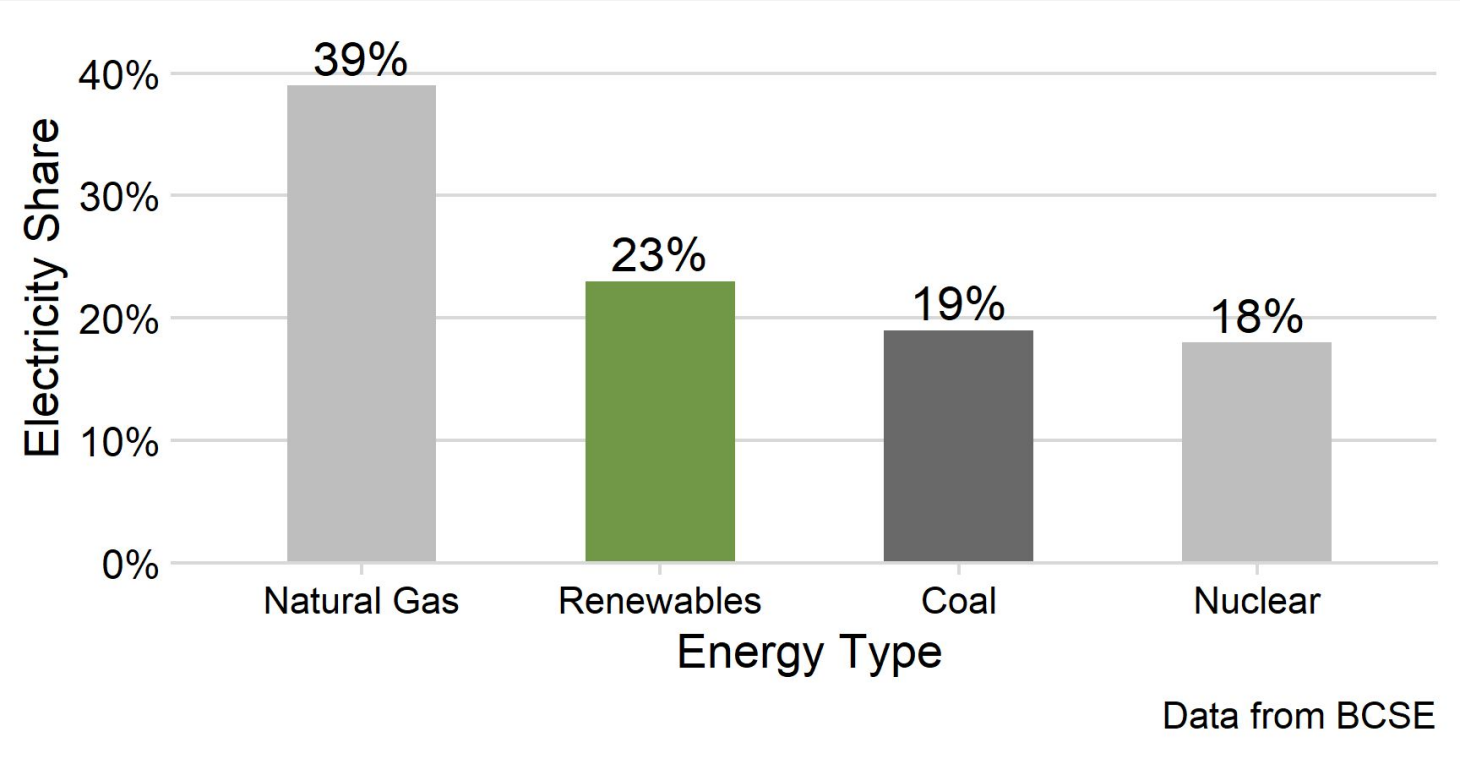
Advancements in **Solar** and **Wind** Energy in the USA

