

GENDERED AND RACIAL IMPACTS OF THE FOSSIL FUEL INDUSTRY IN NORTH AMERICA AND COMPLICIT FINANCIAL INSTITUTIONS



A CALL TO ACTION FOR THE HEALTH OF OUR COMMUNITIES AND NATURE IN THE CLIMATE CRISIS

“ We stand to protect the water and our Mother Earth. We stand to divest from fossil fuel so our children can live. We stand because we have no other choice. Min Wiconi, Water is Life.



LaDonna Brave Bull Allard

(STANDING ROCK SIOUX TRIBE) FOUNDER/LANDOWNER OF SACRED STONE AND LAKOTA HISTORIAN¹

“ They promised us jobs. Instead they pollute us with these plants, like we’re not human beings, like we’re not even people. They’re killing us. And that is why I am fighting.



Sharon Lavigne

FOUNDER OF RISE ST. JAMES, ST. JAMES PARISH, LOUISIANA²

“ Putting more wells where people already face greater rates of respiratory illness and heart disease is unthinkableably cruel. And it’s even worse now with COVID-19 battering our communities, because we know that higher rates of pollution make people more likely to die from the virus.



Rosanna Esparza

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¹ WECAN/DIP. (2017, September 28). *Indigenous Women From Standing Rock And Allies On Divestment Delegation In Europe*. <https://www.wecaninternational.org/PressReleases/Indigenous-Women-From-Standing-Rock-And-Allies-On-Divestment-Delegation-In-Europe>.

² Juhasz, A. (2019, October 30). *Louisiana's 'Cancer Alley' Is Getting Even More Toxic -- But Residents Are Fighting Back*. Rolling Stone, <https://www.rollingstone.com/politics/politics-features/louisiana-cancer-alley-getting-more-toxic-905534/>.

³ Center for Biological Diversity. (2020, September 5). *Thousands Oppose First Federal Oil Lease Sale in California in Eight Years*. https://biologicaldiversity.org/w/news/press-releases/thousands-oppose-first-federal-oil-lease-sale-california-eight-years-2020-09-25/email_view/.

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Executive Summary



Holding BAN TOXIC EMISSIONS sign, Barbara Washington, to the right Gail Leboeuf and Myrtle Felton, in Louisiana. (Louisiana Bucket Brigade)

Executive Summary

It is a well-known truth that the climate crisis does not and will not affect everyone equally, as factors such as gender, race, and socio-economic status make certain communities significantly more vulnerable to the increasing threat of climate change.⁴ Global inequalities, rooted in structural patriarchy, colonialism, white supremacy, and capitalism, continue to place people of the global majority, and specifically women, at risk. In particular, African American/Black/African Diaspora, Indigenous, Latina/Chicana, and low-income women and their communities experience disproportionate harm due to the consequences from pollution, environmental degradation, and the climate crisis.⁵

Fossil fuel activity results in the pollution and degradation of air, water, and land.⁶ The essential nature of the fossil fuel industry is extractive and is not possible without the contamination of the Earth and marginalized communities. Due to foundational and systemic racism, unabated capitalism based on endless material growth on a finite planet, and ongoing settler-colonial policies, fossil fuel activity occurs disproportionately in communities of color and on or near Indigenous lands.⁷ Due to institutional patriarchy and male dominated power structures, sexism, and traditional capitalist labor valuations, the pollution and destruction from fossil fuel extraction and infrastructure disproportionately impacts women in communities of color and low-income communities.⁸

The report addresses the gender and race-specific health and safety impacts as well as human and Indigenous rights issues of fossil fuel extraction and infrastructure in the United States and selected parts of Canada; issues that have been sorely neglected in the discourse regarding fossil fuel extraction impacts in the past. The report also exposes the role that financial institutions, including banks, asset managers, and insurance companies, play in preserving and perpetuating negative gender and racial impacts due to the financing, insuring, and investing in fossil fuel companies. Based on analysis and evidence that links fossil fuel activity to women's health, safety, and rights, the report advocates for financial institutions to divest from and cease insuring fossil fuel companies.

Through an examination of peer reviewed scientific articles, published reports, and first-hand accounts from women in frontline communities, the report finds an indisputable connection between the fossil fuel industry's practices and negative impacts to African American/Black/African Diaspora, Indigenous, Latina/Chicana, and low-income women's health, safety, and human rights in the U.S. and parts of Canada. Specifically, fossil fuel derived air, water, and soil pollution impact women's fertility, mental health, and daily work and responsibilities. The negative

4 WHO. (2014). *Gender, Climate Change and Health*. https://www.who.int/globalchange/publications/reports/gender_climate_change/en/

5 UN Women Watch. *Fact Sheet: Women, Gender Equality and Climate Change*. https://www.un.org/womenwatch/feature/climate_change/downloads/Women_and_Climate_Change_Factsheet.pdf; NAACP. *Environmental and Climate Justice*. <https://naacp.org/issues/environmental-justice/>

6 U.S. EPA. *Nutrient Pollution*. <https://www.epa.gov/nutrientpollution/sources-and-solutions-fossil-fuels>

7 Newkirk II, V.R. (2018, February 28). A New EPA Report Shows that Environmental Racism is Real. *The Atlantic*. <https://www.theatlantic.com/politics/archive/2018/02/the-trump-administration-finds-that-environmental-racism-is-real/554315/>; Volcovici, V. (2016, December 5). Trump advisors aim to privatize oil-rich Indian reservations. *Reuters*. <https://www.reuters.com/article/us-usa-trump-tribes-insight/trump-advisors-aim-to-privatize-oil-rich-indian-reservations-idUSKBN13U1B1>

8 Cushing, L.J., et. al. (2020, July15). Flaring from Unconventional Oil and Gas Development and Birth Outcomes in the Eagle Ford Shale in South Texas. *Environmental Health Perspectives*, 128(7). <https://doi.org/10.1289/EHP6394>

effects from fossil fuel activity — specifically coal, oil, and gas — stem from direct pollution of communities and through the role fossil fuel companies play as the biggest contributors to industrial carbon dioxide and methane.⁹ Additionally, temporary male housing sites used for fossil fuel pipeline construction and oil field work, referred to as “man camps,” have been extensively linked to increased levels of abuse and safety threats to Indigenous women, girls, and two-spirit people,¹⁰ contributing to the Missing and Murdered Indigenous Women, Girls, and Two-Spirit People (MMIWG2S) epidemic.¹¹

The sexual violence against women and girls near “man camps” is a clear violation of human rights. Companies constructing pipelines along Indigenous territories (e.g. Enbridge) are also violating Indigenous rights, including Indigenous sovereignty, the right to Free, Prior and Informed Consent (FPIC), and numerous treaties. This further impacts Indigenous women because of their deep cultural ties to the land and water. **Dr. Sara Jumping Eagle (Oglala Lakota and Mdewakanton Dakota), an Activist and Pediatrician,** describes the intimate ties to her Tribe’s land in North Dakota:

“The connections between who we are as Lakota Oyate — our health, our lands and water, our spirituality, our self-empowerment and self-esteem — are deeply rooted; the actions we take to protect our land and water, our future, and our children’s water can only help us all.”¹²



Dr. Sara Jumping Eagle. (DIP/WECAN)

In the face of an escalating climate crisis and harm to women and their communities, new fossil fuel projects continue to develop and persist across the U.S. and Canada. Although this report concentrates on the U.S., several parts of Canada have been included because of the tar sands mega project in Alberta and “Chemical Valley” in Ontario. The scope of the report does not cover the entirety of fossil fuel expansion, but rather focuses on some of the most extreme projects and regions with concentrated fossil fuel extraction and infrastructure. For example, in Louisiana, in a predominantly African American/Black/African Diaspora neighborhood, FG LA LLC (a subsidiary company of Formosa Plastics Group) has proposed a new plastics manufacturing facility dubbed the “Sunshine Project.”¹³ This petrochemical complex will emit approximately 13 million tons of carbon pollution per year¹⁴ more than doubling the cancer risks in St. James Parish, and exacerbating the disproportionate impacts on African American/Black/African Di-

⁹ Ekwurzel, B., et al. (2017). The rise in global atmospheric CO₂, surface temperature, and sea level from emissions traced to major carbon producers. *Climatic Change*, 144, 579-590. <https://doi.org/10.1007/s10584-017-1978-0>

¹⁰ See Section 3, Definitions and Scope, for definition of two-spirit.

¹¹ C-Span. (2020, September 23). *Human Trafficking in the U.S.* <https://www.c-span.org/video/?315168-1/human-trafficking-us>; Jayasundara, D.S., et al. (2014). Drilling Down: An Examination of the Boom-Crime Relationship in Resource-Based Boom Counties. *Western Criminology Review*, 15(1), 3-17. <http://wcr.sonoma.edu/v15n1/Ruddell.pdf>; Indian Country Today. (2015, May 12). *Native American and Women’s Organizations Request UN Help on Sexual Violence*. <https://indiancountrytoday.com/archive/native-american-and-women-s-organizations-request-un-help-on-sexual-violence-srxHIWjqEmyrmz9OPMmZw>

¹² WECAN/DIP. (2017, March 24). *Indigenous Women of Standing Rock and Allies to Speak Out During Divestment Delegation to Norway*. <https://www.wecaninternational.org/PressReleases/Indigenous-Women-of-Standing-Rock-and-Allies-to-Speak-Out-During-Divestment-Delegation-to-Norway>

¹³ Ludwig, M. (2019, March 10). Petrochemical Giants Are Slowly Killing Black Louisiana Communities. *Portside*. <https://portside.org/2019-03-10/petrochemical-giants-are-slowly-kill-ing-black-louisiana-communities>

¹⁴ Surrusco, E.K. (2020, February 14). Cancer Alley Rises Up. *Earthjustice*. <https://earthjustice.org/features/cancer-alley-rises-up#:~:text=Dubbed%20the%20E2%80%9C9C Sunshine%20Project%2C%E2%80%9D.as%202.8%20million%20passenger%20cars>

aspora neighborhoods.¹⁵ Because women continue to unequally shoulder the burden of family caretaking,¹⁶ when soil contamination and illness spawn from Formosa's pollution, African American/Black/African Diaspora women will be disproportionately impacted. In Southeast Texas, Total SE's Port Arthur refinery was cited for releasing cancer-causing benzene at concentrations 148% above the EPA federal action level.¹⁷ Benzene has been associated with low birth weight, increased risk of childhood leukemia, and other birth defects.¹⁸ Total's emissions place women in Port Arthur's 72.7% African American/Black/African Diaspora and Latinx community¹⁹ in disproportionate harm. Despite this, Total invested in an ethane-based steam cracker slated for 2020 in Port Arthur.²⁰ Numerous other fossil fuel extraction and infrastructure projects are proposed across Appalachia, Colorado, California, the Gulf South, Texas, Minnesota, and Canada, posing inordinate biophysical threats to women of color and low-income women, as well as threats to their mental well-being and safety.

Furthermore, the report highlights the role that financial institutions play as drivers of climate change and injustice via their financing, insuring, and investing in the fossil fuel industry and the aforementioned projects. Based on an examination of approximately 30 companies, this report identifies Enbridge, Chevron, Shell, Formosa, Total SE, Marathon Petroleum, Occidental Petroleum and ExxonMobil as some of the worst actors in terms of pollution emissions, industry accidents (e.g. oil spills), current expansion of fossil fuel related projects/permits, and overall detrimental harm to local communities. Seven of the leading financial institutions backing these specific companies and other fossil fuel companies across the world are Vanguard, BlackRock, Capital Group, JPMorgan Chase, Royal Bank of Canada, Bank of America, and Liberty Mutual. Financial support of oil, gas, and petrochemical companies occurs through multiple forms; the report includes direct project-level financing, as well as general corporate-level financing in the form of underwriting of bonds and share issuances, loans, and insurance services. Notably, asset managers and other institutional investors also hold sway and influence over fossil fuel companies as major shareholders.

The table below presents eight fossil fuel companies (and the Government of Canada), several of their operations, and the report's seven identified financial institutions that are financing, insuring, and investing in these companies.

¹⁵ UN News. (2021, March 2). *Environmental racism in Louisiana's 'Cancer Alley'; must end, say UN human rights experts*. <https://news.un.org/en/story/2021/03/1086172>

¹⁶ Schieder, J., et al. (2016, July 20). *"Women's work" and the gender pay gap*. Economic Policy Institute. <https://www.epi.org/publication/womens-work-and-the-gender-pay-gap-how-discrimination-societal-norms-and-other-forces-affect-womens-occupational-choices-and-their-pay/>

¹⁷ Kuntsman, B., et. al. (2020, February 6). *Monitoring for Benzene at Refinery Fencelines: 10 Oil Refineries Across U.S. Emitted Cancer-Causing Benzene Above EPA Action Levels*. Environmental Integrity Project. <https://environmentalintegrity.org/news/refineries-emit-benzene-in-amounts-above-epa-action-levels/>

¹⁸ University of Montreal. (2017, November 13). *Exposure to benzene during pregnancy: a pilot study raises concerns in British Columbia*. *ScienceDaily*. <https://www.sciencedaily.com/releases/2017/11/171113095435.htm#:~:text=Health%20hazards%20of%20benzene%20include%20birth%20defects&text=The%20health%20impacts%20of%20benzene,%2C%22%20said%20Caron%20Beaudoin>

¹⁹ Collins, C. (2020, February 6). *Six Texas Oil Refineries Are Among the Nation's Worst Benzene Polluters, Data Shows*. *Texas Observer*. <https://www.texasobserver.org/benzene-oil-refineries-texas-coast/>

²⁰ Total SE. *Port Arthur*. <https://www.total.com/energy-expertise/projects/refining-petrochemical-platform/port-arthur-sustainable-platform>

Financial Institutions Highlighted in the Report and Selected or Pertinent Regions and Projects They Finance, Invest in, or Insure

Company	Projects/Regions	Banks*	Asset Managers and Institutional Investors**	Insurance Company***
The Canadian Government	Trans Mountain Pipeline	Royal Bank of Canada, JPMorgan Chase: Credit agreement document	N/A	Liberty Mutual: 2019-2020
Chevron	Permian Basin Oil Fields; Kern Co. Oil Fields	JPMorgan Chase, Bank of America: 12/31/2020 Nasdaq and 2016-2020	Vanguard, BlackRock, Capital Group: 12/31/2020 Nasdaq	N/A
Enbridge	Line 3	Royal Bank of Canada: 2016-2020 and 12/31/2020 Nasdaq JPMorgan Chase and Bank of America: 2020	BlackRock: 10/3/2020 BlackRocksBigProblem's Website Capital Group, Vanguard: 12/31/2020 Nasdaq	N/A
ExxonMobil	Petrochemical Facilities in Southeast Texas; drilling in Central Valley (Aera Energy)	Bank of America, JPMorgan Chase: 12/31/2020 Nasdaq - Bank of America and 2018-2020	Vanguard, BlackRock: 12/31/2020 Nasdaq	N/A
Formosa Plastic Corporation	The "Sunshine Project"; Ethane Cracker in Point Comfort Texas	N/A	Vanguard, BlackRock: from 9/29/2020 to 1/29/2021 Fintel	N/A
Marathon Petroleum	Galveston Bay Texas City; Marathon Refinery in St. John the Baptist Parish	Bank of America, JPMorgan Chase, Royal Bank of Canada 2016-2020 and 12/31/2020 Nasdaq - JPMorgan Chase	BlackRock, Vanguard Group: 12/31/2020 Nasdaq	N/A
Occidental Petroleum	St. James Parish chemical plant; producer in Permian Basin; Wattenberg Gas Field in Colorado	Bank of America, JPMorgan Chase, Royal Bank of Canada: 2016-2020	Vanguard, BlackRock: 12/31/2020 Nasdaq	N/A
Shell	Beaver County mega-petrochemical complex "ethane cracker"; Corunna Refinery-Sarnia Manufacturing Unit	Bank of America, JPMorgan Chase, Royal Bank of Canada: 2019-2020 and 12/31/2020 Nasdaq	Capital Group: 12/31/2020 Nasdaq BlackRock: 9/29/2020 Yahoo! Finance Vanguard: 10/30/2020 Yahoo! Finance	N/A
Total SE	Total Port Arthur Refinery; Permian Basin drilling	Bank of America, JPMorgan Chase, Royal Bank of Canada: 2019-2020 and 12/31/2020 Nasdaq - Bank of America	Vanguard, BlackRock: from 12/23/2020 to 2/26/2021 Fintel	N/A

*Underwriting bonds and share issuances, loans, and/or ownership of stock/institutional investor

**Shareholder/institutional investor, ownership of stock

***N/A due to lack of transparency

Throughout the report, we will be referring to the Paris Climate Agreement. In 2015, world governments signed onto an unprecedented global climate accord, which aims to combat climate change and keep global warming well below a 2° Celsius increase above pre-industrial levels, with the target of 1.5°C.²¹ While WECAN acknowledges this groundbreaking effort, which sends critical signals concerning the end of the fossil fuel era, the Paris Accord falls short of addressing the root causes of the climate crisis and the structures of injustice that perpetuate the extreme inequities of its impacts. Furthermore, since the Paris Agreement was signed, the IPCC report on 1.5°C was released, and scientists made it clear that there must be deeper cuts in global carbon emission reduction targets to avoid the worst impacts of climate disruption.²² As scientists have pointed out, the current commitments for CO2 reductions are far from sufficient. International scientists state that if we are to halt the worst effects of the mounting climate crisis, institutions must contend with the Paris Agreement.²³ Financial institutions that are financing, insuring, and investing in the fossil fuel industry are contributing to the hazardous pollution of the environment and atmosphere. Nevertheless, all seven of the financial institutions identified in this report have directly or indirectly expressed commitments to align to the goals set forth by the Paris Agreement. By continuing to finance, insure, and invest in fossil fuel companies, which are collectively the largest greenhouse gas emitters in the world, the financial institutions displayed in the table above are failing to adhere to this global climate agreement.

Moreover, most of the seven financial institutions identified in this report, including Vanguard, BlackRock, Capital Group, Royal Bank of Canada, and Liberty Mutual, have committed to the Principles for Responsible Investment (PRIs), which assesses signatories' Environmental, Social and Corporate Governance (ESG) performances, and requests that companies adhere to international initiatives, including global human rights standards,²⁴ the right to Free, Prior and Informed Consent as outlined by the United Nations Declaration on the Rights of Indigenous Peoples,²⁵ and the UN Global Compact.²⁶ By financially supporting Chevron, whose oil fields in Kern County are contaminating the drinking water with trichloropropane²⁷ and burdening Latina/Chicana mothers' caretaking roles, Vanguard is not in alignment with the PRIs. Similarly, there is an alignment issue with JPMorgan Chase, Bank of America, and Royal Bank of Canada, who have signed the Equator Principles (EPs), which "support the objectives of the 2015 Paris Agreement and recognize that EPFI's have a role to play in improving the availability of climate-related information" and recognize that "all projects affecting Indigenous Peoples will be subject to a process of Informed Consultation and Participation."²⁸ JPMorgan Chase has financed Enbridge,²⁹ whose Line 3 pipeline project is currently bringing in hundreds of out-of-state workers, housed in "man camps," into the heart of Ojibwe territory in rural Minnesota. "Man camps" have been extensive-

21 Intergovernmental Panel on Climate Change. (2018, October). *Special Report: Global Warming of 1.5 °C*. United Nations. <https://www.ipcc.ch/sr15/>

22 Ibid.

23 Verkuijl, C., et al. (2018, March). *Aligning fossil fuel production with the Paris Agreement: Insights for the UNFCCC Talanoa Dialogue*. Stockholm Environment Institute. https://unfccc.int/sites/default/files/resource/11_12_13_SEI_Talanoa_Fossil_Fuels.pdf

24 UNPRI. (2020, October 22). *Principles For Responsible Investment Sets New Human Rights Expectations For Investors*. <https://www.unpri.org/news-and-press/principles-for-responsible-investment-sets-new-human-rights-expectations-for-investors/6638.article>

25 First Peoples Worldwide. *Investors and Indigenous Peoples: Trends in Sustainable and Responsible Investment and Free, Prior, and Informed Consent*. <http://www.firstpeoples.org/uploads/InvestorsAndIPs.pdf>

26 UNPRI. *What are the Principles for Responsible Investment?* <https://www.unpri.org/pri/what-are-the-principles-for-responsible-investment>

27 Wilson, J., et al. (2020, September 18). *Oil Companies Are Profiting From Illegal Spills. And California Lets Them. ProPublica*. <https://www.propublica.org/article/oil-companies-are-profiting-from-illegal-spills-and-california-lets-them>; Perez, E. (2020, December 17). *WECAN Interview*.

28 Equator Principles. (2020, July). *The Equator Principles July 2020 A Financial Industry Benchmark For Determining, Assessing And Managing Environmental And Social Risk In Projects*. <https://equator-principles.com/wp-content/uploads/2020/01/The-Equator-Principles-July-2020.pdf>; First Peoples Worldwide. *Investors and Indigenous Peoples: Trends in Sustainable and Responsible Investment and Free, Prior, and Informed Consent*. <http://www.firstpeoples.org/uploads/InvestorsAndIPs.pdf>

29 Kirsch, A. (2018, October-updated 2020 November). *Who's Banking Enbridge?* RAN. <https://www.ran.org/the-understory/whos-banking-enbridge/>

ly linked to the MMIWG2S epidemic.³⁰ At the end of February 2021, two Line 3 pipeline workers were arrested on charges of human trafficking.³¹ By financing Enbridge, JPMorgan Chase is demonstrating that the bank's social risk assessments do not stop it from indirectly supporting harm. Financing fossil fuel companies, which incur detrimental impacts on women of color and pollute the environment, does not align with human rights or these financial institutions' signed principles, which claim to support socially and environmentally responsible businesses.

Financial institutions are also tied to a set of Guiding Principles on Business and Human Rights enacted by the United Nations Human Rights High Commission. The impacts from fossil fuel activity on women of color and low-income women clearly violate these human rights laws. For example, the threats to Indigenous women's safety posed by the Trans Mountain expansion project are a threat to human rights. As another example, Enbridge's Line 3 pipeline is planned to go through Indigenous territories where numerous Indigenous Peoples have not given consent for such construction,³² which places communities at risk of further environmental and cultural injustice. The financial institutions backing Enbridge are violating Indigenous rights, FPIC and their obligations to the United Nations Guiding Principles on Business and Human Rights. There are also a myriad of risks to financial institutions associated with financing and insuring fossil fuel companies, such as credit and regulation risks, stranded assets, insurance risks, and reputational risks.

In order to align with the Paris Agreement and their own internal commitments regarding climate change and international human rights laws, this report recommends that financial institutions conduct an immediate managed decline from financing, insuring, and investing in the fossil fuel industry, and instead, to focus on a rapid investment in a Just Transition to a decentralized, clean energy future that supports communities, human rights, and workers who have been dependent on the fossil fuel industry.

Divesting from fossil fuel extraction and infrastructure is necessary to mitigate the climate crisis and allow frontline communities to regenerate after decades of devastation incurred by fossil fuel activity. Environmental degradation and the warming of our atmosphere is possible because corporations continue to sacrifice the health and safety of women in vulnerable communities—the extractive fossil fuel-based economy depends on expendable people and sacrificial lands and zip codes. This is completely unacceptable, and there must be accountability, justice, and remedies for these harms.

By continuing to finance, insure, and invest in the fossil fuel industry, financial institutions, namely those listed in the table above, are perpetuating environmental racism and gender-based violence by the continuous health and safety threats affecting African American/Black/African Diaspora, Indigenous, Latina/Chicana, and low-income women. Divestment will not bring back

30 C-Span. (2020, September 23). *Human Trafficking in the U.S.* <https://www.c-span.org/video/?315168-1/human-trafficking-us>; Jayasundara, D.S., et al. (2014). *Drilling Down: An Examination of the Boom-Crime Relationship in Resource-Based Boom Counties.* *Western Criminology Review*, 15(1), 3-17. <http://wcr.sonoma.edu/v15n1/Ruddell.pdf>; Indian Country Today. (2015, May 12). *Native American and Women's Organizations Request UN Help on Sexual Violence.*

31 Lovrien, Jimmy. (2021, February 23). 2 arrests in human trafficking sting were Line 3 workers. *Duluth New Tribune*. https://www.duluthnewtribune.com/news/crime-and-courts/6901823-2-arrests-in-human-trafficking-sting-were-Line-3-workers?fbclid=IwAR3V35CU21sm-daTakaHZOomVnbUp_4kivFJEUxNBEe4uZ0oUOTcCyET8A#.YDZcadl02Z5.facebook

32 StopLine3.org. (2021, January 31). AN OPEN LETTER TO MINNESOTA DECISION MAKERS <https://www.stopline3.org/take-action#letter>

the dead, reverse childhood asthma, nor give women back years spent fighting systems of injustice, but it will allow the Earth and communities to begin to heal from the devastation. Financial institutions must immediately divest and commit to limiting the global temperature rise to 1.5°C, and must respect all human rights, including those outlined for Indigenous Peoples.³³

Combating climate change and transitioning to a cleaner energy economy must place frontline women and their wisdom at the forefront of decision-making. Studies and data across the world have shown that when women are leading and given agency, societies experience immense benefits. Research indicates that involving women in environmental management and decision-making leads to more successful outcomes and improvements in conservation.³⁴ For example, when allowed to actively participate in disaster planning and response, women show a unique and vital knowledge base and skill set for effective community rescue, support, rebuilding, and conflict management.³⁵ In many countries, women lead on environmental and social legislation when they are elected to public office.³⁶

This report also serves to elevate frontline women's hard work, to acknowledge their numerous achievements, and to honor their vital efforts. There are countless women living in frontline locations who are dedicating their lives to their communities. Although some are known and others not, all of their voices are important to a healthy world that centers on justice and well-being for all. We would particularly like to recognize the women quoted and interviewed for this report (named in order of their appearance in the report): LaDonna Brave Bull Allard (Standing Rock Sioux Tribe), Founder/Landowner of Sacred Stone Camp and Lakota Historian; Sharon Lavigne, Founder of RISE St. James; Rosanna Esparza, Community Organizer and Environmental Researcher in Kern County; Sara Jumping Eagle (Oglala Lakota and Mdewakantonwan Dakota), Activist and Pediatrician; Elizabeth Perez, Community Organizer at the Central California Environmental Justice Network; Casey Camp-Horinek (Ponca Nation), Environmental Ambassador and Senior Project Leader/Board Member at WECAN; Jacqueline Patterson, Director of the NAACP Environmental and Climate Justice Programme and Coordinator and Co-Founder of Women of Color United; Barbara Washington, Member of RISE St. James; Kanahus Manuel (Secwepemc & Ktunaxa Nations), Member of the Secwepemc Women Warriors; Joye Braun (Cheyenne River Sioux), Organizer with the Indigenous Environmental Network and Leader of the Wakpa Waste Camp; Shamyra Lavigne, Member of RISE St. James; Rebekah Hinojosa, Gulf Coast Campaign Representative at the Sierra Club; Genevieve Butler, Member of the Humanitarian Enterprise of Loving People Association; Shamell Lavigne, Member of RISE St. James; Liz Gordon, Activist in Baton Rouge; Christine Rogers (Aamjiwnaang First Nation), Environment Worker at Aamjiwnaang First Nation; Eriel Tchekwie Deranger (Athabasca Chipewyan First Nation), Executive Director of Indigenous Climate Action; Tara Houska (Couchiching First Nation Anishinaabe), Attorney and Founder of Giniw Collective; Michelle Cook (Diné/Navajo), Human Rights Lawyer and Founder of Divest Invest Protect; Nayamin Martinez, Executive Director of

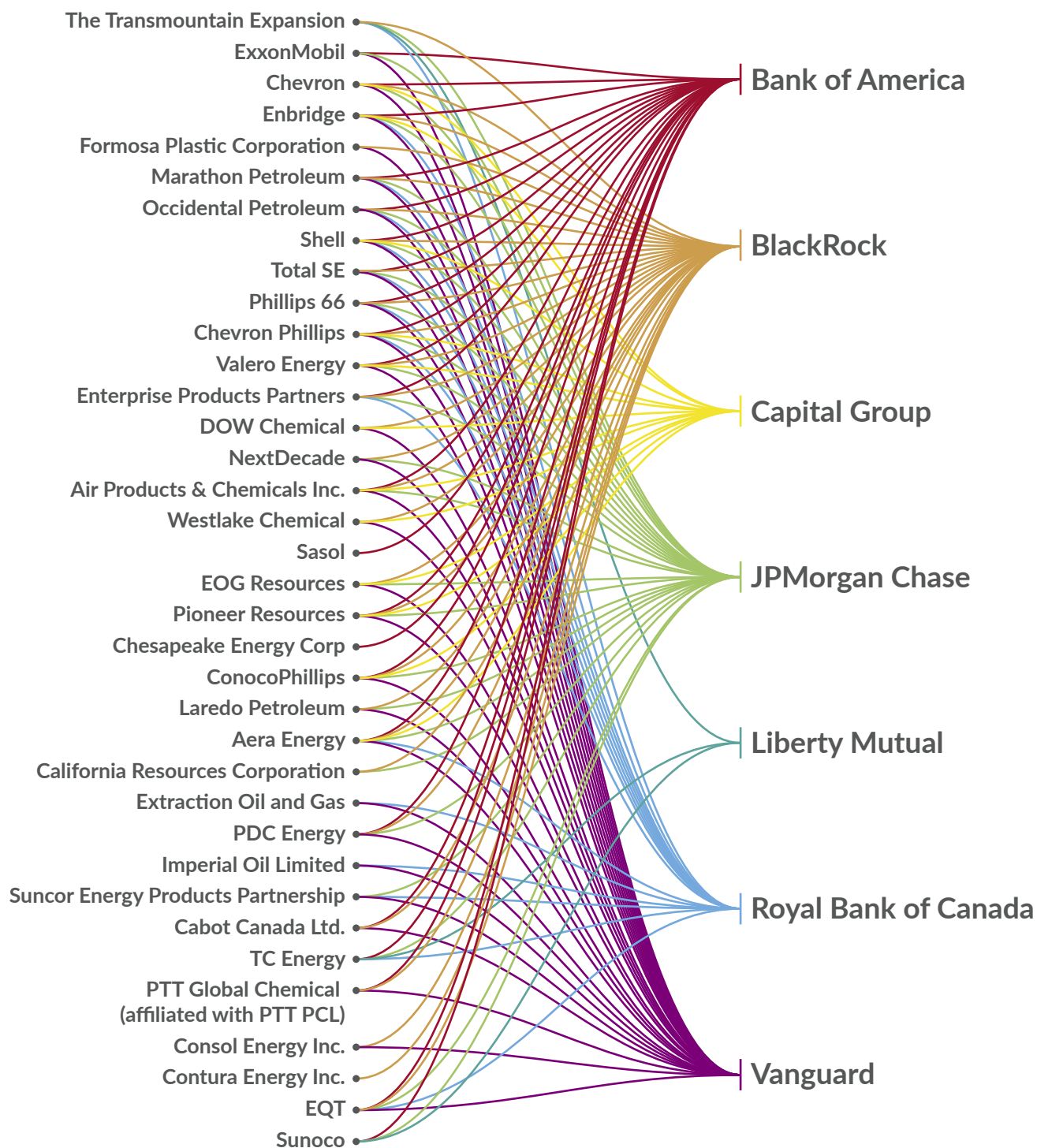
33 RAN in collaboration with other organizations. (2020, September 16). *PRINCIPLES FOR PARIS-ALIGNED FINANCIAL INSTITUTIONS: Climate Impact, Fossil Fuels and Deforestation*. https://e01c23b4-9f2e-4830-9320-a86de06b013e.filesusr.com/ugd/d99d2e_85cb1764f91b42eb82cd03fca8798e2f.pdf

34 WECAN. *Why Women*. <https://www.wecaninternational.org/why-women>

35 Habtezion, S. (2013). *Gender and disaster risk reduction*. Global Gender and Climate Alliance: United Nations Development Programme. <https://www4.unfccc.int/sites/nwppstaging/Pages/item.aspx?ListItemId=23255&ListUrl=/sites/NWPPstaging/Lists/MainDB>

36 WECAN. *Why Women*. <https://www.wecaninternational.org/why-women>

the Central California Environmental Justice Network in Kern County; Wasté Win Yellowlodge Young (Ihunktowanna/Hunkpapa of the Standing Rock Sioux Tribe), Former Tribal Historic Preservation Officer.



Introduction



Water Protector and Aitkin County sheriff in Minnesota at one of the construction sites for Enbridge's Line 3. (Kerem Yücel)

Introduction

This report aims to expose the disproportionate impacts fossil fuel activity has on the health and safety of African American/Black/African Diaspora, Indigenous, Latina/Chicana, and low-income women, and to spotlight specific financial institutions that are complicit in these injustices. Through an analysis of epidemiological studies, published reports, and first-hand accounts from women in frontline communities, the document draws attention to this underreported problem and advocates for financial institutions to divest from fossil fuels.

The report begins by outlining some general terminology in [Section Three](#) and describing the report's research methodology in [Section Four](#). This is followed by [Section Five](#), which extrapolates on the specific links between fossil fuel infrastructure and threats to the health and safety of African American/Black/African Diaspora, Indigenous, Latina/Chicana, and low-income women. The gender-based and race-specific effects cover: environmental racism and breaches to Indigenous rights; air pollution; water pollution; soil pollution; heat islands; fertility issues; "man camps"; and mental health issues. These points all involve the unequal caretaking role that women play across the U.S. and Canada.³⁷ For example, more frequent and intense heat waves, caused by the changing climate and accelerated by fossil fuel extraction activity,³⁸ disproportionately impact African American/Black/African Diaspora women's fertility and reproductive rights.³⁹ Several studies looking at pregnant women and heat exposure "found an association of racial/ethnic disparity and heat exposure with an increasing risk of preterm birth; higher risk was found among black mothers."⁴⁰ Health risks from extreme heat will also disproportionately impact women through their traditional role as caretakers for the sick: Elizabeth Perez, a Community Organizer at the Central California Environmental Justice Network, reports how working mothers in Kern County, a fracking hot spot in Central California where it can get up to 110°F, are responsible for occupying children during the summer when it is too hot to go outside.⁴¹

Due to pervasive environmental racism in the United States and Canada, the most toxic and polluting industrial infrastructure and extraction is disproportionately developed in communities of color and on Indigenous territories.⁴² [Section Six](#) presents some of these communities in eight case studies that exemplify the fossil fuel industry's impacts on women. These regions and projects include: Southeast Texas; "Cancer Alley" along the Mississippi River; Central and West Texas; Northern Colorado; California; Appalachia; "Chemical Valley" in Ontario; and the Alberta Tar Sands, which also implicates Indigenous territories in British Columbia, Minnesota, and other northern middle states. African American/Black/African Diaspora and Latina/Chicana women in frontline communities in Louisiana, Texas, New Mexico, Colorado, and California have

37 Schieder, J., et al. (2016, July 20). "Women's work" and the gender pay gap. Economic Policy Institute. <https://www.epi.org/publication/womens-work-and-the-gender-pay-gap-how-discrimination-societal-norms-and-other-forces-affect-womens-occupational-choices-and-their-pay/>

38 Union of Concerned Scientists. (2008, July 16). *Global Warming FAQ*. <https://www.ucsusa.org/resources/global-warming-faq>

39 Kim, J., et al. (2019 October). *What to Expect When It Gets Hotter: The Impacts of Prenatal Exposure to Extreme Heat on Maternal and Infant Health*. Stanford: Institute for Economic Policy Research. <https://siepr.stanford.edu/research/publications/what-expect-when-it-gets-hotter-impacts-prenatal-exposure-extreme-heat>

40 Bekkar, B., Et al. (2020, June 18). Association of Air Pollution and Heat Exposure With Preterm Birth, Low Birth Weight, and Stillbirth in the US. *JAMA Network Open*, 3(6). doi:10.1001/jama-networkopen.2020.8243

41 Perez, E. (2020, December 17). WECAN Interview.

42 Newkirk II, V.R. (2018, February 28). A New EPA Report Shows that Environmental Racism is Real. *The Atlantic*. <https://www.theatlantic.com/politics/archive/2018/02/the-trump-administration-finds-that-environmental-racism-is-real/554315/>; Volcovici, V. (2016, December 5). Trump advisors aim to privatize oil-rich Indian reservations. *Reuters*. <https://www.reuters.com/article/us-usa-trump-tribes-insight/trump-advisors-aim-to-privatize-oil-rich-indian-reservations-idUSKBN13U1B1>

experienced and witnessed their families suffer from cancer and asthma due to the proximity of barely monitored oil refineries and petrochemical plants.⁴³ “Chemical Valley” in Sarnia, Canada, the tar sands mega-project in Alberta, Canada, and the pipelines invading and ravaging Indigenous territories have had immeasurably devastating impacts on Indigenous women and girls in their homelands. Lower income women from rural areas of Pennsylvania, West Virginia, Ohio, and Texas have had their physical and mental health threatened by the fracking of the Marcellus, Utica, and Barnett Shales.⁴⁴ This list only scratches the surface of fossil fuel projects throughout the United States and Canada that threaten the health and safety of women.

Data has shown that the Covid-19 pandemic is also having disproportionate impacts in terms of race and gender. **Section Six** sheds light on how the Covid-19 virus has exacerbated the health issues in communities already battling fossil fuel induced asthma, cancer, and other health and respiratory problems.⁴⁵ Moreover, the virus has had specifically detrimental consequences for the women in the frontline communities presented in this report’s case studies.⁴⁶ For example, in “Cancer Alley,” an area with already increased respiratory health maladies from fossil fuel pollution, African American/Black/African Diaspora women are simultaneously facing the most severe outcomes in terms of pollution-linked cancer and Covid-19 impacts.⁴⁷

Sections Seven and Eight elaborates on the specific financial institutions identified by the report’s analysis (Vanguard, BlackRock, JPMorgan Chase, Royal Bank of Canada, Bank of America, Capital Group, and Liberty Mutual) and the risks they incur by continuing to finance, insure, and invest in fossil fuel companies. Financial institutions are tied to human rights duties encompassed in frameworks such as the UN Guiding Principles on Business and Human Rights. Frameworks intended to set standards and norms on environmental and social impacts signed by these institutions, including the Principles for Responsible Investment (PRIs) and the Equator Principles (EPs), will also be presented. Such mechanisms call for alignment to the targets set forth by the 2015 Paris Agreement and respect for human and Indigenous rights. As the climate crisis worsens, bringing increased harm to communities, and as the world transitions to a cleaner energy economy, financial institutions supporting fossil fuel companies are exposed to physical and transitional risks, including regulatory, reputational, and financial (i.e credit risks and stranded assets), as well as specific insurance risks.

Section Nine puts forth a list of recommendations for all financial institutions to adopt now, and **Section Ten** describes in brief the solutions promulgated by community members in frontline communities with decades of experience fighting the injustices caused by fossil fuel extraction and infrastructure. These recommendations call on top financial institutions to adopt bolder internal guidelines and implementation standards on climate and human rights issues to be in-line

43 Fleischman, L., Et. al. (2016, August). *Gasping for Breath: An analysis of the health effects from ozone pollution from the oil and gas industry*. Clean Air Task Force. http://www.catf.us/wp-content/uploads/2018/10/CATF_Pub_GaspingForBreath.pdf; Baurick, T., Et al. (2019, October 30). Polluter’s Paradise: Welcome to “Cancer Alley,” Where Toxic Air Is About to Get Worse. *ProPublica, The Times-Picayune, and The Advocate*. <https://www.propublica.org/article/welcome-to-cancer-alley-where-toxic-air-is-about-to-get-worse>

44 Whitworth, K.W., Et al. (2018, March 20). Drilling and Production Activity Related to Unconventional Gas Development and Severity of Preterm Birth. *Environmental Health Perspective*, 126(3). <https://doi.org/10.1289/EHP2622>

45 Oppel, R.A. Jr., et. al. (2020, July 5). The Fullest Look Yet at the Racial Inequity of Coronavirus. *The New York Times*. <https://www.nytimes.com/interactive/2020/07/05/us/coronavirus-latinos-african-americans-cdc-data.html>; Barbaro, M. (2020, November 19) The Pandemic Economy in 7 Numbers. Audio podcast in *The Daily*. The New York Times. 19 Nov, 2020. <https://www.nytimes.com/2020/11/19/podcasts/the-daily/coronavirus-pandemic-us-economy-unemployment.html>

46 Ibid.

47 Ramirez, Rachel. (2020, May 4). Wake up Call. *Grist*. https://grist.org/justice/as-coronavirus-ravages-louisiana-cancer-alley-residents-havent-given-up-the-fight-against-polluters/?utm_medium=email&utm_source=newsletter&utm_campaign=daily

with the agreements they have signed. Based on this examination, the report ultimately advocates for a Just Transition⁴⁸ to a renewable, regenerative energy economy that uplifts communities most impacted by environmental degradation, pollution, and the climate crisis.

Women of color lead the intergenerational fight for climate justice. When approaching climate justice, it is critical to address the interlocking issues of violence against the land and violence against women. The fossil fuel industry's destruction of the Earth is directly linked to harms against women, and this abuse must be brought to light in order to reckon with accountability and provide remedies for injustices. The report serves to begin to fill this knowledge gap, to advocate for divestment and human rights, and to highlight the need for more scientific studies investigating the disproportionate impact that fossil fuel extraction, infrastructure, and activity has on frontline women.

⁴⁸ See Section 9, Steps Forward, for the definition of a Just Transition.

Definitions and Scope



Oil field in Kern County, California. (CCEJN)

Definitions and Scope

The report focuses on existing, developing, and proposed fossil fuel extraction and infrastructure projects; specifically, projects relating to hydraulic fracturing, petrochemical manufacturing, tar sands extraction, coal mining, fossil fuel refining, and fossil fuel transportation. The report is by no means exhaustive, but rather serves to highlight some of the most notorious fossil fuel companies and their projects, key financial institutions financing, investing in and insuring these companies, and the impacts from these operations on African American/Black/African Diaspora, Indigenous, Latina/Chicana, and low-income women in the United States, and two regions in Canada. Below are definitions that are relevant to the report.

African American/Black/African Diaspora: The term African American became popular in the early 1900s in an effort to acknowledge the cultural heritage of individuals with ancestral ties to Africa, as well as to acknowledge the construction of the U.S. through the enslavement of African peoples.⁴⁹ However, the specificity of the terminology “African American” does not necessarily incorporate the entire Black community living in the U.S. today since Haitian Americans, Virgin Island Americans, and other Caribbeans, as well as immigrants from Africa or of African descent, who migrated to the U.S. (especially after the 1960s), do not all identify as African American.⁵⁰ The term Black rose to prominence with sociologists and activists like W.E.B. Du Bois, Stokely Carmichael, and the Black Panthers, among others, recontextualizing the term.⁵¹ For many, identifying as Black is a term of empowerment, especially during the Black Power Movement in the 1960s.⁵² Black most often refers to the lived experiences of people in a system of institutionalised racism and white supremacy. The term African Diaspora refers to the “millions of peoples of African descent living in various societies who are united by a past based significantly but not exclusively upon ‘racial’ oppression and the struggles against it...”⁵³ The term reflects the cultural and political heterogeneity within peoples of African descent, but also the common “emotional bond with one another and with their ancestral continent.”⁵⁴

The report uses African American/Black/African Diaspora in order to be inclusive towards various peoples, and to encompass peoples born inside and outside the U.S. territory of African or Caribbean descent, and the common lived experience of institutional racism and white supremacy.

Ethane Crackers: Plastic manufacturing facilities, or “ethane crackers,” are another form of fossil fuel infrastructure that create the building blocks for plastic by extracting ethane, a component of natural gas, and processing it into ethylene, the most commonly used petrochemical in plastic water bottles, plastic bags, food wrappers, resins, and other single-use plastic items.⁵⁵ The

49 Eligon, J. (2020, June 26). A Debate Over Identity and Race Asks, Are African-Americans ‘Black’ or ‘black’? *The New York Times*. <https://www.nytimes.com/2020/06/26/us/black-african-american-style-debate.html>

50 Ibid.

51 NAACP. NAACP History: W.E.B. Du Bois. <https://www.naacp.org/naACP-history-w-e-b-dubois/>; PBS. Stokely Carmichael. https://www.pbs.org/hueynewton/people/people_carmichael.html

52 Quander, M., Et. al. (2019, May 30). Black vs. African-American: The complex conversation Black Americans are having about identity #ForTheCulture. wusa9. <https://web.archive.org/web/20200617230355/https://www.wusa9.com/article/news/local/black-history/black-vs-african-american-the-complex-conversation-black-americans-are-having-about-identity-fortheculture/65-80dde243-23be-4cfb-9b0f-bf5898bcf069>

53 Palmer, C. (2000). Defining and Studying the Modern African Diaspora. *The Journal of Negro History*, 85(1/2), 27-32. <http://www.jstor.org/stable/2649097>

54 Ibid.

55 Moms Clean Air Force (2019, November 4). Ethane Cracker Plants: Threatening Our Air, Our Climate, and Our Health. <https://www.momscleanairforce.org/ethane-cracker-plants/>

International Energy Agency (IEA) reports that plastics and other petrochemical products are expected to account for more than one-third of global oil demand growth by 2030 and nearly half of demand growth by 2050.⁵⁶ As IEA's Executive Director, Dr Fatih Birol, pointed out: "Petrochemicals are one of the key blind spots in the global energy debate, especially given the influence they will exert on future energy trends. In fact, our analysis shows they will have a greater influence on the future of oil demand than cars, trucks and aviation."⁵⁷ Despite changing public attitudes on fossil fuels and plummeting oil and gas prices, an influx of new petrochemical projects are being constructed and increasingly proposed across the United States and Canada to accommodate for this loss.⁵⁸ New and proposed plastic manufacturing refineries are concentrated in Appalachia, "Cancer Alley" in Louisiana, and the Texas Gulf South—all areas with communities that have already been devastated by the recent fracking boom. The urgency to curb plastic pollution is clear: without commitments from government and industry, 99 million tons of uncontrolled plastic waste will end up in the ocean by 2030.⁵⁹ The former EPA Director and a founder of Beyond Plastics, Judith Enck, specified that 2020 was an essential year because many plastic production projects were still in the permitting phase: "If even a quarter of these ethane cracking facilities are built," she said, "It's locking us into a plastic future that is going to be hard to recover from."⁶⁰ Many of these projects are now underway at the beginning of 2021.⁶¹ Formosa's giant petrochemical complex slotted for St. James Parish in Louisiana is a notable exception to that; the facility's permit was suspended by the U.S. Army Corps of Engineers in November 2020.⁶²

Gender/ Sex:

"Sex" refers to biological attributes, including physical and physiological features such as hormone levels, gene expression, chromosomes, etc.⁶³ Sex is commonly categorized as male or female, but because biological attributes are expressed at varying levels, sex is not a binary term.

