

# 1. Discussions about and planning for the energy transition tend to focus on technological feasibility at the exclusion of social, cultural, and political factors

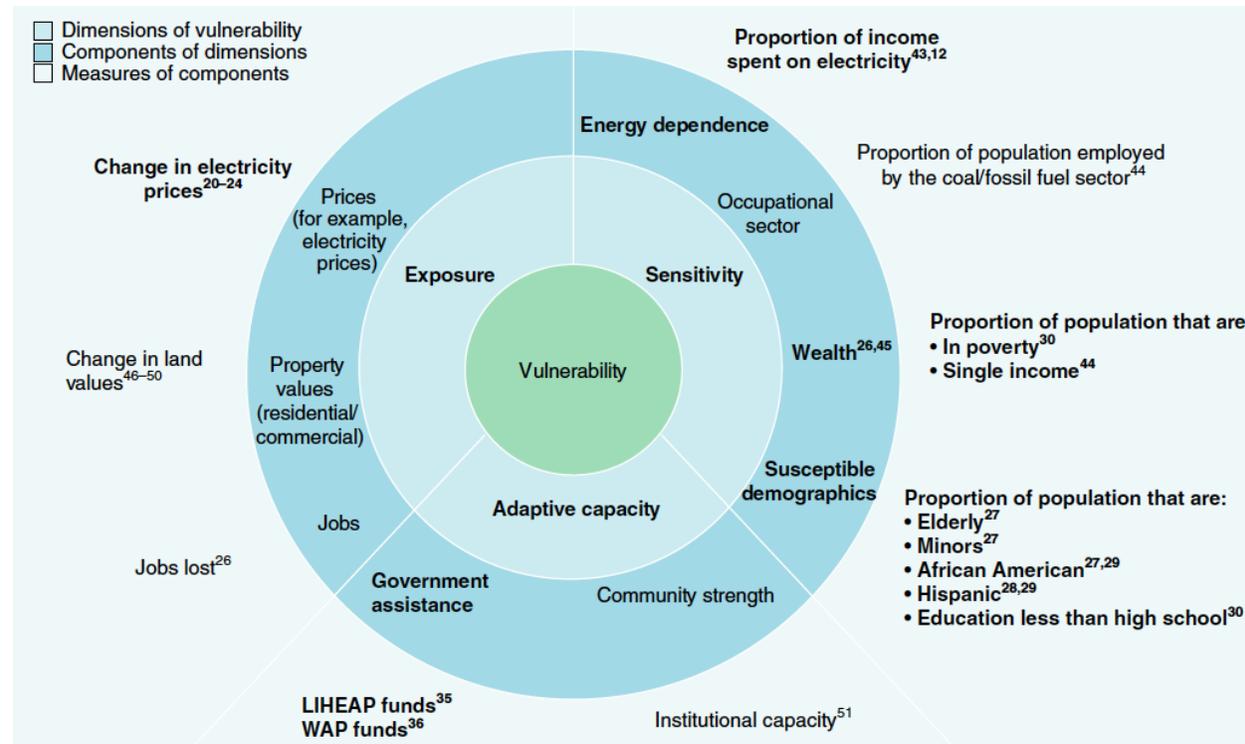
“I feel people are really bitter and nobody has their interest at heart. They feel like the country used them for energy while it bothered them and now that it’s done with them, they kind of, like, forget.”



“There is also a sense of grief that comes along with it, you know, coal mining is really a part of the culture here and it’s interwoven into the way people feel about themselves and their own identity and their identity as a community.”