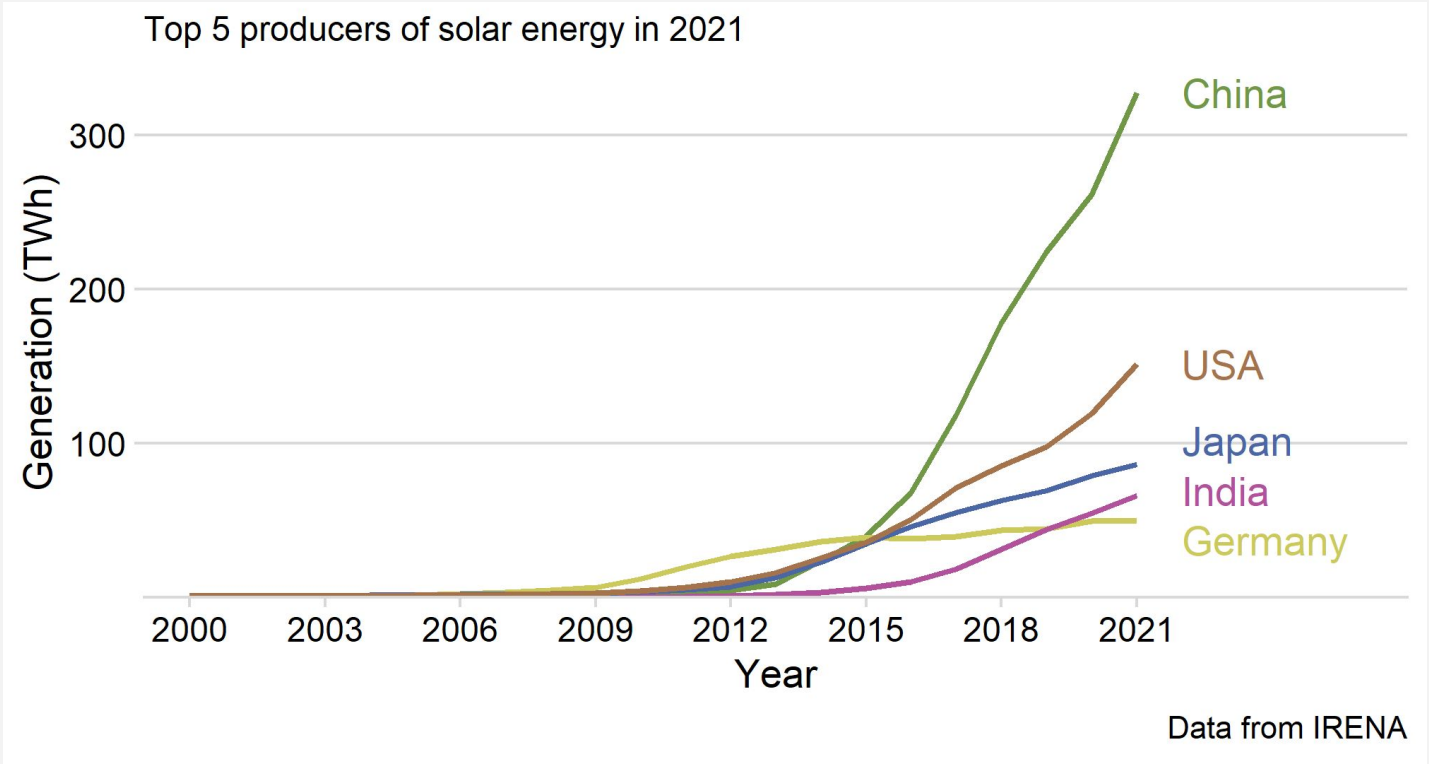
Abbey Kollar & **Pingfan Hu**
The Renewable Revolutionaries

