



Data Visualization Team Project

Coal versus Renewables



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Donald Trump promises to bring back coal jobs but experts disagree

Lifting a moratorium against leases for coal mining on public lands will not create demand for coal

Darryl Fears | Wednesday 29 March 2017 14:45 BST | [📄](#)

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The Independent US

Energy experts give Trump the hard truth: You can't bring coal back

Coal wasn't killed by a political "war"—cheap renewables and fracked gas were the culprits.



Target audience

TRUMP'S ADMINISTRATION

DEFENSE	TREASURY	H.H.S.	COMMERCE
 JAMES MATTIS	 STEVEN MNUCHIN	 TOM PRICE	 WILBUR ROSS
C.I.A.	H.U.D.	U.N.	EDUCATION
 MIKE POMPEO	 DR. BEN CARSON	 NIKKI HALEY	 BETSY DEVOS
ATTORNEY GENERAL	TRANSPORTATION	E.P.A.	CHIEF STRATEGIST
 JEFF SESSIONS	 ELAINE CHAO	 SCOTT PRUITT	 STEVE BANNON
NATIONAL SECURITY ADVISOR	ADMINISTRATOR OF THE S.B.A	U.S. AMBASSADOR TO CHINA	CHIEF OF STAFF
 RETIRED LT. GEN MICHAEL FLYNN	 LINDA MCMAHON	 GOV. TERRY BRANSTAD	 REINCE PRIEBUS
DEPUTY NATIONAL SECURITY ADVISOR	DEPUTY COMMERCE SECRETARY	CMS ADMINISTRATOR	LABOR
KT MCFARLAND	TODD RICKETTS	SEEMA VERMA	 ANDY PUZDER



The Team



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Subramanyam**



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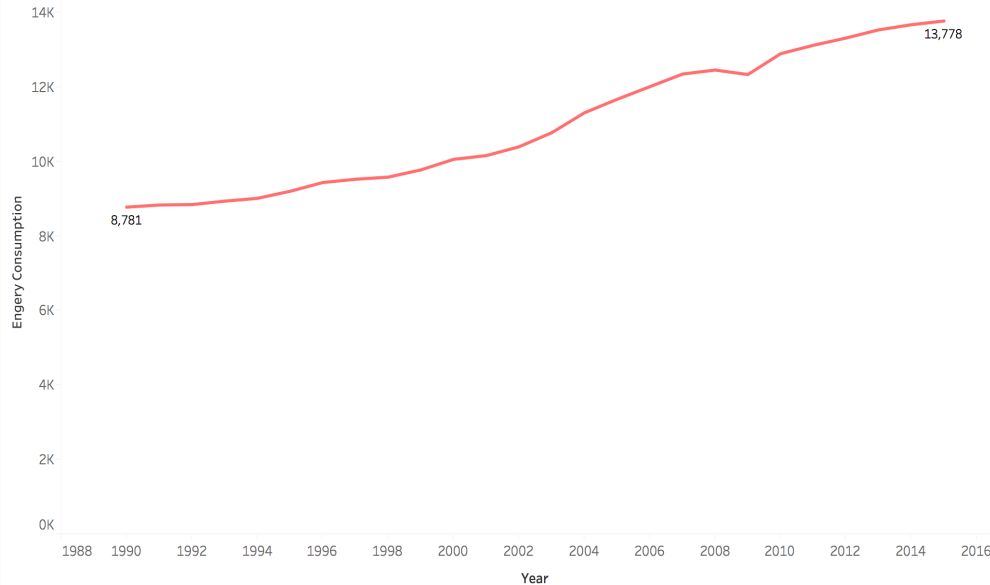
Sapthami Shetty

Increasing Energy Consumption

JULY 25, 2013

EIA projects world energy consumption will increase 56% by 2040

Increasing world energy consumption..

