

US Klima- und Energiepolitik unter Trump: Kann Föderalismus die US Klimapolitik retten?

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Share Global CO₂ Emissions (2013)

Source: Global Carbon Project

1. China 29%
2. United States 15%
3. European Union 10%
4. India 7.1%
5. Russian Federation 5.3%
6. Japan 3.7%
7. Germany 2.2%
8. Republic of Korea 1.8%
9. Iran 1.8%
10. Saudia Arabia 1.8%

Top 3 (China, US, EU) = 54% global total

Top 6 (China, US, EU, India, Russian Fed., Japan = 70.1%)

Supreme Court

2007 Rules CO2 is a pollutant

"greenhouse gases in the atmosphere may reasonably be anticipated both to endanger public health and to endanger public welfare....The major assessments by the U.S. Global Climate Research Program (USGCRP), the Intergovernmental Panel on Climate Change (IPCC), and the National Research Council (NRC) serve as the primary scientific basis supporting the Administrator's endangerment finding."

2014 reaffirms EPA's authority to regulate CO2

The **Supreme Court** ruled in a 7-2 decision Monday that the Obama Administration's Environmental Protection Agency (EPA) is free to regulate **carbon dioxide (CO2)** in the atmosphere, as long as the source of emissions in question is a traditional polluter, like a factory or a power plant, rather than a school or a shopping mall

Obama 2012 Car Efficiency Standards

In August 2012, the Obama administration issued new rules that require auto companies to meet an average of 54.5 miles/gallon for 2025 (average efficiency of fleet)

("Governor Romney opposes the extreme standards that President Obama has imposed, which will limit the choices available to American families," said Andrea Saul the campaign press secretary for the 2012 Mitt Romney presidential campaign.)

CLEAN POWER PLAN

Using authority under Clean Air Act:

- 30% cut in US power plant emissions. Covers the approx. 7000 plants of at least 1MW size.
- Different goals to be set for each state. Flexibility for meeting targets (through efficiency, more natural gas, renewables, cap and trade...). Plan expected to save \$48-82 billion by 2030 in health and climate benefits

U.S. on Paris Climate Negotiations

- 26-28% cut by 2025 compared to 2005
- US bilateral negotiations with China and India on climate



The Paris Climate Accord



https://upload.wikimedia.org/wikipedia/commons/5/54/COP21_participants_-_30_Nov_2015_%2823430273715%29.jpg



**TRUMP
DIGS
COAL**

D FOR BY MT. CARMEL PA FOR TRUMP

Trump Tweet on China and Climate

- „The concept of global warming was created by and for the Chinese in order to make U.S. manufacturing non-competitive.“ (Nov 2012)

President Donald Trump



Donald J. Trump ✓
@realDonaldTrump



Following

Snowing in Texas and Louisiana, record setting freezing temperatures throughout the country and beyond. Global warming is an expensive hoax!

RETWEETS

428

LIKES

358



1:27 AM - 29 Jan 2014

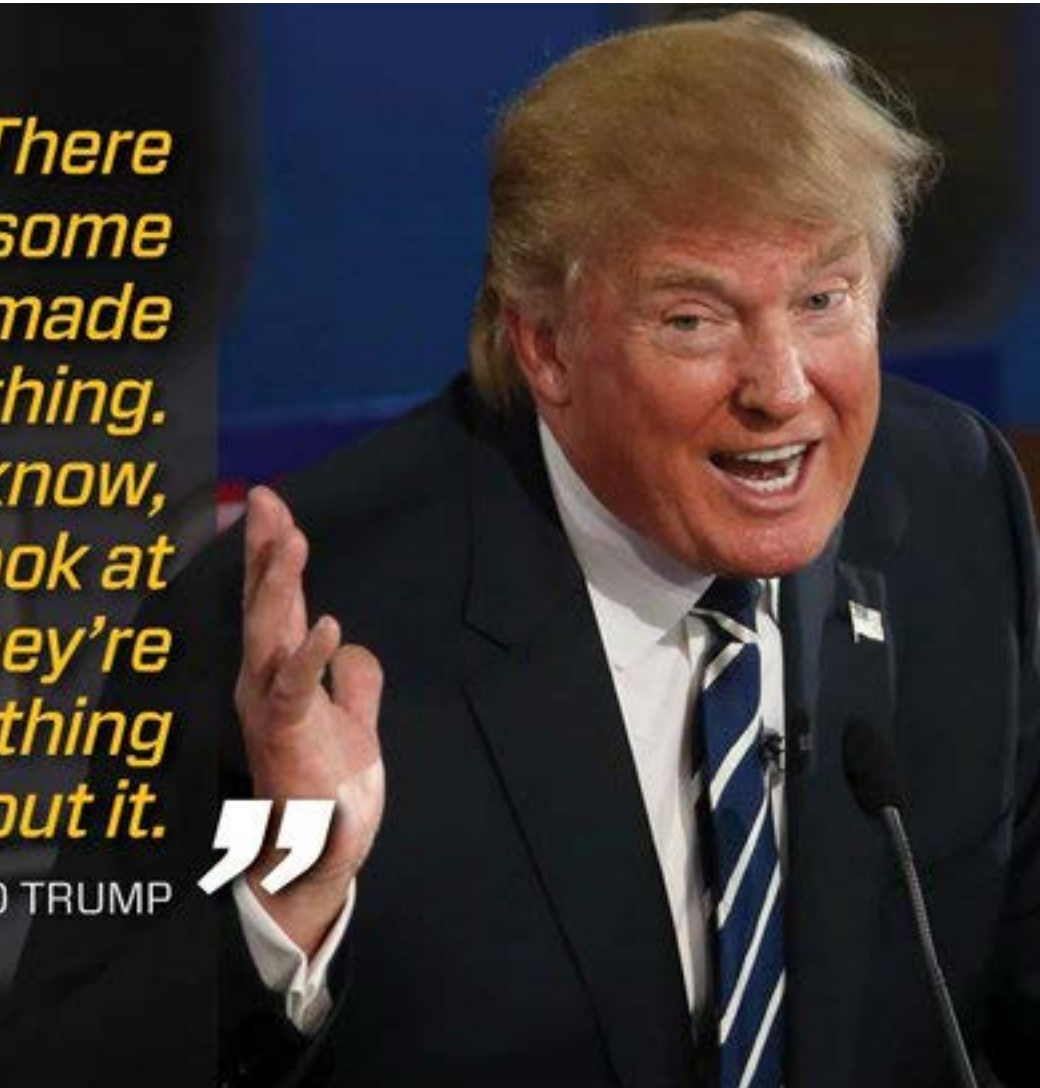


“

There could be some man-made something. But, you know, if you look at China, they're doing nothing about it.

— DONALD TRUMP

”



Scott Pruitt

Environmental Protection Agency

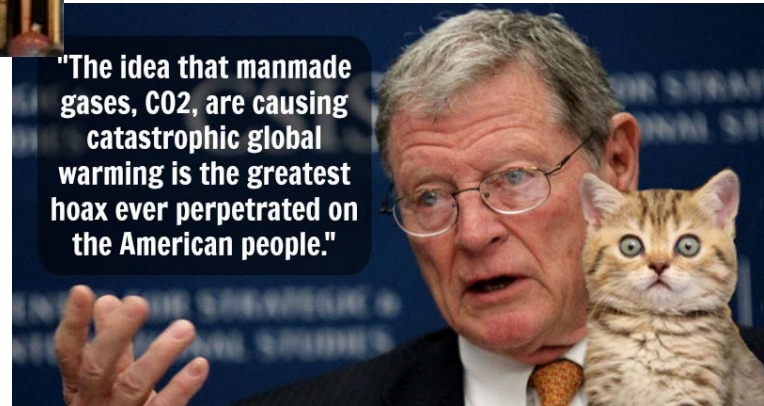


Pruitt established Oklahoma's first federalism unit to combat unwarranted regulation and overreach by the federal government.

Secretary of State pick: Rex Tillerson



U.S. Energy and Climate Politics



The China Factor in US Climate Policy

- 1997 Byrd-Hagel Resolution in U.S. Senate (95-0 vote)
- Asia Pacific Partnership
- China as biggest CO₂ emitter
- US-China Climate Agreement

