**The Global Politics of Climate Change [REVISED SYLLABUS]**

Political Science BC3605

Fall 2022

M, W 10:10-11:25

**Prof. Kimberly Marten**

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Office hours: Most Mondays, 2-4pm, online

“We are standing in front of the abyss;

we still have the opportunity to steer away from the abyss.”

—Christiana Figueres, Costa Rican diplomat and primary architect of

the Paris Climate Agreement, April 4, 2022, *Bloomberg Green*.

**Course Description and Objectives**

Climate change mitigation is the greatest global political challenge of our times. This course uses concepts drawn from the broader political science literature to analyze the recent history and possible future trajectories of interactions between international politics and climate change, including the international political economy of various relevant commercial sectors. It has no prerequisites, and no background knowledge is required. The course has two fundamental goals: to increase student understanding of the complexity of political issues and interests involved in global climate change problems, while countering growing climate despair by suggesting realistic paths forward toward global net zero carbon emissions. Class lectures will leave significant time for student questions and discussion.

**Student Learning Outcomes**

Students who complete this course successfully will be able to:

* Demonstrate knowledge of key political science and policy concepts useful for analyzing the global politics of climate change, as well as factual knowledge of selected cases where this analysis is reflected in real-world events.
* Apply this knowledge to analyze, compare, and evaluate selected historical and current events and make future predictions, identifying and analyzing the ways that political factors may have distinct effects in different locations and different economic sectors.
* Articulate the distinctions between local, national, and global effects and processes, as well as tradeoffs between some local ecology and global climate change mitigation efforts.
* Synthesize facts and arguments across cases in order to reason critically and argue creatively on written assignments, while thinking creatively about global paths forward.

**Assignments and Expectations**

**Two take-at-home midterm exams (due Oct. 6 and Nov. 2), and one take-at-home final exam (due at the time that our in-class exam would be held, probably Dec. 21).** The two midterms will each require several short written responses to prompts (with student choice among prompts), with each exam totaling approximately 2,000 words. The primary purpose of the midterm exams is to monitor whether students are doing the assigned reading and are engaged with course themes. Questions will be distributed at least two weeks in advance of the due-date. No collaboration is allowed on these exams.

There will also be a final take-home exam, with one essay totaling approximately 2,000 words, where each student will choose any one of the international political economy sectoral issues raised in the last third of the course, and propose and defend a realistic path in that sector that moves the world forward toward a net zero outcome. For the final exam students are expected to do independent research, as well as to integrate a sophisticated understanding of the politics discussed throughout the semester. They are encouraged to speak with whomever they like in formulating their ideas, but the final written product and its organizational structure must be the student’s alone. **Personal Librarians:** You may contact Barnard Library’s research and instruction team (Personal Librarians) for any support needed in completing research-based assignments. Librarians are available for individual consultations about ways to access online research materials and meet citation requirements for your papers and projects. Personal Librarians can assist in finding e-books, full-text articles, and open access sources. The dedicated personal librarian for political science is Jennie Correia, <https://library.barnard.edu/profiles/jennie-correia>

**Recommended, not required, podcasts and video series (these may be useful for generating ideas for the final paper especially):**

--“The Sweaty Penguin” from PBS, hosted by Ethan Brown (“Sometimes, climate change IS a laughing matter”): <https://www.pbs.org/wnet/peril-and-promise/series/the-sweaty-penguin-antarcticas-hottest-podcast/>

 --The YouTube channel of the Columbia SIPA Center on Global Energy Policy (CGEP, particularly good on coverage of innovative industry efforts): <https://www.youtube.com/c/CenteronGlobalEnergyPolicy/videos>

 --“The Big Switch,” hosted by CGEP senior research scholar and director of research Dr. Melissa C. Lott: <https://www.energypolicy.columbia.edu/podcast/big-switch>

**Recommended, not required, guide to interpreting some of the vocabulary used when discussing climate issues**: New York Times Climate Desk, “Searching for Hidden Meaning in Climate Jargon,” *New York Times*, Oct. 31, 2021, <https://www.nytimes.com/interactive/2021/10/31/climate/climate-change-sustainability-definition.html>

**All written work will be submitted on the “Assignments” page on Courseworks/Canvas**. All uploaded files must be in either Word or PDF format. All will be put through turnitin.com to check for plagiarism. Please note: a separate handout describes the grading criteria for all exams. All students may use the Barnard and Columbia writing centers without restriction.

