

Help solve climate change!

MIT Spark - Saturday, March 12, 2022

Description

We know the technical changes needed for a relatively safe climate future: reduce human-made greenhouse gas emissions to net-zero by 2050 and reduce CO₂ in the air below 350 ppm by 2100. We also know that when pollution is free, we get too much of it. Climate pollution is still free in most countries. The cheapest, fairest, and most comprehensive way to address our climate pollution problem is to fix the market's failure to account for it with a three-part solution:

1. **Put a steadily increasing price on climate pollution when it enters the economy,**
2. **Give the money collected to the third party that is being harmed (all households equally), and**
3. **Use border carbon adjustments to protect US businesses and push our carbon price around the world.**

A strong carbon price signal will incentivize efficiency, innovation, transition, and drawdown. Sending the cash back to households will protect purchasing power and let us achieve the high price needed. Complementary policies are also necessary, but this is our best first step.

It sounds so easy! What's preventing us from doing this? Is it possible to break the logjam and save ourselves? Can any of us do anything to help solve the most significant existential crisis human civilization has ever faced? Yes, we can.

Each of us can take effective action in this pivotal moment in humankind's history. Ordinary citizens advocating for change is our last, best hope to avoid climate catastrophe. Let's get started right now!

Bio

John worked at Sun Microsystems for 20 years and Oracle for 10, helping roll out the infrastructure for the internet for most of his software career. Then his undergrad Biology background came back to haunt him as he learned more about climate change. After doing a deep dive into economics and policy, he joined Citizens' Climate Lobby's grassroots volunteer effort to help create the political will to enable Congress to pass effective and fair bipartisan legislation. He is CCL's NH state coordinator, has presented at local and national conferences, and taught at MIT ESP and LearningU's Raincloud events, helping others learn how to take effective climate action.

(copy/paste into chat)

Welcome!

MIT Spark 2022: Help solve climate change!

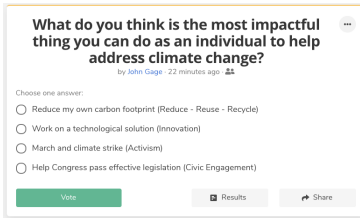
Session guide:

<https://docs.google.com/document/d/1i54tRyl8YjCZLeQX0ENQ1EHv01Nk8njtgJ4kL6-eZDk/edit?usp=sharing>

Hello everyone! Thank you for joining this class to help solve climate change!

Take a poll

I want to start with a poll to see what you think is the most impactful thing you can do as an individual to help solve climate change.



TAB 1: Results: (click on results - click autoloader - share window). **Poll question:** (Paste into chat)

- Session 1: <https://strawpoll.com/8rprq1ej2>
- Session 2: <https://strawpoll.com/gcrqkc2d4>

What do you think is the most impactful thing you can do as an individual to help address climate change?

1. Reduce my own carbon footprint (Reduce - Reuse - Recycle)
2. Work on a technological solution (Innovate)
3. March and climate strike (Activism)
4. Help Congress pass effective legislation (Civic Engagement)

These are all good things to do, but I think there is a clear winner. Here's why:

1 - The average American's carbon footprint is 16 tons of CO₂ a year. But humanity emits about 40 billion tons a year, and 1 billion people don't have access to power yet. Our other GHGs contribute another 15 billion tons of CO₂ worth of warming on top of that. Individual decisions are essential, but to solve this problem we need everyone around the world to make good choices - investors, producers, and consumers - rich and poor.

2 - Technological advancement will help in the long term, but we'll see in En-ROADs later how little impact this can have in the next few decades compared with the scale of what must be done during that time.

3 - Protesting and raising awareness of the problem is part of building the resolve to address it, and this is important. If we could get 10% of all Americans out on the street as happened on the first Earth Day, things would happen. But that is not so easy to do for climate change. It happened in 1970 in a protest against industrial pollution that was obvious to everyone - visible toxins in the air & water. Many problems from it were immediate. Climate pollution is different. There is a separation in space and time from the pollution and the impacts. Space: when climate pollution goes up in the air it mixes all around the world, affecting global temperatures. Time: there is a multi-decade lag between when climate pollution is emitted and when global temperatures change from it, then persist for millenia. We need to make changes globally and before things get terrible because they will get worse for decades after we make changes, and some consequences are irreversible.