Dec 13, 2023

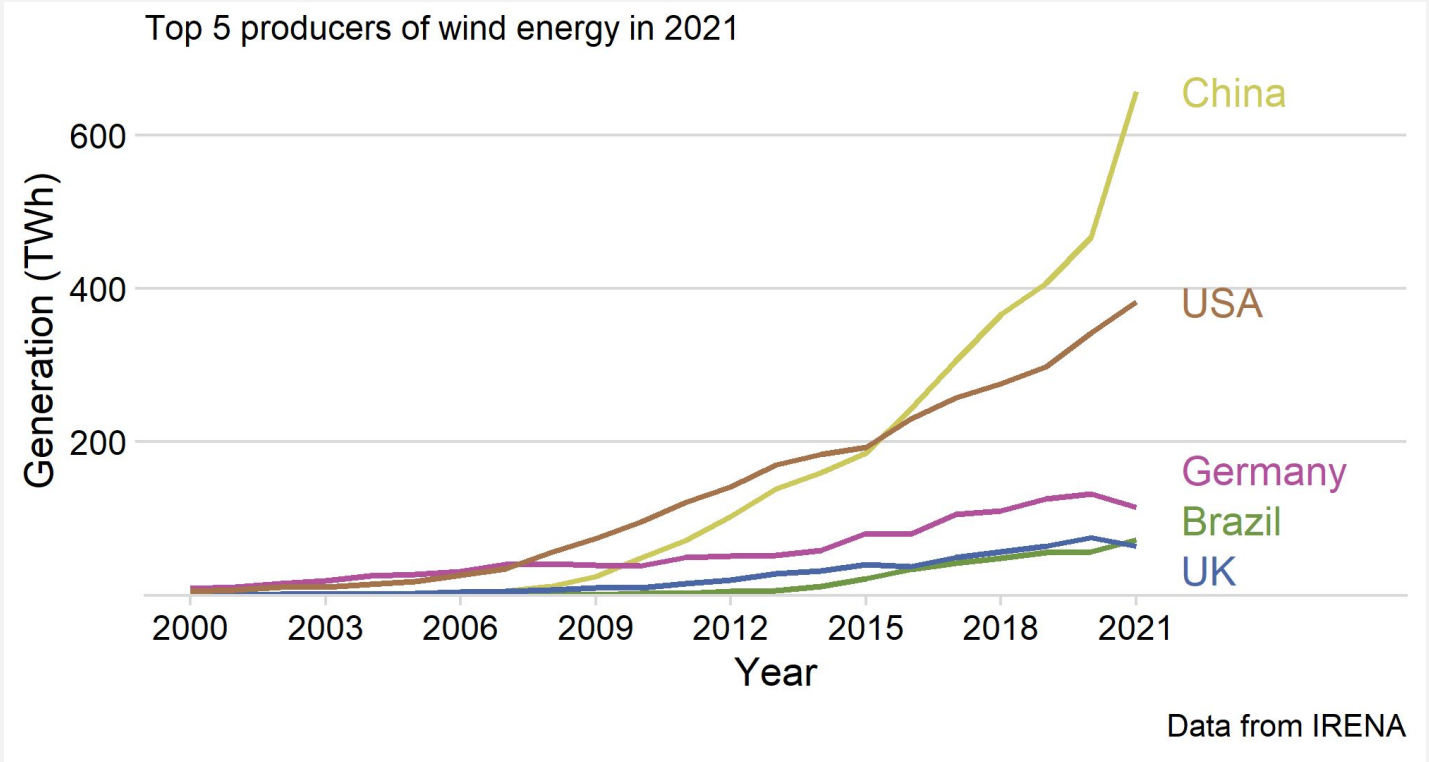
Renewables contribute more to the electricity share than coal



US is the second highest producer of solar



US is the second highest producer of solar and wind



Research Question

Exploring the key **drivers** of the growth of **solar** and **wind** electricity generation in the USA.

1. **Cost** of solar and wind energy
2. **Policies** and incentives
3. Engineering research **budgets**

