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C O M M E N T S

# **Why the United States Does Not Have a Renewable Energy Policy**

by E. Donald Elliott

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## Introduction

The US looks like a Western European country

Stark contrast when it comes to renewable energy (RE) policy

Government support for RE is controversial in the US

Romney argued that Obama was *"picking losers"* by spending federal money to promote RE





[https://en.wikipedia.org/wiki/Mitt\\_Romney](https://en.wikipedia.org/wiki/Mitt_Romney)

Why does the US not have a RE policy like Europe?

Political structure

Political culture

Natural endowment of huge resources of fossil fuels

## 1. Comparing RE development in the US and Europe

2010 New York Times (NYT) data

About 45% of the electricity in the grid in Portugal comes from RES

This compares to 12% in the US

Of which 10% comes from hydropower

RE gap between the US and Europe

Obama's initiatives intended

to promote the development of new green energy technologies

not deploy existing RE ("renewal") energy technologies

Policy ≠ Plan

The US does have a series of plans

The Department of Energy (DOE, <https://www.energy.gov/>) was created in 1977



The President and the DOE are required by law to put together a “National Energy Policy Plan” every two years

These semiannual national energy plans  
are written (by experts), announced, and ignored  
*“go directly into the dustbin of history”*  
*“few read and no one follows”*

This is unlike the Renewable Energy Directive ([https://ec.europa.eu/energy/topics/renewable-energy/renewable-energy-directive\\_en](https://ec.europa.eu/energy/topics/renewable-energy/renewable-energy-directive_en)) in Europe

Creates binding obligations in the member states

Is this failure to implement an effective RE policy

a symptom of a more general breakdown in the ability of national political institutions in the US to address pressing issues (including environmental)?

No, it is rather a deeper expression of the political structure and the political culture in the US  
Hesitancy of the US to be a leader in the RE “parade”

Some wisdom

Some obvious disadvantages

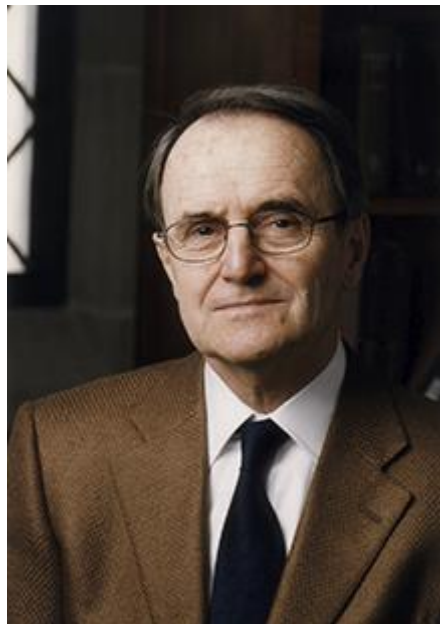
## 2. Structural impediments

Walter Bagehot (aka Adrian Wooldridge, [https://en.wikipedia.org/wiki/Adrian\\_Wooldridge](https://en.wikipedia.org/wiki/Adrian_Wooldridge), 1st editor of The Economist, <https://www.economist.com/>)

*“The English constitution in a word is framed on the principle of choosing a single sovereign authority and making it good. The American on the principle on having many sovereign authorities and hoping that their multitude will atone for their inferiority.”*

Use this to access news sites: <https://github.com/iamadamdev/bypass-paywalls-chrome>

Mirjan R. Damaška (American-Croatian), Sterling Professor Emeritus of Law, Yale Law School (<https://law.yale.edu/mirjan-r-damaska>)



A defining feature of the US legal system is a “coordinate model of authority”

Multiple power centers address the same issue

Difficult to have a coordinated national policy

Consensus will have to be reached

Limits losses by erroneous policies

*“Bagehot’s multitude atoning for their inferiority”*

### 2.A. Fragmented authority

The US is a Republic

Federation of states

50 states regulate energy utilities

with different policies

The wholesale transportation of electricity is regulated by the federal government

Many Renewable Portfolio Standards (RPS) have been adopted at the state level



State laws that require local utilities to supply a certain percentage of the electric power they distribute from RES

*“A renewable portfolio standard (RPS) is a regulatory mandate to increase production of energy from renewable sources such as wind, solar, biomass and other alternatives to fossil and nuclear electric generation. It's also known as a renewable electricity standard.”*

<https://www.nrel.gov/state-local-tribal/basics-portfolio-standards.html>

What varies from state to state

What counts as a renewable energy source (RES)