4 - Yes! The UN, IPCC, World Bank, World Economic Forum, OECD, and nearly all US economists say a critical part of solving climate change is putting a global high price on climate pollution from fossil fuels (carboncashback.org/carbon-cash-back). Congress is the only entity that has the power to do that in a way that can have a global reach. Congress will pass legislation to do this when there is sufficient political will for them to do so. That is why helping create the political will that will enable them to do this is so important right now.

The Message

Global warming is happening. It's us. We're sure. It's urgent. We can fix it. ([Poster](#))

We know the science, economics, and policy solutions. We are only lacking the political will to change.

What it takes to be an effective advocate for change: Concern + Knowledge + Action

1) **Concern:** You're here, so it looks like you've already got this!

2) **Knowledge:** Knowledge and skills make you powerful. Actively seek them. I'll cover basic climate science, the impacts of global warming, the economics of climate pollution, and policy options to address the problem. Other things are important too: communication skills, knowing actions you can take and their relative impacts, and how to share the concern and the solution with others. Solving climate change is a marathon, not a sprint. There's a lot to learn, and doing it can be personally rewarding in many ways.

I'll do a quick review of the science, economics, policy, and politics of climate change, with links to all the sources so you can actively seek more information after this class.

Then, for fun, we'll play a Kahoot about it. (*1 ½ hr version of the course*)

3) **Action:** Then, I will help you take action here in class - we'll each write to Congress. This helps create the political will to enable Congress to pass effective and equitable climate legislation. And you can do this in a few seconds every month, and encourage others to do it as well.

I'll also share some ideas about what you can do after this class to keep taking action. Persistence is an essential part of being effective.

A quick overview of the science, economics, and policies of climate change

Science is the most effective process we have to better understand the physical world around us.

Economics is the study of the economy. Economists are academic professionals who are experts in the flow of money, how producers and consumers behave in markets, and how policies impact those behaviors.

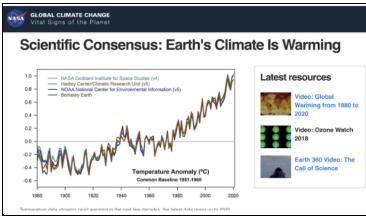
Policies are solutions. Like how an algorithm describes a solution that can be written in code, a policy is a solution that can be written into a law. Examples include regulations, incentives, and taxes.

Politics determine how and when policies become laws.

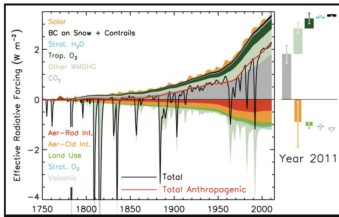
Science: A few degrees difference in the Earth's average temperature is a big deal. A graphical view of the last 20,000 years of Earth surface temps: <https://xkcd.com/1732/>. Human civilization developed during the last 10,000 years, when a stable and relatively warm climate gave us the opportunity (<https://www.climate.gov/news-features/climate-qa/what%E2%80%99s-hottest-earth-has-been-%E2%80%9Ctately%E2%80%9D>).

Climate science is a mature field of study. Here's a 200-year timeline of climate science: <https://history.aip.org/climate/timeline.htm>.

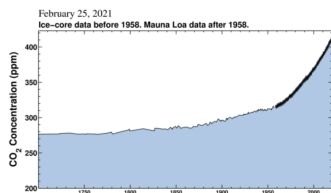
Let's take a look at what we've done and what we are doing to the Earth's climate according to reputable scientific sources.



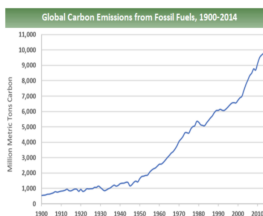
TAB 2: Reputable sources. There is **scientific consensus** about man-made global warming, based on a consensus of all the evidence. This page is from NASA - the graph shows **1.8°F (1°C) of warming** since 1900: <https://climate.nasa.gov/scientific-consensus/>. This page notes that **97% of all climate scientists and 200 scientific organizations all agree** about the basics: it's warming, it's us, it's bad, and we can fix it.