Data Sources

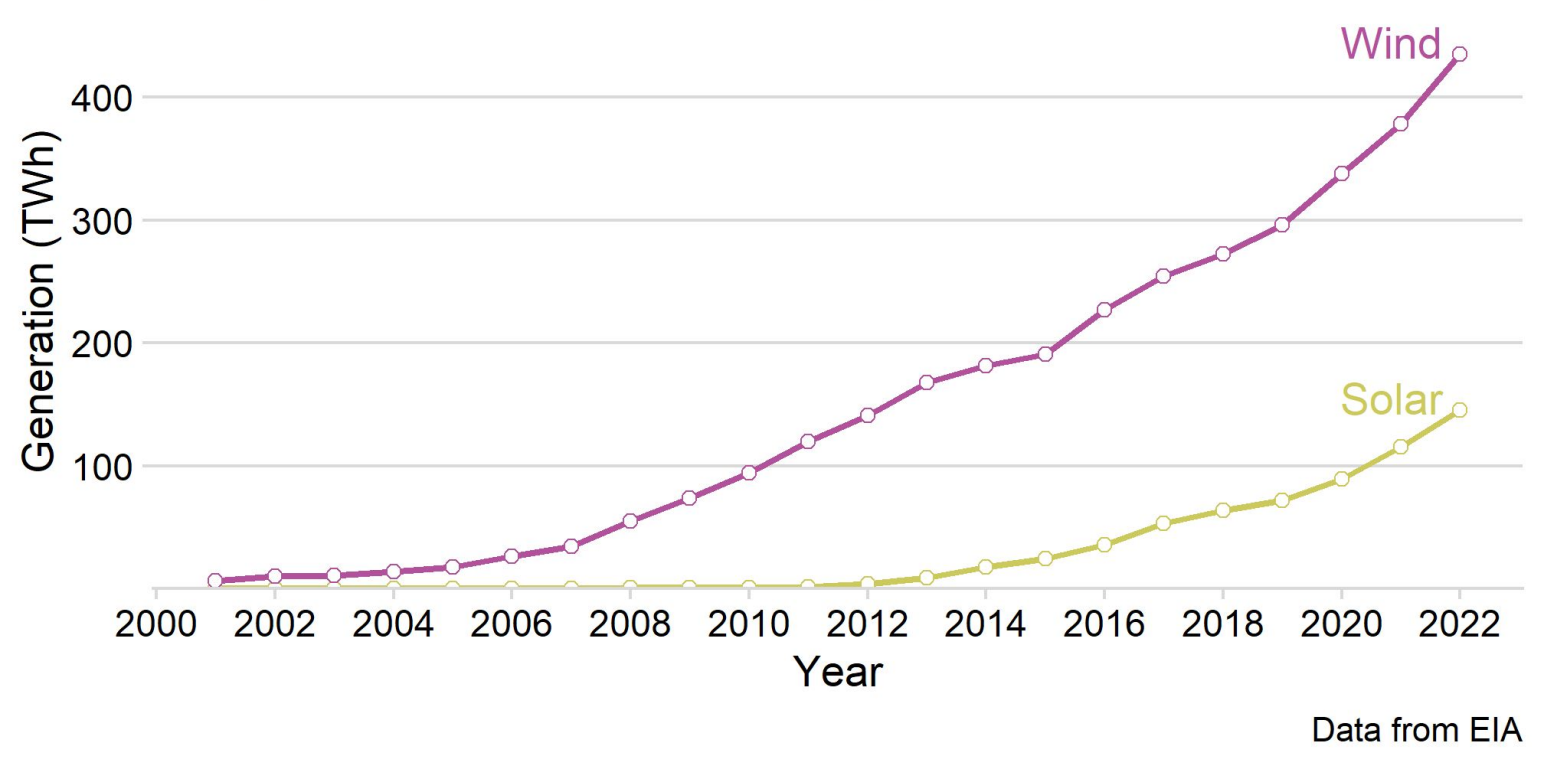
EIA - Solar/Wind **Generation** & **Fossil** Cost

