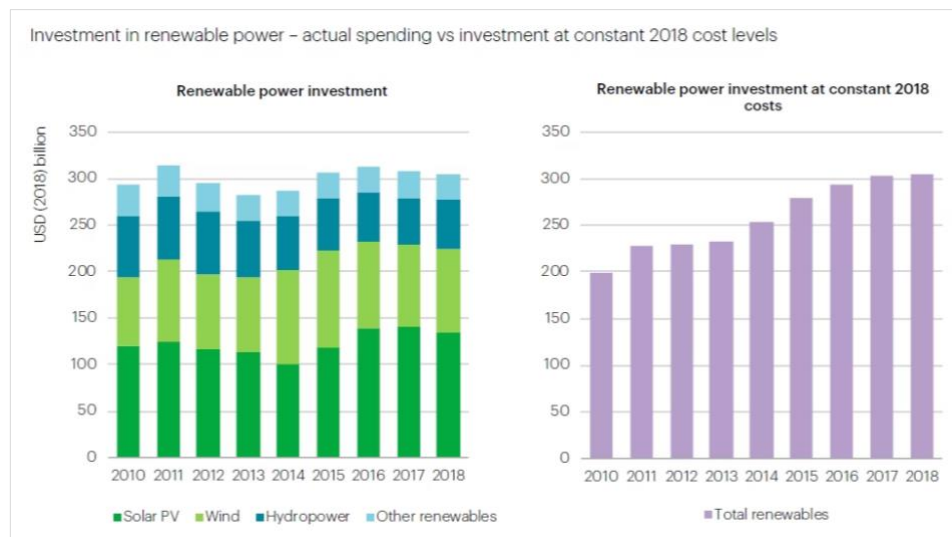


## Fossil Fuels and Renewable Energy Research Report in Virginia

PurpleState Research and Analysis Department  
 Perspectives and Statistics from Research Organizations and Special Interest Groups

**GREENPEACE** – 8 reasons why we need to phase out the fossil fuel industry (2020)  
[\(https://www.greenpeace.org/usa/research/8-reasons-why-we-need-to-phase-out-the-fossil-fuel-industry/\)](https://www.greenpeace.org/usa/research/8-reasons-why-we-need-to-phase-out-the-fossil-fuel-industry/)

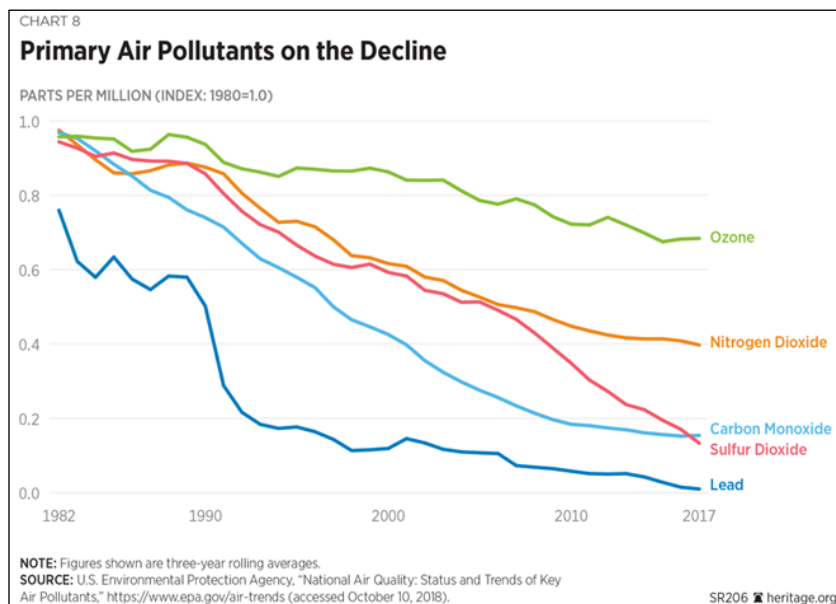
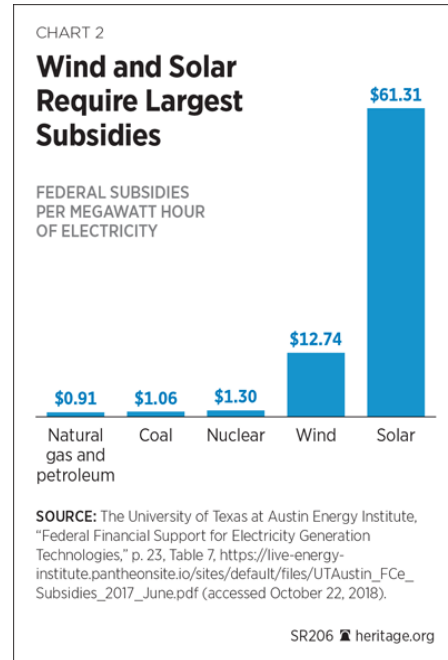
- Studies have shown if nothing is done to halt emissions, climate change could cost the U.S. \$500 billion every year by 2090.
- Total global investment in energy added up to \$1.8 trillion in 2018. Only 35% (~\$630 billion) went towards low-carbon energy, while nearly double (~\$1.2 trillion) went to fossil fuels.