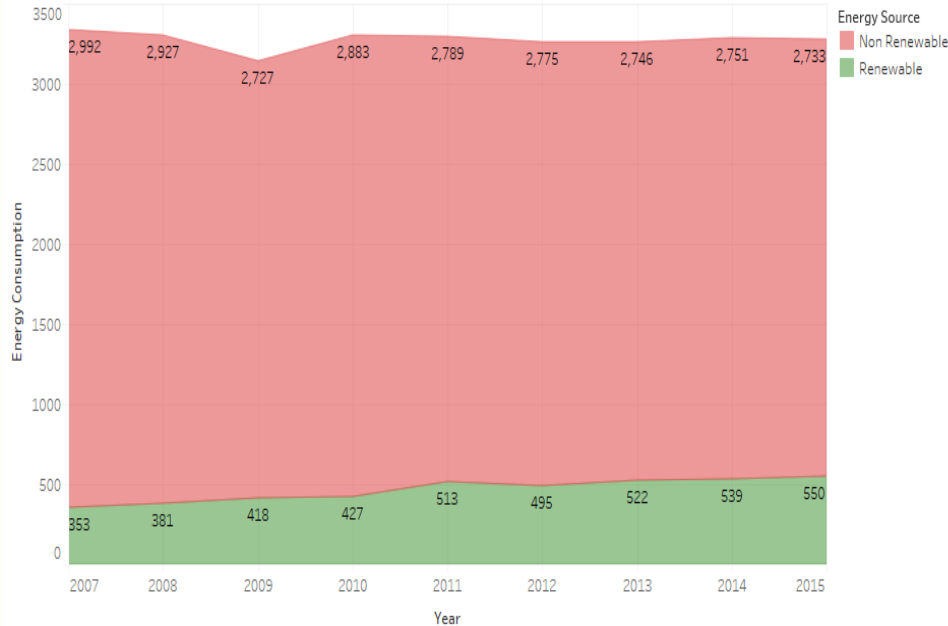


The trend of sum of Engery Consumption for Year. The view is filtered on Year, which ranges from 1990 to 2015.

Renewable and Nonrenewable Energy Consumption



Renewable and Non Renewable Energy Consumption over the Years



The plot of sum of Energy Consumption for Year. Color shows details about Energy Source. The view is filtered on Energy Source and Year. The Energy Source filter keeps Non Renewable and Renewable. The Year filter ranges from 2007 to 2015.

Claim: Renewables would be the fastest growing source of electricity consumption

Shift towards renewables:

- Cost-efficient
- Improved public health and environmental quality
- Inexhaustible energy supply
- Reliable and resilient energy sources
- Creating more jobs!!

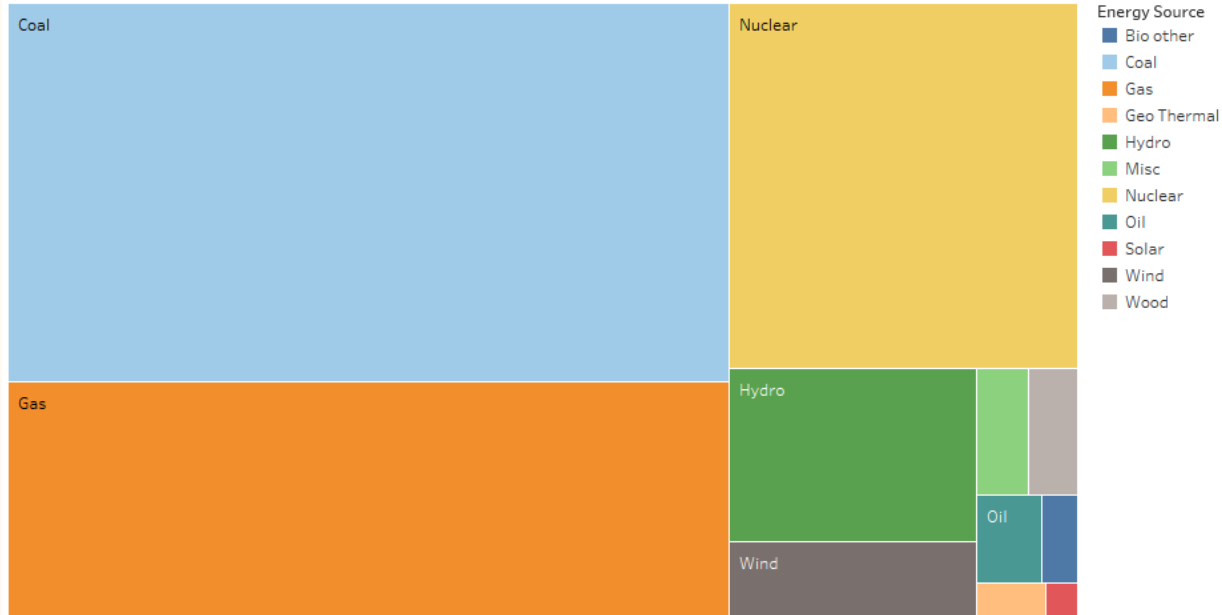
Ref: <http://www.ucsusa.org/clean-energy/renewable-energy/public-benefits-of-renewable-power#.WT8iAevyvIV>

