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Energy Jobs in the United States

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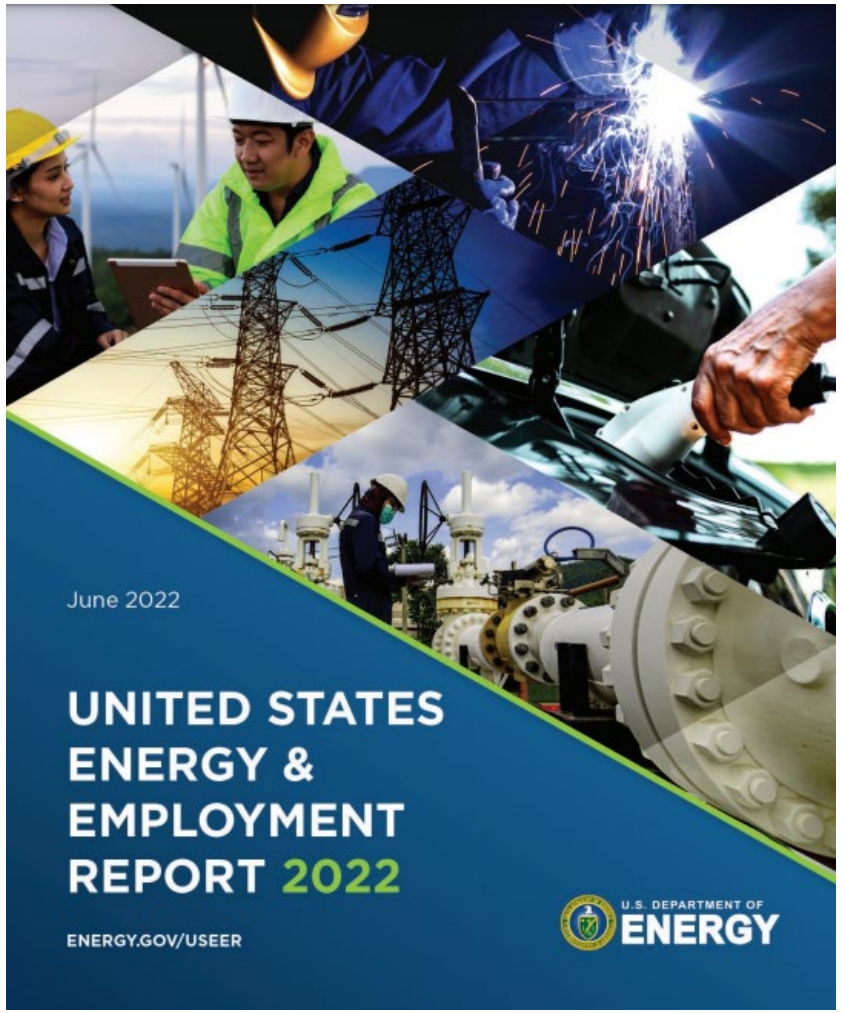
The U.S. Energy and Employment Report (USEER)

- USEER captures employment, workforce, industry, occupation, unionization, demographic & hiring information by technology group.
- Results based on combination of survey done of 33K employers by DOE subcontractor & data from the Bureau of Labor Statistics.
- DOE published report in 2016 & 2017; NASEO & EFI published it in 2018, 2019 & 2020. Report returned to DOE in 2021.
- State-level data available for all 50 states (and the District of Colombia)



Key Findings

In 2021, the energy sector experienced positive job growth across all sectors, except fuels, and outperformed job growth in the economy overall.

Jobs in many clean energy industries grew while overall fossil fuel job numbers declined.

Additional investments are needed to turbocharge America's clean energy economy and build a strong, diverse, and well-supported clean energy workforce.

