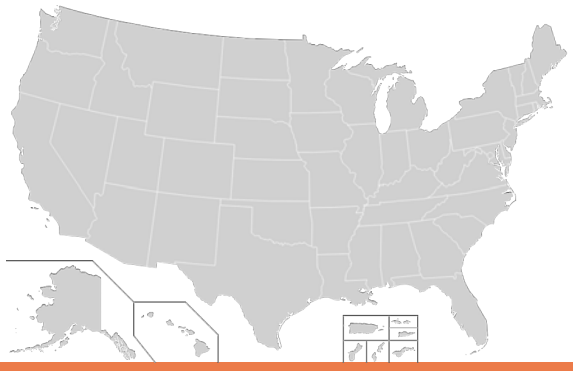
Federal Investment in Energy and Environmental Infrastructure Benefit Communities in ALL 50 STATES



Last updated June 2, 2025

Suggested citation: Lalande, S., Huber, J., and Cochran, B. 2025. Federal Energy and Environment Investment Project: Nationwide. Northwest Environmental Justice Center. Accessed at https://www.pdx.edu/policy-consensus-center/federal-energy-environment-investment-project.

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I. Summary

Communities across the country benefited from $230 billion in federal investments in safe, clean, and affordable options for housing, energy, and transportation infrastructure in 2024, including economically distressed and rural counties, Tribes and small businesses, and red and blue Congressional districts.

Federal funding supports critical infrastructure and environmental protections, including for energy, clean drinking water, rail, food security and farming, and affordable housing in communities across the nation–collectively referred to as "energy and environmental infrastructure" or "energy and environment" investment or spending in this analysis. That federal funding is delivered through grants and loans to local governments, states, Tribes, and small businesses. This research looks at spending patterns from 2010-2024[1], showing how federal spending is critical to local and state economies, and how the distribution of those funds matters. The key findings[2] from this initial analysis include:

- Federal energy and environment investment in rural counties grew from 4.2% of total energy and environment spending in 2010 to 14% in 2024. Similarly, energy and environment investment in economically distressed counties nearly tripled from 9.1%% in 2010 to 30.6% in 2024 to support active transportation, clean energy, affordable housing, food security and farming, among other economic development projects;
- In 2024, $26 billion in federal energy and environment spending went to private businesses for affordable housing, energy grid infrastructure, rural rental assistance, and sustainable farming;
- In 2024, $4 billion went to Tribes for affordable housing, active transportation, energy grid infrastructure, zero emission technologies, and repair of Indian schools;
- Nationwide, between 2010-2024 the average county-level per capita investment in energy and environmental infrastructure grew from $187 per capita in 2010, to $919 in 2020, and then declined to $903 in 2024; and
- Similarly, there were differences in spending by congressional districts in 2024. For example, in 2024, $84 billion in energy and environment investment was distributed to Democrat-held districts and $63 billion went to Republican-held districts. The most energy and environment spending went to districts now held by representatives Raskin (MD-08)(D), Goldman (NY-10)(D), Evans (PA-03)(R), Begich (AK-at large)(R), and Elfreth (MD-03)(D).[3]

On request, the same methodology presented here could be applied by state, federal spending program, or to help answer a number of other questions about the patterns of spending over time, and the potential implications of reducing or increasing spending in particular program areas. If there are questions or requests for additional analysis, please contact Bobby Cochran at jcochran@pdx.edu.

II. The federal government has made substantial investments in clean energy, transportation, clean water, and environmental infrastructure

Federal energy and environmental infrastructure programs invested $2.25 trillion across the country from 2010 to 2024, with investment amounts increasing annually from $174.32 billion in 2010 to $230.58 billion in 2024 (see Figure 1). This may seem like a lot of money, but the federal government obligated $9.7 trillion in 2024[4], so the $230.58 billion represents just 2.38% of all federal spending obligations.

1 All dollar amounts are expressed in 2024 constant dollars using the GDP implicit price deflator to account for inflation. U.S. Bureau of Economic Analysis. 2025. "Table 1.1.7. Percent Change From Preceding Period in Prices for Gross Domestic Product". Accessed at https://www.bea.gov/data/prices-inflation/gdp-price-deflator.