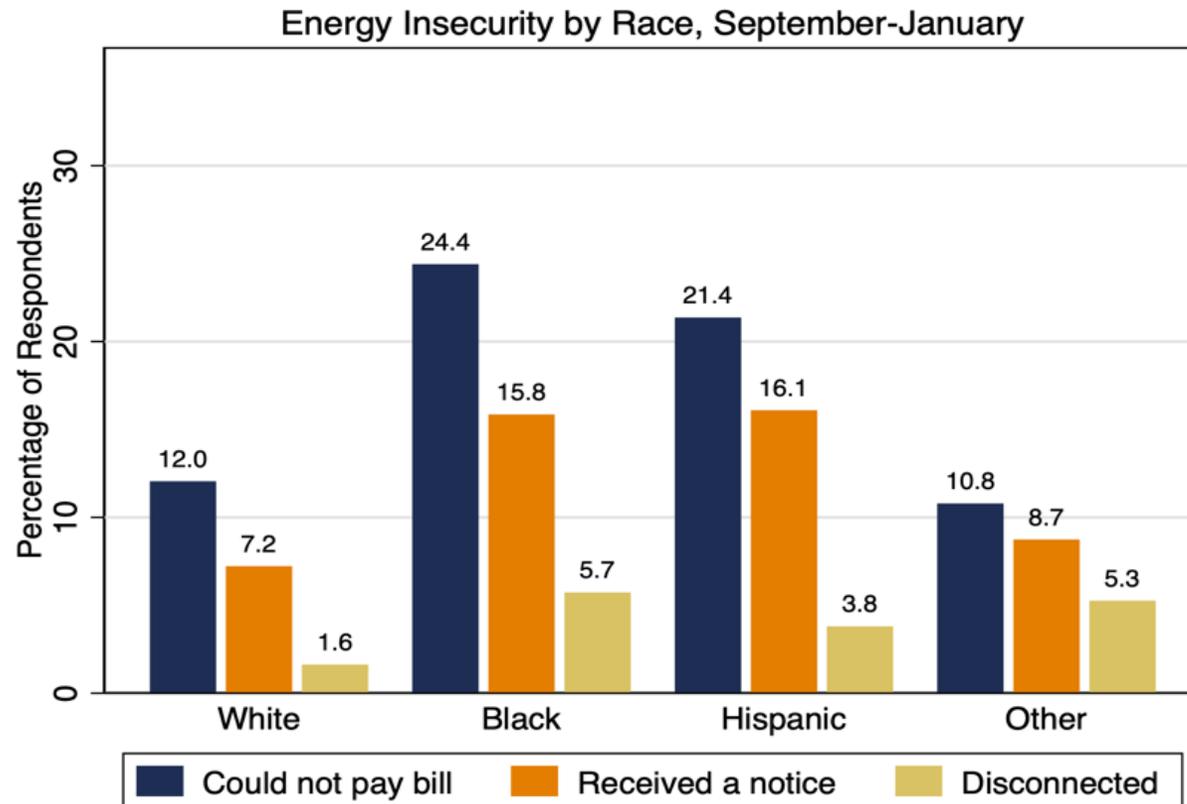
Source: Carley, S., Evans, T. P., Konisky, D. M. 2018. Adaptation, culture, and the energy transition in American coal country. *Energy Research & Social Science* 37: 133-139.

## 2. A Just Transition must include those who work in legacy fossil fuel industries AND the many other vulnerable communities in this transition



Source: Carley, S., Evans, T. P., Graff, M., Konisky, D. M. 2018. A framework for evaluating geographic disparities in energy transition vulnerability. *Nature Energy* 3: 621-627.

# Energy insecurity is growing



Based on a nationally-represented sample of 1,672 households within 200% of the federal poverty line

Survey administered online from January 15-22, 2021

Source: Memmott, T., Carley, S., Graff, M., Konisky, D.M. 2021. Socioeconomic disparities in energy insecurity among low-income households before and during the COVID-19 pandemic. *Nature Energy* 6, 186-193.

# Technological Access not Available to All



Source of images: <https://www.makeuseof.com/tag/5-smart-home-appliances-buying/>; <https://www.energystoragenetworks.com/electric-vehicle-growth-may-lead-to-charging-electric-grid-challenges/>; [https://www.renewableenergymagazine.com/pv\\_solar/study-finds-future-deployment-of-distributed-solar-20150813](https://www.renewableenergymagazine.com/pv_solar/study-finds-future-deployment-of-distributed-solar-20150813); [https://greenliving.lovetoknow.com/LED\\_Light\\_Bulbs](https://greenliving.lovetoknow.com/LED_Light_Bulbs); <http://baystreetex.com/index.php/2017/10/18/smart-appliances-revolutionise-commerce/>

# Opportunities for Employment and Engagement not Available to All



Source of images: <https://www.bls.gov/ooh/construction-and-extraction/solar-photovoltaic-installers.htm>; <https://www.startribune.com/minnesota-s-state-watchdog-agency-dings-utilities-commission-on-dealings-with-public/571919972/>; [https://www.thestar.com/opinion/commentary/2013/04/09/dont\\_look\\_for\\_justice\\_in\\_ontarios\\_debate\\_on\\_wind\\_turbines.html](https://www.thestar.com/opinion/commentary/2013/04/09/dont_look_for_justice_in_ontarios_debate_on_wind_turbines.html); <https://www.ariba.com/solutions/solutions-overview/procurement/procure-to-pay>