"Gender" refers to socially constructed roles, behaviors, expressions, and self perceptions of women, men, agender, bigender, gender non-binary, and other gender identities.⁶⁴

Because epidemiological studies and scientific research often conflate sex and gender, the majority of studies presented in the report refer to individuals with biological female organs and/or who identify as women. This report was limited by the problematic scientific gendered dichotomy, which does not encompass nonbinary individuals and people across the broad spectrum of

56 Ghaddar, A. Et. al. (2018, October 5). Rising Use of Plastics to Drive Oil Demand to 2050: IEA. Reuters. <https://www.reuters.com/article/us-petrochemicals-iaea-idUSKCN1ME2QD>.

57 International Energy Agency. (2018, October 5). Petrochemicals set to be the largest driver of world oil demand, latest IEA analysis finds. <https://www.iea.org/news/petrochemicals-set-to-be-the-largest-driver-of-world-oil-demand-latest-iea-analysis-finds>

58 Gardiner, B. (2019, December 19). The Plastics Pipeline: A Surge of New Production Is on the Way. Yale E360. <https://e360.yale.edu/features/the-plastics-pipeline-a-surge-of-new-production-is-on-the-way>

59 Parker, L. (2020, October 6). Plastic pollution is a huge problem—and it's not too late to fix it. National Geographic. <https://www.nationalgeographic.com/science/2020/10/plastic-pollution-huge-problem-not-too-late-to-fix-it/>

60 Gardiner, B. (2019, December 19). The Plastics Pipeline: A Surge of New Production Is on the Way. Yale E360. <https://e360.yale.edu/features/the-plastics-pipeline-a-surge-of-new-production-is-on-the-way>

61 Crowley, K., Et. al. (2019, June 13). Exxon, Saudis Bet on Plastics Growth in Giant Gulf Coast Plant. Bloomberg.

[https://www.bloomberg.com/news/articles/2019-06-13/exxon-sabic-greenlight-new-texas-plant-to-process-shale-output; Cocklin, J. \(2020, September 29\). Work on Shell's Pennsylvania Ethane Cracker Progressing, but Schedule Clouded by Covid-19. NGL. https://www.naturalgasintel.com/work-on-shells-pennsylvania-ethane-cracker-progressing-but-schedule-clouded-by-covid-19/](https://www.bloomberg.com/news/articles/2019-06-13/exxon-sabic-greenlight-new-texas-plant-to-process-shale-output; Cocklin, J. (2020, September 29). Work on Shell's Pennsylvania Ethane Cracker Progressing, but Schedule Clouded by Covid-19. NGL. https://www.naturalgasintel.com/work-on-shells-pennsylvania-ethane-cracker-progressing-but-schedule-clouded-by-covid-19/)

62 Muller, W. (2020, November 9). Formosa Plastics permit suspended by Army Corps. The Louisiana Weekly. [http://www.louisianaweekly.com/formosa-plastics-permit-suspended-by-army-corps/#:~:text=\(lailluminator.com\)%20-%20The%20James%20Parish](http://www.louisianaweekly.com/formosa-plastics-permit-suspended-by-army-corps/#:~:text=(lailluminator.com)%20-%20The%20James%20Parish)

63 Tseng, J. (2008, July). Sex, Gender, and Why the Differences Matter. *AMA Journal of Ethics*, 10(7), 427-428. Doi: 10.1001/virtualmentor.2008.10.7.fred1-0807

64 Ibid.

sexual orientation and gender identity.

This is especially true for studies looking at the biological effects from fossil fuel pollution, such as fertility issues, breast cancer, and toxicological exposure. An exception to this limited lens is the literature on the Missing and Murdered Indigenous Women and Girls (MMIWG2S) epidemic, which incorporates two-spirit, lesbian, gay, bisexual, transgender, queer, questioning, intersex, and asexual (2SLGBTQQIA) peoples. Two-spirit refers to someone who “[identifies] as having both a masculine and a feminine spirit, and is used by some Indigenous people to describe their sexual, gender and/or spiritual identity.”⁶⁵ In order to fully understand the impacts of fossil fuel extraction, infrastructure, and climate change on communities, it is essential for future studies to incorporate nonbinary populations, and differentiate between gender and sex. This report advocates for the scientific community to include people across the gender spectrum in future research.

Hydraulic Fracturing (“Fracking”): Fracking is a technique that involves injecting water, sand, and chemicals into bedrock to access oil and/or gas from geothermal reservoirs,⁶⁶ which has been increasingly used from the 2000s onwards. It pollutes groundwater, contaminates surface water, and destroys species’ habitats.⁶⁷ Although classified as a new, or unconventional method of extraction in the past, hydraulic fracturing is now being used in 95% of new wells.⁶⁸ A study in 2014 found that since the fracking boom began in 2000, over 15.3 million more U.S. residents live within a mile of a fracking well.⁶⁹ This technique is used extensively in areas of the U.S., including Texas and California. The report focuses on case studies that detail fracking expansion and its impacts on communities in the Central Valley in California, the Permian Basin in Texas, and the Niobrara shale rock in Northern Colorado.

Indigenous/Native American: In the history of relations between American institutions and Indigenous peoples, terminology has often been used in harmful and damaging ways. There are over a thousand distinct Indigenous communities in the U.S. and Canada, and there is no single lexicon to describe Indigenous Peoples and communities. When discussing Indigenous Peoples and communities in the U.S., this report will use the term “Native American” or “Indigenous Peoples.” If the communities are in Canada, the report will use the term “First Nations.” When speaking generally, the report will also use the term “Indigenous.” When quoting individuals, the report uses their specific tribes, nations, or communities. The report acknowledges that the U.S. and Canada, which, together with Mexico, are known as “Turtle Island” by Indigenous Peoples, exist within Indigenous lands. Throughout colonial history, the territories of Indigenous communities have been divided and portioned off. The report uses the term “Indigenous territories” to describe current and traditional geographical areas where Indigenous communities reside. Additionally, the report occasionally uses the term “reservation” because specific studies referenced in the report employ this language. A reservation is a legally defined geographical area set apart

⁶⁵ [lgbtqhealth.ca. Two-Spirit Community. https://lgbtqhealth.ca/community/two-spirit.php](https://lgbtqhealth.ca/community/two-spirit.php)

⁶⁶ US Geological Survey. *What is hydraulic fracturing?* https://www.usgs.gov/faqs/what-hydraulic-fracturing?qt-news_science_products=0#qt-news_science_products

⁶⁷ Soeder, D.J. (2018, July 10). Groundwater Quality and Hydraulic Fracturing: Current Understanding and Science Needs. *The Groundwater Association*, 56(6). <https://doi.org/10.1111/gwat.12810>

⁶⁸ Prepared by Macfarlane, R., Et. al. (2020, January). *Fractures in the Bridge: Unconventional (Fracked) Natural Gas, Climate Change and Human Health*. Canadian Association of Physicians for the Environment (CAPE). http://www.hpaf.co.uk/wp-content/uploads/2020/02/CAPE-Fracking-5b.indd_.pdf

⁶⁹ Lallanilla, M. (2018, February 10). Facts About Fracking. *Live Science*. <https://www.livescience.com/34464-what-is-fracking.html>

by the U.S. government for the use and occupation of Native American communities.

Latinx: WE CAN is an organization working across all gender spectrums and often uses the word “Latinx” to respect non-binary individuals and the entire spectrum of gender in the Latinx community. In the case of this report, the women interviewed requested to be identified as Latina and Chicana so this will be the language used throughout the report when referring to Latinx women-identifying individuals. When referring to population data or any community that includes non-women identifying individuals, the report will use the term “Latinx.” “Hispanic women” also appears in the report because several of the studies presented employ this language.

People who are native of, or who have ancestors from Spanish speaking countries (excluding Spain), and live in the U.S., use various terms to identify themselves, which can depend on region, generation, etc.⁷⁰ Many identify by their country of origin or heritage. Some Mexican Americans identify as Chicana, which is a term that became popular in the 1960s to express pride in a shared cultural, community, and ethnic identity.⁷¹ Hispanic usually refers to someone who is a native of, or descends from a Spanish-speaking country; the term was used by the U.S. government to incorporate all Spanish-speaking groups in the U.S.⁷² The report uses the term Latinx in order to be inclusive; Latinx refers to anyone born with ancestors from Latin America, including Central and South America, Mexico, and islands of the Caribbean, who speak a Romance language.⁷³ Latinx is a description of culture, and a Latinx identifying individual can be of any race or color.⁷⁴

Tar Sands: Tar sands (or “oil sands”) are deposits of sand saturated with bitumen. Extraction of the thick tarry bitumen involves strip mining or “in-situ” methods, which create huge toxic waste ponds.⁷⁵ These “tailing ponds” are the accumulation from over 480 million gallons of toxic waste being dumped daily—waste so toxic that specific employees are responsible for scraping dead birds off the surface of the water.⁷⁶ As Canada warms at twice the rate as the rest of the world,⁷⁷ every stage of the Alberta tar sands industry is not only taking the world further away from the goals of the Paris Agreement, but is also wreaking environmental havoc directly on Canadian ecosystems. The U.S. State Department estimates that production and consumption of a barrel of oil sands crude releases ~20% more carbon dioxide than a standard barrel of crude oil,⁷⁸ and emissions from the oil sands in Canada are approximately 30% more than what has been reported by the industry.⁷⁹ Additionally, because boreal forests bank twice as much carbon as tropical forests, extraction in these regions results in releasing vital carbon sinks, destroying carbon sequestration champions that are vital in preventing even more carbon from entering

70 Exploratorium: GENIAL. *Is it Hispanic, Chicano/Chicana, Latino/Latina, or Latinx?* https://www.exploratorium.edu/sites/default/files/Genial_2017_Terms_of_Usage.pdf

71 Exploratorium: GENIAL. *Is it Hispanic, Chicano/Chicana, Latino/Latina, or Latinx?* https://www.exploratorium.edu/sites/default/files/Genial_2017_Terms_of_Usage.pdf

72 Ibid.

73 Britannica. *List of countries in Latin America.* <https://www.britannica.com/topic/list-of-countries-in-Latin-America-2061416>

74 Ibid.

75 Huseman, J. Et al. (2012). *Extreme Energy as Genocidal Method: Tar Sands and the Indigenous Peoples of Northern Alberta.* Extreme Energy Initiative. <https://static1.squarespace.com/static/557961b3e4b084c9759bd919/t/558ec96ee4b05b489b748099/1435421038675/EEI-Tar-Sands-RP.pdf>

76 Ibid.

77 Bush, E., et al. (2019). *Canada's Changing Climate Report.* The Government of Canada. <https://changingclimate.ca/CCCR2019/>

78 Magill, B. (2017, April 13). *Carbon Emissions Factor Into Major Oil Sands Shakeup.* Climate Central. <https://www.climatecentral.org/news/carbon-emissions-factor-into-oil-sands-shakeup-21341#:~:text=U.S.%20State%20Department%20estimates%20show,much%20as%2020%20percent%20higher.>

79 Leahy, S. (2019, April 11). *This is the world's most destructive oil operation—and it's growing.* National Geographic. <https://www.nationalgeographic.com/environment/article/alberta-canadas-tar-sands-is-growing-but-indigenous-people-fight-back>

the atmosphere, and subsequent warming.⁸⁰ As tailing ponds leak into the Athabasca River, acid rain showers over the remote Northern Canada region, and vast regions of stripped land destroy habitat for native species. The devastating environmental impacts from the tar sands extraction is indisputable.⁸¹ Almost all of the tar oil extracted from Alberta's boreal forest is transported to the U.S. via pipelines, which the Trans Mountain expansion project and Enbridge's Line 3 replacement project would only exacerbate. This report focuses on case studies on Enbridge's project and how it perpetuates the extraction of the Alberta tar sands.

⁸⁰ Huseman, J. Et al. (2012). *Extreme Energy as Genocidal Method: Tar Sands and the Indigenous Peoples of Northern Alberta*. Extreme Energy Initiative. <https://static1.squarespace.com/static/557961b3e4b084c9759bd919/t/558ec96ee4b05b489b748099/1435421038675/EEI-Tar-Sands-RP.pdf>

⁸¹ Leahy, S. (2019, April 11). This is the world's most destructive oil operation—and it's growing. *National Geographic*. <https://www.nationalgeographic.com/environment/article/alberta-canadas-tar-sands-is-growing-but-indigenous-people-fight-back>

Research Methods



Research Methods

The report, organized by Women's Earth and Climate Action Network, began with an investigation into fossil fuel extraction, and infrastructure projects across the United States and in a few locations in Canada. Based on the initial collection of research, eight regions with large fossil fuel projects and/or high concentrations of fossil fuel infrastructure were identified. The fossil fuel companies operating in these identified regions were found through interviews with women living in the regions, local newspaper articles, other published reports, companies' websites describing their operations, and other websites that list proposals and current activities (e.g. Shale Experts). The tables at the beginning of each case study include some of the major fossil fuel companies that are financially supported by at least one of the report's identified financial institutions. The information presented on the companies and their projects is not exhaustive, but rather focuses on specific information relevant to the scope of the report. The tables serve to exhibit some of the most damaging fossil fuel operations, and to highlight relationships between these operations and the report's seven identified financial institutions.

Based on an examination of companies operating in the eight regions, seven financial institutions are identified as prominent financiers, insurers, and investors of these companies. Metrics that led to identifying the three asset managers, three banks, and one insurance company discussed in this report include:

1. The number of projects/companies included in the report that a financial institution finances, insures, or invests in on any level;
2. The frequency with which a financial institution appeared in other reports linking financial institutions and fossil fuel projects/companies; and
3. The overall scale and negative gender and race-based impacts of the project that the particular financial institution is financing, insuring, or investing in.

Information concerning the financial links between the companies and the financial institutions was obtained primarily through *Nasdaq and Yahoo! Finance*,⁸² Rainforest Action Network's (RAN) published reports (which source data from the Bloomberg Terminal), investigative journalism articles (i.e. *National Observer*), and several other sources that are described directly below each table. The financial information presented in tables at the beginning of each case study represent project-level financing and general corporate-level financing, in the form of underwriting of bond and share issuances, loans, and insurance services. The tables also incorporate information about major shareholders and investors of fossil fuel companies, i.e. asset managers and other institutional investors. The investors in the tables include only the top fifteen (on *Nasdaq*) and the top ten (on *Yahoo Finance!*) institutional holders and shareholders shown on the fossil fuel company's page. The information in the tables include company's managed funds/assets

⁸² The financial platforms, *CNN Business* and *Fintel* were also used in some of the tables

by referring to the managing company, e.g. if BlackRock is included as an investor in a table, we are also referring to BlackRock's exchange-traded funds, iShares, or other managed funds. The various financial relationships included in the tables will be described directly below each figure. The tables are limited to the seven financial institutions identified by the report. However, we acknowledge that there are many more banks, asset managers, and insurance companies engaged in these regions. We have purposefully narrowed our scope in order to spotlight some of the biggest fossil fuel backers. Liberty Mutual is mostly absent from the tables because data on insurance companies' financial transactions is difficult to track as it is usually not publicly available. The lack of transparency needs to be remedied, particularly in the insurance sector.

At the end of each case study, there is a paragraph specifically describing selected connections between financial institutions and companies, in order to exemplify particular financial institutions as significant facilitators of fossil fuel companies. These paragraphs are not intended to be exhaustive, and do not describe all of the information in the tables, but rather highlight important examples.

Our analysis of gender and race specific impacts of fossil fuel activity included a literature review of scientific articles from accredited journals, published reports, and interviews with women in the identified frontline communities. Based on this research, the report describes gendered and race-based impacts of the fossil fuel industry through nine themes that were repeatedly found in the data: environmental racism, caretaking roles, air pollution, water contamination, soil pollution/food insecurity, heat-related issues, fertility issues, "man camps," and mental health issues. Relevant studies and quotes from the frontline women's experiences are presented throughout these sections and the case studies.

All the information in the case studies, including companies' operations and new fossil fuel permits/project plans were last updated on February 27, 2021. The scope of the shareholding was analyzed at the most recent date: February 27, 2021. All of the population data was sourced from the U.S. Census Bureau, unless otherwise stated and cited. When the report began, TC Energy's Keystone XL (KXL) Pipeline project was still under construction and in December 2020, "man camps" were in operation in South Dakota near the Rosebud Sioux and Cheyenne River Sioux reservations, posing a continued threat for the nearby tribal communities.⁸³ In the course of writing the report, on January 20, 2021, the Biden administration revoked the March 2019 permit for the Keystone XL pipeline, effectively halting all construction.⁸⁴ The KXL case study remains in the report because tribal communities in South Dakota have already been impacted by the "man camps" brought in due to KXL,⁸⁵ and the pipeline is an important example exposing fossil fuel companies' neglect of Indigenous rights. Also, although it is unlikely, KXL has been reinstated in the past, and we therefore believe it is important to document this information in case that the resurrection of KXL is once again being considered to be resurrected.

⁸³ Iron Cloud, A. (2020, December 10). Leave! Is the Message Dakota Women Have for the Pipeline Man-camps. *Lakota Times*. <https://www.lakotatimes.com/articles/leave-is-the-message-dakota-women-have-for-the-pipeline-man-camps/>

⁸⁴ Exec. order 14008, 83 C.F.R. 7619-33 (2021 February). <https://www.govinfo.gov/app/details/FR-2018-02-22/2018-03547>

⁸⁵ Goodluck, K. Et. al. (2021, January 8). A crude virus: How 'man camps' can cause a COVID surge. *High Country News* and the Human Rights Center at the University of California, Berkeley, Jan. 2021. <https://www.hcn.org/articles/indigenous-affairs-covid19-a-crude-virus-how-man-camps-can-cause-a-covid-surge>

The seven fossil fuel financial institutions were analyzed based on their own internal and external guidelines on climate change and carbon emissions, as well as human rights issues. A set of financial risks were composed by compiling data from academic papers and reports made by financial experts (e.g. *Portfolio Adviser*, *Institute for Energy Economics and Financial Analysis*, *Ceres*), advocacy networks (e.g. *Insure Our Future*), and specialized journalistic articles.

The report aims to include an intersectional gender and race lens to the literature on the disproportionate impacts of fossil fuel extraction and infrastructure on communities of color, Indigenous Peoples, and low-income communities, and to spotlight particular financial institutions as contributors to these injustices. For the sake of the report, we selected a sample of case studies that are emblematic of the fossil fuel industry's offenses against the environment and frontline communities in the U.S. and parts of Canada. The data presented is limited to our own research investigation. We believe that the research we have presented opens the door to the import of further research on the subject.

Gendered and Race-Based Impacts of the Fossil Fuel Industry



Gendered and Race-Based Impacts of the Fossil Fuel Industry

5a. Environmental Racism and Breaches of Indigenous Rights

Fossil fuel extraction and infrastructure is disproportionately developed near communities of color, and on or near Indigenous territories in the U.S. and Canada.⁸⁶ Such communities are at the forefront of air, water, and soil pollution, and suffer the most from increased temperatures as detailed below. The impacts of fossil fuel activity violate internationally recognised substantive human rights, including the right to life, the right to healthy food and water, and the right to health,⁸⁷ as well as Indigenous Peoples' rights.

Tribal sovereignty is integral to the survival of Indigenous Peoples—culturally, physically, and economically.⁸⁸ After centuries of genocidal, colonial policies, tribes have been left with a minute fraction of their previously held land in which to govern. Governments, financial institutions, and corporations are responsible for upholding Indigenous Peoples' right to Free, Prior and Informed Consent (FPIC) as outlined in the UN Declaration on the Right of Indigenous Peoples. **Casey Camp-Horinek (Ponca Nation), an Environmental Ambassador and Senior Project Leader/Board Member at WECAN**, describes the connection between the loss of lives and fertile land due to resource extraction and Indigenous identities:

"In my small Ponca tribe, we hold a funeral nearly every week from fossil fuel-related illnesses. All our families have multiple cases of asthma, cardiovascular disease and industry-specific cancers. Our wells are so polluted our tribe must now buy water. Our land is so toxic, organic food can't be grown within 16 miles. They call it economic progress. We call it environmental genocide."⁸⁹



Casey Camp-Horinek. (Emily Arasim/WECAN)

The extractive fossil fuel industry's destruction of ancestral lands infringes on Indigenous rights to culture, i.e. their "ability to practice and pass on culture, traditional languages and ways of relating to other people and to the land."⁹⁰ The right to culture has been recognised by the World Health Organization (WHO) as intrinsically linked to the right to health, since Indigenous knowledge of health transcends "the traditional Western biomedical paradigm which treats body,

⁸⁶ Newkirk II, V.R. (2018, February 28). A New EPA Report Shows that Environmental Racism is Real. *The Atlantic*. <https://www.theatlantic.com/politics/archive/2018/02/the-trump-administration-finds-that-environmental-racism-is-real/554315/>; Volcovici, V. (2016, December 5). Trump advisors aim to privatize oil-rich Indian reservations. *Reuters*. <https://www.reuters.com/article/us-usa-trump-tribes-insight/trump-advisors-aim-to-privatize-oil-rich-indian-reservations-idUSKBN13U1B1>

⁸⁷ Savaresi, A., Et. al. (2020, February 7). *Human Rights Abuses By Fossil Fuel Companies*. 350.org.

<https://350.org/press-release/climate-crisis-is-aggravating-human-rights-violations-caused-by-the-fossil-fuel-industry-alerts-350-org-report/>

⁸⁸ Bishop, K. (2001, May). *This Land Knows Me: Indigenous Land Rights*. Cultural Survival. <https://www.culturalsurvival.org/publications/cultural-survival-quarterly/land-knows-me-indigenous-land-rights>

⁸⁹ Camp-Horinek, C. (2021, January 4). My tribe holds a funeral every week for people killed by fossil fuels. This isn't progress – it's environmental genocide. *Independent*. <https://www.independent.co.uk/voices/fossil-fuels-trump-land-tribes-b1781438.html>

⁹⁰ National Inquiry into Missing and Murdered Indigenous Women and Girls (Canada). (2019). *Reclaiming Power and Place*. Privy Council Office, 1a, 7. https://www.mmiwg-ffada.ca/wp-content/uploads/2019/06/Final_Report_Vol_1a-1.pdf

mind and society as separate entities and reflects a more holistic understanding of health.”⁹¹

5b. Caretaking Role

Fossil fuel activity increases women’s burden as caretakers.⁹² The land and water contamination near fossil fuel extraction and refining sites affects the area’s biodiversity, which results in increased burdens on women and girls who may be responsible for food production, finding clean water, or caring for family members sickened by the contamination.

Due to persisting patriarchal structures, women continue to be disproportionately responsible for reproductive labor.⁹³ Reproductive labor includes unpaid activities, such as cooking, washing clothes, child and elderly care, and bearing children.⁹⁴ This work remains extremely undervalued by conventional economic models.⁹⁵ While conventional economics focus on the market sphere, or goods which can be relatively easily assigned a monetary market-value, feminist economics criticizes this lens emphasizing that, “capitalist production relies on the reproductive activities of both women and nature,” and “extraction of natural resources and the pollution resulting from production are not sufficiently accounted for in production costs.”⁹⁶

As feminist scholar Dianne Rocheleau argues, the responsibilities of reproductive labor put women “in a position to oppose threats to health, life, and vital subsistence resources, regardless of economic incentives, and to view environmental issues from the perspective of the home, as well as their personal and family health.”⁹⁷ When water and air become polluted, making elders and children at home sick, and safe food and water supplies hard to obtain, it imposes significant stress and strain on women’s daily lives.

In Kern County, caretaking roles are in part shaped by the population of approximately 61,000 undocumented immigrants and the fact that men face higher rates of incarceration for lacking citizenship.⁹⁸ This doubles women’s work: mothers are forced to become both the sole caretaker and the primary financial provider. Given that Central California is predominantly agricultural, women are forced outside into the pollution to provide for their families. **Rosanna Esparza, a Community Organizer and Environmental Researcher in Kern County, California**, describes this phenomenon as it relates to women and families:



Rosanna Esparza in Kern County, CA. (Alex Horvath/Bakersfield Californian)

⁹¹ Ibid.

⁹² Patterson, J. (2020, May 2). WECAN Interview.

⁹³ Ferrant, G., Et. al. (2014, December). *Unpaid Care Work: The missing link in the analysis of gender gaps in labour outcomes*. Organisation for Economic Co-operation and Development Centre. https://www.oecd.org/dev/development-gender/Unpaid_care_work.pdf

⁹⁴ *Reproductive Labour and Care*. (2016). Exploring Economics. <https://www.exploring-economics.org/en/>

⁹⁵ Ibid.

⁹⁶ Ibid.

⁹⁷ Barry, J.M. (2012). *Standing Our Ground: Women, Environmental Justice, and the Fight to End Mountaintop Removal*. Ohio University Press.

⁹⁸ Migration Policy Institute. (2018). *Profile of the Unauthorized Population: Kern County, CA*. <https://www.migrationpolicy.org/data/unauthorized-immigrant-population/county/6029>; Esparza, R. (2020, December 18). WECAN Interview.

“Many of the women are the single family breadwinners, they’re the head of their families. Because of ICE and what’s happening with the number of people who are arrested (males primarily) ...and due to this, women are doing most of the heavy labor. We’re getting exposed [to the pollution].”⁹⁹

This essential caretaking work continues to remain largely invisible and undervalued in the world, monetarily and otherwise. It is imperative to continuously draw connections and bring attention to ways in which the climate crisis in general, and fossil fuel industries in particular, impose an additional burden on women as caretakers. While such impacts might be harder to measure, they are no less important.

The following arguments will delineate effects from the fossil fuel industry on African American/Black/African Diaspora, Indigenous, Latina/Chicana, and low-income women, which will be demonstrated in part by referring to women’s labor as primary caretakers.

5c. Pollution: Air Quality

Numerous epidemiological studies have established a clear link between fine particles emitted by fossil fuel combustion and health hazards. These include aggravated asthma, respiratory infections, lung cancer, heart disease, stroke, cognitive impairment, premature death, and adverse reproductive outcomes.¹⁰⁰ Small particulates have been classified by the WHO as a Group 1 carcinogen.¹⁰¹ In particular, benzene, emitted by fossil fuel activity, is a well-established cause of cancer (including leukemia, lymphoma, and myeloma), aplastic anemia, chromosomal aberrations, and a host of other long term diseases. Acute exposure may lead to symptoms such as states of narcosis, headaches, and loss of consciousness.¹⁰²

Researchers calculated that in 2018, air pollution —and specifically particulate matter less than 2.5 micrometers in diameter —caused by the burning of oil and gas was responsible for 8.7 million deaths worldwide.¹⁰³ This is equivalent to approximately one in five deaths due to oil and gas pollution globally, and 350,000 annually in the U.S.¹⁰⁴ According to numerous internal documents released by *The Guardian*, the oil industry knew “at least 50 years ago that air pollution from burning fossil fuels posed serious risks to human health, only to spend decades aggressively lobbying against clean air regulations.”¹⁰⁵ In 1970 and 1980, Imperial Oil, an ExxonMobil subsidiary, acknowledged the concerns that fossil fuel derived air pollution caused “among mothers who worried about possible smog effects” and “birth defects among industry worker offspring.”¹⁰⁶ Despite this, companies such as ExxonMobil and Shell, took steps to conceal the adverse impacts of air pollution by funding studies that disputed these links.¹⁰⁷

⁹⁹ Esparza, R. (2020, December 18). WECAN Interview.

¹⁰⁰ .S. EPA. Particulate Matter (PM) Pollution. <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm>.

¹⁰¹ Kink, K. (2020, March 13). Burning Fossil Fuels Heats the Climate. It Also Harms Public Health. Yale Climate Connections. <https://www.yaleclimateconnections.org/2020/03/burning-fossil-fuels-heats-the-climate-it-also-harms-public-health/>.

¹⁰² WHO (2010). Exposure to Benzene: A Major Public Health Concern. <https://www.who.int/ipcs/features/benzene.pdf>

¹⁰³ Milman, O. (2021, February 9). ‘Invisible killer’: fossil fuels caused 8.7m deaths globally in 2018, research finds. *The Guardian*. <https://www.theguardian.com/environment/2021/feb/09/fossil-fuels-pollution-deaths-research>

¹⁰⁴ Milman, O. (2021, March 18). Oil firms knew decades ago fossil fuels posed grave health risks, files reveal. *The Guardian*. <https://www.theguardian.com/environment/2021/mar/18/oil-industry-fossil-fuels-air-pollution-documents>

¹⁰⁵ Ibid.

¹⁰⁶ Ibid.

¹⁰⁷ Ibid.

Women are disproportionately vulnerable to the health threats from air pollution. Biologically, female bodies experience higher accumulation of inhaled particles in their lungs and are more sensitive to toxicological exposure.¹⁰⁸ Similarly, the exposure to persistent organic pollutants (POPs), including dioxins, which are released by fossil fuel combustion, have been linked to specific disorders such as breast cancer and ovarian diseases, and can increase risks of cardiovascular disease.¹⁰⁹ The effects of air pollution on biological women's cardio-metabolic health is alarmingly under-researched. Moreover, air pollutants from fossil fuel combustion can result in adverse reproductive outcomes, such as stillbirth, fetal growth restriction, and birth defects.¹¹⁰ Frontline women across Louisiana, California, and Minnesota report "terrible smells," "horrible tastes," and "toxic...burn[ing] air" from pollution.¹¹¹ **Barbara Washington, a Member of RISE St. James in St. James Parish, Louisiana**, describes what she has seen in her community, where her younger sister died from cancer:

"I do know that many ladies have had breast cancer. I do know that many ladies have had hysterectomies. I do know that many ladies have kids born with certain illnesses. As a matter of fact in my family... at least two of the kids... were born deaf... some are autistic. But mostly cancer... in a lot of women... diabetes, heart problems, cholesterol... Our health problems are coming from a whole lot of stuff we are receiving from out of the air and pollution."¹¹²



Barbara Washington in front of the Occidental Chemical Corporation, near her home in St. James Parish, LA. (Julie Dermansky)

Because toxic and polluting industries are disproportionately developed in communities of color, and on or near Indigenous territory in the U.S. and Canada,¹¹³ such communities are facing greater risks from particulate matter and air pollutants. A study done by the National Center for Environmental Assessment (NCEA) found that African American/Black/African Diaspora people are exposed to 1.5 times more particulate matter than their white counterparts, and Latinx people 1.2 times more than non-Hispanic whites.¹¹⁴ Moreover, communities near fossil fuel infrastructure—disproportionately African American/Black/African Diaspora, Indigenous and Latinx communities—are exposed to benzene and other aromatic chemicals released by fossil fuel activities.¹¹⁵

According to a report from the Clean Air Task Force and the National Hispanic Medical Association, more than 1 in 4 people in the United States live in areas that violate the federal air pollution standard for ozone, while more than 1 in 3 Latinx, or over 23 million Latinx people, live

108 Sorensen, C., Et. al. (2018, July 10) Climate change and women's health: Impacts and policy directions. *PLoS medicine*, 15(7). <https://doi.org/10.1371/journal.pmed.1002603>

109 Wahlang, B. (2018). Exposure to persistent organic pollutants: impact on women's health. *Review on Environmental Health*, 33(4). <https://doi.org/10.1515/reveh-2018-0018>

110 More will be described in the fertility discussion below

111 Washington, B. (2020, November 25). WECAN Interview.; Perez, E. (2020, December 17). WECAN Interview.; Esparza, R. (2020, December 18). WECAN Interview.

112 Washington, B. (2020, November 25). WECAN Interview.

113 Newkirk II, V.R. (2018, February 28). A New EPA Report Shows that Environmental Racism is Real. *The Atlantic*. <https://www.theatlantic.com/politics/archive/2018/02/the-trump-administration-finds-that-environmental-racism-is-real/554315/>; Volcovici, V. (2016, December 5). Trump advisors aim to privatize oil-rich Indian reservations. *Reuters*. <https://www.reuters.com/article/us-usa-trump-tribes-insight/trump-advisors-aim-to-privatize-oil-rich-indian-reservations-idUSKBN13U1B1>

114 Mikati, I., Et. al. (2018, April). Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status. *American Journal of Public Health*, 108(4), 480-485. [10.2105/AJPH.2017.304297](https://doi.org/10.2105/AJPH.2017.304297)

115 Earthworks. *Air Pollutants*. https://www.earthworks.org/issues/air_contaminants/

in areas that violate this standard.¹¹⁶ While 3.6% of the general population live near oil and gas wells, 4% of the Latinx community live within one-half mile of an oil or gas well;¹¹⁷ and over 1.78 million Latinx people living in the U.S. are subjected to cancer risks above the EPA's level of concern due to toxic air pollution from oil and gas facilities. Latinx communities experience 153,000 childhood asthma attacks and 112,000 lost school days each year due to oil and gas emissions during the summer ozone season.¹¹⁸ A higher percentage of Latinx children are entering the emergency room from asthma attacks than non-Latinx.¹¹⁹ These discrepancies are exacerbated by high levels of poverty and relatively low rates of health insurance coverage within Latinx communities.

Women are also impacted by air pollution through the additional burden the fossil fuel extractive industry imposes on women as caretakers.¹²⁰ When children, elders, or other family members suffer from a respiratory disease, such as asthma or chronic obstructive pulmonary disease (COPD), or other illnesses triggered by the proximity of polluting industries, women are, in most cases, the ones staying home to take care of the sick.¹²¹ This might entail having to quit work, leaving women more economically vulnerable and/or dependent. Elizabeth Perez and Rosanna Esparza, both Community Organizers in California's Central Valley, shared an example about a young girl from Kern County, California who was battling asthma. During an asthma attack while the girl was at school, there was difficulty calling an ambulance on time for her, causing her mother to leave work and take her to the doctor.¹²²

Due to the disproportionate proximity of extraction facilities near African American/Black/African Diaspora, Indigenous, Latinx, and low-income communities and women's persisting role as caretakers when family members suffer from respiratory illnesses, fossil fuel companies and the financial institutions behind them are placing already vulnerable populations at more risk with air pollution, which has proven negative public health consequences.

5d. Water Contamination

In a 2019 report, the Natural Resources Defense Council (NRDC) found strong correlations between the racial makeup of communities and their access to safe drinking water.¹²³ The analysis showed that people of color, low-income people, and non-native English speakers were especially impacted by water violations.¹²⁴ More than any other socio-demographic characteristics analyzed, race, ethnicity, and language spoken were found to have the strongest relationship to decreased access to safe drinking water.¹²⁵

As one of the main industries responsible for water contamination, the fossil fuel industry

¹¹⁶ Fleischman, L., Et. al. (2016, September). *Latino Communities at Risk: The Impact of Air Pollution from the Oil and Gas Industry*. CATF and NHMA. https://www.catf.us/wp-content/uploads/2016/09/CATF_Pub_LatinoCommunitiesAtRisk.pdf

¹¹⁷ Earthworks. *Oil and Gas Health Effects*. https://www.earthworks.org/issues/oil_and_gas_health_effects/#:~:text=Today%2C%20more%20than%2012%20million,or%20gas%20well%20or%20facility

¹¹⁸ Fleischman, L., Et. al. (2016, September). *Latino Communities at Risk: The Impact of Air Pollution from the Oil and Gas Industry*. Clean Air Task Force and NHMA. https://www.catf.us/wp-content/uploads/2016/09/CATF_Pub_LatinoCommunitiesAtRisk.pdf

¹¹⁹ Ibid.

¹²⁰ Patterson, Jacquelin. WECAN, International Interview. 2 May 2020.

¹²¹ Ibid.

¹²² Perez, E. (2020, December 17). WECAN Interview.; Esparza, R. (2020, December 18). WECAN Interview.

¹²³ Fedinick, K.P., Et al. (2020, March 27). *Watered Down Justice*. National Resource Defense Council, Et al. <https://www.nrdc.org/resources/watered-down-justice>

¹²⁴ Ibid.

¹²⁵ Ibid.

directly contributes to this grave issue.¹²⁶ The NRDC study demonstrates how the most vulnerable communities in the U.S. carry the heaviest burden of the extractive industry's pollution and contamination of water. The NRDC notes that evidence of water contamination in the U.S., and thus its impacts on communities, is alarmingly underreported as the collected data "only regulates a small subset of drinking water contaminants" and "monitoring and compliance data on regulated substances is incomplete and often falsified," notably because "drinking water is [only] monitored at point of entry."¹²⁷

As mentioned, women face heightened effects from water pollution due to persisting patriarchal structures in the U.S. and Canada. Because of their caretaking duties, including household labor, women are more exposed to polluted water.¹²⁸ Fossil fuel extraction and refining pose significant threats to nearby waterways and can enter into the drinking water system through a number of pathways: coal mining operations often wash acid runoff into drinking water sources; oil spills and leaks during extraction and transport further pollute drinking water sources; and wastewater, laden with heavy metals, radioactive materials, and other pollutants is stored in underground wells that can leach into waterways.¹²⁹ This water contamination can cause cancers, birth defects, and neurological damage.¹³⁰ The contamination of mercury from coal-fired power plants is hazardous to women's pregnancies, and women's consumption of contaminated fish and/or seafood increase infants' risks of neurological and neurobehavioral complications.¹³¹

When children, elders, or other family members suffer from waterborne illness, or other illnesses triggered by the proximity of polluting industries, women are, in most cases, the ones who end up having to stay home and take care of the sick.¹³² **Elizabeth Perez, a Community Organizer at the Central California Environmental Justice Network (CCEJN)**, explains how water contamination from fracking in Kern County, California has impacted the community's water supply:

"The state provides water ... and sometimes the needs aren't met and I believe it is difficult to take care of a baby with limited water. I know in some areas of the Central Valley, some schools don't have clean drinking water and are only given one bottle of water a day and it gets really hot here... I can imagine mothers being concerned with their children not having access to this basic human right, which is water."¹³³

Water contamination also has a particular cultural significance for Indigenous women. The connec-



Elizabeth Perez at a rally in Kern County, CA opposing oil and gas drilling on public lands. (CCEJN)

¹²⁶ Denchak, M. (2018, March 14). *Water Pollution: Everything You Need to Know*. Natural Resource Defense Council. <https://www.nrdc.org/stories/water-pollution-everything-you-need-know>

¹²⁷ Fedinick, K.P., Et al. (2020, March 27). *Watered Down Justice*. National Resource Defense Council, Et al. <https://www.nrdc.org/resources/watered-down-justice>

¹²⁸ McHenry, K.A. (2017, October 10). Fracking women: a feminist critical analysis of hydraulic fracturing in Pennsylvania. *IJFAB: International Journal of Feminist Approaches to Bioethics*, 10(2), 79-104. <https://doi.org/10.3138/ijfab.10.2.79>

¹²⁹ Denchak, M. (2018, March 14). *Water Pollution: Everything You Need to Know*. Natural Resource Defense Council. <https://www.nrdc.org/stories/water-pollution-everything-you-need-know>

¹³⁰ Ibid.

¹³¹ Eugenio, R.N., Et al. (2018). *Soil Pollution: A Hidden Reality*. Food and Agriculture Organization of the United Nation. <http://www.fao.org/3/i9183en/i9183en.pdf>

¹³² Patterson, J. (2020, May 2). WE CAN Interview.

¹³³ Perez, E. (2020, December 17). WE CAN Interview.

tion between women's roles as mothers and water is sacred. **Kanahus Manuel (Secwepemc & Ktunaxa Nations), a Member of the Secwepemc Women Warriors and Indigenous Land Defender in British Columbia**, speaks about the link between Indigenous mothers' defense of their land and defense of their children:

"When they are destroying the water, it is like they are destroying our children. And we're not going to let them destroy our children or kill our children or kill our water. We're going to stand up. And it is going to take the women and the mothers because of that sacred connection that we have with the children and the nation. We birthed the nation."¹³⁴

5e. Soil Pollution and Food Insecurity

Air and water pollution inevitably affect soil quality, and therefore the ability to grow and harvest healthy resources. Soil pollution is defined as "the presence of a chemical or substance out of place and/or present at a higher than normal concentration that has adverse effects on any non-targeted organism," and is commonly caused by anthropogenic sources such as industrial or mining activities.¹³⁵ Environmental racism and socio-spatial segregation in the United States and Canada leaves African American/Black/African Diaspora, Indigenous, and Latinx communities with land close to fossil fuel extraction and infrastructure, which results in polluted and unfruitful land for growing. While 98% of farmland is owned by white people in the U.S., the workforce is predominantly composed of non-white, especially Latinx, farmers.¹³⁶ The small percentage of land non-white farmers own is mainly located in regions most affected by fossil fuel industries, such as the Appalachian region (Kentucky, North Carolina, Tennessee, Virginia, and West Virginia) and southern states such as Alabama, Arkansas, Georgia, Florida, Louisiana, Mississippi, and South Carolina. Communities of color are at the frontline of soil pollution and its epidemiologic consequences.¹³⁷

Soil and food pollution impact women's reproductive systems. Surface mining has led to the intrusion of arsenic into soils, which increases risks of miscarriage, stillbirth, and pre-term birth. Coal combustion also increases soil levels of mercury, and can lead to higher frequencies of low-birth weight and infant death. A study found that pregnant women residing in coal mining areas of West Virginia had a low birth weight rate 16% higher than those in other counties.¹³⁸ Likewise, excess heavy metals in soil, such as dioxins from fossil fuel brine and crude oil spills, "cause reproductive and developmental problems" and perturbations of the endocrine system by interfering with hormones.¹³⁹

Soil pollution from fossil fuel infrastructure also impacts the ability to grow food, and by extension, women's ability to feed their families. Brine spills increase salinity levels, which impacts soil

¹³⁴ Indigenous Climate Action. (2019, March). *Violence Against the Land is Violence Against Women*. <https://www.indigenousclimateaction.com/entries/violence-against-the-land-is-violence-against-women>

¹³⁵ Rodríguez-Eugenio, N., Et al. (2018). *Soil Pollution: A Hidden Reality*, FAO. <http://www.fao.org/3/I9183EN/i9183en.pdf>

¹³⁶ Horst, M., Et al. (2018 October 28). Racial, Ethnic and Gender Inequities in Farmland Ownership and Farming in the U.S. *Agriculture and Human Values*, 26, 1-16. <https://link.springer.com/article/10.1007/s10460-018-9883-3>

¹³⁷ Ibid.

¹³⁸ Epstein, P.R. Et al. (2011, February). Full Cost Accounting for the Life Cycle of Coal. *Annals of the New York Academy of Sciences*, 1219, 73-98. [10.1111/j.1749-6632.2010.05890.x](https://doi.org/10.1111/j.1749-6632.2010.05890.x)

¹³⁹ Science Communication Unit, University of the West of England, Bristol (2013, September). *Science for Environment Policy In-depth Report: Soil Contamination: Impacts on Human Health*. Report produced for the European Commission DG Environment.: <http://ec.europa.eu/science-environment-policy>

fertility. The estimated 3,900 brine spills resulting from fracking activities in the Bakken region of North Dakota are notable examples of widespread and consistent soil contamination, “kill[ing] nearly all vegetation [and] rendering sections of crop and ranch lands unusable.”¹⁴⁰ Excess heavy metals in soil, such as arsenic, cadmium, and lead (particularly originating from mining), are destructive to plant metabolism, which leads to a decrease in crop productivity. Besides the epidemiologic effects, excess heavy metals can impede on plant tissues interfering with growth and causing plant death.¹⁴¹ In particular, cadmium can cause a “reduction of root, stem and leaf growth, decreasing net photosynthesis and water use efficiency and altering nutrient uptake.”¹⁴² Wastewater resulting from oil and gas activities, especially fracking involving radioactive materials and heavy metals, degrades the quality of soil by creating excessive sodicity, which lowers the permeability of soil to air and water. This in turn results in excessive salt levels that are lethal to plants and increased biocides that cause biodegradation.¹⁴³ Water and air pollution also contribute to soil pollution. For example, acid rain stemming from the combustion of fossil fuel, especially coal, releases sulfur dioxide (SO₂) and nitrogen oxides (NO_x), contaminating water and polluting soil.¹⁴⁴ Barbara Washington, a Member of RISE St. James, who lives a mile from Occidental’s chemical plant in St. James Parish, Louisiana, describes her family’s garden, “The okra... muscle green... none of that is doing well anymore... because the soil is contaminated.”¹⁴⁵ As previously mentioned, such increased food insecurity is not without gendered effects, as women are overrepresented in domestic and caretaking duties.