Target percentages

What was the state of affairs in 2013

7 states have voluntary RPS

29 states, the District of Columbia, and Puerto Rico have enacted mandatory RPS

California was the most ambitious state

Announced the goal of obtaining 33% of its electricity from RE by 2020

*“California currently gets more than 30 percent of its electricity from renewable sources, primarily solar and wind, but not counting large hydroelectric dams. Under its 2018 climate law, the state plans to increase the renewable contribution to 60 percent by 2030. By 2045, 100 percent of its electricity is to be “zero-carbon” – but under the law that last 40 percent may include large hydro and even nuclear, if any is available. California’s last nuclear plant at Diablo Canyon, which generates nine percent of the state’s electricity today, is set to close in 2025.”*

<https://www.nationalgeographic.com/science/2020/08/why-renewables-arent-reason-california-blackouts/>

“California Reveals That the Transition to Renewable Energy Isn’t So Simple”

(<https://slate.com/technology/2020/08/california-blackouts-wind-solar-renewable-energy-grid.html>)

Heat storm causing grid operators to impose rolling blackouts

*“This time, what we’re seeing should give renewable energy advocates pause”*

*“...California’s experience also underscores a growing consensus among energy scholars: that variable renewable energy technologies are unlikely to meet the grid’s power demand by themselves. They will play an important role, but more firm generating sources, like next-generation nuclear reactors, natural gas plants with carbon capture technologies, enhanced geothermal, and others that can balance out variable renewables, will be required.”*

Conclusions

Even the most ambitious US state was behind Portugal and most other EU countries

State governments are doing something to promote electricity from RE

A diversity of policies are set at a state level

One half of the states mandate some generation from RES

## **2.B. Separation of powers (divided government)**

The separation of powers adds to the coordinate model of authority to impede RE policy

One party controls one house of the US Congress and the Presidency

The US Congress is bicameral

House of Representatives

Senate

The other party controls the other house of the US Congress

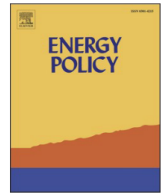
A strong wing of one of the two major political parties (Republicans) is usually opposed to government action to promote RE

Details on party platforms on energy (2012)

<https://www.ans.org/news/article-3+1144/the-party-platforms-on-energy-and-nuclear/>

David Brooks, NYT, summarizes the “schism”:

Democrats tend to be skeptical that dispersed consumers can get enough information to make smart decisions. . . . Democrats generally seek to concentrate decision-making and cost-control power in the hands of centralized experts. . . . Republicans at their best are skeptical about top-down decisionmaking. They are skeptical that centralized experts can accurately predict costs. They are skeptical that centralized experts can predict human behavior accurately enough to socially engineer new programs. . . . They are skeptical that political authorities can, in the long run, resist pressure to hand out free goodies. They are also skeptical that planners can control the unintended effects of their decisions. They argue that a decentralized process of trial and error will work better, as long as the underlying incentives are right. . . . Democrats have much greater faith in centralized expertise. Republicans . . . believe that the world is too complicated, knowledge is too imperfect. They have much greater faith in the decentralized discovery process of the market.<sup>17</sup>



## Republicans and Democrats differ in why they support renewable energy

Abel Gustafson<sup>a,\*</sup>, Matthew H. Goldberg<sup>a</sup>, John E. Kotcher<sup>b</sup>, Seth A. Rosenthal<sup>a</sup>, Edward W. Maibach<sup>b</sup>, Matthew T. Ballew<sup>a</sup>, Anthony Leiserowitz<sup>a</sup>

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### ABSTRACT:

Americans strongly support policies aimed at increasing the use of renewable energy. Prior research has found that, overall, support for renewable energy tends to be motivated primarily by people's perceptions that it creates economic benefits and reduces environmental harms. However, the extant research has not established how these motivations vary across political segments. Here we investigate (a) if and how Republicans and Democrats differ in their stated motivations for supporting a transition to renewable energy, and (b) what demographic and attitudinal variables best predict Republicans' and Democrats' support for renewable energy policies. Using a nationally representative sample of American registered voters, we found a consistent pattern across multiple methods of analysis: Republicans' (compared to Democrats') support for renewable energy is driven more by considerations of economic costs/benefits, whereas Democrats' (compared to Republicans') support is driven more by concern about global warming. These partisan differences hold significant implications for those who seek to effectively tailor policy and strategic communication to these political segments.