2 Other analyses have looked specifically at Department of Energy investments and sourced information from news announcements. Our analysis looks only at US Treasury records of obligated funds, but across a number of federal agencies. Inconsistent findings are likely due to different methods and sources of federal spending data. We can provide our full methodology on request.

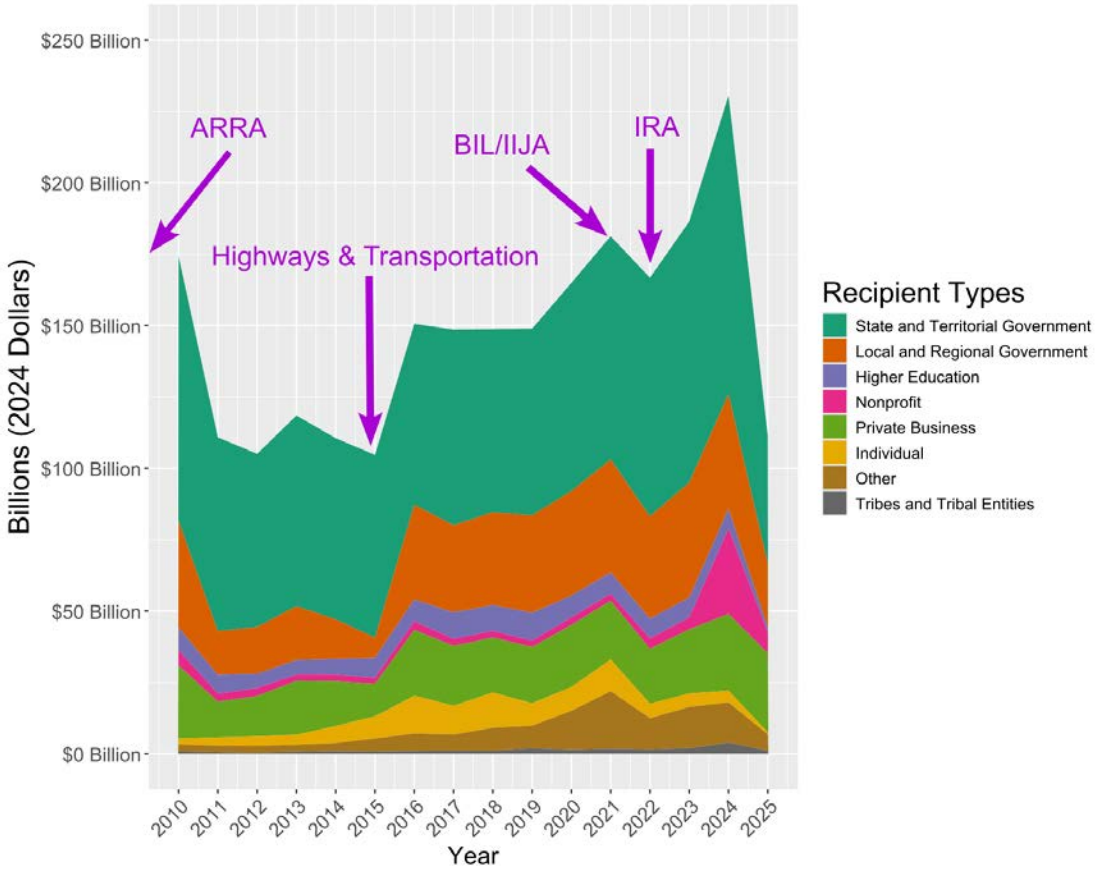
3 All spending, 2010-2024 was assigned to the current representative and Congressional District boundary as of 2025.

4 USA Spending. 2024. Accessed at https://www.usaspending.gov/explorer/budget_function.

Programs funded rail, renewable energy, affordable housing, clean drinking water, sustainable farming, and rural development. Larger increases in investments in this period are tied to particular Congressional Acts, including:

- the American Reinvestment and Recovery Act (ARRA) of 2009, designed as stimulus following the 2008 housing and financial crisis[5];
- the Highway and Transportation Funding Act of 2015[6];
- the Infrastructure Investment and Jobs Act (BIL/IIJA)[7]; and
- the Inflation Reduction Act of 2022 (IRA)[8].