National Data

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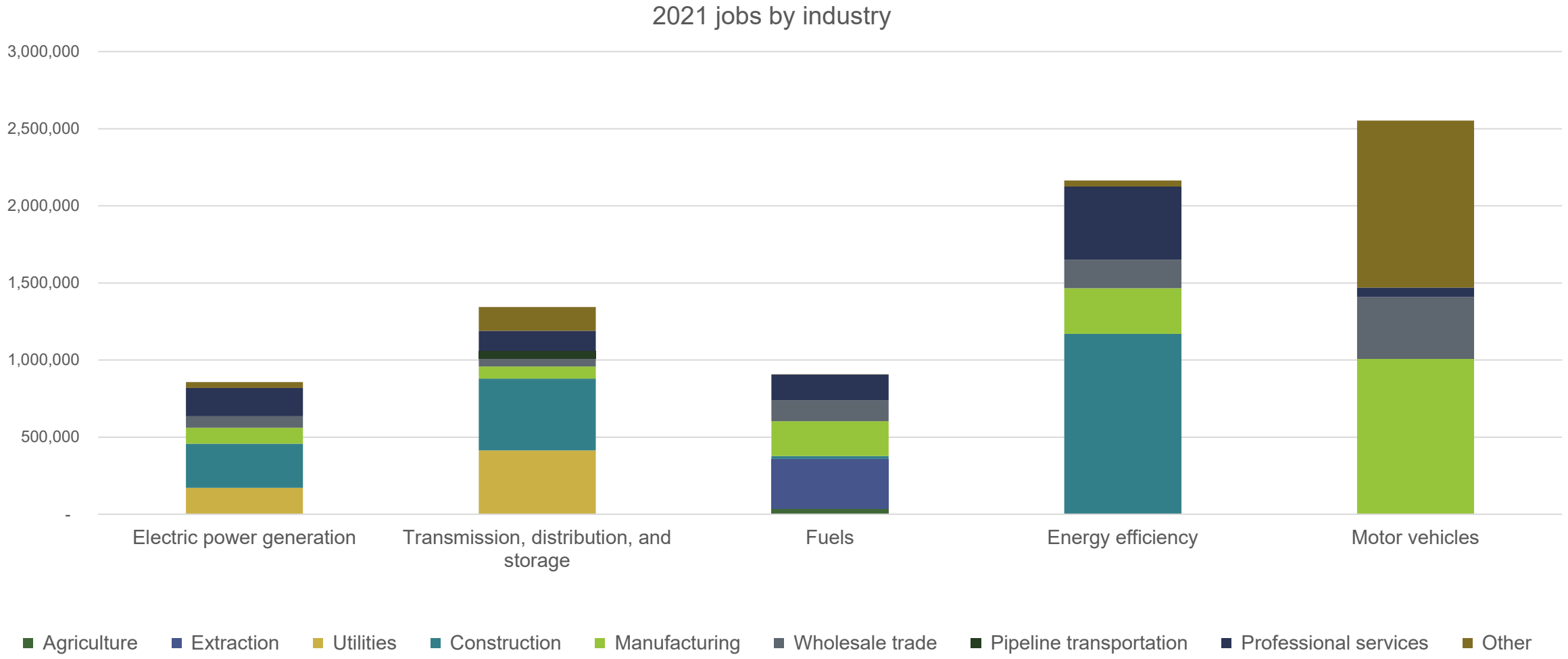
In 2021 there were over 7.8 million energy jobs in the United States, up from 7.5 million in 2020, adding 300,000 jobs.

Energy jobs grew faster (4%) in 2021 than the U.S. economy overall (2.8%).