TAB 3: The **climate has always changed**, and we know why. From the *IPCC's AR5* - natural and man-made warming and cooling climate forces since 1750: <https://www.ipcc.ch/site/assets/uploads/2018/02/Fig8-18-1.jpg> See the description of Figure 8.18 in: https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_all_final.pdf. *Point out W/m², CO₂, Other WMGHG (methane, nitrogen), 11-year solar cycle, volcanos' aerosols, net result (1.5°C worth of warming force)*. The Earth warms 3/4°C for each W/m² added, so 2W/m² increase means we've added 1.5C worth of total warming to the Earth's climate system. IPCC AR6 WG1 Figure 2.10 (warming and cooling forces). The [IPCC AR6 WG1 SPM](#) shows the net impact in **Figure SPM.1** (hockey stick graph).



TAB 4: The **Keeling Curve** shows the **50% human-caused increase in CO₂** in the air since 1850. <https://siweb.ucsd.edu/programs/keelingcurve/> (1 year, full record, 1700-present, 10,000-year views). There is a lot of bad news in the world, but there is absolutely no worse news than this: we have changed the basic chemistry of the Earth's atmosphere, and that is changing important physical properties of the Earth. Once there, much of the CO₂ we add stays in the air for decades or even centuries. Where the 10,000-year data came from: <https://berkeleyearth.org/dv/10000-years-of-carbon-dioxide/>.



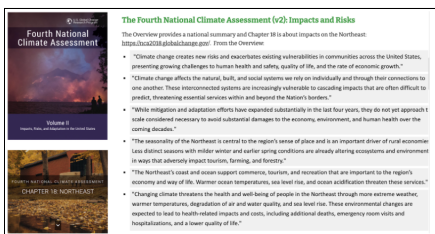
TAB 5: Where did that extra CO₂ come from? Most of it [came from burning fossil fuels](#). (FF chemistry). And 150% increase in methane (CH₄): [Our World in Data](#). **CO₂ and CH₄ emissions from fossil fuels is climate pollution**. They act like a blanket, trapping heat that would have radiated out into space. CO₂ stays in Earth's atmosphere for hundreds of years.



TAB 6: Causes: The *Fourth National Climate Assessment* (NCA4) reports 1.8°F of warming has been measured so far, and 1.1°F more is built into the system:

<https://science2017.globalchange.gov/chapter/executive-summary/>. This is a summary about what we know through science from **the USGCRP** (NASA, NOAA, EPA, DOE, DOD, National Academy of Science, and other major scientific agencies) for use by the policy side of government. What else do we know:

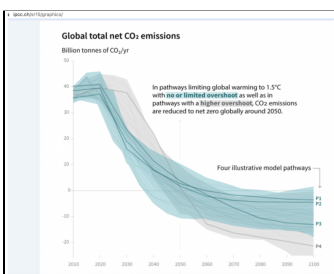
- 1) There is **latency** and **inertia** in the system - another 1.1°F warming is expected in the next two decades from our past pollution. Additional warming will continue after that from positive feedbacks.
- 2) **Positive feedback loops** and **tipping points**: loss of albedo (reflective snow & ice), Arctic methane release, foundation species loss (eg. coral reef ecosystem), desertification, ocean circulation changes.
- 3) **Effects**: global warming causes different changes in climate in different places. Here in the Northeast, our climate is moving 30 feet north a day. Increasing CO2 is also causing ocean acidification.



TAB 7: Impacts and Risks: sites.google.com/view/carbon-cashback-coalition/science#h.p_XH-pHdcZgydq - The *Fourth National Climate Assessment* - US and Regional Impacts - more severe heat waves, droughts, and associated fires; more severe precipitation events, stronger storms, sea-level rise, and associated flooding and storm damage; ocean acidification. Shifting climate zones, migration patterns, pest range expansion.

An example of ecosystem destruction from the *IPCC*: 50% loss of coral reefs at 1°C, 70-90% loss at 1.5°C, and 98-100% loss at 2°C warming. (Documentary recommendation: **Chasing Coral** on Netflix streaming).

Now you know the details of the problem. How can we fix it?