George W. Bush's White House and Climate Change

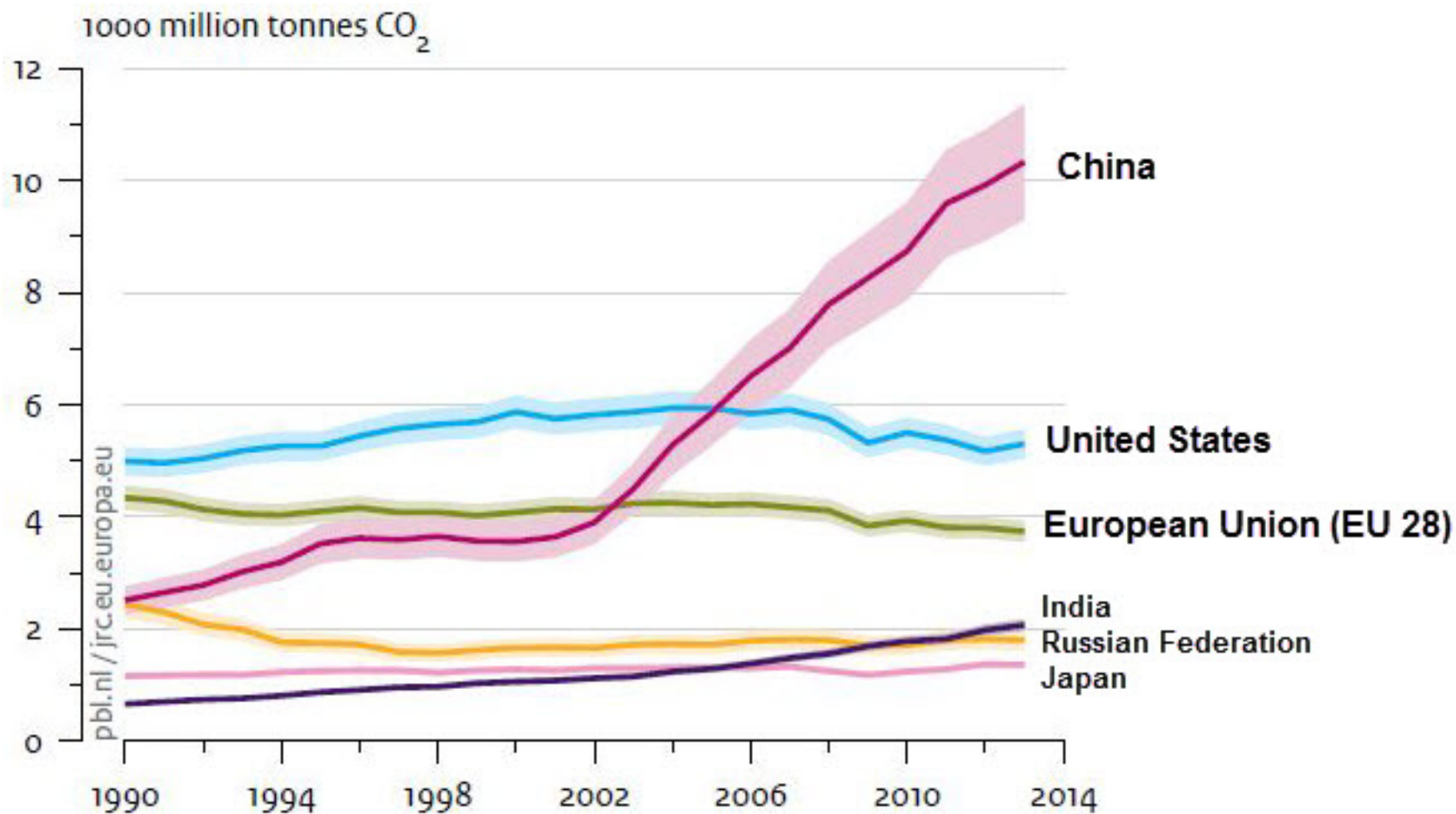
The Kyoto Protocol is “dead on arrival”
(Condoleezza Rice, March 27, 2001)

The Kyoto Protocol is “dead” in its current form
(George Bush, June 2001)

2007 Agreed to “seriously
consider”

EU Plan to halve global
GHG emissions
by 2050

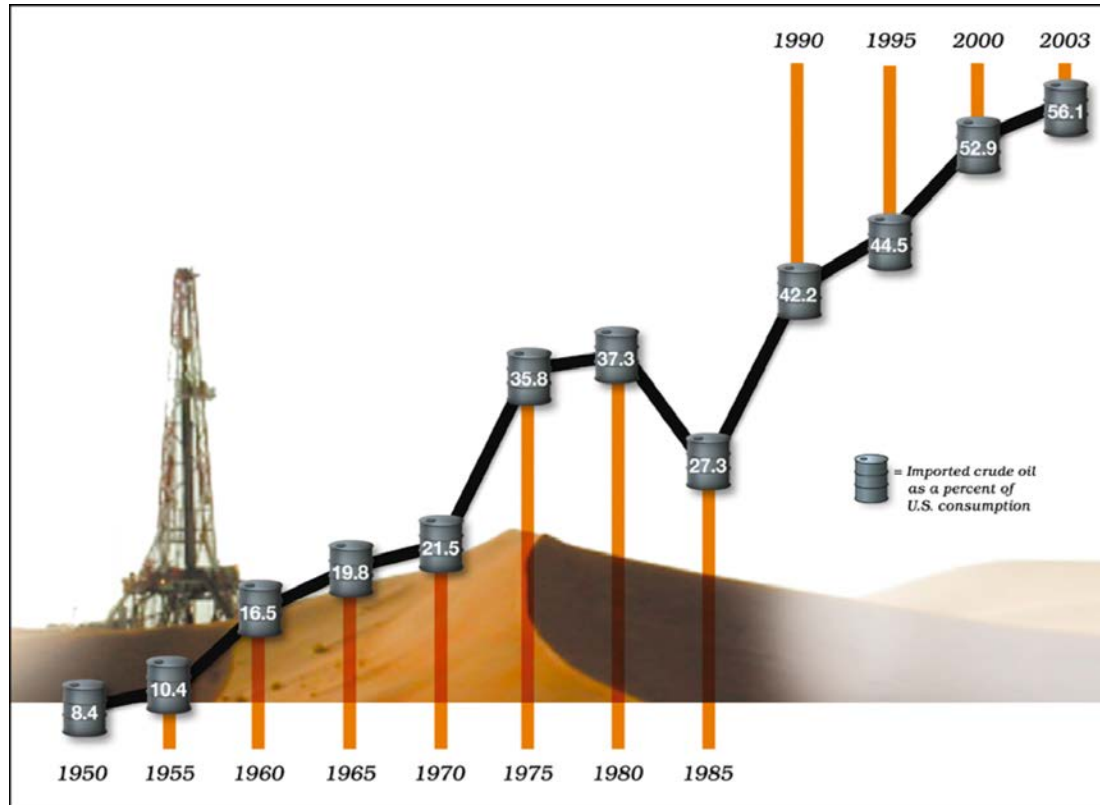




Source: Trends in global CO₂ emissions: 2014 Report. PBL Netherlands Environmental Assessment Agency (December 2014)

U.S. Crude Energy Imports,

http://upload.wikimedia.org/wikipedia/commons/f/ff/Imported_Crude_Oil_as_a_Percent_of_US_Consumption_1950-2003.jpg



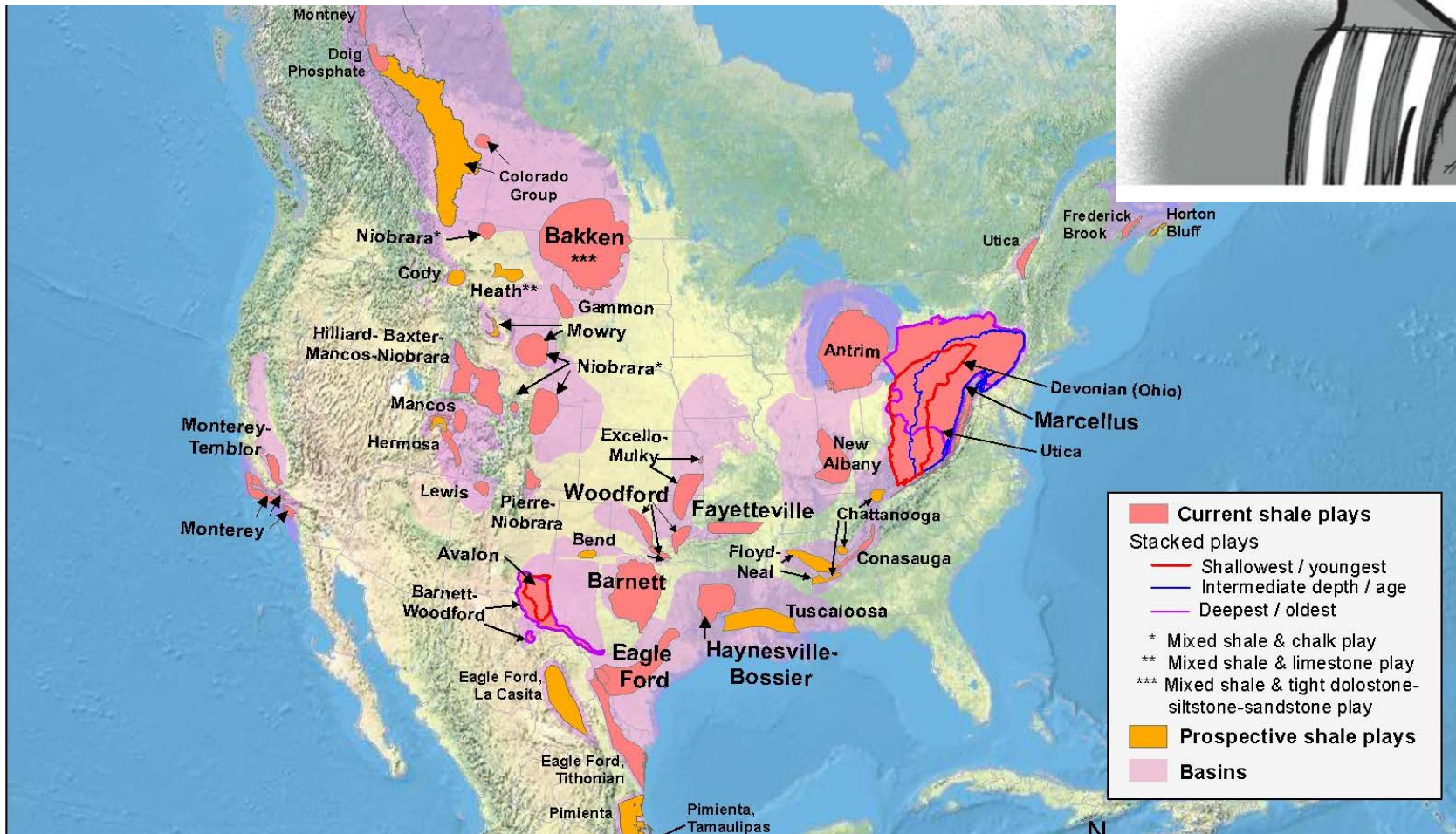
Energy Policy Act 2005

- focus is on how to meet growing energy demands linked to rising population
- how to assure energy security
- provides numerous incentives to oil, coal, gas industries
- also has some focus on renewable energies and energy efficiency improvements