Jobs are distributed by industry

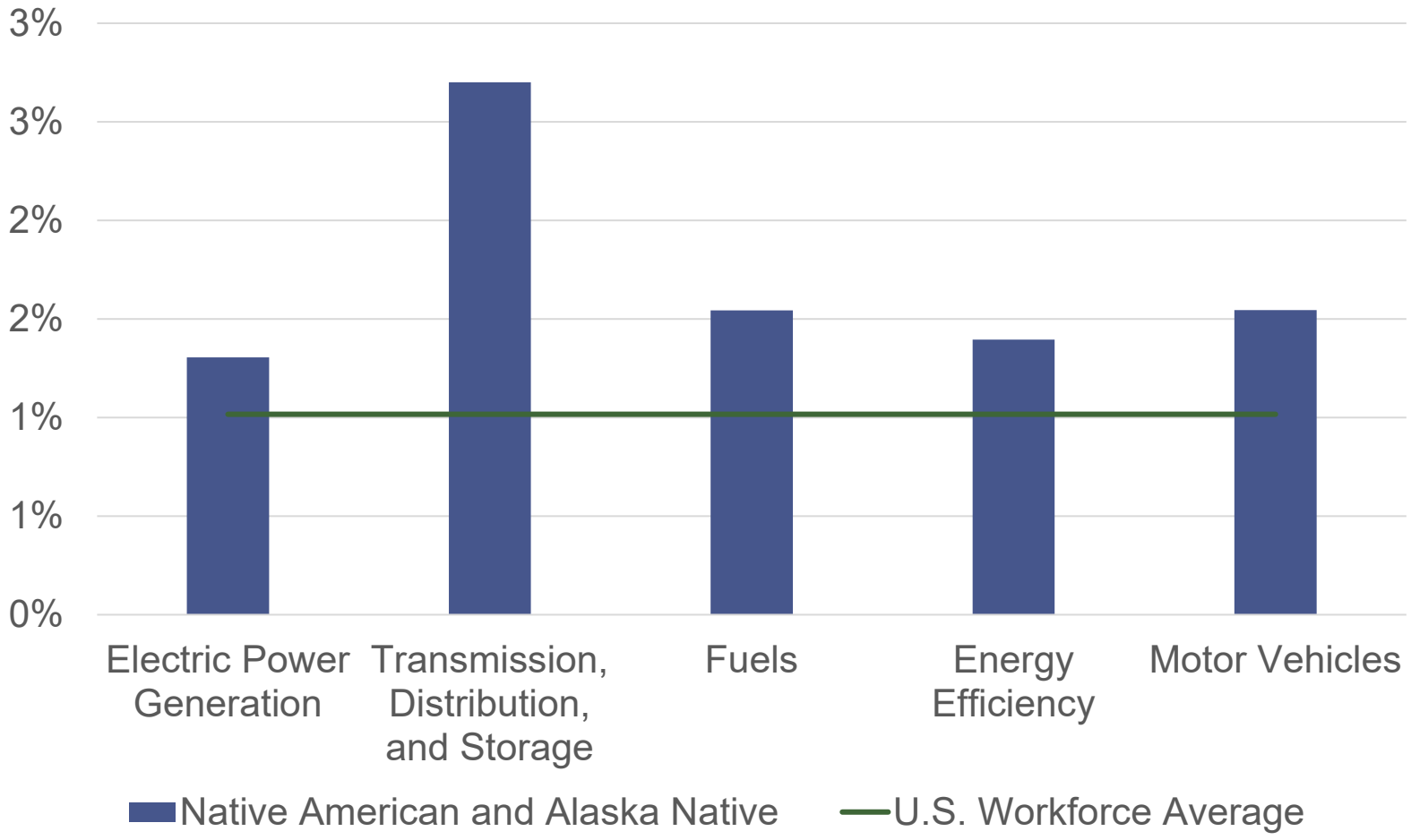


Topline Findings

- All technology groups, except fuels, grew in 2021.
- 2021 growth was not enough to make up for jobs lost in 2020.
- Union density in the energy sector is higher than the national average for private sector employers.
- Female and Black or African American workers represent lower-than-average percentages while there are more workers of two or more races.
- The concentration of veterans and workers under the age of 55 is higher in energy than the national workforce.

Native American and Alaska Natives in the Energy Workforce

- Native American and Alaska Natives are more concentrated in the energy workforce relative to the workforce as a whole (2% compared to 1%).
- Transmission, distribution and storage has the highest concentration (3%) but percentages are higher than the national average for all technology groups.



Topline Findings

- Of the jobs DOE counts, vehicles (including repairs and manufacturing) is the largest sector.
- All transmission, distribution, and storage & energy efficiency sectors grew.
- Electric power generation jobs increased except for nuclear and coal.
- Coal and petroleum drove declines in fuel jobs.
- The majority of employers within all industries across all technology groups reported difficulty hiring workers.