In addition, each student will choose **ten (10) times during the semester** to submit a discussion question on Courseworks/Canvas, based on the assigned readings, by 5pm the night before the lecture is scheduled. Each will be marked 95 (excellent, shows deep engagement with the readings and independent thought), 90 (good, shows the reading was completed but reflects summary rather than independent thought), 85 (acceptable, shows some effort was put in), or not acceptable (in this case the question will be dropped, and the student may choose a future session in its place if they wish to receive credit for 10 sessions).

**Evaluation**

* First midterm: 20%
* Second midterm: 30%
* Final exam: 40%
* Regular class participation via the Canvas/Courseworks discussion page: 10%

**Barnard Honor Code**

Approved by the student body in 1912 and updated in 2016, the Code states: “We, the students of Barnard College, resolve to uphold the honor of the College by engaging with integrity in all of our academic pursuits. We affirm that academic integrity is the honorable creation and presentation of our own work. We acknowledge that it is our responsibility to seek clarification of proper forms of collaboration and use of academic resources in all assignments or exams. We consider academic integrity to include the proper use and care for all print, electronic, or other academic resources. We will respect the rights of others to engage in pursuit of learning in order to uphold our commitment to honor. We pledge to do all that is in our power to create a spirit of honesty and honor for its own sake.”

All assignments in this class are to be completed in accordance with the Barnard Honor Code, with expectations outlined in the following paragraph, whether or not the student is a Barnard student. Any student who violates the Honor Code will face dean’s discipline at her or his home college, and will earn a zero on the assignment in question, even if only a small portion of the assignment is plagiarized.

Students affirm that all work turned in is their own, and that they have fully and accurately cited every written source, including web-based sources and unpublished sources (such as prior student papers), used in their writing. **Students should avoid cutting and pasting from source materials**, to ensure that the wording used is their own; if the words of others are used, they should be placed in quotation marks. “Plagiarism” is the use of someone else’s words or ideas without proper attribution. It is, at its core, the act of falsely implying or claiming credit for intellectual work that someone else did. All students receive in-depth briefings on plagiarism and proper citation techniques as part of their introductory days at Barnard and Columbia; any student who has any remaining questions about proper citation technique or about how to avoid plagiarism should discuss these questions and concerns with Prof. Marten before turning in the assignment in question.

**The use of laptops during lecture is prohibited,** with the exception of students who receive official disability office accommodations. There is overwhelming scientific evidence that taking notes by hand increases student learning and knowledge retention.

**Center for Accessibility Resources & Disability Services (CARDS) Statement**

If you believe you may encounter barriers to the academic environment due to a documented disability or emerging health challenges, please contact the Center for Accessibility Resources & Disability Services (CARDS) if you are a Barnard student, or Columbia Disability Services if you are a Columbia student. Any student with approved academic accommodations is encouraged to contact me during office hours or via email. If you have questions regarding registering a disability or receiving accommodations for the semester, please contact CARDS at (212) 854- 4634, cards@barnard.edu, or learn more at <http://barnard.edu/disabilityservices>; the Columbia counterpart website is <https://www.health.columbia.edu/content/disability-services>.

**Barnard Wellness Statement**

It is important for undergraduates to recognize and identify the different pressures, burdens, and stressors they may be facing, whether personal, emotional, physical, financial, mental, or academic. We as a community urge you to make yourself—your own health, sanity, and wellness—your priority throughout this term and your career here. Sleep, exercise, and eating well can all be a part of a healthy regimen to cope with stress. Resources exist to support you in several sectors of your life, and we encourage you to make use of them. Should you have any questions about navigating these resources, please visit these sites:

* <http://barnard.edu/primarycare>
* [http://barnard.edu/counseling](http://barnard.edu/counsel)
* <http://barnard.edu/wellwoman/about>
* [Stressbusters Support Network](http://health.columbia.edu/files/healthservices/pdf/alice_Stressbusters_Support_Network.pdf) (Columbia)

**Course Schedule**

**Note:** All readings are available online; no book purchases are necessary. The easiest way to access them is through the “Modules” function on Courseworks. Please read items in the order they are listed; this will help make clear which issues in each reading are important. Additions and/or substitutions may occur as new work is published and current events unfold.

**Part I: Introduction to the global problem of climate change**

Sept. 7. Climate change as a “wicked problem.”