# Who mines, extracts, and produces clean energy components? Who is displaced by new energy development?



Review

Who are the victims of low-carbon transitions? Towards a political ecology of climate change mitigation

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**Table 3**

**Vulnerable groups mentioned in academic research on political ecology and climate mitigation (n = 198 studies).**

| Vulnerable group  | No. of articles | % of articles |
|---|-----------------|---------------|
| Non-human species   | 153             | 77.3%         |
| Local communities, host communities, adopters or households   | 152             | 76.8%         |
| Farmers, agriculturalists, or pastoralists  | 74              | 37.4%         |
| Rural poor  | 73              | 36.9%         |
| Occupational workers, wage laborers, or their unions  | 72              | 36.4%         |
| Indigenous/aboriginal groups, ethnic/racial minorities, or members of a lower caste                 | 71              | 35.9%         |
| Future generations (e.g., nuclear waste)  | 71              | 35.9%         |
| Fishers and water resource users  | 51              | 25.8%         |
| Environmental groups, civil society, wildlife reserivists, land managers or nature conservationists | 38              | 19.2%         |
| Urban poor  | 36              | 18.2%         |
| Women (including gender roles)  | 27              | 13.6%         |
| Recreationists, campers, hikers, forest users   | 27              | 13.6%         |
| Banks, financiers, investors (including fossil fuel incumbents)                                     | 27              | 13.6%         |
| Elderly   | 13              | 6.6%          |
| Students  | 13              | 6.6%          |
| Disabled individuals  | 12              | 6.1%          |
| Forced labor or modern slaves   | 10              | 5.1%          |
| Coastal homeowners (e.g. offshore wind energy)  | 10              | 5.1%          |
| Prostitutes   | 10              | 5.1%          |
| Children or youth (including health impacts)  | 5               | 2.5%          |
| Local businesses (including tourism)  | 5               | 2.5%          |
| Refugees (including displaced persons and forced migrants)  | 3               | 1.5%          |
| Alcoholics  | 3               | 1.5%          |
| Affluent suburban homeowners  | 1               | 0.5%          |

Source: Author.

### 3. The energy transition may be slow but the changes within specific communities are fast, and so fast that many are unprepared

Count of Energy Justice and Just Transition Programs across the U.S.

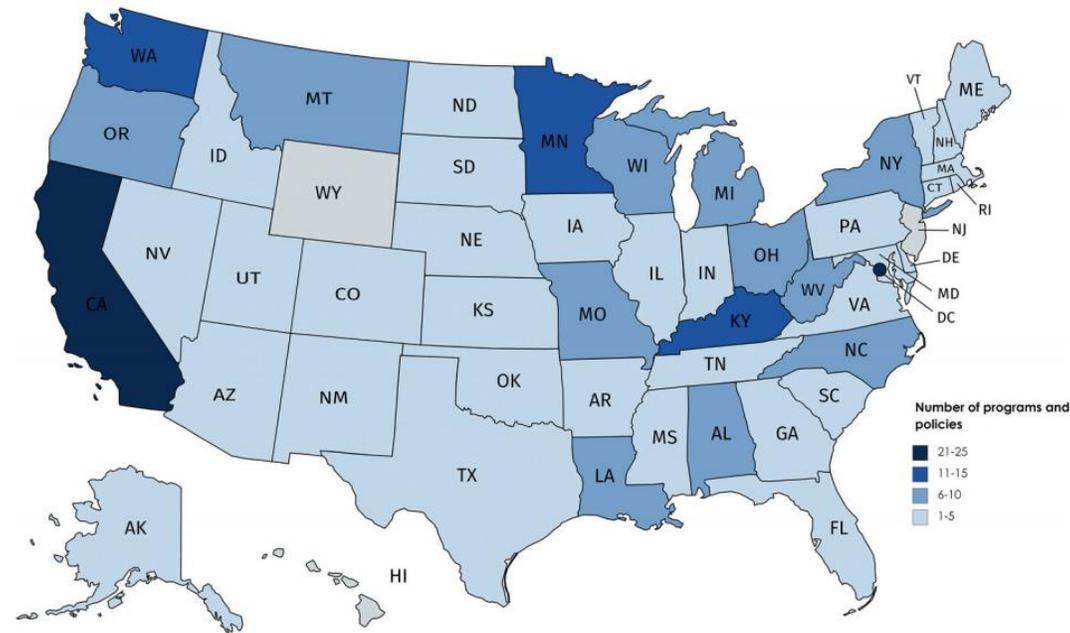


Fig. 1. Count of programs across U.S. states.