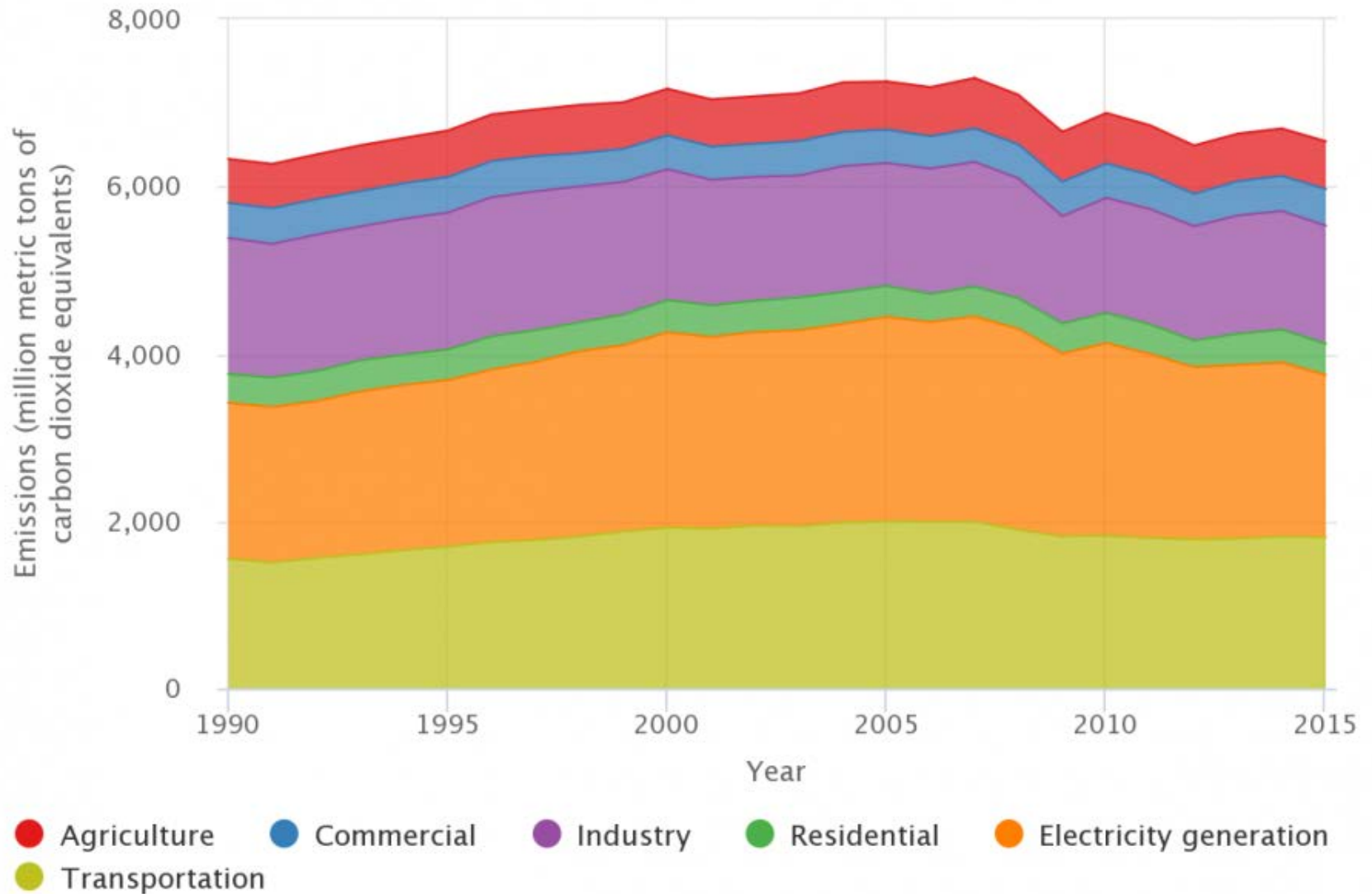


Moving towards U.S. Energy Independence



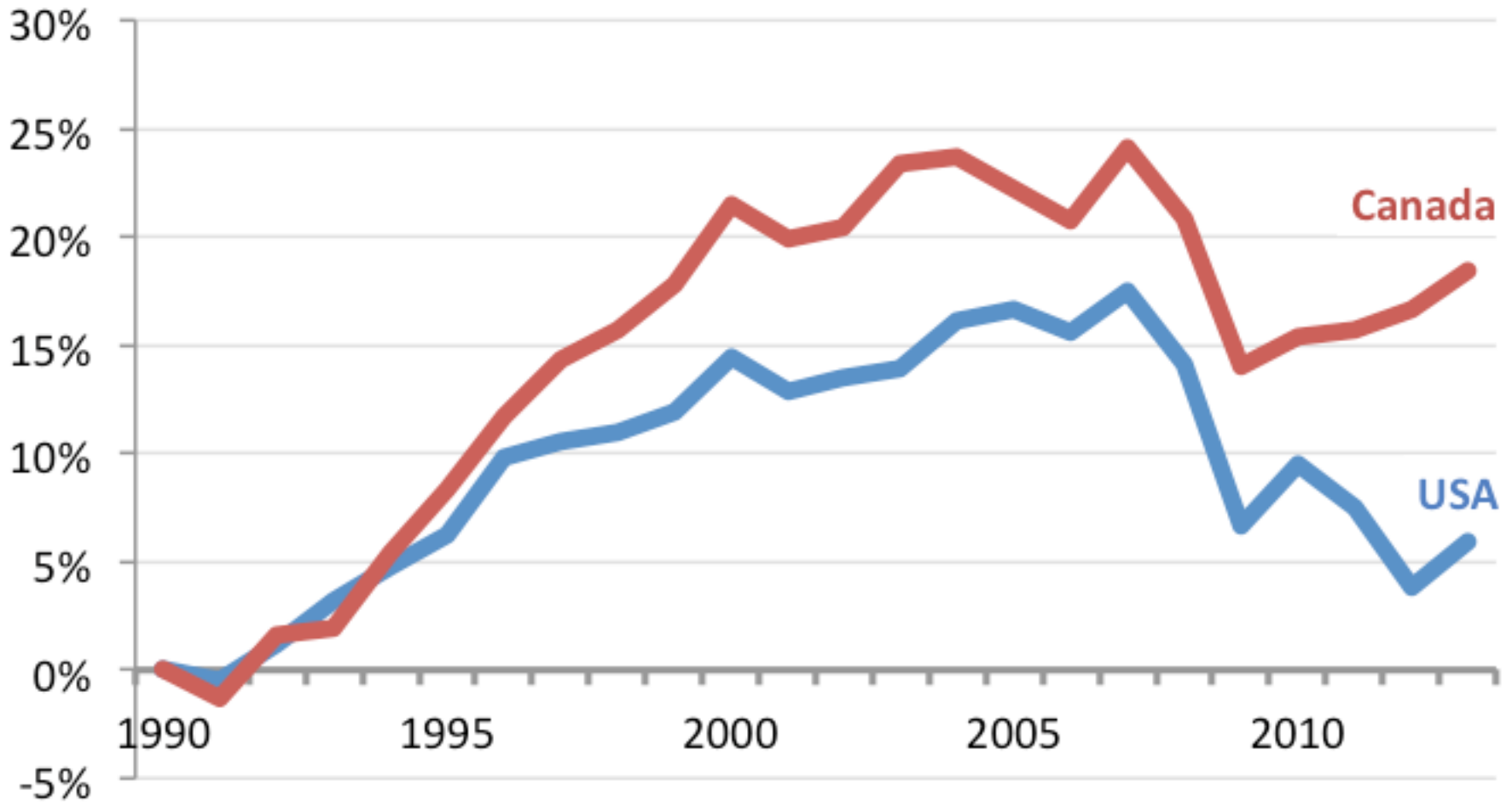


U.S. Greenhouse Gas Emissions by Economic Sector, 1990-2015



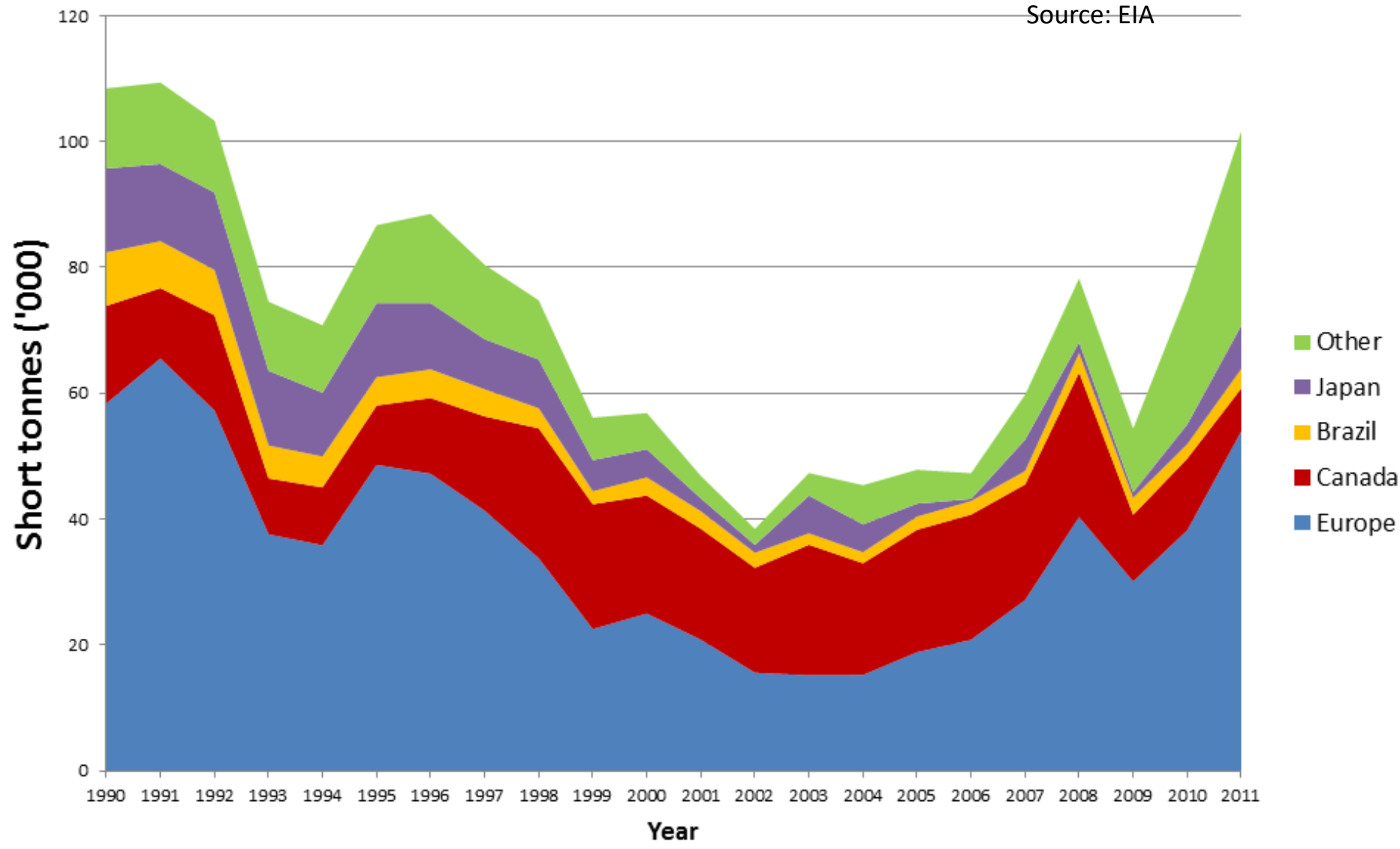
Source: U.S. EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2015.
<http://www.epa.gov/climatechange/ghgemissions/usinventoryreport.html>