IRENA - Solar/Wind **Cost** and **International** Renewable Generation

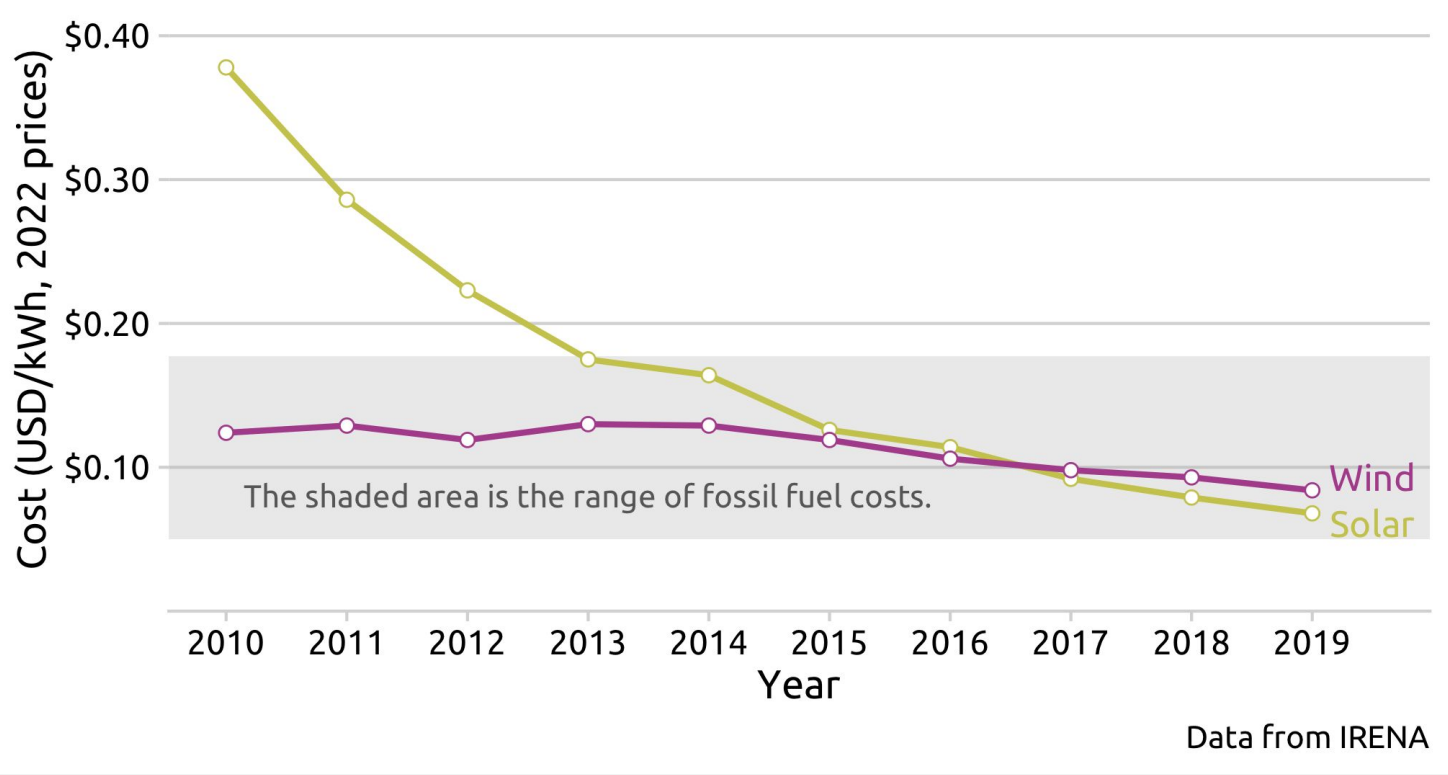
DSIRE - Solar/Wind **Laws** & Incentives

IEA - Energy Technology RD&D **Budgets**

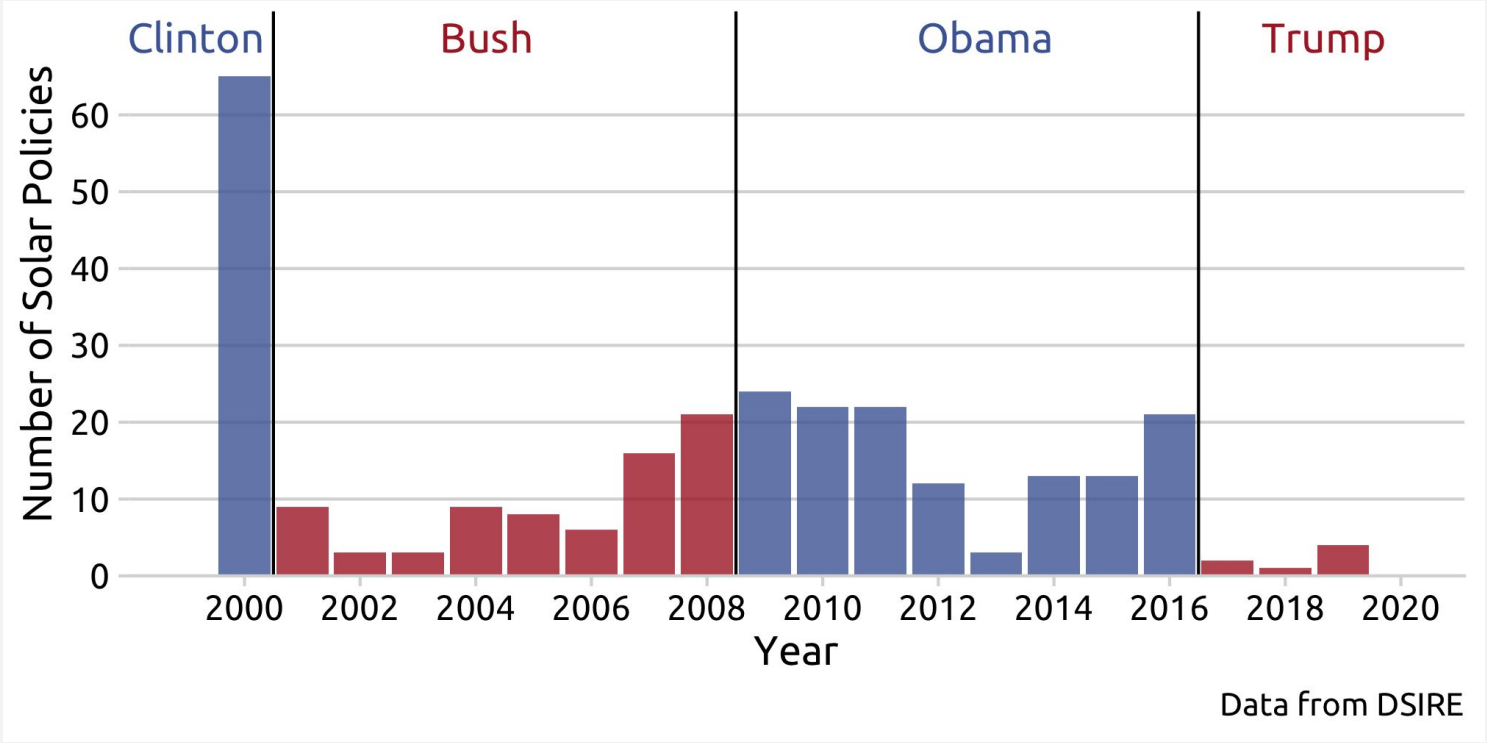
Wind outpaces solar generation every year



