



Comments to the Select Committee
on the Climate Crisis
Submitted by Taxpayers for Common Sense
November 22, 2019

Taxpayers for Common Sense is a national, non-partisan budget watchdog organization that promotes sound fiscal policy across the federal government. The mission of Taxpayers for Common Sense is to fight for a federal government that operates within its means. We focus our efforts on eliminating programs and policies that are both wasteful and harmful, including subsidies to polluting industries, weapons systems that don't work, and federal disaster insurance that encourages risky practices.

For taxpayers, the costs of climate change are mounting. Catastrophic floods, hurricanes, and wildfires are more destructive because of climate change, and taxpayers pay the price. The National Flood Insurance Program has borrowed more than \$36 billion from taxpayers to pay claims. This, of course, is on top of the human costs — losses of life, homes, businesses, and other property. Communities that do seek to mitigate or prevent harm face challenges and a scarcity of available resources to prepare for the next disaster. And an increase in the frequency and intensity of severe weather events is undercutting the ability of farming and ranching businesses to effectively manage production risk.

Any serious climate effort must substantially reduce the number and costs of tax expenditures, subsidies, and sweetheart deals provided for activities that increase greenhouse gas emissions. A first step towards addressing climate change is to eliminate federal incentives that increase production of oil and gas, one of the most significant sources of carbon emissions. For more than a century, oil and gas companies have benefited from multiple taxpayer subsidies, such as special tax preferences, below-cost leasing of public lands, and limited liabilities. Entrenched market advantages help maintain fossil fuels' dominance at the expense of other, less harmful technologies.

In recent decades, as evidence has mounted that fossil fuels are the driver of climate change, so too have the costs — for infrastructure repairs, military installation maintenance and adaptation, the federal financial safety net for agriculture, and of course, disaster response. Oil and gas companies must not be held harmless for these consequences. Future investments in infrastructure of all types, community development, and military construction should be prioritized to reduce long-term climate related liabilities, slow the acceleration of climate change, and increase resilience.

Congress should take responsibility for the impacts any climate package has on our overall fiscal position. It would be irresponsible for Congress to enact reforms that worsen our nation's financial outlook and operate at cross purposes with our long-term goals. In general, TCS believes Congress must eliminate subsidies, enact a carbon tax, and require industry to bear its own costs and liabilities. In addition, Congress can play a role in helping individuals, businesses, and communities become more resilient in the face of climate change. To do this, federal investment must be prioritized on programs and practices for which there is a documentable and quantifiable impact on reducing risk. This will help

alleviate the financial impacts of climate change policies on federal taxpayers. In the end, stewardship of our fiscal resources is directly connected to stewardship of our natural resources and climate impacts.

We believe Congress should focus on:

- 1) fixing outdated and broken energy policies that favor fossil fuels and biofuel subsidies which exacerbate climate impacts and taxpayer costs
- 2) eliminating wasteful agricultural policies that disincentivize innovation and responsible risk management
- 3) reducing climate impacts and related costs to critical and national security infrastructure
- 4) enacting a carbon tax; raising a minimum of a trillion dollars over 10 years
- 5) reforming disaster spending and prevention efforts to promote resilience and adaptation
- 6) eliminating subsidies from programs across the government that reduce costs of the use of fossil fuels and inhibit transition to more sustainable technologies

Below are TCS's answers to questions included in the Committee's request that are directly applicable to our work, as well as some additional thoughts on areas the Committee should explore.

QUESTION 1. Sector-Specific Policies

What policies should Congress adopt to decarbonize the following sectors consistent with meeting or exceeding net-zero emissions by mid-century? Where possible, please provide analytical support that demonstrates that the recommended policies achieve the goal.

a. Transportation

To help achieve net-zero emissions by mid-century, Congress must eliminate perverse incentives currently in law that undermine the Committee's goal of cutting greenhouse gas (GHG) emissions.

