

Economic Potential of Wind and Solar in Native Communities

Dominic Parker
December 12, 2024

Affiliations & Collaborators



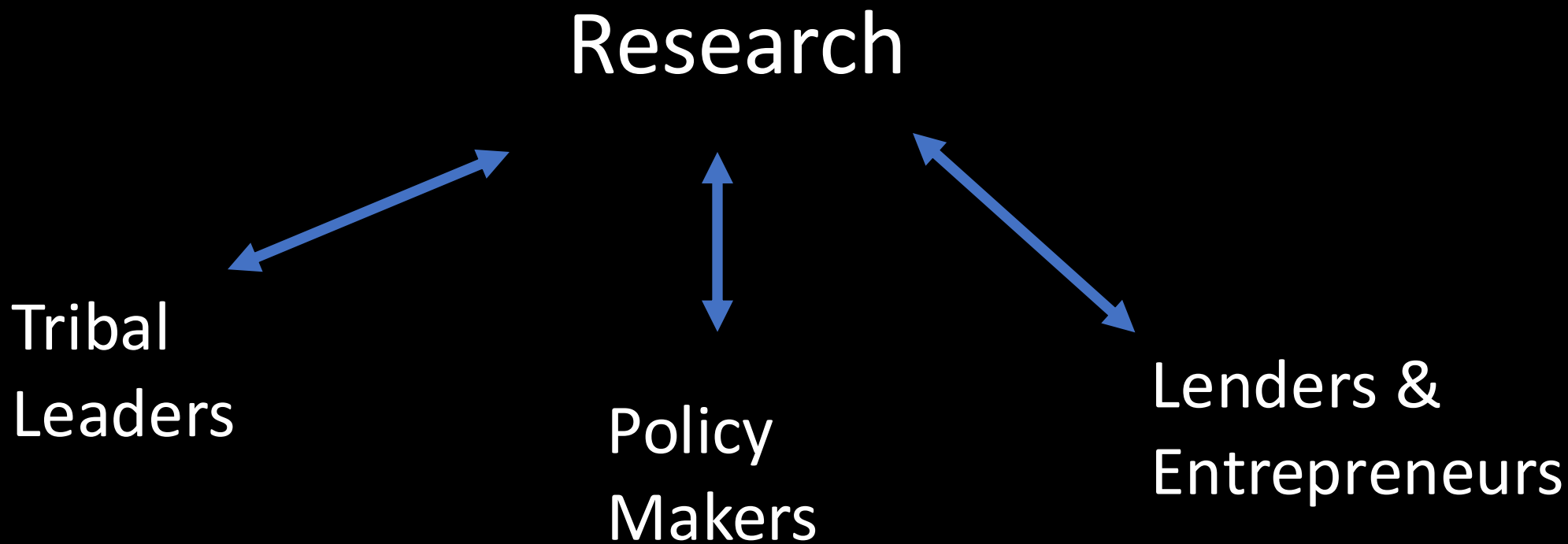
University of Wisconsin-Madison



Hoover Institution at Stanford University

RENEWING **INDIGENOUS** ECONOMIES

A PROJECT FROM THE HOOVER INSTITUTION



Workshops

Thursday, May 12, 2022 - Saturday, May 14, 2022



Territory, Culture, and
Indigenous Ecology

Sunday, November 17, 2019 - Tuesday,
November 19, 2019



Indigenous Capital, Growth, and
Property Rights: The Legacy of
Colonialism

Wednesday, August 10, 2022



Policy Seminar with Dominic
Parker

Publish Data-Driven Findings



**AMERICAN
ECONOMIC
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**JOURNAL OF
Development
ECONOMICS**

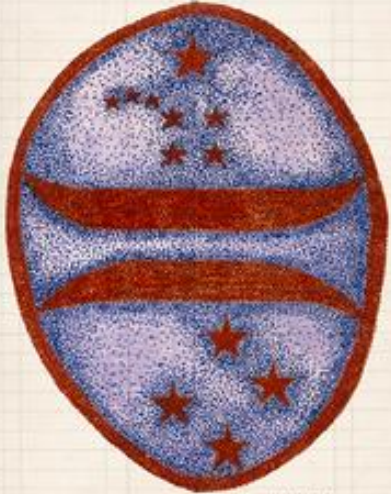
nature

**INDIGENOUS BUSINESS &
PUBLIC ADMINISTRATION**

**THE
ECONOMIC
JOURNAL**

Presented in Digestible Ways

RENEWING INDIGENOUS ECONOMIES



TERRY L. ANDERSON
KATHY RATTÉ



HOOVER INSTITUTION PRESS

Publications from the Hoover Institution

Renewing Indigenous Cultures

Research Conclusions



Indigenous institutions encouraged commerce, prosperity prior to colonization



Colonial policies have & are discouraging investment, resource utilization



Sovereign tribal economies thrive with clear jurisdiction, predictable rule of law, and checks and balances