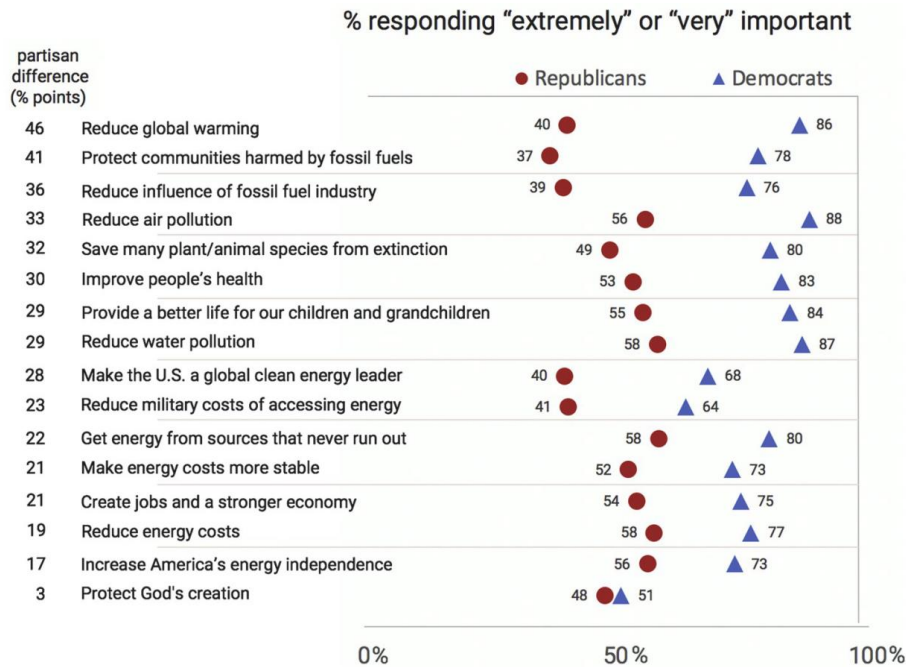


Fig. 2. Difference between the proportions of Republican and Democratic registered voters who said the reasons to transition to renewable energy were "extremely" or "very" important.



**Table 1**

Comparing Democrats' and Republicans' ratings of the importance of reasons to transition to 100% clean, renewable energy.

Reason to transition to renewable energy	% top choice		Rep Mean	Rep SD	Dem mean	Dem SD	t	p	Hedge's g
	Rep	Dem							
<b>Reduce global warming</b>	7	<b>33</b>	3.28	1.42	<b>4.54</b>	0.79	14.76	.000	1.17
Reduce influence of fossil fuel industry	2	4	3.38	1.17	4.21	0.93	10.23	.000	0.81
Reduce air pollution	7	4	3.91	0.98	<b>4.52</b>	0.76	8.96	.000	0.72
Protect communities harmed by fossil fuels	1	2	3.49	1.04	4.18	0.94	8.76	.000	0.70
Save plant/animal species from extinction	4	2	3.70	1.16	4.34	0.89	8.05	.000	0.64
Protect God's creation	10	6	3.65	1.16	3.35	0.89	2.60	.010	0.64
<b>Improve people's health</b>	5	<b>12</b>	3.87	0.99	4.42	0.86	7.49	.000	0.60
Reduce water pollution	3	1	<b>3.99</b>	0.93	<b>4.47</b>	0.76	7.38	.000	0.58
<b>Provide a better life for our children</b>	<b>15</b>	<b>13</b>	3.93	1.03	4.44	0.87	6.90	.000	0.54
Make the U.S. a global renew. energy leader	1	3	3.37	1.15	3.97	1.10	6.74	.000	0.53
<b>Energy from sources that never run out</b>	<b>15</b>	7	<b>4.00</b>	0.92	4.37	0.89	5.18	.000	0.41
Reduce military costs of energy access	1	1	3.43	1.21	3.89	1.08	5.21	.000	0.41
Create jobs and a stronger economy	4	1	3.82	0.99	4.16	0.91	4.66	.000	0.36
Make energy costs more stable	2	3	3.81	0.95	4.11	0.90	4.02	.000	0.33
<b>Reduce energy costs</b>	<b>14</b>	6	<b>4.01</b>	0.90	4.22	0.92	2.78	.006	0.23
Increase America's energy independence	10	2	3.94	1.01	4.14	1.00	2.50	.013	0.20

Note: % top choice = within each party, the % of registered voters who selected this reason as their single most important reason. For each party, the top three reasons by frequency selected as "top choice" and the top three by mean importance are bolded. Analyses exclude those (n = 103) who opted out of this question.