 **Open web:**

 Raghu Murtugudde, “10 Reasons Why Climate Change Is a 'Wicked' Problem,” The Wire (India), Dec. 11, 2019, <https://thewire.in/environment/climate-change-wicked-problem>

Brad Plumer and Henry Fountain, “A Hotter Future Is Certain, Climate Panel Warns. But How Hot Is Up to Us,” *New York Times*, Aug. 9, 2021, <https://www.nytimes.com/2021/08/09/climate/climate-change-report-ipcc-un.html> . [Please note: all students are eligible for a free online *New York Times* subscription through CLIO. Directions on a separate handout.]

 Brad Plumer, Raymond Zhong and Lisa Friedman, “Time Is Running Out to Avert a Harrowing Future, Climate Panel Warns,” *New York Times*, Feb. 28, 2022, <https://www.nytimes.com/2022/02/28/climate/climate-change-ipcc-un-report.html>

John Bistline, Inês Azevedo, Chris Bataille and Steven Davis, “We Are Wasting Time on These Climate Debates. The Next Steps Are Clear,” *New York Times*, Apr. 10, 2022, <https://www.nytimes.com/2022/04/10/opinion/environment/ipcc-report-climate-change-debates.amp.html>

Sept. 12. Climate change and inequality: “climate justice,” “loss and damage,” “adaptation,” and climate migration.

 **Open web:**

 Rebecca Byrnes and Swenja Surminski, “What is climate change ‘Loss and Damage’?” LSE Grantham Research Institute on Climate Change and the Environment, Jan. 13, 2021, <https://www.lse.ac.uk/granthaminstitute/explainers/what-is-climate-change-loss-and-damage/>

 Jocelyn Timperley, “The broken $100-billion promise of climate finance — and how to fix it,” *Nature.com News*, Oct. 20, 2021, <https://www.nature.com/articles/d41586-021-02846-3>

 Abrahm Lustgarten, “The Great Climate Migration,” *New York Times*, July 23, 2020, <https://www.nytimes.com/interactive/2020/07/23/magazine/climate-migration.html>

 **CLIO:**

 Mary Robinson and Tara Shine, “Achieving a climate justice pathway to 1.5 °C,” *Nature Climate Change* 8 (July 2018): 564-569.

 Kelly Sims Gallagher, “The Coming Carbon Tsunami: Developing Countries Need a New Growth Model—Before It’s Too Late,” *Foreign Affairs* 101, no. 1 (Jan./Feb. 2022): 151-164.

Sept. 14. Does climate change cause war? The example of the Syrian civil war (2011).

 **CLIO:**

 Vally Koubi, “Climate Change and Conflict,” *Annual Review of Political Science* 22 (2019): 343-60.

 **Open web:**

 Colin P. Kelley, Shahrzad Mohtadi, Mark A. Cane, Richard Seager, and Yochanan Kushnir, “Climate change in the Fertile Crescent and implications of the recent Syrian drought,” *Proceedings of the National Academy of Sciences* 112, no. 11 (Mar. 17, 2015): 3241-3246, <https://www.pnas.org/content/112/11/3241>

 Jan Selby, Omar S.Dahi, Christiane Fröhlich, and MikeHulme, “Climate change and the Syrian civil war revisited,” *Political Geography* 60 (Sept. 2017): 232-244, <https://www.sciencedirect.com/science/article/pii/S0962629816301822>

Sept. 19. Climate change and disease: will it likely cause pandemics?

 **Open web:**

 Abrahm Lustgarten, “How Climate Change Is Contributing to Skyrocketing Rates of Infectious Disease,” *ProPublica*, May 7, 2020, <https://www.propublica.org/article/climate-infectious-diseases>

 Rob Jordan, “How does climate change affect disease?” *Stanford Earth Matters Magazine*, Mar. 15, 2019, <https://earth.stanford.edu/news/how-does-climate-change-affect-disease#gs.p0u5zf>

 “As Earth Warms, the Diseases That May Lie within Permafrost Become a Bigger Worry,” *Scientific American*, Nov. 1, 2016, <https://www.scientificamerican.com/article/as-earth-warms-the-diseases-that-may-lie-within-permafrost-become-a-bigger-worry/>

 Michaeleen Doucleff, “Are There Zombie Viruses — Like The 1918 Flu — Thawing In The Permafrost?” NPR *Goats and Soda* Podcast, May 19, 2020, <https://www.npr.org/sections/goatsandsoda/2020/05/19/857992695/are-there-zombie-viruses-like-the-1918-flu-thawing-in-the-permafrost>

**Part II. States as Actors**

Sept. 21. CLASS CANCELLED unexpectedly. Prof. Marten scheduled to give congressional testimony at our class time.