In the transportation sector, one of the largest current subsidies for biofuels and biomass production is the Renewable Fuel Standard (RFS) mandate. While the RFS - first enacted in the 2005 energy bill and expanded in the 2007 energy bill – was intended to significantly reduce GHG emissions and spur the next generation of non-food-based, advanced biofuels production, the mandate has instead primarily been filled with first-generation biofuels that may actually harm the climate. Recent Environmental Protection Agency (EPA) triennial reports on the environmental impacts of the RFS have found that the primary biofuels filling the mandate to date – corn ethanol and soy biodiesel – have had negative impacts on our nation's soil, water, air, and wildlife habitat.¹ The most recent report released in 2018 estimates that “actively managed cropland [increased in the U.S.] by roughly 4-7.8 million acres” since the RFS was enacted.² This increase in cropland used to produce biofuels feedstocks – such as corn and soybeans – came from carbon-rich land, including native grasslands, wetlands, etc.

While Congress intended for cellulosic biofuels to make up a greater percentage of the RFS by now, EPA expects that only *two* percent of the overall 19.92 billion-gallon mandate in 2019 will be met by these next-generation biofuels.³ Instead, the mandate has primarily been filled with corn ethanol and soy

¹ https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=IO&dirEntryId=341491

² https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=IO&dirEntryId=341491

³ <https://www.epa.gov/renewable-fuel-standard-program/final-renewable-fuel-standards-2019-and-biomass-based-diesel-volume>

biodiesel, biofuels that may actually *increase* GHG emissions.⁴ This is unlikely to change in the future. For these and other reasons, the National Academies predicts that the RFS will fail to achieve its goals by 2022: “[The] RFS may be an ineffective policy for reducing global greenhouse-gas emissions because the effect of biofuels on greenhouse-gas emissions depends on how the biofuels are produced and what land-use or land-cover changes occur in the process.”⁵

Congress must also forgo extending certain policies – such as biofuels tax credits – that distort markets, pick winners and losers, cause long-term taxpayer liabilities, and most importantly, likely *increase* instead of *decrease* GHG emissions. While the ethanol tax credit – known as the Volumetric Ethanol Excise Tax Credit (VEETC) – expired in 2011, other tax credits for biodiesel, cellulosic biofuels, biofuels infrastructure, etc. have historically been extended in short-term intervals, sometimes retroactively. While the latter credits expired at the end of 2017, Congress is currently considering extending these special interest tax breaks once again. The House Ways and Means Committee recently proposed extension of tax credits for the following biofuels through 2024: biodiesel (which costs taxpayers \$3 billion/year), cellulosic (second-generation biofuel), alternative fuel (including biomass-based fuels), and alternative fuel vehicle refueling property credit (for ethanol blender pumps and biodiesel fueling, among others). While the Ways and Means Committee’s “GREEN” Act aims to reduce GHG emissions, a 2013 National Academies report recommends that if the U.S. intends to both (1) cut GHG emissions and (2) save taxpayer dollars, then Congress should *eliminate* biofuels tax incentives instead of *extending* them.⁶ As the report states,

“Removing all provisions [tax credits for biodiesel and cellulosic biofuels] would reduce expenditures from the Treasury by about \$12.6 billion per year, as payouts for biodiesel and cellulosic production are eliminated.... [E]very dollar of federal revenue (that is, foregone in tax receipts) generates a small increase in [GHG] emissions... For the best-guess estimates of the parameters used in this study, the provisions [biofuels tax incentives] lead to both revenue losses and *higher* GHG emissions” (emphasis added).⁷

Congress should eliminate perverse incentives such as the RFS, biofuels tax extenders, and other energy and agriculture subsidies that are not only failing to achieve their goals but are also causing long-term taxpayer liabilities and working at cross purposes with other federal programs aimed at GHG reductions, carbon storage, land conservation, clean air and water, etc.

Furthermore, subsidies in the transportation sector must be evaluated. The gas tax has not been increased since 1993, and it’s purchasing power has diminished over time. Increasing the tax and indexing it to inflation would increase funding for transit and will also incentivize fuel efficiency. Alternatively, we would support a Vehicle Miles Traveled (VMT) tax that would also suitably fund the Highway Trust Fund.

