

# Getting Dirty Before You Get Clean: Institutional Investment in Fossil Fuels and the Green Transition

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## EXECUTIVE SUMMARY

**MAYANK KUMAR ARGUES THAT PRIVATE INVESTMENT IN FOSSIL FUEL COMPANIES DOES NOT ADVERSELY AFFECT CLIMATE OUTCOMES BUT RATHER IT CAN SUPPORT THE GREEN TRANSITION BY FINANCING CLEAN TECHNOLOGIES. SPECIFICALLY, THE PAPER STUDIES THE EFFECTS OF PE INVESTMENT IN FOSSIL FUEL ON SOLAR ENERGY TECHNOLOGIES.**

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This is a brief based on the E-Axes Young Scholar's Webinar Series on Climate Finance and Economics, organized on T

is Policy Brief is based on the Job Market Paper of Mayank Kumar entitled "Getting Dirty Before You Get Clean: Institutional Investment in Fossil Fuels and the Green Transition". **The paper has received an Honorable Mention at the 2023 E-Axes Research Prize.**

## Policy Brief

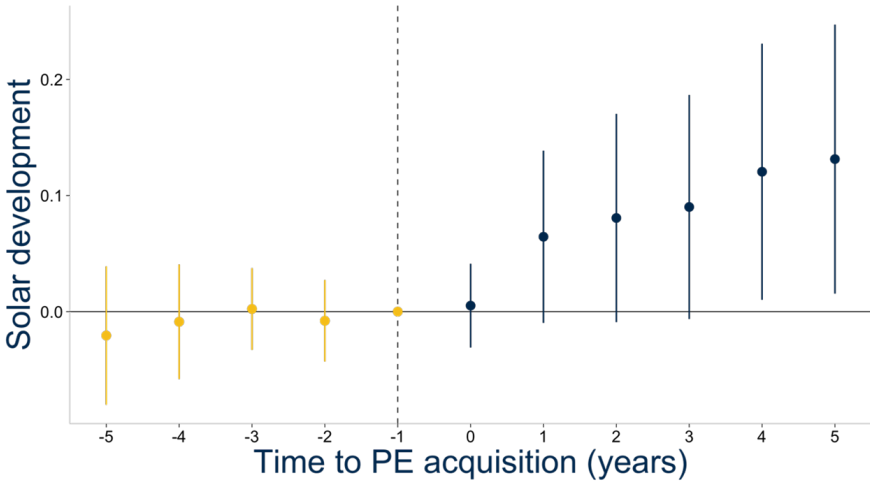
Institutional investments in fossil fuel companies through private equity (PE) funds have grown significantly in the last decade, with over a trillion dollars invested since 2010. Consequently, there is a growing concern that PE investment in fossil fuels delays the green transition by prolonging the lives of dirty assets. This concern has led to mounting pressure on pension funds and asset managers to divest their fossil fuel holdings, not only from their public equity investments but also from private equity.

Contrary to these concerns, Kumar (2023) shows that PE investments in fossil fuels may facilitate the green transition by allowing new, clean technologies to develop. The key insight of the paper is that old, polluting assets often provide opportunities that are valuable for the development of new, clean technologies. For example, fossil fuel power plants have access to grid infrastructure and the right to interconnect and transmit electricity. These resources are

critical to the development of clean energy sources such as solar power, which faces significant costs, delays, and regulatory hassles related to the interconnection of a new plant to the grid. This paper empirically shows that private equity owners of fossil fuel plants are better able to contract on these resources with solar developers and realize the opportunities.

The paper finds that the PE acquisition of a fossil power plant in a county leads to an 8% increase in the likelihood of new solar development in that county in the next five years, relative to other counties with fossil-fuel power plants. This increase is economically significant as only 37% of all counties have any solar development in the sample. On an intensive margin, the paper also finds an additional 11% increase in the number of solar plants installed in that county and a 40% increase in new solar power capacity.

**Figure 1: PE acquisition of fossil fuel plants and solar development**



Notes: Kumar (2023)

Next, the paper establishes a causal link between the PE acquisition of fossil fuel power plants and solar development and shows that PE firms intentionally acquire fossil fuel plants for future solar development opportunities. To do this, the paper measures the solar investment opportunity of a fossil fuel plant using the intensity of the sunlight that falls on the power plants. The paper also uses the passage of the tax credits as a temporal variation in the costs of solar development. In a difference-in-differences setting, the paper shows that PE firms are more likely to buy fossil plants that provide exogenously higher solar investment opportunities, that is, they buy plants in sunnier areas but only after the passage of the investment tax credits and not before. A one standard deviation increase in solar intensity within a state increases the likelihood of private equity firms buying a fossil fuel plant by 3.1% after 2005. This is an economically meaningful 41% increase relative to the likelihood of PE ownership of a fossil fuel plant in my sample (7.5%).

Finally, the paper explores the mechanisms through which private equity facilitates solar development. PE firms have strong relationships with other institutional investors, who are also key players in greenfield solar development. The repeated interaction between these investors eases the flow of information about new opportunities and makes contracting on resources easier. Consistent with this, the paper finds that the increase in solar development in counties with PE-owned fossil plants comes from institutional investment (such as from

private equity, banks, and pension funds) in solar. Moreover, in more than half of the PE counties with institutional solar development, the paper finds that the solar and fossil investors are either owned by the same parent company or related through prior limited partnerships. This suggests that the relationships between institutional investors may be valuable in realizing these investment opportunities.

Overall, contrary to the prevailing criticism that PE acquisition of dirty assets delays the green transition, I show that it can facilitate the transition by allowing new technologies to come up. PE firms, due to less regulatory and public scrutiny, offer institutional investors a path to entry into the energy sector that then increases their green investments in solar. My findings suggest that any future regulations prohibiting institutional investments in fossil fuels may unintentionally also reduce clean energy investments and hamper the green transition.

## References

Kumar, M. (2023). Getting Dirty Before You Get Clean: Institutional Investment in Fossil Fuels and the Green Transition.  
[https://drive.google.com/file/d/1BWbW8Oc\\_uGmXDLD1XtRV8hMWDSWPWZg83/view](https://drive.google.com/file/d/1BWbW8Oc_uGmXDLD1XtRV8hMWDSWPWZg83/view)

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