5f. Heat Islands

Extreme heat is one of the deadliest weather hazards we face due to the climate crisis. Heat contributes to thousands of deaths in the U.S. every year, and without rapid curbing of greenhouse gas emissions, the death rate is expected to dramatically increase over this century. The NRDC reports that excess deaths on dangerously hot summer days could grow from the historical average of 1,360 to 13,860 deaths by the 2040s.¹⁴⁶ The largest source of greenhouse gas emissions from human activity is the burning of fossil fuels.¹⁴⁷

According to data from the Union of Concerned Scientists, extreme heat disproportionately affects communities of color: from 1971-2000, U.S. counties with more than 25% African American/Black/African Diaspora residents endured an average of 18 days with temperatures above 100°F, while counties with fewer than 25% African American/Black/African Diaspora residents endured an average of seven days with temperatures above 100°F.¹⁴⁸ It is projected that, if the Paris Agreement goals are not met, U.S. counties with larger African American/Black/African Diaspora populations will face 72 “very hot days” per year, on average, compared to 36 days for

140 Flesher, J. (2016, April, 27) Scientists Say Oilfield Wastewater Spills Release Toxins. AP News. <https://apnews.com/article/d9dce200f58847b6a3cf296b420a7a1b>

141 Rodriguez-Eugenio, N., Et al. (2018). *Soil Pollution: A Hidden Reality*. FAO page 50. <http://www.fao.org/3/i9183EN/i9183en.pdf>

142 Ibid.

143 Pichtel, J. (2016, February 14). Oil and Gas Production Wastewater: Soil Contamination and Pollution Prevention. *Hindawi Publishing*, 2016, 7 <http://dx.doi.org/10.1155/2016/2707989>

144 Everything Connects. *Soil Pollution*. <https://www.everythingconnects.org/soil-pollution.html>

145 Washington, B. (2020, November 25). WECAN Interview.

146 Constible, J. (2017, June 29) *Killer Summer Heat: Paris Agreement Compliance could avert hundred of thousands of needless deaths in America's cities*. National Resources Defense Council. <https://www.nrdc.org/resources/killer-summer-heat-paris-agreement-compliance-could-avert-hundreds-thousands-needless>

147 U.S. EPA (2018). *Sources of Greenhouse Gas Emissions*. <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#:~:text=The%20largest%20source%20of%20greenhouse,electricity%2C%20heat%2C%20and%20transportation>

148 Lakhani, N. (2020, July 8). Killer heat: US racial injustices will worsen as climate crisis escalates. *The Guardian*. <https://www.theguardian.com/us-news/2020/jul/28/us-racial-injustices-will-worsen-climate-crisis-escalates?fbclid=IwAR1rPYN0qgEkkgqXFDL>

counties with smaller African American/Black/African Diaspora populations.¹⁴⁹

Disproportionate impacts from a phenomenon known as “Heat Islands” is the result of redlining, where communities of color are denied public services like banking, healthcare and parks, with their shading and cooling trees, and are instead targeted for environmentally toxic projects such as fossil fuel extraction sites and chemical plants.¹⁵⁰ Historically, African American/Black/African Diaspora neighborhoods were primarily impacted by redlining and today this injustice continues, now also impacting Latinx and Indigenous communities.¹⁵¹ Heat Islands are characterized by structures such as housing projects and asphalt car parks with inadequate vegetation, and are up to 12.6°F hotter than non-redlined neighborhoods of the same city.¹⁵² According to the American Economic Journal, up to 7% of racial education achievement gaps can be attributed to heat impacts, specifically a combination of more hot days and hotter classrooms for African American/Black/African Diaspora and Latinx students.¹⁵³

Additionally, heat stress poses threats to pregnant women and can have disastrous consequences for fetal health. Studies have exposed links between heat exposure and premature birth,¹⁵⁴ low birth weight,¹⁵⁵ birth defect,¹⁵⁶ and stillbirth.¹⁵⁷ According to the Centers for Disease Control and Prevention (CDC), premature birth is a leading cause of infant death and has been connected to higher rates of lifelong intellectual and physical health problems.¹⁵⁸ Premature births further affect families by creating heavy financial costs and emotional tolls.¹⁵⁹ Additionally, a study from Stanford University found that heat exposure leads to more hospitalization for African American/Black/African Diaspora pregnant women than other pregnant women exposed to heat: “disparities in both the levels of extreme heat exposure and the magnitudes of the effects of exposure could help explain the racial gap in maternal health.”¹⁶⁰ With climate change, the future will bring hotter days and more periods of acute heat waves, and there is need for more research into this area to support these findings, expound on the effects, and help mitigate the impacts.

The combination of systematic racism and Heat Islands are placing women of color in the U.S. in disproportionate danger; African American/Black/African Diaspora, Indigenous, and Latina/Chicana women face worse heat effects to their pregnancy health and birth outcomes than white women.¹⁶¹ According to studies, African American/Black/African Diaspora pregnant women are

¹⁴⁹ Ibid.

¹⁵⁰ Ibid.

¹⁵¹ Perry, A.M., et al. (2019, October 14). *America's formerly redlined neighborhoods have changed, and so must solutions to rectify them*. Brookings. <https://www.brookings.edu/research/america-formerly-redlines-areas-changed-so-must-solutions/>; Glantz, A., Et al. (2018, February 17). *Modern-day redlining: How banks block people of color from homeownership*. *Chicago Tribune*. <https://www.chicagotribune.com/business/ct-biz-modern-day-redlining-20180215-story.html>

¹⁵² Lakhani, Nina. (2020 July 28). *Killer heat: US racial injustices will worsen as climate crisis escalates*. *The Guardian*. <https://www.theguardian.com/us-news/2020/jul/28/us-racial-injustices-will-worsen-climate-crisis-escalates?fbclid=IwAR1rPYN0ggEkkqgXFDL>

¹⁵³ Park, J.R., Et. al. (2020 May). *Heat and Learning*. *American Economic Journal*, 12(2), 306-39. doi: 10.1257/pol.20180612

¹⁵⁴ Auger, N. Et. al. (2017, January 1). *Risk of Congenital Heart Defects after Ambient Heat Exposure Early in Pregnancy*. *Environmental Health Perspective*, 125(1). <https://doi.org/10.1289/EHP171>

¹⁵⁵ Ngo, N.S., Et. al. (2016, January). *Climate change and fetal health: The impacts of exposure to extreme temperatures in New York City*. *Environmental Research*, 144, 158-164. 2015. <https://doi.org/10.1016/j.envres.2015.11.016>

¹⁵⁶ Auger, N. Et. al. (2017, January 1). *Risk of Congenital Heart Defects after Ambient Heat Exposure Early in Pregnancy*. *Environmental Health Perspective*, 125(1). <https://doi.org/10.1289/EHP171>

¹⁵⁷ Basu, R., Et al. (2017, April). *The impact of maternal factors on the association between temperature and preterm delivery*. *Environmental Research*, 154, 109-114. <https://doi.org/10.1016/j.envres.2016.12.017>

¹⁵⁸ CDC. *Preterm Birth*. <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pretermbirth.htm>

¹⁵⁹ Human Rights Watch. (2020, October 23). *US: Heat Emergency Plans Missing Pregnancy, Racial Justice*. <https://www.hrw.org/news/2020/10/23/us-heat-emergency-plans-missing-pregnancy-racial-justice>

¹⁶⁰ Kim, J., et al. (2019 October). *What to Expect When It Gets Hotter: The Impacts of Prenatal Exposure to Extreme Heat on Maternal and Infant Health*. Stanford: Institute for Economic Policy Research. <https://siepr.stanford.edu/research/publications/what-to-expect-when-it-gets-hotter-impacts-prenatal-exposure-extreme-heat>

¹⁶¹ Ibid.

especially vulnerable to the increasing heat threat.¹⁶² Because women of color and low-income women live in areas of cities with less green space and higher average temperatures, they endure more hours of dangerous heat and are more often working in hotter conditions.¹⁶³ This may result in pregnant women working in extreme heat, and being forced to choose between their paychecks and their health.

According to Rupa Basu, the Chief of Air and Climate Epidemiology Section at the Office of Environmental Health Hazard Assessment for the California EPA, “Black women have the highest risk of preterm delivery from heat.”¹⁶⁴ Amongst research looking at heat exposure and pregnancy, four different studies found that heat was linked to a range of increased risk of preterm birth from 8.6% to 21%.¹⁶⁵ Two other studies “found an association of racial/ethnic disparity and heat exposure with an increasing risk of preterm birth; higher risk was found among black mothers.”¹⁶⁶ These detrimental effects on birth outcomes impact women’s rights to care for their children and achieve “supportive parenting environments,” as described by Kelly Davis, Chief Equity Officer at the National Birth Equity Collaborative (NBEC).¹⁶⁷

Extreme heat has also been associated with intimate partner violence.¹⁶⁸ In the United States, 1 in 4 women and 1 in 9 men experience intimate partner violence.¹⁶⁹ This suggests that with the increase in heat and subsequent intimate partner violence, women will endure higher levels of violence.

Elizabeth Perez, Community Organizer at the Central California Environmental Justice Network (CCEJN), describes the interlocking issues between heat, poverty, racism, and women’s caretaking duties that arise in Latinx communities in the Central Valley where it can reach 110°F:

“Pregnant women who are farmers have to go to work and it’s hot and they get tired. During the summer especially... women have to find a caretaker, or if not, a way to keep the children busy whilst they’re working... [It’s] too hot for children to play outside and a lot of time mothers have to look after their children inside... and generally farmers share houses with other families... I can imagine that’s also heavy on the women to keep their families entertained and healthy in this house full of other people...”¹⁷⁰

5g. Fertility Issues

The fossil fuel industry has devastating impacts on women’s fertility and reproductive rights. Proximity to fossil fuel extraction and development has been inextricably linked to negative

¹⁶² Human Rights Watch. (2020, October 23). *US: Heat Emergency Plans Missing Pregnancy, Racial Justice*. <https://www.hrw.org/news/2020/10/23/us-heat-emergency-plans-missing-pregnancy-racial-justice>

¹⁶³ Ibid.

¹⁶⁴ King, A.D. (2020, July 29). At the Intersection of Climate Change and Environmental and Reproductive Justice. *New Security Beat*. <https://www.newsecuritybeat.org/2020/07/intersection-climate-change-environmental-reproductive-justice/?fbclid=IwAR2fCr8tFnYQHkMToXNPq3q3EoPRdnK-zByZv3hZQjvsl006Sjh0sQINeSE>

¹⁶⁵ Bekkar, B., Et al. (2020, June 18). Association of Air Pollution and Heat Exposure With Preterm Birth, Low Birth Weight, and Stillbirth in the US. *JAMA Network Open*, 3(6). doi:10.1001/jamanetworkopen.2020.8243

¹⁶⁶ Ibid.

¹⁶⁷ Human Rights Watch. (2020, October 23). *US: Heat Emergency Plans Missing Pregnancy, Racial Justice*. <https://www.hrw.org/news/2020/10/23/us-heat-emergency-plans-missing-pregnancy-racial-justice>

¹⁶⁸ Linares, C., Et. al. (2018, December). Heat Wave and the Intimate Risk of Violence. *Science of the Total Environment*, 644, 413-419.

¹⁶⁹ NCADV. *Statistics*. <https://ncadv.org/STATISTICS>

¹⁷⁰ Perez, E. (2020, December 17). WECAN Interview.

impacts among expecting mothers and children. These are often lifelong impacts affecting the mental and physical health of women and children.¹⁷¹

Fracking fluids use over 1,000 different chemicals, many of which have been proven or are suspected to be carcinogens, reproductive or developmental toxicants, or endocrine disruptors.¹⁷² According to the WHO, endocrine disrupting chemicals are associated with altered reproductive function, increased incidence of breast cancers, abnormal growth patterns, and neurodevelopmental delays in children, which may not become evident until later in life.¹⁷³

Health data on fracking has been historically under-researched, but recent years have seen an influx of peer-reviewed scientific studies that point out a disconcerting dynamic in how fracking threatens the health of pregnant women and their children.¹⁷⁴ A study investigating records for 15,451 live births from 2007 to 2010 in Southwest Pennsylvania found a significant association between proximity to unconventional gas development (fracking) and decreased birth weight, after accounting for a large number of contributing factors.¹⁷⁵ In the most exposed group, there was a significant increase in incidence of small for gestational age, newborns born smaller in size than normal for their gestational age, in the most exposed group.¹⁷⁶ Infants born small for gestational age are at increased risk of perinatal morbidity, persistent short stature, and metabolic alterations in later life.¹⁷⁷ A retrospective cohort study that analyzed electronic health record data on 9,384 mothers and their 10,946 newborn children in Pennsylvania from 2009 to 2013, found that pregnant women who live in proximity to active fracking sites were at a 40% increased risk of giving birth prematurely, and at a 30% increased likelihood of having high-risk pregnancies.¹⁷⁸ Women who lived in the closest proximity to the most active wells among the 40 counties included in the research, had the highest rates of premature births and high-risk pregnancies.¹⁷⁹

Similarly, a retrospective birth cohort study of 158,894 women living in the Barnett Shale area (a geological formation in Northeast Texas), found an association between mothers' residential proximity to unconventional natural gas development (UGD) activity and preterm birth and fetal death.¹⁸⁰ In another study looking at UGD activity and preterm births, researchers found that mothers living closest to the densest fracking activity were more likely to have extremely premature babies (born before 28 weeks of gestation) compared with women who did not live near a well.¹⁸¹ Infants born preterm are vulnerable to various potential complications including respi-

171 Pacheco, S.E. (2020 January 13). Catastrophic effects of climate change on children's health start before birth. *Journal of Clinical Investigation*, 130(2). doi: 10.1172/JCI135005

172 Prepared by Macfarlane, R., Et. al. (2020, January). *Fractures in the Bridge: Unconventional (Fracked) Natural Gas, Climate Change and Human Health*. Canadian Association of Physicians for the Environment (CAPE). http://www.hpaf.co.uk/wp-content/uploads/2020/02/CAPE-Fracking-5b.indd_.pdf

173 Bergman, A., Et. al. (2013). *State of the Science of Endocrine Disrupting Chemicals 2012*. WHO, IOMC, Et. al. https://apps.who.int/iris/bitstream/handle/10665/78102/WHO_HSE_PHE_IHE_2013.1_eng.pdf;jsessionid=B5628E6A8D2F3BAFB6E5056ECBF814C1?sequence=1

174 Boden, S. (2019, August 2). *Fracking Linked To Anxiety, Depression In Pregnant Women*. WESA 90.5 Pittsburgh's NPR News Station. <https://www.wesa.fm/post/fracking-linked-anxiety-depression-pregnant-women>

175 Stacy, S.L., Et. al. Perinatal outcomes and unconventional natural gas operations in Southwest Pennsylvania. *PLoS One*, 10(6). 2015. <https://doi.org/10.1371/journal.pone.0126425>

176 Ibid.

177 Cho, W.K., Et. al. (2016, January 22). Catch-up Growth and Catch-up Fat in Children Born Small for Gestational Age, *Korean Journal of Pediatrics*, 59(1), 1-7. <https://doi.org/10.3345/kjp.2016.59.1.1>

178 Casey, J.A., Et. al. (2016, March). Unconventional natural gas development and birth outcomes in Pennsylvania, USA. *Epidemiology*, 27(2), 163. [10.1097/EDE.0000000000000387](https://doi.org/10.1097/EDE.0000000000000387); Johns Hopkins Bloomberg School of Public Health. (2015, October 8). *Study: fracking industry wells associated with premature birth*. <https://www.jhsph.edu/news/news-releases/2015/study-fracking-industry-wells-associated-with-premature-birth.html>

179 Ibid.

180 Whitworth, K.W., Et. al. (2017, July 21). Maternal residential proximity to unconventional gas development and perinatal outcomes among a diverse urban population in Texas. *PLoS One*, 12(7). [10.1371/journal.pone.0180966](https://doi.org/10.1371/journal.pone.0180966)

181 Konkell L. (2018, October 1). Drilling into Critical Windows of Exposure: Trimester-Specific Associations between Gas Development and Preterm Birth. *Environmental Health Perspectives*, 126(10). <https://doi.org/10.1289/EHP3762>

Whitworth, K.W., Et. al. (2018, March 20). Drilling and Production Activity Related to Unconventional Gas Development and Severity of Preterm Birth. *Environmental Health Perspectives*, 126(3). <https://doi.org/10.1289/EHP2622>

ratory distress syndrome, chronic lung disease, injury to the intestines, a compromised immune system, cardiovascular disorders, hearing and vision problems, and neurological insult; the risks increase the earlier the birth.¹⁸²

A 2018 study published by the University of Oklahoma found a significantly increased prevalence of neural tube defects among children whose birth residence was located within two miles of a drilling and/or fracking site, compared to those which were not.¹⁸³

Rates of premature birth in the U.S. have been growing for five years in a row.¹⁸⁴ According to the CDC, African American/Black/African Diaspora women's pregnancies end in premature birth 50% more often than those of white women.¹⁸⁵ Further, low birth weight is twice as common among babies born to African American/Black/African Diaspora women, and for African American/Black/African Diaspora women, stillbirth is more than twice as common as it is for white women.¹⁸⁶ March of Dimes, an organization fighting premature birth in the U.S., found that Hispanic and Native American women also have worse birth outcomes than white women.¹⁸⁷

Rosanna Esparza, a Community Organizer and Environmental Researcher, expresses her concern for the young Latina women and their future children in the heavily fracked region of Kern County:

"We know about the exposure to toxicity from the proprietary lens of fracking. We know that there are cancer causing substances. When we've done our testing and our gram samples of the air as well as the soil samples we've seen the number of chemicals that can cause sterility, something like spina bifida, or any of these other challenges and birth defects. And we see it later in the birth of these children."¹⁸⁸

Joan Casey, an environmental health scientist at the Columbia University Mailman School of Public Health and researcher on the gendered impacts of fracking, points out why the implications of pregnant women's health problems can be far reaching:

"There's growing realization that we need to be concerned about the health of mothers during and after pregnancy. They are vulnerable women who are growing another human being inside of them, and their exposures potentially tell us something about what a larger population is experiencing."¹⁸⁹

The fossil fuels industry's willingness to sacrifice women's overall health and fertility for financial gain is a reproductive health and justice issue because it impacts women's fertility and ability

¹⁸² Butler, A.S., Et al. (2007). *Preterm birth: causes, consequences, and prevention*. National academies press.

¹⁸³ Janitz, A.E., Et al. (2019, January). The association between natural gas well activity and specific congenital anomalies in Oklahoma, 1997–2009. *Environment International*, 122, 381–388. <https://doi.org/10.1016/j.envint.2018.12.011>

¹⁸⁴ Hamilton, B.E., Et al. (2020, May). *Births: Provisional Data for 2019*. CDC: U.S. Department of Health and Human Services, Et. al. <https://www.cdc.gov/nchs/data/vsrr/vsrr-8-508.pdf>

¹⁸⁵ CDC. *Reproductive Health: Preterm Birth*. <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pretermbirth.htm>

¹⁸⁶ Sharp. (2020, October 14). *Black women's risk of premature birth*. <https://www.sharp.com/health-news/black-women-s-risk-of-premature-birth.cfm>; CDC. *Stillbirth*. <https://www.cdc.gov/ncbddd/stillbirth/features/kf-black-mothers-stillbirth.html>

¹⁸⁷ March of Dimes. (2020). *Report Card for United States*. <https://www.marchofdimes.org/peristats/tools/reportcard.aspx?reg=99>

¹⁸⁸ Esparza, R. (2020, December 18). WECAN Interview.

¹⁸⁹ Boden, S. (2019, August 2). *Fracking Linked To Anxiety, Depression In Pregnant Women*. WESA 90.5 Pittsburgh's NPR News Station. <https://www.wesa.fm/post/fracking-linked-anxiety-depression-pregnant-women>

to parent the children they have, and it impedes on the parents' right to raise their children in a toxic-free environment.¹⁹⁰ The studies from different parts of the U.S. where fracking occurs demonstrate that fracking can have harmful impacts on a woman's ability to maintain pregnancy and carry a healthy pregnancy to term, as well as result in developmental disorders for the infant.¹⁹¹

5h. "Man Camps"

One of the most well-documented devastating gendered implications of the oil and gas industry is the increase in rates of sexual assault and violence against women in areas where "man camps" appear. "Man camps" are temporary housing sites set up for the construction of resource extraction infrastructure.¹⁹² "Man camps" are predominantly occupied by young transient male workers, who are disconnected from the community into which they are temporarily relocated for grueling but very high-paying work. Extensive research points to the hyper-masculine nature of "man camps," which leads to social isolation, lack of self-care, and significant alcohol and drug consumption, as well as an increase in demand for sex trafficking.¹⁹³ Oil and gas projects are disproportionately developed on Native American reservations in the U.S.: reservations



(Sarah LittleRedfeather/Honor the Earth)

¹⁹⁰ McHenry, K.A. (2017, October 10). Fracking women: a feminist critical analysis of hydraulic fracturing in Pennsylvania. *IJFAB: International Journal of Feminist Approaches to Bioethics*, 10(2), 79-104. <https://doi.org/10.3138/ijfab.10.2.79>

¹⁹¹ Casey, J.A., Et al. (2016, March). Unconventional natural gas development and birth outcomes in Pennsylvania, USA. *Epidemiology*, 27(2), 163. [10.1097/EDE.0000000000000387](https://doi.org/10.1097/EDE.0000000000000387)

¹⁹² Simons, P., Et al. (2019, April 3). Relations of Ruling: A Feminist Critique of the United Nations Guiding Principles on Business and Human Rights and Violence against Women in the Context of Resource Extraction. *Canadian Journal of Women and the Law*, 31(1), 113-150. doi: 10.3138/cjwl.31.1.06

¹⁹³ Gibson, G., Et al. with Lake Babine Nation and Nak'azdli Whut'en. (2017, February). *Indigenous Communities and Industrial Camps: Promoting healthy communities in settings of industrial change*. The Firelight Group. https://firelight.ca/wp-content/uploads/2016/03/Firelight-work-camps-Feb-8-2017_FINAL.pdf

represent 2% of the land but hold approximately 20% of the fossil fuel reserves.¹⁹⁴ Substance abuse, high disposable incomes, lack of social ties in the area, in addition to colonial and racist views towards Indigenous women, all contribute to violence against women, girls, and two-spirit people near “man camps.”¹⁹⁵

The extractive industry’s “man camps” contribute to the iniquitous Missing and Murdered Indigenous Women, Girls, and Two-Spirit People (MMIWG2S) epidemic.¹⁹⁶ According to the U.S. Department of Justice, “one in three Native American women are raped during their lifetimes – two-and-a-half times the likelihood for an average American woman—and in 86 percent of these cases, the assailant is non-Indian.”¹⁹⁷ During a panel discussing human trafficking in the U.S., particularly in North Dakota, former U.S. Senator Heidi Heitkamp emphasized the impact trafficking has on Indigenous women: “Native American women are murdered at ten times the national average, and 84 percent of the Native women have experienced violence in their lifetime.”¹⁹⁸ In Canada, Indigenous women are 12 times more likely to be murdered or missing than any other Canadian women, and 16 times more likely than Caucasian women.¹⁹⁹

Frontline Indigenous communities, advocacy organizations, and researchers have all consistently



(WECAN)



(Sarah LittleRedfeather/Honor the Earth)

pointed out that “there is a direct correlation between increased rates of sexual abuse, trafficking, and domestic violence against women and children in regions where fossil fuel extraction companies set up “man camps” to house workers.”²⁰⁰ A study done by the U.S. Bureau of Justice Statistics found that when looking at the rapid rise of oil worker populations in the Bakken region from 2006-2012, that the rate of aggravated assault increased by 70% and that the rate of

194 Osborne, T. (2018, April 9). *Native Americans Fighting Fossil Fuels*. Scientific American. <https://blogs.scientificamerican.com/voices/native-americans-fighting-fossil-fuels/>

195 Gibson, G., Et al. with Lake Babine Nation and Nak'azdli Whut'en. (2017, February). *Indigenous Communities and Industrial Camps: Promoting healthy communities in settings of industrial change*. The Firelight Group. https://firelight.ca/wp-content/uploads/2016/03/Firelight-work-camps-Feb-8-2017_FINAL.pdf

196 Jones, R.J. (2020, October 9). *Keep my Memory*. Alliance for Climate Education. <https://acespace.org/2020/10/09/keep-my-memory/>

197 Crane-Murdoch, S. (2013, February 22). *On Indian Land, Criminals Can Get Away with Almost Anything*. The Atlantic. <https://www.theatlantic.com/national/archive/2013/02/on-indian-land-criminals-can-get-away-with-almost-anything/273391/>

198 Coons, A. (2017, October 29). *Human and Sex Trafficking on the Home Front*. Dakota Student. <https://dakotastudent.com/11262/opinion/human-and-sex-trafficking-on-the-home-front/>

199 National Inquiry into Missing and Murdered Indigenous Women and Girls (Canada). (2019). *Reclaiming Power and Place*. Privy Council Office, 1a, 7. https://www.mmiwg-ffada.ca/wp-content/uploads/2019/06/Final_Report_Vol_1a-1.pdf

200 Clabots, B. (2019, October 14). *The Darkest Side of Fossil-Fuel Extraction*. Scientific American Blog Network. <https://blogs.scientificamerican.com/voices/the-darkest-side-of-fossil-fuel-extraction/>; Seeding Sovereignty. <https://seedingsovereignty.org>; Brown, A. (2018, July 1). *A New Film Examines Sexual Violence as a Feature of the Bakken Oil Boom*. The Intercept. <https://theintercept.com/2018/07/01/nuuca-bakken-oil-boom-sexual-violence/>; Brewer, S. (2017, September). *Sold for Sex: Senate Committee Investigates Human Trafficking of Native Women and Children*. Rewire News Group. <https://rewirenewsgroup.com/article/2017/09/28/sold-sex-senate-committee-investigates-human-trafficking-native-women-children/>

unlawful sexual contact toward women increased by 54%.²⁰¹ In contrast, rates of violent victimization in the same period declined by 8% in the nation.²⁰²

Because Indigenous women are not protected by law in the same way as non-Indigenous women, sexual violence near Indigenous territories becomes even more problematic for the victims. Following the 1978 Supreme Court case *Oliphant v. Suquamish*, Indigenous tribes in the U.S. were stripped of the right to arrest and prosecute non-Native Americans who commit crimes on Indigenous land.²⁰³ As reported by *The Atlantic*, “In 2011, the U.S. Justice Department did not prosecute 65 percent of rape cases reported on reservations.”²⁰⁴ This systemic injustice leaves the tribes with little to no control over the thousands of workers that move into “man camps,” and the cases of MMIWG2S continue to go unprosecuted and underreported.

The Sovereign Bodies Institute, a research institute that created one of the largest data sources on the MMIWG2S epidemic, documents the multiple barriers to justice for Indigenous women, girls, and two-spirit people, which include jurisdictional complexity, police negligence and incapacity, gender violence by law enforcement, difficulty in accessing data, and a policymaking process that is abusive towards survivors.²⁰⁵ Thus, areas where “man camps” are located not only have higher rates of violence against women, girls, and two-spirit people, they also lack law enforcement capacity and will to respond— further exacerbating the cumulative impacts of violence.

Moreover, the increased rate of rape, demand for sex work, and sex trafficking, result in increased incidences of sexually transmitted infections (STIs) and HIV/AIDS; an issue that is heightened due to the lack of adequate health services and testing capabilities in these areas.²⁰⁶ The Firelight Report exposes Northern British Columbia, an area with high numbers of industrial “man camps,” as a region with particularly high rates of STIs: 22% higher than the provincial average.²⁰⁷

Although oil and gas companies frequently emphasize the economic benefits extractive projects will bring into a community, Indigenous women often do not get the same access to these touted benefits. There are several barriers to women’s economic participation in these extractive projects and the resource sector wages:

- “Man camps” are hypermasculinized and hypersexualized settings where sexual harassment, racism, and violence occur at elevated levels, making these worksites too dangerous for women; violence that is worsened by lack of adequate policing.²⁰⁸

201. Martin, K., Et al. (2019, February 12). *Violent Victimization Known to Law Enforcement in the Bakken Oil-Producing Region of Montana and North Dakota, 2006-2012*. Research Triangle Institute and Bureau of Justice Statistics, Feb. 2019. <https://www.ojp.gov/pdffiles1/bjs/grants/252619.pdf>

202 Ibid.

203 *Oliphant v. Suquamish Indian Tribe*. 435 U.S. 191 (1978).

204 Crane-Murdoch, S. (2013, February 22). On Indian Land, Criminals Can Get Away with Almost Anything. *The Atlantic*, <https://www.theatlantic.com/national/archive/2013/02/on-indian-land-criminals-can-get-away-with-almost-anything/273391/>.

205 Sovereign Bodies Institute and Brave Heart Society. Zuya Winyan Wicayun’oniha: Honoring Warrior Women. https://2a840442-f49a-45b0-b1a1-7531a7cd3d30.filesusr.com/ugd/6b-33f7_27835308ecc84e5aae8ffbdb7f20403c.pdf

206 Gibson, G., Et al. with Lake Babine Nation and Nak’azdli Whut’en. (2017, February). *Indigenous Communities and Industrial Camps: Promoting healthy communities in settings of industrial change*. The Firelight Group. https://firelight.ca/wp-content/uploads/2016/03/Firelight-work-camps-Feb-8-2017_FINAL.pdf

207 Ibid.

208 National Inquiry into Missing and Murdered Indigenous Women and Girls (Canada). (2019). *Reclaiming Power and Place*. Privy Council Office, 1a, 584-88. https://www.mmiwg-ffada.ca/wp-content/uploads/2019/06/Final_Report_Vol_1a-1.pdf

- The rotational schedules, in combination with a lack of childcare, make it difficult for mothers to join the workforce.²⁰⁹

The gender-based violence towards Indigenous women perpetuated by the extractive industry and its financial backers, also creates intergenerational trauma among Indigenous children.²¹⁰

Joye Braun (Cheyenne River Sioux), an Organizer with the Indigenous Environmental Network and Leader of the Wakpa Waste Camp, describes this trauma:

“The truth is written in the blood and tears of our sisters that tar sands and the subsequent pipelines are nothing more than death knocking at our children’s future. As Indigenous women we know the fear of looking into our daughter’s eyes hoping and praying they won’t go missing or murdered. These industries bring that fear to our doorstep. They bring death to our cultures and our children.”²¹¹



Joye Braun. (Emily Arasim/WECAN)

Prompted by determined advocacy from Indigenous Peoples, social justice organizations, and concerned citizens, a bill was passed in October 2020 in the U.S. Senate requiring that the Department of Justice “review, revise, and develop law enforcement and justice protocols to address the missing or murdered Native Americans.”²¹² Despite this progress, new fossil fuel projects resulting in transient work camps within or near Indigenous communities continue to get approved and financed.

5i. Mental Health

In addition to affecting the physical health of community members, fossil fuel activity is a source of major mental and emotional distress for women in frontline communities. Psycho-social stress, psychological stress, and negative mental health outcomes associated with fracking include:

“‘Collective trauma’ and loss of community unity, lifeways, and social fabrics; social disruption from boom and bust cycles; gendered imbalances; and distressing and alienating working conditions...; increased sex trafficking around oil and gas “man camps,” which can particularly affect Indigenous women; and various disparities in resource and information access between industry and people living amid drilling.”²¹³

Research conducted by the Oklahoma State University in 2016 examined the effects of horizon-

²⁰⁹ Ibid.

²¹⁰ Ibid.

²¹¹ Henn, J. (2020, October 19). *Indigenous Women Leaders Warn Global Financial Companies to Stop Support for Tar Sands Oil*. Stop the Money Pipeline. <https://stopthemoneypipeline.com/indigenous-women-leaders-tar-sands-letter/>

²¹² Savanna’s Act, S.R. 227, 116th Cong. (2020). <https://www.congress.gov/bills/116/congress/senate/bills/227>

²¹³ Malin, S. (2020, December). Depressed democracy, environmental injustice: Exploring the negative mental health implications of unconventional oil and gas production in the United States. *Energy Research and Social Justice*, 70. <https://doi.org/10.1016/j.erss.2020.101720>

tal drilling on mental well-being in Texas. The study found that for the entire sample, horizontal drilling significantly reduced life satisfaction and increased bad mental health days.²¹⁴ When the negative effects were separated by gender, women were found to experience reduced life satisfaction from horizontal and conventional drilling, while men were not.²¹⁵ This study exposes the disproportionate mental health impact the oil and gas industry has on women. Combined with the fact that a larger magnitude of extractive facilities are located near communities of color, African American/Black/African Diaspora, Indigenous, Latina/Chicana, and low-income women are at higher risk for negative mental health outcomes.

A paper examining data collected over three years in Northern Colorado exposes how oil and gas production generates chronic stress and self-reported mental health impacts: 90% of participants reported chronic stress about the uncertainty of the risks surrounding continued expansion of fossil fuel infrastructure, and 75% reported negative mental health impacts such as depression.²¹⁶ The study concentrates on Weld County, which has one of the highest well-to-people density ratios in the U.S. and a Latinx population in Greeley City (in Weld Co.) that is approximately 20 percentage points above the national average.

Shamyra Lavigne, a Member of RISE St. James, reports the stresses and anxieties that arise from the numerous industrial projects surrounding her home in “Cancer Alley,” including alcohol abuse and the emotional pain particular to mothers:

“We’re also talking about the stress and the anxiety of... having to raise your kids here and not knowing what’s going to happen in the future. The fear of what’s going to happen, the fear of what’s coming, the fear and the disheartening emotions that you feel when the government is letting you down and that no one is there to protect you or help you. And that you’re being overlooked and that you’re not as important... That also affects our health, that also affects us completely.”²¹⁷

A study evaluating prenatal mental health found that pregnant women living near hydraulic fracking activity in Pennsylvania were more likely to develop depression and anxiety.²¹⁸ According to the study, 4 out of 100 pregnant women exposed to fracking activity develop anxiety or depres-



Shamyra Lavigne.
(courtesy of Shamyra Lavigne)

214 Maguire, K., Et al. (2016, March 21). Energy Boom and Gloom? Local Effects of Oil and Natural Gas Drilling on Subjective Well-Being. *Institute of Labor Economics*, Discussion Paper No. 98. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2750294

215 Ibid.

216 Malin, S. (2020, December). Depressed democracy, environmental injustice: Exploring the negative mental health implications of unconventional oil and gas production in the United States. *Energy Research and Social Justice*, 70. <https://doi.org/10.1016/j.erss.2020.101720>

217 Lavigne, S. (2020, November, 25). WECAN Interview.

218 Boden, S. (2019, August 2). *Fracking Linked To Anxiety, Depression In Pregnant Women*. WESA 90.5 Pittsburgh's NPR News Station. <https://www.wesa.fm/post/fracking-linked-anxiety-depression-pregnant-women>

sion that they would not have otherwise developed.²¹⁹ The researchers controlled for a variety of other factors about the mothers that could explain this relationship, but the proximity and size of fracking wells was the only factor correlated with increases in depression and anxiety.²²⁰ This finding speaks not only to the impacts of fracking on women's mental health but also to the health of the infant, as depression in mothers has been linked to developmental issues among infants.²²¹ Dr. Kristen Abastis McHenry, a faculty member at Spelman College and an expert on women's health and fracking, describes the mental health consequences that result from fossil fuel infrastructure:

"Fracking causes a level of fear, stress, and anxiety not only about how best to protect children from the harm that is being done in the present but also about how to secure a future where the environment is safe for the generations to come."²²²

²¹⁹ Ibid.

²²⁰ Ibid.

²²¹ Ibid.

²²² McHenry, K.A. (2017, October 10). Fracking women: a feminist critical analysis of hydraulic fracturing in Pennsylvania. *IJFAB: International Journal of Feminist Approaches to Bioethics*, 10(2), 79-104. <https://doi.org/10.3138/ijfab.10.2.79>

Case Studies



A church next to ExxonMobil's Baytown Refinery in Baytown, TX. (Julie Dermansky)



Case Studies

6a. Southeast Texas

Project(s)	Companies Operating in East Texas*	Banks Financing the Company**	Asset Managers and Investing in the Company***	Insurance Companies Insuring the Company****
Total Port Arthur Refinery	Total SE	Bank of America, JPMorgan Chase, Royal Bank of Canada: 2019-2020 and 12/31/2020 Nasdaq - Bank of America	Vanguard, BlackRock: from 12/23/2020 to 2/26/2021 Fintel	N/A
Pasadena Refining	Chevron	JPMorgan Chase, Bank of America: 12/31/2020 Nasdaq and 2016-2020	Vanguard, BlackRock, Capital Group: 12/31/2020 Nasdaq	N/A
Terminal in Beaumont	Phillips 66	Bank of America, Royal Bank of Canada, JPMorgan: 12/31/2020 Nasdaq -JPMorgan Chase and Bank of America and 2018-2020	Vanguard Group Inc., BlackRock 12/31/2020 Nasdaq	N/A
Chevron Phillips Chemical Baytown TX.; Potential new Ethane Cracker in Orange TX (This is a potential project that has not yet been confirmed)	Chevron Phillips Chemical Company; Chevron and Phillips 66 Company	Bank of America, Royal Bank of Canada, JPMorgan: 12/31/2020 Nasdaq -JPMorgan Chase and Bank of America and 12/31/2020 Nasdaq and 2016-2020	Vanguard, BlackRock, Capital Group: 12/31/2020 Nasdaq and 12/31/2020 Nasdaq	N/A
Valero Corpus Christi East; Premcor Port Arthur Refinery	Valero Energy	JPMorgan Chase, Bank of America: 2018-2020 and 12/31/2020 Nasdaq - JPMorgan Chase	Vanguard, BlackRock, Capital Group: 12/31/2020 Nasdaq	N/A
Galveston Bay Refinery, Texas City	Marathon Petroleum	Bank of America, JPMorgan Chase, Royal Bank of Canada 2016-2020 and 12/31/2020 Nasdaq - JPMorgan Chase	BlackRock, Vanguard: 12/31/2020 Nasdaq	N/A
Shell Deer Park	Shell	Bank of America, JPMorgan Chase, Royal Bank of Canada: 2019-2020 and 12/31/2020 Nasdaq	Capital Group: 12/31/2020 Nasdaq BlackRock: 9/29/2020 Yahoo! Finance Vanguard: 10/30/2020 Yahoo! Finance	N/A
Ethylene Export Terminal on Houston Ship Channel	Enterprise Products Partners (joint venture with Navigator Gas)	Bank of America, JPMorgan Chase, Royal Bank of Canada 12/31/2020 Nasdaq - Enterprise-Bank of America and 2018-2020	BlackRock 12/31/2020 Nasdaq - Enterprise	N/A

Baytown Complex and Beaumont TXx; Chemical plant near Corpus Christi expect to start in 2021 (joint venture with Saudi Basic Industries Corp)	ExxonMobil	Bank of America, JPMorgan Chase: 12/31/2020 Nasdaq - Bank of America and 2018-2020	Vanguard, BlackRock: 12/31/2020 Nasdaq	N/A
Ethane Cracker in Point Comfort Tx	Formosa Plastic Corporation	N/A	Vanguard: 10/31/2020 Yahoo! Finance BlackRock: 12/31/2020 Yahoo! Finance	N/A
Novealis Holdings LLC: Bayport Polymers in Port Arthur TX	Total SE (joint venture with Borealis)	Bank of America, JPMorgan Chase, Royal Bank of Canada: 2019-2020 and 12/31/2020 Nasdaq - Bank of America	Vanguard, BlackRock: 2/26/2021 Fintel	N/A
Occidental Chemical Corporation Ingleside Plant	Occidental Petroleum	Bank of America, JPMorgan Chase, Royal Bank of Canada: 2016-2020	Vanguard, BlackRock: 12/31/2020 Nasdaq	N/A
DOW Chemical Ethylene Production Freeport TX	DOW Chemical (subsidiary of DOW Inc.)	N/A	Vanguard, Capital Group, Black Rock 12/31/2020 - Nasdaq	N/A
Rio Grande Liquefied Natural Gas fracked gas export terminal; potential project	NextDecade	JPMorgan Chase 12/31/2020 Nasdaq	Vanguard, BlackRock: 12/31/2020 Nasdaq	N/A
Texas LNG: Liquefied Natural Gas fracked gas export terminal	Texas LNG: ExxonMobil invested in the project	Bank of America, JPMorgan Chase: 12/31/2020 Nasdaq - Bank of America and 2018-2020	Vanguard, BlackRock: 12/31/2020 Nasdaq	N/A
Annova LNG: Liquefied Natural Gas fracked gas export terminal	Annova LNG signed precedent agreement with Enbridge	Royal Bank of Canada: 2016-2020 and 12/31/2020 Nasdaq JPMorgan Chase and Bank of America: 2020	BlackRock: 10/3/2020 BlackRocksBigProblem's Website Capital Group, Vanguard: 12/31/2020 Nasdaq	N/A

All data in the chart is derived from financial data bases/platforms (*Nasdaq/Yahoo! Finance/Fintel*), RAN's 2021 published report, *Banking on Climate Chaos*: "Financing by Bank or Client," or a campaign update from BlackRockBigProblem's Website.

*This list is not exhaustive.