- One out of every 10 U.S. dollars spent on energy (roughly \$170 billion in 2018) goes to fossil fuel supply projects, driving rapid increase in oil and gas production.
- In addition to releasing planet-warming greenhouse gas emissions, burning fossil fuels generates localized air pollutants — such as soot (fine particulate matter) and smog (ozone) — that increase the risk of death from stroke, heart disease, lung cancer, and respiratory illness.

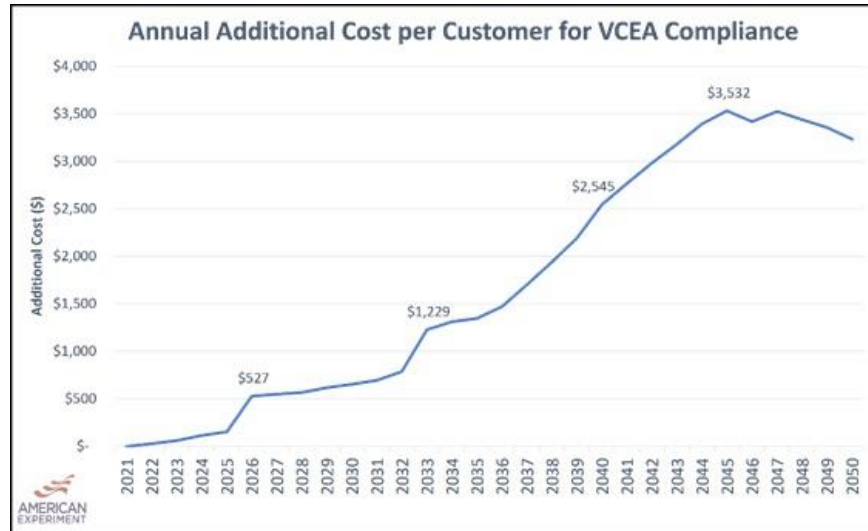
**The Heritage Foundation – State Renewable Energy Mandates: A Regressive Green Tax on America’s Poor (2018)** (<https://www.heritage.org/renewable-energy/report/state-renewable-energy-mandates-regressive-green-tax-americas-poor#:~:text=Natural%20expansion%20of%20renewable%20energy,utility%20bills%20than%20the%20wealthy>)

- In 2018, the United States produced more than 75% of its electricity from natural gas, coal, and nuclear power.
- Between 2009 and 2014, more than \$150 billion in federal subsidies went to wind and solar industries even though they make up less than 10% of U.S. electricity production.
- Wind and solar power require 5-20 times the amount of federal taxpayer subsidies per megawatt-hour compared to natural gas, coal, and nuclear.
- Low-income households spend a higher percentage of their incomes on energy (5-10x) than do high-income households.
- In the US, the 6 principal air pollutants have fallen by 67% since 1980, despite a 44% increase in population and 25% increase in energy consumption.