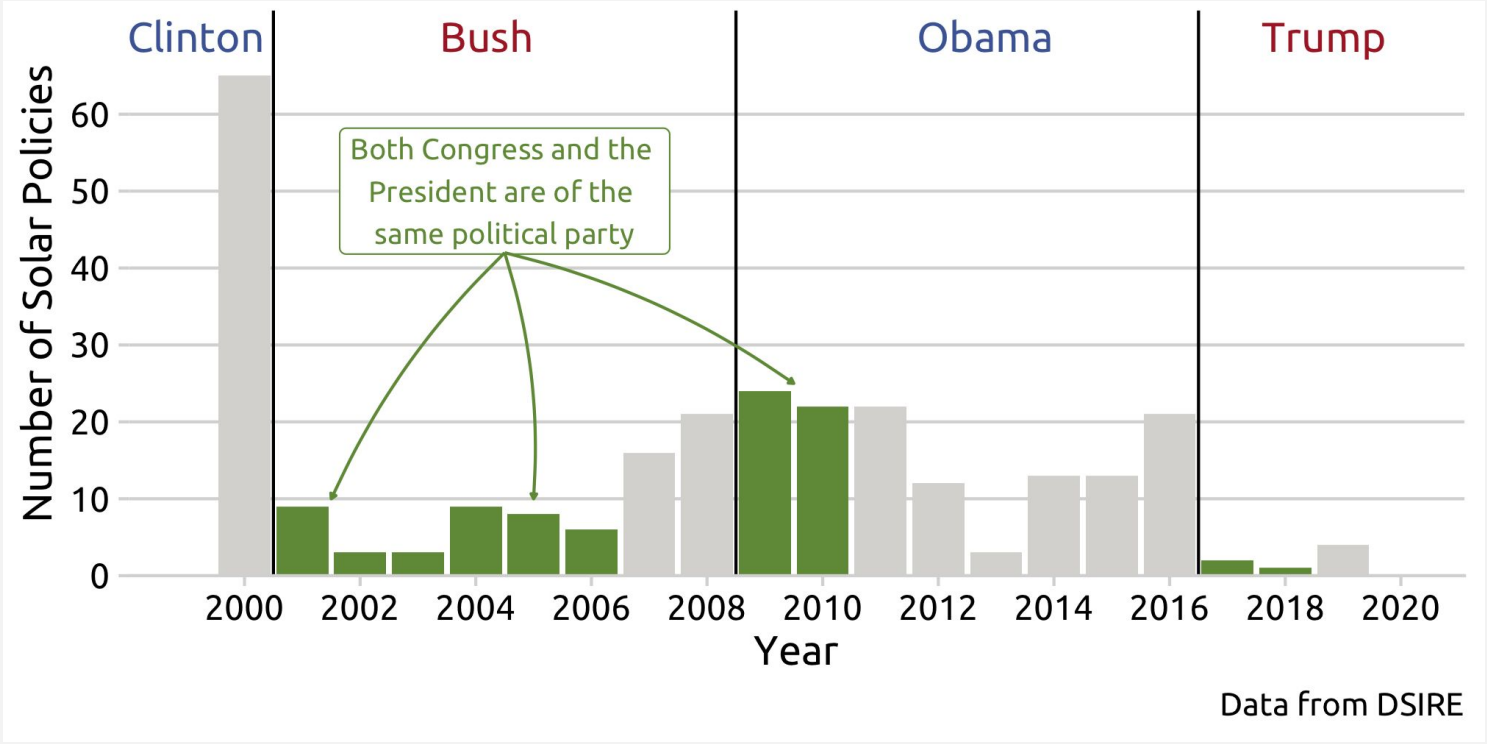
The cost of solar and wind are competitive with fossil fuels