Figure 1. Federal energy and environment spending by recipient (2010-2025)



Note: FY2025 is partial year data for 6 months (October 2024 to April 2025)

The analysis presented here examined 468 federal grant and loan programs identified by agencies as important to addressing the climate crisis and ensuring the health of the American people and the environment[9] [10]. These programs distributed funds to counties, Tribes, nonprofits, small businesses, and other entities across the United States. The spending data is from the US Department of Treasury's USA Spending database[11]. USA Spending was established in response to the 2014 Digital Accountability and Transparency Act (DATA Act) to provide better visibility into federal financial data and spending. Patterns in this federal spending were investigated to understand:

5 United States, Congress. Public Law 111-5, American Reinvestment and Recovery Act. govinfo.gov, 2009. U.S. Government Printing Office, https://www.govinfo.gov/app/details/PLAW-111publ5.
6 United States, Congress. Public Law 114-21, Highway and Transportation Funding Act of 2015. govinfo.gov, 2015. U.S. Government Printing Office, https://www.govinfo.gov/app/details/PLAW-114publ21.
7 United States, Congress. Public Law 117-58, Infrastructure Investment and Jobs Act. govinfo.gov, 2021. U.S. Government Printing Office, https://www.govinfo.gov/app/details/PLAW-117publ58.
8 United States, Congress. Public Law 117-169, Inflation Reduction Act. govinfo.gov, 2022. U.S. Government Printing Office, https://www.govinfo.gov/app/details/PLAW-117publ169.
9 Executive Order 14008. January 27, 2021. Tackling the Climate Crisis at Home and Abroad. Accessed at https://www.federalregister.gov/documents/2021/02/01/2021-02177/tackling-the-climate-crisis-at-home-and-abroad.
10 Executive Order 14096. April 21, 2023. Revitalizing Our Nation's Commitment to Environmental Justice for All. Accessed at https://www.federalregister.gov/documents/2023/04/26/2023-08955/revitalizing-our-nations-commitment-to-environmental-justice-for-all.
11 USA Spending. 2024. Accessed at https://www.usaspending.gov/.

- What proportion of federal spending was obligated to low income[12], rural[13], communities with high unemployment[14], and other indicators of vulnerability[15]?
- What proportion of federal spending was obligated to Tribes and Native-led organizations?
- Which counties and Congressional districts across the United States received the greatest and least amounts of federal energy and environment spending in 2024?

This analysis does not explain why certain patterns exist or identify them all. It is intended to support a conversation about how federal spending is critical to local and state economies, and how the distribution of those funds matters.

III. In 2024, $4 billion went to Tribes, $32 billion to rural counties, and $26 billion to private businesses

Of the total $2.25 trillion invested between 2010 and 2024, $20.1 billion was granted to Tribes. The total annual amount to Tribes increased from $894.62 million in 2010 (0.5% of total) to $3.93 billion in 2024 (1.7% of total). In the same period, $369.35 billion (or 16.4%) was granted to rural counties across the country. Over time, especially the last eight years, growing proportions of federal funds have been invested in disadvantaged communities, which include low income, Tribal, rural, high unemployment, and other communities facing stresses that affect health and livelihoods (see Table 1).

Table 1. Proportions of total energy and environment spending (2010-2024) to Tribes, rural counties, and economically distressed counties (download county spending data).

Recipient	% invested (2013)	% invested (2017)	% invested (2022)	% invested (2024)	Average % invested (2010-2024)
Tribes	0.6%	0.7%	0.9%	1.7%	**0.9%**
Rural Counties	7.3%	20.8%	19.0%	14.0%	**16.4%**
Economically Distressed Counties[16]	15.5%	36.2%	33.9%	30.6%	**28.7%**

IV. Transportation, housing, agriculture, and energy agencies invested the most in energy and environmental infrastructure

The greatest share of energy and environment investments between 2010 and 2024 ($952.89 billion, or 42.3%) came through the U.S. Department of Transportation, especially the Highway Planning and Construction and Transit-Oriented Development Planning (TOD) programs that fund planning, public works, transportation, construction/renewal/rehabilitation projects and fixed guideway investments such as new and expanded rail and bus rapid transit. The Department of Housing and Urban Development ($643.41 billion, or 28.6%) and the Department of Agriculture ($192.44 billion, or 8.5%) also invested significant amounts. Different programs were more important for particular recipient types based on amounts invested (see Table 2).