- Electric vehicle jobs increased by 26.2%, adding 21,961 new jobs.
- Hybrid electric vehicle jobs increased 19.7%, adding 23,577 new jobs.
- Solar energy jobs increased by 5.4%, adding 17,212 new jobs.
- Wind energy jobs increased by 2.9%, adding 3,347 new jobs.
- Energy efficiency jobs increased by 2.7%, adding 57,741 new jobs.
- Transmission, distribution, and storage jobs increased by 1.9%, adding 22,779 new jobs.

Many technologies surpassed 2019 levels

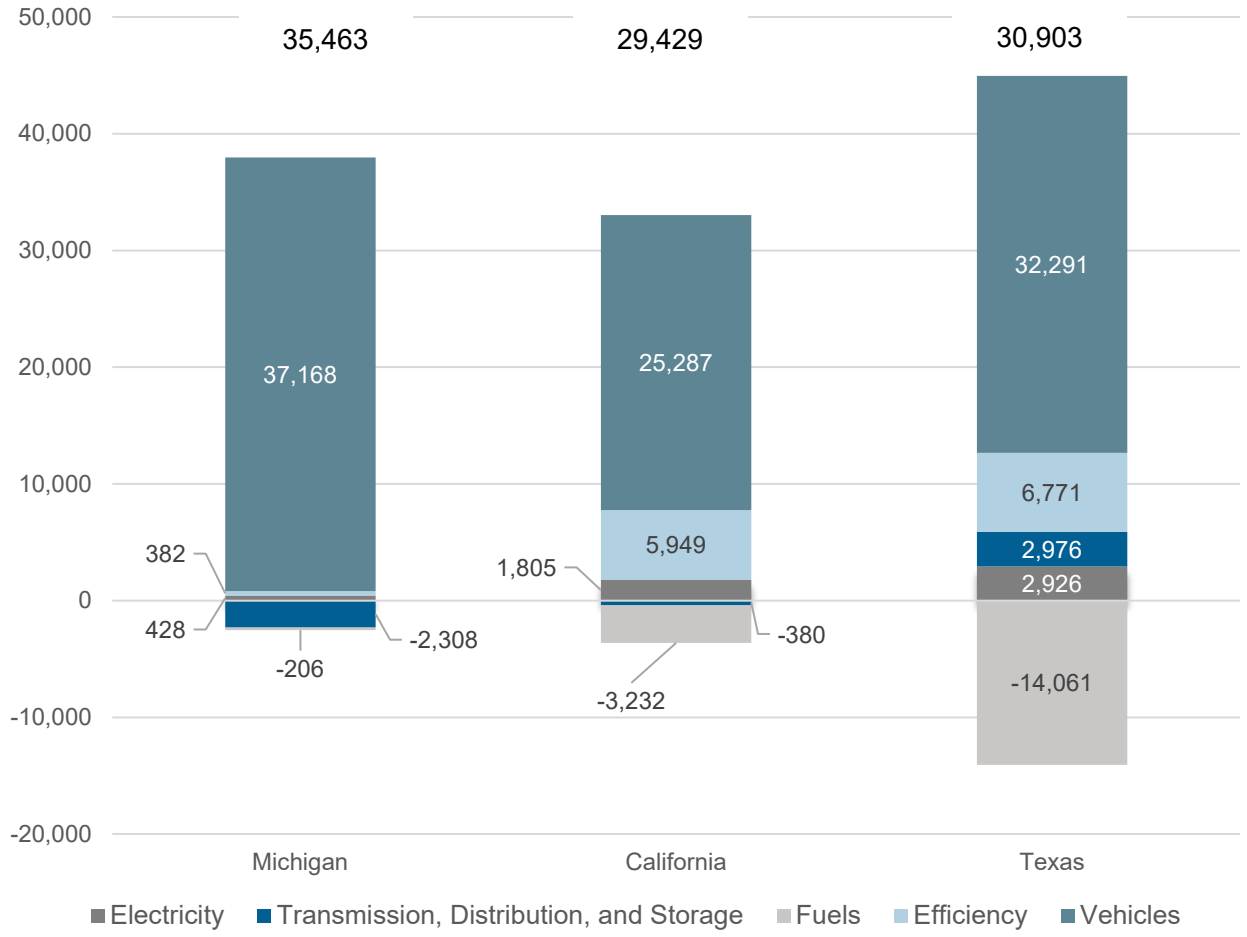
Wind: 5,390 (4.7%)	Batteries: 3,794 (5.8%)	Woody biomass: 472 (1.4%)	Hydrogen fuel cell vehicles: 3,429 (32%)
Natural gas vehicles: 569 (4.4%)	Plug in EVs: 11,013 (21%)	Full EVs: 28,027 (36%)	Hybrids: 29,869 (26%)