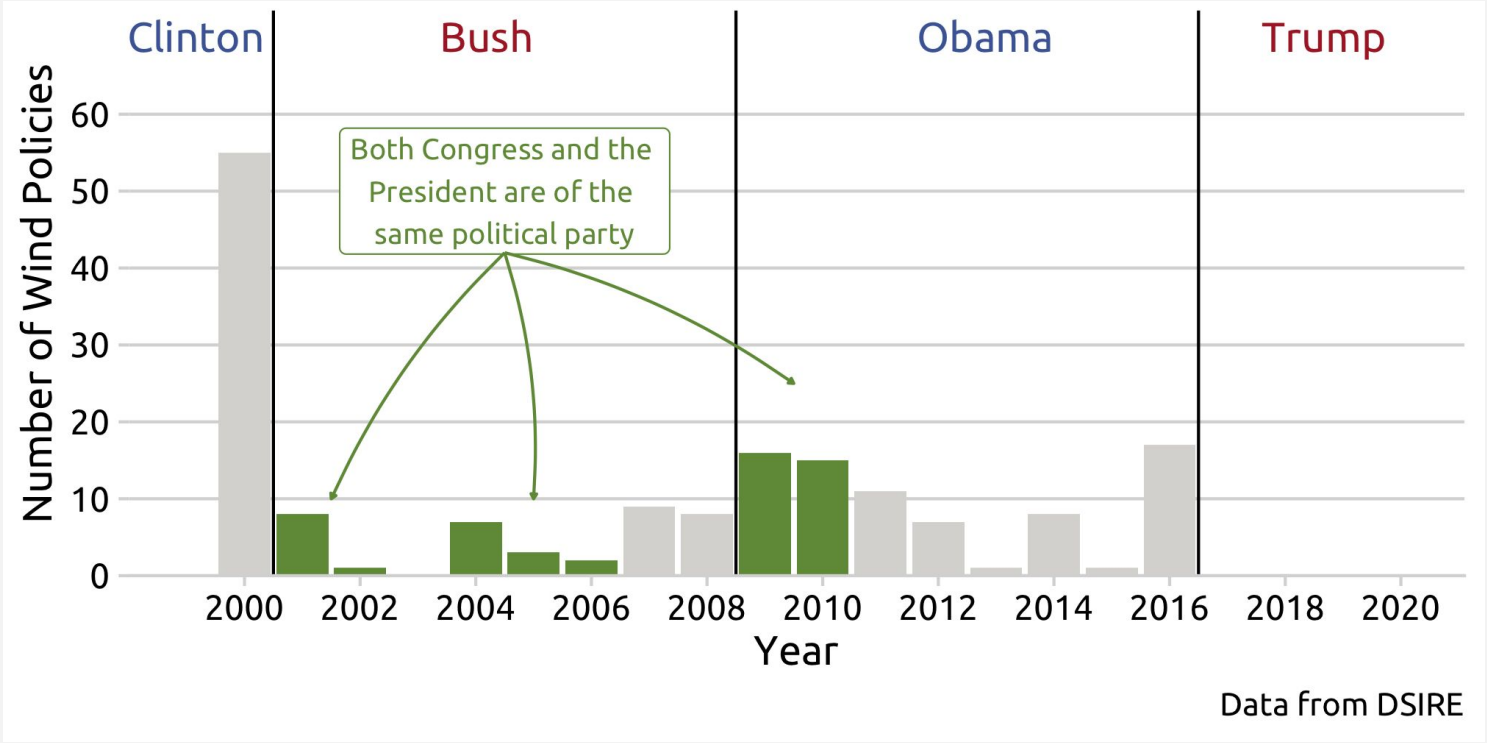
State solar policies coincide with democratic presidential terms