12 Congressional Research Service. 2023. Areas of Economic Distress for EDA Activities and Programs. Accessed at https://sgp.fas.org/crs/misc/IF12074.pdf.
13 Health Resources and Services Administration, Office of Rural Health Policy. 2024. List of Rural Counties And Designated Eligible Census Tracts in Metropolitan Counties. Accessed at https://www.hrsa.gov/sites/default/files/hrsa/rural-health/resources/forhp-eligible-areas.pdf.
14 Congressional Research Service. 2023. Areas of Economic Distress for EDA Activities and Programs. Accessed at https://sgp.fas.org/crs/misc/IF12074.pdf.
15 Centers for Disease Control. 2024. SVI Frequently Asked Questions (FAQs). Place and Health - Geospatial Research, Analysis, and Services Program (GRASP). Accessed at https://www.atsdr.cdc.gov/place-health/php/svi/svi-frequently-asked-questions-faqs.html.
16 For this analysis, we also looked at the Social Vulnerability Index (CDC 2024, see note 12), which showed a similar pattern to the Economically distressed county proportions.

Table 2. Programs with the most energy and environment spending (2024) to Tribes and business (download spending data by recipient type).

Recipient Type	Programs with the most spending to the recipient type
Tribes	Indian Housing Block Grants ($1.1 billion) Highway Planning and Construction ($737.8 million) Grid Infrastructure Deployment and Resilience ($417.4 million) Greenhouse Gas Reduction Fund: Zero Emission Technologies Grant Program ($223.2 million) Replacement and Repair of Indian Schools ($158.7 million)
Business	Mortgage Insurance Homes- loan program ($231.5 billion) Project-Based Rental Assistance ($15.85 billion) Grid Infrastructure Deployment and Resilience ($2.7 billion) Rural Rental Assistance Payments ($1.3 billion) Green and Resilient Retrofit Program ($1.3 billion)

V. Per capita federal investment in energy and environmental infrastructure has grown, but some counties have attracted more investment than others

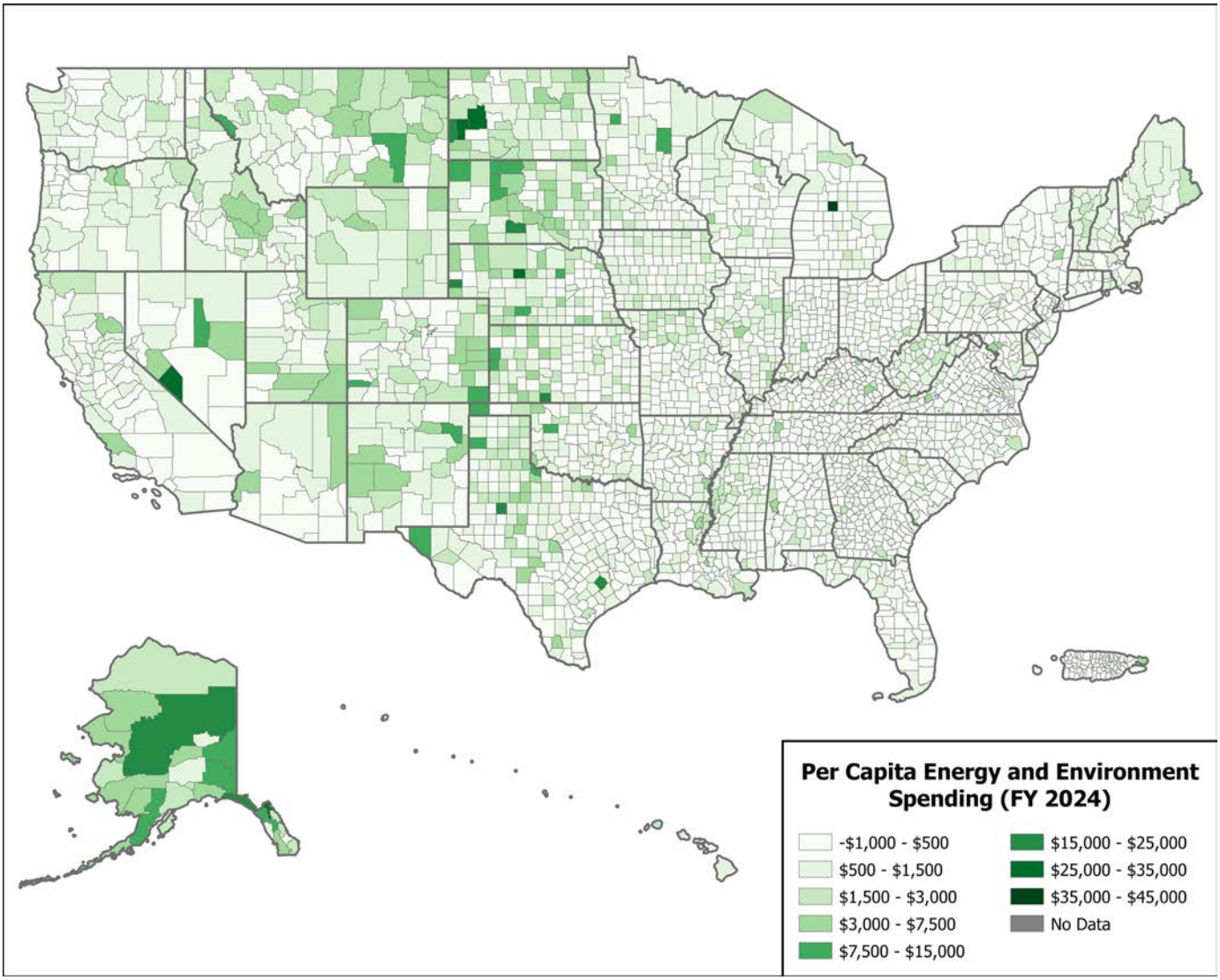
Nationwide, between 2010-2024 the average county-level per capita investment in energy and environmental infrastructure grew from $187 per capita in 2010, to $919 in 2020, and declined to $903 in 2024. The counties with the highest and lowest per capita investment in 2024 are shown in Table 3, and Figure 2 shows the relative per capita investments in 2024 by county nationwide. The states with the highest state-level per capita investment in 2024 included North Dakota, Minnesota, Kentucky, Connecticut, and Indiana (download state spending data). Presenting data on a per capita basis makes it easier to compare state and county spending across vast differences in population numbers.