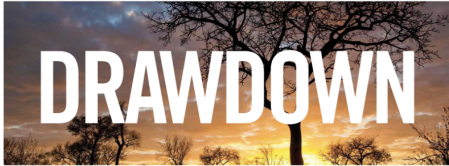


TAB 8: The emissions pathway to hold warming to 1.5°C: **Step 1:** Stop polluting. This report was the origin of the call to reduce future CO2 emissions to net-zero by 2050, specifying the remaining carbon budget that gives us a 50:50 chance: https://sites.google.com/view/carbon-cashback-coalition/science#h.p_1pX8Sd7hhmy3 The IPCC's *Special Report on 1.5°C of Global Warming*. Read about these relatively safe emission reduction

pathways (Figure SPM.3A) at <https://www.ipcc.ch/sr15/chapter/spm/>. Another view: <https://twitter.com/LeoHickman/status/1466437136463409169?t=smO7JQgWOFmSdJoYDI02qg&s=19>.



TAB 9: Step 2: reduce the CO₂ in the air back down to 350 ppm by 2100 (it won't go down all by itself): https://www.giss.nasa.gov/research/briefs/2010_lacis_01. (This is how 350.org got its name). Once there, most CO₂ stays in the air for decades or centuries. CO₂ is “The Thermostat that Controls Earth's Temperature”.



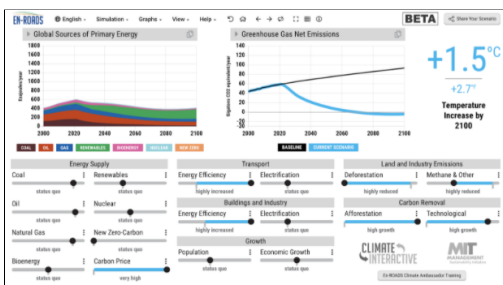
TAB 10: Getting CO₂ back down to 350 ppm is what Project Drawdown (<https://drawdown.org>) is all about: the top 100 technical solutions to do what is needed. Summary: end fossil fuels; fix refrigeration and cement; educate women; better healthcare; land-use, agricultural & other changes to pull the extra CO₂ out of the air.

We have the technology and ideas needed, but individuals, businesses, and governments are not making the right choices. Currently, there are insufficient incentives in the market to drive those changes at the pace and scale needed.

Pause & Reflect

Ask: Why are we doing this to ourselves? (*Take answers*). The underlying reason is climate pollution is free, so there is insufficient incentive for people and businesses to reduce it. (The tragedy of the Commons).

How can we fix this? The free market isn't addressing the problem. How do we change behavior to do what is needed? **We need the government to do something.** Policies such as regulations, subsidies, incentives, or putting a price on carbon emissions will change behavior. Policies are not a subject of Project Drawdown, but the author, Paul Hawken, says a carbon price will “**accelerate nearly every one of the 100 solutions described in the book**”.



TAB 11: How can we compare policies? The En-ROADS climate policy simulator from MIT lets us compare and see the combined impacts of all the different policy options. We see that carbon pricing is the most powerful option. When carbon pricing is combined with complementary policies, we can achieve the Paris Accord goal of holding warming to 1.5°C: <https://en-roads.climateinteractive.org/scenario.html>.

There are significant related social issues of equity and justice. [Climate policies can be regressive](#) (hurt the poor). Additional policies are needed to help communities that are disproportionately harmed by past pollution and communities that are dependent on fossil fuel production to transition to the new clean energy economy.

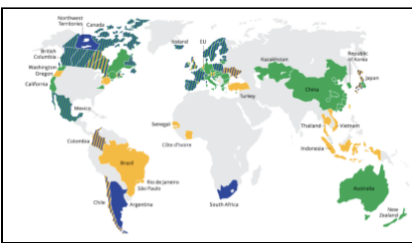
Carbon Pricing



TAB 12: The experts say “We cannot solve the climate crisis without effective carbon pricing.” (US Treasury Secretary Janet Yellen. The IPCC says, “Explicit carbon prices remain a necessary condition of ambitious climate policies” (IPCC SR15 chapter 4.4.5.2). So how does it work?