**Underwriting bonds and share issuances, loans, and/or ownership of stock/institutional investor.

***Shareholder/institutional investor, ownership of stock.

****N/A is because there is a lack of transparency.

The Texas Gulf Coast holds the highest concentration of oil refineries and petrochemical plants in the United States.²²³ In 2019, the Environmental Integrity Project (EIP) released air monitoring reports for over 100 refineries in the United States, exposing the top ten refineries that have cancer-causing benzene levels at concentrations exceeding federal action levels, and six of these refineries are located in the eastern Texas Gulf Coast.²²⁴

Of these six petroleum refineries, five are located near communities that are predominantly Latinx and African American/Black/African Diaspora. The sixth (Shell's plant in Deer Park) is near a city with a Latinx community approximately double the nation's average.²²⁵ Total's petrochemical refinery, which was cited emitting benzene at 148% above the EPA's action level, is located in Port Arthur, a city with a poverty rate more than double the state of Texas and a population of 72.7% African American/Black/African Diaspora and Latinx people.²²⁶

The EIP emphasizes that long term exposure to the levels of pollution emitted by such refineries can cause adverse health effects, including impacts to the blood and nervous systems, and an increased risk of cancer. The report specifically notes that populations enduring benzene levels above the EPA Action level, "could see as many as four additional cancers per 10,000 people exposed."²²⁷ These health risks are exacerbated by the compounding industrial activity in this area: pollution from the Houston ship channel has earned Harris, Brazoria, and Jefferson counties (which all have populations made up of over half African American/Black/African Diaspora and Latinx people) the nickname "Cancer Belt."²²⁸ According to the University of Texas School of Public Health, children living within two miles of the Houston ship channel are 56% more likely to contract leukemia than those living farther away.²²⁹

The past and current happenings in Corpus Christi are an egregious example of the oil and gas industry's history of environmental racism against African American/Black/African Diaspora and Latinx communities in Southeast Texas. The history of devastation is embodied in the actions of the Citgo operations in Corpus Christi: in 2008 blood and urine tests of residents adjacent to the refinery had benzene levels 280 times greater than the general population;²³⁰ in 2014 Citgo was found guilty on two Clean Air Act counts of conviction;²³¹ and in 2016, an oil spill rendered the tap water for 85% of the county undrinkable.²³² Two companies from the 2019 EIP report are located in Corpus Christi: Valero and Flint Hills Resources (FHR). 81% of the people living within a one mile radius of Valero's plant are Latinx.²³³ Similarly, people within a one mile radius of FHR's refinery are 73% Latinx and 19% African American. The communities near Valero and FHR that are closest to, and therefore most vulnerable to, fossil fuel pollution, are respectively

223 Jackson, E. (2020, February 28). *National Energy and Petrochemical Map*. Fracktracker Alliance. <https://www.fracktracker.org/2020/02/national-energy-petrochemical-map/>

224 Kunstman, B., Et al. (2020, February 6). *Monitoring for Benzene at Refinery Fencelines: 10 Oil Refineries Across U.S. Emitted Cancer-Causing Benzene Above EPA Action Levels*. Environmental Integrity Project. <https://www.environmentalintegrity.org/wp-content/uploads/2020/02/Benzene-Report-2.6.20.pdf>

225 Ibid.

226 Collins, C. (2020, February 6). *Six Texas Oil Refineries Are Among the Nation's Worst Benzene Polluters, Data Shows*. Texas Observer. <https://www.texasobserver.org/benzene-oil-refineries-texas-coast/>; U.S. Census Bureau. (2019) *Port Arthur city, Texas*. <https://www.census.gov/quickfacts/portarthurcitytexas>

227 Ibid.

228 Collins, C. (2020, February 6). *Six Texas Oil Refineries Are Among the Nation's Worst Benzene Polluters, Data Shows*. Texas Observer. <https://www.texasobserver.org/benzene-oil-refineries-texas-coast/>

229 Ibid.

230 Wilder, F. (2009, August). *The Fire this Time*. The Texas Observer. <https://www.texasobserver.org/the-fire-this-time/>

231 The United States Department of Justice. (2014, February). *Citgo Sentenced to Pay More Than \$2 Million for Environmental Crimes at Corpus Christi, Texas, Refinery*. <https://www.justice.gov/opa/pr/citgo-sentenced-pay-more-2-million-environmental-crimes-corpus-christi-texas-refinery>

232 Fortune. (2016, December 18). *Texas City Lifts Tap Water Ban After Chemical Spill Fear*. <https://fortune.com/2016/12/18/corpus-christi-drinking-water/>

233 Kunstman, B., Et al. (2020, February 6). *Monitoring for Benzene at Refinery Fencelines: 10 Oil Refineries Across U.S. Emitted Cancer-Causing Benzene Above EPA Action Levels*. Environmental Integrity Project. <https://www.environmentalintegrity.org/wp-content/uploads/2020/02/Benzene-Report-2.6.20.pdf>

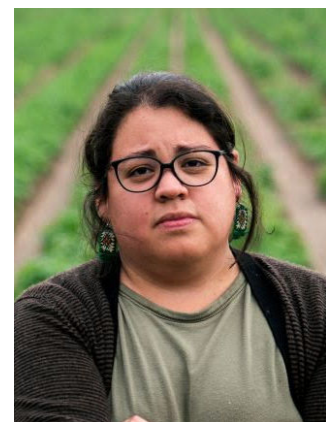
87% and 92% people of color, with populations 89% and 65.9% below the poverty line, respectively.²³⁴

The dirty energy sector is rapidly growing in Southeast Texas, with new fossil fuel developments and ethane crackers being built and proposed across the region. In 2019, FHR expanded their crude oil terminal, located in the mouth of Corpus Christi Bay, where they pump oil from Texas to the world markets.²³⁵ The fossil fuel industry has numerous other lucrative plans for plastic production in the future: as of August 2019, an additional 48 plastic-related expansion projects/plants for the Southeastern Texas region were permitted by the state or proposed by industry.²³⁶ Currently, ExxonMobil is planning a joint venture with Saudi Basic Industries Corporation (SABIC), a Saudi Arabian petrochemical company, to build an \$8 billion ethane cracker and plastics manufacturing plant near Corpus Christi, where the largely Latinx and African American/Black/African Diaspora community has been devastated by extraction processes for decades.²³⁷ Chevron Phillips Chemical (owned by Chevron Corporation and Phillips 66) is currently looking to expand their ethane cracker in Baytown, where African American/Black/African Diaspora and Latinx residents make-up over 60% of the population.²³⁸ Chevron Phillips Chemical is also considering whether to invest in another ethane cracker that would likely be located in Orange, Texas.²³⁹

The EIP reported that if just one-third of these plastic projects are carried out, an extra 14,192 tons of pollution will be authorized.²⁴⁰ It is clear from the companies' plans that this pollution will be emitted near African American/Black/African Diaspora and Latinx communities.

New pipelines are also being proposed to further facilitate the transfer of greater amounts of oil and natural gas to ports and refineries in the Texas Gulf. For example, the Port Arthur Pipeline, a subsidiary of Sempra LNG, is currently soliciting bids for its proposed "Texas Connector Project," and expects to open for operation in 2024.²⁴¹ The Texas Connector Project would operate as part of the larger Port Arthur Liquid Natural Gas (LNG) Pipeline, expanding the ability to transfer LNG throughout the area and terminating at the Port Arthur Liquefaction Project.²⁴² Referring to the three proposed fracked gas export terminals in Texas (Rio Grande LNG, Texas LNG, and Annova LNG), **Rebekah Hinojosa, a Gulf Coast Campaign Representative at the Sierra Club**, who lives in Brownsville, Texas stated:

"These export terminals would also bulldoze native wildlife habitats,



Rebekah Hinojosa. (LinkedIn)

²³⁴ Ibid.

²³⁵ Cision. (2019 June 26). *Flint Hills Resources Retains J.P. Morgan To Market Ingleside Crude Oil Terminal*. <https://www.prnewswire.com/news-releases/flint-hills-resources-retains-jp-morgan-to-market-ingleside-crude-oil-terminal-300875644.html>

²³⁶ Phillips, A., Et al. (2019, September 5). *Rapid Growth of Houston Plastics Industry Increases Air Pollution and Safety Risks*. Environmental Integrity Project. <https://environmentalintegrity.org/news/rapid-growth-of-houston-plastics-industry-increases-air-pollution-and-safety-risks/>

²³⁷ Ibid.

²³⁸ Ibid.

²³⁹ Phillips, A., Et al. (2019, September 5). *Rapid Growth of Houston Plastics Industry Increases Air Pollution and Safety Risks*. Environmental Integrity Project. <https://environmentalintegrity.org/news/rapid-growth-of-houston-plastics-industry-increases-air-pollution-and-safety-risks/>

²⁴⁰ Phillips, A., Et al. (2019, September 5). *Rapid Growth of Houston Plastics Industry Increases Air Pollution and Safety Risks*. Environmental Integrity Project. <https://environmentalintegrity.org/news/rapid-growth-of-houston-plastics-industry-increases-air-pollution-and-safety-risks/>

²⁴¹ Sempra LNG. *Port Arthur Pipeline: Texas Connector*. <https://sempralng.com/port-arthur-pipeline/>

²⁴² Ibid.

threaten sacred Indigenous historical sites, hurt our local ecotourism economy, release toxic air pollution into our Latinx communities, and contribute to the threat of climate change.”²⁴³

Continuation of the fossil fuel industry and the rapid development currently underway in the Texas Gulf Coast will disproportionately impact African American/Black/African Diaspora women and Latinas/Chicanas in these communities. As previously discussed, fossil fuel pollution related illnesses in children and family members disproportionately encumber women, given their more pronounced roles as caretakers tending to the sick. Although no studies from this particular region have been published about reproductive issues, based on other studies in Pennsylvania and the carcinogenic nature of these chemicals, there is need for more data and research into the effects this pollution is having on pregnant women and newborns.

From 2016 to 2020, JPMorgan Chase, Bank of America, and Royal Bank of Canada provided Total SE (formerly Total SA) with \$2,330,410,000, \$1,957,710,000, \$1,452,170,000 respectively in fossil fuel financing.²⁴⁴ These banks collectively provided \$5,740,290,000 in financing to the company behind the Port Arthur Refinery. As of December 31, 2020, Vanguard, BlackRock, and JPMorgan Chase were among the fifteen largest shareholders of Marathon Petroleum, the company behind the Marathon Galveston Bay Texas City facility.²⁴⁵ Additionally, from 2016 to 2020, JPMorgan Chase, Bank of America, and Royal Bank of Canada provided Marathon Petroleum with significant fossil fuel financing.²⁴⁶



Flare at a refinery in Deer Park, TX. (Julie Dermansky)

²⁴³ Hinojosa, R. (2020, February 6). *Stop the International Fracking Cycle*. Sierra Club. <https://www.sierraclub.org/articles/2020/02/stop-international-fracking-cycle>

²⁴⁴ RAN, Et al. (2021, March). *Banking on Climate Chaos: Fossil Fuel Finance Report 2021 – FINANCING BY BANK OR CLIENT*. <https://www.ran.org/bankingonclimatechaos2021/>

²⁴⁵ Nasdaq. Petroleum Corporation Common Stock (MPC) Marathon <https://www.nasdaq.com/market-activity/stocks/mpc/institutional-holdings>

²⁴⁶ RAN, Et al. (2021, March). *Banking on Climate Chaos: Fossil Fuel Finance Report 2021 – FINANCING BY BANK OR CLIENT*. <https://www.ran.org/bankingonclimatechaos2021/>

6b. “Cancer Alley”

Project(s)	Companies Operating in Cancer Alley*	Banks Financing the Companies**	Asset Managers and Investing in the Companies***	Insurance Companies Insuring the Company****
Baton Rouge Oil Refinery	ExxonMobil	Bank of America, JPMorgan Chase: 12/31/2020 Nasdaq - Bank of America and 2018-2020	Vanguard, BlackRock: 12/31/2020 Nasdaq	N/A
Air Products and Chemicals Inc Norco SMR	Air Products & Chemicals Inc.	Bank of America, JPMorgan Chase 12/31/2020 Nasdaq	Vanguard, BlackRock Inc., Capital Group: 12/31/2020 Nasdaq	N/A
Norco Fractionation Plant	Enterprise Products Partners	Bank of America, JPMorgan Chase, Royal Bank of Canada 12/31/2020 Nasdaq - Enterprise-Bank of America and 2018-2020	BlackRock: 12/31/2020 Nasdaq - Enterprise	N/A
Norco Manufacturing Unit	Shell	Bank of America, JPMorgan Chase, Royal Bank of Canada: 2019-2020 and 12/31/2020 Nasdaq	Capital Group: 12/31/2020 Nasdaq BlackRock: 9/29/2020 Yahoo! Finance Vanguard: 10/30/2020 Yahoo! Finance	N/A
LACC Ethylene Production facility in Calcasieu Parish	Westlake Chemical-acquired Axiall Corporation (joint venture with Lotte Chemical)	N/A	Capital Group, Vanguard, BlackRock: 12/31/2020 Nasdaq - Westlake Chem.	N/A
Cracker Project in Lake Charles	Sasol	Bank of America: 2018-2020	N/A	N/A
Ethane Cracker (“The Sunshine Project”)	FG LA LLC (subsidiary of Formosa Plastic Corporation)	N/A	Vanguard, BlackRock: from 9/29/2020 to 1/29/2021 Fintel	N/A
Garyville Refinery	Marathon Petroleum	Bank of America, JPMorgan Chase, Royal Bank of Canada 2016-2020 and 12/31/2020 Nasdaq - JPMorgan Chase	BlackRock, Vanguard Group: 12/31/2020 Nasdaq	N/A
Occidental chemical plant in St. James Parish	Occidental Petroleum	Bank of America, JPMorgan Chase, Royal Bank of Canada: 2016-2020	Vanguard, BlackRock: 12/31/2020 Nasdaq	N/A
Carville Styrenics Complex Polystyrene Plant	Total SE	Bank of America, JPMorgan Chase, Royal Bank of Canada: 2019-2020 and 12/31/2020 Nasdaq - Bank of America	Vanguard, BlackRock: from 12/23/2020 to 2/26/2021 Fintel	N/A

All data in the chart is derived from financial databases/platforms (Nasdaq/Yahoo! Finance/Fintel) or RAN’s 2021 published report, *Banking on Climate Chaos: “Financing by Bank or Client”*

*This list is not exhaustive

**Underwriting bonds and share issuances, loans, and/or ownership of stock/institutional investor

***Shareholder/institutional investor, ownership of stock

****N/A is because there is a lack of transparency

In March, 2021, a large group of UN human rights experts called for a halt to further pollution in “Cancer Alley,” and described the pollution-emitting chemical plants as a form of environmental racism that “poses serious and disproportionate threats to the enjoyment of several human rights of its largely African American residents, including the right to equality and non-discrimination, the right to life, the right to health, right to an adequate standard of living and cultural rights.”²⁴⁷



The Zion Travelers Cemetery in front of the Marathon Refinery in Reserve (unincorporated St. John the Baptist Parish), LA in the heart of “Cancer Alley.” (Julie Dermansky)

“Cancer Alley” is an 85-mile stretch along the banks of the Mississippi River between Baton Rouge and New Orleans, where companies such as ExxonMobil, Occidental Petroleum, Shell, and Formosa operate about 150 fossil fuel refineries and petrochemical facilities.²⁴⁸ Dubbed “Cancer Alley” in the early 1980s, this area has one of the highest cancer rates in the country.²⁴⁹ Research has found that the cancer risk within the region is even higher among lower income

²⁴⁷ UN News. (2021, March 2). *Environmental racism in Louisiana's 'Cancer Alley', must end, say UN human rights experts*. <https://news.un.org/en/story/2021/03/1086172>

²⁴⁸ Juhasz, A. (2019, October 30). *Louisiana's 'Cancer Alley' Is Getting Even More Toxic -- But Residents Are Fighting Back*. Rolling Stone, <https://www.rollingstone.com/politics/politics-features/louisiana-cancer-alley-getting-more-toxic-905534/>

²⁴⁹ Yawn Y.J. (2020, March 19). *St. James is full: New Cancer Alley plant may double toxic pollutants, EPA data shows*. Tennessean. <https://www.tennessean.com/in-depth/news/american-south/2020/03/19/st-james-parish-louisiana-cancer-alley-formosa-plant-pollution/4809422002/>

and African American/Black/African Diaspora-dominant communities and neighborhoods, than in the nearby high-income white ones.²⁵⁰ Barbara Washington and Shamyra Lavigne, Members of RISE St. James, both mention that districts four and five in St. James Parish, which are predominantly African American/Black/African Diaspora and poor neighborhoods, hold the highest concentration of polluting industry plants.²⁵¹

“Cancer Alley” is a poignant example of evolving racism in the United States. In the 1800s, this stretch of land along “River Road” was dominated by plantations worked by slaves.²⁵² After the abolition of slavery, parts of this region became settlements of freed slaves characterized by a large community of African American/Black/African Diaspora farmers and activists fighting Jim Crow policies.²⁵³ In the late 1960s, the fossil fuel industry laid claim to the land, a phenomenon of environmental racism that continues today. For example, in 2014, several areas of St. James Parish were covertly re-zoned as “industrial” and “residential/future industrial” by the government, a decision most residents were not even informed of, opening this region to massively polluting industries. These areas are over 90% African American/Black//African Diaspora communities.²⁵⁴

Since the 1960s, fossil fuel companies have profited billions of dollars from activities causing direct harm to low-income African American/Black/African Diaspora communities in “Cancer Alley.” In 2019, the University Network for Human Rights conducted a localized cancer study, and found that for those living within a 1.5 kilometer radius of the Denka petrochemical plant, cancer rates were 71% higher than the national average.²⁵⁵ After decades of community members in St. John the Baptist Parish reporting health issues, the EPA finally did an assessment concluding that Denka’s emission of the carcinogenic chemical chloroprene was above EPA action levels.²⁵⁶ Denka’s facility is one of the many petrochemical operations in the area. In another example, the Marathon Refinery in St. John the Baptist Parish was built around a cemetery where pipes, tank farms, and other refinery buildings now surround a thin strip of above ground crypts.²⁵⁷ As Marathon Petroleum was exempted from paying property taxes to expand their Garyville Refinery, property values in fence-line communities in St. John the Baptist Parish went down.²⁵⁸

The Louisiana Bucket Brigade, a local environmental justice organization, created a film project highlighting the leadership of women of “Cancer Alley.” In six short documentary films, eight women who have thus far survived effects from fossil fuel petrochemical plants and refineries, share the terrible losses of their parents, sisters, brothers and partners. They discuss the work they have done in making these injustices visible, and also demand change.²⁵⁹ For instance,

250 James, W., Et al. (2012, December 3). Uneven magnitude of disparities in cancer risks from air toxics. *International journal of environmental research and public health*, 9(12), 4365-4385. [10.3390/ijerph9124365](https://doi.org/10.3390/ijerph9124365)

251 Washington, B. (2020, November 25). WECAN Interview.

252 Potter, A.E., Et al. (2017, December). *Commemorating the Enslaved Along Louisiana’s River Road*. American Association of Geographers. <http://news.aag.org/2017/12/commemorating-the-enslaved-along-louisianas-river-road/>

253 Ludwig, M. (2019, March 10). Petrochemical Giants Are Slowly Killing Black Louisiana Communities. *Portside*. <https://portside.org/2019-03-10/petrochemical-giants-are-slowly-kill-ing-black-louisiana-communities>

254 Ibid.

255 Yawn Y.J. (2020, March 19). St. James is full: New Cancer Alley plant may double toxic pollutants, EPA data shows *Tennessean*. <https://www.tennessean.com/in-depth/news/ameri-can-south/2020/03/19/st-james-parish-louisiana-cancer-alley-formosa-plant-pollution/4809422002/>

256 University Network for Human Rights. (2019, July). “Waiting to Die:” Toxic Emissions and Disease Near the Louisiana Denka/DuPont Plant. <http://www.humanrightsnetwork.org/waiting-to-die>

257 Staudinger, C. (2021, February). St. John Takes, Marathon Takes. *Antigravity*. <https://antigravitymagazine.com/feature/st-john-makes-marathon-takes/>

258 Ibid.

259 Louisiana Bucket Brigade. *Women of Cancer Alley*. <http://labucketbrigade.org/content/women-cancer-alley>

Genevieve Butler, a Member of the Humanitarian Enterprise of Loving People Association and a resident of St. James Parish, describes having the skin peel off her face—twice—after getting caught in the rain, being diagnosed with breast cancer, and having thyroid surgery.²⁶⁰ Sharon and Shamell Lavigne, a mother and daughter from St. James Parish, have been driven to fight for environmental justice because they understand that their family's health problems stem from the polluting plants.²⁶¹ The women have succeeded in shutting down some petrochemical projects to date, but new proposals are constantly being set forth, despite the clear health problems these plants pose.



Flares burning at Sasol plant in Westlake, LA. (Julie Dermansky)

Women of “Cancer Alley” who are fighting for justice face an uphill battle. Dr. Robert Bullard, a professor at Texas Southern University who has written several books about environmental racism in the South, explains that the U.S. legal system places the burden on community members to prove that their disease has been caused directly by local emissions.²⁶² This is very difficult, given that the community lacks resources that would enable them to prove this, and health researchers often blame residents’ sicknesses on diets and “lifestyles.”²⁶³

African American/Black/African Diaspora women of “Cancer Alley” suffer particularly severe health complications. Studies have repeatedly shown that women, especially of color, are less likely to be taken seriously by medical professionals and are more likely to have their illnesses ig-

²⁶⁰ Ibid.

²⁶¹ Ibid.

²⁶² Lu Baum, J. (2019, April 1). They Don't Call It “Cancer Alley” For Nothing. *Big Easy Magazine*. <https://www.bigeasymagazine.com/2019/04/01/they-dont-call-it-cancer-alley-for-nothing/>

²⁶³ Ibid.

nored.²⁶⁴ And, these same communities are statistically likely to have related chronic conditions undertreated for their entire lives.²⁶⁵ With the threat of the powerful petrochemical industry and the difficulty in proving causation, this problem is even more hazardous for women experiencing health problems in “Cancer Alley.” Liz Gordon, an Activist in Baton Rouge, describes how one day after “yet another explosion,” her six-month-old daughter, broke out in a rash all over her body.²⁶⁶ The doctor told Liz Gordon, “Well, we don’t want to treat her because we don’t want to put Exxon in the paperwork,” or “Be involved in a lawsuit.”²⁶⁷ The harm inflicted by these companies is also financial: it costs money to treat illnesses, to go to the emergency room, and to miss work to care for yourself and loved ones.²⁶⁸



Pollution in “Cancer Alley” (Josh Badnali)



Pollution in “Cancer Alley” (Josh Badnali)

An air permits administrator at the Louisiana Department of Environmental Quality (DEQ) for over 20 years, told ProPublica that he could not recall a single permit ever being denied by the agency.²⁶⁹ He also added that the DEQ sometimes approves projects with a lower cap on emissions than companies request. There are currently enormous new petrochemical facilities seeking permits to operate along the Mississippi River.²⁷⁰

Formosa’s Sunshine Project, planned for St. James Parish, will involve building a \$9.4 billion plant that will make single-use plastics. The petrochemical project is emblematic of a global push for plastic plants construction.²⁷¹ If the Sunshine Project successfully obtains all permits and licenses, when in operation it will emit roughly 13 million tons of carbon pollution per year.²⁷² An attorney for Earthjustice says it will cause ethylene oxide levels 246 times above levels design-

264 Fenton, S. (2016, July 27). How Sexist Stereotypes mean Doctors Ignore Women’s Pain. *Independent*. <https://www.independent.co.uk/life-style/health-and-families/health-news/how-sexist-stereotypes-mean-doctors-ignore-women-s-pain-a7157931.html>

265 Hoffman, K.M., et al. (2016, April 4). Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites.” *PNAS*, 113(16), 4296-4301. <https://doi.org/10.1073/pnas.1516047113>

266 Louisiana Bucket Brigade and Story Center. (2019, January 24). Women of Cancer Alley: Nothing Happens. *Youtube*, commentary by Liz Gordon. <https://www.youtube.com/watch?v=tzAM-KF60oXI&list=PL2zMrq22-Y2t5jbGmwYB1-o443Daya6e0&index=2>

267 *Ibid*.

268 Investopedia. (2020, May 12). 6 Reasons Healthcare Is So Expensive in the U.S. <https://www.investopedia.com/articles/personal-finance/080615/6-reasons-healthcare-so-expensive-us.asp>

269 Baurick, T., Et al. (2019, October 30). Polluter’s Paradise: Welcome to “Cancer Alley,” Where Toxic Air Is About to Get Worse. *ProPublica, The Times-Picayune, and The Advocate*. <https://www.propublica.org/article/welcome-to-cancer-alley-where-toxic-air-is-about-to-get-worse>

270 *Ibid*.

271 Center for International Environmental Law. (2017). *Fueling Plastics: How Fracked Gas, Cheap Oil, and Unburnable Coal are Driving the Plastics Boom*. <https://www.ciel.org/wp-content/uploads/2017/09/Fueling-Plastics-How-Fracked-Gas-Cheap-Oil-and-Unburnable-Coal-are-Driving-the-Plastics-Boom.pdf>

272 Surrusco, E.K. (2020, February 14). Cancer Alley Rises Up. *Earthjustice*. <https://earthjustice.org/features/cancer-alley-rises-up#:~:text=Dubbed%20the%20%E2%80%99CSunshine%20Project%2C%E2%80%99D,as%202.8%20million%20passenger%20cars>

nated by the EPA to be cancer-causing.²⁷³ The EPA indicates that high levels of ethylene oxide exposure could lead to increased rates of miscarriages in female workers.²⁷⁴ All three of the sites that Formosa has proposed are in predominantly African American/Black/African Diaspora neighborhoods.²⁷⁵ In 2018, during a land survey of one of the proposed sites, Formosa discovered the remains and graves of formerly enslaved people.²⁷⁶ This information only came out after RISE St. James submitted a public records request, forcing Formosa to disclose such activi-



RISE members celebrating All Saints' Day at burial sites on proposed Formosa site, Sharon Lavigne in foreground clapping. (Bron Moyi)

ties.

Since it was first proposed, St. James community members have fought Formosa's petrochemical plant: there have been protests, packed public hearings, and petitions opposing the project with hundreds of signatures.²⁷⁷ Despite clear public outcry, local and state officials are pushing the project through quickly, with the state of Louisiana even incentivizing its construction by offering \$12 million in infrastructure grants and access to further tax exemption programs.²⁷⁸ However, in November 2020, the U.S. Army Corps of Engineers suspended Formosa's license, which halted most of the construction. However, Formosa is continuing certain activities on the planned plastic project.²⁷⁹ Covid-19 was cited as the reason for the suspension, but activists and local com-

273 Ludwig, M. (2019, March 10). Petrochemical Giants Are Slowly Killing Black Louisiana Communities. *Portside*. <https://portside.org/2019-03-10/petrochemical-giants-are-slowly-killing-black-louisiana-communities>

274 U.S. EPA. *Frequent Questions: Health Information About Ethylene Oxide*. <https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/frequent-questions-health-information-about-ethylene-oxide#pregnant>

275 Ludwig, M. (2019, March 10). Petrochemical Giants Are Slowly Killing Black Louisiana Communities. *Portside*. <https://portside.org/2019-03-10/petrochemical-giants-are-slowly-killing-black-louisiana-communities>

276 Center for Constitutional Rights (2019, December). *Graves of Enslaved People Found on Proposed Formosa Plastics Site*. <https://ccrjustice.org/home/press-center/press-releases/graves-of-enslaved-people-found-proposed-formosa-plastics-site>

277 Ludwig, M. (2019, March 10). Petrochemical Giants Are Slowly Killing Black Louisiana Communities. *Portside*. <https://portside.org/2019-03-10/petrochemical-giants-are-slowly-killing-black-louisiana-communities>

278 Ibid.

279 Planet Tracker. (2020, November). *Falling Dominoes: USD 10 billion U.S. Formosa plastics facility licence suspended*. <https://planet-tracker.org/falling-dominoes-usd-10-billion-u-s-formosa-plastics-facility-licence-suspended/>; Jacobs, D. (2020, November 23). *Work resumes on the \$9.4B Sunshine Project Despite permit suspension*. *New Orleans City Business*. <https://neworleanscitybusiness.com/blog/2020/11/23/work-resumes-on-9-4b-sunshine-project-despite-permit-suspension/>

munity members are organizing in the hopes of permanently halting the petrochemical facility.²⁸⁰

Some of the worst actors in this region include Formosa, Occidental, Denka, Marathon Petroleum, ExxonMobil and Total SE. **Barbara Washington, a Member of RISE St. James in St. James Parish, Louisiana** stated:

“Occidental is a petrochemical plant, it is a mile from me. All of these plants are here and they are emitting chemicals into the air that we know are cancer-causing. And so that is why I started fighting.”²⁸¹



Myrtle Felton and Barbara Washington holding NO FORMOSA PLASTICS sign. (Louisiana Bucket Brigade)

From 2016 to 2020, Bank of America, JPMorgan Chase, and Royal Bank of Canada provided \$23,967,470,000 to Occidental Petroleum.²⁸² As of December 31, 2020, Vanguard and Black-Rock were two of the four largest investors in Occidental Petroleum.²⁸³ Blackrock owns 123.3M shares valued at \$382.2M, or 1.94%, of Formosa Plastics Corporation, and ~40M shares valued at \$127.2M, or .42%, of Formosa Petrochemicals Corporation.²⁸⁴ This financing and investing indirectly supports operations at the company’s St. James Parish petrochemical complex. The largest shareholders of Formosa Plastics Corporation (owned by the same parent company as



Sharon Lavigne, Barbara Washington, and other RISE St. James members. (L. Kasimu Harris)

²⁸⁰ Ibid; Rise St. James. (2021, February). *Today we are LIVE to demand that President Joe Biden and the US Army Corps of Engineers...* Facebook, commentary by Sharon Lavigne. https://www.facebook.com/pg/risestjames/videos/?ref=page_internal

²⁸¹ Washington, B. (2020, November 25). WECAN Interview.

²⁸² RAN, Et al. (2021, March). *Banking on Climate Chaos: Fossil Fuel Finance Report 2021 —FINANCING BY BANK OR CLIENT.* <https://www.ran.org/bankingonclimatechaos2021/>

²⁸³ Nasdaq. Occidental Petroleum Corporation Common Stock. <https://www.nasdaq.com/market-activity/stocks/oxy/institutional-holdings>

²⁸⁴ Thoumi, Planet Tracker and Bloomberg, L.P. (2021). *Data analysis and interview.*

Louisiana-based FG LA LLC and the company behind the giant plastic plant in St. James Parish), were Vanguard and Blackrock.²⁸⁵

6c. West and Central Texas

Project(s)	Companies operating in West and Central Texas*	Banks financing the company**	Asset Managers investing in the company***	Insurance Companies insuring the company****
Eagle Ford, Permian Basin, Barnett Shale	EOG Resources, Inc.	JPMorgan Chase: 2019-2020 and 12/31/2020 Nasdaq	Capital Group, Vanguard, BlackRock: 12/31/2020 Nasdaq	N/A
Permian Basin oil and gas production	Pioneer Natural Resources	JPMorgan Chase: 12/31/2020 Nasdaq	BlackRock, Vanguard, Capital Group: 12/31/2020 Nasdaq	N/A
Permian Basin oil and gas production-48 drilling rigs (plans to increase by 80% by 2024)	ExxonMobil	Bank of America, JPMorgan Chase: 12/31/2020 Nasdaq - Bank of America and 2018-2020	Vanguard, BlackRock: 12/31/2020 Nasdaq	N/A
Permian Basin oil and gas production, 240,000 acres	Shell	Bank of America, JPMorgan Chase, Royal Bank of Canada: 2019-2020 and 12/31/2020 Nasdaq	Capital Group: 12/31/2020 Nasdaq BlackRock: 9/29/2020 Yahoo! Finance Vanguard: 10/30/2020 Yahoo! Finance	N/A
Permian Basin oil and gas production- number producer	Occidental Petroleum	Bank of America, JPMorgan Chase, Royal Bank of Canada: 2016-2020	Vanguard, BlackRock: 12/31/2020 Nasdaq	N/A
Permian and Eagle Ford Basins 200,000 acres	Callon Petroleum Corporation	N/A	BlackRock, Vanguard Group: 12/31/2020 Nasdaq	N/A
Eagle Ford Shale	Chesapeake Energy Corp	Bank of America: 2016-2020	N/A	N/A
Major producer in the Permian Basin, just acquired Concho Resources	ConocoPhillips	Bank of America and JPMorgan Chase: 2020 and 12/31/2020 Nasdaq - JPMorgan Chase	Vanguard, BlackRock, Capital Group: 12/31/2020 Nasdaq	N/A
2.2 million acres in the Permian Basin, Eagle Ford Shale	Chevron	JPMorgan Chase, Bank of America: 12/31/2020 Nasdaq and 2016-2020	Vanguard, BlackRock, Capital Group: 12/31/2020 Nasdaq	N/A
Enterprise West Terminal in Midland	Enterprise Products Partners	Bank of America, JPMorgan Chase, Royal Bank of Canada: 12/31/2020 Nasdaq - Bank of America and 2018-2020	BlackRock: 12/31/2020 Nasdaq	N/A

²⁸⁵ Fintel. TW:1301 / Formosa Plastics Corp - Institutional Ownership and Shareholders. <https://fintel.io/so/tw/1301>

Horizontal drilling: 12 new horizontal wells Howard Co. in Oct. 2020	Laredo Petroleum	JPMorgan Chase 12/31/2020 Nasdaq	BlackRock, Vanguard: 12/31/2020 Nasdaq	N/A
Wink to Webster Pipeline	ExxonMobil (joint venture with Plains All American Pipeline, Lotus Midstream, Delek US, MPLX LP, and Rattler Midstream LP)	Bank of America, JPMorgan Chase: 12/31/2020 Nasdaq - Bank of America and 2018-2020	Vanguard, BlackRock: 12/31/2020 Nasdaq	

All data in the chart is derived from financial data bases/platforms (*Nasdaq/Yahoo! Finance*) or RAN's 2021 published report, *Banking on Climate Chaos: "Financing by Bank or Client"*.

*This list is not exhaustive.

**Underwriting bonds and share issuances, loans, and/or ownership of stock/institutional investor.

***Shareholder/institutional investor, ownership of stock.

****N/A is because there is a lack of transparency.

Injustices occurring in Texas against African American/Black/African Diaspora women and Latinas/Chicanas can be seen plainly in fossil fuel companies' past and current activity in the Permian Basin, and along the Eagle Ford and Barnett Shale basin.

The Permian Basin, which extends from West Texas to Southeastern New Mexico, is the largest oil and gas producing basin in the U.S. and is expected to lead the global oil supply in crude oil over the next seven years,²⁸⁶ becoming one of the world's biggest sources of greenhouse gases.²⁸⁷ Despite reduced oil demand amidst the Covid-19 downturn, the production of hydrocarbons in the Permian Basin is projected to grow 85% by 2030.²⁸⁸ Even if coal emissions are dramatically reduced in this region, production in the Permian Basin is expected to account for 24% of the remaining global oil and gas emissions budget (this budget refers to the amount of greenhouse gas emissions that can be emitted before the atmosphere warms to 1.5°C).²⁸⁹ A study led by the Environmental Integrity Project (EIP), using TCEQ data, found that the Permian Basin has the highest illegal air pollution emissions in the state of Texas.²⁹⁰ This concerning health hazard has not been a priority for the state nor the fossil fuel industry: there are just three air quality monitors in the region, only one of which monitors sulfur dioxide, the most prevalent air pollutant in the region.²⁹¹ This one monitor, located 60 miles from the fracking site, measured sulfur dioxide levels over the national health-based standard on at least 30 separate occasions from

286 *The Dallas Morning News*. (2018, March 5). U.S. oil production, led by the vast Permian Basin, is expected to supply the world. <https://www.dallasnews.com/business/energy/2018/03/05/u-s-oil-production-led-by-the-vast-permian-basin-is-expected-to-supply-the-world/>

287 Bingle, Jacey, et al. (2020, February 10). *Five Years Lost: How Finance is Blowing the Paris Carbon Budget*. Urgewald, RAN, et al. 2020. <https://urgewald.org/sites/default/files/media-files/FiveYearsLostReport.pdf>

288 Ibid.

289 Ibid.

290 Levin, I., et al. (2019, May 9). *Sour Wind in West Texas: Air Pollution From Surging Oil and Gas Industry Exceeds Health Standards*. Environmental Integrity Project. <https://environmentalintegrity.org/wp-content/uploads/2019/05/West-Texas-Air-Pollution-Report-5.9.19.pdf>

291 Ibid.

2016 to 2019.²⁹²

Due to this lack of monitoring, in 2017, the EIP used computer modeling and self-reports from the industry to finally identify 782 reported events of unpermitted sulfur dioxide emissions in Ector County, and 320 events in Crane County.²⁹³ Ector County is 62.6% Latinx and Crane County is 66.1% Latinx. Both counties have Latinx populations that are 3.5 times above the national average. According to the EPA, sulfur dioxide can harm the respiratory system, and short-term exposure can lead to an increase in hospital emergency room visits.²⁹⁴ In a study from the *American Journal of Epidemiology*, the risk of stillbirth increased 13% with every three parts per billion sulfur dioxide exposure in the first trimester of pregnancy, and 26% in the third trimester.²⁹⁵ As the primary caretakers, Latinas/Chicanas disproportionately bear the burden of the health problems arising from unsafe fossil fuel pollution in these counties. Health and reproductive issues are exacerbated by lack of insurance and insufficient healthcare for Latinx families.

Studies conducted of the Eagle Ford Shale, spanning from Northwest to Southwest Texas, and the Barnett Shale, located below Dallas Fort Worth, have exposed inequities incurred by extractive facilities. A study done by the National Institutes of Health (NIH) analyzing over 23,000 birth records from 2012-2015, found that there was a 50% higher chance of preterm births for women living within three miles of the Eagle Ford shale basin than for those women living farther away.²⁹⁶ This was the first study to directly relate oil and gas development to women of color: “stratified analysis suggested that Hispanic women were more vulnerable to the effects of flaring on preterm birth, whereas non-Hispanic white women were not.”²⁹⁷ While this association between flaring and preterm births was found along the Eagle Ford shale basin, flaring in the Permian Basin is even worse: in 2015, flaring in the Permian Basin was on average higher in activity and volume than the Eagle Ford.²⁹⁸ This suggests that impacts from flaring to pregnant women (predominantly Latinas/Chicanas in this region) may span across West Texas.

Rather than heeding the implications of these numerous studies elucidating the hazardous health impacts from oil and gas pollution, companies and their financial backers forge ahead with future development. Plastic production and new petrochemical facilities are giving oil companies substantial business: the Permian Basin’s oil is expected to feed numerous petrochemical operations on the gulf coast, including Formosa’s giant plastic plant (“The Sunshine Project”) in Louisiana, to be completed in 2029.²⁹⁹

Occidental Petroleum, which was exposed in the EIP report as releasing the most unauthorized sulfur dioxide in 2017 (10,618,267 lbs), states on their website that they are “focused on developing and growing inventories in the Wolfcamp and Bone Springs formations [both in the

²⁹² Ibid.

²⁹³ Ibid.

²⁹⁴ Langford, Cameron. (2019, May 9). Texas Oil Boom Linked to Spike in Air Pollution. *Courthouse News Service*. <https://www.courthousenews.com/texas-oil-boom-linked-to-spike-in-air-pollution/>

²⁹⁵ Faiz, A.S., et al. (2012, August 15). Ambient Air Pollution and the Risk of Stillbirth. *American Journal of Epidemiology*, 176(4), 308-316. <https://doi.org/10.1093/aje/kws029>

²⁹⁶ Cushing, L.J., et. al. (2020, July15). Flaring from Unconventional Oil and Gas Development and Birth Outcomes in the Eagle Ford Shale in South Texas. *Environmental Health Perspectives*, 128(7). <https://doi.org/10.1289/EHP6394>

²⁹⁷ Ibid.

²⁹⁸ Ibid.

²⁹⁹ Buckner, E. (2020, February 14). Why We’re Challenging Formosa Plastics’ Massive Proposed Petrochemical Plants in Court. *EarthWorks*. <https://www.earthworks.org/blog/why-were-challenging-formosa-plastics-massive-proposed-petrochemical-plants-in-court/>

Permian Basin]... The company is also appraising and delineating several other resource plays for future development.”³⁰⁰

Other companies granted new permits amidst the pandemic include Callon, which was issued three new permits in 2020-2021 to drill in La Salle County³⁰¹ (with a Latinx community of 87%) and ExxonMobil, which in 2021 “aims to increase [their] output from the Permian Basin next year despite slashing capital spending by more than a third.”³⁰² ExxonMobil applied for 6,599 new permits in 2019 and plans to grow their Permian output to “one million oil-equivalent barrels per day by 2024.”³⁰³ Within one week in June 2020, 42 companies filed for 109 permits with the Railroad Commission of Texas (the state agency regulating the oil and gas industry), half of which were in the Permian Basin; Pioneer Natural Resources was one of the leaders applying for new permits.³⁰⁴ Marathon Oil plans to drill six horizontal wells in Atascosa and Karnes County, and Total is currently seeking permission to drill 16 new horizontal wells, nine of which will be developed within the Fort Worth city limits.³⁰⁵



Oil extraction next to a home in Midland, TX, in the Permian Basin. (Julie Dermansky)

Eighty-one percent of the forecasted increase in oil production in the Permian Basin will come from burning liquids and gas from new wells that were not in operation at the end of 2020, so if

300 Occidental. *A Sustainable Energy Leader*. <https://www.oxy.com/Pages/default.aspx>

301 Shale Experts. (2021, January). *Eagle Ford Shale: Drilling Permits: La salle County*. <https://www.shaleexperts.com/plays/eagle-ford-shale/county/la-salle-county-tx>

302 Gordon, M. (2020, October). *ExxonMobil aims to boost Permian oil output in 2021 despite capex cuts*. S&P Global Platts. <https://www.spglobal.com/platts/en/market-insights/latest-news/oil/103020-exxonmobil-aims-to-boost-permian-oil-output-in-2021-despite-capex-cuts>

303 ExxonMobil. (2019, March). *ExxonMobil to increase...* https://corporate.exxonmobil.com/News/Newsroom/News-releases/2019/0305_ExxonMobil-to-increase-accelerate-Permian-output-to-1-million-barrels-per-day-by-2024

304 Chapa, S. (2020, June 15). *Drilling Down: Permian Basin revival looming on the horizon*. *Houston Chronicle*. <https://www.houstonchronicle.com/business/energy/article/Drilling-Down-Permian-Basin-revival-looming-on-15334449.php>

305 Ibid.

new fossil fuel production was halted in early, or even mid-2021 in this region, a large percentage of the remaining global budget for oil and gas emissions would be freed up.³⁰⁶

Some of the top drillers in this area include Chevron, Occidental Petroleum, ExxonMobil, and Pioneer Natural Resources. As of December 31, 2020, Vanguard and BlackRock were the two largest shareholders of the company behind “42 facilities that reported releasing nearly 2.4 million pounds of unauthorized sulfur dioxide during 359 incidents” in the Permian Basin in 2017.³⁰⁷ Additionally, JPMorgan Chase and Bank of America each provided ExxonMobil with \$14,219,450,000 over the last five years.³⁰⁸ As of December 31, 2020, BlackRock, Vanguard, and Capital Group were all top investors in Pioneer Natural Resources.³⁰⁹

³⁰⁶ Binger, Jacey, et al. (2020, February 10). *Five Years Lost: How Finance is Blowing the Paris Carbon Budget*. Urgewald, RAN, et al. 2020. <https://urgewald.org/sites/default/files/media-files/FiveYearsLostReport.pdf>

³⁰⁷ Levin, I., et al. (2019, May 9). *Sour Wind in West Texas: Air Pollution From Surging Oil and Gas Industry Exceeds Health Standards*. Environmental Integrity Project. <https://environmentalintegrity.org/wp-content/uploads/2019/05/West-Texas-Air-Pollution-Report-5.9.19.pdf>

Nasdaq. *Exxon Mobil Corporation Common Stock (XOM)*. <https://www.nasdaq.com/market-activity/stocks/xom/institutional-holdings>

³⁰⁸ RAN, Et al. (2021, March). *Banking on Climate Chaos: Fossil Fuel Finance Report 2021 –FINANCING BY BANK OR CLIENT*. <https://www.ran.org/bankingonclimatechaos2021/>

³⁰⁹ Nasdaq. *Pioneer Natural Resources Company Common Stock (PXD)*. <https://www.nasdaq.com/market-activity/stocks/pxd/institutional-holdings>

6d. Central California

Project(s)	Companies Operating in California's Central Valley*	Banks Financing the Company**	Asset Managers Investing in the Company***	Insurance Companies Insuring the Company****
(1). Kern River oil field; (2). Lost Hills field; (3). Cymric field; (4). Midway Sunset field in Southwestern Kern Co.; (5). Coalinga oil field	Chevron	JPMorgan Chase, Bank of America: 12/31/2020 Nasdaq and 2016-2020	Vanguard, BlackRock, Capital Group: 12/31/2020 Nasdaq	N/A
(1). Midway Sunset field in Southwestern Kern County; (2). Belridge Producing Complex; (3). Coalinga oil field	ExxonMobil and Shell (Aera Energy)	Bank of America, JPMorgan Chase: 12/31/2020 Nasdaq - Bank of America and 2018-2020 Royal Bank of Canada: 2019-2020	Shell: Capital Group: 12/31/2020 Nasdaq BlackRock: 9/29/2020 Yahoo! Finance 12/31/2020 Nasdaq Vanguard: 10/30/2020 Yahoo! Finance 12/31/2020 Nasdaq	N/A
Elk Hills gas-producing field Kern Co.	California Resources Corporation	JPMorgan Chase: 12/30/2020 Yahoo Finance!	BlackRock: 12/30/2020 Yahoo Finance!	N/A

All data in the chart is derived from financial data bases/platforms (*Nasdaq/Yahoo! Finance*) or RAN's 2021 published report, *Banking on Climate Chaos*: "Financing by Bank or Client".

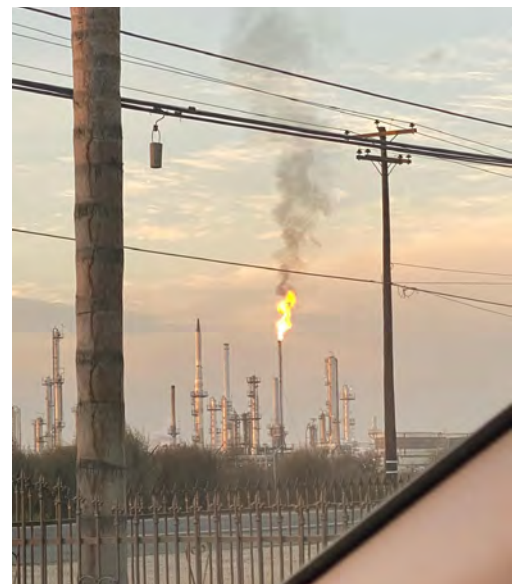
*This list is not exhaustive.

**Underwriting bonds and share issuances, loans, and/or ownership of stock/institutional investor.

***Shareholder/institutional investor, ownership of stock.

****N/A is because there is a lack of transparency.

In 2019, the Trump administration, in conjunction with the Bureau of Land Management, broke a five year moratorium on leasing public land in California for oil drilling and hydraulic fracturing.³¹⁰ Despite massive pushback, both locally and from the state of California, over 1.7 million acres of public and private land were opened for extraction across eighteen counties in a region spanning across the Central Valley, Central Coast, and Bay Area.³¹¹ In March, 2021, the Kern County Board of Supervisors voted for an ordinance that will greenlight 40,500 new oil and gas wells in Kern County in the Central Valley.³¹² These wells will "likely end up in low-income, monolingual, Hispanic communities with virtually no environmental review."³¹³



Flaring in Kern County, CA. (CCEJN)

³¹⁰ Bryndon, M. (2019, December 13). Feds to California: Open up lands to oil, gas drilling. *Capitol Weekly*. <https://capitolweekly.net/feds-to-california-open-up-lands-to-oil-gas-drilling/>

³¹¹ Ibid.