U.S. Energy Consumption by sources



Item 1

Consumption of Disparate Energy Sources in the United States



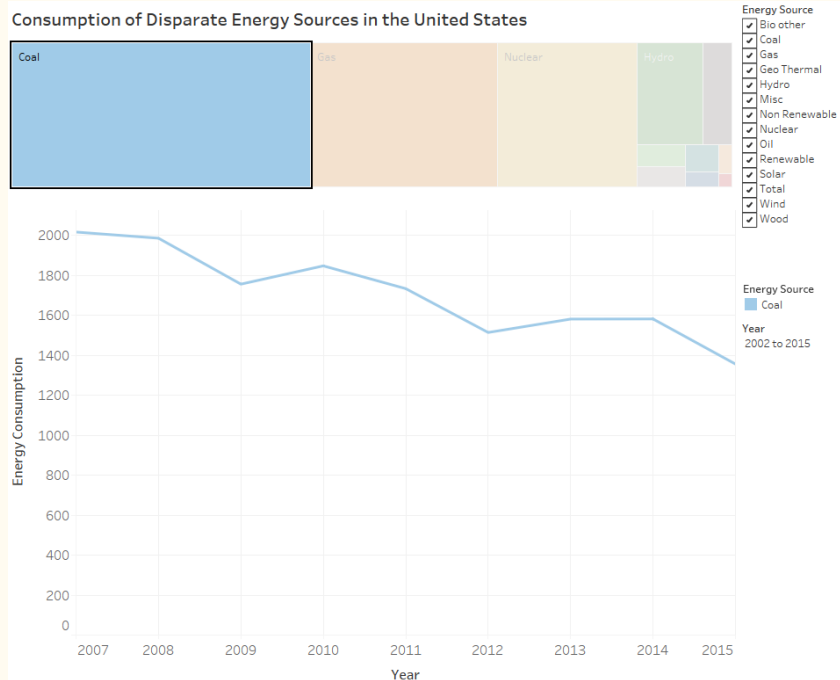
Energy Source. Color shows details about Energy Source. Size shows sum of Energy Consumption. The marks are labeled by Energy Source. The data is filtered on Year, which ranges from 2002 to 2015. The view is filtered on Energy Source, which excludes Non Renewable, Renewable and Total.

Decreasing Coal Consumption vs Increasing Solar Consumption

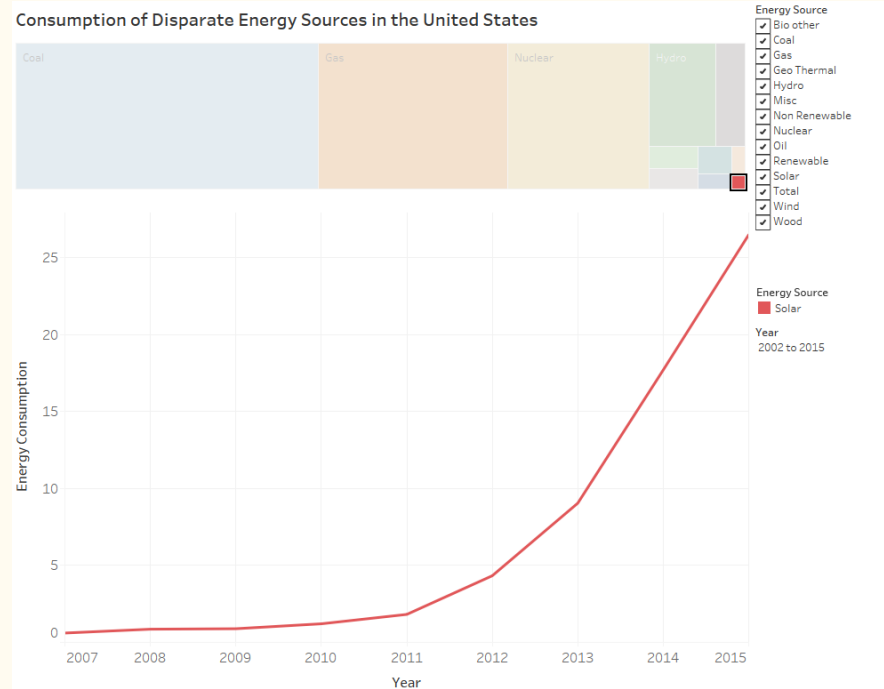


Claim: Energy Consumption from Coal is reducing while consumption from solar energy sees rapid increase.