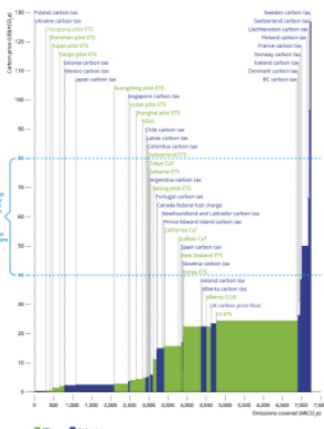
Carbon pricing explained with chickens - video:

<https://www.youtube.com/embed/zD64kaTY5Vg?start=0&end=118&autoplay=1&rel=0>



TAB 13: The video mentioned that 20 countries have put a price on carbon emissions. The good news is that the video is six years old, and now 46 countries have put a price on carbon:

https://sites.google.com/view/carbon-cashback-coalition/carbon-cash-back#h.p_OYg519J_K16c



TAB 14: The bad news is that most countries’ carbon prices are too low to drive emissions down as needed. What we’ve got: 20% of global FFs are covered with an average \$15/tCO₂ price. Figure 9 (PDF pg 29) at <https://openknowledge.worldbank.org/bitstream/handle/10986/31755/9781464814358.pdf?sequence=8&isAllowed=y>. According to the [World Bank’s High Commission on Carbon Pricing, IPCC, OECD, IMF](#), and others ([Nature: A near-term to net zero cost of carbon](#)), we need a global price rising to \$135/tCO₂ by 2030 and rising after.

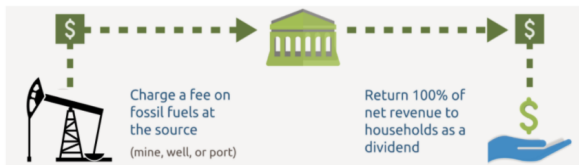
Because we are starting 30 years too late, additional [complementary policies](#) will also be required. As we saw with En-ROADS, because we are so late, carbon pricing is now just our best first step to deal with the problem.

Ask: We know the price that is needed, but can anyone guess why that price is so difficult to achieve?

How can we achieve the high carbon price that is needed?

Cash-back carbon pricing makes it possible: we can charge fossil fuel producers a pollution fee and give the money to all households on an equal basis to protect purchasing power. This solution is popular and durable.

How Carbon Fee and Dividend Works



TAB 15: How does Carbon Fee and Dividend Work? *Present the CF&D laser talk while showing this image:* https://sites.google.com/view/carbon-cashback-coalition/carbon-cash-back?authuser=4#h.p_GBewkKX4wPxO.

Reference: [the CF&D laser talk \(elevator pitch\)](#) and citizensclimatelobby.org/basics-carbon-fee-dividend.

1. Charge coal, oil, and gas producers and importers a steadily increasing carbon fee (\$10/tCO₂ more each year)
2. Give all the money collected to all families equally to compensate people for the harm from the pollution
3. Use Border Carbon Adjustments to put our fee on imports to protect US jobs & push our price globally.

THE WALL STREET JOURNAL	ECONOMISTS' STATEMENT ON CARBON DIVIDENDS
	The Largest Public Statement of Economists in History
	SIGNATORIES INCLUDE
	3589 U.S. Economists
	4 Former Chairs of the Federal Reserve (All)
	27 Nobel Laureate Economists
	15 Former Chairs of the Council of Economic Advisers

TAB 16: The Economists' Statement on Carbon Dividends: <https://clcouncil.org/economists-statement/>. This largest public statement of support for any policy ever from economists says carbon fee and dividend with border adjustments is the most cost-effective and equitable way to reduce climate pollution. What is economics: the academic study of money and markets. What do they say we have? A **market failure due to external costs**. Economists say the cash-back dividend prevents the regressive impact of other climate policies: <https://www.nature.com/articles/s41467-021-22315-9>.

Policies like carbon fee and dividend yield "as much consensus among economists as the reality of climate change does among scientists." - Gregory Mankiw, Chair of the Council of Economic Advisers, President G. W. Bush.

Time for questions

Q&A from MIT SPLASH 2020

1. How would a cash-back carbon pricing policy fit in with the Green New Deal?

Cash-back carbon pricing is an effective bipartisan climate pollution reduction policy with highly progressive results. The GND is a set of Democrat goals involving climate and social issues. Similar to how the original New Deal was rolled out, the GND will likely be accomplished by passing a set of

legislation, and cash-back carbon pricing could be one of the bills passed as part of GND. Because cash-back carbon pricing attracts bipartisan support, this legislation will be durable through future election cycles.