All of these areas are in carbon-reducing categories

State Level Data

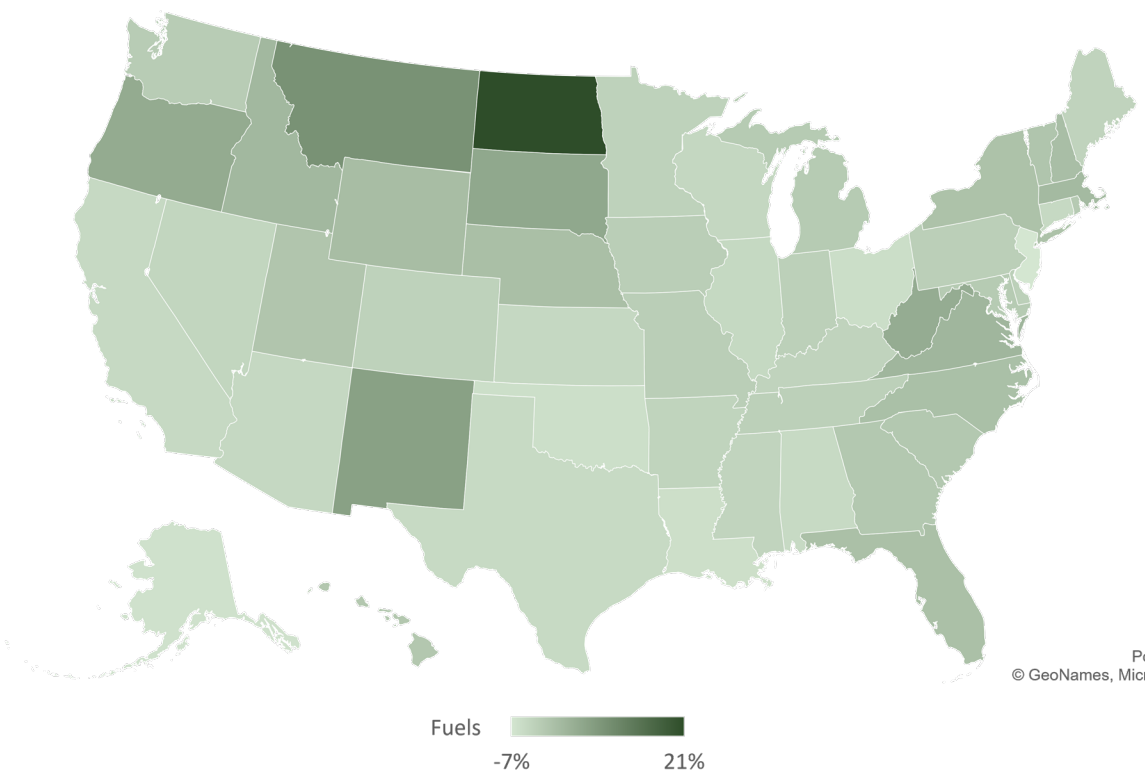
States with motor vehicle manufacturing added the most energy jobs

- States with motor vehicle manufacturing added most jobs – Michigan led U.S. in creation followed by California & Texas.
- Large growth in motor vehicles offset declines in transmission, distribution, storage and fuels in Michigan.
- Texas added the most jobs but also lost more fuel jobs than any other state: -14,061 – next highest losses were in Louisiana with -3,731 – significant difference.