INDIGENOUS STUDENT SEMINAR

@ THE HOOVER INSTITUTION

Economic Potential of Natural Resources & Barriers

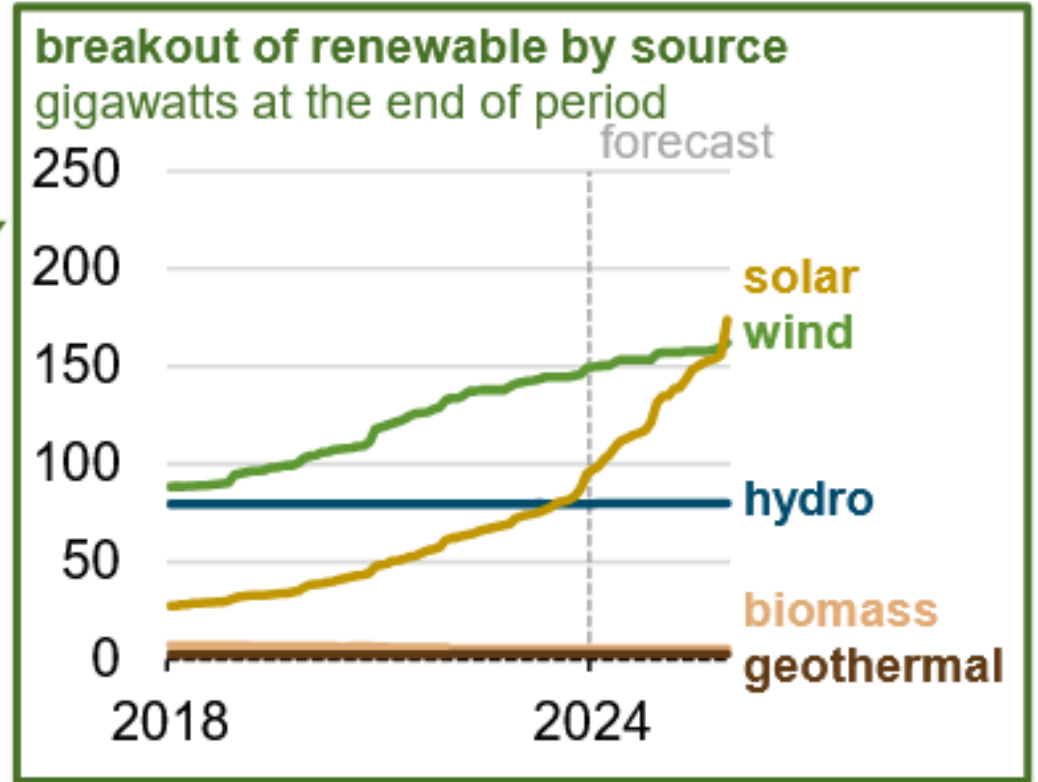
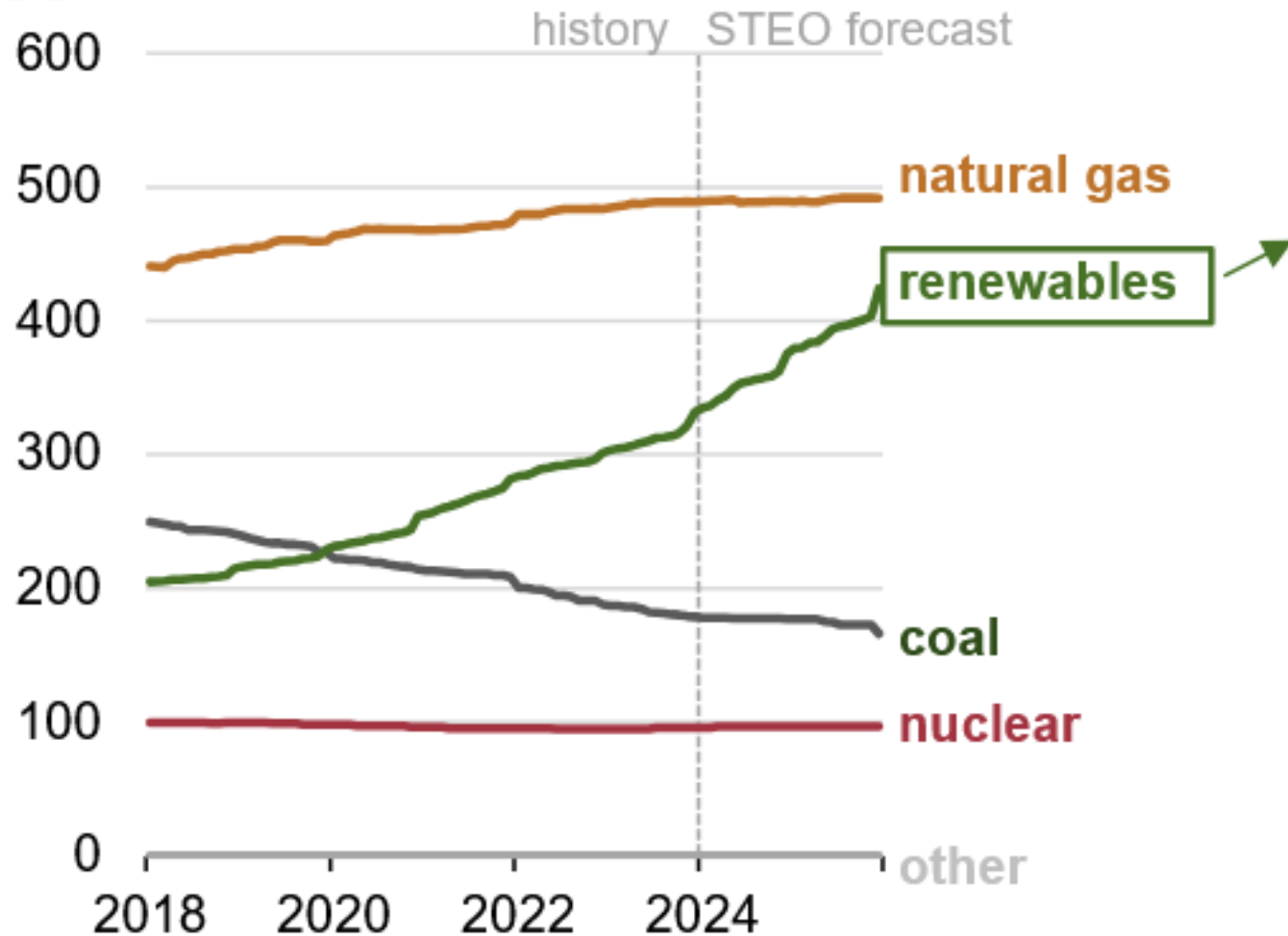