The inland waterways industry enjoys a roughly 90 percent federal subsidy. While there is a fuel tax that operators pay, it is dedicated to construction and major rehabilitation projects, contributing 50 percent of the cost. Operation and maintenance costs are entirely borne by the taxpayer and are a much greater cost of the system. Requiring operators to pay a share of the operating cost while maintaining their

⁴ https://ec.europa.eu/energy/sites/ener/files/documents/Final%20Report_GLOBIOM_publication.pdf, <https://www.catf.us/wp-content/uploads/2019/10/20130405-CATF-White-Paper-Corn-GHG-Emissions-Under-Various-RFS-Scenarios.pdf>

⁵ <https://www.nap.edu/resource/13105/Renewable-Fuel-Standard-Final.pdf>

⁶ <https://www.nap.edu/read/18299/chapter/7#101>

⁷ <https://www.nap.edu/read/18299/chapter/7#101>

responsibility to cover half of the cost of construction and major rehabilitation for all navigation features, would reduce operations on deadbeat waterways, which could then be managed in ways that mitigate impacts from climate change (e.g. flooding).

b. Electric power

Similar to biofuels tax incentives, tax breaks for biomass energy should also be eliminated. The production tax credits (PTC) for open- and closed-loop biomass (in addition to biofuels tax credits) do not require any GHG emission reductions in exchange for generous taxpayer subsidies. Taxpayers have no assurances that the types of biomass subsidized under the tax code (or Dept. of Energy loan guarantees, biorefinery subsidies, etc.) will actually help combat climate change. EPA's Science Advisory Board concluded in March 2019 that "...not all biogenic emissions [from biomass] are carbon neutral nor net additional to the atmosphere, and assuming so is inconsistent with the underlying science."⁸ Many federal bioenergy subsidies do not distinguish between different types of biomass nor require environmental criteria be met to qualify for billions in taxpayer subsidies. Since many bioenergy subsidies – such as biomass tax breaks – do more harm than good, Congress should not renew them in coming years.

2. What policies should Congress adopt to ensure that the United States is a leader in innovative manufacturing of clean technologies, creating new, family-sustaining jobs in these sectors, and supporting workers during the decarbonization transition?

The biofuels and oil and gas industries are a cautionary tale for providing technology specific subsidies and incentives. Rather than picking technological winners and losers with financial incentives, Congress should identify the measurable standards new technologies should meet. Moreover, investing in basic research, and ensuring public investment enables public use of technological breakthroughs, will help ensure that the best ideas and technologies rise to the top rather than the most subsidized.

QUESTION 4. Carbon Pricing:

a. What role should carbon pricing play in any national climate action plan to meet or exceed net zero by mid-century, while also minimizing impacts to low- and middle-income families, creating family-sustaining jobs, and advancing environmental justice? Where possible, please provide analytical support to show that the recommended policies achieve these goals.

For all our nearly 25 years, TCS has supported a carbon tax as an efficient revenue raiser. We have also worked to reduce or prevent long-term federal liabilities. As climate related liabilities continue to grow, a carbon tax has the potential to reduce those liabilities while raising needed revenue. The deficit-financed 2017 tax bill included tax breaks for many carbon intensive industries, reinforcing the need for a carbon tax.

A carbon tax is an excise, or consumption, tax imposed on specified sources of carbon emissions. It may be imposed either "upstream" on products the consumption of which will result in the release of carbon into the atmosphere, or "downstream" on actual emissions. Although the federal government does not

⁸[https://yosemite.epa.gov/sab/sabproduct.nsf/LookupWebReportsLastMonthBOARD/B86C81BACFAF9735852583B4005B3318/\\$File/EPA-SAB-19-002+.pdf](https://yosemite.epa.gov/sab/sabproduct.nsf/LookupWebReportsLastMonthBOARD/B86C81BACFAF9735852583B4005B3318/$File/EPA-SAB-19-002+.pdf)

currently have a broad-based consumption tax, such taxes are frequently suggested either as a replacement for one or more existing taxes⁹ or as sources of additional revenue for deficit reduction.¹⁰