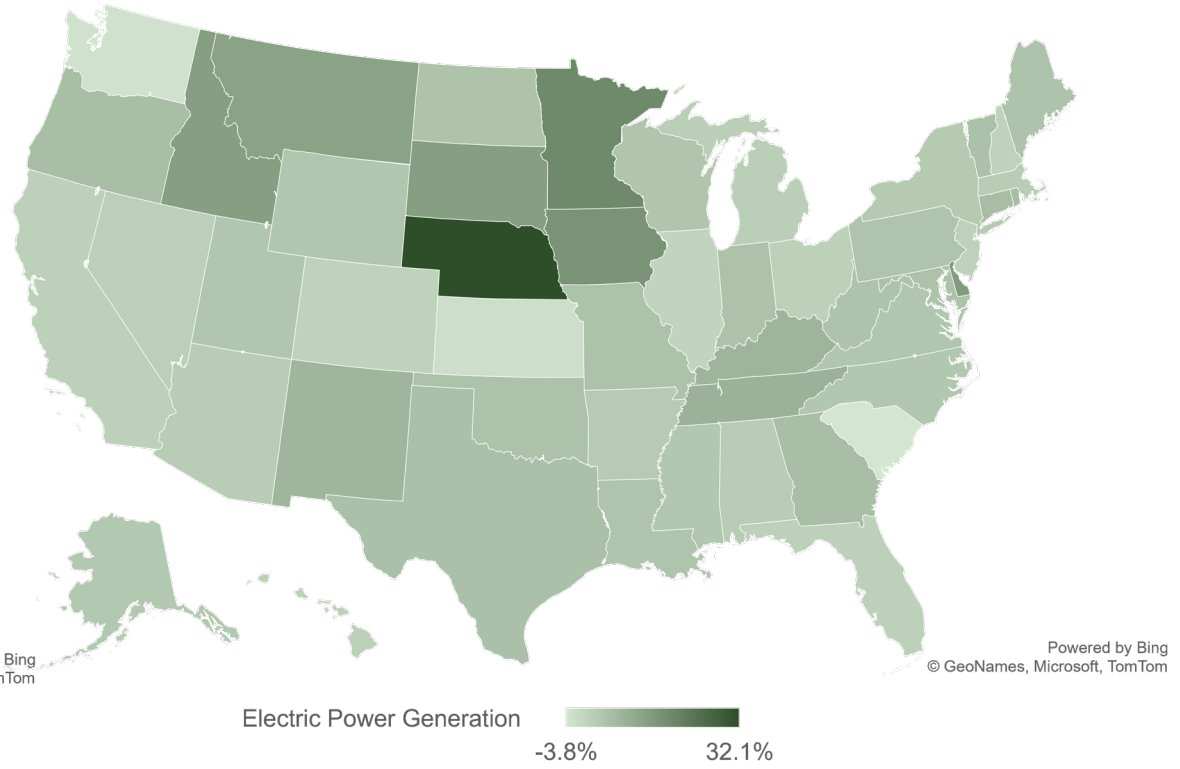


Fuels and electricity grew the fastest in the Midwest

Fuels Growth from 2020: North Dakota (21%), Montana (8%), and New Mexico (5%)