Consumption of Disparate Energy Sources in the United States



Consumption of Disparate Energy Sources in the United States

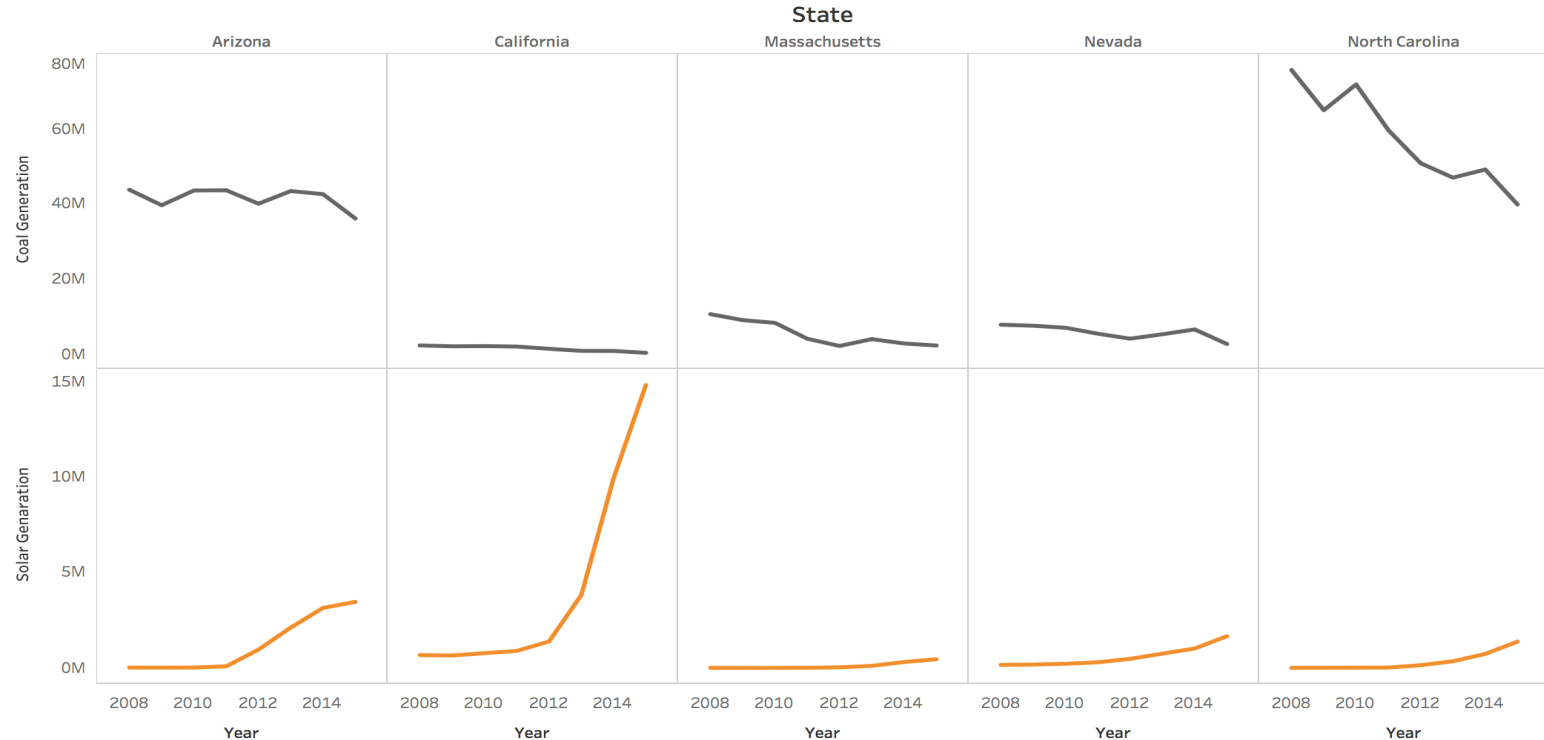


State wise comparison of Electricity Generation



Claim: More and more states shifting their focus towards solar energy for electricity generation.