2. Why not spend some of the money collected on energy efficiency, incentives, and helping affected communities?

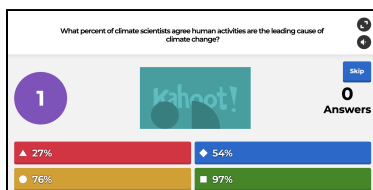
The GHG emissions reducing power of carbon pricing is determined by the price we can push around the world. We can get the highest carbon price possible by returning all the money to households. Most families will come out ahead, so most voters will support the policy - especially after they start receiving their monthly carbon dividend checks. If the government spends the money, that erodes the public's desire to see the carbon price rise. This also reduces the ability to pass the bill because it makes it a tax. Some members of Congress are strongly against increasing taxes. Many other complementary climate policies will be needed, and there are other ways to raise revenue for those (e.g. reallocate some from the military budget, roll back the previous tax cut for wealthy individuals and businesses, etc.)

3. I've heard a lot of GHG pollution is produced from making electric vehicles. Are EVs really any better for the climate?

About half an automobile's GHG emissions are from its production, the other half from the gas it burns. This exposes a weakness of subsidizing EVs - it only reduces half of the total GHG emissions. Putting a price on carbon emissions at the source incentivizes consumers to prefer EVs. But it also incentivizes emission reductions throughout the entire EV production process, and in how the electricity is produced that powers EVs. This demonstrates the comprehensive way carbon pricing at the source of fossil fuel production reduces GHG emissions throughout the economy, and the limits of specific subsidies that only encourage one specific consumer choice.

4. How come children only get a half-share and adults get a whole share for their dividend?

Although the dividend is compensation for damages from the pollution, a critical feature is that it also protects family budgets during the transition to a clean energy economy. Parents pay most of the bills and will be paying most of the higher prices. To make the policy viable and durable (so it can be legislated and will be popular once in place so it lasts for the decades needed) we need to make sure voters like the solution. Everyone 18 and older gets 1 full share, often when people start paying for their own heating, transportation, food, housing, etc.



TAB 17: Let's Play a Climate Kahoot!

Copy/paste into chat: On your phone, go to <http://kahoot.it>

Game: <https://play.kahoot.it/v2/?quizId=0cef8991-9cee-4f7c-940c-185b798e1f1a>

1. What percent of climate scientists agree that humans are the leading cause of climate change?
2. How much has the CO2 concentration in the air increased due to human activities?
3. How much has the Earth's surface warmed since 1900?
4. What percent of the world's tropical coral reefs have been lost since 1990?

5. What is the most cost-effective and fair approach to address climate pollution according to economists?
6. How many countries have already put a price on carbon emissions from fossil fuels?
7. What carbon price is needed by 2030 to meet Paris Accord Goals?
8. The most impactful thing we can do about climate change is to get effective federal legislation. T/F

Prepare for Action

Now you know the science, economics, and the most powerful climate solution policy according to the experts. You probably know more than some members of Congress do about this! So how can we work together to get Congress to act?



TAB 18: CCL Intro - 2-minute video: <https://www.youtube.com/embed/9oyguP4nLv0?autoplay=1&rel=0>

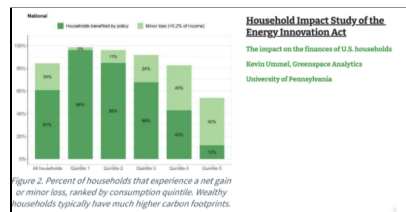
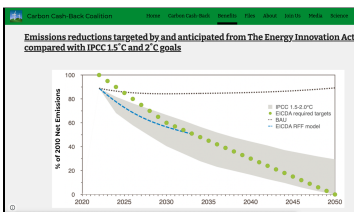
200,000 Citizens Climate Lobby volunteers around the world, mostly in the US. In Canada, they succeeded. Here is the PM Trudeau talking about it: <https://www.youtube.com/embed/3fF4XK2X3KA?start=1378&end=1552&autoplay=1>. In the US, CCL has been working in their towns and states, and lobbying Congress to pass Carbon Fee and Dividend legislation for over ten years. Now there is a bill in Congress!



TAB 19: The bill is called the **Energy Innovation and Carbon Dividends Act**: energyinnovationact.org.

You can learn how to explain it by internalizing this brief description (laser talk) of the bill: <https://citizensclimatelobby.org/laser-talks/energy-innovation-and-carbon-dividend-act/>. Check out the other laser talks about related topics from here as well. Here is a two-page [fact sheet](#) about the bill.