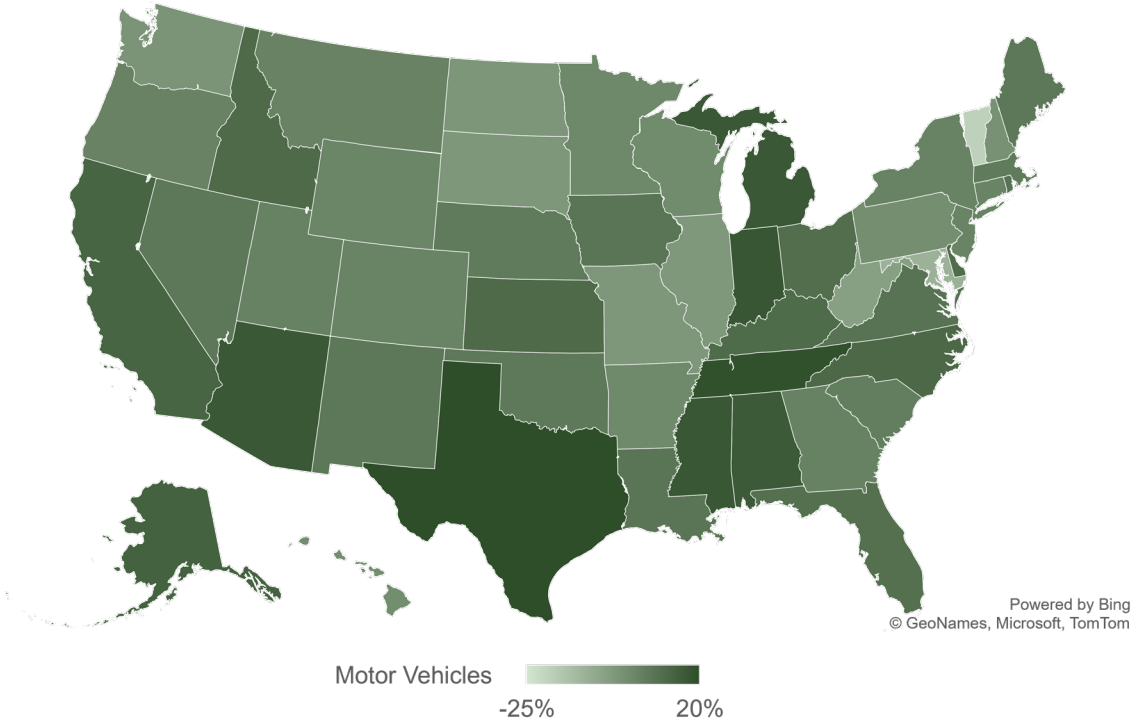


Electricity Growth from 2020: Nebraska (32%), Minnesota (18%), Iowa (16%)

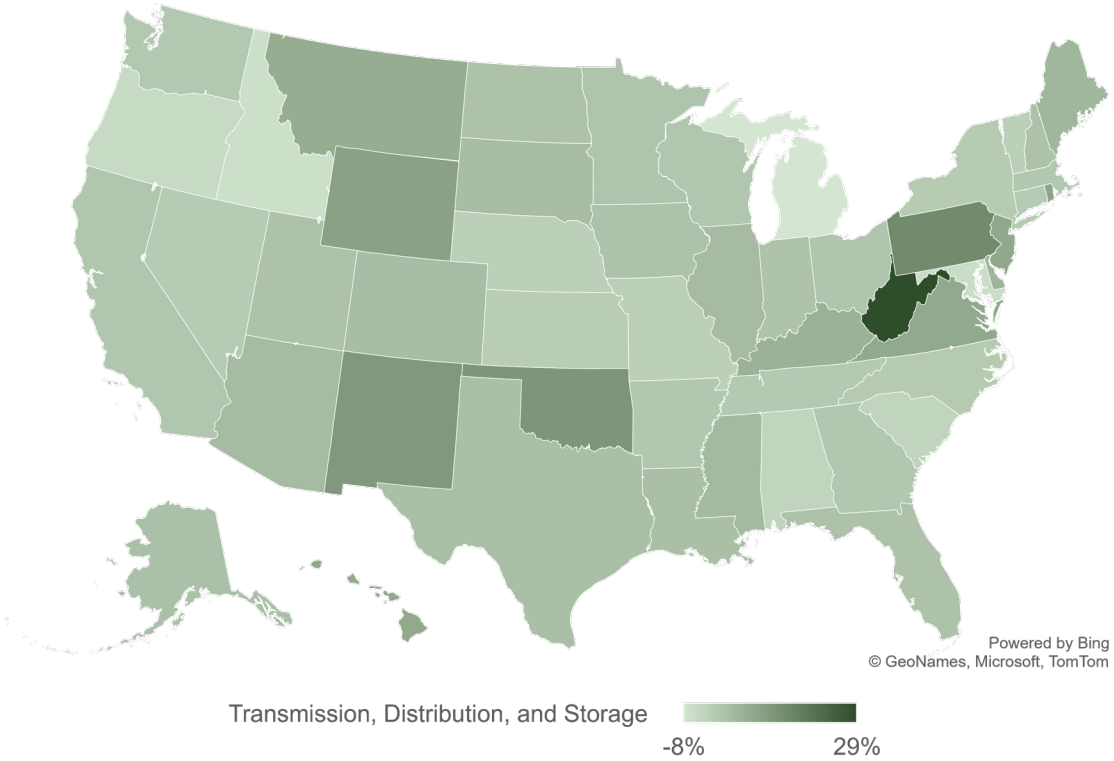


Appalachia had highest growth in transmission, distribution, and storage while the south had strong motor vehicles growth