What about Wind & Solar?



Projected Demand for Wind & Solar is Large

U.S. annual electric generating capacity (2018–2025)
gigawatts at end of December



And Renewable Leases can Pay Well

August 23, 2021





Dear Landowner,

lines. I would like to speak with you about a long-term lease on your property. **Our lease rate starts at \$1,000.00 per acre per year with an annual escalator.** We build the solar farms with our own capital at no cost to you, we insure the property, we maintain the solar farm, and we pay any increase in the property taxes.

Economic potential of wind and solar in American Indian communities

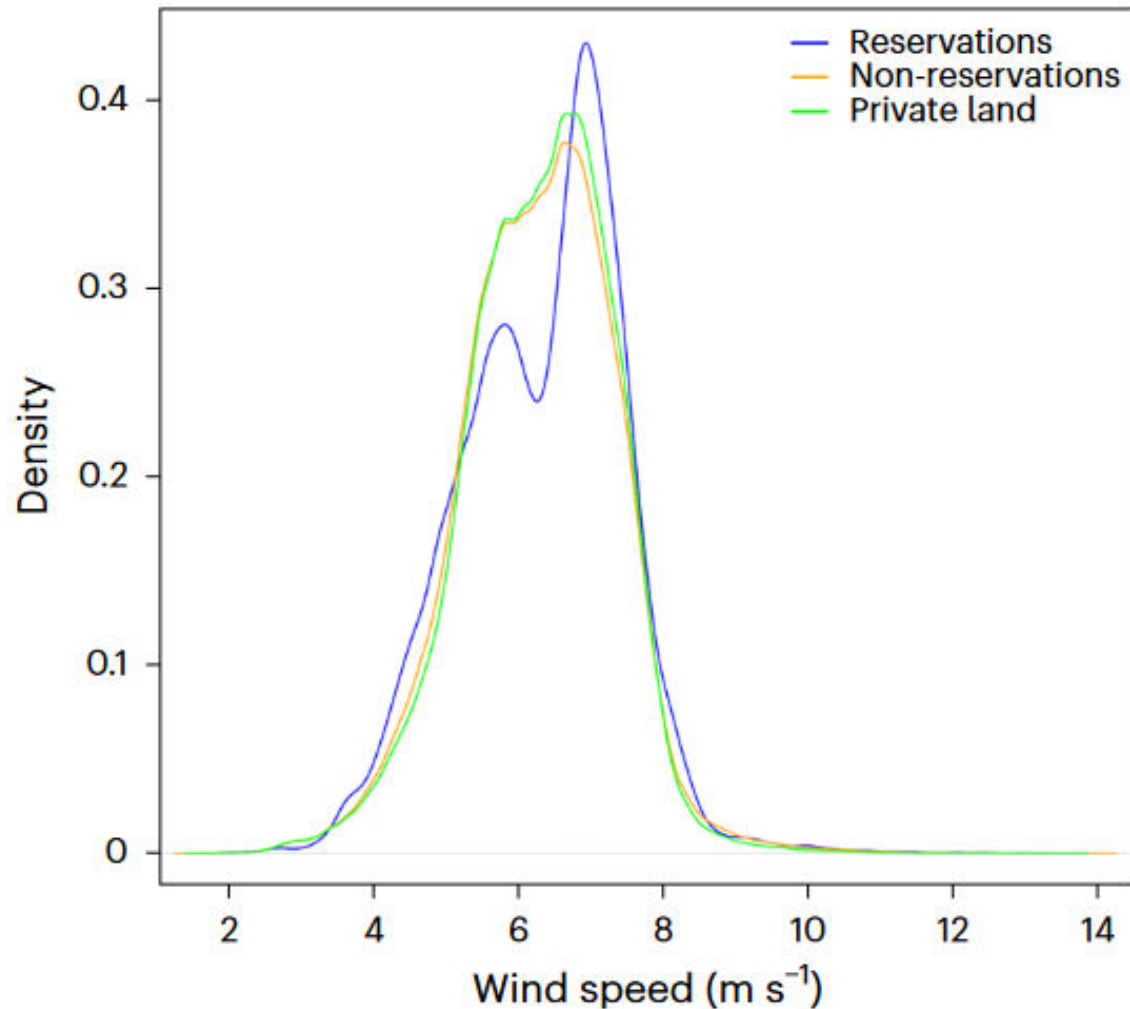
Received: 18 September 2023

Accepted: 25 July 2024

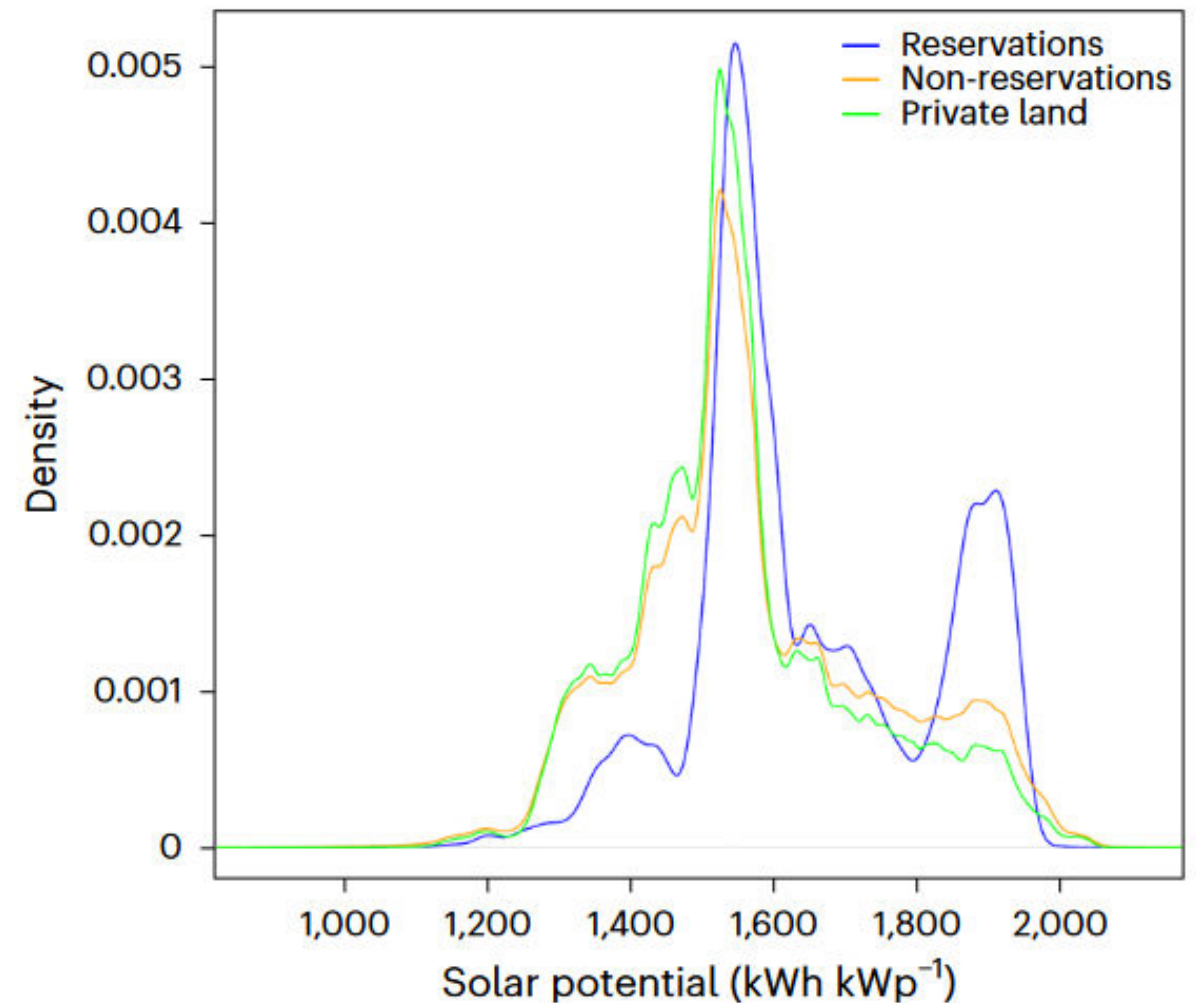
Dominic P. Parker ^{1,2,3}✉, Sarah Johnston ¹, Bryan Leonard^{3,4},
Daniel Stewart ^{2,5} & Justin B. Winikoff ⁶