Electricity generation through coal and solar



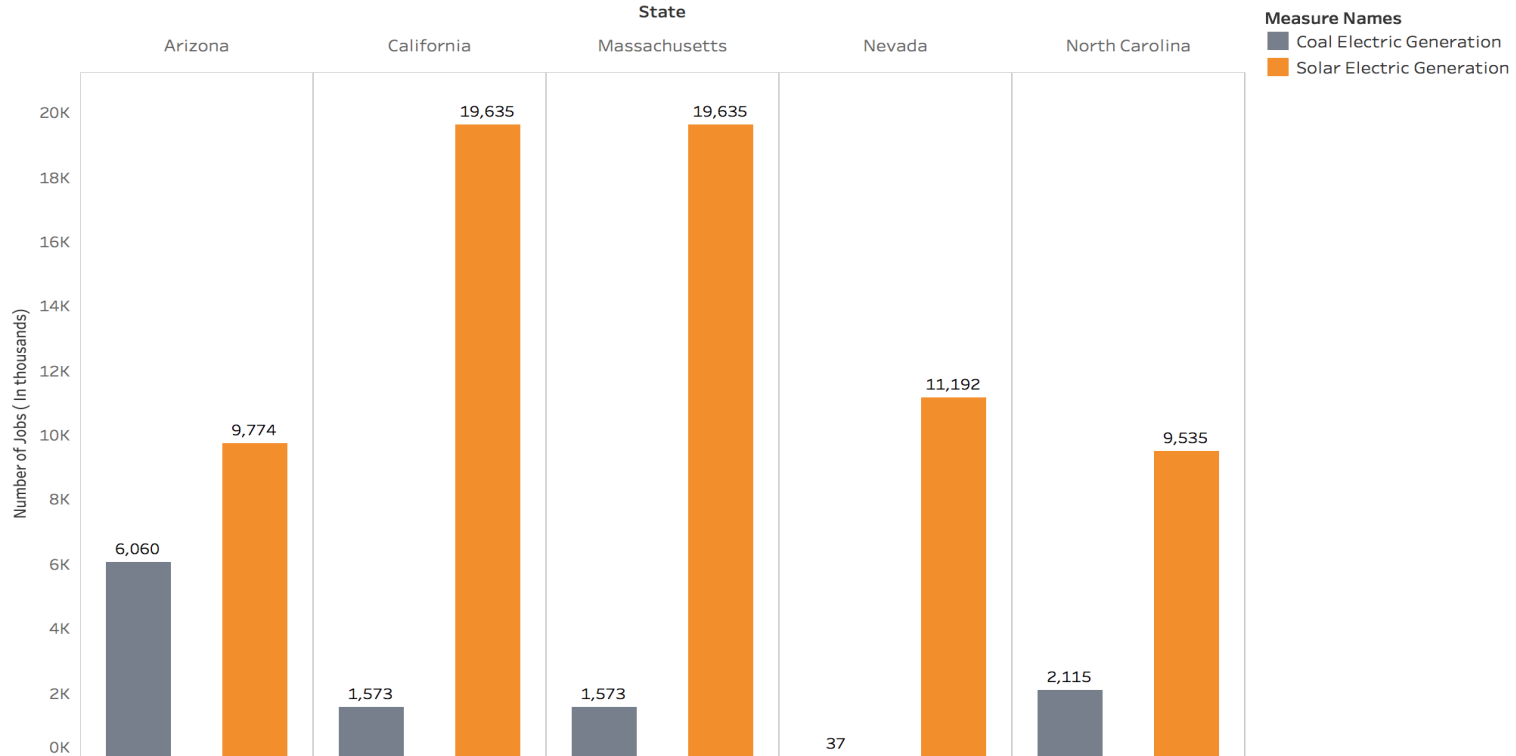
The trends of sum of GENERATION (Megawatthours) and sum of GENERATION (Megawatthours) (StatewiseSolarData.csv) for Year broken down by State. The data is filtered on Action (Year) and Action (State). The Action (Year) filter keeps 8 members. The Action (State) filter keeps 5 members.



Electric Power Generation Employment

Claim: Solar Electricity generation is creating more jobs than coal.

