center for Advanced Study in the Behavioral Sciences (CASBS) and a member of the National Academy of Sciences. David Victor is clearly the most eminent and knowledgeable senior political scientist working on climate change issues in the world. Michael Ross is the chief theorist of the "resource curse." Two of the top comparative politics political scientists at Stanford, Kenneth Scheve and Michael Tomz – both of whom are now working on climate change issues -- are also involved. This is an "all-star" set of political scientists who are all involved without compensation because they find the project exciting.

In Keohane's field, an "emanation" is an organization or network that is spawned by another network. There are now two sets of emanations to report. Dustin Tingley, Professor of Government at Harvard and a member of Keohane's research group, has (with his participation and that of other colleagues at Harvard) successfully applied for Harvard funds to support networking and mentoring of graduate students at any university who either wish to work on the politics of climate change or could be encouraged to do so. These networks will be set up, virtually and in some cases with physical connections, next fall.

Secondly, one of our colleagues from another university has found that the pattern of mentorship created in these workshops – getting outstanding advice and feedback over multiple years as early-career faculty – is an incredibly useful experience and a way to create an amazing sense of community, thus leading to the initiation of an annual climate policy retreat for graduate students at that institution. Thus, an innovative experience has been initiated, and other scholars will want to take it up and pass it on.

In Keohane's words: "I am a student of institutions and I believe in the importance of institutions. This Balzan Network has become an institution, and I am unwilling to let it wither and die because we have reached the end of its expected term. Going forward, I have arranged with Princeton University for research resources to fund a fourth workshop on the comparative politics of climate change at CASBS in February 2021. We will therefore supplement the Balzan-funded papers with other promising work in the field, broadening further the impact of this important network."

Publications

The Politics of Decarbonization in the Oil and Gas Industry (Green, Hadden, Hale, Mahdavi)

- *Washington Post* Monkey Cage Analysis: "Oil companies aren't actually going green — but some are heading there faster than others." Published on September 18, 2020.
- Research Paper: "Transition, Hedge, or Resist? Understanding Political and Economic Behavior toward Decarbonization in the Oil and Gas Industry." Published in the *Review of International Political Economy* in July 2021.
- Research Note: "Using Earnings Calls to Understand the Political Behavior of Major Polluters." Published in *Global Environmental Politics* in February 2022.

- Harvard's Dataverse: "Replication Data for: Using Earnings Calls to Understand the Political Behavior of Major Polluters." https://doi.org/10.7910/DVN/ICEYCR

Identity and Cross-National Responses to Climate Change (Bush, Clayton)

- Bush, Sarah Sunn, and Amanda Clayton. "Facing Change: Gender and Climate Change Attitudes Worldwide." *American Political Science Review* (2022): 1-18.

Vulnerability, Compensation, and Support for Climate Policies (Gaikwad, Genovese, Tingley)

- Gaikwad, Nikhar, Federica Genovese and Dustin Tingley. 2022. "Climate Action from Abroad: Assessing Mass Support for Cross-Border Climate Compensation." Working Paper.
- Gaikwad, Nikhar, Federica Genovese and Dustin Tingley. 2022. "Creating Climate Coalitions: Mass Preferences for Compensating Vulnerability in the World's Two Largest Democracies." *American Political Science Review*. FirstView

The Politics of Decarbonization (Stokes, Breetz, Mildenberger))

- Hanna Breetz, Matto Mildenberger, and Leah Stokes, "The Political Logics of Clean Energy Transitions," *Business and Politics* 2018:1-31.