<https://www.sciencedirect.com/science/article/abs/pii/S0301421520302019>

David Frum (Republican), former George W. Bush ("Dubya") White House adviser

*"Th[e] command-and-control method has been tried and tried again, always with conspicuous lack of success, and for all the obvious reasons: Because government favors big "imagination-capturing" technologies over incremental adjustments. Because government makes a bad venture capitalist. Because democratic governments (rightly) cannot decree the kinds of lifestyle changes that price signals will induce voluntarily. What government will order empty nesters to move from the exurbs to downtown? But a 60-minute commute and \$5 gas will persuade people to do what no bureaucrat would dare command."*



NEW YORK TIMES BESTSELLER

"An acute analysis of what goes on inside the administration . . . [Frum has] given us a look at Bush different from any we've ever seen. . . . Remarkably candid."

—*Los Angeles Times Book Review*

# THE RIGHT MAN

AN INSIDE ACCOUNT OF  
THE BUSH WHITE HOUSE

Updated for President  
Bush's second term

DAVID FRUM  
WITH A NEW AFTERWORD BY THE AUTHOR

## 2.C. Changing policies

Frequent changes of control of government by political parties

Result in shifting policies

National policy to promote an alternative to gasoline-powered automobiles

The two major political parties

agree on this objective

differ on the means to accomplish it

Mixed and inconsistent signals are sent to industry and the states



## Example

2003: President George W. Bush in his State of the Union address announced an initiative to invest billions of US\$ to develop a hydrogen-powered fuel cell car

2008: President Barack Obama cut 80% of the funding for the hydrogen car

2011: President Obama in his State of the Union address announced the promotion of electric-powered cars instead

In 2009 the National Academy of Sciences identified the “*lack of sustained policies*” as one of the three top barriers to promoting RE

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This contrasts with Germany’s long-term commitment 2008 to RE for 20 years

Facilitates developers in financing their projects

*“The Energiewende continues to be the defining feature of Germany’s energy policy landscape. In place for nearly a decade, the Energiewende is a major plan for transforming the country’s energy system to make it more efficient and supplied mainly by renewable sources. The Energiewende is clearly visible in electricity generation, where it has increased the share of renewables. Yet despite progress on lowering overall emissions, Germany is struggling to meet its near-term emissions reduction targets, in large part because of uneven progress across sectors. It faces notable challenges in transport and heating ... In its energy transition so far, Germany has maintained a high degree of oil, natural gas and electricity supply security. Planned nuclear and coal phase-outs are set to increase the country’s reliance on natural gas, making it increasingly important to continue efforts to diversify gas supply options, including through liquefied natural gas imports.”*

<https://www.iea.org/reports/germany-2020>

The US has difficulty in

maintaining policies

sending consistent signals to the market

California planned to build 10,000 electric vehicle charging points

Will the shale gas boom make the car of the future to be powered by compressed natural gas (CNG)?

No, electric cars are the future, but they have been affected by the COVID-19 pandemic

New electric vehicle registrations have slowed down

Purchases have been deferred due to reduced availability of subsidies and loans

## 2.D. Unrepresented future generations

No strong political constituency for RE or energy efficiency in the US

The putative beneficiaries are (largely) future generations

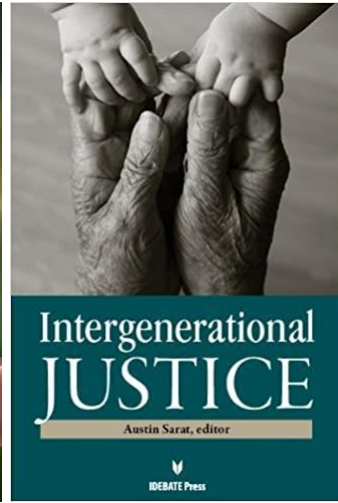
Unrepresented in current political processes

Intergenerational (or transgenerational) justice

*“Intergenerational justice concerns the extent and the character of moral relations among different generations. A theory of intergenerational justice attempts to show why particular moral responsibilities and obligations apply.”*

[https://link.springer.com/referenceworkentry/10.1007%2F978-3-642-28036-8\\_500](https://link.springer.com/referenceworkentry/10.1007%2F978-3-642-28036-8_500)