Talking points: the Energy Innovation Act will get us to **net-zero by 2050**, produce **affordable clean energy**, **save lives**, and **put more money in most people's pockets**.



TAB 20: Independent analyses have been done to evaluate the effectiveness and benefits of this approach: https://sites.google.com/view/carbon-cashback-coalition/benefits#h.p_uJeLR2IAMFce (Show the emissions-reducing potential graph, then scroll up to show the highly progressive result reflected by the Household Impact Study chart).

Why haven't we done this already? Some companies have been profiting from the status quo, and some people believe the government should stay out of markets even in the case of market failures.

They have run a public misinformation campaign and used money in politics to successfully delay effective legislation to address climate pollution from fossil fuels. This is a Pulitzer Prize-winning article about that: <https://insideclimatenews.org/news/15092015/Exxons-own-research-confirmed-fossil-fuels-role-in-global-warming>. This book (and movie) about that is by a Science Historian at Harvard University: [Merchants of Doubt](#).

TAB 21: Take Action (zoom in to show the numbered actions below)

What actions can we take right now? How can we help more people act to enable Congress to pass effective climate legislation to address the problem?

We can help create the political will for climate action by sharing our concern with others and taking actions that empower other people and Congress to act. Here are some things actions. Try something new each month:

- 1) Write Congress and ask them to act: <http://cclusa.org/write>.
- 2) Write President Biden and ask him to act: <http://cclusa.org/action>.
- 3) Use social media to tell your friends about Carbon Fee and Dividend and how they can take action to help (share [the CCL Intro video](#), the actions above, and check out some other videos at <https://community.citizensclimate.org/resources/item/19/230>).
- 4) Talk about climate change science with your family: give them the elevator pitch for Carbon Fee and Dividend, and ask them to email [Congress](#) and [President Biden](#).
- 5) Talk some more: ask your teachers about all of the above - science, economics, and policies.
- 6) Do you know a business owner or is there a local business that you like? Ask them to endorse the bill on behalf of their business at <http://energyinnovationact.org/endorse>
- 7) Do you know a community leader? (If not, give a state rep a call). [Ask them](#) for a good time to talk, and ask them to endorse the bill as a prominent individual at <http://energyinnovationact.org/endorse>
- 8) Write a Letter To the Editor (200 words) or Op-ed (500 words). Some tips on getting published <https://community.citizensclimate.org/resources/item/19/111> & some [Op-Ed templates](#) & [examples](#).
- 9) Try more actions from the "Take Action" menu at citizensclimatelobby.org.
- 10) Give a presentation to others (or make a brief video to share): start with this document or see <https://community.citizensclimate.org/resources/item/19/218>
- 11) Keep learning. Sign up for the weekly CCL video training: <https://community.citizensclimate.org/topics/core-volunteer-training>
- 12) Try something at your town level Check out carboncashback.org for a NH warrant article idea.
- 13) Lobby Congress! Get trained and lobby with CCL at the next June or November Conference and Lobby Day. Prepare at <http://community.citizensclimate.org/new-volunteer>.

Conclusion

"Once we start to act, hope is everywhere. So instead of looking for hope, look for action. Then, and only then, hope will come." - Greta Thunberg (TEDx Talk at <https://youtu.be/H2QxFM9y0tY>).

None of us can solve this on our own. But each of us can do our part. Look around you (in zoom gallery view). This is what gives me hope. Each of us is a part of a growing number of people who are concerned about climate change, learning how to make a difference, and taking effective action to address it.

Now you know what to do, and you know you can do it. Start with easy things, and try bigger things as you gain experience. Amplify your power by helping others learn how to take effective action too. Spread the

word, and ask them to spread the word, and a geometric progression of ordinary people taking action will be how we solve climate change.

“I used to believe the important people were addressing the important problems, but I don’t believe that anymore.” - Marshall Saunders, founder of Citizens’ Climate Lobby

Now I know it’s up to ordinary people - you, me, all of us together - to make it happen.

Thank you for helping solve climate change!

Appendix

A session recording of this class - <https://youtu.be/zfX2WV7kfz8>

YouTube Playlist of helpful climate solution videos:

<https://www.youtube.com/watch?v=9oyguP4nLv0&list=PLID5D4dOkPpKZkJ-BijUalzUFq-Kcad-u>

Academic resources (*Our Energy Future*): <https://bity.ly/our-energy-future>