Finding 1: Indian Country is Disproportionately Windy & Sunny

a Distribution of wind endowments

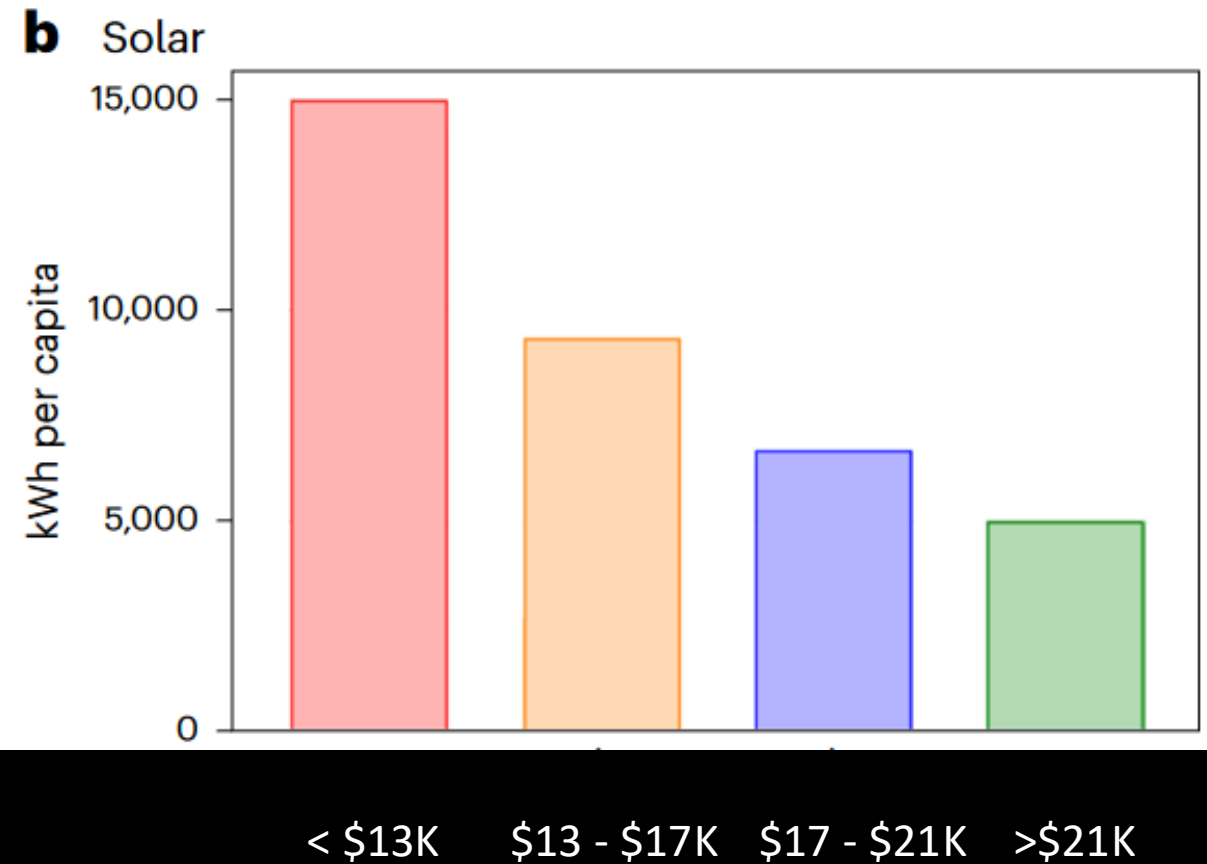
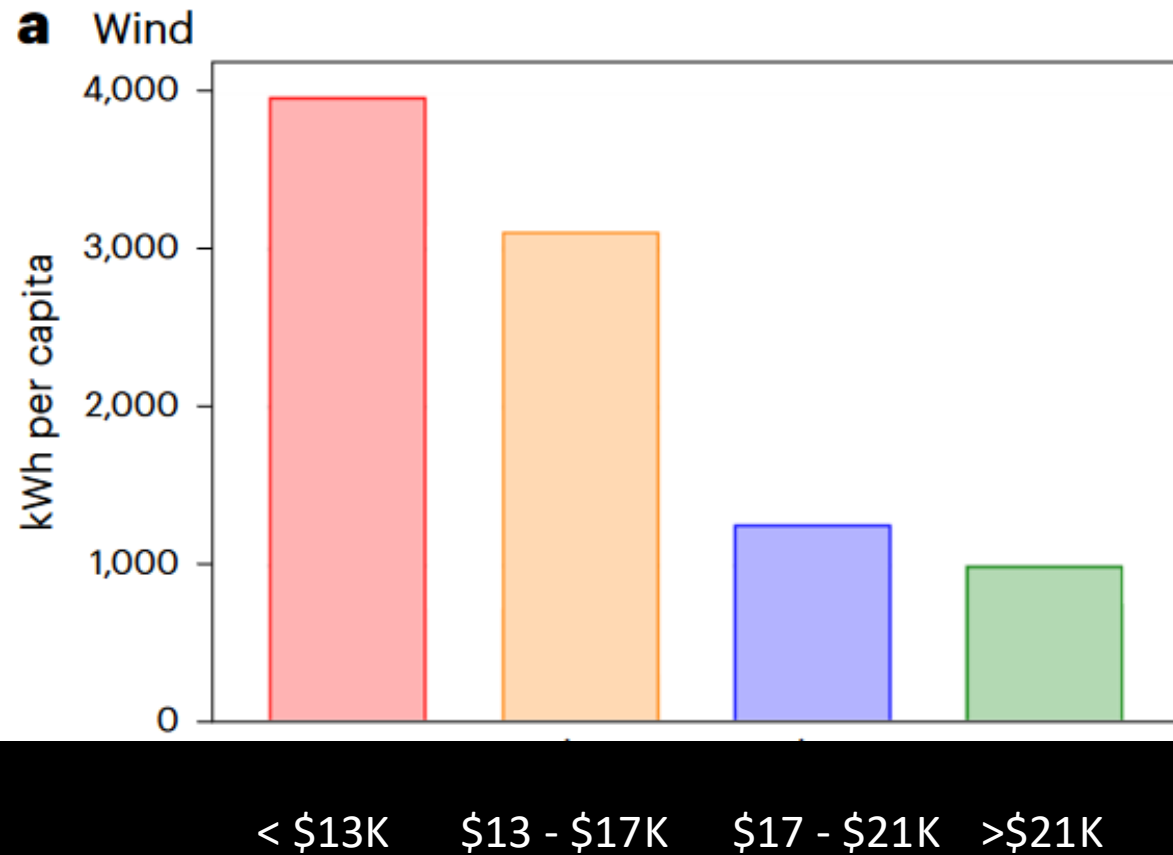