³¹² Bacher, D. (2021, March 9). Kern County Board of Supervisors Votes 5-0 to greenlight 40,500 new oil and gas wells. *Daily KOS*. <https://www.dailykos.com/stories/2021/3/8/2020132/-Kern-County-Board-of-Supervisors-Votes-5-0-to-greenlight-43-000-new-oil-and-gas-wells>

³¹³ Ibid.

The Central Valley has been plagued by big industry's pollution for decades; oil wells and extraction sites have been developed disproportionately in diverse, low income, working class, and/or rural communities.³¹⁴ A report from the NRDC states that 5.4 million Californians live within a mile of an oil or gas well, and over one-third (or 1.8 million) of these people live in areas identified by the California EPA as the most burdened by environmental pollution.³¹⁵ Ninety-two percent of those 1.8 million people are people of color: 69% Latinx, 11% Asian, and 10% African American/Black/African Diaspora.³¹⁶ It is clear from this data that Latinx communities in California are unfairly shouldering the harmful impacts from the extraction industry. According to the American Lung Association, four of the cities put back on the auction block (Fresno, Madera, Hanford, and Bakersfield) recently ranked at the top in the country for particle pollution and water contamination.³¹⁷ All four of these cities are located in counties with communities that are predominantly Latinx.



Oil rig near a home in Kern County, California. (CCEJN)

Kern County, where the Latinx community accounts for 54.6% of the population, is an especially poignant example of how the fossil fuel industry disproportionately impacts people of color. Kern County holds over 63,000 of the 84,000 oil and gas wells in California, and produces approximately 75% of the state's oil and 58% of its natural gas.³¹⁸ Rural towns in this region have been devastated by poverty, food insecurity, and pollution from oil and gas emissions, truck traffic, and wastewater disposal. Of the 122,000 Kern residents that live near wells and suffer from

³¹⁴ Ruas, C. (2019, May 31). *People of color would bear the brunt of additional fossil fuel pollution coming from public lands*. The Wilderness Society. <https://www.wilderness.org/articles/blog/new-drilling-and-fracking-california-will-hurt-latino-communities#>

³¹⁵ Srebotnjak, T., Et al. (2014, October). *Drilling in California: Who's at risk?* National Resources Defense Council. <https://www.nrdc.org/sites/default/files/california-fracking-risks-report.pdf>

³¹⁶ Ibid.

³¹⁷ Ruas, C. (2019, May 31). *People of color would bear the brunt of additional fossil fuel pollution coming from public lands*. The Wilderness Society. <https://www.wilderness.org/articles/blog/new-drilling-and-fracking-california-will-hurt-latino-communities#>

³¹⁸ Srebotnjak, T., Et al. (2014, October). *Drilling in California: Who's at risk?* National Resources Defense Council. <https://www.nrdc.org/sites/default/files/california-fracking-risks-report.pdf>

high pollution, 76% of them are people of color.³¹⁹ Water samples in Kern county were found to contain benzene, ethylbenzene, and xylene and several of the samples collected exceeded benzene levels established by safe drinking water standards.³²⁰

Both **Elizabeth Perez, a Community Organizer at the Central California Environmental Justice Network**, and Rosanna Esparza, a Community Organizer and Environmental Researcher, describe abnormally high levels of respiratory problems, cancer, and other unusual health issues where they live in Kern County. Elizabeth Perez describes the impacts from pollution on women in her community:

“Some of my friends have asthma...during summer it’s really hard for people who have respiratory illnesses to go outside just because our air is so dirty...women are the ones who have to take their children to the clinic, for example to take the kids medicine for asthma [at school].”³²¹



Elizabeth Perez. (CCEJN)

Rosanna Esparza reports an incident a few years ago when farm workers in Central California publicly disclosed that their daughters were born without reproductive organs; this demonstrates the widespread and understudied health impacts from pollution in Kern County.³²² She works to educate women about the risks of pollution; and describes how Kern County residents cannot even take showers because of the pollution:

“Then the first thing you want to do when you get home is take a shower after getting pesticides rained on you, but the shower is quasi contaminated with all of these other pollutants ... and then we reinfect ourselves with the vapor [we] breathe...”³²³

Chevron exemplifies big industry’s bad acting in California. In 2019, a Chevron-owned oil well in Kern County leaked 800,000 gallons of crude petroleum and water for over two months into a creek near Bakersfield. This well was using steam injection to extract underground crude oil.³²⁴

Despite alarming data on pollution and negative health impacts, as well as a pandemic and a supply glut resulting in historically low barrel prices, oil and gas companies and their investors are currently expanding their fossil fuel projects. Since April 2020, 50 new fracking permits have been issued to Chevron and Aera Energy, a Bakersfield company owned by ExxonMobil and Shell.³²⁵ Over half of these permits are in Kern county and 282 more fracking permits are awaiting review. Similarly, Kern petroleum is obtaining new permits for fracking, and oil officials are looking to ramp production back up as soon as the economy has improved from COVID.³²⁶ The

³¹⁹ Ibid.

³²⁰ Renda, M. (2019, October). Feds Open Slice of California’s Central Coast to Oil & Gas Drilling. *Courthouse News Service*. <https://www.courthousenews.com/feds-open-slice-of-californias-central-coast-to-oil-gas-drilling/>

³²¹ Perez, E. (2020, December 17). WECAN Interview.

³²² Esparza, R. (2020, December 18). WECAN Interview.

³²³ Esparza, R. (2020, December 18). WECAN Interview.

³²⁴ Wick, J. (2019 July 17). A major Kern County oil spill in environmentally conscious California. *Los Angeles Times*. <https://www.latimes.com/california/story/2019-07-16/kern-county-oil-spill-california>

³²⁵ Willon, P. (2020, September). Environmentalists plan lawsuit challenging Newsom over oil and gas drilling permits. *Los Angeles Times*. <https://www.latimes.com/california/story/2020-09-21/environmentalists-lawsuit-gavin-newsom-over-oil-and-gas-drilling-permits>

³²⁶ Cox, J. (2020, April 21) *Kern oil producers dodge worst of US price collapse*. Bakersfield.com. https://www.bakersfield.com/news/kern-oil-producers-dodge-worst-of-us-price-collapse/article_fb957ec6-83fa-11ea-b29a-a7813d481a1c.html

president and CEO of Aera Energy, one of California's largest oil and gas producers, stated: "Further, I believe that once we're past the pandemic, we'll see pent-up demand emerge throughout our economy...That will, in turn, drive oil prices to a more normal range."³²⁷

As of December 31, 2020, Vanguard, BlackRock, Capital Group, Bank of America, and JPMorgan Chase accounted for five of the ten largest investors in Chevron,³²⁸ the leading oil producer in Kern County.³²⁹ Chevron was also the company responsible for 1.31% of the global greenhouse gases from 1988-2015,³³⁰ and is now one of the world's leading producers of chemicals and plastics.³³¹ Notably, at the end of 2018, Vanguard owned 6.9% and BlackRock owned 6.4% of Chevron.³³²



Kern County, CA. (CCEJN)

³²⁷ Ibid.

³²⁸ Nasdaq. Chevron Corporation Common Stock (CVX)

<https://www.nasdaq.com/market-activity/stocks/cvx/institutional-holdings>

³²⁹ Drilling Edge. Oil & Gas Production in Kern County, CA. <http://www.drillingedge.com/california/kern-county>

³³⁰ Riley, T. (2017 July 10). Just 100 companies responsible for 71% of global emissions, study says. The Guardian. <https://www.theguardian.com/sustainable-business/2017/jul/10/100-fossil-fuel-companies-investors-responsible-71-global-emissions-cdp-study-climate-change>

³³¹ Chevron. United States. <https://www.chevron.com/worldwide/united-states>

³³² Gladman, K. (2018). Asset Manager Climate Scorecard 2018. 5050Climate.org. <https://5050climate.org/wp-content/uploads/2018/09/FINAL-2018-Climate-Scorecard-1.pdf>

6e. Northern Colorado

Project(s)	Companies Operating in Weld County*	Banks Financing the Company**	Asset Managers Investing in the Company***	Insurance Companies Insuring the Company****
Currently being challenged: an 18 well-pad in city limits of Broomfield (April 2020)	Extraction Oil&Gas	Royal Bank of Canada credit agreement document	Vanguard 8/31/2020 Fintel	N/A
Oil Development plans in Commerce City and Aurora (close-in suburbs)	Extraction Oil&Gas	Royal Bank of Canada credit agreement document	Vanguard 8/31/2020 Fintel	N/A
Denver-Julesburg (DJ) Basin... in or near metro-area suburbs	Extraction Oil&Gas	Royal Bank of Canada credit agreement document	Vanguard 8/31/2020 Fintel	N/A
Wattenberg Gas Field and largest energy operator in Weld Co.	Occidental Petroleum (previously Kerr-McGee Oil & Gas Onshore LP a subsidiary of Anadarko Petroleum Corp.)	Bank of America, JPMorgan Chase, Royal Bank of Canada: 2016-2020	Vanguard, BlackRock: 12/31/2020 Nasdaq	
Wattenberg Gas Field and second largest operator in Weld Co.	Chevron (previously Noble Energy Inc.)	JPMorgan Chase, Bank of America: 12/31/2020 Nasdaq and 2016-2020	Vanguard, BlackRock, Capital Group: 12/31/2020 Nasdaq	
Wattenberg Gas Field (majority in Weld County), 180,000 acres	PDC Energy Inc.	JPMorgan Chase and Bank of America: 2020 and 12/31/2020 Nasdaq - JPMorgan Chase	BlackRock, Vanguard: 12/31/2020 Nasdaq	

All data in the chart is derived from financial data bases/platforms (Nasdaq/Yahoo! Finance/Fintel) or RAN's 2021 published report, *Banking on Climate Chaos*: "Financing by Bank or Client," or a credit agreement document.

*This list is not exhaustive.

**Underwriting bonds and share issuances, loans, and/or ownership of stock/institutional investor.

***Shareholder/institutional investor, ownership of stock.

****N/A is because there is a lack of transparency.

Weld County in Northern Colorado currently has an "F" grade for air quality from the American Lung Association (ALA) and has not met EPA air quality standards since 2004.³³³ Without air pollution monitoring and required public reporting, the fossil fuel industry in this region is neglecting both public and environmental health.

The Colorado Department of Public Health and Environment (CDPHE) released a study in 2019 concluding that Colorado residents living within 2,000 feet of fracking sites may be exposed to

³³³ Community for Sustainable Living. (2020, March 18). *Fighting Fracking Pollution*. <https://www.cforse.org/posts/2020/2/11/identifying-and-fixing-pollution-in-the-oil-patch#:~:text=Main%20Points%3A,be%20monitored%20and%20publicly%20reported>

unhealthy levels of benzene and other chemicals, which may lead to elevated negative short-term health impacts, including nose bleeds, headaches, trouble breathing and dizziness.³³⁴ Since 2009, companies have drilled 1,689 wells within 500-1,000 feet of buildings, 534 wells within 350-500 feet, 317 wells within 150-350 feet, and 16 wells within 150 feet. In response to this finding, the president of the Colorado Oil and Gas Association stated “policy needs to be based on real data, not modeling,” and complained that this study will lead to delays in permitting new operations.³³⁵ In 2016, there were 509 oil spills in Colorado, 32% of them within 1,500 feet of an occupied building and no distance was reported for 52% of the spills.³³⁶

Weld County has 23,000 wells (almost half of the state’s active wells) and produces 91% of the state’s oil production. A study on mental health, conducting long term interviews with residents in Northern Colorado, found that living near industrial unconventional oil and gas production generated chronic stress and self-reported mental health impacts; 90% of participants reported chronic stress about the uncertainty of the risks as fossil fuel expansion continues in their community and 75% reported negative mental health impacts like depression.³³⁷ The previous Section 5.i provides more information on this topic.

In 2019, a study done by Barrett Engineering found that elevated benzene levels were detected on Bella Romero Academy’s two campuses in Greeley, located in Weld County. The monitoring system set up on Bella Romero’s grounds measured hourly hydrocarbons from October to December in 2019; the study found that benzene levels exceeded the one-hour safe level for one full school day and the eight-hour safe level for four full school days, and in total that the threshold on the campus was exceeded 113 times.³³⁸ Approximately 1,000 feet from the academy are 11 wells owned by Extraction Oil and Gas, which began producing hydrocarbon liquids and gas in October 2019. Although Extraction rejects responsibility for these toxic chemical spikes, wind observations during the 10 highest hours of benzene concentrations indicate Extraction’s well pad as the source.³³⁹

Extraction’s harmful project right next to this Greeley school has a harsh history of environmental racism. In 2013, Mineral Resources obtained a permit to drill near Frontier Academy, a majority white, charter school in an affluent neighborhood in Greeley, but the permit was delayed when residents showed strong resistance.³⁴⁰ Extraction Oil and Gas acquired Mineral Resources a year later. Under this company, drilling plans near Frontier were abandoned and instead targeted the majority Latinx school, Bella Romero Academy. Despite protests and a resolution passed by the school board opposing the development, Extraction completed their 11 well development on the campus, drilling even closer to the campus than they had planned for Frontier. Bella

334 Finley, B. (2019, October 17). Colorado to tighten oversight of oil and gas sites near homes in wake of study finding possible short-term health effects. *The Denver Post*. <https://www.denverpost.com/2019/10/17/colorado-oil-gas-health-risks-study/>

335 Ibid.

336 Physicians for Social Responsibility. (2018). *Health Impacts of Fracking*. http://world.350.org/colorado/files/2018/01/17.12.13-The-Health-Effects-of-Fracking-in-Colorado.pdf?_ga=2.225525084.753262556.1585258905-1207637909.1523902607

337 Malin, S. (2020, December). Depressed democracy, environmental injustice: Exploring the negative mental health implications of unconventional oil and gas production in the United States. *Energy Research and Social Justice*, 70. <https://doi.org/10.1016/j.erss.2020.101720>

338 Woodruff, Chase. (2020 March 11). Bella Romero Benzene Levels Worse Than Reported, Analysis Claims. *Westword*. <https://www.westword.com/news/bella-romero-benzene-levels-worse-than-reported-analysis-claims-11662591>

339 Ibid.

340 Julia, M. (2018, April 17). Parents Didn’t Want Fracking Near Their School. So the Oil Company Chose a Poorer School, Instead. *Mother Jones*. <https://www.motherjones.com/environment/2018/04/an-oil-company-faced-pushback-about-fracking-near-a-charter-so-it-moved-next-to-a-low-income-public-school/>

Romero's students are 82% Latinx and 85% of the students qualify for free or reduced lunch, this is compared to Frontier's 77% white students and 20% of students who qualify for free or reduced lunch.³⁴¹

Although Extraction filed for bankruptcy in June 2020, the company obtained numerous new permits for operating in Weld County in 2020, twelve of them issued in June, in the middle of the Covid-19 pandemic.³⁴² Despite the bankruptcy, the president of Extraction said, "It does not expect major changes to its operations" claiming that there will be almost no changes for the stakeholders in the company and Extraction will continue to be a leading operator in the community (including their 11 wells next to Bella Romero).³⁴³

In November 2020, Royal Bank of Canada (RBC) entered into a credit agreement with Extraction Oil and Gas.³⁴⁴ As of the end of August, 2020, Vanguard was one of the largest shareholders of Extraction Oil and Gas.³⁴⁵ In this way, RBC and Vanguard are financially supporting the company behind the pollution of Bella Romero Academy.



An oil and gas rig in a Greeley neighborhood in Weld County, Colorado. (Matt Bloom/KUNC)

³⁴¹ Public School Review. *Bella Romero Academy Of Applied Technology*. <https://www.publicschoolreview.com/bella-romero-academy-of-applied-technology-profile>

³⁴² Colorado Oil&Gas Conservation Commission. *Pending Permits*. <https://cogcc.state.co.us/permits.html>

³⁴³ Ricciardi, T. (2019, December 20). Parents, educators at Greeley school petition governor to shut down nearby oil and gas wells. *The Denver Post*. <https://www.denverpost.com/2020/06/23/bella-romero-greeley-school-fracking/>

³⁴⁴ Sec.gov. (2020, November 2). *Credit Agreement*. <https://www.sec.gov/Archives/edgar/data/1655020/000165502020000155/exh-101xdipamendment21.htm>

³⁴⁵ Fintel. XOG / Extraction Oil & Gas, Inc. <https://fintel.io/so/us/xog>

6f. “Chemical Valley”

Project(s)	Companies Operating in California’s “Chemical Valley”*	Banks Financing the Company**	Asset Managers Investing in the Company***	Insurance Companies Insuring the Company****
Sarnia Refinery Plant	Imperial Oil Limited	Royal Bank of Canada 12/31/2020 Nasdaq	Vanguard 12/31/2020 Nasdaq	N/A
Sarnia Refinery	Suncor Energy Products Partnership	Royal Bank of Canada: 12/31/2020 Nasdaq JPMorgan Chase: 2019-2020	Vanguard: 12/31/2020 Nasdaq	N/A
Sarnia Manufacturing Centre and Corunna Refinery-Sarnia Manufacturing Unit	Shell Canada Products	Bank of America, JPMorgan Chase, Royal Bank of Canada: 2019-2020 and 12/31/2020 Nasdaq	Capital Group: 12/31/2020 Nasdaq BlackRock: 9/29/2020 Yahoo! Finance Vanguard: 10/30/2020 Yahoo! Finance	N/A
Sarnia Plant	Cabot Canada Ltd. (owned by Cabot Corporation)	Bank of America 12/31/2020 Nasdaq	Vanguard, BlackRock: 12/31/2020 Nasdaq	N/A
Sarnia Industrial Pipeline reinforcement construction Project; Sarnia Airport Pool; Sarnia Terminal; Dawn Hub: natural gas storage hub	Enbridge	Royal Bank of Canada: 2016-2020 and 12/31/2020 Nasdaq JPMorgan Chase and Bank of America: 2020	BlackRock: 10/3/2020 BlackRocksBigProblem’s Website Capital Group, Vanguard: 12/31/2020 Nasdaq	N/A
St. Clair River Facility-Corunna Site: modifies polyethylene and polypropylene	DOW Chemical of Canada (subsidiary of DOW Inc.)	N/A	Vanguard, Capital Group, Black Rock Inc. 12/31/2020 - Nasdaq	N/A

All data in the chart is derived from financial data bases/platforms (Nasdaq/Yahoo! Finance), RAN’s 2021 published report, *Banking on Climate Chaos*: “Financing by Bank or Client,” or a campaign update from BlackRockBigProblem’s Website.

*This list is not exhaustive.

**Underwriting bonds and share issuances, loans, and/or ownership of stock/institutional investor.

***Shareholder/institutional investor, ownership of stock.

****N/A is because there is a lack of transparency.

Canada’s “Chemical Valley,” located in Sarnia in Southwestern Ontario, has 62 operating petrochemical plants and oil refineries producing an amount equivalent to 40% of Canada’s oil consumption. There are 38 fossil fuel operations within 25 kilometers of the Aamjiwnaang First Nation (AFN), 23 of them reported emitting more than 55 tons of air pollution per year, with some of the facilities sharing a property line with the AFN.³⁴⁶ The pollution from these facilities

³⁴⁶ Macdonald, E. (2019, June). *Return to Chemical Valley 2019*. Ecojustice. https://ecojustice.ca/wp-content/uploads/2019/06/Return-to-Chemical-Valley_FINAL.pdf

is also being carried across the St. Clair River into Michigan.

While levels of some pollutants in Sarnia have decreased in the last ten years, the industry continues to place nearby communities at great risk with emissions that routinely exceed Ontario Ambient Air Quality Criteria (AAQC) and Canadian Ambient Air Quality Standards (CAAQS), both set by the Canadian government to protect against adverse effects on human health and the environment. These air quality standards are not legally binding and the industry facilities can easily circumvent any regulations through site specific standards.³⁴⁷

In 2019, Ecojustice released a followup report from their 2007 paper elucidating the pollution and air quality in Sarnia. Ecojustice obtained data from air quality monitoring stations (one in Sarnia and one in the AFN) measuring various air pollutants, the most harmful being benzene and sulfur dioxide. Here is a summary of their findings: in 2018, sulfur dioxide exceeded AAQC levels 38 times and 28 times respectively at the AFN and Sarnia stations; in 2018, the ozone AAQC was exceeded at the Sarnia station 18 times (no data has been available since 2015 on ozone at the AFN station); in 2017 and 2018, fine particulate matter levels exceeded CAAQS at both stations; and every year since 2011, the annual benzene AAQC has been exceeded at the AFN station.³⁴⁸ Between 2014 and 2015, Sarnia companies reported just under 500 pollution incidents, with more than 25% of those incidents involving or potentially involving flaring, which has been directly linked to women's mental health and fertility issues. The previous Sections, 5.i and 5.g, provide more information on this topic.



A view of "Chemical Valley" from the Sarnia bay. (Dave McIntosh)

³⁴⁷ Ibid.

³⁴⁸ Ibid.

Many AFN residents have reported suffering from a host of health problems, such as asthma, reproductive problems, skin rashes, chronic headaches, and rare cancers due to the toxic air pollutants in the area. An Ecojustice study found that 39 percent of women surveyed had experienced a miscarriage or stillbirth.³⁴⁹ Mothers in the area reported feeling “helpless” for not being able to protect their children from the toxic air they breathe.³⁵⁰ For instance, in 2013, several children were exposed to a hydrogen sulfide leak from a Shell refinery and had to be hospitalized (Shell did not report the leak, so the children were also originally misdiagnosed).³⁵¹ A study published by the Aamjiwnaang Environmental Committee reported that “Chemical Valley’s” ratio of female to male births had reached 2:1, an anomaly that has only ever been documented in animal populations residing in extremely polluted areas.³⁵² Aamjiwnaang mothers face unique challenges raising children in this unhealthy environment. According to a 2019 study, the incident rate of acute myeloid leukemia in Sarnia is three times higher than the national average.³⁵³ Christine Rogers, an Environment Worker at Aamjiwnaang First Nation mother to three daughters, was forced to describe the smoke stacks above their home as “cloud makers” and deliver a rhyme so her children could understand: “The more clouds in the sky, the more people die.”³⁵⁴

Pollution from “Chemical Valley” streams from the St. Clair River into the St. Clair Lake and Detroit River, which provide tap water for 3.5 million people in Michigan.³⁵⁵ In a 16-year period, more than 700 chemical spills from Sarnia facilities were recorded, and due to the rapidity of the chemical releases in Michigan, residents are often not given sufficient warning.³⁵⁶

AFN Tribe members, Sarnia residents, and environmental activists have fought these polluters and their financial backers for over a decade. Elaine MacDonald, the director of the Healthy Communities Program at Ecojustice, said in 2018, “In Canada, we have a provincial government and a federal government. We sued in both courts and lost. We can’t match the money the petrochemical industry can spend.”

Despite efforts to transition to cleaner energy production in Sarnia, the fossil fuel companies cling to their dirty products with new projects planned for the area. NOVA Chemicals is in the process of developing a \$2.2 billion project, which will include a polyethylene (plastic) plant and an expansion of the Corunna “cracker” unit, to be completed by 2021.³⁵⁷ NOVA Chemicals was in the top five polluters in Sarnia, located less than five kilometers from the Aamjiwnaang First Nation. Although oil spills, health abnormalities, and fears plague the Aamjiwnaang First Nation Tribe, Sarnia residents, and communities in Michigan, financial support continues for these fossil fuel companies.

349 MacDonald, E., Et al. (2007, October). *Exposing Canada’s chemical valley: An investigation of cumulative air pollution emissions in the Sarnia, Ontario area*. Ecojustice Canada. <https://www.ecojustice.ca/wp-content/uploads/2015/09/2007-Exposing-Canadas-Chemical-Valley.pdf>

350 Vice. Canada’s Toxic Chemical Valley. YouTube. https://www.youtube.com/watch?v=UnHWZE0M_-k.

351 Thorkelson, E. (2013, January 31). Shell Leak Sheds Light on Life in Canada’s Chemical Valley. *The Narwhal*. <https://thenarwhal.ca/shell-leak-sheds-light-life-canada-s-chemical-valley/>

352 Vice. (2013). *The Chemical Valley*. <https://www.vice.com/en/article/4w7gwn/the-chemical-valley-part-1>

353 Ghazawi, F.M., Et al. Analysis of acute myeloid leukemia incidence and geographic distribution in Canada from 1992 to 2010 reveals disease clusters in Sarnia and other industrial US border cities in Ontario. *Cancer*, 125(11). 10.1002/cncr.32034

354 Vice. (2013). *The Chemical Valley*. <https://www.vice.com/en/article/4w7gwn/the-chemical-valley-part-1>

355 Selwesi, C. (2017, October 31). Chemical Valley and the threat to Michigan’s drinking water. *Bridge Michigan*. <https://www.bridgemi.com/quality-life/chemical-valley-and-threat-michigans-drinking-water>

356 Ibid.

357 Shantz, T. (2019, December 4). Boom time in Sarnia for skilled trades. <https://thesarniajournal.ca/boom-time-in-sarnia-for-skilled-trades/>

At the end of 2020, Royal Bank of Canada, Capital Group, Vanguard,³⁵⁸ and BlackRock³⁵⁹ were some of the top investors of Enbridge, making these financial institutions major investors in Enbridge's operations in Sarnia, including the company's pipeline project, gas storage, and its Sarnia terminal. Also at the end of December, 2020, Royal Bank of Canada had significant investments in Imperial Oil and Suncor Energy Inc., two of the companies with refineries located less than five kilometers from the Aamjiwnaang First Nation, and which were reported as having some of the highest tons of air pollution.³⁶⁰

³⁵⁸ Nasdaq, *Enbridge Inc Common Stock (ENB)*, <https://www.nasdaq.com/market-activity/stocks/enb/institutional-holdings>

³⁵⁹ BlackRocksBigProblem. (2020, October 3). *Stop the Money Pipeline: Activists target BlackRock for funding tar sands pipelines*. <https://blackrocksbigproblem.com/stop-the-money-pipeline-activists-target-blackrock-for-funding-tar-sands-pipelines/>

³⁶⁰ MacDonald, E. (2019, June). *Return to Chemical Valley 2019*. Ecojustice. https://ecojustice.ca/wp-content/uploads/2019/06/Return-to-Chemical-Valley_FINAL.pdf; Nasdaq, *Suncor Energy Inc. Common Stock (SU)*

<https://www.nasdaq.com/market-activity/stocks/su>; Nasdaq, *Imperial Oil Limited Common Stock (IMO)*, <https://www.nasdaq.com/market-activity/stocks/imo/institutional-holdings>

6g. Alberta Tar Sands: Enbridge Line 3, Trans Mountain, and Keystone XL

Alberta's tar sands operations are the largest industrial project in the world. If Alberta were a country, it would be the world's fifth largest oil producing nation.³⁶¹ The especially gruesome extraction methods³⁶² and the enormous size of the Alberta tar sands operation have serious ramifications for the global atmosphere, the local ecosystems, and the Indigenous communities in the area.

Indigenous Peoples hold deep relationships to their land bases; to destroy the natural environment of Indigenous territories is, in essence, committing cultural genocide.³⁶³ The culture and livelihoods of numerous First Nation peoples are being sacrificed for extraction of the tar sands. These include the Athabasca Chipewyan First Nation, the Fort McKay First Nation, the Mikisew Cree First Nation, Fort McKay Cree Nation, Beaver Lake Cree First Nation, the Chipewyan Prairie First Nation, and the Metis.³⁶⁴ Eriel Tchekwie Deranger, the Executive Director of Indigenous Climate Action and a member of the Athabasca Chipewyan First Nation, laments how the caribou, fish, birds, and other species they depend upon for survival are disappearing before their eyes.³⁶⁵ First Nation community members' ability to hunt, gather food, and travel has also been impacted.³⁶⁶ The Fort McKay First Nation and Indigenous Climate Action lead efforts to halt tar sands expansion projects, suing the Canadian government and helping communities to transition to clean energy. Despite these efforts, the government continues to approve projects that First Nations oppose.³⁶⁷

Kanahus Manuel (Secwepemc & Ktunaxa Nations) a Member of the Secwepemc Women Warriors who are defending land in British Columbia, describes this opposition as it pertains to Indigenous women:

"The resource extractive industries like tar sands mining and its pipelines are directly linked to the violence of our Indigenous lands and women. Indigenous women, the title holders to our Indigenous Territories, are the first to be impacted and have voiced a collective no consent for these pipelines to invade our tribal lands, and we have shown we are willing to risk our liberty and freedom and put our bodies on the line to blockade and stop construction of these dirty oil and gas projects, to ensure we have a clean future for our children."³⁶⁸



Kanahus Manuel. (Carrie Cervantes)

361 Leahy, S. (2019, April 11). This is the world's most destructive oil operation—and it's growing. *National Geographic*. <https://www.nationalgeographic.com/environment/article/alberta-cana-das-tar-sands-is-growing-but-indigenous-people-fight-back>

362 Described further in Section 3 above

363 Huseman, J. Et al. (2012). *Extreme Energy as Genocidal Method: Tar Sands and the Indigenous Peoples of Northern Alberta*. Extreme Energy Initiative. <https://static1.squarespace.com/static/557961b3e4b084c9759bd919/t/558ec96ee4b05b489b748099/1435421038675/EEI-Tar-Sands-RP.pdf>

364 Indigenous Environmental Network. *Tar Sands*. <https://www.ienearth.org/what-we-do/tar-sands/#:~:text=The%20cultural%20heritage%2C%20land%2C%20ecosystems,are%20being%20sacrificed%20for%20oil>

365 Leahy, S. (2019, April 11). This is the world's most destructive oil operation—and it's growing. *National Geographic*. <https://www.nationalgeographic.com/environment/article/alberta-cana-das-tar-sands-is-growing-but-indigenous-people-fight-back>

366 Ibid.

367 Ibid.

368 WECAN/DIP. (2021, January 14). *Indigenous Women Call Upon Biden to Stop Pipelines and Uphold Indigenous Rights in the Wake of Escalating Climate Chaos and Covid-19 Crises*. <https://www.wecaninternational.org/PressReleases/Indigenous-Women-Call-Upon-Biden-to-Stop-Pipelines-and-Uphold-Indigenous-Rights-in-the-Wake-of-Escalating-Climate-Chaos-and-Covid-19-Crises>

The construction of Line 3 and Trans Mountain tar sands pipelines will facilitate further environmental and cultural decimation in Alberta, Canada by increasing the volume of bitumen that can be transported from the region.



Dump trucks parked at a mine staging area near Fort McMurray, Alberta, Canada. (Dan Prat)

6g.i. Enbridge Line 3 “Replacement Project”

Project(s)	Company	Banks Investing in the Company*	Asset Managers Investing in the Company**	Insurance Companies Insuring the Company***
Line 3	Enbridge	Royal Bank of Canada: 2016-2020 and 12/31/2020 Nasdaq JPMorgan Chase and Bank of America: 2020	BlackRock: 10/3/2020 BlackRocksBigProblem's Website Capital Group, Vanguard: 12/31/2020 Nasdaq	N/A

All data in the chart is derived from financial data bases/platforms (Nasdaq) RAN's 2021 published report, *Banking on Climate Chaos: "Financing by Bank or Client,"* RAN's series, *The Understory*, or a campaign update from BlackRockBigProblem's Website.

*Underwriting bonds and share issuances, loans, and/or ownership of stock/institutional investor.

**Shareholder/institutional investor, ownership of stock.

***N/A is because there is a lack of transparency.

Enbridge's Line 3 project aims to replace their current pipeline pumping tar sands oil from Alberta to Wisconsin with a larger diameter pipeline, posing a 10% increase in the Alberta tar sands extraction.³⁶⁹ The Calgary-based energy company is looking to replace the leg that runs from Minnesota to Wisconsin, which passes through the Mississippi River headwaters and hundreds of watersheds, before terminating at Lake Superior in Wisconsin.³⁷⁰ Although Enbridge touts this as a “replacement project,” the company plans to build a completely new pipeline corridor and abandon the old Line 3, which is corroding and leaking into water sources.³⁷¹ This project presents catastrophic environmental risks and threatens Ojibwe territories and treaties along the proposed construction line. It also threatens First Nation tribes near the Alberta tar sands region.



Winona LaDuke, Anishinaabekwe (Ojibwe) member of the White Earth Nation, an active leader as a Water Protector with the Line 3 pipeline protests (Schumacher Center)

Enbridge has a terrible track record of gaining profits at the expense of wildlife habitat and Indigenous rights. In 2010, Enbridge's pipeline 6B caused one of the biggest inland oil spills on record, spilling more than one million gallons of tar sands oil into the Kalamazoo River and resulting in the river's closure for over two years.³⁷²

The current Enbridge Line 3 project completely disregards Ojibwe treaty rights; the pipeline's route would extend through the 1855 Treaty territory where members of the Ojibwe bands have rights to hunt, fish, harvest wild rice, conduct religious ceremonies, and travel.³⁷³ All five of the Ojibwe

³⁶⁹ Gürsöz, A. (2019, November 25). *Water Protectors Block Gate at Enbridge U.S. Tar Sands Terminal: We Will Stop Line 3*. RAN. <https://www.ran.org/press-releases/water-protectors-block-gate-at-enbridge-u-s-tar-sands-terminal-we-will-stop-line-3/>

³⁷⁰ Ibid.

³⁷¹ Honor the Earth. (2016, December). What is Line 3. *Youtube*, commentary by Winona LaDuke. https://www.youtube.com/watch?v=-S9hfiXcl_Q&feature=youtu.be

³⁷² Hazemyer, D. (2018, May 3). Enbridge Fined for Failing to Fully Inspect Pipelines After Kalamazoo Oil Spill. *Inside Climate News*. <https://insideclimatenews.org/news/03052018/en-bridge-fined-tar-sands-oil-pipeline-inspections-kalamazoo-michigan-dilbit-spill>

³⁷³ Stope Line 3 and Honor the Earth. *Stop the Line 3 Pipeline*. <https://www.stopline3.org/#intro>

nations in Minnesota, whose territories would be crossed by the pipeline's route, oppose the construction, emphasizing the risk it poses to the Ojibwe's culturally significant wild rice beds.³⁷⁴ As Enbridge moves ahead with the project, the company is directly violating Indigenous Peoples' right to Free, Prior and Informed Consent.³⁷⁵



Resistance along Line 3 in Minnesota. (Giniw Collective/Facebook)

In November 2020, Enbridge received the final permits from the state of Minnesota and the U.S. Federal Government, and in December began early construction.³⁷⁶ As of January 27, 2021, multiple “man camps” have been established in the region and thousands of out of state construction workers continue to pour into rural Minnesota to work on Enbridge's Line 3.³⁷⁷ This is despite the Covid-19 pandemic, outstanding legal challenges, lack of consent from local tribes, and Indigenous led-opposition across the country.³⁷⁸



Resistance along Line 3 in Minnesota. (Giniw Collective/Facebook)



Resistance along Line 3 in Minnesota. (Giniw Collective/Facebook)

³⁷⁴ Ibid.

³⁷⁵ Indigenous peoples. *Food and Agriculture Organization of the United Nations*. FAO. [http://www.fao.org/indigenous-peoples/our-pillars/fpic/en/#:~:text=Free%2C%20Prior%20and%20Informed%20Consent%20\(FPIC\)%20is%20a%20specific,affect%20them%20or%20their%20territories](http://www.fao.org/indigenous-peoples/our-pillars/fpic/en/#:~:text=Free%2C%20Prior%20and%20Informed%20Consent%20(FPIC)%20is%20a%20specific,affect%20them%20or%20their%20territories)

³⁷⁶ RAN, (2020, December 8). Big Banks Face Stark Climate Choices as Tar Sands Pipelines Rammed Through Amidst Escalating Pandemic. <https://www.ran.org/press-releases/big-banks-face-stark-climate-choices-as-tar-sands-pipelines-rammed-through-amidst-escalating-pandemic/>

³⁷⁷ Engelfried, N. (2020, December 14). Indigenous-led resistance to Enbridge's Line 3 pipeline threatens Big Oil's last stand. *Waging Nonviolence*. <https://wagingnonviolence.org/2020/12/indigenous-water-protectors-enbridge-line-3-pipeline-big-oil-last-stand/>; Common Dreams (2021, January 15). *Water Protectors Arrested in Minnesota After Chaining Themselves Inside Enbridge Line 3 Pipe*. EcoWatch.

<https://www.ecowatch.com/water-protectors-arrested-enbridge-2649950795.html?rebellitem=1#rebellitem1>

³⁷⁸ RAN, (2020, December 8). Big Banks Face Stark Climate Choices as Tar Sands Pipelines Rammed Through Amidst Escalating Pandemic. <https://www.ran.org/press-releases/big-banks-face-stark-climate-choices-as-tar-sands-pipelines-rammed-through-amidst-escalating-pandemic/>



Resistance along Line 3 in Minnesota. (Giniw Collective/Facebook)



Resistance along Line 3 in Minnesota. (Giniw Collective/Facebook)

The risks for Indigenous women are even greater. Construction along Line 3 is impacting environmental features integral to Indigenous women's identity and culture by harming their sacred relationship to both water and Mother Earth.³⁷⁹ Additionally, the "man camps" currently operating in Minnesota threaten the health and safety of Indigenous women and girls, and risk perpetuating the epidemic. Over 40 Indigenous women signed a petition in October 2020, calling for global financial institutions to stop backing tar sands fossil fuel projects, including Line 3, that endanger their communities and lead to sexual assault and murder of Indigenous women.³⁸⁰ In February, 2021, two Line 3 pipeline workers in Itasca County, Minnesota were arrested and charged with human trafficking, and specifically, solicitation to engage in prostitution.³⁸¹ This news confirms community concerns that the influx of Line 3 pipeline workers will place nearby Indigenous women and girls in danger. Financial institutions have the opportunity to prevent further abuses and the completion of Line 3 by discontinuing financing, insuring, and investing in Enbridge.³⁸² **Tara Houska (Couchiching First Nation Anishinaabe), an Attorney and Founder of Giniw Collective,** calls for action:

"The land cries out for empathy, the people cry out for justice and both are met with silence. The tar sands industry is a tribute to human egoism and short-sighted benefit as the arboreal forest, the water, a multitude of ecosystems, and Black and Indigenous communities are sacrificed on the pyre of profiteering. As I see man camps appearing all over northern Minnesota to build Enbridge's Line 3 tar sands pipeline, I call on the financiers to end their relationships with those who harm our people and land without a second thought. I call for action, not more empty words and promises."³⁸³



Tara Houska (Ayşe Gürsöz)

379 Whyte, K.P. Indigenous Women, Climate Change Impacts, and Collective Action. *Hypatia: Journal of Feminist Philosophy* 29 (3), 599-616. <http://onlinelibrary.wiley.com/doi/10.1111/hypa.12089/abstract>

380 Adamson, R, et al. (2020, October). To the CEOs of major global asset managers, banks, and insurers. <https://d99d2e8d-06c9-433b-915d-f6e381b1acd4.usrfiles.com/ugd/d99d2e8d658c651fc514565a4d554b0ef2418e4.pdf>

381 Lovrien, Jimmy. (2021, February 23). 2 arrests in human trafficking sting were Line 3 workers. *Duluth New Tribune*. https://www.duluthnewtribune.com/news/crime-and-courts/6901823-2-arrests-in-human-trafficking-sting-were-Line-3-workers?fbclid=IwAR3V35CU21sm-daITakaHZoomVnbUp_4kqvFJEUxNBEe4uZ0oUOTcCyET8A#YZZcadl02Z5

382 Kirsch, A. (2018, October-updated 2020 November). *Who's Banking Enbridge?* RAN. <https://www.ran.org/the-understory/whos-banking-enbridge/>

383 Henn, J. (2020, October 19). *Indigenous Women Leaders Warn Global Financial Companies to Stop Support for Tar Sands Oil*. Stop the Money Pipeline. <https://stopthemoneypipeline.com/indigenous-women-leaders-tar-sands-letter/>

Bank of America, JPMorgan Chase, and Royal Bank of Canada are all lenders providing credit facilities to relevant Enbridge companies.³⁸⁴ Bank of America and JPMorgan Chase were both lead managers underwriting the bonds Enbridge issued in 2020, and Royal Bank of Canada is profiting from fees for advising Enbridge on how to sell renewable energy and natural gas assets in order to focus on Line 3.³⁸⁵ Additionally, at the end of 2020, Capital Group, Vanguard,³⁸⁶ and BlackRock³⁸⁷ were some of the top investors of Enbridge.



Resistance along Line 3 in Minnesota. (Sara Pajunen)

³⁸⁴ Kirsch, A. (2018, October-updated 2020 November). *Who's Banking Enbridge?* RAN. <https://www.ran.org/the-understory/whos-banking-enbridge/>

³⁸⁵ Ibid.

³⁸⁶ Nasdaq. *Enbridge Inc Common Stock (ENB)*. <https://www.nasdaq.com/market-activity/stocks/enb/institutional-holdings>

³⁸⁷ BlackRocksBigProblem. (2020, October 3). *Stop the Money Pipeline: Activists target BlackRock for funding tar sands pipelines*. <https://blackrocksbigproblem.com/stop-the-money-pipeline-activists-target-blackrock-for-funding-tar-sands-pipelines/>

6g.ii. Trans Mountain Expansion Project

Project(s)	Owner of Project	Banks Financing the Project*	Asset Managers Investing in the Company**	Insurance Companies Insuring the Company***
TransMountain Expansion Project	Canadian Government	Royal Bank of Canada, JPMorgan Chase: Credit agreement document	N/A	Liberty Mutual: 2019-2020

All data in the chart is derived from a credit agreement document or RAN's series, *The Understory*.

*Credit agreement.

**Insurance coverage.

The Trans Mountain Expansion Project (TMX) entails replicating an existing pipeline along a 1,500 kilometer route from Alberta to British Columbia.³⁸⁸ This project would triple the current pipeline's capacity to transport bitumen, with an estimated carrying capacity of approximately 890,000 barrels per day of products, including lighter crudes and refined fuels.³⁸⁹ Completing the pipeline would extend a lifeline to the environmentally catastrophic Alberta tar sands operation and allow the tar sands from Alberta to expand to overseas markets.³⁹⁰ The expansion project was initially proposed and approved in 2016 under the ownership of Kinder Morgan, but in 2018, the Canadian government purchased the pipeline, and, as of January, 2021, is still the owner.

Approving and developing the TMX has been rife with contention: in 2018, the Canadian Federal Court of Appeals ruled that the government had failed to consider the concern from multiple challenges from First Nations.³⁹¹ However, in 2019, the pipeline was reapproved, prompting several First Nations to file an appeal, including the Squamish Nation, the Tsleil-Waututh Nation, along with three environmental groups.³⁹² The Squamish, the Tsleil-Waututh, the Coldwater, and a collective of bands within the Stó:lō, also argued against the project in December, 2019.³⁹³ When the 2019 First Nations' appeal was dismissed,³⁹⁴ even more First Nations challenged the project. In August, 2020, the Squamish Nation, the Tsleil-Waututh Nation, the Ts'elxwéyeqw Tribes, and the Coldwater Indian Band challenged the Court of Appeals by filing applications to the Supreme Court of Canada. However, in July, 2020, the Supreme Court dismissed this appeal.³⁹⁵ While construction moves forward on TMX, it is abundantly clear that Free, Prior and Informed Consent has not been granted.

In December 2019, a cease and desist order for TMX was sent from the United Nations Com-

388 The Canadian Press. (2020, September 15). Trans Mountain pipeline expansion on schedule and on budget after 1st year, says CEO. CBC. <https://www.cbc.ca/news/canada/calgary/tmx-pipeline-on-time-budget-1.5724937>

389 Ibid.

390 Cunningham, N. (2020, August 14). Canada's Trans Mountain Pipeline Inches Forward, But Opposition Intensifies. Desmog. <https://www.desmogblog.com/2020/08/14/canada-trans-mountain-pipeline-tiny-house-warriors>

391 Kassam, A. (2018, August). Trans Mountain pipeline halted after Canadian court overturns approval. *The Guardian*, Aug 2018. <https://www.theguardian.com/world/2018/aug/30/trans-mountain-pipeline-latest-canada-court-overturns>

392 Belrichard, C. (2020, February 4). First Nations respond to Trans Mountain appeal decision. CBC.

<https://www.cbc.ca/news/indigenous/trans-mountain-appeal-decision-first-nations-1.5451374>

393 Ibid.

394 Kung, E. (2020). *Eugene Kung speaks on Wellhead to Tidewater webinar*. Vimeo. <https://vimeo.com/395230626>

395 Rabson, M. (2020, July 2). Supreme Court rejects Indigenous challenge to Trans Mountain pipeline approval. *The Canadian Press*. <https://globalnews.ca/news/7131113/supreme-court-rejects-trans-mountain-challenge/>

mittee for the Elimination of Racial Discrimination to Canada.³⁹⁶ The committee explicitly expressed that: “by the refusal [of Canada] to consider Free, Prior and Informed Consent as a requirement for any measure, such as large-scale development projects, that [Canada] may cause irreparable harm to indigenous peoples rights, culture, lands, territories and way of life.”³⁹⁷ The government has not taken any action.

