

Southern Oregon Climate Action Now

SOCAN

Confronting Climate Change

<https://socan.eco>

Alan R.P. Journet Ph.D.

Cofacilitator

Southern Oregon Climate Action Now

alan@socan.eco

541-500-2331

February 8th 2024

Reference HB4083

Chair Grayber and Members of the House Committee on Emergency Management, General Government, and Veterans:

I write as cofacilitator of Southern Oregon Climate Action Now, an organization of some 2,000 Southern Oregonians who are concerned about the climate crisis and encourage state action to address it. As rural Oregonians, we live on the frontlines of the warming, reducing snowpack, heatwaves, drought and the increasing wildfire risk that these trends conspire to produce. Climate science tells us these trends will continue into the future. Because of this, we pay close attention to what is happening in Salem in terms of legislative proposals.

I write today to offer our profound support for HB4083. Those of us following the reports of the Intergovernmental Panel on Climate Change are very much aware that the IPCC argued several years ago (IPCC 2018) that it is necessary to limit global warming to 1.5°C above pre-industrial levels. This has become sufficiently well accepted that it is now generally accepted as the limit of warming we should allow (e.g., IPCC 2023). The industrial revolution is identified as having occurred in the mid – late 1700s through the early 1800s (e.g., Wilkinson 2023). Some 6 years ago, the IPCC (2018) indicated that global temperatures had reached 1°C above that pre-industrial temperature while IPCC (2023) identified warming as then reaching 1.1°C above the 1850-1900 immediate post-industrial revolution average. In fact, according to NASA (2024) last year the temperature anomaly over land was already 1.5 C above the 1951-9180 average with every month from June onwards beating historic records.

Restricting warming to the targeted upper 1.5°C limit was argued by the IPCC (2018) to require our collectively achieving net zero emissions of greenhouse gases by 2050 where net zero is defined to exist when “...the amount of CO₂ entering the atmosphere must equal the amount that is removed.”

We understand well enough that the greatest contributor to the climate crisis is our extraction, processing and combustion of fossil fuels. Client Earth (2022) pointed out, for example, that “In 2018, 89% of global CO₂ emissions came from fossil fuels and industry.” The EPA (2023) stated: “Human activities are responsible for almost all of the increase in greenhouse gases in the

atmosphere over the last 150 years. The largest source of greenhouse gas emissions from human activities in the United States is from burning fossil fuels for electricity, heat, and transportation.” According to Client Earth (2022) coal, alone, was identified as being responsible for 30% of the warming to that date. Meanwhile, Climate Council (2023) reported: “No matter how you label it, coal is always polluting. In fact, it is the most polluting way to produce electricity. When coal is dug up and later burned in power stations, it releases massive amounts of pollution, damaging our health and contributing to intensifying climate change.” Countering the claim that eliminating coal is too costly, the International Monetary Fund (IMF 2022) indicated that by phasing out coal and replacing it with renewable energy: “the world would yield a net gain of nearly \$78 trillion through the end of this century.” It is therefore unsurprising that between its peak use in 2007 and 2021 electricity generation from coal had dropped 55% in the U.S. (Davis 2022). She ascribed the drop to (1) the price of natural gas, (2) the use of renewable energy, and (3) environmental regulation. Davis (2022) also pointed out that 85% of the electricity generation capacity being retired that year nationwide was coal – fired generators. Clearly, coal is diminishing in its use for power generation. This implies that investing in coal represents a dead end.

Welsby et al. (2021) pointed out that “fossil fuels continue to dominate the global energy system and a sharp decline in their use must be realized to keep the temperature increase below 1.5 °C.” Specifically, they argue: “By 2050 ... nearly 60 per cent of oil and fossil methane gas, and 90 per cent of coal must remain unextracted to keep within a 1.5 °C carbon budget.” Meanwhile Hauenstein (2023) reports that the signatories to the Glasgow United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP26) agreed to phase down coal consumption. Nevertheless, the coal industry is continuing to develop new capacities. He cited reports from Auger et al. (2021) suggesting that “By 2040, one-third of the current mining capacity risks becoming stranded assets” and Van der Ploeg and Rezai (2020) suggesting that the Paris agreement (UN undated a, undated b) urging action to keep warming to 1.5 °C above pre-industrial levels and urging a transition to renewable energy will result in the need to leave substantial fossil fuel reserves unextracted. The resulting stranded assets (LSE&PS 2022) would mean: “Coal-fired power plants are the most exposed to the risk of becoming stranded and would have to retire **10 to 30 years earlier** [than otherwise].”

In terms of the impact of fossil fuel stranded assets, Semieniuk et al. (2022) argue that: “Most of the market risk falls on private investors, overwhelmingly in OECD countries, including substantial exposure through pension funds and financial markets.”