b Distribution of solar endowments

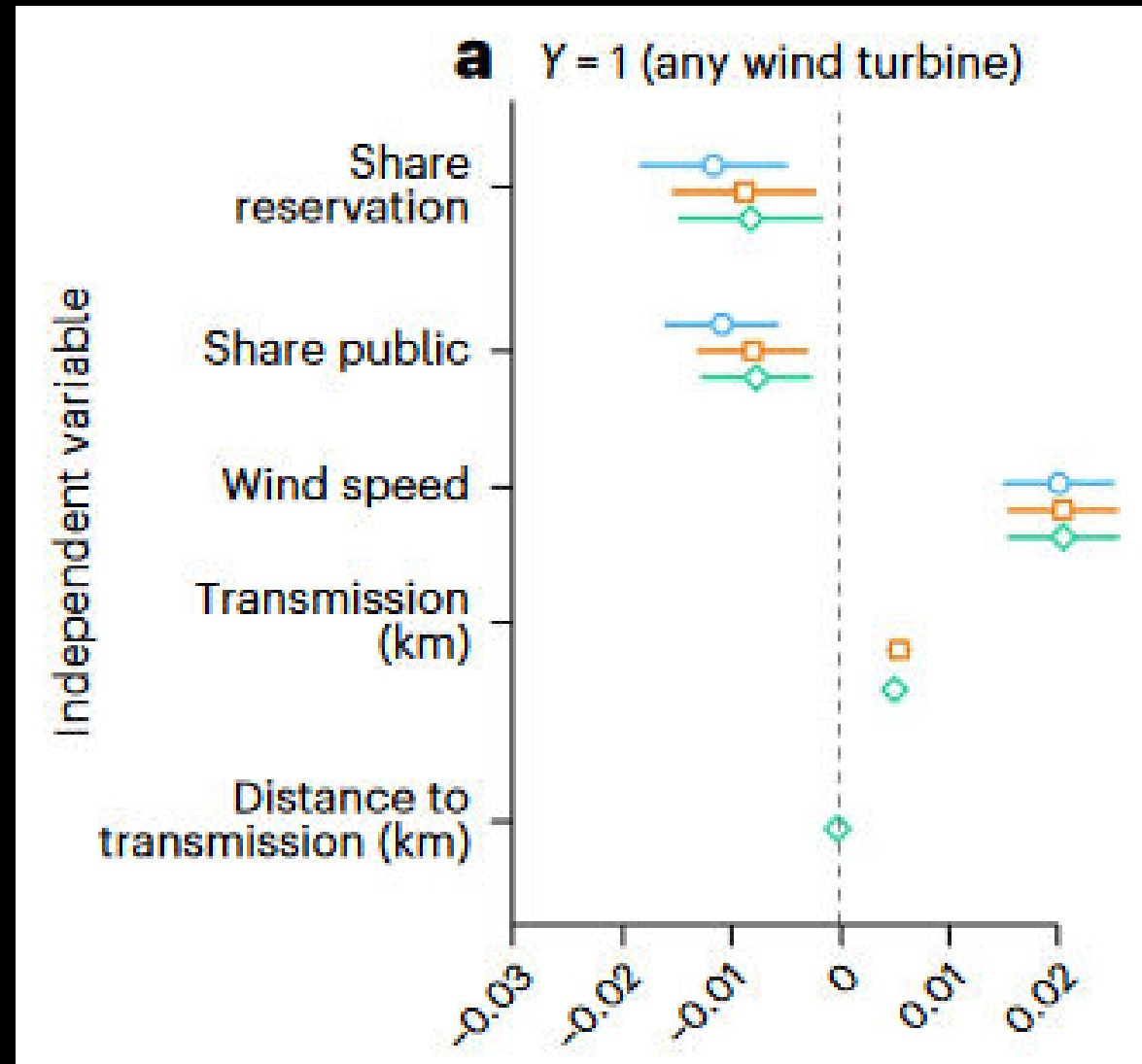


Finding 2:

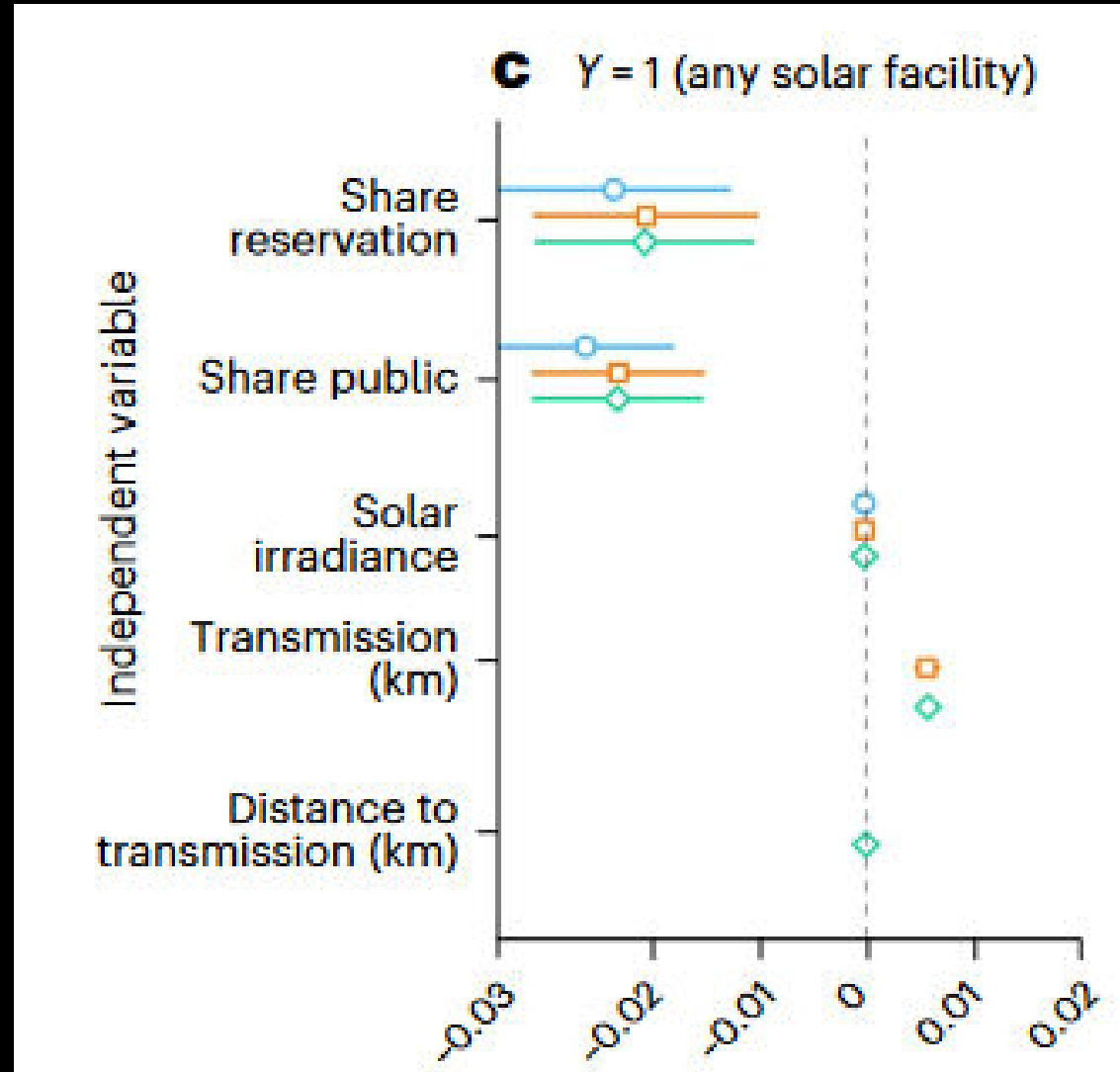
Wind and Solar Potential is Greatest in Poorest Communities



Finding 3: Wind Facilities 50% Less Likely than Adjacent Land



Finding 4: Solar Facilities 110% Less Likely than Adjacent Land



Finding 5: If Disparity Persists, Communities may Forgo \$19B

	Capacity lost (1,000 MW)		Royalties lost (Million US\$)			Tax revenue lost (Million US\$)			Revenue and Royalties Lost (Million US\$)
	Solar	Wind	Solar	Wind	Total	Solar	Wind	Total	Total
REF	7	4	703	332	1,035	810	429	1,239	2,274
B+	40	12	3,441	980	4,421	3,962	1,266	5,229	9,650
E+	51	14	4,345	1,143	5,488	5,004	1,476	6,480	11,968
E-	49	17	4,054	1,249	5,302	4,668	1,613	6,282	11,584
E+RE-	18	6	1,967	604	2,571	2,265	780	3,045	5,616
E+RE+	94	32	6,942	1,871	8,814	7,995	2,417	10,413	19,226

The scenarios come from Larson et al.⁵⁴. REF refers to the reference scenario. E- B+ refers to a high biomass scenario. E+ refers to high electrification. E- refers to low electrification. E+RE- refers to high electrification and low renewable supply. E+RE+ refers high electrification and 100% renewable supply.