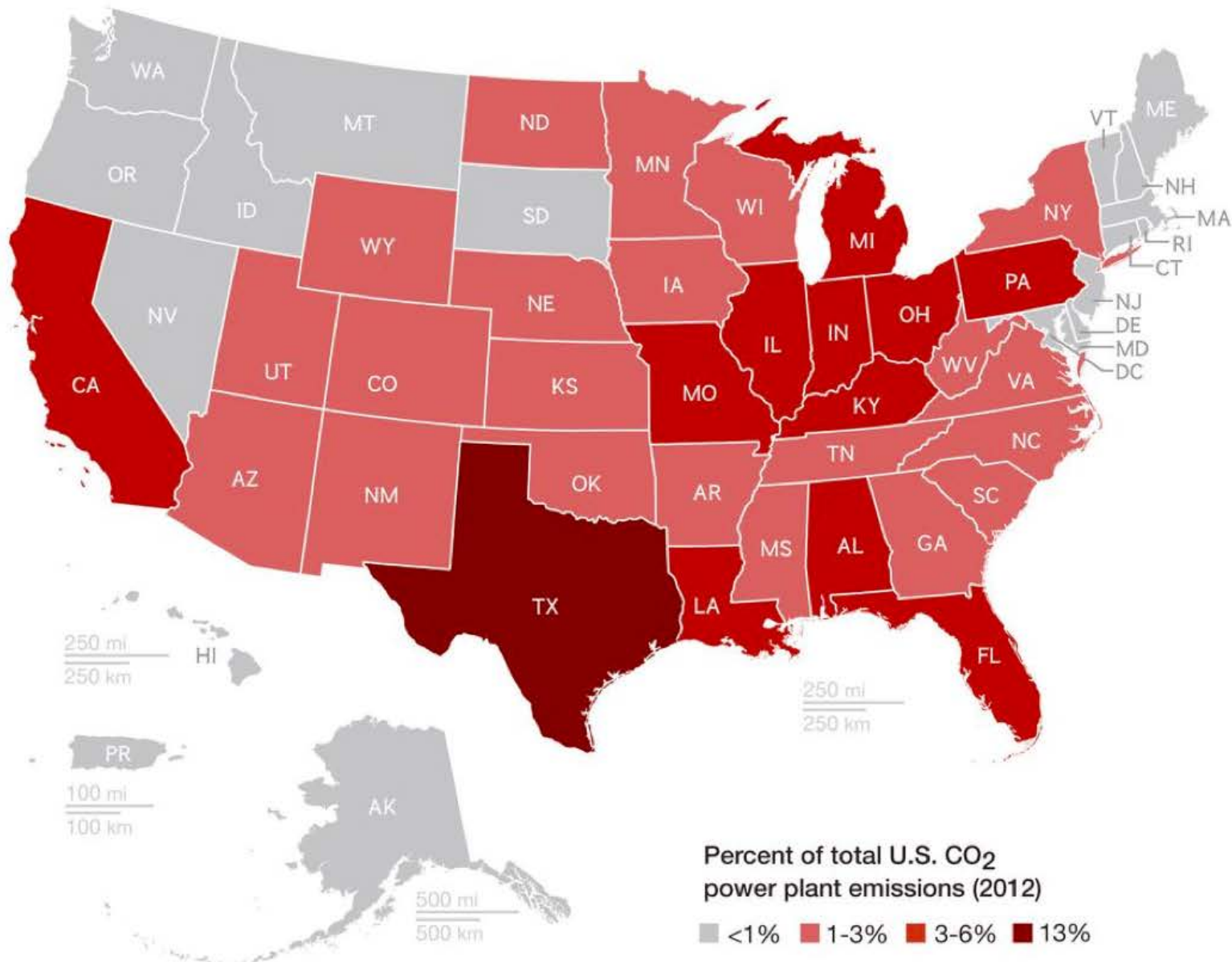
Change in GHGs from 1990 level



Cumulative U.S. coal exports (by country)