Sept. 26. Realism as a perspective: the problem of energy security.

 **CLIO:**

Stephen M. Walt, “The World Wants You to Think Like a Realist,” ForeignPolicy.com, May 30, 2018.

Stephen M. Walt, “The Realist Guide to Solving Climate Change,” ForeignPolicy.com, Aug. 13, 2021.

 **Open web:**

Keith Bradsher, “China Hurries to Burn More Coal, Putting Climate Goals at Risk,” *New York Times*, Oct. 28, 2021, <https://www.nytimes.com/2021/10/28/business/energy-environment/china-coal-climate.html>

 Emily Holland [GS Political Science ‘09, PhD ’17 and Prof. Marten’s former student!], “Europe’s Energy Security Problem Leaves It in the Cold,” *War on the Rocks*, Nov. 30, 2021, <https://warontherocks.com/2021/11/europes-energy-security-problem-leaves-it-in-the-cold/>

Sept. 28. The global collective action problem (the tragedy of the commons) and possible solutions.

**Courseworks files:**

 Erik Nordman, “What’s So Tragic about the Commons?” and “The Climate Commons,” chapters 1 and 6 of *The Uncommon Knowledge of Elinor Ostrom* (Washington, DC: Island Press, 2021), pp. 1-18 and 105-126.

**CLIO:**

Thomas Dietz, Elinor Ostrom, and Paul C. Stern, “The Struggle to Govern the Commons,” *Science* 302, no. 5652 (Dec. 12, 2003): 1907-1912.

 William Nordhaus, “The Climate Club: How to Fix a Failing Global Effort,” *Foreign Affairs* 99, no. 3 (May/June 2020): 10-17.

 **Open web:**

 “Pricing Carbon,” The World Bank, <https://www.worldbank.org/en/programs/pricing-carbon>

 “Carbon Border Adjustment Mechanism: Questions and Answers,” European Commission, July 14, 2021, <https://ec.europa.eu/commission/presscorner/detail/en/qanda_21_3661>

Oct. 3. Liberal institutionalism: international climate agreements (with special attention to the relatively successful Montreal Protocol on ozone depletion)

 **Open web:**

 Lindsay Maizland, “Global Climate Agreements: Successes and Failures,” Council on Foreign Relations *Backgrounder*, Nov. 17, 2021, <https://www.cfr.org/backgrounder/paris-global-climate-change-agreements>

 Ian Rae, “Saving the ozone layer: why the Montreal Protocol worked,” *The Conversation*, Sept. 9, 2012, <https://theconversation.com/saving-the-ozone-layer-why-the-montreal-protocol-worked-9249>

 Peter M. Haas, “Robust Ozone Governance Offers Lessons for Mitigating Climate Change,” *One Earth Commentary* (Cell Press), Sept. 20, 2019, [https://www.cell.com/one-earth/pdf/S2590-3322(19)30027-2.pdf](https://www.cell.com/one-earth/pdf/S2590-3322%2819%2930027-2.pdf)

 **Courseworks files:**

 Leslie Kaufman, “UN Plastic Pledge Is Bright Spot for Global Climate Diplomacy,” Bloomberg.com, Mar. 7, 2022.

Oct. 5. No class meeting. Take-home midterm due Oct. 6 at 5pm.

Oct. 10. Is capitalism as a system to blame for climate change?

 **Open web:**

 Alyssa Battistoni and Jedediah Britton-Purdy, “After Carbon Democracy,” *Dissent*, Winter 2020, <https://www.dissentmagazine.org/article/after-carbon-democracy>

 **CLIO:**

 Charles E. Lindblom, “The Market as Prison,” *Journal of Politics* 44, no. 2 (May 1982): 324-36.

 **Courseworks Files:**

 D.J. Peterson, “Introduction,” from his *Troubled Lands: The Legacy of Soviet Environmental Destruction* (Boulder, CO: Westview Press, 1993), pp. 1-16 only.