Although a carbon tax would be more targeted than a comprehensive consumption tax, it would have a broad impact because carbon contributes to the value of many goods and services through its presence in raw material, transportation and energy. The policy considerations surrounding consumption taxation are well documented.¹¹ Opponents of consumption taxes argue that such taxes are inherently regressive and that a federal consumption tax could interfere with the ability of states to impose sales taxes, a traditional source of state and local revenue. With this in mind, however, there are four basic advantages to this type of taxation:

- 1) It corrects a current law bias that rewards consumption over savings and investment and is therefore more economically efficient.
- 2) A consumption tax, assuming some protection for very low income workers, would improve tax fairness by creating a flatter tax system.
- 3) Consumption taxes would largely exempt U.S. exports, making them more competitive and impose tax on imports.
- 4) To the extent that consumption taxes are imposed before the last retail sale, they likely would improve overall tax compliance.

As noted, a carbon tax could be imposed either on the products the consumption of which will release carbon (“upstream”) or on actual emissions (“downstream”). A downstream tax would also need an upstream or mid-stream component on the carbon released by businesses and residential consumption of fuels.

The imposition of an upstream tax would have two advantages.¹² First, imposition of an upstream carbon tax would not require the creation of a large new bureaucracy to measure actual emissions and collect the tax. The Internal Revenue Service (IRS) already collects a variety of excise taxes under well established procedures. In some cases, it might even be possible to eliminate one or more existing excise taxes by adjusting the carbon tax rate on particular products to generate the same revenue or to combine the reporting of existing taxes with reporting of the carbon tax. The administrative structures currently in place for a number of taxes, such as the motor fuels and the black lung excise taxes, could support administration of an upstream carbon tax.

Second, the number of entities required to file tax returns for an upstream tax would be limited and would target the most significant contributors to climate change. Most of the tax would be paid by the operators of approximately 150 refineries, 500 gas processing plants, and 1300 coal mines.¹³ In contrast,

⁹ For early examples see, H.R. 2060, 104th Congress, July 1995 (The Flat Tax introduced by Rep. Armey (R-TX)); H.R. 2525 106th Congress, July 1999 (The Fair Tax introduced by Rep. Linder (R-GA)). Similar tax proposals have been reintroduced repeatedly.

¹⁰ The National Commission on Fiscal Responsibility and Reform (Simpson-Bowles) recommended a 15-cent a gallon increase in the gas tax in addition to additional revenues from tax reform. The Bipartisan Policy Center debt reduction report (Domenici-Rivlin) recommended a 6.5 percent VAT described as a “national debt reduction sales tax.”

¹¹ See, A VAT Reader, Tax Analysts 2011.

¹² See CBO, Policy Options for Reducing CO₂ Emissions, February 2008 at xii – xiii; Metcalf, Gilbert E., A Proposal for a U.S. Carbon Tax Swap, (The Hamilton Project October 2007) at 13 – 14.

¹³ U.S. Energy Information Administration data

an emissions tax would require filings by, for example, every business consuming coal or petroleum products, and by firms selling transportation fuels and fuels for residential use.

A carbon tax would apply to the principle sources of CO₂ emissions: coal, natural gas and petroleum products. Other greenhouse gases to which the tax could apply include methane from landfill, coal mining and agricultural activities, nitrous oxide and fluorinated gases. A tax on carbon would provide for differing rates on each taxable substance so that each was taxed on the basis of their equivalent tons of CO₂ emissions. The CO₂ equivalence rate could be set and adjusted to achieve any desired combination of revenue collections and GHG emissions reductions.