Source: EIA

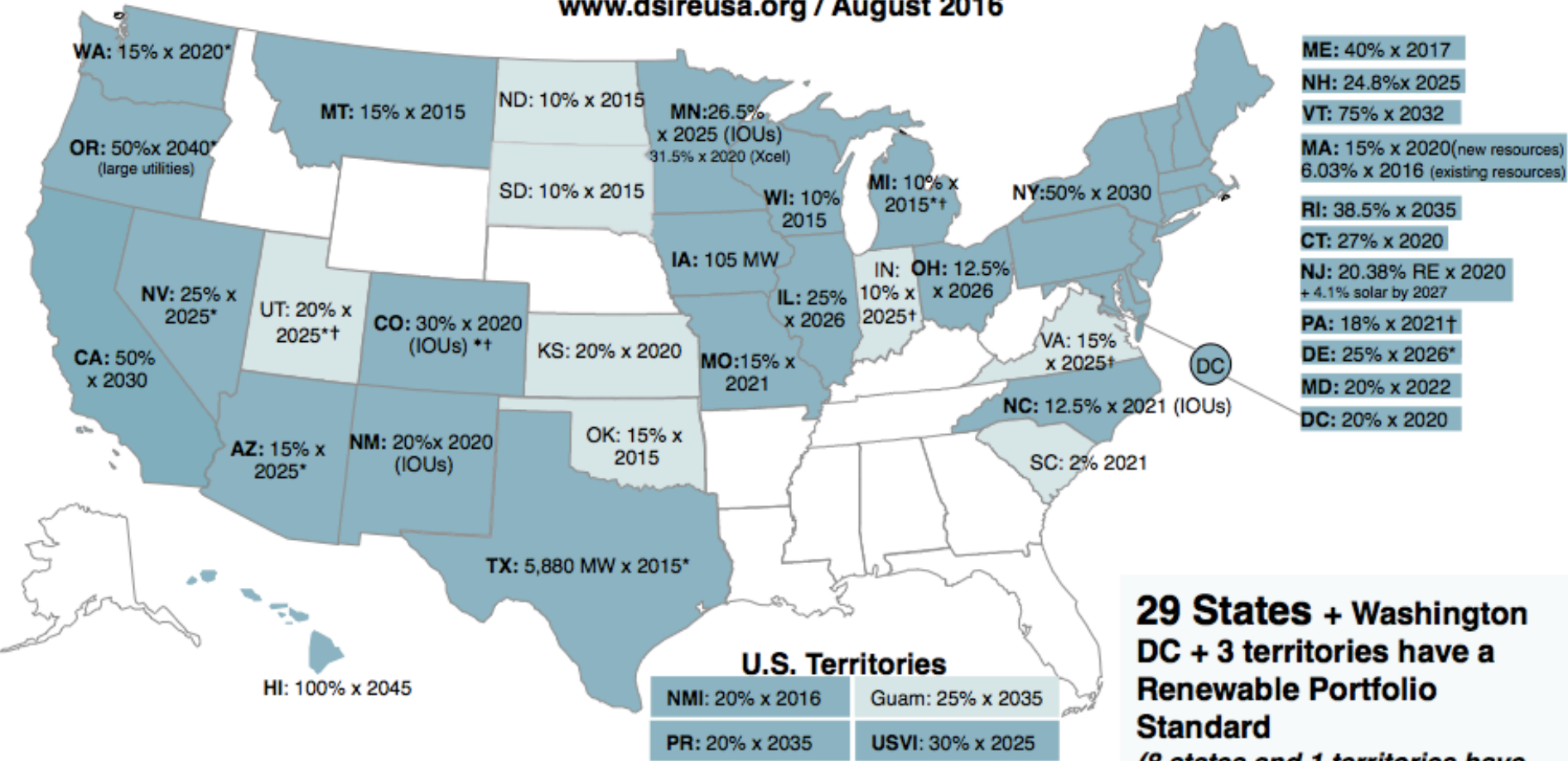




NG STAFF. SOURCE: EPA

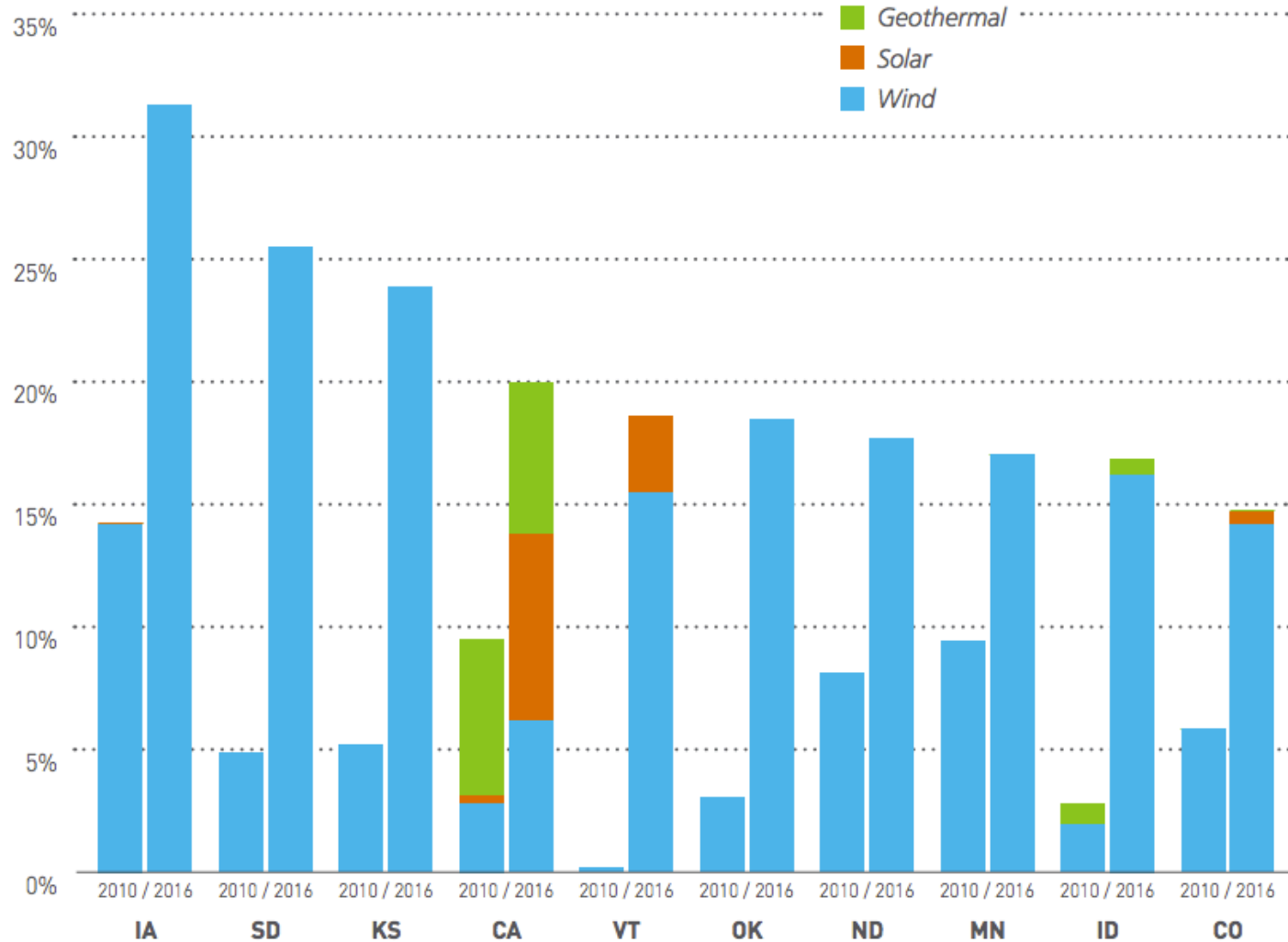
Renewable Portfolio Standard Policies

www.dsireusa.org / August 2016



- Renewable portfolio standard
- Renewable portfolio goal
- * Extra credit for solar or customer-sited renewables
- † Includes non-renewable alternative resources

RE Ranking:



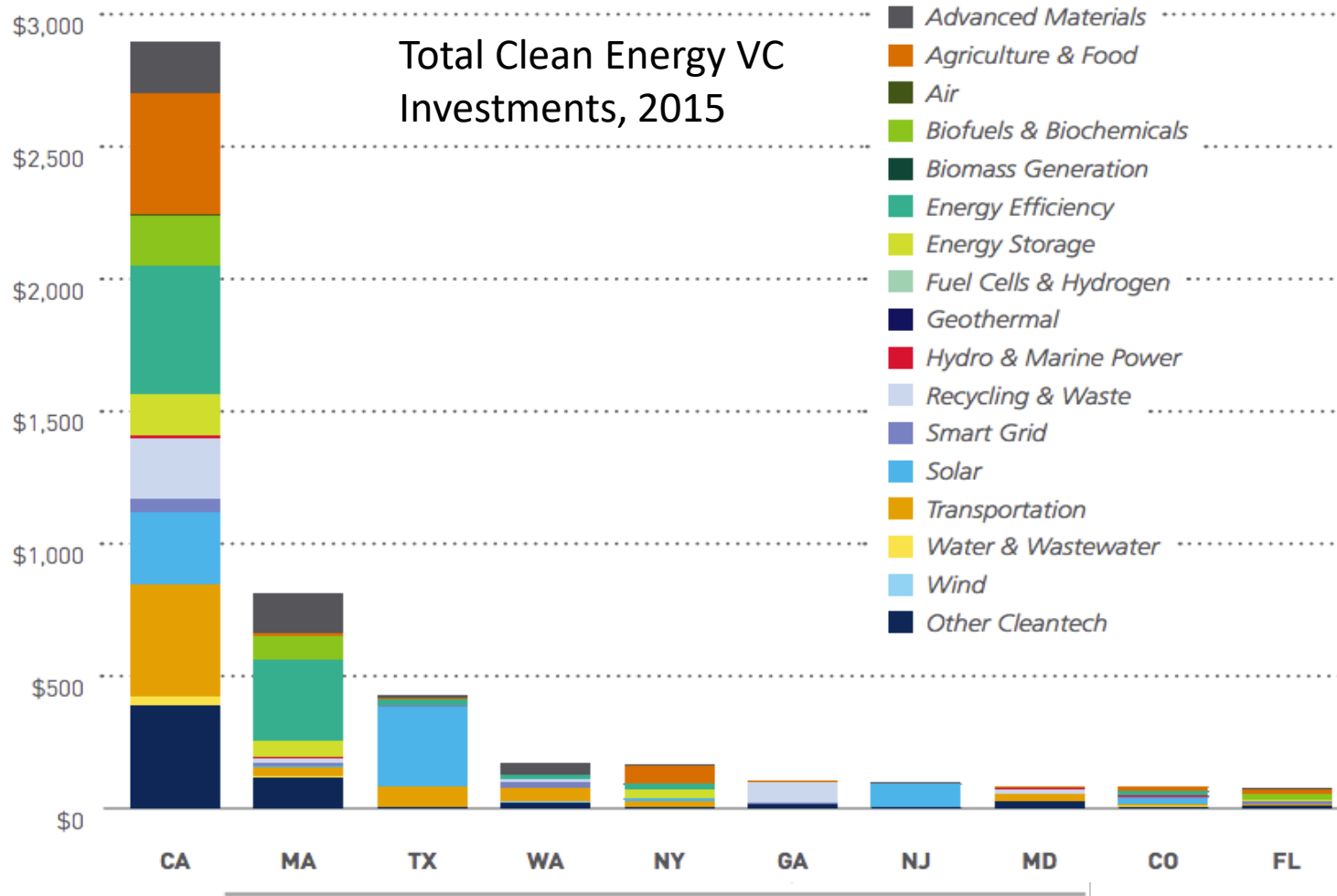
RE Ranking:



TOTAL SOLAR ELECTRICITY GENERATION (2015)

STATE	RANK	UTILITY-SCALE % OF TOTAL GENERATION	DISTRIBUTED GENERATION % OF TOTAL GENERATION	% OF TOTAL GENERATION	UTILITY-SCALE THOUSAND MWH	DISTRIBUTED GENERATION THOUSAND MWH
CALIFORNIA	1	7.58%	2.60%	10.18%	15,007	5,139
HAWAII	2	0.81%	6.11%	6.92%	80	607
VERMONT	3	3.16%	2.58%	5.74%	66	54
NEVADA	4	4.36%	0.41%	4.77%	1,694	160
MASSACHUSETTS	5	2.14%	2.08%	4.22%	690	673
ARIZONA	6	3.10%	1.01%	4.11%	3,516	1,140
NEW JERSEY	7	1.10%	1.52%	2.62%	824	1,145
NEW MEXICO	8	1.97%	0.42%	2.39%	646	138
DELAWARE	9	0.80%	0.83%	1.63%	62	64
NORTH CAROLINA	10	1.42%	0.07%	1.49%	1,834	90

VC Ranking:



Local Climate Initiatives: City and State

Seattle Climate Action Plan

Seattle Climate Action

NOW



PEW CENTER
ON
Global CLIMATE
CHANGE

U.S. Mayors Climate Initiative:
over 1000 cities and 90 million people



**US Mayors
Climate
Protection
Agreement**

Mayors React to Trump

385 US #ClimateMayors, representing 68 million Americans, have committed to adopt, honor and uphold the climate goals of the Paris Agreement



CLIMATEMAYORS.ORG



Climate Alliance US States

Launched by US Governors Cuomo (NY), Inslee (WA), Brown (CA)

in support of Paris Agreement.

