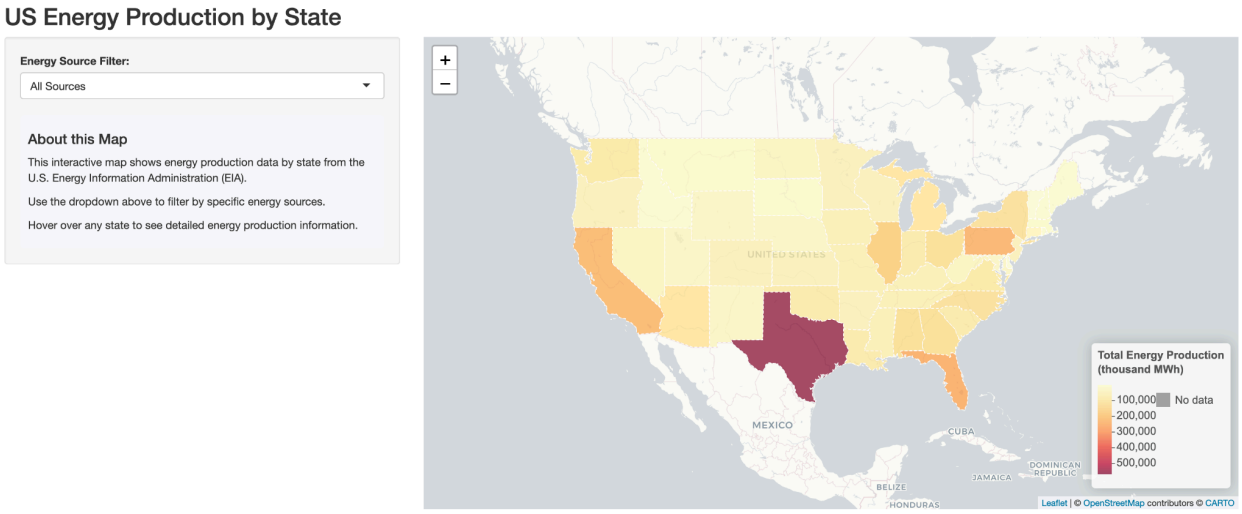
US Energy Production Patterns and Policy Implications

Link to shiny app: https://tillmawitz.shinyapps.io/story_7/
Screenshot in case things are not working for whatever reason:



Regional Patterns and Dependencies

The interactive map reveals distinct regional patterns in US energy production, highlighting the country's diverse energy landscape. The Southeast and Texas dominate in total energy production, with states like Florida, Georgia, and Texas relying heavily on natural gas. Meanwhile, the Midwest exhibits strong dependency on coal, particularly in states like West Virginia, Wyoming, and Kentucky, where it constitutes over 70% of electricity generation. The Western states demonstrate greater diversification, with California leading in solar production and states like Washington and Oregon leveraging their geographical advantages for hydroelectric power. The Northeast, despite lower overall production, shows the most balanced energy portfolio, incorporating nuclear, natural gas, and growing renewable sources. These regional disparities reflect each area's unique resource availability, historical infrastructure investments, and economic priorities.

Energy Security and Policy Considerations

These production patterns have significant implications for US energy security and policy direction. The heavy fossil fuel dependence in many regions presents vulnerability to price volatility and supply disruptions, while also posing challenges for national carbon reduction

goals. States transitioning away from coal toward natural gas have reduced emissions but remain dependent on nonrenewable resources subject to price fluctuations. Regions with diverse energy portfolios demonstrate greater resilience to supply shocks and changing market conditions. Moving forward, federal and state policies should focus on supporting renewable energy development in areas with untapped potential, modernizing transmission infrastructure to enable renewable energy transport from production centers to consumption hubs, and providing economic transition support for coal-dependent communities. A balanced approach that acknowledges regional strengths while encouraging diversification would enhance national energy security while advancing climate objectives.