Consideration of a carbon tax raises environmental policy issues in addition to tax issues. A tax would rely upon market forces to limit carbon emissions by increasing the price of carbon. This additional price would be known and predictable so that businesses could plan effectively. A tax would avoid creation of new financial markets and regulation related to carbon allowances and offsets. A carbon tax might discourage adoption of a complex cap and trade system¹⁴ by a future Congress, as a carbon tax likely would be more economically efficient than a cap and traded system.¹⁵

QUESTION 5. Innovation:

b. How can Congress incentivize more public-private partnerships and encourage more private investment in clean energy innovation?

Incentivizing new public-private partnerships as a means to spur clean energy innovation will not likely serve taxpayers. Public-private partnerships (P3s) can be a useful tool to leverage private sector capital for public benefits, but they are not a panacea and must be structured properly or not used at all.¹⁶ We have seen too many cases where the short-term benefits are reaped by the private sector and long-term costs are saddled on taxpayers. In addition, P3s only work where there is an identifiable revenue stream or some other requirement for the work to go along with other private benefit.

Tax provisions to favor development must be narrowly tailored and regularly reviewed or they will be abused. We have seen this with the New Markets Tax Credit,¹⁷ Gulf Opportunity (GO) Zones,¹⁸ Liberty

¹⁴ Proponents of a cap and trade system argue that a carbon tax would not create an assured limit on carbon emissions. Without credit offsets to the tax, they would argue that the tax fails to address a major source of climate change: deforestation. Additionally, they believe a cap and trade system would be more readily harmonized with carbon regulation by other nations.

¹⁵ CBO, Policy Options for Reducing CO₂ Emissions, February 2008.

¹⁶ U.S. Department of Treasury. Expanding the Market for Infrastructure Public-Private Partnerships. April 2015. <https://www.treasury.gov/connect/blog/Documents/Treasury%20Infrastructure%20White%20Paper%20042215.pdf>

¹⁷ Government Accountability Office. New Markets Tax Credit: Better Controls and Data Are Needed to Ensure Effectiveness. July 2014. Available at <https://www.gao.gov/assets/670/664717.pdf>

¹⁸ Government Accountability Office. Community Development: Limited Information on the Use and Effectiveness of Tax Expenditures Could be Mitigated Through Congressional Attention. February 2012. Available at <https://www.gao.gov/assets/590/588978.pdf>

Zones,¹⁹ and most recently Opportunity Zones.²⁰ In addition, tax provisions or other subsidy programs must be tailored to encourage activity that would not have otherwise occurred and ratchet up required performance targets over time.

QUESTION 6. Agriculture:

What policies should Congress adopt to reduce carbon pollution and other greenhouse gas emissions and maximize carbon storage in agriculture?

The Committee's framing of the questions regarding agriculture and climate change indicates an important awareness of the unique and critical position of agriculture. Reliance on fossil-fuel based inputs in a resource intensive monocropping system of production means the farming and ranching sectors are a significant source of greenhouse gas emissions. Yet with more efficient use of agricultural inputs, increased integration of less carbon intensive cropping and grazing systems, and the potential for agricultural land to serve as sinks for greenhouse gas emissions, agricultural businesses can become some of the most effective partners in mitigating the effects of climate change.

Reorienting federal policy to aid agriculture in mitigating climate change is imperative because climate change is clearly impacting farming and ranching. Frequent and intense weather extremes are becoming the norm. Decades or centuries of experience and tried and true methods of managing normal volatility associated with crop and livestock production are quickly becoming ineffective. Providing agricultural businesses with the tools, opportunities, and support needed to improve their resilience to climate change are vital to development of a more fiscally and environmentally sustainable federal agricultural policy. To do this Congress must eliminate federal policies that disincentivize adaptation while investing in policies proven to increase resilience for individual producers and the system as a whole.