Despite calls from human rights organizations across the world to shut down TMX, as well as legal action by First Nations, Trans Mountain “man camps” are continuing to operate through 2021, even in the midst of a pandemic. Construction sites in Clearwater and Valemount are operating within Secwepemc Territory and without Secwepemc consent.³⁹⁸ The Tiny House Warriors are a group of Secwepemc and Ktunaxa people positioned along the route to peacefully protest Trans Mountain from crossing unceded Secwepemc Territory. This group of primarily women was violently attacked in April, 2020 and their memorial of red dresses for missing and murdered Indigenous women and girls was destroyed.³⁹⁹ Threats to Indigenous women from “man camps” are outlined in the 1,200 page report, *Reclaiming Power and Place: The Final Report of the National Inquiry into Missing and Murdered Indigenous Women and Girls*, published by the Government of Canada.⁴⁰⁰

TMX poses environmental threats as well: the existing pipeline has a history of disastrous spills, including the July, 2020 incident when the pipeline spilled 50,000 gallons of crude oil from a



(Imran Babur)

396 Tiny House Warriors. (2020, April 1). SHUT DOWN THE MAN CAMPS. <http://www.tinyhousewarriors.com/2020/04/shut-down-the-man-camps/>

397 Ibid.

398 Ibid.

399 Tiny House Warriors. <http://www.tinyhousewarriors.com/?fbclid=IwAR2BLGgeFajl-Rl7GatGMMUZLqupGaGw9L7c7ZtEjUwvzliOyXRIJtoaO2w#about>

400 National Inquiry into Missing and Murdered Indigenous Women and Girls (Canada). (2019). *Reclaiming Power and Place*. Privy Council Office, 1a, 7. https://www.mmiwg-ffada.ca/wp-content/uploads/2019/06/Final_Report_Vol_1a-1.pdf; Smith, R. (2020, October 5). *Liberty Mutual slammed for tar sands involvement*. Insurance Business America. <https://www.insurancebusiness-mag.com/us/news/environmental/liberty-mutual-slammed-for-tar-sands-involvement-235233.aspx>

pump station located above an aquifer that supplies the Sumas First Nation with drinking water.⁴⁰¹ On top of posing environmental threats to local communities, building TMX would take Canada even further away from meeting their commitment to the goals set forth in the Paris Agreement.⁴⁰²

The pipeline requires insurance under federal law in order to transport oil because of the numerous risks associated with pipelines and construction.⁴⁰³ If insurance companies stopped providing critical financial support to Trans Mountain, the project would no longer be able to transport oil.⁴⁰⁴ Liberty Mutual has provided significant insurance coverage to Trans Mountain.⁴⁰⁵

Banks also play a large role in expanding the TMX pipeline. Royal Bank of Canada (RBC) has provided financial support to TMX: in 2018, RBC helped finance Canada's \$4.5 billion purchase of Kinder Morgan's TMX.⁴⁰⁶ This occurred through a loan agreement guaranteed up to \$1 billion by Export Development Canada.⁴⁰⁷ In June 2017, when Kinder Morgan obtained project-level funding to build TMX, RBC and JPMorgan Chase were lenders.⁴⁰⁸ By continuing to provide financial support, Liberty Mutual, RBC, and JPMorgan Chase are violating Indigenous rights, perpetuating the MMIWG2S epidemic, and facilitating the continuation of North America's most carbon intensive operation.



Tiny House Warriors in front of a home located on a Trans Mountain "man camp." (Tiny House Warriors/Facebook/Elle Magazine)

⁴⁰¹ Sulakshana, E. (2020, July 14). *Who's insuring the Trans Mountain pipeline?*

RAN. <https://www.ran.org/the-understory/whos-insuring-the-trans-mountain-pipeline/>

⁴⁰² Israel, B. (2017, October 4). *The Real GHG trend: Oilsands among the most carbon intensive crudes in North America*. Pembina Institute. <https://www.pembina.org/blog/real-ghg-trend-oilsands>

⁴⁰³ Sulakshana, E. (2020, July 14). *Who's insuring the Trans Mountain pipeline?*

RAN. <https://www.ran.org/the-understory/whos-insuring-the-trans-mountain-pipeline/>

⁴⁰⁴ Ibid.

⁴⁰⁵ Ibid.

⁴⁰⁶ Meyer, C., Et al. (2018, June 25). *More than \$1 billion will go through seldom-used Canadian account to buy pipeline*. *Canada's National Observer*. <https://www.nationalobserver.com/2018/06/25/news/more-1-billion-will-go-through-seldom-used-canadian-account-buy-pipeline>

⁴⁰⁷ Ibid.

⁴⁰⁸ Sec.gov. (2017, June 16). *Credit Agreement between Kinder Morgan...* https://www.sec.gov/Archives/edgar/data/1506307/000110465917040966/a17-15457_1ex10d1.htm

6g.iii. TC Energy: Keystone XL

Halted Project	Company	Banks that were financing the project*	Asset Managers that were investing in the project	Insurance companies that were insuring the project**
Keystone XL Expansion	TC Energy	JPMorgan Chase, Royal Bank of Canada, Bank of America: previous financing	N/A	Liberty Mutual: previous insurance coverage

All data in the chart is derived from RAN's series, *The Understory*.

*Underwriting bonds and share issuances, loans prior to cancellation.

**Insurance coverage prior to cancellation.

As of January 20, 2021, construction of the Keystone XL (KXL) Pipeline expansion project was halted by the Biden administration.⁴⁰⁹ This case study has been included in the report for several reasons: KXL has been previously reinstated, despite being stopped in the past; tribal communities have already been impacted by the “man camps” brought in at the end of 2020; and it serves as an important example of fossil fuel companies’ disregard for Indigenous Peoples’ rights. See the Methods in Section Four above for more information about the choice to include KXL.

The Keystone pipeline transports crude oil from the boreal forests in Alberta to refineries in Texas.⁴¹⁰ In 2008, the Keystone expansion project consisted of two segments, one of which has already been completed (running from Cushing, Oklahoma, to Nederland, Texas) and the second of which was proposed to carry tar sands oil from Alberta through Montana and South Dakota to Nebraska.⁴¹¹ The pipeline route planned to cross through ancestral lands and sacred Indigenous sites, as well as Indigenous territories.⁴¹²

Since it was first proposed in 2008, tribal members and activists have adamantly fought against the Keystone Pipeline: in 2017 Tribal leaders representing tens of thousands of Indigenous Peoples from the Blackfoot Confederacy in Canada and the Great Sioux Nation and Ponca Tribe in the U.S., signed a declaration opposing the



(WECAN)

409 Exec. order 14008, 83 C.F.R. 7619-33 (2021 February). <https://www.govinfo.gov/app/details/FR-2018-02-22/2018-03547>

410 Denchak, M. (2021, January 20) *What Is the Keystone XL Pipeline?* National Resources Defense Council. <https://www.nrdc.org/stories/what-keystone-pipeline>

411 Borunda, A. (2020, July 9). *Keystone XL stalls—again—along with other pipeline projects.* National Geographic, July 2020. <https://www.nationalgeographic.com/science/2020/07/keystone-xl-stalls-again-along-with-other-pipelines/>

412 Ibid.

pipeline.⁴¹³ Multiple lawsuits were brought against TC Energy (the company building the pipeline), the Trump administration, and other government organizations; in November 2020, the Rosebud Sioux Tribe (*Sicangu Lakota Oyate*) and the Fort Belknap Indian Community (Assiniboiné (*Nakoda*) and Gros Ventre (*Aaniiih*) Tribes) filed a lawsuit against the United States Department of Interior and the Bureau of Land Management over their January, 2020 issuing of the KXL permit.⁴¹⁴ TC Energy for the most part ignored this opposition.

Construction of KXL violated tribal treaty rights to fish and hunt pursuant to the National Environmental Policy Act,⁴¹⁵ broke FPIC laws, and openly flouted a number of other treaties and past court cases.⁴¹⁶ In the building of the Keystone pipeline, TC Energy irrevocably damaged sacred land, which has further threatened tribal sovereignty by preventing tribes' economic and cultural survival.⁴¹⁷ Despite all this and the Covid-19 pandemic, TC Energy was ramming through construction of the KXL at the end of 2020,⁴¹⁸ threatening the health and safety of the nearby Tribal communities on the Rosebud Sioux and Cheyenne River Sioux reservations.⁴¹⁹

In December, 2020, “man camps” were brought into South Dakota, placing Indigenous women at risk of increased sexual violence.⁴²⁰ The risks that “man camps” pose to Indigenous women, girls and two-spirit peoples are described in more detail in Section 6.h above. Before President Biden’s executive order halting KXL, TC Energy had plans to bring in a half-dozen “man camps” near the Rosebud Sioux and Cheyenne River Sioux reservations.⁴²¹ As expressed by **Casey Camp-Horinek (Ponca Nation), an Environmental Ambassador and Senior Project Leader/Board Member at WECAN:**

“Keystone is allowed to come across that territory, bringing “man camps” with virtually no caretaking of the health and well-being of the people when we are already suffering from asthma, from cardiovascular diseases, from cancers, that we know are directly related to the fossil fuels... poisoning everything.”⁴²²



Casey Camp-Horinek. (Katherine Quaid/WECAN)

Liberty Mutual provided a \$15.6 million bond to cover the construction risks in South Dakota.⁴²³ **Joye Braun (Cheyenne River Sioux), an Organizer with the Indigenous Environmental Network and Leader of the Wakpa Waste Camp at the Cheyenne River Sioux Reservation in South Da-**

413 Nicholson, B. (2020, May 16). Tribes in U.S., Canada to unite against Keystone XL oil pipeline. *The Seattle Times*. <https://www.seattletimes.com/business/tribes-in-us-canada-unite-against-keystone-xl-oil-pipeline/>

414 Native American Rights Fund. *Keystone XL Pipeline*. <https://www.narf.org/cases/keystone/>

415 Ibid.

416 Marr, G. (2020, May 18). *Who's banking the Keystone XL pipeline?* RAN. <https://www.ran.org/the-understory/whos-banking-the-keystone-xl-pipeline/>

417 Native American Rights Fund. *Keystone XL Pipeline*. <https://www.narf.org/cases/keystone/>

418 RAN. (2020, December 8). *Big Banks Face Stark Climate Choices as Tar Sands Pipelines Rammed Through Amidst Escalating Pandemic*. <https://www.ran.org/press-releases/big-banks-face-stark-climate-choices-as-tar-sands-pipelines-rammed-through-amidst-escalating-pandemic/>

419 Iron Cloud, A. (2020, December 10). *Leave! Is the Message Dakota Women Have for the Pipeline Man-camps*. *Lakota Times*. <https://www.lakotatimes.com/articles/leave-is-the-message-dakota-women-have-for-the-pipeline-man-camps/>

420 Ibid.

421 Nauman, T. (2020, April 14). *Lakota grandmothers fight man camps amid pandemic*. *Esperanza Project*. <https://www.esperanzaproject.com/2020/native-american-culture/lakota-grand-mothers-fight-man-camps-amid-pandemic/>

422 WECAN. (2020, August 6). *Casey Camp-Horinek Condemns Fossil Fuel Bailouts & Speaks Out During The People, Not Polluters Virtual Rally*. Facebook. <https://www.facebook.com/watch/?v=286842785749866>

423 Marr, G. (2020, May 18). *Who's banking the Keystone XL pipeline?* RAN. <https://www.ran.org/the-understory/whos-banking-the-keystone-xl-pipeline/>

kota, makes this statement:

“[Financial institutions] must stop funding extractive industries that threaten the safety of Indigenous communities. They have funded KXL, a zombie pipeline we’ve killed before but keeps coming back thanks in large part to funders... [these extractive projects] directly affect my lands, my people, our water... “Man camps” close to our borders threaten the safety of our women as they have been proven to increase sexual assault cases, increase drugs... and provoke racial attacks on our people.”⁴²⁴

⁴²⁴ WECAN/DIP. (2020, July 9). *Indigenous Women’s Divestment Delegation Pushes Deutsche Bank for Fossil Fuel Divestment Amidst Pipeline Shutdowns, a Global Pandemic and the Climate Crisis*. <https://www.wecaninternational.org/PressReleases/Indigenous-Women%E2%80%99s-Divestment-Delegation-Pushes-Deutsche-Bank-for-Fossil-Fuel-Divestment-Amidst-Pipeline-Shutdowns%2C-a-Global-Pandemic-and-the-Climate-Crisis>

6h. Appalachia

Project(s)	Companies Operating in Appalachia*	Banks Financing the Company**	Asset Managers Investing in the Company***	Insurance Companies Insuring the Company****
Shell's Beaver County mega-petrochemical complex "ethane cracker"	Shell	Bank of America, JPMorgan Chase, Royal Bank of Canada: 2019-2020 and 12/31/2020 Nasdaq	Capital Group: 12/31/2020 Nasdaq BlackRock: 9/29/2020 Yahoo! Finance Vanguard: 10/30/2020 Yahoo! Finance	N/A
Belmont County, OH Ethane Cracker	PTT Global Chemical (affiliated with PTT PCL)	Bank of America 2019-2020	Vanguard, BlackRock 9/28/2020-1/27/2021	N/A
Bailey Mine (nation's largest underground coal complex in Southwestern Pennsylvania); Enlow Fork Mine	Consol Energy Inc.	N/A	BlackRock, Vanguard: 12/31/2020 Nasdaq	N/A
Cumberland mine in Greene County	Contura Energy Inc.	N/A	BlackRock: article Yahoo! Finance	N/A
Mariner East pipeline in Pennsylvania	Suncoco	Bank of America, JPMorgan Chase: 2019-2020	N/A	Liberty Mutual: certificate of insurance
Actively developing in Marcellus and Utica Shales, hydraulic fracturing	EQT Corporation	Bank of America, Royal Bank of Canada, JPMorgan Chase: 2020 JPMorgan Chase: 12/31/2020 Nasdaq - JPMorgan Chase	Vanguard, BlackRock: 12/31/2020 Nasdaq	N/A

All data in the chart is derived from financial data bases/platforms (Nasdaq/Yahoo! Finance/Fintel) RAN's 2021 published report, *Banking on Climate Chaos*: "Financing by Bank or Client," or a certificate of insurance.

*This list is not exhaustive.

**Underwriting bonds and share issuances, loans, and/or ownership of stock/institutional investor.

***Shareholder/institutional investor, ownership of stock.

****N/A is because there is a lack of transparency.

For decades, the Appalachian region, including rural communities in Pennsylvania, West Virginia, and Ohio, has suffered from boom and bust economic perturbations and persistent pollution caused by the fossil fuel industry. Despite Appalachia's rich natural resources, the region has a history of economic hardship and extraction-related health issues.⁴²⁵ This region exemplifies

⁴²⁵ Food and Water Watch. (2020, September 21). *Cracked: The Case For Green Jobs Over Petrochemicals In Pennsylvania*. <https://www.foodandwaterwatch.org/insight/cracked-case-green-jobs-over-petrochemicals-pennsylvania>

how fossil fuel companies and their investors target low-income communities: the top three fracking counties in Virginia (Buchanan, Wise, and Dickenson) are in the state's ten most impoverished counties, and six of the seven counties in Pennsylvania with the most fracking wells have poverty levels below the state's average.⁴²⁶

A study done on Appalachian fracking communities found that methane and ethane were respectively six times and twenty-three times higher in homes close to natural gas wells, and methane was found in 82% of drinking water samples.⁴²⁷ A 2017 study that examined the health records of 1,125,748 infants born in Pennsylvania from 2004 to 2013, found negative health effects for infants born to mothers living within three kilometers of a fracking site during pregnancy.⁴²⁸ The researchers also found a 25% increase in the probability of a low-birth-weight newborn for mothers living within one kilometer of a fracking site and significant declines in average birth weight, as well as an index of other infant health issues.⁴²⁹ A study that examined pregnant women residing close to a shale gas well from 2003 to 2010 in Pennsylvania showed the introduction of drilling increased low-birth-weight and decreased term birth weight, on average, among infants whose mothers lived within 2.5 kilometers of a well, providing further evidence that air pollution from shale gas development threatens infant health.⁴³⁰ Because infant health is directly related to maternal health,⁴³¹ this study also has implications for the health of mothers and women in general.

Despite thorough research revealing the cruel impacts that drilling and refining have on the women in these communities, fossil fuel companies are turning to petrochemicals, and Appalachia has become a frontier for the plastics industry. Plans for petrochemical plants are appearing across the region: Shell is currently constructing a plant in Beaver County, which has a poverty rate above the national average.⁴³² This giant ethane cracker is estimated to produce 1.8 million tons of plastic per year.⁴³³ Just this single plastic project would negate all of Pittsburgh's work combating the climate crisis through 2030.⁴³⁴ According to the Center for Environmental Research and Education at Duquesne University, because shale gas wells have steep declines in production rates, Shell's ethane cracker will require more wells to be drilled to keep the plant running for decades to come.⁴³⁵ Shell claims to support the Paris Agreement⁴³⁶ and states that it "will grow its business in areas it expects to be important in the energy transition, while reducing costs and improving [its] CO₂-intensity performance."⁴³⁷

Similarly, PTTGC America LLC (the U.S. subsidiary of Thailand's PTT Global Chemical) is planning

426 Castelli, M. (2015, May 8). Fracking and the Rural Poor: Negative Externalities, Failing Remedies, and Federal Legislation. *Indiana Journal of Law and Social Equality*, 3(2). <https://www.repository.law.indiana.edu/cgi/viewcontent.cgi?referer=https://redir=1&article=1041&context=ijlse>

427 Ridlington, E. et al. (2015 October). *Dangerous and Close Fracking Near Pennsylvania's Most Vulnerable Residents*. Frontier Group and PennEnvironment Research & Policy Center. https://pennenvironment.org/sites/environment/files/reports/PA_Close_Fracking_scrn.pdf; Jackson, B.R., et al. (2013, July 9). Increased stray gas abundance in a subset of drinking water wells near Marcellus shale gas extraction. *PNAS*, 110(28). <https://doi.org/10.1073/pnas.1221635110>

428 Currie, J., et al. (2017, December 13). Hydraulic fracturing and infant health: New evidence from Pennsylvania. *Science Advances*, 3(12). doi: 10.1126/sciadv.1603021.

429 Ibid.

430 Hill, E.L. (2018, August 13). Shale gas development and infant health: Evidence from Pennsylvania. *Journal of Health Economics*, 61, 134–150. [10.1016/j.jhealeco.2018.07.004](https://doi.org/10.1016/j.jhealeco.2018.07.004)

431 CDC. *Reproductive Health: Pregnancy Complications*. <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pregnancy-complications.html>

432 Food and Water Watch. (2020, September 21). *Cracked: The Case For Green Jobs Over Petrochemicals In Pennsylvania*. <https://www.foodandwaterwatch.org/insight/cracked-case-green-jobs-over-petrochemicals-pennsylvania>

433 The Allegheny. (2020, February 5). VIDEO: AS THE WORLD GRAPPLES WITH PLASTIC POLLUTION, PA'S ETHANE CRACKER PROMISES MORE PLASTIC. <https://www.alleghenyfront.org/as-the-world-grapples-with-plastic-pollution-pa-s-ethane-cracker-promises-more-plastic-2/>

434 Cunningham, N. (2019, March 21). *A Fracking-Driven Industrial Boom Renews Pollution Concerns in Pittsburgh*. Yale School of the Environment; Yale Environment 360. <https://e360.yale.edu/features/a-fracking-driven-industrial-boom-renews-pollution-concerns-in-pittsburgh>

435 Ibid.

436 Shell. *Our Climate Target*. <https://www.shell.com/energy-and-innovation/the-energy-future/our-climate-target.html#iframe=L3dYmFwcHMvY2xpbWF0ZV9hbWJpdGlubi8>

437 Shell. *Shell Energy Transition Report*. <https://www.shell.com/energy-and-innovation/the-energy-future/shell-energy-transition-report.html>

ethane crackers to start in Belmont County, Ohio, which has a poverty rate over two percentage points above the national average.⁴³⁸ PTT Global Chemical expects a final investment decision in 2021 for their planned petrochemical complex in Shadyside, Ohio.⁴³⁹ The complex would be located along the Ohio River and capable of producing approximately 1.6 million tons of polyethylene plastic resin per year, which is used to make a variety of plastic products⁴⁴⁰

Terri Baumgardner, a member of the Beaver county Marcellus Awareness Community, referring to plastics said, “To me, it’s so obvious that they are trying to lock us into fossil fuels.”⁴⁴¹ Liberty Mutual has provided significant insurance coverage for Sunoco’s Mariner East pipeline in Pennsylvania.⁴⁴² Vanguard and BlackRock are major investors in PTT Global Chemical, the company



Shell's cracker plant in Beaver County, PA. (Teake Zuidema)

behind the giant ethane cracker planned for Ohio.⁴⁴³

438 Brelsford, R. (2020, September 14). *PTTGCA advances proposed Ohio petrochemical complex*. Oil&Gas Journal.

<https://www.oj.com/refining-processing/petrochemicals/article/14184078/pttgca-advances-proposed-ohio-petrochemical-complex>.

439 Ibid.

440 Ibid.

441 Holden, E. (2019, October 11). Will a push for plastics turn Appalachia into next 'Cancer Alley'? *The Guardian*. <https://www.theguardian.com/environment/2019/oct/11/plastics-appalachia-next-cancer-alley-fracking-public-health-ethane>

442 Energy Insurance Mutual. Certificate of insurance for Sunoco Pipeline L.P. https://middletowndelcopa.gov/vertical/sites/%7BE08CD8FE-6BF2-4104-AF8F-C16770381A63%7D/uploads/2019-2020_Sunoco_Certificates_of_Insurance.pdf

443 Fintel. TH:PTTGC-R / PTT Global Chemical PCL. <https://fintel.io/so/th/pttgc-r>

6i. Covid-19

Many of the same communities discussed in the case studies above are suffering the worst outcomes from the Covid-19 pandemic, as disproportionate impacts are occurring in terms of both race and gender. The health and economic consequences from the pandemic in frontline communities are exacerbated by long-term exposure to pollutants emitted by nearby refineries, drilling sites, and other fossil fuel activity.

Extensive data has been published by the Center for Disease Control, Johns Hopkins University, and other health institutions revealing higher Covid-19-related deaths and infection rates in African American/Black/African Diaspora and Latinx communities.⁴⁴⁴ Moreover, this data shows that within predominantly white communities, African American/Black/African Diaspora and Latinx residents account for a larger percentage of the Covid-19 cases.⁴⁴⁵ African American/Black/African Diaspora and Latinx people are three times more likely to contract the virus and are nearly twice as likely to die from the virus as white people.⁴⁴⁶ According to an analysis by APM Research Lab, Native Americans and Alaskan Natives are dying at almost twice the rate of white Americans.; Since the beginning of the pandemic until February, 2021, one in 475 Native Americans have died from Covid-19, while one in 825 white Americans have died.⁴⁴⁷ The racial disparities, both between and within communities, lay-bare the continued existence and impacts of structural racism pervasive across the United States.

Overall, in the year 2020, African American/Black/African Diaspora, Indigenous, and Latinx Americans were at least 2.7 times more likely to die from Covid-19 than white people, adjusted for age.⁴⁴⁸ The fossil fuel industry's pollution and concentration of activity in communities of color ("sacrifice zones"), have contributed to these racial disparities. Communities subjected to elevated levels of particulate matter are associated with higher death rates from Covid-19, even after controlling for other factors such as pre-existing conditions like obesity and diabetes.⁴⁴⁹ A study published by the Oxford Academic Journal found that air pollution, specifically exposure to particulate matter 2.5, is a fundamental cofactor increasing the mortality from Covid-19.⁴⁵⁰ Using models and satellite data, this study found that a significant portion of the global Covid-19 mortality is attributable to anthropogenic air pollution, of which 70-80% in North America is related to fossil fuel combustion.⁴⁵¹ Similarly, a recent study from Harvard's School of Public Health found that the Covid-19 death rate is 15% higher in areas with even slightly increased air pollution than areas with clean air, indicating the link between preexisting conditions from fossil fuel activity and Covid-19 outcomes.⁴⁵²

444 Oppel, R.A. Jr., Et al. (2020, July 5). The Fullest Look Yet at the Racial Inequity of Coronavirus. *The New York Times*. <https://www.nytimes.com/interactive/2020/07/05/us/coronavirus-latinos-african-americans-cdc-data.html>

445 Ibid.

446 Ibid.

447 Lakhani, N. (2021, February 4). COVID-19 Has Killed 1 in 475 Native Americans. *Mother Jones*. <https://www.motherjones.com/coronavirus-updates/2021/02/covid-19-has-killed-1-in-475-native-americans/>

448 Egbert, A., Et al. ((2021, December 21). *THE COLOR OF CORONAVIRUS: 2020 YEAR IN REVIEW*. APM Research Lab.

<https://www.apmresearchlab.org/covid/deaths-2020-review>

449 Covert, B. (2016 February 18). Race Best Predicts whether you Live near Pollution. *The Nation*. <https://www.thenation.com/article/archive/race-best-predicts-whether-you-live-near-pollution/>

450 Pozzer, A, Et al. (2020, December 1). Regional and global contributions of air pollution to risk of death from COVID-19. *Cardiovascular Research*, 116(14), 2247-2253. <https://doi.org/10.1093/cvr/cvaa288>

451 Ibid.

452 Wu, X., Et al. (2020, May 5). *Air pollution linked with higher COVID-19 death rates*. Harvard TH Chan: School of Public Health. <https://www.hsph.harvard.edu/news/hsph-in-the-news/air-pollution-linked-with-higher-covid-19-death-rates/>

Because fossil fuel combustion emits large amounts of PM2.5 particulates as well as other harmful air pollution, it is unsurprising the communities analyzed in the report are experiencing the highest Covid-19 death and infection rates. By August, 2020, Kern County, where Chevron operates thousands of extraction wells (backed by JPMorgan Chase and Vanguard), had turned into one of the worst Covid-19 hot spots in the nation.⁴⁵³ As of September 2020, the five metropolitan communities with the highest Covid-19 infection and death rates were along the Texas Gulf South, including Corpus Christi where Valero's oil refinery (and others) exceeded EPA benzene emissions by 44%.⁴⁵⁴ At the beginning of the pandemic, Weld County in Colorado, where over 23,000 wells produce 91% of the state's oil production, was the hardest hit county in Colorado.⁴⁵⁵ Researchers at the Tulane Environmental Law Clinic found that eight of the 10 Louisiana parishes with the highest Covid-19 death rates are in "Cancer Alley".⁴⁵⁶

A particularly disturbing case of Covid-19 running rampant in a community already ravaged by the pollution from petrochemical plants is along "Cancer Alley" in Louisiana's St. John the Baptist Parish. For decades, this parish has endured higher rates of respiratory illness, kidney disease, diabetes, and cancer: the risk of cancer in this parish is more than 50 times the national average.⁴⁵⁷ Studies have shown that these health conditions, which are all listed by the CDC as preconditions rendering people more vulnerable to Covid-19, are caused by air pollution emitted from the chemical plants, even when controlling for other factors.⁴⁵⁸ As of April, 2020, St. John the Baptist Parish had the highest Covid-19 death rate of any county in the U.S., with a population over 5,000.⁴⁵⁹ African American/Black/African Diaspora residents of St. John make up 32.7% of the population, but have accounted for 70% of the Covid-19 deaths.⁴⁶⁰ The much higher death rate in this parish as compared to the national average has been extensively shown to be caused by pollution from nearby fossil fuel infrastructure.⁴⁶¹ The systematic racism that has persisted for centuries has been brought into ever more shocking light with the disproportionate impacts from Covid-19.

At the beginning of December, 2020, Aitkin County, Minnesota—which includes many rural areas and nearby Indian reservations—was in the middle of a Covid-19 surge, forcing local businesses to pause operations in order to slow the outbreak.⁴⁶² At the same time (on December 1, 2020) Enbridge began establishing "man camps" composed of out-of-state workers to start building their Line 3 pipeline.⁴⁶³ The influx of construction workers is expected to increase

453 Branson-Potts, H. (2020, August). Political battles, confusion reign in Kern County, one of worst U.S. coronavirus hot spots. *Los Angeles Time*. <https://www.latimes.com/california/story/2020-08-17/kern-county-pained-by-confusing-covid-19-guidance>.

454 Fernandez, M., Et al. (2020, August 13). 5 South Texas Communities Have the Country's Highest New Infection Rates. *The New York Times*. <https://www.nytimes.com/2020/08/13/us/coronavirus-south-texas.html>

455 Wingerter, Meg. (2020, June 8). Denver's COVID-19 infection and death rates surpass a flattening Weld County. *Denver Post*. <https://www.denverpost.com/2020/06/08/denver-coronavirus-deaths-infection-rates/>

456 Terrell, K., Et al. (2020 May). *Air Pollution and COVID-19: A Double Whammy for African American and Impoverished Communities in Cancer Alley*. Tulane Law Clinic. <https://law.tulane.edu/sites/law.tulane.edu/files/Files/Terrell%20-%20COVID-19%20-%20PM%202.5%20Louisiana%202020-5-14%20WEB%20VERSION.pdf>

457 Lartey, J., Et al. (2019, May 6). Cancer and chemicals in Reserve, Louisiana: the science explained. *The Guardian*. <https://www.theguardian.com/us-news/2019/may/06/cancertown-chemicals-reserve-louisiana-science#:~:text=St%20John%20the%20Baptist,toxicity%2C%20according%20to%20government%20science>.

458 Lerner, S. (2017, March 4). The Plant Next Door: A Louisiana Town Plagued by Pollution Shows Why Cuts to the EPA Will Be Measured in Illnesses and Deaths. *The Intercept*. <https://theintercept.com/2017/03/24/a-louisiana-town-plagued-by-pollution-shows-why-cuts-to-the-epa-will-be-measured-in-illnesses-and-deaths/>

459 Laughland, O., Et al. (2020, April 7). A Virus Stalks a County with One of the Highest Death Rates in US: 'People Are Dropping like Flies.' *The Guardian*. <https://www.theguardian.com/us-news/2020/apr/07/cancer-alley-coronavirus-reserve-louisiana>

460 Ibid.

461 Terrell, K., Et al. (2020 May). *Air Pollution and COVID-19: A Double Whammy for African American and Impoverished Communities in Cancer Alley*. Tulane Law Clinic. <https://law.tulane.edu/sites/law.tulane.edu/files/Files/Terrell%20-%20COVID-19%20-%20PM%202.5%20Louisiana%202020-5-14%20WEB%20VERSION.pdf>

462 Mizner, L. (2020, December 2). Influx of pipeline workers during COVID-19 surge. *Aitkinage*. https://www.messagemedia.co/aitkin/news/local/influx-of-pipeline-workers-during-covid-19-surge/article_e356a26c-3422-11eb-b4c2-2fd442a26e7d.html

463 Orenstein, W. (2021, January 19). What we know so far about COVID-19 spread among Line 3 workers in northern Minnesota. *MinnPost*. <https://www.minnpost.com/greater-minnesota/2021/01/what-we-know-so-far-about-covid-19-spread-among-line-3-workers-in-northern-minnesota/>

the county's population by 10%.⁴⁶⁴ Riverwood, the rural hospital in Aitkin County, has 25 beds and four intensive care beds, causing serious concern around potential new spikes in the virus; for this reason, at the end of 2020, almost 200 Minnesota health professionals petitioned the governor's office to pause construction of Line 3.⁴⁶⁵ Disregarding pleas from health professionals and widespread opposition amongst the local community, Enbridge has brought numerous "man camps" into rural Minnesota. As of January 19, 2021, Enbridge reported 20 cases of Covid-19 in their workforce, which does not include asymptomatic cases.⁴⁶⁶ Although hospitalization cases are down in the county, there are signs of another spike, including an increasing seven-day positive case average in January, 2021.⁴⁶⁷ Enbridge and their financial backers are placing nearby Indigenous communities at even greater risk given that Native Americans are four times more likely to be hospitalized for Covid-19 than white Americans and 2.7 times more likely to die from the virus.⁴⁶⁸ The Covid-19 risks brought in by Enbridge's "man camps" are even graver for Indigenous women and their families since Indigenous women are often the main providers of food and nutrition to their families.⁴⁶⁹



Gail LeBoeuf, a member of RISE St. James, at a protest in St. John the Baptist Parish, LA, calling to shut down petrochemical plants in St. James and St. John the Baptist Parish. (Julie Dermansky)

464 Mizner, L. (2020, December 2). Influx of pipeline workers during COVID-19 surge. *Aitkinage*. https://www.messagemedia.co/aitkin/news/local/influx-of-pipeline-workers-during-covid-19-surge/article_e356a26c-3422-11eb-b4c2-2fd442a26e7d.html

465 Holden, E. (2020, December 4). A huge oil pipeline is coming to Minnesota – and with it the risk of Covid. *The Guardian*. <https://www.theguardian.com/us-news/2020/dec/04/minnesota-pipeline-aitkin-county-enbridge-coronavirus>

466 Orenstein, W. (2021, January 19). What we know so far about COVID-19 spread among Line 3 workers in northern Minnesota. *MinnPost*. <https://www.minnpost.com/greater-minnesota/2021/01/what-we-know-so-far-about-covid-19-spread-among-line-3-workers-in-northern-minnesota/>

467 Ibid.

468 CDC (2021, February 18). *Risk for COVID-19 Infection, Hospitalization, and Death by Race/Ethnicity*. <https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html>

469 United Nations Department of Economic and Social Affairs: Indigenous Peoples. COVID-19 and Indigenous peoples. <https://www.un.org/development/desa/indigenouspeoples/covid-19.html>

The Covid-19 economic consequences are also unequally affecting women, particularly African American/Black/African Diaspora, Indigenous, Latina/Chicana, and other women of color. According to the National Women's Law Center, in December 2020, women lost 156,000 jobs while men gained 16,000 jobs, and women have accounted for 55% of the 9.8 million jobs lost since the start of the Covid-19 pandemic in February, 2020.⁴⁷⁰ At the end of 2020, the unemployment rate was 9.1% for Latinas/Chicanas, 8.4% for African American/Black/African Diaspora women, 5.7% for white women, and 5.8% for white men.⁴⁷¹ For African American/Black/African Diaspora women aged 20 and older, the jobless rate is 25% higher than the national average for all Americans in that same age group, and for Latinas/Chicanas 20 years and older, the jobless rate is almost 50% higher than the national average for the same age group.⁴⁷² This is in part because more women than men work in sectors hit hardest by the pandemic, including food service and retail. Additionally, according to McKinsey & Company, the gender gap in vulnerability to job losses in the pandemic can be attributed in larger part to "the burden of unpaid care," the demands of which have grown substantially during the pandemic. Women are on the front lines here; they do an average of 75% of the world's total unpaid care work, including childcare, caring for the elderly, cooking, and cleaning."⁴⁷³

The closing of child care centers and the shift to remote schooling due to the pandemic has increased responsibilities that disproportionately fall on women; these gender inequalities at home (e.g. household duties and child care) affect immediate and long-term inequalities in the workplace.⁴⁷⁴ Misty L. Heggeness, a principal economist at the Census Bureau, describes the long-term effects that may result from the pandemic: "mothers will forever be vulnerable to career scarring during any major crisis like this pandemic."⁴⁷⁵

These disproportionate gender and race based impacts of the pandemic are exacerbated by the fossil fuel pollution that is enabled by the financial institutions identified in this report.

470 Connley, C. (2021 January 11). A year ago, women outnumbered men in the U.S. workforce, now they account for 100% of jobs lost in December. CNBC. <https://www.cnbc.com/2021/01/11/women-account-for-100percent-of-jobs-lost-in-december-new-analysis.html>

471 Ibid.

472 Modarressy-Tehrani, C. (2020, August 1). Women of color hardest hit pandemic joblessness. NBC News. <https://www.nbcnews.com/news/us-news/women-color-hardest-hit-pandemic-joblessness-n1235585>

473 Madgavkar, A., Et al. COVID-19 and gender equality: Countering the regressive effects. McKinsey & Company. <https://www.mckinsey.com/featured-insights/future-of-work/covid-19-and-gender-equality-countering-the-regressive-effects>

474 Cohen, P. (2020, November 19). Recession With a Difference: Women Face Special Burden. *The New York Times*. <https://www.nytimes.com/2020/11/17/business/economy/women-jobs-economy-recession.html?action=click&module=Spotlight&pgtype=Homepage>

475 Heggeness, M. L. (2020, October 4). Estimating the immediate impact of the COVID-19 shock on parental attachment to the labor market and the double bind of mothers. *Review of Economics in the Household*, 18, 1053-1078. <https://link.springer.com/article/10.1007/s11150-020-09514-x>

Financial Institution Implementation Gaps Regarding Human Rights and the Environment



An educational "Toxic Tour" in front of an oil rig next to a residential neighborhood in Kern County, CA. (CCEJN)

Financial Institution Implementation Gaps Regarding Human Rights and the Environment

Fossil fuel company operations are only possible because businesses have bankers, asset managers, and insurers supporting their activities. It is essential to highlight financial institutions' responsibility in preserving the fossil fuel-based economy and financial institutions' complicity in the abuses against the environment, Indigenous women, women of color, low-income women, and Indigenous rights that stem from fossil fuel activity.

All businesses and financial institutions are tied to human rights protection duties under the UN Human Rights High Commissioner's Guiding Principles on Business and Human Rights (Guiding Principles).⁴⁷⁶ The Guiding Principles state "the scale and complexity of the means through which enterprises meet that responsibility may vary according to these factors and with the severity of the enterprise's adverse human rights impacts."⁴⁷⁷ Because fossil fuel activity poses particularly severe threats to human rights (delineated in sections five and six above), financial institutions backing fossil fuel companies have an even greater responsibility to supervise, monitor, and mitigate adverse human rights impacts. Detrimental health and safety impacts affecting African American/Black/African Diaspora, Indigenous, Latina/Chicana, and low-income women stemming from fossil fuel activity place the businesses financing, insuring, and investing in oil and gas infrastructure at the forefront of upholding human rights. **Shamyra Lavigne, a Member of RISE St. James**, describes these breaches to intrinsic human rights resulting from fossil fuel activity in her community of St. James Parish, Louisiana:

"Basic human rights have been violated... I believe as humans we have the right to clean air and clean water, and these [fossil fuel] industries prevent us from being able to have this constant need. And it is affecting our health here and it is causing people to have illnesses and to have cancer... So I do believe it's a human rights [violation]."⁴⁷⁸

This report identifies Vanguard, BlackRock, Capital Group, JPMorgan Chase, Royal Bank of Canada, Bank of America, and Liberty Mutual as some of the largest financial institutions financing, insuring, and investing in fossil fuel companies operating across the U.S. and parts of Canada.

All seven of these financial institutions have voiced support of the Paris Agreement via statements or by signing various frameworks like the Equator Principles. Key objectives of the Paris Agreement include: (1) leveling-off global greenhouse gas emissions as soon as possible, and becoming carbon neutral no later than the second half of this century; and (2) requiring that the 186 countries responsible for 90% of global greenhouse gas emissions meet their carbon reduction targets, which are nationally determined.⁴⁷⁹ Because China, the United States, and

⁴⁷⁶ OHCHR. (2011). *Guiding Principles on Business and Human Rights: Implementing the United Nations 'Protect, Respect and Remedy' Framework*. https://www.ohchr.org/documents/publications/guidingprinciplesbusinesshr_en.pdf

⁴⁷⁷ Ibid.

⁴⁷⁸ Lavigne, S. (2020, November, 25). WECAN Interview.

⁴⁷⁹ UNFCCC. *Key aspect of the The Paris Agreement*. <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement/key-aspects-of-the-paris-agreement>; Denchak, M. (2021, February 19). *Paris Climate Agreement: Everything You Need to Know*. NRDC. <https://www.nrdc.org/stories/paris-climate-agreement-everything-you-need-know>

the nations that make up the European Union are the biggest contributors to global greenhouse gas emissions on an absolute basis, these countries have a greater responsibility to make reduction commitments.⁴⁸⁰ The United States, historically the largest contributor to greenhouse gas emissions and currently the world's second biggest carbon-emitter,⁴⁸¹ committed to cutting overall greenhouse gas emissions by 26-28% below 2005 levels before 2025.⁴⁸² It is also possible that given the new Biden Administration's efforts to address the climate crisis, there may be stronger commitments for greenhouse gas emission reductions as the world prepares for the United Nations Framework Convention on Climate Change COP 26 planned for November, 2021. Extensive research has exposed the unsuitability of fossil fuel extractive activities to the Paris Agreement targets; carbon emissions from the oil and gas industries "would take the world beyond 1.5°C [of warming]" and "[t]he potential carbon emissions from the oil, gas, and coal in the world's currently operating fields and mines would take us beyond 2°C of warming."⁴⁸³ The Paris Agreement also states that "[p]arties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities... as well as gender equality [and] empowerment of women."⁴⁸⁴

Five of this report's seven identified financial institutions, Vanguard, BlackRock, Royal Bank of Canada, Capital Group, and Liberty Mutual, have signed the Principles for Responsible Investment (PRIs). The PRIs, launched by the UNEP Finance Initiative, are a set of voluntary standards which assess signatories' Environmental, Social and Corporate Governance (ESG) performances.⁴⁸⁵ The PRIs joined several initiatives to act on climate change, including the Climate Action 100+, the Investor Agenda, the Montreal Carbon Pledge, the Net-Zero Asset Owner Alliance, InitiativeClimate International, and the Transition Pathway Initiative, most of which commit to reducing carbon investment to align with the Paris Agreement targets.⁴⁸⁶ Furthermore, the PRIs consider the protection of human rights crucial to the progress of ESG investment and plan to include a human rights assessment to their Reporting Framework by 2022.⁴⁸⁷ The goal is to eventually make this assessment mandatory.⁴⁸⁸ Notably, the PRIs "launched an effort to promote and respect the rights of Indigenous Peoples around the world..." by "adopt[ing] an Indigenous Peoples policy that recognizes [the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)]," especially Indigenous Peoples' right to Free, Prior and Informed Consent.⁴⁸⁹

Likewise, JPMorgan Chase, Royal Bank of Canada, and Bank of America are signatories to the Equator Principles (EPs). The EPs refer to a social and environmental risk management framework, which is adopted on a voluntary basis by financial institutions. The EPs support the goals

480 Center for Climate and Energy Solutions. (2019). *Global Emissions*. <https://www.c2es.org/content/international-emissions/>

481 Ibid.

482 Biniarz, S. (2020, March 11). *Returning To Paris: The Next U.S. "NDC."* Climate Law Blog Sabin Center for Climate Change Law. <http://blogs.law.columbia.edu/climatechange/2020/03/11/returning-to-paris-the-next-u-s-ndc/>

483 Muttitt, G. (2016, September 22). *The Sky's Limit: Why the Paris Climate Goals Require a Managed Decline of Fossil Fuel Production*. Oil Change International. <http://priceofoil.org/2016/09/22/the-skys-limit-report/>

484 UNFCCC. *The Paris Agreement*. https://unfccc.int/files/meetings/paris_nov_2015/application/pdf/paris_agreement_english_.pdf

485 PRI. *What are the Principles for Responsible Investment*. <https://www.unpri.org/pri/what-are-the-principles-for-responsible-investment>

486 PRI. *Climate Change*. <https://www.unpri.org/sustainability-issues/climate-change>

487 PRI. (2020, October 22). *Principles For Responsible Investment Sets New Human Rights Expectations For Investors*. <https://www.unpri.org/news-and-press/principles-for-responsible-investment-sets-new-human-rights-expectations-for-investors/6638.article>

488 Ibid.

489 First Peoples Worldwide. *Investors and Indigenous Peoples: Trends in Sustainable and Responsible Investment and Free, Prior, and Informed Consent*. <http://www.firstpeoples.org/uploads/InvestorsAndIPs.pdf>

set forth by the Paris Agreement and express dedication to improve the information available on hazards caused by the EP Financial Institutions (EPFIs).⁴⁹⁰ The EPs also state the need for “robust standards” on protecting Indigenous Peoples’ rights as “[all] projects affecting Indigenous Peoples will be subject to a process of Informed Consultation and Participation, and will need to comply with the rights and protections for Indigenous Peoples contained in relevant national law, including those laws implementing host country obligations under international law. IFC Performance Standard 7 paragraphs 13-17 detail the special circumstances that require the Free, Prior and Informed Consent (FPIC) of affected Indigenous Peoples....”⁴⁹¹

And yet, even as signatories of the EPs, alongside similarly expressed support of environmental and social risk management and Indigenous rights protections in their individual policies, JPMorgan Chase, Royal Bank of Canada, and Bank of America continue to provide financing to Enbridge, the company behind Line 3, and other companies whose operations are harming communities and the environment, and are violating Indigenous rights.