Politicians

- subject to frequent reelection

- failure to provide economic commitments over a sustained period

### 3. Cultural impediments

Important cultural differences between the US and Europe

#### 3.A. The “right” to cheap energy

Expectation of cheap energy in US citizens

President Obama’s (2009 to 2017) bid for reelection was threatened by rising gasoline prices

In the US, there is a stronger correlation

- between presidential popularity and low gasoline prices

- than presidential popularity and unemployment rates

The US public is upset when the price of gasoline rises to \$4 per gallon

- US liquid gallon = 3.785 liters

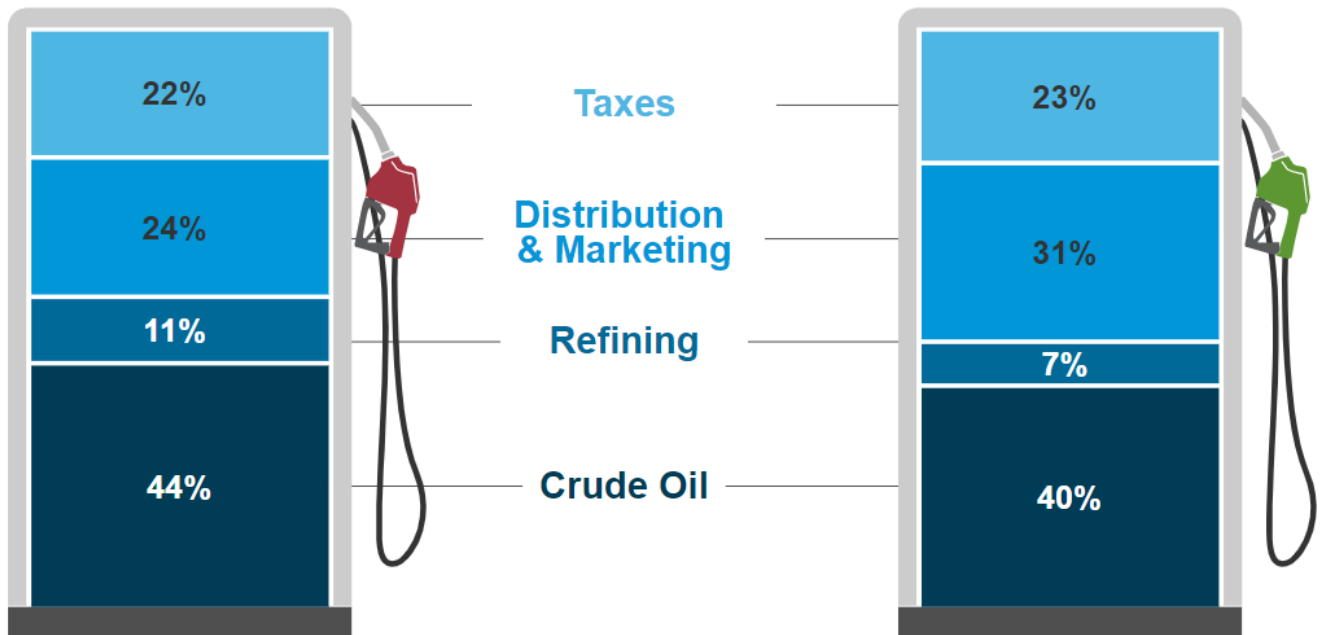
- \$4/gallon =  $4/3.785 = \$1.06/\text{liter}$


Current US Regular Gasoline Prices (dollars per gallon, <https://www.eia.gov/petroleum/gasdiesel/>)

## What we pay for in a gallon of:

**Regular Gasoline**  
September 2020  
Retail price: \$2.18/gallon

**Diesel**  
September 2020  
Retail price: \$2.41/gallon



 Source: U.S. Energy Information Administration, *Gasoline and Diesel Fuel Update*

Both the Bush and Obama administration agreed

Energy prices in the US were too low

A fundamental expectation has been created in democratic voters

Energy prices must remain low

The US is one of the world's largest energy producers of fossil fuels

Large domestic supplies of oil, natural gas, and coal

In 1917, the US was the largest oil producer in the world

produced two-thirds of the world's oil

Oil production in the US peaked around 1970

In 2020 the US is again the largest oil producer in the world

Puts the attitude of the US public towards climate change into perspective

<https://www.worldometers.info/oil/oil-production-by-country/>

[https://en.wikipedia.org/wiki/List\\_of\\_countries\\_by\\_oil\\_production](https://en.wikipedia.org/wiki/List_of_countries_by_oil_production)