State wise solar Jobs in 2017



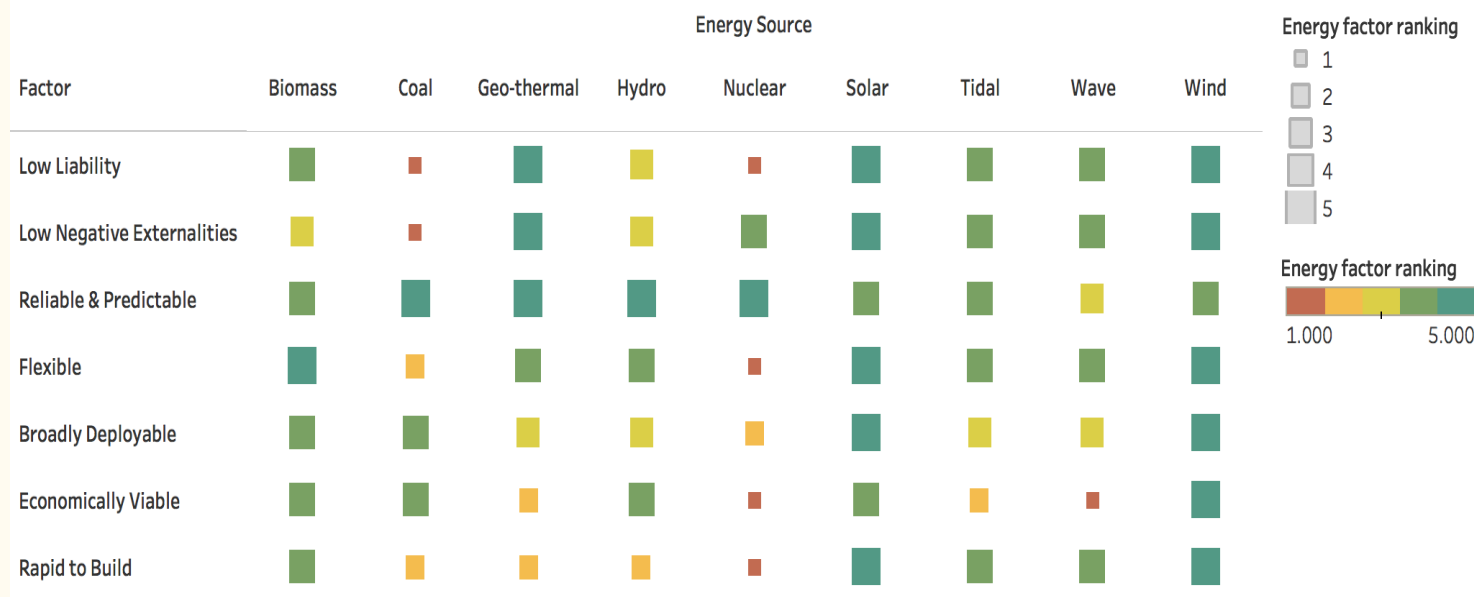
Coal Electric Generation and Solar Electric Generation for each State. Color shows details about Coal Electric Generation and Solar Electric Generation. The data is filtered on Action (State), which keeps 5 members.



7 factor evaluation to measure energy efficiency

Claim: It's not favorable to bring coal back

7 Factors Show Why Wind & Solar Are The 1st Choices!



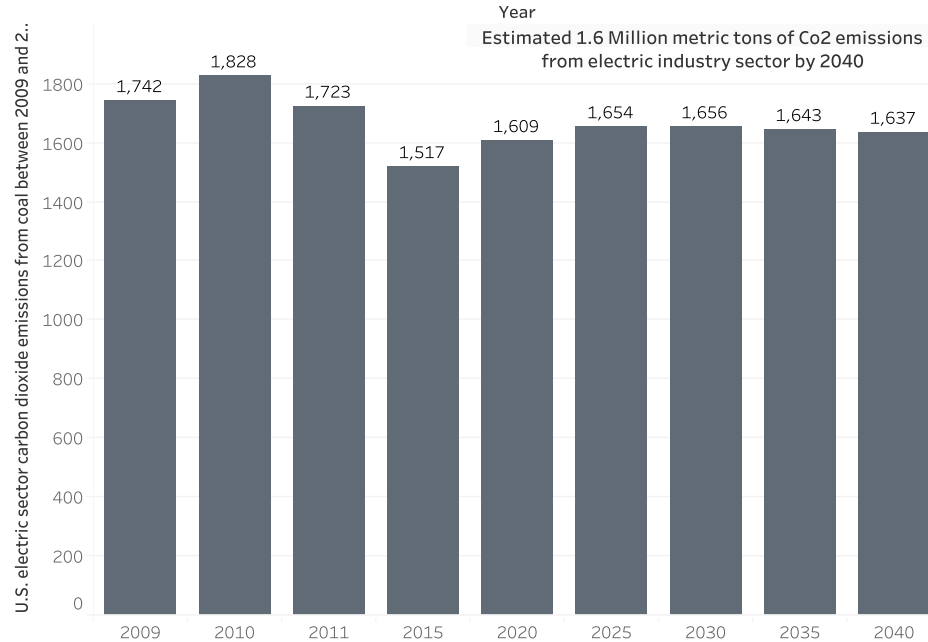
Sum of Electricity Generation (color) and sum of Electricity Generation (size) broken down by Energy Source vs. Factor. The view is filtered on Factor and Energy Source. The Factor filter keeps 7 of 7 members. The Energy Source filter keeps 9 of 9 members.