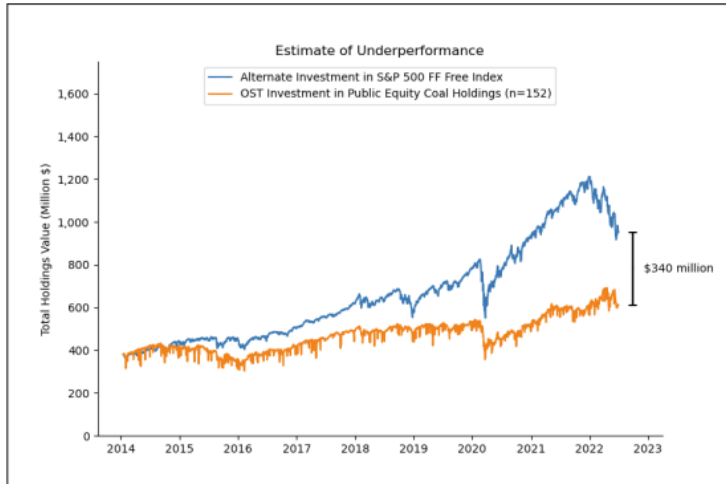


Figure 1. Figure 2: Time series supporting estimate of coal underperformance. Lower line (orange): total value of the 152 coal holdings with available data modeled backward in time from the June 2022 value. Upper line (blue): modeled reinvestment of the January 15, 2014 estimated value in the S&P 500 Fossil Fuel Free Index. (Divest Oregon 2023)

Divest Oregon (2023) reported, as depicted in Figure 1, that over the period 2014-2022 investment portfolios with fossil fuels underperformed those without.

The evidence clearly suggests that wise managers of public investment funds should avoid fossil fuel investment, especially coal investment.

For the above reasons, Southern Oregon Climate Action Now urges that HB 4083, the COAL Act, should be enthusiastically endorsed in the 2024 Oregon Legislative Session.

Respectfully Submitted

Alan Journet

References Cited

Auger T, Trüby J, Balcombe P and Staffell I 2021 The future of coal investment, trade and stranded assets *Joule* **5** 1462–84.

<https://www.sciencedirect.com/science/article/pii/S2542435121002439?pes=vor>

Client Earth 2022 Fossil fuels and climate change: the facts. Client Earth Communications.

<https://www.clientearth.org/latest/news/fossil-fuels-and-climate-change-the-facts/>

Climate Council 2023 Killer coal: just how bad are the health effects of coal? Climate Council.

<https://www.climatecouncil.org.au/killer-coal-just-how-bad-are-the-health-effects-of-coal/#:~:text=No%20matter%20how%20you%20label,contributing%20to%20intensifying%20climate%20change.>

Davis R 2022. 3 reasons US coal power is disappearing – and a Supreme Court ruling won't save it. The Conversation. <https://theconversation.com/3-reasons-us-coal-power-is-disappearing-and-a-supreme-court-ruling-wont-save-it-187254>

Divest Oregon 2023. OST Public Equity Coal Holdings Underperformed by an Estimated \$340 Million. Divest Oregon. <https://www.divestoregon.org/ost-public-equity-coal-holdings-underperformed-by-an-estimated-340-million>

EPA 2023. Sources of Greenhouse Gas Emissions. U.S. Environmental Protection Agency. <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#:~:text=Human%20activities%20are%20responsible%20for,over%20the%20last%20150%20years.&text=The%20largest%20source%20of%20greenhouse,electricity%2C%20heat%2C%20and%20transportation.>

Semieniuk G, Holden P, Mercure J, Salas P, Pollitt H, Jobson K, Vercoulen P, Chewpreecha U, Edwards N. & Viñuales J 2022 Stranded fossil-fuel assets translate to major losses for investors in advanced economies. Nature Climate Change 12: 532–538. <https://www.nature.com/articles/s41558-022-01356-y>

Hauenstein C. 2023. Stranded assets and early closures in global coal mining under 1.5⁰C. Environmental Research Letters 18: 024021 <https://iopscience.iop.org/article/10.1088/1748-9326/acb0e5>

IMF 2022. How Replacing Coal With Renewable Energy Could Pay For Itself. International Monetary Fund Blog. <https://www.imf.org/en/Blogs/Articles/2022/06/08/how-replacing-coal-with-renewable-energy-could-pay-for-itself>

IPCC 2018. Global Warming of 1.5⁰C Intergovernmental Panel on Climate Change. <https://www.ipcc.ch/sr15/>

IPCC 2023. CLIMATE CHANGE 2023 Synthesis Report Summary for Policymakers. Intergovernmental Panel on Climate Change. https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf

LSE&PS. 2022. What are stranded assets? London School of Economics and Political Science.

NASA 2024 GISS Surface Temperature Analysis (v4) Analysis Graphs and Plots. National Aeronautics and Space Administration. https://data.giss.nasa.gov/gistemp/graphs_v4/

UN undated a. The Paris Agreement. United Nations Climate Action <https://www.un.org/en/climatechange/paris-agreement>

UN undated b. The Paris Agreement: What is the Paris Agreement? United Nations Climate Action. <https://unfccc.int/process-and-meetings/the-paris-agreement>

Van der Ploeg F, and Rezai A. 2020. Stranded assets in the transition to a carbon-free economy
Annu. Rev. Resour. Econ. 12 281–98.

<https://scholar.google.com/scholar?q=van+der+Ploeg+F+and+Rezai+A+2020+Stranded+assets+in+the+transition+to+a+carbon-free+economy+Annu.+Rev.+Resour.+Econ.+12+281%E2%80%9398>

Welsby D, Price J, Pye S, Ekins P. 2021. Unextractable fossil fuels in a 1.5 °C world. Nature 597:
230–234 <https://www.nature.com/articles/s41586-021-03821-8>

Wilkinson F. 2023. Industrialization, Labor, and Life National Geographic.
<https://education.nationalgeographic.org/resource/industrialization-labor-and-life/>