## The 10 largest oil<sup>1</sup> producers and share of total world oil production<sup>2</sup> in 2019<sup>3</sup>

Country	Million barrels per day	Share of world total
United States	19.51	19%
Saudi Arabia	11.81	12%
Russia	11.49	11%
Canada	5.50	5%
China	4.89	5%
Iraq	4.74	5%
United Arab Emirates	4.01	4%
Brazil	3.67	4%
Iran	3.19	3%
Kuwait	2.94	3%
Total top 10	71.76	71%
World total	100.63	

<sup>1</sup> Oil includes crude oil, all other petroleum liquids, and biofuels.

<sup>2</sup> Production includes domestic production of crude oil, all other petroleum liquids, biofuels, and refinery processing gain.

<sup>3</sup> Most recent year for which data are available when this FAQ was updated.

## The 10 largest oil<sup>1</sup> consumers and share of total world oil consumption in 2017<sup>2</sup>

Country	Million barrels per day	Share of world total
United States	19.96	20%
China	13.57	14%
India	4.34	4%
Japan	3.92	4%
Russia	3.69	4%
Saudi Arabia	3.33	3%
Brazil	3.03	3%
South Korea	2.63	3%
Germany	2.45	2%
Canada	2.42	2%
Total top 10	59.33	60%
World total	98.76	

<sup>1</sup> Oil includes crude oil, all other petroleum liquids, and biofuels.

<sup>2</sup> Most recent year for which data are available when this FAQ was updated.

<https://www.eia.gov/tools/faqs/faq.php?id=709&t=6>

The US is also the second largest oil importer country in the world

<http://www.worldstopexports.com/crude-oil-imports-by-country/>



## Searchable List of crude oil Importing Countries in 2019

You can change the presentation order by clicking the triangle icon at the top of any of the columns below.

Show  entries Search:

RANK	IMPORTER	CRUDE OIL IMPORTS (US\$)	%WORLD TOTAL
1.	China	\$238,707,061,000	22.6%
2.	United States	\$132,370,663,000	12.5%
3.	India	\$102,306,491,000	9.7%
4.	Japan	\$73,085,389,000	6.9%
5.	South Korea	\$70,193,489,000	6.6%
6.	Netherlands	\$46,414,486,000	4.4%
7.	Germany	\$40,737,628,000	3.9%
8.	Spain	\$30,499,660,000	2.9%
9.	Italy	\$29,615,998,000	2.8%
10.	United Kingdom	\$24,542,383,000	2.3%

Showing 1 to 10 of 117 entries

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### No real alternative to driving cars in the US