The following section of the report outlines how the seven identified financial institutions have made statements and signed frameworks specifying their support of sustainability, the Paris Agreement, and human and Indigenous rights international standards. We are providing a partial listing. The purpose of presenting some of these financial institutions’ signed human rights and environmental frameworks, internal ESG guidelines, and other international guidelines and instruments is to highlight the gap between the financial institutions’ claimed objectives and the actual implementation and achievements of what has been stated and signed. As a result of our research findings, we are calling for real action: financial institutions must improve implementation of ESG policies, uphold the International Bill of Human Rights and the UN Guiding Principles on Business and Human Rights, and provide genuine consultative processes with affected communities with special attention to Free, Prior and Informed Consent. This gap must be remedied— for detailed recommendations concerning how financial institutions can chart a path forward we advise, amongst others, the following reports: *Free, Prior and Informed Consent Due Diligence Questionnaire*⁴⁹² and *Consent is Everybody’s Business: Why banks need to act on free, prior and informed consent*.⁴⁹³

7a. Bank of America

According to a report published by Rainforest Action Network, BankTrack, Indigenous Environmental Network, Oil Change International, Reclaim Finance, and the Sierra Club in 2021, Bank of America is the fourth largest bank financing the fossil fuel industry in the world.⁴⁹⁴ Since the Paris Agreement, the bank has poured over \$198.452 billion into the fossil fuel industry.⁴⁹⁵ Additionally, Bank of America is the fourth largest banker of fossil fuel expansion companies in 2020

490 EPs. (2020, July). The Equator Principles July 2020: A Financial Industry Benchmark For Determining, Assessing And Managing Environmental And Social Risk In Projects. <https://equator-principles.com/wp-content/uploads/2020/01/The-Equator-Principles-July-2020.pdf>

491 Ibid.

492 First Peoples Worldwide: University of Colorado Boulder. *Free, Prior and Informed Consent Due Diligence Questionnaire*. https://www.colorado.edu/program/fpw/sites/default/files/attached-files/fpic_due_diligence_questionnaire-2.pdf

493 Hawkes, S. (2019, August 20). *Consent is Everybody’s Business: Why banks need to act on free, prior and informed consent*. Oxfam, doi: 10.21201/2019.4733. <https://policy-practice.oxfam.org/resources/consent-is-everybodys-business-why-banks-need-to-act-on-free-prior-and-informed-620854/>

494 RAN, Et. al. (2021 March). *Banking on Climate Chaos: Fossil Fuel Finance Report 2021*. <https://www.ran.org/bankingonclimatechaos2021/>

495 Ibid.

and the fourth largest banker of fracked oil and gas in 2020,⁴⁹⁶ making it a significant contributor to water and air pollution, which is jeopardizing the health and safety of communities near fossil fuel activity. Notably, Bank of America increased its financing to both the expansion and fracked sectors from 2019 to 2020.⁴⁹⁷

Bank of America has voluntarily committed to many sustainability and carbon reduction initiatives, including the Carbon Disclosure Project, Task Force on Climate-related Financial Disclosures, the Green Bond Principles, the Partnership for Carbon Accounting Financials, the Carbon Principles, the Greenhouse Gas Protocol, the Business of Environmental Leadership Council, and the Global Compact.⁴⁹⁸ In its 2021 updated Environmental and Social Risk Policy Framework, the bank commits to the goals set-out by the Paris Agreement, explicitly stating its efforts to stay below 1.5°C.⁴⁹⁹ The bank states its “efforts to finance the transition to a low-carbon, sustainable economy;”⁵⁰⁰ yet, this does not align with Bank of America’s role as the fourth largest banker of fossil fuels in the world, since the signing of the Paris Agreement.

Bank of America is a signatory of the PRIs, which support institutions’ responsibilities to respect human rights by the process of: “identify[ing] actual and potential negative outcomes for people, arising from investees” and “prevent[ing] and mitigat[ing] the actual and potential negative outcomes identified.”⁵⁰¹ By providing financing to Enbridge, whose “man camps” have contributed to human trafficking and threaten to perpetuate the MMIWG2S epidemic,⁵⁰² Bank of America is not in alignment with the PRIs. Financing companies at any level that results in the sexual abuse of Indigenous women is not identifying and preventing potential negative outcomes for people.

Bank of America’s 2021 Environmental and Social Risk Policy Framework included that “for transactions in which the majority use of proceeds is attributed to identified activities that may negatively impact an area used by or traditionally claimed by an indigenous community...we expect our clients to demonstrate alignment with the objectives and requirements of the International Finance Corporation (IFC) Performance Standard 7, which addresses impacts to Indigenous Peoples including free, prior and informed consent.”⁵⁰³ Bank of America has provided loans to Enbridge, who has not received tribal consent for their Line 3 pipeline, which will damage sacred sites and tribal territory; rather, many tribes have signed petitions against Line 3 and are actively fighting to stop the construction.⁵⁰⁴ Bank of America’s statement to protect Indigenous Peoples’ rights and abide by FPIC are not being respected, nor implemented.

496 Ibid.

497 Ibid.

498 BankTrack. Bank of America. *Bank Track*, 2020. https://www.banktrack.org/bank/bank_of_america#news

499 Bank of America. (2021, February). *Bank of America Corporation Environmental and Social Risk Policy Framework*. <https://about.bankofamerica.com/assets/pdf/Environmental-and-Social-Risk-Policy-Framework.pdf>

500 Ibid.

501 UNPRI. (2020, October 22). *Why and how investors should act on human rights*. <https://www.unpri.org/human-rights-and-labour-standards/why-and-how-investors-should-act-on-human-rights/6636.article>

502 Lovrien, Jimmy. (2021, February 23). 2 arrests in human trafficking sting were Line 3 workers. *Duluth New Tribune*. https://www.duluthnewtribune.com/news/crime-and-courts/6901823-2-arrests-in-human-trafficking-sting-were-Line-3-workers?fbclid=IwAR3V35CU21sm-daTakaHZOomVnbUp_4kivFJEUxNBEE4uZ0oUOTcCyET8A#.YDZcadl0Z25.facebook

503 Bank of America. (2021, February). *Bank of America Corporation Environmental and Social Risk Policy Framework*. <https://about.bankofamerica.com/assets/pdf/Environmental-and-Social-Risk-Policy-Framework.pdf>

504 StopLine3.org. (2021, January 31). *An Open Letter to Minnesota Decision Makers*. <https://www.stopline3.org/take-action#letter>

In its 2021 Human Rights statement, Bank of America reiterated its commitment to addressing “critical human rights issues, such as economic empowerment, hunger, jobs, improved health, and access to sustainable energy and water...” and declared that its “policies and practices promote and protect human rights, and ... strive to conduct ... business in a manner consistent with the United Nations Universal Declaration of Human Rights, the United Nations Guiding Principles on Business and Human Rights and the International Labor Organization’s Fundamental Conventions.”⁵⁰⁵ Financing companies in the Permian Basin, which have been cited for emitting unsafe levels of sulfur dioxide emissions into communities, disregards communities’ right to health. Financing Enbridge, whose pipeline spilled at least one million gallons of oil into the Kalamazoo river in Michigan, which in turn spilled and leaked oil into communities’ water sources,⁵⁰⁶ is not protecting the right to clean water.

Bank of America has failed to incorporate sufficient policy to restrict financing of tar sands oil and fracked oil and gas, and does not exclude any coal developers.⁵⁰⁷ However, in 2020 Bank of America publicly committed to measure the full carbon footprint of its financing.⁵⁰⁸ In order to fully assess its carbon footprint, the bank will also need to assess the carbon footprints of the individual companies and projects it finances. As an example, Bank of America is providing general corporate financing for companies behind the proposed Wink to Webster Pipeline, which would carry over one million barrels of fracked oil per day from the Permian Basin to terminals near Houston.⁵⁰⁹ In 2020, Bank of America provided over \$1,194 million in fossil fuel financing to Shell, which is one of the four global businesses behind 10% of the world’s carbon emissions since 1965.⁵¹⁰

In February, 2021, Bank of America committed to net zero financed emissions by 2050.⁵¹¹ While the updated policy makes important acknowledgments about the need to preserve biodiversity and respect Indigenous rights,⁵¹² Bank of America continues to finance and invest in companies engaged in extractive and polluting activities, such as Chevron and ExxonMobil.

7b. Liberty Mutual

Liberty Mutual is the world’s fifth largest property-casualty insurance company and the third biggest insurer of the power sector in the U.S., with 11% of the market share.⁵¹³ As of March, 2020, Liberty Mutual had at least \$8.9 billion invested in fossil fuel companies.⁵¹⁴ The insurance company provided a \$15.6 million bond to TC Energy to cover the construction of the Keystone XL pipeline in South Dakota, which was recently halted by the Biden administration.⁵¹⁵ Liberty

505 Bank of America. (2021). *Bank of America Human Rights Statement*. <https://about.bankofamerica.com/assets/pdf/human-rights-statement.pdf>

506 Sierra Club: Michigan Chapter. *Kalamazoo River Disaster*. <https://www.sierraclub.org/michigan/kalamazoo-river-disaster>.

507 RAN. (2019, April). *A Leader No More: An Analysis of the climate-related provisions in Bank of America’s April 2019 Environmental and Social Risk Policy Framework*. https://www.ran.org/wp-content/uploads/2019/04/RAN_Response_BofA_Coal_Policy_April2019.pdf; Reclaim Finance. (2021, February 12). *New Policy Coal: Bank of America*. <https://reclaimfinance.org/site/en/2021/02/12/bank-of-america-fails-the-coal-policy-test/>

508 RAN, Et. al. (2020 March). *Banking on Climate change: Fossil Fuel Finance Report 2020*. <https://www.ran.org/bankingonclimatechange2020/>

509 RAN, Et. al. (2021, March). *Banking on Climate Chaos: Fossil Fuel Finance Report 2021 – FINANCING BY BANK OR CLIENT*. <https://www.ran.org/bankingonclimatechaos2021/>; Bank Track. *Wink to Webster Pipeline*. https://www.banktrack.org/project/wink_to_webster_pipeline

510 Ibid; Taylor, M., Et al. (2019, October 9). *Revealed: the 20 firms behind a third of all carbon emissions*. *The Guardian*. <https://www.theguardian.com/environment/2019/oct/09/revealed-20-firms-third-carbon-emissions>

511 Bank of America. (2021, February 11). *Bank of America Announces Actions to Achieve Net Zero Greenhouse Gas Emissions before 2050..*

<https://newsroom.bankofamerica.com/content/newsroom/press-releases/2021/02/bank-of-america-announces-actions-to-achieve-net-zero-greenhouse.html>

512 Bank of America. (2021, February 11). *Bank of America Corporation Environmental and Social Risk Policy Framework*. <https://about.bankofamerica.com/assets/pdf/Environmental-and-Social-Risk-Policy-Framework.pdf>

513 RAN. *Insurers and Climate Change*. RAN, Oct. 2019 <https://www.ran.org/wp-content/uploads/2019/10/Final-LM-White-Paper.pdf>

514 Sulakshana, E. (2020, March 26). *Liberty Mutual Stands With Tar Sands Oil*. RAN. <https://www.ran.org/the-understory/liberty-mutual-stands-with-tar-sands-oil/>

515 Ibid.

Mutual has provided \$250 million in coverage to the Trans Mountain pipeline in Canada,⁵¹⁶ and it currently insures the Mariner East pipeline in Pennsylvania.⁵¹⁷

In 2019, the company expressed its commitment to a long term decarbonization strategy which involves “supporting the transition to a low-carbon economy” and expanding its investments in renewable energy production.⁵¹⁸ That same year, Liberty Mutual integrated an ESG Review to monitor the environmental impact of oil and gas in credit research.⁵¹⁹ Liberty Mutual announced that it “will not insure new risks for companies with more than 25% exposure to coal; will phase out existing coverage to such companies by 2023; and will end new investments in companies that generate at least 25% of their revenue from coal mining or produce at least 25% of their power from coal.”⁵²⁰ However, “these policies leave the door open for the company to insure ‘hundreds of coal expansion projects;’”⁵²¹ Liberty Mutual still insures some coal projects and owns a coal mine in Australia.⁵²² Liberty Mutual does not mention any restrictions on insuring oil and gas and continues to cover the expansion of the dirty tar sands pipeline system in North America.⁵²³ The company’s involvement with the disastrous social and environmental impacts of the Alberta tar sands operation, which will be facilitated by the Trans Mountain expansion project, does not align with the company’s stated consideration to the UN Sustainable Development Goals: 3 “Good Health and Wellbeing,” 10 “Reduce... Inequalities,” and 13 “Climate Action.”⁵²⁴ The insurance company has also expressed its dedication to align business activities with the principles “guided by the Universal Declaration on Human Rights, [and] the UN Guiding Principles on Business and Human Rights...”⁵²⁵

Although Liberty Mutual is aware of the moral and business risks associated with fossil fuels, it opposes any drastic divestment from fossil fuels claiming that divestment would cause “more harm than good” because the world lacks alternatives to the fossil fuel sector.⁵²⁶ This viewpoint is simplistic and fails to recognize the gendered impacts, racial impacts, and environmental destruction that arise from the tar sands. Liberty Mutual’s 2019 ESG Review acknowledged the financial risks associated with insuring fossil fuels,⁵²⁷ but did not mention any resolutions to address such risks.

Liberty Mutual is also a signatory of the PRIs and claims to consider the UN Global Compact in its businesses; both of these initiatives aim to align with the Paris Agreement targets. Their ongoing insuring of carbon intensive projects and companies is not in alignment with these

⁵¹⁶ Wilderness Committee. *Call on Liberty Mutual to Drop Trans Mountain's Insurance*. <https://www.wildernesscommittee.org/take-action/call-liberty-mutual-drop-trans-mountains-insurance#:~:text=Liberty%20Mutual%20provides%20%24250%20million,stop%20the%20flow%20of%20pipelines>.

⁵¹⁷ Tsarouhis, F. (2020, June 22). *Mass. State Legislators Urge Liberty Mutual To Cut Fossil Fuel Ties*. S&P Global Market Intelligence. <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/mass-state-legislators-urge-liberty-mutual-to-cut-fossil-fuel-ties-59109916>

⁵¹⁸ Cision PRNewswire. (2019, December 13). *Liberty Mutual Insurance Appoints First Chief Sustainability Officer to Oversee Continued Development of Environmental, Social and Governance Agenda*. [https://www.prnewswire.com/news-releases/liberty-mutual-insurance-appoints-first-chief-sustainability-officer-to-oversee-continued-development-of-environmental-social-and-governance-agenda-300974652.html#:~:text=BOSTON%2C%20Dec.,organization's%20first%20Chief%20Sustainability%20Officer;LibertyMutual\(2019\).Environmental,SocialandGovernanceReview2019.https://www.libertyspecialtymarkets.com.au/uploads/liuaustralia/assets/File/Liberty-Mutual-2019-ESG-Review.pdf](https://www.prnewswire.com/news-releases/liberty-mutual-insurance-appoints-first-chief-sustainability-officer-to-oversee-continued-development-of-environmental-social-and-governance-agenda-300974652.html#:~:text=BOSTON%2C%20Dec.,organization's%20first%20Chief%20Sustainability%20Officer;LibertyMutual(2019).Environmental,SocialandGovernanceReview2019.https://www.libertyspecialtymarkets.com.au/uploads/liuaustralia/assets/File/Liberty-Mutual-2019-ESG-Review.pdf)

⁵¹⁹ Liberty Mutual (2019). *Environmental, Social and Governance Review 2019*. <https://www.libertyspecialtymarkets.com.au/uploads/liuaustralia/assets/File/Liberty-Mutual-2019-ESG-Review.pdf>

⁵²⁰ Turner, H.A (2020, October 20). *Liberty Mutual Faces Backlash for 'Fueling the Climate Crisis.'* *Property Casualty 360*. <https://www.propertycasualty360.com/2020/10/20/liberty-mutual-faces-backlash-for-fueling-the-climate-crisis/>

⁵²¹ Ibid.

⁵²² Ibid.

⁵²³ Ibid.

⁵²⁴ Liberty Mutual (2019). *Environmental, Social and Governance Review 2019*. <https://www.libertyspecialtymarkets.com.au/uploads/liuaustralia/assets/File/Liberty-Mutual-2019-ESG-Review.pdf>; UN. *THE 17 GOALS*. <https://sdgs.un.org/goals>

⁵²⁵ Ibid.

⁵²⁶ Ibid.

⁵²⁷ Ibid.

initiatives. Liberty Mutual's insuring of TC Energy's Keystone XL (KXL) pipeline is not in alignment with the UN Global Compact's first principle: "Businesses should support and respect the protection of internationally proclaimed human rights;" international rights include the rights of Indigenous Peoples and FPIC.⁵²⁸ Before the Biden administration halted KXL, The Great Plains Tribal Chairmen's Association wrote an open letter⁵²⁹ to Liberty Mutual's CEO David Long highlighting TC Energy's violation of Indigenous treaty rights and disregard for sacred sites. Liberty Mutual did not respond to the letter.⁵³⁰ The Trans Mountain pipeline expansion project has not "obtained the Free, Prior, and Informed Consent of impacted Indigenous communities,"⁵³¹ thus Liberty Mutual's continuous insuring of the project is not respecting Indigenous Peoples' rights. Such operations are clear breaches of internationally recognized Indigenous rights.

7c. BlackRock

BlackRock is the world's largest investor in fossil fuels.⁵³² At the beginning of 2020, BlackRock held \$87.3 billion invested in fossil fuel portfolios⁵³³ and continues to invest in Enbridge, Chevron, ExxonMobil, Formosa, Shell, Marathon Petroleum, and Occidental Petroleum, or more than half of the companies discussed in this report. In 2021, BlackRock remains "the world's largest asset manager" with \$8.7 trillion managed assets,⁵³⁴ giving the investment company considerable influence over numerous companies.⁵³⁵

In his 2020 Letter to CEOs, Larry Fink expressed dedication to holding sustainable investments, placing climate risk at the center of BlackRock's investment strategy, and increasing carbon pricing.⁵³⁶ This standpoint was reinforced by Larry Fink's 2021 letter to CEOs, which explicitly includes the importance of a "transition to a net zero economy...to keep global warming well below 2°C."⁵³⁷ These statements, amongst others that commit to ESG standards and reducing greenhouse gas emissions, are not in alignment with BlackRock's actual fossil fuel financing practices described in the report and the fact that it remains one of the world's largest investors in coal.⁵³⁸

BlackRock is a signatory of agreements aligned with the Paris Agreement targets, including the PRIs, the UN Global Compact, and the Climate Action 100+ . The UN Global Compact is a set of Ten Principles that establish human rights and environmental responsibilities.⁵³⁹ The Climate Action 100+ ensures that the "world's largest corporate greenhouse gas emitters take necessary

⁵²⁸ UN Global Compact. *The Ten Principles of the UN Global Compact*. <https://www.unglobalcompact.org/what-is-gc/mission/principles>

⁵²⁹ Great Plains Tribal Chairmen's Association. (2020, September 2). Letter to David Long: URGENT: Keystone XL Pipeline. <https://drive.google.com/file/d/15U6RJsOIV5VCvv7V2NNSWTejmrX-pvz/view>

⁵³⁰ Moran, G. (2020, December 13). Indigenous Groups Push Insurers To Abandon Fossil Fuel Projects. *The Intercept*. <https://theintercept.com/2020/12/13/indigenous-pipeline-oil-gas-insurers/>

⁵³¹ Biggs, S. (2020, May 27). URGENT: Insuring the Trans Mountain Pipeline. *Stand.earth*. https://www.stand.earth/sites/stand/files/insuring_the_trans_mountain_pipeline_-_liberty_mutual.pdf

⁵³² BlackRock's Big Problem. *THE PROBLEMS: Funding the Climate Crisis*. <https://blackrocksbigproblem.com/the-problems/>

⁵³³ Partridge, J. (2020, January 14). World's Biggest Fund Manager Vows To Divest From Thermal Coal. *The Guardian*. <https://www.theguardian.com/business/2020/jan/14/blackrock-says-climate-crisis-will-now-guide-its-investments>

⁵³⁴ Hansen, S. (2021, February 17). \$8.7 Trillion Asset Manager BlackRock Is Exploring Bitcoin As Institutions Flood Crypto. *Forbes*. <https://www.forbes.com/sites/sarahhansen/2021/02/17/87-trillion-asset-manager-blackrock-is-exploring-bitcoin-as-institutions-flood-crypto/>

⁵³⁵ Norrestad, F. (2020, October). *December Largest Asset Management Companies Worldwide in 2019, by Managed Assets (in trillion U.S. dollars)*. Statista. <https://www.statista.com/statistics/431790/leading-asset-management-companies-worldwide-by-assets/#:~:text=At%20the%20end%20of%202019,to%207.43%20trillion%20U.S.%20dollars.>

⁵³⁶ Fink, Larry. (2020). Letter to CEOs: A Fundamental Reshaping of Finance. <https://www.blackrock.com/ch/individual/en/larry-fink-ceo-letter>

⁵³⁷ Fink, Larry. (2021). Letter to CEOs: Larry Fink's 2021 Letter to CEOs. <https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter>

⁵³⁸ BlackRock's Big Problem. Vanguard and BlackRock are the world's biggest investors in coal. <https://blackrocksbigproblem.com/vanguard-and-blackrock-are-the-worlds-biggest-investors-in-coal/>

⁵³⁹ UN Global Compact. *The Ten Principles of the UN Global Compact*. <https://www.unglobalcompact.org/what-is-gc/mission/principles>

action on climate change.”⁵⁴⁰ BlackRock adopted disclosure tools such as the Financial Stability Board Task Force on Climate-related Financial Disclosures (TCFD) and the Sustainable Accounting Standards Board, and expects the companies it finances to “include [a] plan for operating under a scenario where the Paris Agreement’s goal of limiting global warming to less than two degrees is fully realized ...”⁵⁴¹ BlackRock also signed the Vatican’s 2019 statement on carbon pricing and climate disclosure to disincentivize companies from engaging in high carbon emitting projects and advocate for greater incorporation of 2°C or lower scenarios.⁵⁴² Finally, BlackRock is a member of the Climate Finance Partnership, a collection of actors from the public and private sector that share the belief that “aggressive action is necessary in order to limit climate change to well below 2°C, keeping a view to a 1.5°C limit, in a manner that harnesses the economic opportunities embedded in the transition to a global low-carbon economy.”⁵⁴³

While BlackRock has made positive statements about mitigating their climate and human rights impacts, the fact remains that BlackRock continues to pour billions of dollars into fossil fuel companies and still lacks a policy that explicitly recognizes the rights of Indigenous Peoples and FPIC.⁵⁴⁴ In March 2021, BlackRock released a memo encouraging FPIC more comprehensively, but the statement still did not explicitly outline accountability mechanisms that would require and ensure that investee companies uphold FPIC and respect Indigenous and human rights.⁵⁴⁵ While this memo is an important step in the right direction, it would need to progress further to actually provide implementation and accountability measures to protect frontline communities.

7d. Royal Bank of Canada

Royal Bank of Canada (RBC) is one of the largest bankers of fossil fuels and a leading banker of tar sands oil.⁵⁴⁶ RBC funded fossil fuels with over \$160 billion from 2016 to 2020 making it one of the largest banks contributing to the climate crisis since the 2015 Paris Agreement.⁵⁴⁷ RBC was the largest banker of tar sands oil in 2020 and has funded a total of \$22.523 billion in tar sands oil from 2016 to 2020.⁵⁴⁸ RBC is the fifth biggest banker of fossil fuel expansion, funding the sector with \$61.106 billion between 2016 and 2020.⁵⁴⁹ In terms of assets, the bank holds the second largest stake in conventional and unconventional oil and gas assets.⁵⁵⁰

By financing fossil fuel operations such as the Trans Mountain Expansion Project,⁵⁵¹ and companies such as Enbridge and Occidental Petroleum,⁵⁵² RBC is not in alignment with their 2017 Cli-

⁵⁴⁰ Climate Initiative Platform. *Climate Action 100+*.

http://climateinitiativesplatform.org/index.php/Climate_Action_100%2B#:~:text=Climate%20Action%20100%2B%20is%20an,necessary%20action%20on%20climate%20change.&text=Investors%20are%20calling%20on%20companies,strengthen%20climate%2Drelated%20financial%20disclosures.

⁵⁴¹ Fink, Larry (2020). Letter to CEOs: A Fundamental Reshaping of Finance. <https://web.archive.org/web/20200812153828/https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter>

⁵⁴² EcoJesuit. (2019, June 15). Energy CEOs Sign Joint Statements At The Vatican On Carbon Pricing And Climate Risk Disclosures. <https://www.ecojesuit.com/energy-ceos-sign-joint-statements-at-the-vatican-on-carbon-pricing-and-climate-risk-disclosures/>

⁵⁴³ Businesswire. (2020, January, 22). Davos 2020 Climate Finance Partnership Press Release.

<https://www.businesswire.com/news/home/20200121006178/en/Davos-2020-Climate-Finance-Partnership-Press-Release>

⁵⁴⁴ BlackRock’s Big Problem. *The Problem: Fossil Fuels*. <https://blackrocksbigproblem.com/the-problems/fossil-fuels/>

⁵⁴⁵ BlackRock. (2021, March). *Our approach to engagement with companies on their human rights impacts: Investment Stewardship*. <https://www.blackrock.com/corporate/literature/publication/blk-commentary-engagement-on-human-rights.pdf>

⁵⁴⁶ RAN, Et. al. (2021, March). *Banking on Climate Chaos: Fossil Fuel Finance Report 2021*. <https://www.ran.org/bankingonclimatechaos2021/>

⁵⁴⁷ Ibid.

⁵⁴⁸ Ibid.

⁵⁴⁹ Ibid.

⁵⁵⁰ Corporate Mapping Project. *Royal Bank of Canada*. <https://www.corporatemapping.ca/profiles/royal-bank-of-canada/#easy-footnote-bottom-21-1784>

⁵⁵¹ Meyer, C., Et al. (2018, June 5). More than \$1 billion will go through seldom-used Canadian account to buy pipeline. *Canada’s National Observer*. <https://www.nationalobserver.com/2018/06/25/news/more-1-billion-will-go-through-seldom-used-canadian-account-buy-pipeline>

⁵⁵² RAN, Et. al. (2021, March). *Banking on Climate Chaos: Fossil Fuel Finance Report 2021 – FINANCING BY BANK OR CLIENT*. <https://www.ran.org/bankingonclimatechaos2021/>

mate Change Position and Disclosure Statement, which claims that RBC “support[s] the principles of the Paris Agreement and the international goal to hold global warming to below 2° Celsius.”⁵⁵³

In September, 2020, RBC expressed that they will stop lending to “new coal-fired power generators, thermal coal mines, or coal mines that require mountaintop removal” and to “new clients that get more than 60 percent of their revenue from thermal coal or coal-fired power generation.”⁵⁵⁴ RBC will “lend to new clients that get some revenue from [fossil fuel] industries if they can show they’re moving away from coal or reducing their greenhouse gas emissions.”⁵⁵⁵ RBC is affiliated with several climate-risk monitoring authorities, such as the Global Reporting Initiative, the Sustainability Accounting Standards Board, the Financial Stability Board Task Force on Climate-related Financial Disclosures, and the Carbon Disclosure Project.⁵⁵⁶ In February, 2021, Royal Bank of Canada announced its commitment to “net-zero emissions in its lending by 2050.”⁵⁵⁷ While this is a step forward, the bank remains one of the largest bankers of fossil fuels and time is of the essence as the climate crisis escalates.

RBC is also a signatory of the EPs and the PRIs, and has stated its alignment with the Social Bond Principles.⁵⁵⁸ The Social Bonds Principles are voluntary process guidelines that increase transparency to investors and promote social goods such as “affordable basic infrastructure (e.g. clean drinking water, sewers, sanitation, transport, energy), [f]ood security and sustainable food systems ... [and] [s]ocio-economic advancement and empowerment (e.g. equitable access to and control over assets, services, resources, and opportunities; and equitable participation and integration into the market and society....”⁵⁵⁹ The Social Bonds Principles target vulnerable groups such as women and “[e]xcluded and/or marginalised populations and/or communities.”⁵⁶⁰ Such targets are oxymoronic to the disastrous environmental and social impacts resulting from the companies and projects that RBC finances.

7e. JPMorgan Chase

JPMorgan Chase is reportedly the largest banker of the climate crisis, with over \$316 billion in fossil fuel financing in the five years after the Paris Agreement was adopted.⁵⁶¹ JPMorgan Chase was the overall leading banker of fossil fuel expansion and Arctic oil and gas, as well as a top banker of tar sands oil, offshore oil and gas, and fracked oil and gas.⁵⁶²

In 2020, JPMorgan Chase approved a “financing commitment” aligned to the goals of the Paris Agreement: JPMorgan Chase’s co-president Daniel Pinto expressed support for “turn[ing] the goals of Paris into a reality.”⁵⁶³ JPMorgan Chase’s financing of fossil fuels does not align with

⁵⁵³ Royal Bank of Canada. (2017). FY2017 Climate Change Position & Disclosure Statement. http://www.rbc.com/community-sustainability/_assets-custom/pdf/RBC_ClimateChangePosition_Disclosure_Statement_2017.pdf

⁵⁵⁴ Weber, B. (2020, October 2). RBC Announces New Restrictions On Financing Coal, Oil Developments. *Global News* <https://globalnews.ca/news/7376077/rbc-coal-oil-financing-restrictions/>

⁵⁵⁵ Ibid.

⁵⁵⁶ BankTrack. (2020, May 4). Royal Bank of Canada (RBC). <https://www.banktrack.org/bank/rbc/pdf>

⁵⁵⁷ RBC. (2021, February 25). RBC announces progress on its climate strategy including new sustainable finance target of \$500 billion by 2025. <http://www.rbc.com/newsroom/news/2021/20210225-sustainable-finance.html>

⁵⁵⁸ Royal Bank of Canada. *Our Commitment to Sustainable Finance*. http://www.rbc.com/community-sustainability/_assets-custom/pdf/OurCommitment_EN.PDF

⁵⁵⁹ International Capital Market Association. (2020 June). *Social Bond Principles: Voluntary Process Guidelines for Issuing Social Bonds*. <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/June-2020/Social-Bond-PrinciplesJune-2020-090620.pdf>

⁵⁶⁰ Ibid.

⁵⁶¹ RAN, Et. al. (2021, March). *Banking on Climate Chaos: Fossil Fuel Finance Report 2021*. <https://www.ran.org/bankingonclimatechaos2021/>

⁵⁶² Ibid.

⁵⁶³ Harker, V. (2020, December 1). Banks Attack Carbon Emissions Through Lending And Investment. *Chamber Business News*. <https://chamberbusinessnews.com/2020/12/01/carbonfree/>

this commitment. More details on the next steps towards sustainable financing are expected to be published in the spring of 2021.⁵⁶⁴ JPMorgan Chase's economists, David Mackie and Jessica Murray, published a report in January, 2020 detailing the economic, social, and epidemiologic effects of climate change and reported that "[t]o contain the change in the climate, global net emissions need to reach zero by the second half of this century."⁵⁶⁵

In the bank's 2020 Environmental and Social Policy Framework, JPMorgan Chase includes a human rights section that explicitly states that "where proceeds may have potential to impact Indigenous Peoples," clients must "demonstrate alignment with the objectives and requirements of IFC Performance Standard 7 on Indigenous Peoples, including with respect to circumstances requiring Free, Prior and Informed Consent."⁵⁶⁶ Despite this internal policy, JPMorgan Chase continues to finance fossil fuel companies that are linked to hazardous consequences for Indigenous women's health and safety. For example, both the bank's financial recipients, Enbridge and TC Energy, have committed violations to Indigenous and human rights. The ongoing financing of projects and companies that systematically contaminate Indigenous Peoples' lands contravening Indigenous Peoples' rights to health, to life, and to healthy food and water, does not align with JPMorgan Chase's stated commitment to respect human rights,⁵⁶⁷ which is specified in the bank's Code of Conduct.⁵⁶⁸

The bank's 2020 Environmental and Social Policy Framework also prohibits the development and financing of coal mining companies "whose businesses are more than 50% coal mining" but this "amounts to less than 0.6% of [JPMorgan Chase's] overall \$196 billion lending to the [fossil fuel] sector over the last three years."⁵⁶⁹ Their framework restricts transactions with clients involved in oil sands development by subjecting them to "enhanced review," however, it does not mention any prohibitions.⁵⁷⁰

7f. Vanguard

At the beginning of 2021, Vanguard owned \$268.87 billion of fossil fuel investments, and about 5.95% of their assets are flagged.⁵⁷¹ It is the world's biggest investor in coal, which is responsible for over 30% of global carbon emissions.⁵⁷² Vanguard has invested in at least one company from almost every case study in the report and is therefore complicit in the numerous detrimental impacts on communities stemming from fossil fuel activity that are detailed in sections five and six.

Despite Vanguard's continued support of the dirty energy sector, in 2020 Vanguard acknowl-

⁵⁶⁴ JP Morgan Chase & Co. *Sustainability*. <https://www.jpmorganchase.com/impact/sustainability>

⁵⁶⁵ Mackie, D., Et al. (2020, January 14). *Special Report: Risky Business: the Climate and the Macroeconomy*. JP Morgan Economic Research. https://extinctionrebellion.uk/wp-content/uploads/2020/02/JPM_Risky_business_the_climate_and_the_macroeconomy_2020-01-14_3230707.pdf.pdf

⁵⁶⁶ JPMorgan Chase. (2020, February). *Environmental and Social Policy Framework as of February 2020*. JPMorgan Chase. <https://www.jpmorganchase.com/content/dam/jpmc/jpmorgan-chase-and-co/documents/environmental-and-social-policy-framework.pdf>

⁵⁶⁷ JPMorgan Chase & Co. *Human Rights*. <https://web.archive.org/web/20150310145642/http://www.jpmorganchase.com/corporate/About-JPMC/human-rights.htm>

⁵⁶⁸ JPMorgan Chase & Co. (2014, June). *Code of Conduct*. <https://web.archive.org/web/20150329193719/http://www.jpmorganchase.com/corporate/About-JPMC/document/FI-NAL-2014CodeofConduct.pdf>

⁵⁶⁹ Harder, A. (2020, February 24). *JPMorgan Chase To Pull Support For Some Fossil Fuels*. Axios. <https://www.axios.com/jp-morgan-fossil-fuels-support-4b755a24-d57c-4d8b-8424-a401e994ec89.html>

⁵⁷⁰ JPMorgan Chase. (2020, February). *Environmental and Social Policy Framework as of February 2020*. JPMorgan Chase. <https://www.jpmorganchase.com/content/dam/jpmc/jpmorgan-chase-and-co/documents/environmental-and-social-policy-framework.pdf>

⁵⁷¹ Fossil Free Funds. *Vanguard*. <https://fossilfreefunds.org/families?q=Vanguard>

⁵⁷² BlackRocks Big Problem. Vanguard and BlackRock are the world's biggest investors in coal. <https://blackrocksbigproblem.com/vanguard-and-blackrock-are-the-worlds-biggest-investors-in-coal/>

edged that “climate change represents a profound, fundamental risk to investors’ long-term success” and promised to “continue to raise [its] voice on climate change.”⁵⁷³ Vanguard explicitly supports the Paris Agreement standards and “encourages companies to set targets that align with these goals and to disclose them.”⁵⁷⁴

In a press release, Vanguard declared its commitment to achieve 100% renewable energy by 2021 and reach carbon neutrality by 2025.⁵⁷⁵ Vanguard uses environmental, social, and governance (ESG) index funds, coined as “socially responsible investment,” as a way to address the climate crisis.⁵⁷⁶ The ESG funds are based on a screening process that excludes companies involved in harmful activities, such as oil and coal producing companies,⁵⁷⁷ and companies that exhibit activities detrimental to the UN Global Compact Principles.⁵⁷⁸ Vanguard also describes the ESG ETFs as an important step to the group’s goal to reach the UN Sustainable Development Goals.⁵⁷⁹ According to a Morningstar report ranking asset managers incorporating ESG factors into investment decisions, Vanguard was given a low score “because [its] sustainable strategies accounted for only a fraction of assets under management and its ESG team is relatively small.”⁵⁸⁰

Vanguard is also a signatory and supporter of the PRIs, the TFCF, and the Sustainability Accounting Standards Board.

7g. Capital Group

Capital Group is one of the world’s largest investors in coal plant development with bonds and shares worth US \$9 billion.⁵⁸¹ Capital Group invests in Enbridge, Chevron, and Shell—three fossil fuel companies operating across several of the report’s case studies.

Capital Group systematically incorporates ESGs to screen their investments, and has “opted to engage with companies to encourage more climate-friendly action to accompany the transition to a low-carbon economy.”⁵⁸² This involves “quantifiable financial and nonfinancial barometers, such as carbon emissions and executive compensation.”⁵⁸³ Capital Group’s ESG policy statement published in November, 2020 reiterated support of the Paris targets, its “acknowledgement” of the Universal Declaration of Human Rights, and its “leverage” of the UN Global Compact,⁵⁸⁴

573 Vanguard. (2020, June, 24). Vanguard Investment Stewardship Insights: How Vanguard Addresses Climate Risk. https://www.vanguardfrance.fr/documents/how-vanguard-addresses-climate-risk_eu_en_pro.pdf

574 Ibid.

575 Ibid.

576 Ibid; Vanguard. ESG Strategies. <https://advisors.vanguard.com/investments/approach/esg-strategies>

577 FoxBusiness. (2020, September). Vanguard, Blackrock Add New Climate-focused ETFs As Demand Soars.

<https://www.foxbusiness.com/markets/vanguard-blackrock-add-new-climate-focused-etfs-as-demand-soars>; Vanguard. ETFs Explained. <https://www.vanguardinvestor.co.uk/investing-explained/what-are-etfs>

578 Vanguard. (2020, September 24). Vanguard Launches ESG U.S. Corporate Bond ETF. CISION PR Newswire.

<https://www.prnewswire.com/news-releases/vanguard-launches-esg-us-corporate-bond-etf-301137536.html>

579 Jones, M. (2018, September 18). Opinion: As Vanguard Launches A Sustainable-investing ETF, Its Low Fees Are Only One Of The Factors To Consider. MarketWatch.

<https://www.marketwatch.com/story/as-vanguard-launches-a-sustainable-investing-etf-its-low-fees-are-only-one-of-the-factors-to-consider-2018-09-28>; Miralles-Quirós, J.L. Et al. (2020, June 29). Sustainable Development Goals and Investment Strategies: The Profitability of Using Five-Factor Fama-French Alphas. Sustainability (Basel, Switzerland) 12(5), 1842. <https://doi.org/10.3390/su12051842>

580 InvestmentNews by Bloomberg News, (2020, November 18). Vanguard, Fidelity fall short in ESG fund ratings. <https://www.investmentnews.com/vanguard-fidelity-fall-short-esg-ratings-199474>

581 BankTrack. (2019, December 6). Banks and Investors Against the Future. https://www.banktrack.org/article/banks_and_investors_against_the_future

582 Capital Group. (2016, August). Investing in a Context of Climate Change: Capital Group’s Approach.

https://dps17pmz5b6vt.cloudfront.net/uploads/media/3709/CG_ii-climate-change-201609.pdf

583 Petersen, A. (2018, September 30). Our Distinctive Approach to Sustainable Investing. Capital Group.

<https://www.capitalgroup.com/pcs/insights/articles/sustainable-investing.html>

584 Capital Group. (2020, November). ESG Policy Statement. <https://www.capitalgroup.com/advisor/pdf/shareholder/ITGEOT-001-643701.pdf>

which set clear principles on businesses' human rights duties and responsibilities to protect the environment. By financially supporting Shell, whose Deer Park refinery was cited for emitting benzene at concentrations above federal action levels, Capital Group is not in alignment with these mentioned initiatives and human rights documents. According to an assessment by ShareAction in 2020, Capital Group is among the poorest performers on human rights.⁵⁸⁵

Capital Group is a part of several alliances that aim to decarbonise financing, including the PRIs and the International Corporate Governance Network (ICGN). The ICGN states a commitment to align with the UN SDGs and calls on investors to “address systemic risks and other externalities” particularly as a result of climate change, and to “understand how company boards are addressing systemic risks and externalities at investee companies.”⁵⁸⁶ Capital Group has ratified and supports several frameworks and disclosures that seek to improve transparency on shares: the Sustainability Accounting Standards Board (SASB), which “identif[ies], manage[s] and report[s] [investors'] sustainability,”⁵⁸⁷ the Investor Advisory Group (IAG), which “recognize[s] the need for consistent, comparable, and reliable disclosure of financially-material, decision-useful environmental, social, and governance (ESG) information to investors,”⁵⁸⁸ and the TCFD. In a statement released in October, 2020, Capital Group supported the TCFD and emphasized its monitoring of carbon intensive activities and promotion of low-carbon emitting alternatives.⁵⁸⁹ If Capital Group is serious about its commitment to the PRIs and other agreements, then it must transition away from fossil fuels and stop investing in companies that are extracting and expanding fossil fuel infrastructure, and furthering human rights abuses.

⁵⁸⁵ ShareAction. (2020, May, 14). *The world's largest asset managers pay lip service to preventing human rights abuse*. <https://shareaction.org/the-worlds-largest-asset-managers-pay-lip-service-to-preventing-human-rights-abuse/>

⁵⁸⁶ ICGN. *ICGN Policy Priorities 2019/2020*. <https://www.icgn.org/sites/default/files/ICGN%20Policy%20Priorities%202019-20.pdf>

⁵⁸⁷ SASB. *SASB*. <https://www.sasb.org/>

⁵⁸⁸ SASB. *Support from Investors*. <https://www.sasb.org/investor-use/supporters/>

⁵⁸⁹ Capital Group. (2020, October). *Task Force on Climate-related Financial Disclosures (TCFD): Statement of Support*. <https://www.capitalgroup.com/advisor/pdf/shareholder/ITGEOT-002-645001.pdf>

Financial and Market Risks



Market and Financial Risks

Financial institutions backing the fossil fuel industry, on any level, are exposed to the physical and transition risks of the climate crisis, and are simultaneously heightening these risks by providing financial support to companies whose activities exacerbate accelerating climate chaos.⁵⁹⁰ These risks arise from the physical threats climate change poses to company's assets and profits, e.g. extreme weather and climate disaster risks, and from the transition risks arising from the move to a lower carbon economy, e.g. regulatory and reputational risks. These risks could strand carbon intensive assets and impact the values of other assets.⁵⁹¹

8a. Regulatory Risks

As the climate crisis exponentially accelerates, and increasing harms to the health and safety of communities arise from climate chaos, fossil fuel companies are exposed to regulatory risks. The potential restrictions from legislative powers and lawsuits are strengthened by the scientific attribution of climate change to anthropogenic activities, and the fact that fossil fuels are the largest source of greenhouse gases.

Regulatory risks, i.e. governments' restrictions to the use of fossil fuels, are an even greater threat in 2021 given that the Biden Administration aims to achieve "a 100% clean energy economy and net-zero emissions no later than 2050."⁵⁹² JPMorgan Chase and BlackRock have both acknowledged⁵⁹³ that Biden's election will increase the "global momentum towards tackling climate change."⁵⁹⁴ In October, 2020, Capital Group recognized that regulatory risks affect their business model and their duty to provide low-carbon solutions.⁵⁹⁵ In the past, government regulations have forced divestment from fossil fuels: increased regulation of carbon emitting projects influenced BlackRock's decision to divest from its thermal coal exposure.⁵⁹⁶ Other regulators are calling for more restrictions; a group of Senators, Representatives, and lawyers in Massachusetts denounced Liberty Mutual's financial choices and "request[ed] the insurer cease insuring new coal projects or companies actively expanding their coal-related business, refuse to cover tar sands projects [such as the Trans Mountain pipeline], and make its underwriting and investments completely emissions-free by 2050."⁵⁹⁷

As an example of an intergovernmental organization taking action: in March, 2021, a large group of UN human rights experts called for a halt to further pollution in "Cancer Alley," and described the pollution-emitting chemical plants as a form of environmental racism that "poses serious

⁵⁹⁰ Gelzinis, G. et al. (2019, November 21). *Climate Change Threatens the Stability of the Financial System*. Center for American Progress. <https://www.americanprogress.org/issues/economy/reports/2019/11/21/477190/climate-change-threatens-stability-financial-system/>

⁵⁹¹ Ibid.

⁵⁹² Krane, J. (2017, April 1). *Climate Change and Fossil Fuel: An Examination of Risks For The Energy Industry and Producer States*. *MRS Energy & Sustainability: A Review Journal*. Published by Cambridge University Press, Page, 4. <https://doi.org/10.1557/mre.2017.3>; Joe Biden.com. *The Biden Plan for Clean Energy Revolution and Environmental Justice*. <https://joebiden.com/climate-plan/>

⁵⁹³ Fink, Larry. (2021). Letter to CEOs: Larry Fink's 2021 Letter to CEOs. <https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter>

⁵⁹⁴ Ward, K., et al. (2020, December). *Investment Outlook 2021: Bridge Over Troubled Waters*. JP Morgan Asset Management. <https://am.jpmorgan.com/content/dam/jpm-am-aem/global/en/insights/market-insights/investment-outlook-2021-eu.pdf>

⁵⁹⁵ Capital Group. (2020, October). *Task Force on Climate-related Financial Disclosures (TCFD): Statement of Support*.

<https://www.capitalgroup.com/advisor/pdf/shareholder/ITGEOT-002-645001.pdf>

⁵⁹⁶ Buckley, T., et al. (2020, January 29). *\$7tn Investor BlackRock Announces Coal Divestment, But Not Across All Funds*. Energypost.eu. <https://energypost.eu/7tn-investor-blackrock-announces-coal-divestment-but-not-across-all-funds/>

⁵⁹⁷ Shemkus, S. (2020, June 18). *Massachusetts Lawmakers Ask Liberty Mutual To Stop Financing Fossil Fuels*. Energy News Network. <https://energynews.us/2020/06/18/northeast/massachusetts-lawmakers-ask-liberty-mutual-to-stop-financing-fossil-fuels/>

and disproportionate threats to the enjoyment of several human rights of its largely African American residents, including the right to equality and non-discrimination, the right to life, the right to health, right to an adequate standard of living and cultural rights.”⁵⁹⁸ Both Vanguard and BlackRock are large investors in Formosa, the company behind the giant plastic plant, which is expected to emit an extra 13 million tons of carbon pollution per year in this region.