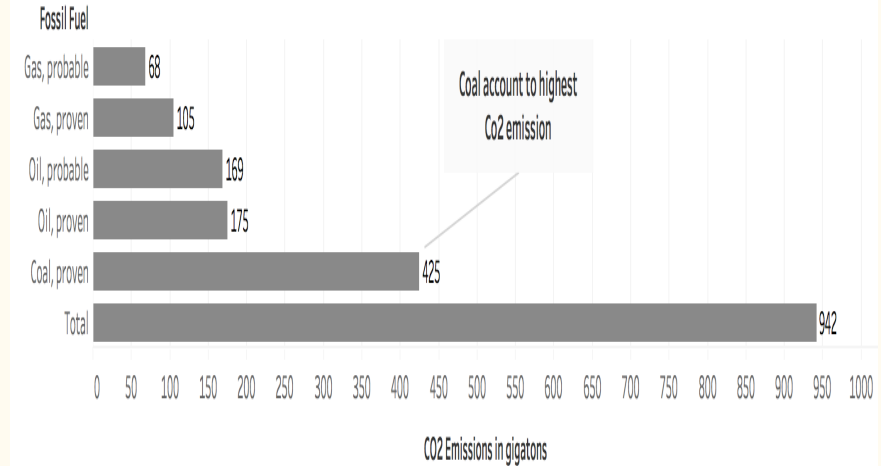
Environmental Impact by Energy Sources

Claim: Coal Industry's contribution to the CO2 emissions are significant and is very detrimental to the environment

U.S. Electric Sector Carbon dioxide Emissions



Co2 Emission From Coal



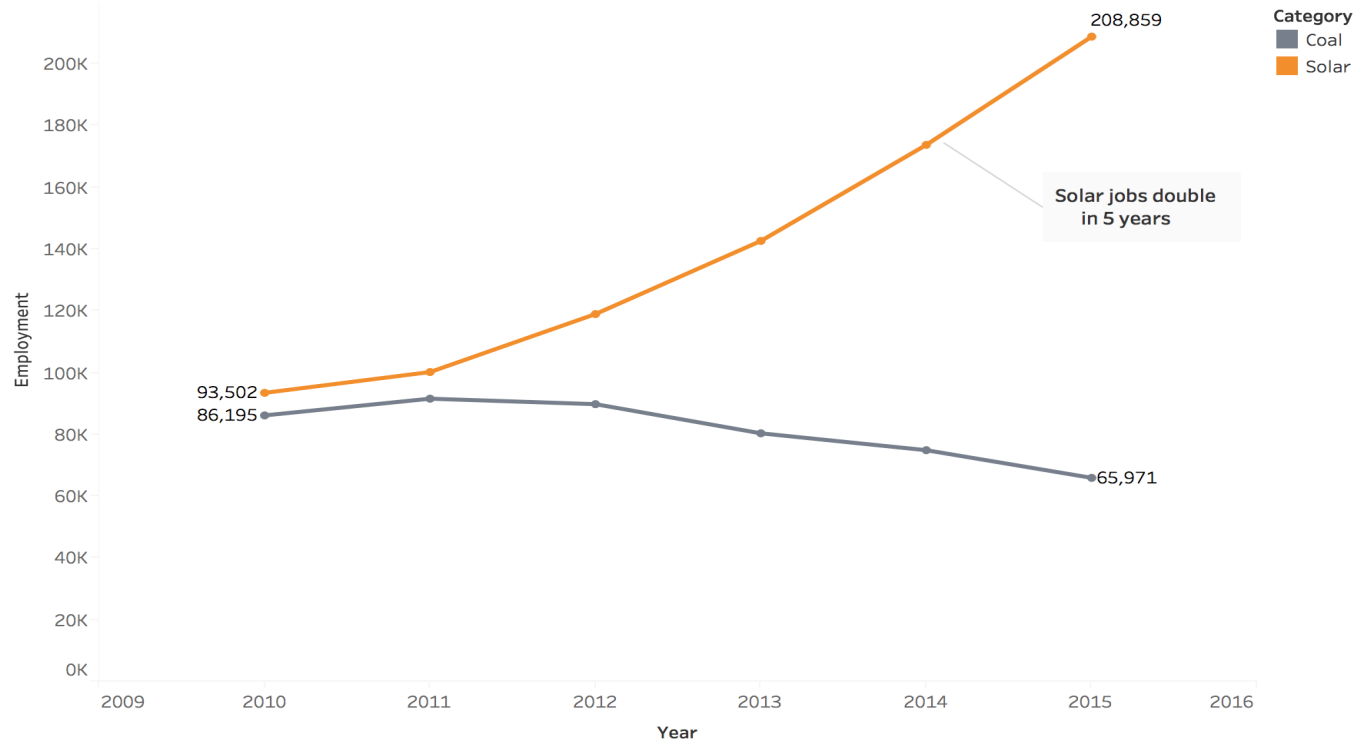
Sum of CO2 Emissions in gigatons for each Fossil Fuel.