- Layout of cities

- Absence of good public transportation

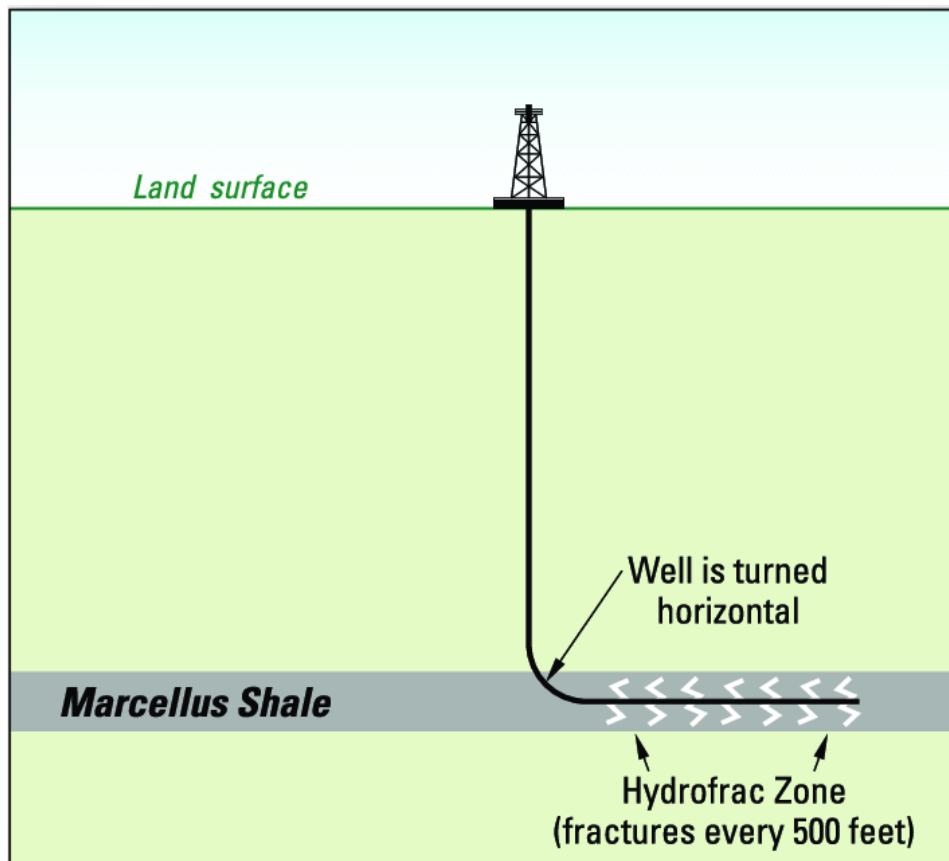
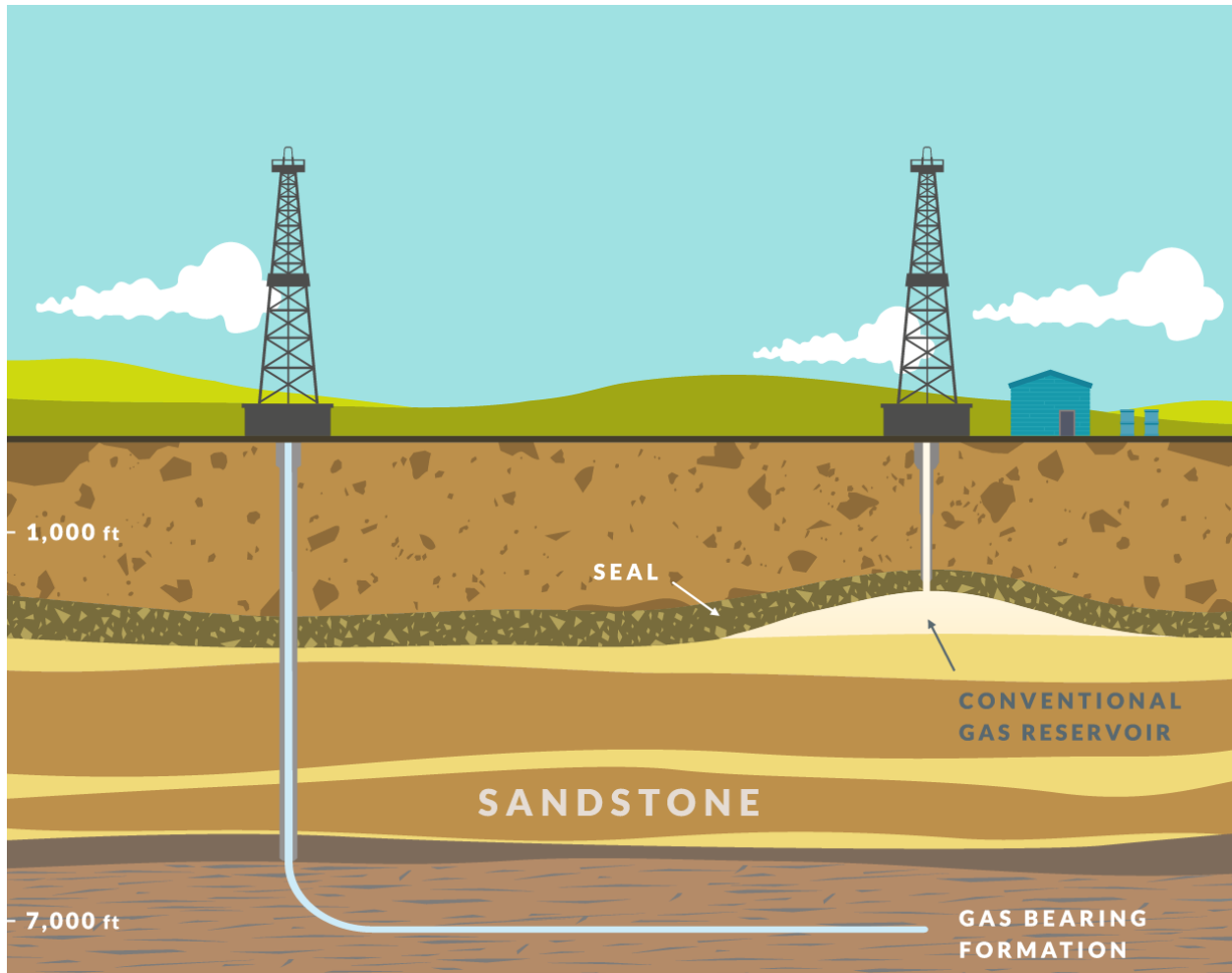
### Shale oil and gas revolution in the US

- Huge new shale gas deposits

- Was it good luck at this point in history or advances in fracking technology and lateral (horizontal) drilling?