Financial institutions’ continuous exposure to fossil fuel infrastructure contravenes international efforts to regulate carbon-intensive activities and consequently exposes these companies to potential regulatory risks. As a result, an emerging body of financial experts are warning about the threat of carbon financing to financial stability. Because regulators have “a legal obligation to protect the prudential safety of banks and other financial firms,”⁵⁹⁹ restrictions on fossil fuel financing will become more and more severe. This would have a grave effect on financial—especially banking—stability: syndicated loans are massively constituted of oil and gas financings, so damage of these loans could cause serious harms to the entire banking sector.⁶⁰⁰

8b. Credit Risks and Stranded Assets

Financing and investing in fossil fuel projects is financially unviable: financial experts increasingly report “climate change could... be the cause of the next systemic financial crisis.”⁶⁰¹

Banks with carbon-intensive fundings are exposed to credit risk stemming from borrowers’ inability to repay their debts.⁶⁰² This can lead to higher “loss-given-default,” or banks losing money as a result of loan defaults.⁶⁰³ For example, a report published by Ceres estimates that climate risks could lead to substantial losses for banks: the largest U.S. banks, such as JPMorgan Chase, are risking an estimated average wide impact loss on syndicated loan portfolios of 18%.⁶⁰⁴ In a statement released in 2019, JPMorgan Chase acknowledged that increased regulatory risks caused by climate change can lead “to credit or investment losses for clients or the Firm.”⁶⁰⁵ As one of the world’s top financiers of extreme oil and gas in Canada, Royal Bank of Canada’s (RBC) loans are at very high risk. Due to the numerous risks attached to fossil fuel infrastructure, many banks have withdrawn funding from fossil fuel companies, which places increased dependence on the remaining banks financing oil, gas, and petrochemical companies, e.g. RBC, JPMorgan Chase, and Bank of America.⁶⁰⁶

Fossil fuel assets are increasingly depreciated.⁶⁰⁷ It is estimated that the value of stranded assets for fossil fuels, i.e. assets that have lost their value, could surpass \$100 trillion by 2050.⁶⁰⁸ The

⁵⁹⁸ UN News. (2021, March 2). *Environmental racism in Louisiana’s ‘Cancer Alley’, must end, say UN human rights experts*. <https://news.un.org/en/story/2021/03/1086172>

⁵⁹⁹ Ford, G. (2020, August 10). *Fossil Fuel Lending is a Financial Stability Issue*. *Environmental Finance*. <https://www.environmental-finance.com/content/analysis/fossil-fuel-lending-is-a-financial-stability-issue.html>

⁶⁰⁰ Ibid.

⁶⁰¹ Bolton, P., Et al. (2020, January). *The Green Swan: Central Banking and Financial Stability In The Age Of Climate Change*. Banque de France, page 1. <https://www.bis.org/publ/othp31.pdf>

⁶⁰² Ibid.

⁶⁰³ Ibid.

⁶⁰⁴ Ceres (2020, October 19). *Financing a Net-Zero Economy: Measuring and Addressing Climate Risk for Banks*. <https://www.ceres.org/resources/reports/financing-net-zero-economy-measuring-and-addressing-climate-risk-banks>

⁶⁰⁵ JP Morgan Chase & Co. (2019, May). *Understanding Our Climate-Related Risks and Opportunities*. <https://www.jpmorganchase.com/content/dam/jpmc/jpmorgan-chase-and-co/documents/jpmc-cr-climate-report-2019.pdf>

⁶⁰⁶ Hudson, M., Et al. (2019, January 11). *Finance, Fossil Fuels, and Climate Change: Networks of Power in Canada*. Transnational Institute. 2019 <https://longreads.tni.org/fr/stateofpower/canada-networks-of-power>

⁶⁰⁷ Krane, J. (2017, April 1). *Climate Change and Fossil Fuel: An Examination of Risks For The Energy Industry and Producer States*. *MRS Energy & Sustainability: A Review Journal*. Published by Cambridge University Press, page 4. <https://doi.org/10.1557/mre.2017.3>

⁶⁰⁸ Ibid.

financial institutions spotlighted in the report are at risk of climate-related asset stranding. The two largest fossil fuels asset managers, Vanguard and BlackRock, have refused to join the investor-led initiative to end fossil fuel subsidies.⁶⁰⁹ Oil, gas, and coal reserves are at risk of becoming stranded assets because of their unpredictability: “[oil, gas, and coal could] become unusable depending on climate legislation.”⁶¹⁰

A report from the Institute for Energy Economics and Financial Analysis stated that from 2009 to 2019 BlackRock lost its investors over \$90 billion in value destruction and opportunity cost in just a few select holdings of mostly fossil fuel heavy investments, which is due largely to ignoring the global climate crisis.⁶¹¹ Pacific Gas & Electric, the utility giant in California, filed for bankruptcy in 2019 due to over \$20 billion in potential liabilities associated with the California wildfires; the *Wall Street Journal* called this “The first climate-change bankruptcy.”⁶¹² BlackRock owned 5% of Pacific Gas & Electric in 2018.⁶¹³

Mercer’s report, *Investing in a Time of Climate Change—The Sequel*, projects that if global warming is limited to 2°C, the fossil fuel sector will see negative investment returns.⁶¹⁴ Under this scenario, the report projects 100% absolute loss of value for the coal sector by 2041, 42% cumulative loss of value for the oil and gas sector by 2030, and 95% by 2050.⁶¹⁵

Capital Group is aware of their exposure to stranded assets, but with \$9 billion invested in coal plant developers, the asset manager is exposed to a depreciation of such shares.⁶¹⁶ The collapse of oil prices has been exacerbated by the Covid-19 pandemic: in July, 2020, ExxonMobil (with investments from BlackRock and Vanguard) posted its first quarterly loss in three decades, and Shell (with investing from Capital Group, BlackRock, and Vanguard) cut its dividend for the first time since World War II.⁶¹⁷

Financial institutions that do not align their financing and investing with lowering carbon emissions and with the targets of the Paris Agreement encounter risks of major financial losses as the world more assertively addresses the climate crisis. According to the Institute for Energy Economics and Financial Analysis, major oil and gas companies such as ExxonMobil should transform their business model or “they will face bankruptcy or significant shareholder wealth destruction (beyond those already incurred over the last decade), and often much faster than is anticipated, and with dire implications for investors, company employees and communities.”⁶¹⁸ In addition, between 2010 and 2019, over 50 U.S. coal companies fell into bankruptcy.⁶¹⁹ The year

⁶⁰⁹ Nauman, B. (2019, December 9). Global Investor Group Urges Action On Climate Change. *Financial Times*. <https://www.ft.com/content/c740ae38-192a-11ea-97df-cc63de1d73f4>

⁶¹⁰ Ibid.

⁶¹¹ Buckley, T., Et al. (2019, August). *Inaction is BlackRock’s Biggest Risk During the Energy Transition Still Lagging in Sustainable Investing Leadership*. Institute for Energy Economics and Financial Analysis. https://ieefa.org/wp-content/uploads/2019/07/Inaction-BlackRocks-Biggest-Risk-During-the-Energy-Transition_August-2019.pdf

⁶¹² Gold, R. (2019, January 18). PG&E: The First Climate-Change Bankruptcy, Probably Not the Last. *The Wallstreet Journal*. <https://www.wsj.com/articles/pg-e-wildfires-and-the-first-climate-change-bankruptcy-11547820006>

⁶¹³ Buckley, T., Et al. (2019, August). *Inaction is BlackRock’s Biggest Risk During the Energy Transition Still Lagging in Sustainable Investing Leadership*. Institute for Energy Economics and Financial Analysis. https://ieefa.org/wp-content/uploads/2019/07/Inaction-BlackRocks-Biggest-Risk-During-the-Energy-Transition_August-2019.pdf

⁶¹⁴ Mercer (2019). *Investing in a time of Climate Change-- The Sequel*. <https://www.mercer.com/our-thinking/wealth/climate-change-the-sequel.html>

⁶¹⁵ Ibid.

⁶¹⁶ BankTrack. (2019, December 6). *Banks and Investors Against the Future*. https://www.banktrack.org/article/banks_and_investors_against_the_future

⁶¹⁷ Reiners, L. (2020, July 24). PANDEMIC BAILOUT OF THE FOSSIL FUEL INDUSTRY HIGHLIGHTS FINANCIAL SECTOR RISKS. The FinReg Blog. <https://sites.law.duke.edu/thefinreg-blog/2020/07/24/pandemic-bailout-of-the-fossil-fuel-industry-highlights-financial-sector-risks/>

⁶¹⁸ Buckley, T., Et al. (2019, August). *Inaction is BlackRock’s Biggest Risk During the Energy Transition Still Lagging in Sustainable Investing Leadership*. Institute for Energy Economics and Financial Analysis. https://ieefa.org/wp-content/uploads/2019/07/Inaction-BlackRocks-Biggest-Risk-During-the-Energy-Transition_August-2019.pdf

⁶¹⁹ Murray, J. (2020, May 6). Charting a decade of US coal company bankruptcies and plant retirements. *NS ENERGY*. <https://www.nsenenergybusiness.com/news/us-coal-company-bankruptcies/>

2020 was very bad for oil and gas: oil rigs shut down, major production paused, and at one point U.S. oil prices turned negative.⁶²⁰ The fossil fuel industry's destabilizing disruptions in 2020, exacerbated and created by the pandemic, "come as a growing number of investors, regulators and even energy giants are projecting bigger shifts in oil demand in the years to come..."⁶²¹ The fracking industry is also poorly profitable to investors: "only a tenth of large shale companies reported positive cash flow in the first quarter of 2019."⁶²² Higher rates of fracking funding and the risk of a financing crunch threaten the fracking sector.⁶²³

8c. Insurance Risks

The degrading value of fossil fuel projects can also impact insurers. A report published by a set of climate advocacy networks pointed out that fossil fuels are losing their attraction as investments.⁶²⁴ According to UN Secretary General António Guterres, investing in fossil fuels is now considered "bad economics."⁶²⁵ The S&P 500 Index has shown a 43% fall in value for U.S. oil and gas companies, and a 98% fall in value for the U.S. coal industry over the last ten years.⁶²⁶ Liberty Mutual received failing scores from Insure our Future's published scorecard, which evaluates insurance companies' fossil fuel policies and other aspects of climate leadership; Liberty Mutual was called out for having particularly weak coal regulating policies.⁶²⁷

Insuring fossil fuel companies could lead to litigation risks: at the end of 2020, there were over 1,500 active climate lawsuits around the world and, as Kate Lennon, who leads Axa XL's climate change working group, said, "It can't be that long until some kind of legal precedent is set in terms of climate change liability."⁶²⁸ Because of climate material risks, insurance companies are decreasingly insuring fossil fuel companies.⁶²⁹ This is in part because insurers of fossil fuel companies face losses from weather changes as a consequence of climate change. It is estimated that "[g]lobal catastrophes resulted in \$56 billion in insured losses in 2019, \$155 billion in 2018, and a record \$350 billion in 2017."⁶³⁰ Hence, oil and gas companies are seeing an increase of insurance groups opting out or refusing to cover damages, e.g. property damages.⁶³¹ A report released by Insure Our Future found that "[t]he number of insurers withdrawing cover for coal has more than doubled in 2019" as "[c]oal exit policies have been announced by 17 of the world's biggest insurers."⁶³² Although Liberty Mutual has adopted a weak coal policy, the insurance company continues to insure the tar sands sector with no restrictions.⁶³³ Moreover, in September, 2020, a group of businesses called on the insurance industry, e.g. Liberty Mutual, to stop "insur-

620 Domanoske, C. (2020, September 15). Oil Demand Has Collapsed, And It Won't Come Back Any Time Soon. NPR. <https://www.npr.org/2020/09/15/913052498/oil-demand-has-collapsed-and-it-wont-come-back-any-time-soon>

621 Ibid.

622 Matthews, C.M., Et al. (2019, June 7). Frackers Scrounge for Cash as Wall Street Closes Doors. *The Wall Street Journal*. <https://www.wsj.com/articles/frackers-scrounge-for-cash-as-wall-street-closes-doors-11559915320>

623 Ibid.

624 Mason, D., Et al. (2020, December). *Insuring our Future: The 2020 Scorecard on Insurance, Fossil Fuels and Climate Change*. Insure Our Future, et al. <https://insureourfuture.co/2020scorecard/>

625 Holder, M. (2020, August 28). UN Chief António Guterres: 'The coal business is going up in smoke.' *Business Green*. <https://www.businessgreen.com/news/4019484/chief-antonio-guterres-coal-business-smoke>

626 Mason, D., Et al. (2020, December). *Insuring our Future: The 2020 Scorecard on Insurance, Fossil Fuels and Climate Change*. Insure Our Future, et al. <https://insureourfuture.co/2020scorecard/>

627 Ibid.

628 Ibid.

629 McComber, K. (2020, April 22). Why the Insurance Industry Must Stop Supporting Fossil Fuels. *Property Casualty 360°*. <https://www.propertycasualty360.com/2020/04/22/why-the-insurance-industry-must-stop-supporting-fossil-fuels/>

630 Ibid.

631 Krane, J. (2017, April 1). Climate Change and Fossil Fuel: An Examination of Risks For The Energy Industry and Producer States. *MRS Energy & Sustainability: A Review Journal*. Published by Cambridge University Press, page 6. <https://doi.org/10.1557/mre.2017.3>

632 Insure Our Future. (2019, December 2). *INSURERS WITHDRAWING COVER FROM COAL PROJECTS DOUBLE IN 2019*. <https://insureourfuture.co/2019scorecardnews/#:~:text=The%20number%20of%20insurers%20withdrawing,insurance%2C%20coal%20and%20climate%20change.>

633 Ibid.

ing and investing in the fossil fuels driving climate change.”⁶³⁴

8d. Reputational Risks

As the accelerating climate crisis continues to place the entire world at risk – and particularly marginalized communities at even greater risk – resistance within society has continued to grow to address and curtail this rapidly growing threat. Groups and movements across the world are organizing in an effort to hold the biggest drivers of environmental destruction and climate change accountable, which includes fossil fuel companies and financial institutions supporting those companies on any level.⁶³⁵

By continuing to finance, insure, and invest in fossil fuel companies and their projects, financial institutions are exposing themselves to increased reputational risks, i.e. “damage to brand value or reputation, lost revenue, or additional capital expenditures.”⁶³⁶ Institutions providing financing to carbon assets and fossil fuel companies are subject to increasing scrutiny. Campaigns that publicize the environmental damage and human and Indigenous rights abuses associated with financing Alberta tar sands projects, plastic refineries in “Cancer Alley,” and other fossil fuel infrastructure, encourage members of society, including customers, employees, and investors, to request policies that limit financing to these companies.⁶³⁷ Reputational risks, which can also result in regulatory risks described in section 8a above, may reduce the attractiveness of a financial institution on the market resulting in a lower overall demand for their services.⁶³⁸ In particular, Vanguard and BlackRock have been accused of “total greenwash[ing]” because of their complete lack of concern for climate risks and insufficient performative sustainable portfolios.⁶³⁹ In 2020, BlackRock, Capital Group, and Vanguard were ranked among the five lowest global asset managers voting in favor of 51 climate-related proposals before the fall of 2020: BlackRock voted for 10% of climate-related proposals, Capital Group 11%, and Vanguard 14%.⁶⁴⁰ In 2019, Capital Group had the poorest voting record in support of environmental solutions, followed by T. Rowe Price, BlackRock, JPMorgan Chase, and Vanguard.⁶⁴¹ In 2019, *The Guardian* reported that Capital Group opposed or abstained from 92% of “climate-related shareholder motions at fossil fuel companies between 2015 and 2019,” while JPMorgan Chase opposed or abstained from 75%.⁶⁴² A report published by economists working for JPMorgan Chase warned of dreadful environmental and financial risks of global warming.⁶⁴³ This acknowledgement spotlights the fact that JPMorgan Chase knowingly funds climate change.⁶⁴⁴ Liberty Mutual’s ongoing insurance coverage of Trans Mountain has also been massively contested by climate and Indigenous

634 Green America. (2020, September 17). In Industry first, 60 Companies Call on US Insurers to Drop Fossil Fuels. <https://www.greenamerica.org/press-release/major-companies-tell-us-insurance-companies-drop-fossil-fuels>

635 Tasman-Jones, J. (2019, November 4). Capital Group Named and Shamed for Voting Against Climate Action. Portfolio Adviser. <https://portfolio-adviser.com/capital-group-named-and-shamed-for-voting-against-climate-action/>

636 Fulton, M., Et al. (2015, July). Carbon Asset Risk: Discussion Framework. World Resources Institute and Finance UNEP Initiative. <https://www.unepfi.org/publications/climate-change-publications/portfolio-carbon-initiative-publications/carbon-asset-risk-framework/>

637 Ibid.

638 Krane, J. (2017, April 1). Climate Change and Fossil Fuel: An Examination of Risks For The Energy Industry and Producer States. *MRS Energy & Sustainability: A Review Journal*. Published by Cambridge University Press, page 6. <https://doi.org/10.1557/mre.2017.3>

639 Business F. (2020, October 25). Chris Hohn Blasts BlackRock and Vanguard Over Climate Change. *Financial Times*. <https://www.ft.com/content/2ea426f2-b338-4921-882b-7c99076489fe>

640 Berridge, R. (2021, January 12). How asset managers can improve their voting record on climate in 2021. GreenBiz. <https://www.greenbiz.com/article/how-asset-managers-can-improve-their-voting-record-climate-2021>

641 Tasman-Jones, J. (2019, November 4). Capital Group Named and Shamed for Voting Against Climate Action. Portfolio Adviser. <https://portfolio-adviser.com/capital-group-named-and-shamed-for-voting-against-climate-action/>

642 Greenfield, P. (2019, October 12). World’s Top Three Asset Managers Oversee \$300bn Fossil Fuel Investments. *The Guardian*. <https://www.theguardian.com/environment/2019/oct/12/top-three-asset-managers-fossil-fuel-investments>

643 Greenfield, P., Et al. (2020, February 9). JPMorgan Economists Warn Climate Crisis Is Threat To Human Race. *The Guardian*. <https://www.theguardian.com/environment/2020/feb/21/jpmorgan-economists-warn-climate-crisis-threat-human-race>

644 Ibid.

rights activists and lawyers; organizations representing more than 24 million members sent an open letter calling on Liberty Mutual, and other insurance companies, to stop supporting Trans Mountain.⁶⁴⁵

⁶⁴⁵ Adriano, L. (2020, August 6). Major petition urges insurers to drop Trans Mountain coverage. *Insurance Business Canada*. <https://www.insurancebusinessmag.com/ca/news/environmental/major-petition-urges-insurers-to-drop-trans-mountain-coverage-229967.aspx>

Recommendations



Water Protectors and a sheriff in front of a Line 3 construction site in Minnesota. (Sarah LittleRedfeather/Honor the Earth)

Recommendations

“The world and our nations must work together to capture and make financial systems accountable. We must make our financial institutions serve the people to protect our planet’s resources for our collective future and well-being.”

Michelle Cook

(DINÉ/NAVAJO) HUMAN RIGHTS LAWYER AND FOUNDER OF DIVEST INVEST PROTECT⁶⁴⁶



Michelle Cook. (DIP/WECAN)

There have been some encouraging signs in that several of the financial institutions in this report have been working to improve their policies on fossil fuel extraction and infrastructure, and human and Indigenous rights— that said, the accelerating climate crisis, ongoing rights violations, and concomitant harms to affected communities demand more immediate and stronger action commensurate with the crises at hand. Additionally, there continues to be a significant need for robust consultation on the ground with frontline communities, Indigenous Peoples, and all affected communities.

JPMorgan Chase, Bank of America, Royal Bank of Canada, and other banks must:

- I. Halt all forms of financing for fossil fuel expansion and infrastructure.
- II. Explicitly commit to phasing out all forms of financing for fossil fuel projects and companies.
- III. Exclude all financing to companies that do not have a clear and explicit timeline to align with limiting global warming to 1.5°C.
- IV. Adopt a full exclusion policy regarding financing for coal power, tar sands, and fracked oil and gas projects, and/or companies.
- V. Commit to reducing the bank’s climate impact to zero by 2050 at the latest, and explicitly define an immediate decline year-on-year from 2021.
- VI. Adhere to and implement mandatory policies that uphold Indigenous Peoples’ rights, including the right to Free, Prior and Informed Consent as outlined in the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) and the UN Guiding Principles on Business and Human Rights.*
- VII. Include direct consultation with Indigenous, frontline, and local communities in decision-making processes in areas where operations impact those communities.
- VIII. Adhere to and implement policies that uphold human rights protection in accordance with the International Bill of Human Rights and the UN Guiding Principles on Business and Human Rights.
- IX. *JPMorgan Chase and Bank of America both mention the IFC Performance Standard 7 (which addresses Indigenous rights and FPIC) in their internal policies, but we are calling on them to adhere to and implement this standard.

⁶⁴⁶ WECAN/DIP. (2018, May 3). *May Calls For Justice Raised By Indigenous Women’s Divestment Delegation During Meetings With Fossil Fuel Funders*. <https://www.wecaninternational.org/PressReleases/Calls-For-Justice-Raised-By-Indigenous-Women%E2%80%99s-Divestment-Delegation-During-Meetings-With-Fossil-Fuel-Funders>

BlackRock, Vanguard, Capital Group, and other asset managers must:

- I. Change proxy voting:
 - A. Vote in favor of Paris Agreement compliance shareholder resolutions to move companies away from oil and gas extraction and other fossil fuel activities,* and
 - B. Halt voting in favor of U.S. energy-proposed resolutions which protect fossil fuel intensive activities.
- II. Make any engagement with companies transparent.
- III. Vanguard and Capital Group must agree to sign up for the Climate Action 100+ which pressures the largest fossil fuel producers to meet carbon dioxide reduction targets.
- IV. Prioritize creating more “climate safe” (i.e fossil fuel free) funds and place these funds as the default option for all clients and investors across its product offerings, and require an opt-in for non climate safe options.
- V. Create higher standards for ESG product screens.
- VI. Expand policies to exclude high emitting companies, including tar sands, fracked oil and gas, and other notorious polluters.
- VII. Commit to reducing the institution’s climate impact to zero by 2050 at the latest, and explicitly define an immediate decline year-on-year from 2021.
- VIII. Expand policies to include the entire global coal exit list, which accounts for all sectors involved in the coal industry, not just thermal coal production companies.
- IX. Eliminate exposure to all fossil fuel assets companies that do not have a clear and explicit timeline to align with limiting global warming to 1.5°C.
- X. Adhere to and implement policies requiring all investee companies to uphold Indigenous Peoples’ rights, including the right to Free, Prior and Informed Consent, as outlined in the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) and the UN Guiding Principles on Business and Human Rights.**
- XI. Include direct consultation with Indigenous, frontline, and local communities in decision-making processes in areas where operations impact those communities.
- XII. Adhere to and implement policies requiring all investee companies uphold human rights in accordance with the International Bill of Human Rights and the UN Guiding Principles on Business and Human Rights.

*This has been suggested by Larry Fink’s latest letter to clients, but whether these promises will materialize has yet to be proven.

**This was suggested by BlackRock’s 2021 memo which encourages FPIC, but does not explicitly outline accountability mechanisms that would require and ensure that investee companies uphold FPIC and respect Indigenous and human rights. While this memo is an important step in the right direction, it would need to progress further to actually provide implementation and accountability measures to protect frontline communities⁶⁴⁷

⁶⁴⁷ BlackRock. *Our approach to engagement on natural capital: Investment Stewardship*. <https://www.blackrock.com/corporate/literature/publication/blk-commentary-engagement-on-natural-capital.pdf>

Liberty Mutual and other insurance companies must:

- I. Halt insurance coverage of Trans Mountain, rule out insuring Line 3, and exit the entire tar sands sector.
- II. Halt all insuring of coal, oil, and gas companies, existing or new, and adopt a coal policy that does not leave room for any insuring of coal projects.
- III. Make any engagement with companies transparent and available to the public.
- IV. Divest all assets from coal, oil, and gas companies that are not in line with a timeline to limit global warming to 1.5°C, including assets managed for third parties.
- V. Commit to reducing its climate impact to zero by 2050 at the latest, and explicitly define an immediate decline year-on-year from 2021.
- VI. Adopt a clear and mandatory policy to cease insuring companies that don't uphold Indigenous Peoples' rights, including the right to Free, Prior and Informed Consent, as outlined in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and the UN Guiding Principles on Business and Human Rights.
- VII. Include direct consultation with Indigenous, frontline, and local communities in decision-making processes in areas where operations impact those communities.
- VIII. Adhere to and implement policies that require companies receiving insurance to uphold human rights in accordance with the International Bill of Human Rights and the UN Guiding Principles on Business and Human Rights.

Steps Forward



Steps Forward

The scope of the report aims to describe the harmful gendered and racial impacts from fossil fuel activity, and spotlight several of the specific financial institutions as drivers of these injustices in the United States and parts of Canada. The report's intent was not to research in-depth the vital topic of solutions. That said, we believe that it is critical to outline several important steps forward as a basis for framing how financial institutions can pivot their activities toward a just, equitable, and healthy future.

Solutions to transition away from a fossil fuel-based economy have been promulgated by communities directly impacted by the fossil fuel industry. These frontline communities have had decades long experience living with fossil fuel extraction and infrastructure and fighting the injustices that spawn from industrial activity. It is critical to amplify this first-hand knowledge of the issues, include their voices and leadership in decision-making, and implement strategies proposed by women leaders and communities living in sacrifice zones. The transition away from fossil fuels must focus on a Just Transition for workers, clean regenerative and renewable energy, accountability and justice, new economic frameworks, and community-led solutions.

Addressing the climate crisis must involve addressing the disproportionate impact fossil fuel activity has on African American/Black/African Diaspora, Indigenous, Latina/Chicana, and low-income women. A central component of this process involves financial institutions acknowledging their role in perpetuating these injustices and being accountable to change their practices. In particular, Royal Bank of Canada, Bank of America, JPMorgan Chase, BlackRock, Vanguard, and Liberty Mutual must be held accountable for their role in financing, insuring, and investing in abuses against women and the planet. Their financial transactions and business relationships must reflect the agreements and commitments made in their policies and statements. The global community, and frontline women especially, need divestment from fossil fuels and respect for human and Indigenous rights immediately.

A 2015 study cited by the United Nations found that 80% of fossil fuel reserves must remain in the ground if the international community is to meet the Paris Agreement goal of a temperature rise below 2°C.⁶⁴⁸ The year 2020 was an extraordinary one for the planet: people were impacted across the globe by record breaking temperatures, the largest wildfires in history, unprecedented back to back hurricanes, and massive floods.⁶⁴⁹ The 2018 UNFCCC Talanoa Dialogue underscored this essential time in history: "We are now at a turning point where policy-makers and civil society are realizing that managing the transition away from fossil fuels is an essential element of achieving climate goals."⁶⁵⁰ Reducing current rates of greenhouse gas emissions through an immediate year on year decline from fossil fuels, and transitioning to an economy based on

⁶⁴⁸ McGlade, C., Et al. (2015, January 7). The geographical distribution of fossil fuels unused when limiting global warming to 2 °C. *Nature*. (517), 187-190. <https://doi.org/10.1038/nature14016>

⁶⁴⁹ World Meteorological Organization. (2020, December 2). 2020 on track to be one of three warmest years on record. <https://public.wmo.int/en/media/press-release/2020-track-be-one-of-three-warmest-years-record>

⁶⁵⁰ Stockholm Environment Institute. (2018). *Aligning fossil fuel production with the Paris Agreement Insights for the UNFCCC Talanoa Dialogue*. https://unfccc.int/sites/default/files/resource/11_12_13_SEI_Talanoa_Fossil_Fuels.pdf

clean, regenerative, renewable energy is essential for all countries. As this occurs, it is vital that the transition places frontline women's wisdom and solutions at the heart of the movement.

Studies across the world have shown that when women are uplifted, there are immense benefits to entire communities and societies overall. Sustainable and local economies grow,⁶⁵¹ and children's health and education improve⁶⁵²—all of which are foundations for a sustainable path forward. Research indicates that involving women in environmental management and decision-making leads to more successful outcomes and improvements in conservation. For example, when allowed to actively participate in disaster planning and response, women show a unique and vital knowledge base and set of skills for effective community rescue, support, rebuilding, and conflict management.⁶⁵³

In order to support the efforts of frontline women and their communities, the United States and Canada must implement a Just Transition that invests in workers and historically marginalized communities. The Climate Justice Alliance (CJA), which represents frontline communities across the U.S., outlines a Just Transition in a set of principles that are rooted in low-income communities of color who have witnessed firsthand the harm industries have had on the health of their communities and the planet.⁶⁵⁴ In alliance with these frontline communities, CJA defines a transition away from polluting industries that also “redress[es] past harms and creat[es] new relationships of power for the future through reparations.”⁶⁵⁵ The process cannot cost workers or community residents their jobs or economic assets: the transition must create new clean energy job opportunities and compensate for job losses, especially for workers who will be directly impacted by changing industries.⁶⁵⁶ **Nayamin Martinez, Executive Director of the Central California Environmental Justice Network in Kern County,** calls for the end of fossil fuel expansion and an immediate commencement of the Just Transition:

“[More oil and gas leases will] increase the air and water pollution that already disproportionately harms communities of color in Kern County. We need a Just Transition away from fossil fuels that protects workers, frontline communities and the environment.”⁶⁵⁷



Nayamin Martinez at a rally opposing oil and gas drilling on public lands in Kern County, CA. (CCEJN)

The Feminist Green New Deal coalition advocates for an intersectional and feminist perspective

651 Shearman, S. (2019, July 30). Want to add trillions to the global economy? Black female founders. *Reuters*. <https://www.reuters.com/article/us-global-women-business/want-to-add-trillions-to-the-global-economy-black-female-founders-idUSKCN1UP0WC>

652 The Partnership for Maternal, Newborn and Child Health, Et al. (2013). *Promoting women's empowerment for Better Health Outcomes for Women and Children*. Partners in Population and Development (PPD) An Inter-Governmental Organization for Promoting South-South Cooperation. https://www.who.int/pmnch/knowledge/publications/strategybriefs/sb_gender.pdf

653 Habtezion, S. (2013). *Gender and disaster risk reduction*. Global Gender and Climate Alliance: United Nations Development Programme.

654 Climate Justice Alliance. *Just Transition: A Framework for Change*. <https://climatejusticealliance.org/just-transition/>

655 Ibid.

656 Justice Transition Alliance. *What is Just Transition*. <http://jtalliance.org/what-is-just-transition/>

657 Center for Biological Diversity. (2020, September 25). *Thousands Oppose First Federal Oil Lease Sale in California in Eight Years*. https://biologicaldiversity.org/w/news/press-releases/thousands-oppose-first-federal-oil-lease-sale-california-eight-years-2020-09-25/email_view/

surrounding the Green New Deal that lays out goals and principles in order to transition to clean energy.⁶⁵⁸ The feminist perspective emphasizes the need to create a regenerative economy, which moves away from an extractive economy in order to protect communities and nature, and that incorporates feminist economics and care work; “women around the world have... disproportionately performed labor like housework, raising children, and elder work” which is “almost always unpaid, undervalued, and invisibilized in economic and social policies.”⁶⁵⁹ The Feminist Green New Deal also states the need to transition away from fossil fuels, “transforming an extractive, unjust status quo into new, socially just and environmentally sustainable economies that respect and balance nature’s regenerative capacity.”⁶⁶⁰

Traditional Ecological Knowledge is an essential framework for addressing the climate crisis. For thousands of years Indigenous Peoples have observed and interpreted changes in the environment; Indigenous knowledge holds abundant expertise and techniques for land management, economic paradigms that respect reciprocity with the natural world, and an ethos of living in harmony with nature.⁶⁶¹ Indigenous Peoples’ vast body of knowledge and land caring approaches must be a foundation for adaptation and mitigation strategies, and Indigenous leaders must be at the forefront of decision-making efforts regarding the climate crisis.

Oil and gas refineries and other large industrial plants often cause economic turmoil in the communities where they are located, e.g. decreasing property values.⁶⁶² Fossil fuel companies force out other businesses, which in turn restrict job opportunities for local residents, forcing workers into industry jobs. **Barbara Washington, a Member of RISE St. James**, describes the economic impact in her community of St. James Parish in Louisiana:

“From one end of the parish to the next end of the parish we can’t buy a pair of shoes... we have to go outside of our parish to shop for big things that we want... they’re saying they need the revenue that comes from the plant... they give them tax exemptions... we don’t see any of that.”⁶⁶³

Investing in clean renewable energy is a lower risk investment opportunity that allows financial institutions to comply with their commitments to the Paris Agreement. When solar or wind generated electricity is made available, it replaces natural gas and coal fired energy in the U.S. and almost every country.⁶⁶⁴ The Energy Information Administration projected that most electric generation added in 2020 could come from wind and solar.⁶⁶⁵ Financial institutions have the opportunity to be a part of the rapidly growing future of clean energy and to invest in frontline communities.

⁶⁵⁸ Recognizing the duty of the Federal Government to create a Green New Deal. H.R. 116th Cong. (2019). <https://ocasio-cortez.house.gov/sites/ocasio-cortez.house.gov/files/Resolution%20on%20a%20Green%20New%20Deal.pdf>

⁶⁵⁹ Feminist Green New Deal. Principles. <http://feministgreennewdeal.com/principles/>

⁶⁶⁰ Ibid.

⁶⁶¹ Bioneers. Indigeneity: Bringing Indigenous Perspectives to Global Conversations. <https://bioneers.org/indigeneity-program/>

⁶⁶² Staudinger, C. (2021, February). St. John Takes, Marathon Takes. *Antigravity*. <https://antigravitymagazine.com/feature/st-john-makes-marathon-takes/>

⁶⁶³ Washington, B. (2020, November 25). WECAN Interview.

⁶⁶⁴ Bird, L. Et al. (2020, May 12). *Setting the Record Straight About Renewable Energy*. World Resources Institute. <https://www.wri.org/blog/2020/05/setting-record-straight-about-renewable-energy>

⁶⁶⁵ U.S. Energy Information Administration. (2020, January 14). *New electric generating capacity in 2020 will come primarily from wind and solar*. <https://www.eia.gov/todayinenergy/detail.php?id=42495>

Crucially, we must ensure justice is respected in the transition to 100% renewable energy. Any solution that does not safeguard the dignity and flourishing of people and the planet must be rejected. False solutions, such as increased natural gas extraction; mega-dams that cause irreversible damage to biodiversity, food sovereignty and livelihoods; geo-engineering; bioenergy; carbon trading schemes; and carbon capture and storage have no place in the Just Transition.

To begin to heal the abuses against the environment and harm done to African American/Black/ African Diaspora, Indigenous, Latina/Chicana, and low-income women, the global community must immediately embark upon the Just Transition to a democratized, decentralized, clean energy future, and remedy social, racial, gender, and economic injustices. This is what is best for all of our communities, and this is a necessity in the fight for a livable and just world for future generations.

As mentioned in Section 7, for important guidance on respecting and upholding human and Indigenous rights as well as FPIC implementation specifically, we recommend, amongst others, the following two reports: *Free, Prior and Informed Consent Due Diligence Questionnaire*⁶⁶⁶ and *Consent is Everybody's Business: Why banks need to act on free, prior and informed consent*.⁶⁶⁷

“The time has come for companies, businesses, institutions, communities, families and individuals to step up and play an active role in transitioning from fossil fuel extraction and consumption to green energy. Our future is at stake.”

Wasté Win Yellowlodge Young

(IHUNKTOWANNA/HUNKPAPA OF THE STANDING ROCK SIOUX TRIBE) FORMER TRIBAL HISTORIC PRESERVATION OFFICER⁶⁶⁸



Wasté Win Yellowlodge Young (Teena Pugliese/ DIP/WECAN)

⁶⁶⁶ First Peoples Worldwide: University of Colorado Boulder. *Free, Prior and Informed Consent Due Diligence Questionnaire*. https://www.colorado.edu/program/fpw/sites/default/files/attached-files/fpic_due_diligence_questionnaire-2.pdf

⁶⁶⁷ Hawkes, S. (2019, August 20). *Consent is Everybody's Business: Why banks need to act on free, prior and informed consent*. Oxfam, doi: 10.21201/2019.4733. <https://policy-practice.oxfam.org/resources/consent-is-everybodys-business-why-banks-need-to-act-on-free-prior-and-informed-620854/>

⁶⁶⁸ WECAN/DIP. (2018, October 9). *Indigenous Women's Delegation Takes Fossil Fuel Divestment Demands To New York City and Washington D.C.* <https://www.wecaninternational.org/PressReleases/Indigenous-Women's-Delegation-Takes-Fossil-Fuel-Divestment-Demands-To-New-York-City-and-Washington-D.C.>

Conclusion



Conclusion

The fossil fuel industry cannot exist without the contamination of land, water, air, and marginalized communities. Due to structural racism and institutional sexism, African American/Black/African Diaspora, Indigenous, Latina/Chicana, and low-income women are disproportionately impacted by the extraction and infrastructure of the fossil fuel industry's destruction towards the Earth. These abuses by the fossil fuel industry are perpetuated by the financial institutions who finance, insure and invest in fossil fuel companies; the harm and the drivers of the harm must be reckoned with and there must be remedy for injustices. It is critical to address the specific interlocking issues of violence against the land and violence against women when approaching environmental justice.

Based on the analysis of first-hand women's accounts, peer-reviewed scientific articles, and other published papers, this report identifies a myriad of links between the fossil fuel activity that particular financial institutions support and threats to the health and safety of African American/Black/African Diaspora, Indigenous, Latinas/Chicanas, and low-income women. These negative impacts have been clearly documented in the eight regions highlighted in the report. However, we recommend that further research be conducted because impacts to frontline women are still under-researched and underreported.

Extraction zones are extensively associated with sexual violence against Indigenous women and girls. "Man camps" are currently being established along Enbridge's Line 3 project in rural Minnesota in the heart of Ojibwe territory. Based on the history of "man camps" and the recent arrest of two Line 3 pipeline workers on charges of human trafficking in February, 2021, these sites will place Indigenous women in danger of rape, sex trafficking, and abuse. More than 40 Indigenous women from communities impacted by tar sands extraction and infrastructure sent an open letter to 70 major banks, insurers, and asset managers, calling on them to respect Indigenous rights and stop providing financial support for the industry destroying their homelands.⁶⁶⁹ By financing Enbridge, JPMorgan Chase, Royal Bank of Canada, Bank of America, BlackRock, Vanguard, and Capital Group are perpetuating safety threats to Indigenous women, breaking Ojibwe treaty rights, violating the right to Free, Prior, and Informed Consent, and endangering Anishinaabe treaty protected natural and cultural resources. Because of the deep and sacred connection between Indigenous Peoples' identity, livelihood and survival, and the land, destroying land and water on Indigenous lands is in essence committing cultural genocide.

Women experience disproportionate health impacts from fossil fuel pollution. For example, air pollution and water contamination have been linked to breast cancer, ovarian diseases, and risks to women's pregnancies. Proximity to fracking has been linked to adverse birth outcomes, including premature births and high risk pregnancies. Fossil fuel activity places additional burdens on women as primary caretakers. Health risks from pollution and fossil fuel driven climate

⁶⁶⁹ Adamson, R., Et al. (2020, October 19). To the CEOs of major global asset managers, banks, and insurers. <https://d99d2e8d-06c9-433b-915d-f6e381b1acd4.usrfiles.com/ugd/d99d2e-d658c651fc514565a4d554b0ef2418e4.pdf>

change, heighten and impede women's daily work and responsibilities. When children, elders, or other family members suffer from illnesses triggered by the proximity of polluting industries—e.g. asthma—women are, in most cases, the ones who end up having to stay home and take care of the sick. The interlocking issues between caretaking and pollution can be seen in St. James Parish in “Cancer Alley,” where residents cannot grow safe food because of fossil fuel derived soil pollution. This soil pollution prevents women from fulfilling this food security role, which includes providing healthy food to their families. Formosa's giant petrochemical plant, planned for a predominantly African American/Black/African Diaspora district in St. James Parish, is estimated to emit 1.6 million pounds of toxic air pollution annually, more than doubling the 1.4 millions pounds already emitted annually by other plants in St. James, like Marathon and Occidental Petroleum.⁶⁷⁰ This would further exacerbate all pollution problems, particularly women's role as the family's caretaker. Marathon and Occidental Petroleum are backed by Vanguard and BlackRock.

Financial institutions must acknowledge their role in perpetuating these and other devastating impacts and others delineated in the report. For too long, these financial actors have profited off the direct disenfranchisement and oppression of women of color and low-income women. By continuing to finance, insure, and invest in fossil fuels, banks, asset managers, and insurance companies are neglecting their commitments to adhere to the Paris Agreement's goals, are breaching international human rights law and treaties, including Indigenous Peoples' right to Free, Prior and Informed Consent, and are neglecting their internal ESG guidelines and agreements regarding frameworks such as the UN Guiding Principles on Business and Human Rights.

As the climate crisis accelerates and the global community transitions to cleaner energy, financial institutions who continue to support fossil fuel companies are exposed to physical and transitional risks, including regulatory, reputational, and financial (i.e. credit risks and stranded assets), as well as specific insurance risks.

Financial institutions have been complicit in the violations against frontline women described in the report. JPMorgan Chase, Bank of America, Royal Bank of Canada, BlackRock, Vanguard, and Liberty Mutual must immediately divest from and stop insurance coverage of fossil fuels. These financial institutions must adhere to and implement mandatory policies upholding human and Indigenous rights, and include direct consultation with Indigenous, frontline, and local communities in decision-making processes in areas where operations impact those communities. These are necessary steps in order for the global community to begin to heal and move towards a Just Transition to a regenerative clean energy future that values all humans equally, regardless of race or gender.

Because the financial, epidemiological, and social research in the report is by no means exhaustive, we hope that the information presented may serve as an antecedent for future research.

⁶⁷⁰ Yawn, A. (2020, March 19). 5 things to know about Formosa, a new petrochemical plant in Cancer Alley. *Tennessean*. <https://www.tennessean.com/story/news/american-south/2020/03/19/5-things-formosa-new-petrochemical-plant-cancer-alley-louisiana/4930430002/>

Due to lack of monitoring and the difficulty of conducting long-term health studies, impacts from fossil fuel pollution and activity need to be more rigorously analyzed to document the full extent of harms. It is imperative that future research investigates what these links mean, especially in areas where systemic racism and patriarchy have left communities with inadequate economic and social benefits.

While the report specifically focuses on the gendered and racial impacts of significant fossil fuel companies and financial institutions in North America, these impacts and experiences are not unique to North American women, but also exist throughout the world. Women in other countries also face death threats and violence because of their resistance to fossil fuel extraction and infrastructure in their communities. In 2019, Global Witness reported that 212 land and environmental defenders were killed protecting their communities and lands from extraction.⁶⁷¹ While this report is specific to North America, its findings, implications, and recommendations can have a global impact for financial institutions supporting the fossil fuel industry elsewhere in the world.

Frontline women have been leading efforts to stop extractive industries, and this report honors the hard work and numerous achievements of individual women and women-led organizations fighting to protect their communities worldwide.⁶⁷²

⁶⁷¹ Global Witness. (2020, July 9). *Defending Tomorrow*. Page 10. <https://www.globalwitness.org/en/campaigns/environmental-activists/defending-tomorrow/>

⁶⁷² WE CAN. *Women Speak*. <https://www.wecaninternational.org/womenspeak>

About WECAN

The Women's Earth and Climate Action Network (WECAN) is a solutions-based, multi-faceted 501c3 non-profit organization established to engage women worldwide in policy advocacy, on-the-ground projects, direct action, trainings, and movement building for global climate justice. Our primary work is with women globally on the frontlines of climate change; in particular, Indigenous women, women of color, low-income women, and underserved communities. We also know that it is essential to work with decision-makers, and, thus, our network also engages with women at the highest levels of government and business.

Due to unequal gender norms globally, women are impacted first and worst by the climate crisis and socio-ecological degra-

dation, and yet one of the untold stories is how women are simultaneously essential actors in local and global solutions. Study after study shows that we must involve women's leadership if we are to succeed in areas of just climate solutions, social equality, and bold transformative change.⁶⁷³

Gender and climate justice are at the core of WECAN's mission.⁶⁷⁴ African American/Black/African Diaspora, Indigenous, Latina/Chicana, and low-income women are central leaders in the intergenerational fight for climate justice. Amongst other program areas, WECAN works with frontline women and communities to organize strategic campaigns and programs to protect their communities and lands.

⁶⁷³ WECAN. *Why Women*. <https://www.wecaninternational.org/why-women>

⁶⁷⁴ WECAN. *About Women's Earth and Climate Action Network, International (WECAN)*. <https://www.wecaninternational.org/about>