U.S. CLIMATE ALLIANCE

California

Colorado

Connecticut

Delaware

Hawaii

Massachusetts

Minnesota

New York

North Carolina

Oregon

Puerto Rico

Rhode Island

Vermont

Virginia

Washington

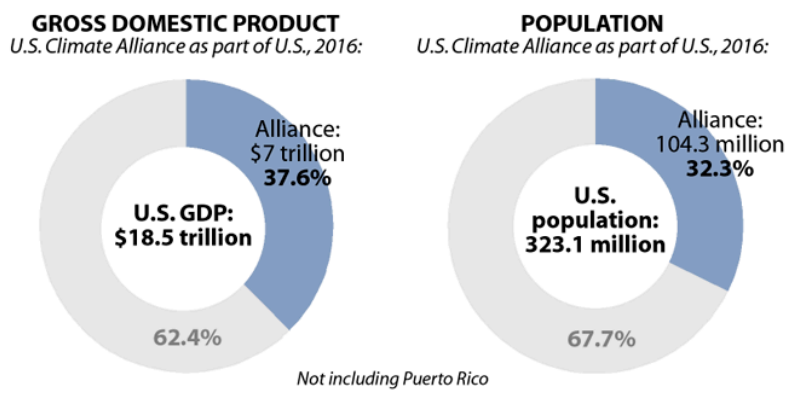
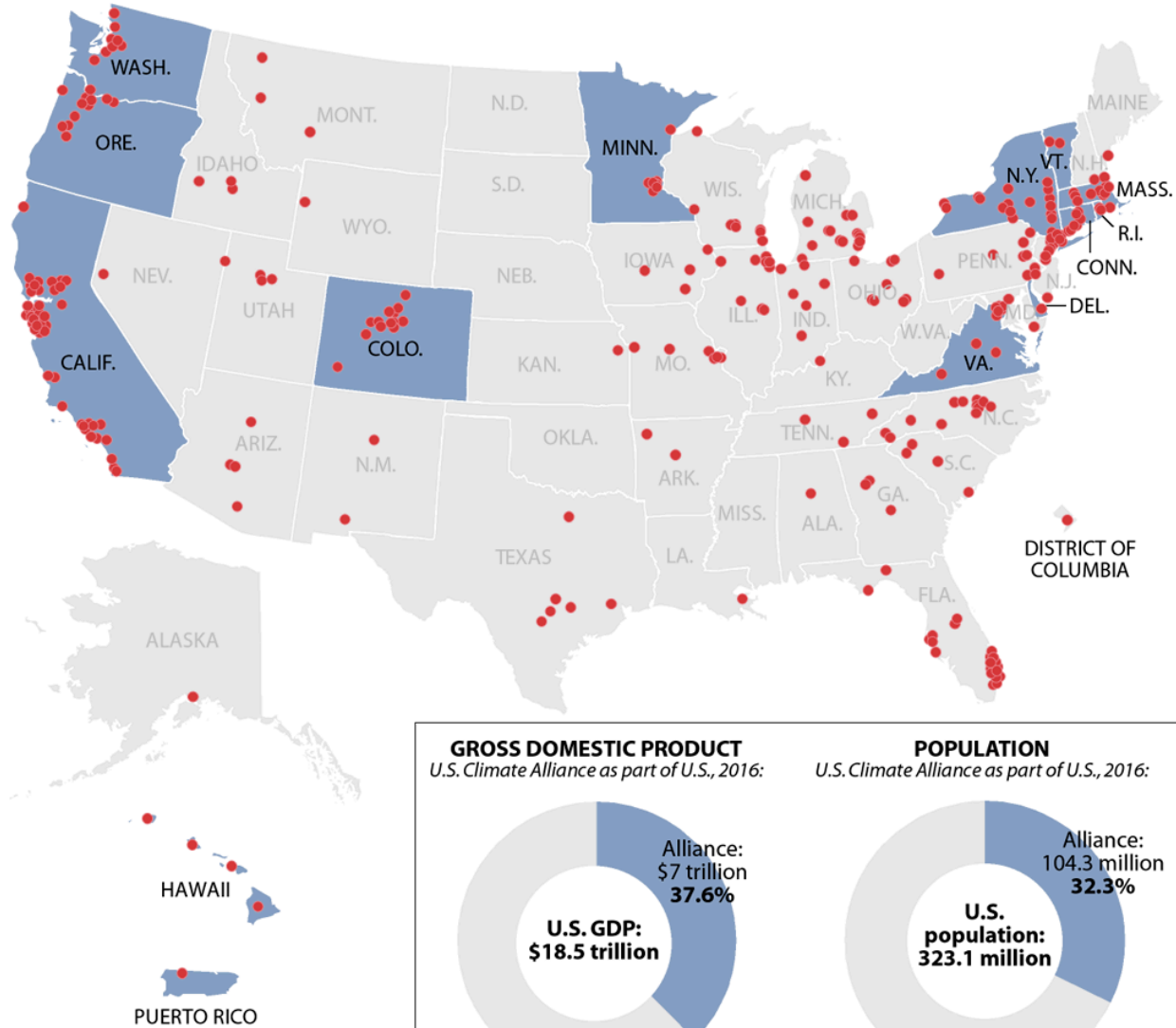
States, Cities Stepping Up for the Paris Agreement



In the wake of President Trump's decision to pull the U.S. out of the Paris climate agreement, states and cities began announcing that they would still fulfill America's Paris climate commitment. They include members of the U.S. Climate Alliance and Mayors National Climate Action Agenda.

UNITED STATES CLIMATE ALLIANCE

MAYORS NATIONAL CLIMATE ACTION AGENDA
includes partnering cities (non-members)

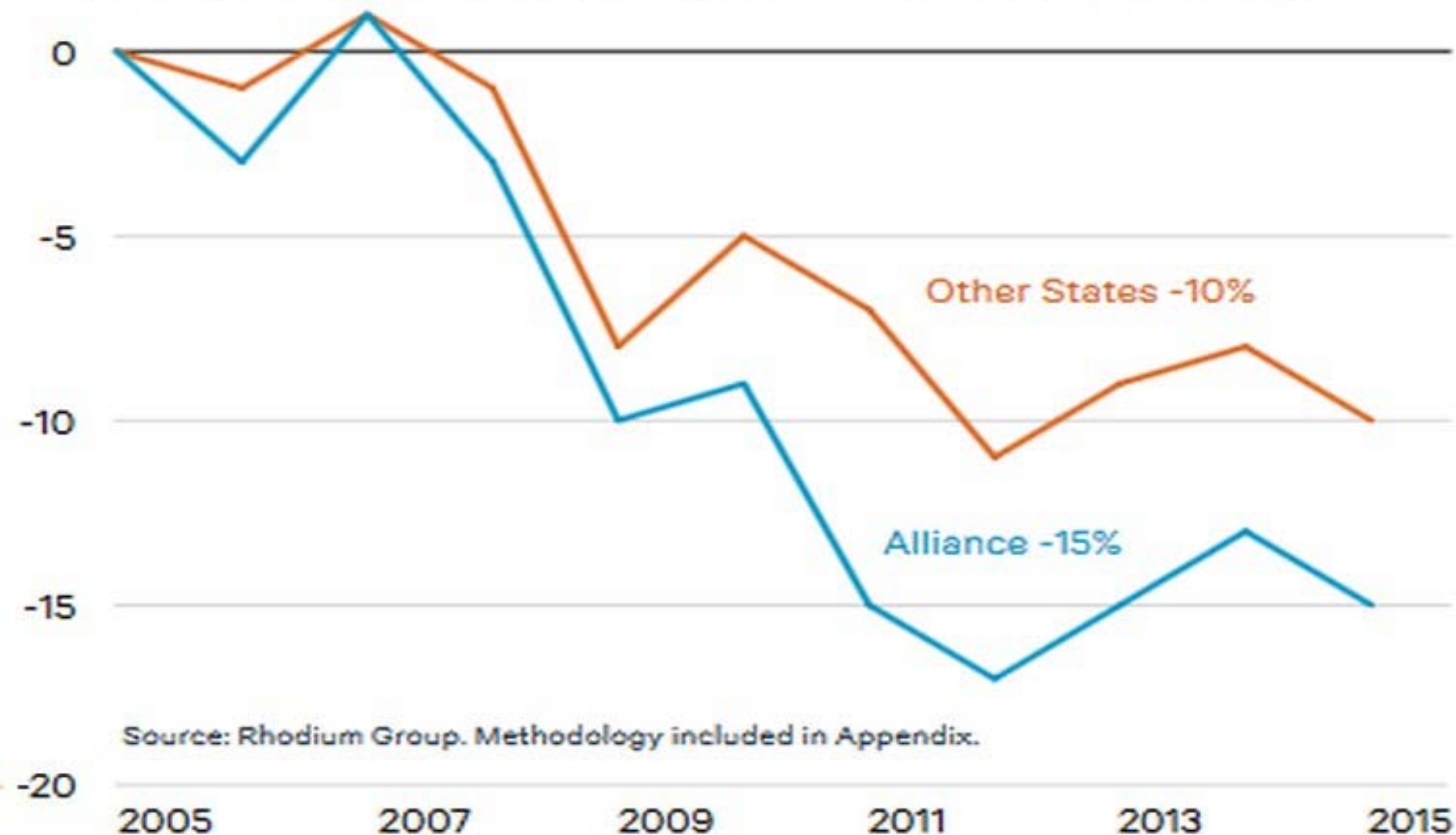


All data as of July 12, 2017, except city data as of June 22, 2017

Research and graphic by GEORGINA GUSTIN and PAUL HORN / InsideClimate News

FIGURE 3: ALLIANCE STATES LEADING THE WAY

Percent change in net GHG emissions relative to 2005 levels





NEW YORK'S CLIMATE LEADERSHIP

#CWN NYC

- ✓ Cofounded the bipartisan, **US Climate Alliance** that includes 14 states and Puerto Rico
- ✓ Targeted greenhouse gas emissions reduction of **40% by 2030 & 80% by 2050**
- ✓ Committed to develop **up to 2.4 GW of offshore wind power** by 2030
- ✓ Established **Reforming the Energy Vision, Clean Energy Standard, and Clean Energy Fund**



NEW YORK
STATE OF
OPPORTUNITY.

Reforming the
Energy Vision

California's hotter future

Climate change caused by carbon emissions is projected to increase the amount of air conditioning needed in California.