- Experts believe that these advances developed in response to increased demand for energy

- Expectations of low natural gas prices



### 3.B. Free market ideology

Free market ideology

Stronger in the US than in most countries in Europe

Leading conservative think tanks

Attack the concept of government promoting green energy

Cato Institute (<https://www.cato.org/>)

Heritage Foundation (<https://www.heritage.org/>)

American Enterprise Institute (<https://www.aei.org/>)

Not opposed to RE per se

Despise the heavy hand of government to mandate it

In general, conservatives

in Europe support RE

in the US oppose it

US conservatives have claimed that RE is

*“quite literally the energy of yesterday”*

the energy of the 13th century

If green energy is so inevitable and such a great investment why do we need to subsidize it? . . . If and when renewable energy makes economic sense, profit hungry investors will build all that we need without government needing to lift a finger. But if it doesn't make economic sense, all of the subsidies in the world won't change that fact.<sup>48</sup>

<https://www.forbes.com/2011/03/28/green-energy-economics-opinions-jerry-taylor-peter-vandoren.html?sh=31814e8f2784>

Oppositions to RE (previous article)

*“First, green energy is diffuse (and dilute), and it takes a tremendous amount of land and material to harness even a little bit of energy”*

*“Second, it is extremely costly”*

*“Third, it is unreliable”*

*“Fourth, it [real estate] is scarce”*

*“Finally, once the electricity is produced by the sun or wind, it cannot be stored because battery technology is not currently up to the task”*

Use it or lose it

On the other hand, the previous article argues

*“Fossil fuel is everything that green energy is not. It is comparatively cheap. It is reliable; it will burn and produce energy whenever you want it. It is plentiful (we use only a tiny bit of oil in the electricity sector). And you can store fossil fuels until you need them.”*

The US electricity system is dominated by private ownership of electric utilities

These are a powerful lobbying force against fundamental changes in the current energy structure



### 3.C. Less concern about climate change

Less concern about climate change in the US than in Europe

Europeans mention global climate change first and energy security second

In the US it is the other way around

2011 Gallup poll

Only 51% of Americans regarded climate change as a “*serious problem*”

That is not enough to legislate

NYT, 2010

If the United States is to catch up to countries like Portugal, the United States must overcome obstacles like a fragmented, outdated energy grid poorly suited to renewable energy, a historic reliance on plentiful and cheap supplies of fossil fuels, especially coal, powerful oil and coal industries that often oppose incentives for renewable development and an energy policy that is influenced by individual states.<sup>51</sup>

It does not follow that every country should get the same percentage of its energy from RES

A country like the US with huge fossil resources, should be expected to obtain less of its energy from RES (compared to countries that lack comparable resources)

You would not expect Saudi Arabia find hydropower attractive

### 4. Defending the American approach

#### LET STUDENTS RECAP THE ARGUMENTS

The US system of government is not good at government-led transformations of the economy

Mobilizing trillions of US\$ to remake its energy infrastructure

The US political structure aims to

prevent government from leading into misadventures

It is better for government not to act decisively than to act wrongly

There is

more concern that the government will pick and subsidize losers

less concern that the US will miss the boat because it does not have a strong centralized energy policy

The US RE policy

does not have a single national policy

allows states and private companies to experiment with different approaches

Ultimately let the market decide what works best

Great fallacy in this argument:

The US already has significant government subsidies that distort the competition

Theoretical justifications for conservative position

The best national RE policy is not to have a single national one  
but a diversity of policies  
at the state level  
among private investors

Maximin (not "maxmin") strategy in game theory

Hedge your bets

Invest some in RE

Do not invest too much in something that may turn out to be wrong

Like portfolio theory in economics

Bagehot was right

The essence of American government is hoping that the multitude of institutions will atone for their inferiority

The US typically follows inelegant, muddled, untidy, but diversified strategies

They are never right

Also never end up being totally wrong

It is in our nature to envision the future

We are not good at predicting it