 **Open web:**

 Somini Sengupta, “Both Climate Leader and Oil Giant? A Norwegian Paradox,” *New York Times*, June 17, 2017.

 Maxine Bédat [Barnard Political Science ‘05 and Prof. Marten’s former advisee!], “Maxine Bédat Urges the Fashion Industry to Make a Change Now, Not in 2030,” Vogue.com. Apr. 29, 2021, <https://www.vogue.com/article/maxine-bedat-new-standard-institute-why-fashion-industry-must-change-now>

**Part II: Domestic Politics and Decision Making**

Oct. 12. The logic of two-level games: US hegemonic leadership in global negotiations, and distributional issues.

 **CLIO:**

Manjana Milkoreit, “The Paris Agreement on Climate Change—Made in USA?” *Perspectives on Politics* 17, no. 4 (Dec. 2019): 1019-1037.

Michaël Aklin and Matto Mildenberger, “Prisoners of the Wrong Dilemma: Why Distributive Conflict, Not Collective Action, Characterizes the Politics of Climate Change,” *Global Environmental Politics* 20, no. 4 (November 2020): 4-27.

 Joshua Partlow, “How Coal Holds on in America,” *Washington Post*, Jan. 17, 2022.

Oct. 17. Can China replace the US as a hegemonic leader on climate change?

**Open web:**

Phillip Stalley, “In the fight against climate change, China is doing more than you think – but still not enough,” *The Conversation*, Dec. 7, 2021, <https://theconversation.com/in-the-fight-against-climate-change-china-is-doing-more-than-you-think-but-still-not-enough-172138>

 David Sandalow, *Guide to Chinese Climate Policy 2019*, Columbia SIPA Center on Global Energy Policy, Sept. 2019, <https://www.energypolicy.columbia.edu/sites/default/files/file-uploads/Guide%20to%20Chinese%20Climate%20Policy_2019.pdf>

Oct. 19. Kleptocracy and patron/client relations: the example of the Russian Arctic.

 **Open web:**

 Meghan L. O’Sullivan and Jason Bordoff, “Russia Isn’t a Dead Petrostate, and Putin Isn’t Going Anywhere,” *New York Times*, Jan. 27, 2022.

 **Courseworks files:**

 Thane Gustafson, “The Politics of Climate Change in Russia,” chapter 1 from his *Klimat: Russia in the Age of Climate Change* (Cambridge, MA: Harvard University Press, 2021), pp. 17-46.

Kimberly Marten, “Can Global Business Norms Turn the Kremlin Green? The Example of Nornickel,” Unpublished paper presented at the International Studies Association Convention (online), March 2022.

Oct. 24. Constructivism and change: evaluating the roles of protest, civil disobedience, and uncivil action.

 **CLIO:**

Joost de Moor, “The ‘efficacy dilemma’ of transnational climate activism: the case of COP21,” *Environmental Politics* 27, no. 6 (2018): 1079–1100.

 Joost de Moor, Michiel De Vydt, Katrin Uba & Mattias Wahlström, “New

kids on the block: taking stock of the recent cycle of climate activism,” *Social Movement Studies* 20, no. 5 (2021): 619-62.

 Andrew Marantz, “Not Dark Yet: The Sunrise Movement wants to revolutionize climate politics,” *The New Yorker*, March 7, 2022.

 **Open web:**

Matthew Wolfe, “The Rise and Fall of America’s Environmentalist Underground,” *New York Times*, May 26, 2022, <https://www.nytimes.com/2022/05/26/magazine/earth-liberation-front-joseph-mahmoud-dibee.html>

Oct. 26. Constructivism and change: greening business investment, or green washing?

 **Courseworks files:**

 David Carlin, “The Case for Fossil Fuel Divestment,” *Forbes*, Feb. 20, 2021; and David Carlin, “The Case for Fossil Fuel Engagement,” *Forbes*, Mar. 2, 2021.

 Saijel Kishan, “A Basic Guide to ESG Investing and Why It Faces a Backlash: Quick Take,” Bloomberg.com, June 24, 2022.

 Kassia Yanosek and David G. Victor, “How Big Business Is Taking the Lead on Climate Change,” ForeignAffairs.com, Feb. 3, 2022.

 **CLIO:**

 Diane Coyle, “The Revolution Will Not Be Privatized: Corporate Responsibility and Its Limits,” *Foreign Affairs* 101, no. 1 (Jan./Feb. 2022): 119-127.