Table 3. Counties with the most and least per capita federal investment in energy and environmental infrastructure in 2024.

Most Per Capita Spending*	Spending (FY24)	Least Per Capita Spending*	Spending (FY24)
Missaukee County, MI	$43,390.89	Rappahannock County, VA	$3.14
Dunn County, ND	$34,283.40	Johnson County, IL	$4.51
Billings County, ND	$32,671.99	Essex County, VA	$4.67
Haines Borough, AK	$29,497.05	Wasatch County, UT	$5.57
Skagway Municipality, AK	$27,701.77	Oconto County, WI	$7.55

**Most of these 10 counties are rural, with a mix of lower and higher incomes. The single-year per capita numbers are likely driven by one or two large federal grants, or conversely only one or two small federal grants.*

Figure 2. Per capita federal investment in energy and environmental infrastructure by county in 2024 (download county spending data).



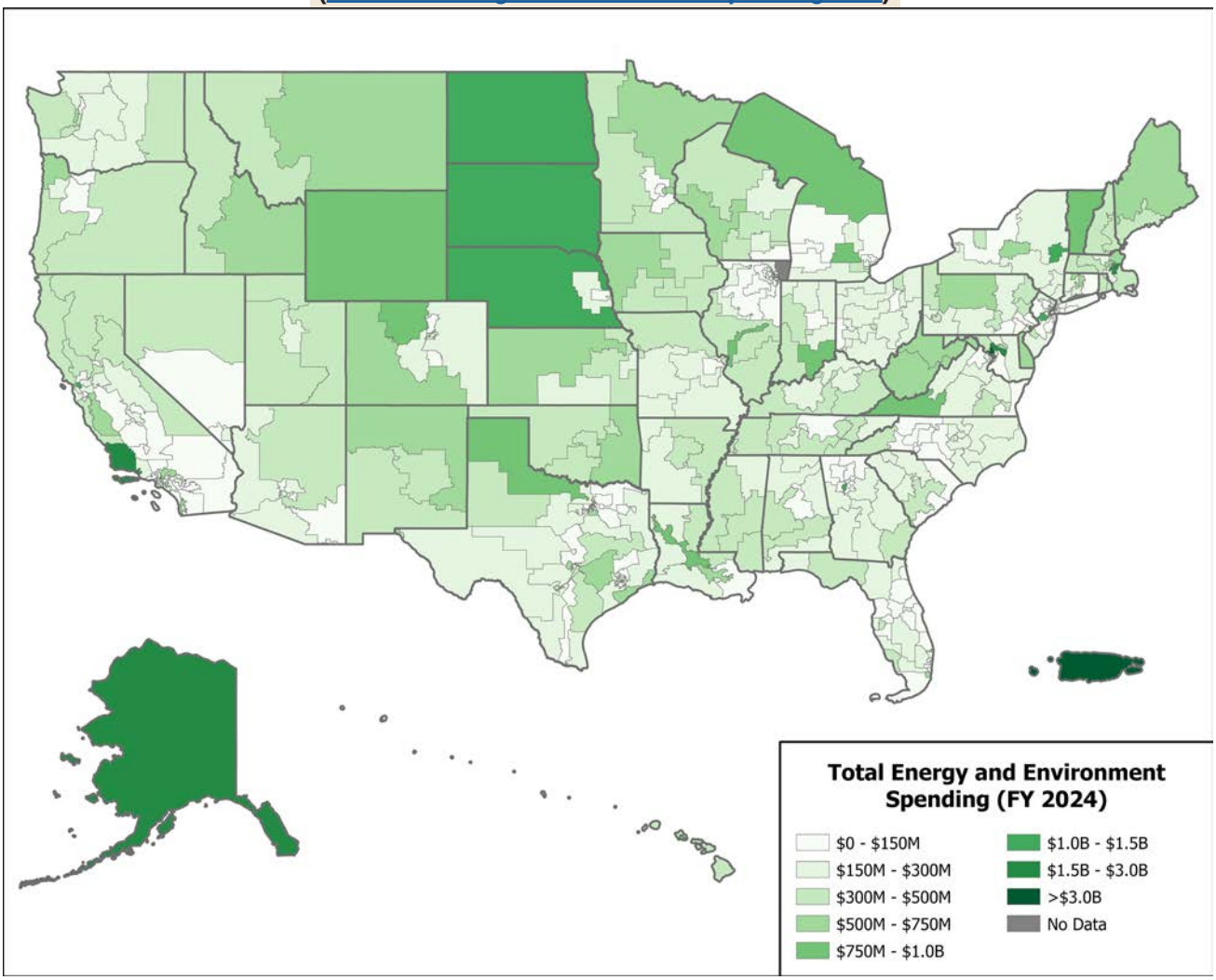
VI. There are differences in which congressional districts received more or less energy and environment funding in 2024

In 2024, about 57% of energy and environmental infrastructure investment was distributed to Democrat-held districts and 43% to Republican-held districts. Prior years since 2017 had a more even distribution with only a 0%-8% difference in spending in Democrat and Republican-held districts. There are some congressional districts who get a great percentage of their federal grants and loans from energy and environmental infrastructure programs. The congressional districts with the highest and lowest total investment in 2024 are shown in Table 3, and Figure 3 shows the total investments by congressional districts nationwide.

Table 3. Congressional districts with the most and least total federal energy and environment investment in 2024.

Congressional District & Party Representation	Spending (FY24)	Congressional District & Party Representation	Spending (FY24)
1: MD-08 (D)	$7.35 billion	431: CA-23 (R)	$11.75 million
2: NY-10 (D)	$5.83 billion	432: IL-04 (R)	$11.12 million
3: PA-03 (R)	$2.92 billion	433: CA-41 (R)	$10.84 million
4: AK-00 (R)	$2.51 billion	434: AZ-05 (R)	$1.46 million
5: MD-03 (D)	$2.15 billion	435: NV-03 (D)	$466,327

Figure 3. Total federal energy and environment investment by congressional district in 2024 (download congressional district spending data).



**Puerto Rico does not have a congressional district, but the map reflects the total FY 2024 investment for the entire territory.*

VII. Conclusions and next steps

This analysis demonstrates the breadth and extent of federal environment and energy spending across the United States. Future research could investigate particular federal funding programs and how funds reach the communities who need the investment most. Future work might also inform how congressional infrastructure bills, and how they are structured, have shaped how funding reaches local areas to meet the priorities envisioned by Congress and the federal government.