- Vehicles growth dispersed, led by Texas (20%), Tennessee (19%), and Indiana (18%)

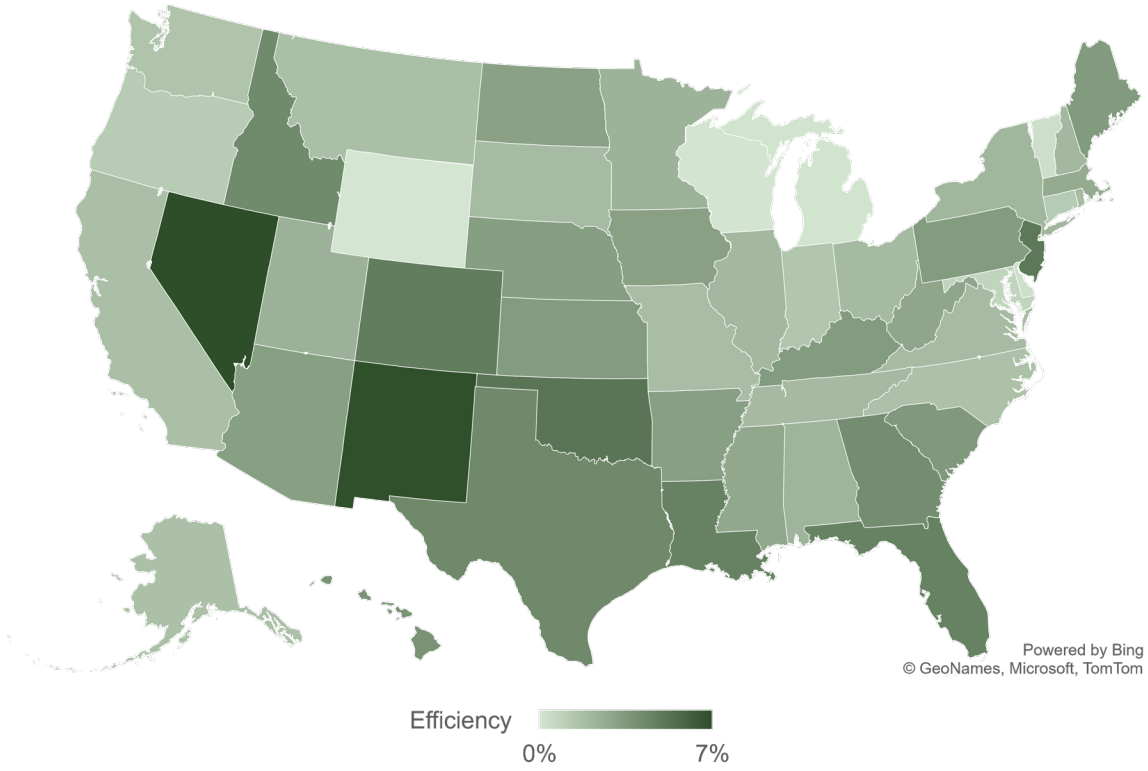


TDS Growth from 2020: West Virginia (29%), Pennsylvania (14%), and Oklahoma (11%)



Highest efficiency growth was in the southwest

Efficiency Growth from 2020: Nevada (+7%), New Mexico (+7%), and Oklahoma (+5%)



Oklahoma and New Mexico were the only two states to rank in the top three for growth in more than one technology groups

States with the most estimated net-zero aligned jobs

- States with the highest number of jobs in net-zero aligned industries
  - California: 2,711,064 jobs in net-zero aligned industries
  - Texas: 391,670
  - New York: 256,449
  - Florida: 144,701
  - Michigan: 131,477

- States with the highest percentage of jobs in net-zero aligned industries
  - Vermont (58% of energy jobs were in net-zero aligned industries)
  - Nevada (56%)
  - District of Columbia (56%)
  - Hawaii (55%)
  - Rhode Island (52%)

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Thank you

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