 **Open web:**

Larry Fink, “A Fundamental Reshaping of Finance,” his 2020 letter to CEOs, <https://www.blackrock.com/corporate/investor-relations/2020-larry-fink-ceo-letter>; and “Capitalism and Sustainability,” and “Empowering clients with choice on ESG votes,” sections of his 2022 letter to CEOs, “The Power of Capitalism,” <https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter>

 Dominic Rushe, “Green investing ‘is definitely not going to work’, says ex-BlackRock executive,” *The Guardian*, Mar. 30, 2021, <https://www.theguardian.com/business/2021/mar/30/tariq-fancy-environmentally-friendly-green-investing>

Oct. 31. Cities as problems, cities as solutions: the example of C40 and New York City. Guest lecture by Daniel Zarrilli, Special Advisor on Climate and Sustainability at Columbia University and the former NYC Chief Climate Policy Advisor.

 **Open web:**

 John Rennie Short and Abbey Farmer, “Cities and Climate Change,” *Earth* 2021 no. 2: 1038–1045, PDF may be downloaded from here: <https://www.mdpi.com/2673-4834/2/4/61>

 “About C40.” Please scroll down this website and follow links that interest you, to learn about what C40 is and does: <https://www.c40.org/about-c40/>

 Daniel Zarilli, “A Livable Climate,” part 7 of *OneNYC 2050: Building a Strong and Fair City*, Apr. 2019, <https://onenyc.cityofnewyork.us/wp-content/uploads/2019/11/OneNYC-2050-A-Livable-Climate-11.7.pdf> Also please click around the website for the entire report, “New York City’s Green New Deal,” <https://onenyc.cityofnewyork.us/#main-content>

Nov. 2. No class meeting; take home midterm due at 5pm.

Nov. 7. Election Day Holiday; no class meeting.

Nov. 9. Oct. 26. Cognitive biases, prospect theory, and communicating about climate change.

 **Courseworks files:**

Chunka Mui, “3 Reasons There Might Be No Path to Success on Climate Change,” Forbes.com, Oct. 1, 2019.

 Lorraine Whitmarsh and Stuart Capstick, “Perceptions of Climate Change,” in *Psychology and Climate Change*, ed. Susan Clayton and Christie Manning (Elsevier, 2018), pp. 13-33.

 **Open web TED Talk:** Per Espen Stoknes, “How to transform apocalypse fatigue into action on global warming,” June 7, 2019, <https://www.ted.com/talks/per_espen_stoknes_how_to_transform_apocalypse_fatigue_into_action_on_global_warming>

**Part III: Sectoral Global Political Economies**

Nov. 14. The global politics and climate impact of oil.

 **Open web: drill baby, drill?**

Camila Domonoske, “Big Oil (Probably) Isn't Going Away Anytime Soon. But It's Definitely Changing,” NPR, June 8, 2021, <https://www.npr.org/2021/06/08/1002448099/big-oils-transition-3-takeaways-on-how-the-industry-is-and-isnt-going-green>

 David Manley, David Mihalyi, and Patrick R.P. Heller, “Hidden Giants: It’s time for more transparency in the management and governance of national oil companies,” *Finance and Development* (IMF), Dec. 2019, <https://www.imf.org/en/Publications/fandd/issues/2019/12/national-oil-companies-need-more-transparency-manley>

Benjamin Franta, “What Big Oil knew about climate change, in its own words,” The Conversation.com, Oct. 28, 2021, [https://theconversation.com/what-big-oil-knew-about-climate-change-in-its-own-words-170642#](https://theconversation.com/what-big-oil-knew-about-climate-change-in-its-own-words-170642)

Damian Carrington and Matthew Taylor, “Revealed: the ‘carbon bombs’ set to trigger catastrophic climate breakdown,” *The Guardian*, May 11, 2022, <https://www.theguardian.com/environment/ng-interactive/2022/may/11/fossil-fuel-carbon-bombs-climate-breakdown-oil-gas>.