California

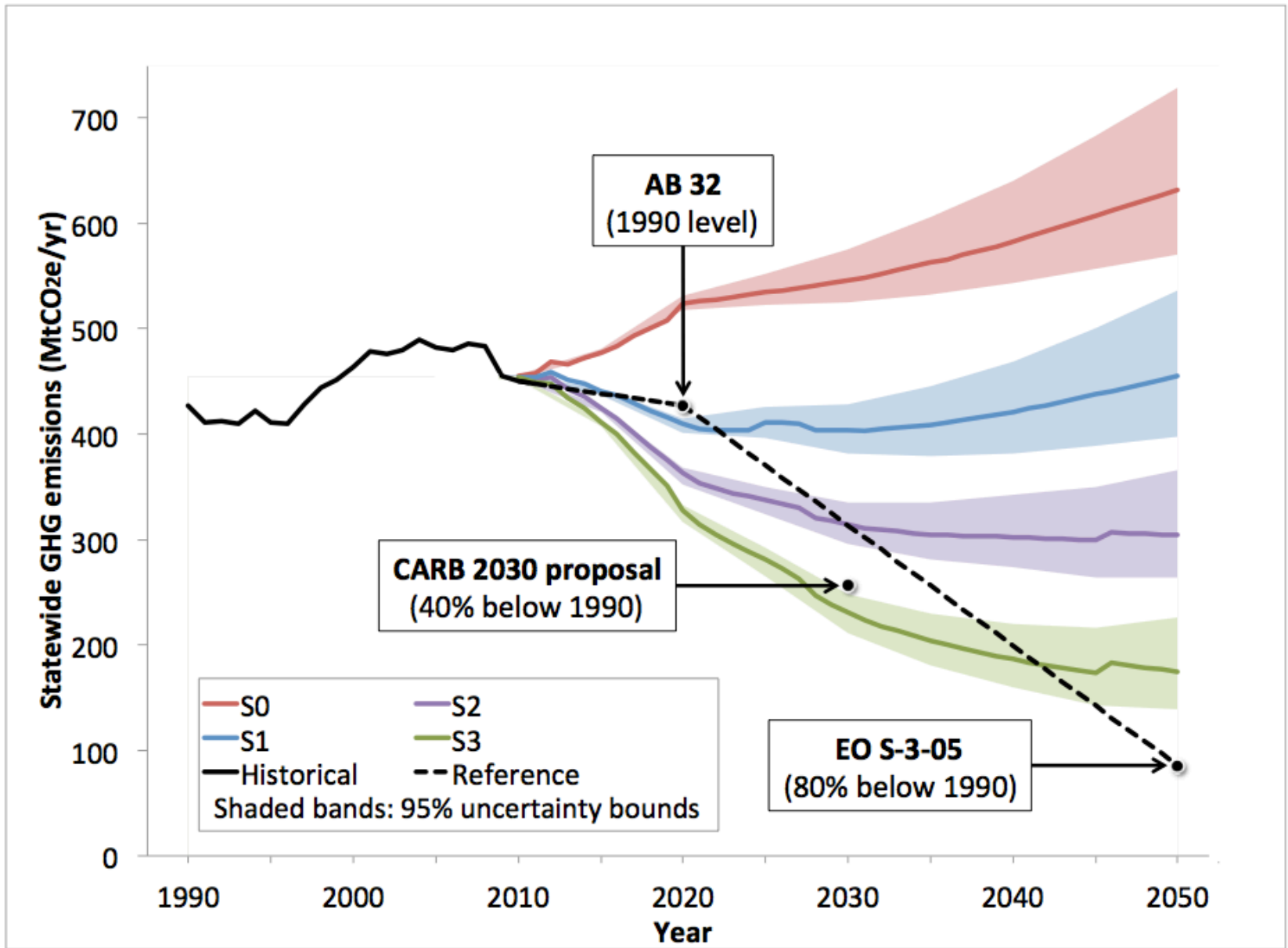
- Population 38 Million (2013)
- GDP \$2.2 trillion global ranking #8:
 1. EU
 2. US (with CA)
 3. China
 4. Japan
 5. Germany
 6. France
 7. UK
 8. Brazil, California \$58,016 Per Cap GDP
 9. Italy
 10. Russia

TABLE 2. GHG EMISSIONS AND GDP PER CAPITA

1990–2012 PERCENT CHANGE

REGION	MTCO ₂ e / PERSON	GDP / PERSON
CHINA	222%	604%
U.S. (WITH CALIFORNIA)	-17%	37%
EU-28	-17%	36%
INDIA	120%	176%
RUSSIA	-24%	21%
JAPAN	17%	18%
GERMANY	-22%	35%
SOUTH KOREA	138%	170%
IRAN	120%	87%
SAUDI ARABIA	70%	53%
CANADA	-5%	35%
BRAZIL	58%	43%
AUSTRALIA	21%	53%
CALIFORNIA	-25%	37%

NEXT 10 CALIFORNIA GREEN INNOVATION INDEX. Data Source: U.S. Energy Information Administration; USDA Economic Research Service; The California Department of Finance. Analysis: Collaborative Economics.



California Targets

- -80% by 2050
- 33% of electricity from renewables by 2020
- 20,000MW Solar
- 2016 Target set to 40% cut in CO₂ emissions compared to 1990 levels by 2030.

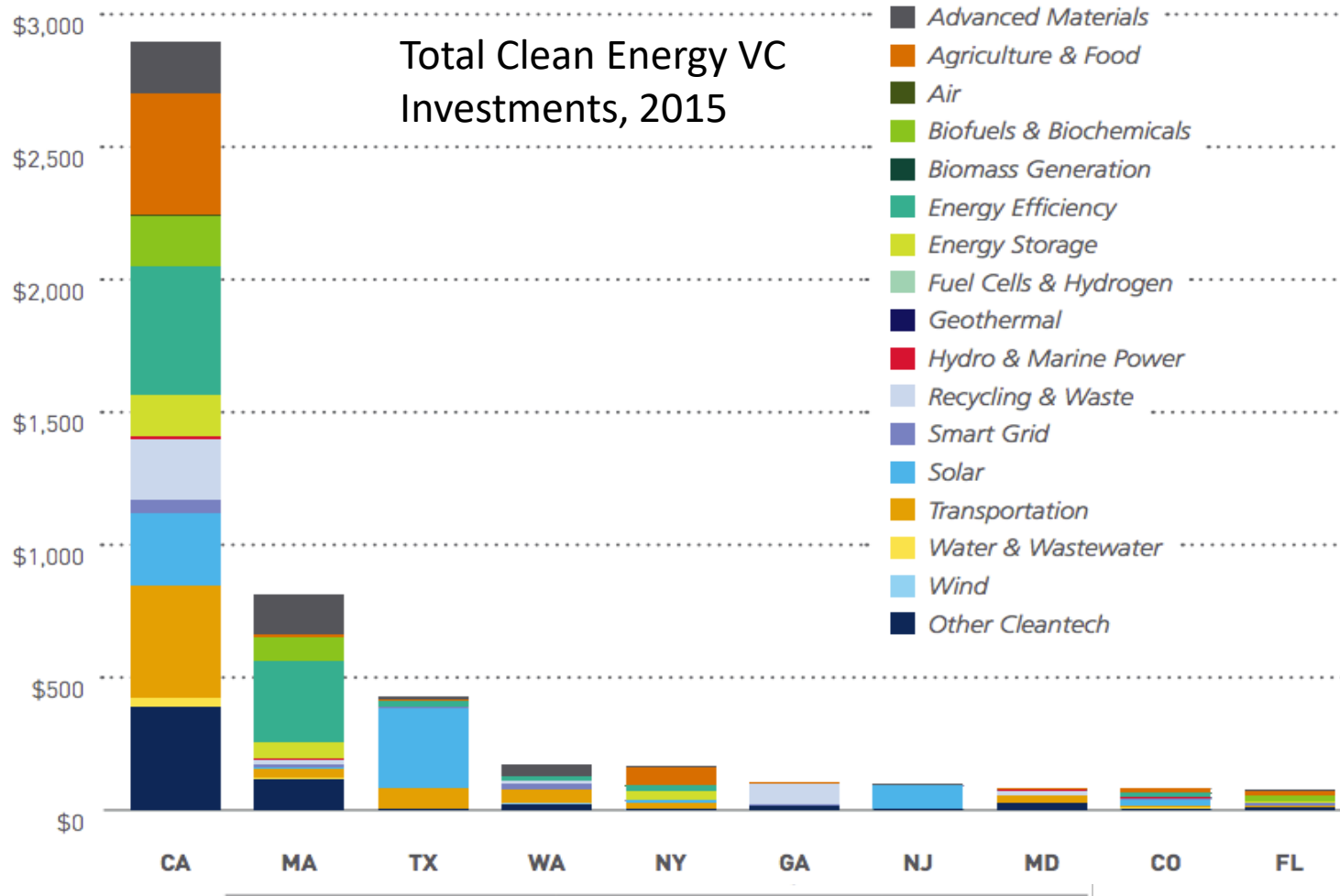
RE Ranking:



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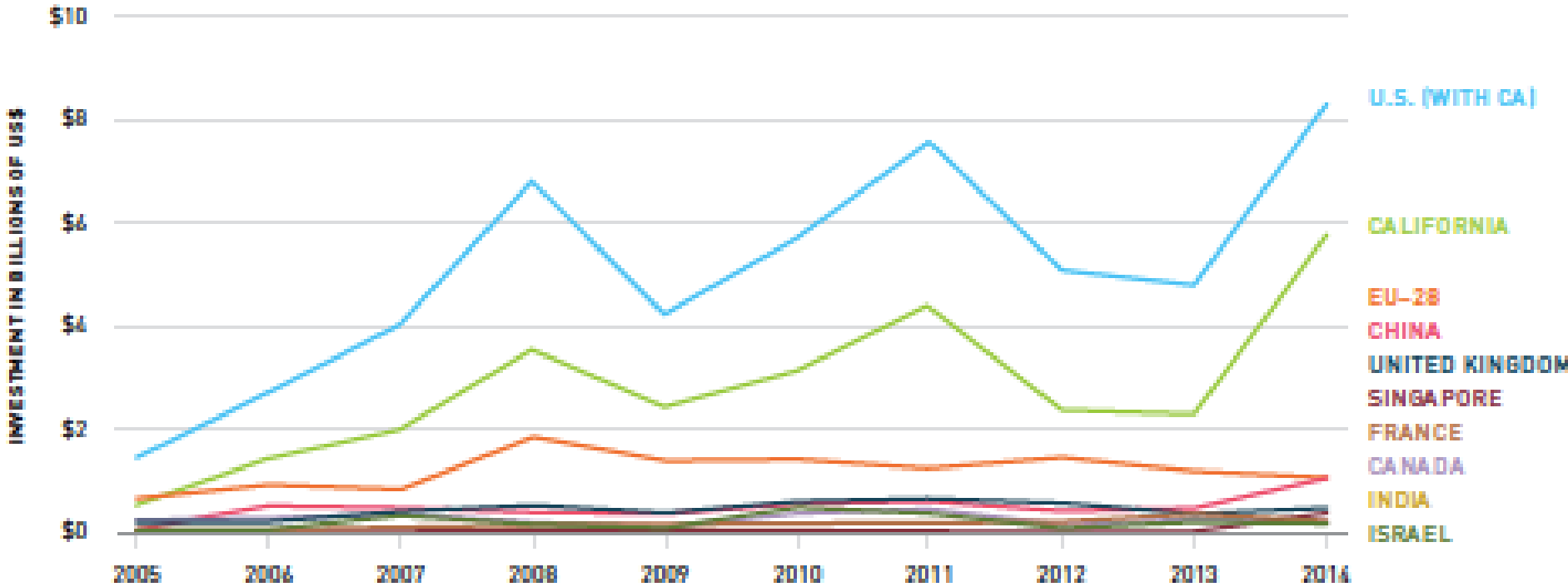
VC Ranking:



Emissions Per Capita MTCO₂e/person)

1.	Nigeria	0.51
2.	Pakistan	0.77
3.	Philippines	0.81
4.	Vietnam	1.44
5.	India	1.52
6.	Indonesia	1.83
7.	Egypt	2.47
8.	Brazil	2.51
9.	Algeria	3.58
10.	Turkey	3.72
20.	China	6.36
31.	California	9.16 (Germany 9.2)
44.	US (with CA)	16.77

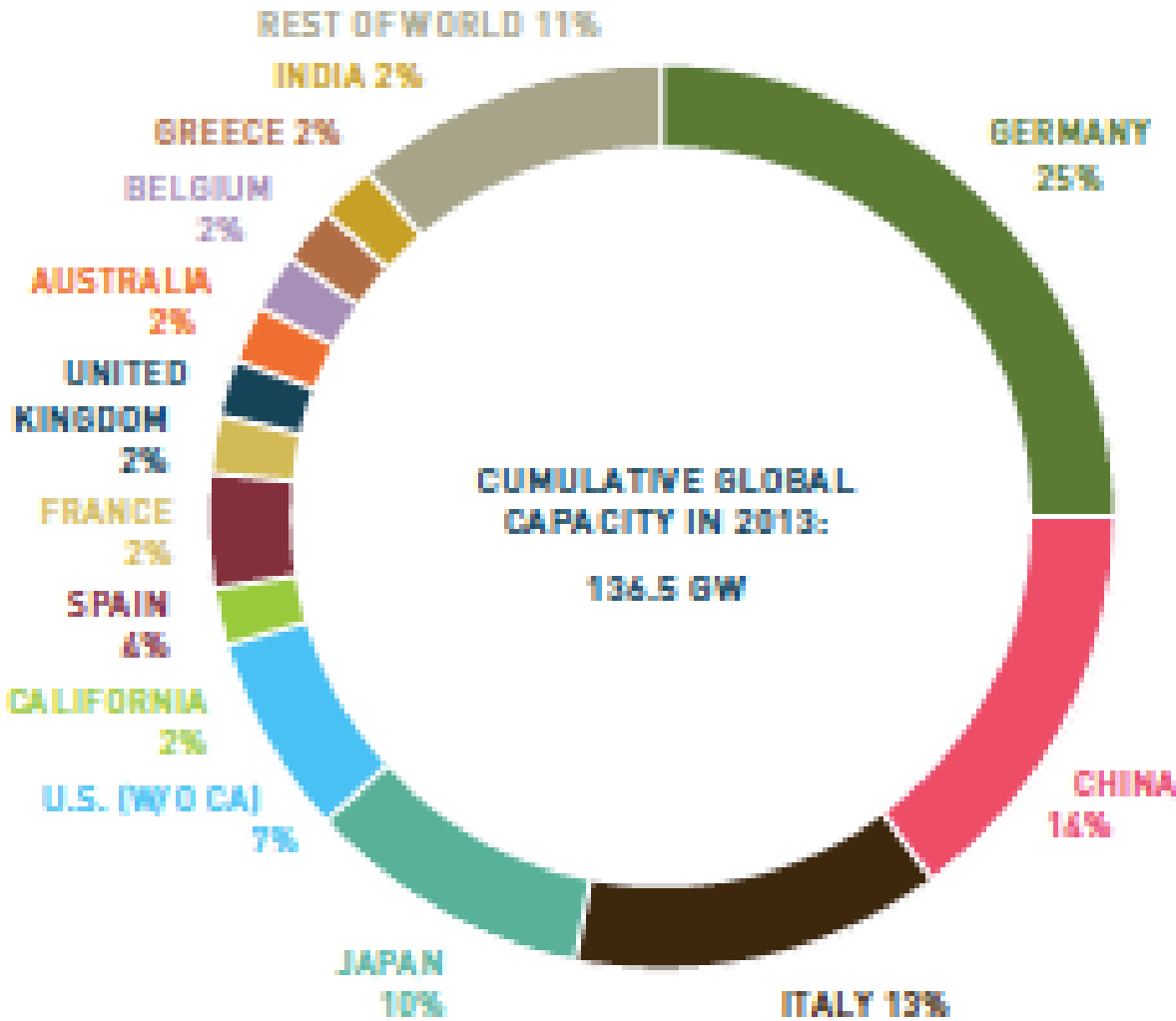
FIGURE 22. VENTURE CAPITAL INVESTMENT IN CLEAN TECHNOLOGY COMPANIES



NEXT 10 CALIFORNIA GREEN INNOVATION INDEX. Note: Amount unadjusted for inflation (nominal) regions include the top 10 of VC investment in 2014. The company Uber accounted for \$3 billion of the California, the U.S., and the World totals in 2014. Data Source: Cleantech Group LLC. Analysis: Collaborative Economics. NEXT 10 / SF - CA - USA

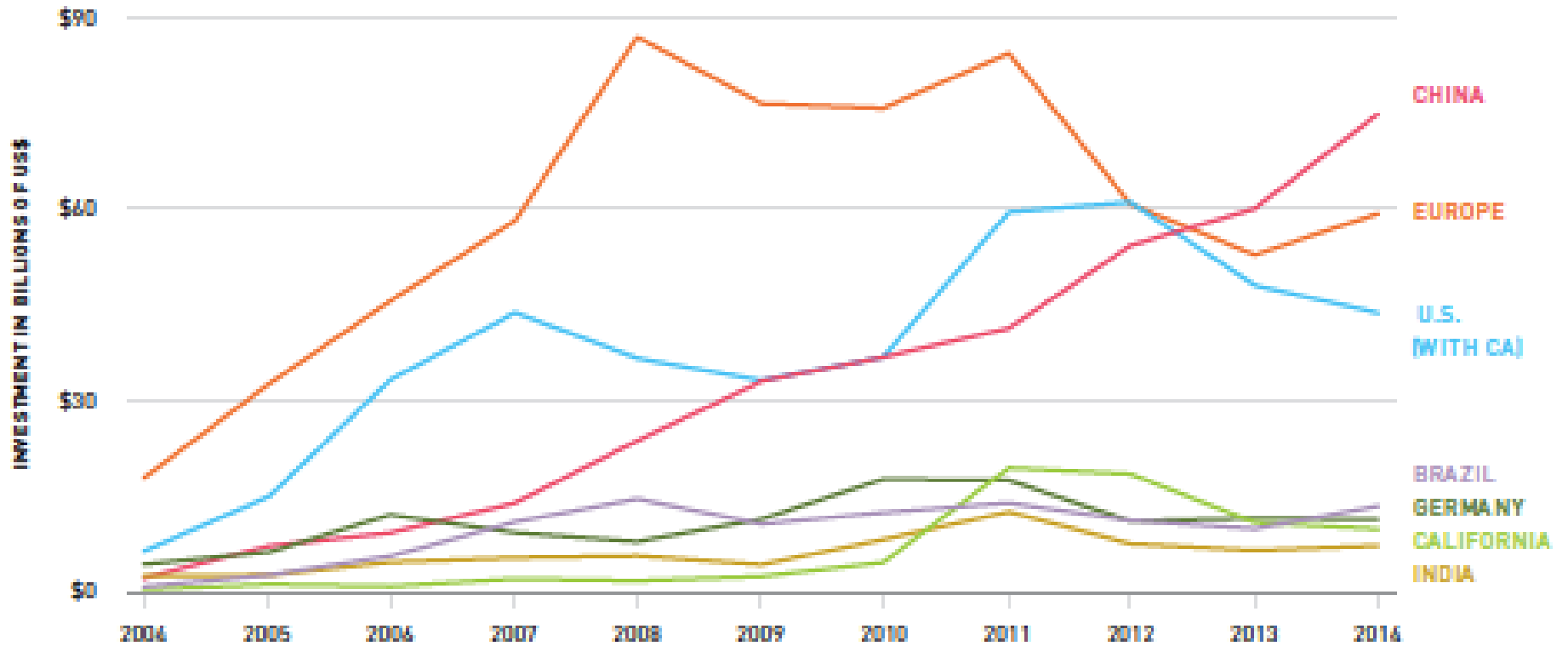
FIGURE 18. SOLAR ENERGY

CUMULATIVE INSTALLED CAPACITY, 2013



NEXT 10 CALIFORNIA GREEN INNOVATION INDEX. Note: Total may not add to 100% due to rounding.
Data Source: Solar Energy Industries Association and International Energy Agency - Photovoltaic Power Systems Programme. Analysis: Collaborative Economics. NEXT 10 / SF - CA - USA

FIGURE 19. RENEWABLE ENERGY PROJECT FINANCING
TOTAL INVESTMENT BY REGION



NEXT 10 CALIFORNIA GREEN INNOVATION INDEX. Note: Amounts in nominal US\$ (not adjusted for inflation). Data includes New Build, Refinance, and Acquisition asset finance investment only for projects in segments: Biofuels, Biomass & Waste, Wind, Solar, Marine, Geothermal, Small Hydro. Europe includes the continent (i.e. more than EU-28). Countries include top 5 in total GHG emissions from energy consumption, plus California, Brazil, and others as space allows. Data Source: Bloomberg New Energy Finance. Analysts: Collaborative Economics. NEXT 10 / SF - CA - USA

Bright Source, CA





Google, Tesla And Apple Race For Electric, Autonomous Vehicle Talent

Apple, Google, Tesla, and Ford appear to be in a bit of a hiring -- and in some cases, poaching -- spree to build up their electric and self-driving car teams.

<http://www.informationweek.com/it-life/google-tesla-and-apple-race-for-electric-autonomous-vehicle-talent/d/d-id/1324351>



Battery Storage Sites going online

- Three massive battery storage plants—built by Tesla, AES Corp. and Altagas Ltd. go online in Southern California. Combined, they equal 15 percent of the battery storage installed globally in 2016 (Bloomberg)