**Center of the American Experiment – The High Cost of the Virginia Clean Economy Act (2022)**  
<https://www.americanexperiment.org/the-high-cost-of-the-virginia-clean-economy-act-executive-summary/>

- Complying with VCEA energy mandates would cost approximately \$203 billion through 2050.
- The VCEA will increase the cost of electricity to an average annual expense of \$1,770 per customer, with costs peaking at \$3,500 per customer by 2045.



- Under VCEA, residential ratepayers would see an average additional increase of over \$1,160 per year. Costs would peak at more than \$2,300 in 2045.
- Under VCEA, commercial electricity users would see a \$6,800 annual average increase in their electricity expenses. These costs would nearly double by 2045.

**Greenlink Group – Virginia’s Energy Transition Report (2019)**  
[https://info.aee.net/hubfs/VA\\_Energy%20Transition%20FINAL\\_9.24.19.pdf](https://info.aee.net/hubfs/VA_Energy%20Transition%20FINAL_9.24.19.pdf)

- Over the next 30 years, all Zero Carbon Scenarios will produce net savings ranging from \$1,600 to \$3,400 for the average Virginia household.

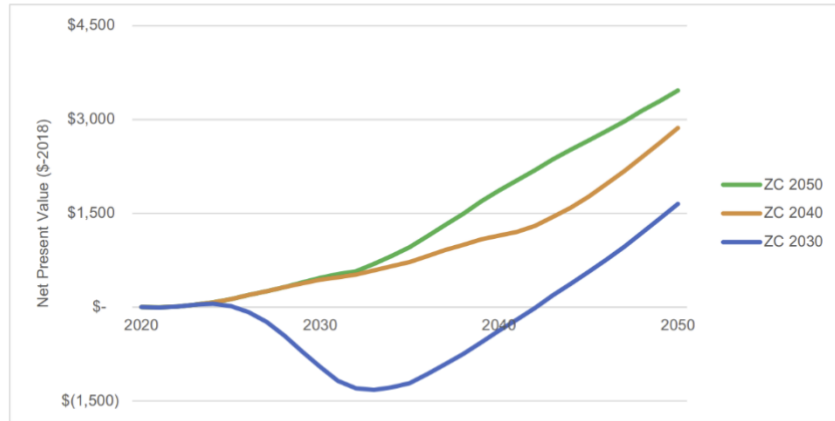


Figure ES-2: Average Virginia Household Bill Savings

- Customer bills are 10-15% lower in Zero Carbon Scenarios than with business-as-usual models.
- Zero Carbon Scenarios lead to an average of about 13,000 new jobs each year whereas business as usual produce around 6,000 new jobs each year.
- Business as usual will accumulate \$500 million in damage from localized air pollutants in 2020 and over \$7 billion by 2050.
- Business as usual will accumulate \$2.5 billion in damage from CO2 in 2020 and \$56 billion in 2050.
- Each Zero Carbon Scenario offers a 50% or greater reduction in both localized public health pollutants and CO2 emissions compared to the business as usual.

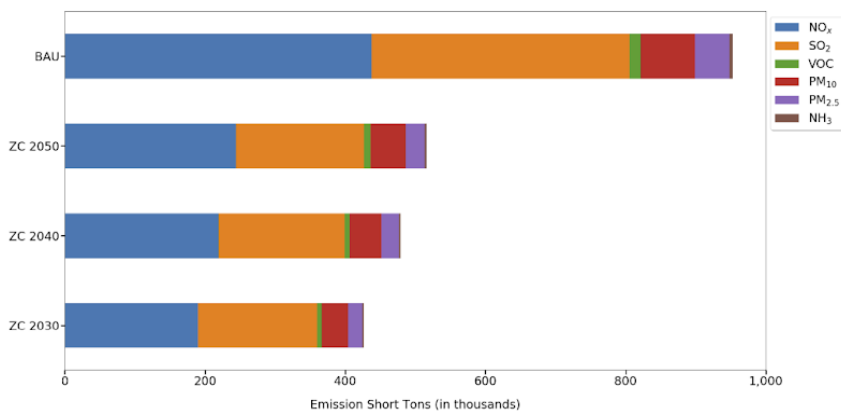


Figure 6-1: Cumulative Localized Pollutant Emissions through 2050 by Scenario