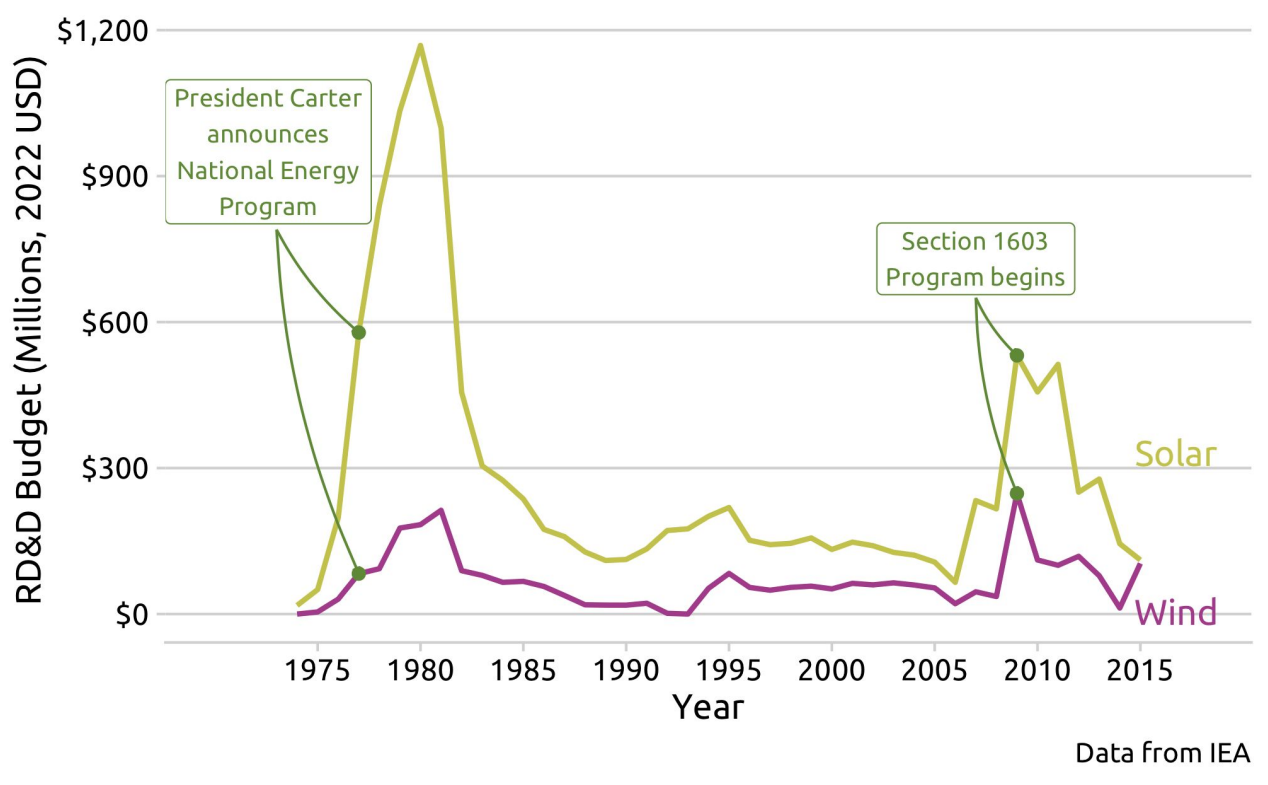
However, solar policies are not dependent on alignment of parties



State wind policies follow similar trends, but there are less enacted



Solar and wind budgets have the same trend, but solar is greater



Cost seems to be the main driver… with caveats

Energy Type	Driver	Correlation
Solar	Cost	-1.00
Solar	Budgets	0.46
Solar	Laws	-0.01
Wind	Cost	-0.81
Wind	Budgets	0.29
Wind	Laws	-0.08

US should retain a mix of drivers for renewable energy growth, but more research is needed.