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Leading the Unwilling: Unilateral Strategies to Prevent Arctic Oil Exploration*

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Highlights

- Technological spillovers are a strategic tool for leaving Arctic fossil fuels untouched.
- Countries may deter the entry of others by coordinating on not entering themselves.
- “Pretending” to be environmentally adamant is another viable strategy.
- Calibration suggests Norway, or prospects of a future green U.S., could be pivotal.

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Abstract: Arctic oil extraction is inconsistent with the 2°C target. We study unilateral strategies by climate-concerned Arctic countries to deter extraction by others. Contradicting common theoretical assumptions about climate-change mitigation, our setting is one where countries may fundamentally disagree about whether mitigation by others is beneficial. This is because Arctic oil extraction requires specific R&D, hence entry by one country expands the extraction-technology market, decreasing costs for others. This means that, on the one hand, countries that extract Arctic oil gain if others do so as well. On the other hand, as countries may disagree about how harmful climate change is, they may disagree whether an equilibrium where all enter is better or worse than an equilibrium where all stay out. Less environmentally-concerned countries (preferring maximum entry) have a first-mover advantage but, because they rely on entry by others, entry in equilibrium is determined by the preferences of those who are moderately concerned about the environment.

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