Barrier 1: Less Access to Transmission Lines

- 70% fewer km of transmission lines
- Eliminating gap would increase probability of development:

11% for wind

14% for solar



TRIBAL BUSINESS NEWS

Oregon tribe's \$857M power line upgrade could unlock renewable energy future



“We're excited ... because it really begins what can be a snowball of economic development”

- Warm Springs Power utility manager

Barrier 2: Regulatory Complexity & Uncertainties

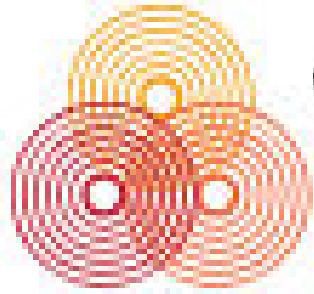
Example: 49 regulatory steps for an oil lease in Indian country, compared to 4 steps elsewhere.

Renewable Energy:

- Greater NEPA/ESA involvement
- Duplicate agencies
- Slow BIA response times



Ernest Sickey's "White Tape"



WISCONSIN
PUBLIC RADIO

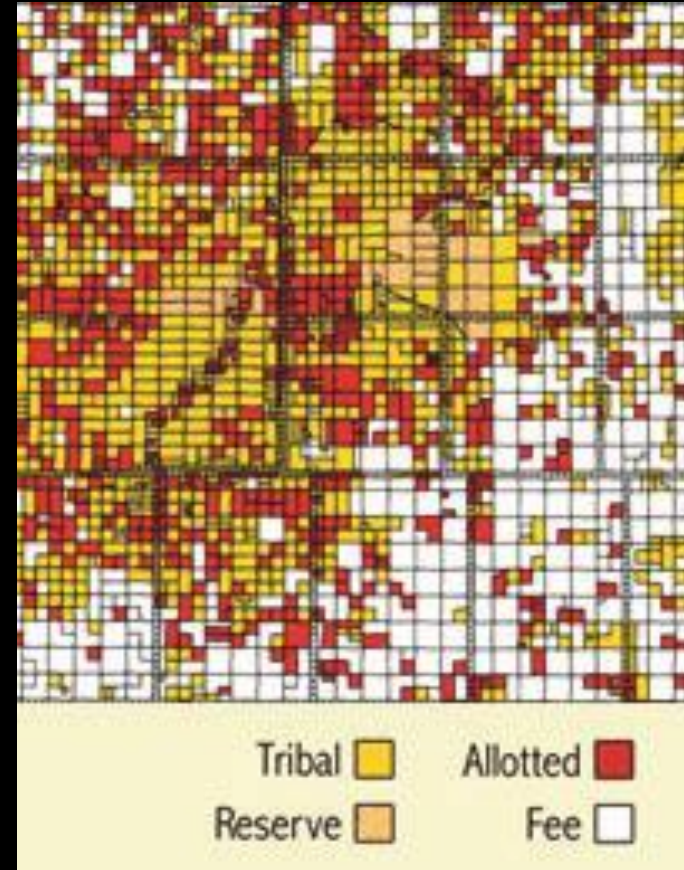
Wisconsin tribe laments delays with federal agency in developing projects

Representative Conrad St. John, a member of the St. Croix Tribal Council, said the Bureau of Indian Affairs and Department of Interior are barriers to renewable energy development on reservations.

“Their decision-making process is often drug out unnecessarily for many years...”

Barrier 3: Checkerboards and Land Fractionation

- Difficult to create solar & especially wind farms that don't span multiple jurisdictions; many owners
- 25% of reservations with best wind have 7 million fractionated acres; average of 16 owners per tract



Land Mosaics

Despite Barriers, Optimism is Rational!

1. Indian Country has valuable resources
 - Human Capital (ideas, entrepreneurs, unique cultures)
 - Natural Capital (sun, wind, critical minerals + traditional nat. resources)
2. Blue and Red administrations express desire to reduce federal regulations
3. Fractionation & checkerboards are challenging, but contiguous tribal land can be an advantage not available off reservation
4. Tribal development of energy projects growing, better electricity

Clarifications on my Views

1. **Not** a call to impose federal priorities on uninterested Tribes
2. **True sovereignty** means freedom to pursue projects (or not) free of excessive regulatory controls
3. Respect for sovereignty should be **color-blind**



Manny Jules

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nature energy

To Amt Paid		By Amt Paid				
Mch 1	Cash 89	62.51	Mch 1	Cash 88	88	
	Balance	134.59		al	171.50	
		1376.53			1276.53	
March 25	To Cash	97	100	Mch 1	By Balance	134.59
27	al	99	34.59			134.59
			134.59			

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MANNY



Haley Raines