Analysis on Job Industry

Claim: Today's energy jobs are in Solar and not in coal



As coal job declines, solar sector shines!



The trend of sum of Employment for Year. Color shows details about Category. The data is filtered on Action (Year), which keeps 6 members.



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Today's Energy Jobs Are in Solar, Not Coal

By NADJA POPOVICH APRIL 25, 2017



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BREAKING

IDNR seeking bids for a new vendor to run Rend Lake Resort

American Coal lays off workers at New Future Mine



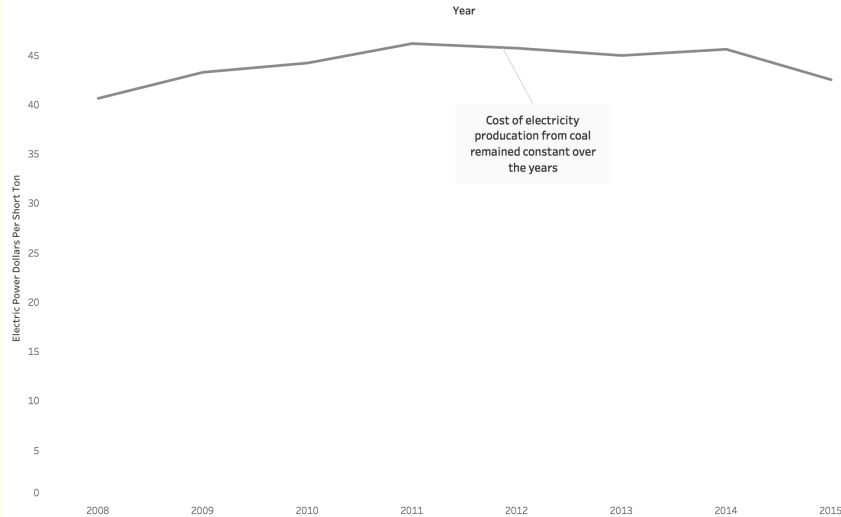
Apr 25, 2017 2



How much it costs to produce electricity?

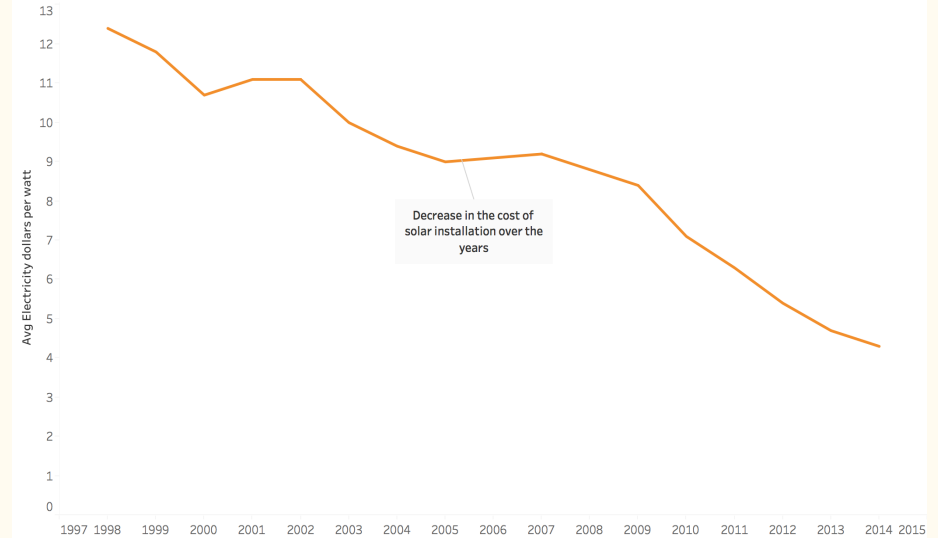
Claim: Solar installing cost is decreasing rapidly

Cost of electricity production from coal



The trend of sum of Electric Power Dollars Per Short Ton for Year.

Solar installation price over the years



The trend of sum of Avg Electricity dollars per watt for Year.



“As compared to coal, Solar energy wins on price, job opportunities and low environment impacts.”



[illegible]