**Open web:** **the carbon capture debate:**

June Sekera and Neva Goodwin, “Why the oil industry’s pivot to carbon capture and storage – while it keeps on drilling – isn’t a climate change solution,” *The Conversation*, Nov. 23, 2021, <https://theconversation.com/why-the-oil-industrys-pivot-to-carbon-capture-and-storage-while-it-keeps-on-drilling-isnt-a-climate-change-solution-171791>

Paul Tullis, interview of Jennifer Wilcox, “Can Carbon Capture Be Part of the Climate Solution?” *New York Times*, June 13, 2022, <https://www.nytimes.com/2022/06/13/climate/capture-capture-storage-jennifer-wilcox.html>

 **Open web: what all this means for the Middle East:**

 Jon B. Alterman, “A New Revolution in the Middle East,” Center for Strategic and International Studies Commentary, Aug. 9, 2021, <https://www.csis.org/analysis/new-revolution-middle-east-0>

Nov. 16. The global politics and climate impact of natural gas: a transition fuel?

 **Open web:**

J. William Carpenter, “The Top Natural Gas Companies in the World,” Investopedia, Sept. 13, 2021, <https://www.investopedia.com/articles/markets/030116/worlds-top-10-natural-gas-companies-xom-ogzpy.asp>

 C. Gürsan and V. de Gooyert, “The systemic impact of a transition fuel: Does natural gas help or hinder the energy transition?” *Renewable and Sustainable Energy Reviews* 138 (2021) 110552, <https://www.sciencedirect.com/science/article/pii/S1364032120308364> (please note that you can download a PDF from this HTML link). This is a difficult read, but please slog through it; it presents very objectively a summary of the available research on natural gas as a replacement for coal and oil, its associated extraction and infrastructure, and the problem of methane.

Nov. 21. The global politics and climate impact of coal.

 **Open web:**

Mark Shwartz, “Q&A: Stanford expert explains why we continue burning coal for energy,” *Stanford Energy*, Dec. 20, 2019, <https://energy.stanford.edu/news/qa-stanford-expert-explains-why-we-continue-burning-coal-energy>

Fatih Birol and David Malpass, “It’s critical to tackle coal emissions,” translation of an opinion piece originally published in *Le Monde*, Oct. 7, 2021, <https://www.iea.org/commentaries/it-s-critical-to-tackle-coal-emissions>

 Global Energy Monitor et al., “Boom and Bust Coal 2022: Tracking the Global Coal Plant Pipeline,” April 2022, <https://globalenergymonitor.org/wp-content/uploads/2022/04/BoomAndBustCoalPlants_2022_English.pdf>

 **Courseworks files:**

 Antony Sguazzin, “S. Africa’s $8.5 Billion Climate Pact May Draw New Partners,” Bloomberg.com, June 21, 2022.

Nov. 23. Thanksgiving Day Holiday, no class meeting.

Nov. 28. The global politics of nuclear energy.

 **CLIO:**

 Jason Bordoff, “3 Reasons Nuclear Power Has Returned to the Energy Debate,” ForeignPolicy.com, Jan. 3, 2022.

**Open web:**

Hartmut Winkler, “Russia’s nuclear power exports: will they stand the strain of the war in Ukraine?” *The Conversation*, March 6, 2022, <https://theconversation.com/russias-nuclear-power-exports-will-they-stand-the-strain-of-the-war-in-ukraine-178250>

 BBC, “Fukushima disaster: What happened at the nuclear plant?” March 10, 2021, <https://www.bbc.com/news/world-asia-56252695>

Nov. 30. The global politics (and limits) of clean energy: solar, wind, and green hydrogen.

 **Open web:**

 Fiona Brown and Daniel Roberts, “Green, blue, brown: the colours of hydrogen explained,” Commonwealth Scientific and Industrial Research Organisation (Australia), May 27, 2021, <https://blog.csiro.au/green-blue-brown-hydrogen-explained/>

 “Hydrogen Pipelines,” U.S. Department of Energy Office of Energy Efficiency and Renewable Energy, <https://www.energy.gov/eere/fuelcells/hydrogen-pipelines>

 **CLIO:**

Nicola De Blasio and Fridolin Pflugmann, “The Geopolitics of Renewable Hydrogen in Low-Carbon Energy Markets,” *Geopolitics, History, and International Relations* 12, no. 1 (2020): 9-44.

On the limits of clean energy on airplanes: Sam Howe Verhovek and Davide Monteleone. "How Green, How Soon?" *National Geographic Magazine* 240, no. 4 (Oct. 2021): 64-83.

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**Part IV. Predicting the future?**

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**Readings will be drawn from current events sources.**