As a start, Congress should eliminate subsidies in the farm bill's energy, rural development, forestry, and commodity titles for biofuels and biomass sources that fail to reduce GHG emissions. While Congress enacted several farm bill energy title programs in particular in an effort to cut GHG emissions and spur the next generation of bioenergy production from perennial grasses and agricultural and forest residues, the U.S. Dept. of Agriculture (USDA) has instead directed taxpayer subsidies to the mature corn ethanol and soy biodiesel industries. In fact, from 2009-2016, more than half of USDA's Bioenergy Program for Advanced Biofuels subsidies went to first-generation corn ethanol and soy biodiesel despite the program's title – supporting *advanced* biofuels.²¹ Congress should also continue to rein in USDA's support of ethanol blender pumps and storage tanks since the Department contravened Congressional intent when in 2015 USDA used Commodity Credit Corporation funds to subsidize corn ethanol blender pumps. This is despite Congress's prohibition in the 2014 farm bill stating that taxpayer subsidies should not be spent on these types of counter-productive subsidies. Achieving net-zero emissions by mid-century will be difficult, if not impossible, if USDA and other federal programs continue to waste taxpayer dollars on bioenergy sources that worsen – instead of benefit – the climate.

¹⁹ Al Yoon. Reuters. BofA NY HQ loan in unique CMBS, muni deal. Available at <https://www.reuters.com/article/us-cmbs-newyork/bofa-ny-hq-loan-in-unique-cmbs-muni-deal-idUSTRE65K3M020100621>

²⁰ Bloomberg. Treasury Department Invites Abuse of Opportunity Zones. April 25, 2019. Available at <https://www.bloomberg.com/opinion/articles/2019-04-25/opportunity-zone-investments-treasury-rules-are-not-enough>

²¹ <https://www.taxpayer.net/energy-natural-resources/bioenergy-program-for-advanced-biofuels-fact-sheet-2/>

b. What policies should Congress adopt to help farmers, ranchers, and natural resource managers adapt to the impact of climate change?

Federal agricultural producers are a diverse set of businesses with complex operations and networks that do not lend themselves to simple centrally developed policy solutions. In developing federal policies to help agriculture adapt to the impact of climate change, however, following a number of principles will lead to the development of solutions that are appropriate for various regions, operation types, and management structures.

The federal financial safety net for agriculture must be reoriented to foster economic resilience instead of shielding producers from reality. Federal policy and programs must not create a system that over-insulates producers from market forces to the point of harming individual businesses and the sector as a whole. The federally subsidized crop insurance program and permanently authorized supplemental disaster programs are not perfect, but they are perfectible. Ensuring these programs are focused on systemic risks that are too costly or too complex for producers to manage on their own, is key. Layering on top of these additional income subsidies in the farm bill, through annual “emergency” supplementals, and arbitrary executive action, however, shifts the safety net away from one focused on managing risk and toward enshrining politically favored commodities, business structures, or growing regions. Making agriculture a no-loss industry by insulating producers from all risk is antithetical to climate adaptation. Agricultural operations, like all businesses, will also need to be held accountable under any system of carbon taxation.

Federal policy should also increase investment in tools that help producers increase their economic resilience. To do this, policymakers must increase federal investments in measuring program performance and quantifying accrued benefits of conservation practices and farm bill conservation programs. Improving measurement and setting performance metrics is critical for identifying what tools and farm practices are most effective at achieving results. In this vein regulatory barriers preventing collaboration between the private sector, nonprofits, academia, and within USDA sub agencies must be eliminated. Finally, the USDA must increase its investment in technical assistance for implementation of conservation practices. Many farming and ranching businesses lack the time, ability, or resources to modify their operations to effectively mitigate the effects of climate change. Policymakers should encourage increased cooperation between private sector and nonprofit entities and the USDA to ensure more producers have the opportunity to identify, implement, and maintain tools to increase their resilience in the face of climate change.

QUESTION 8. Oceans, Forestry and Public Lands

How should Congress update the laws governing management of federal lands, forests, and oceans to accelerate climate adaptation, reduce greenhouse gas emissions and maximize carbon storage?

More than one quarter of all U.S. land is owned and managed by the federal government. The actions of the primary land management agencies – the Bureau of Land Management (BLM), Forest Service, Fish and Wildlife Service (FWS), National Park Service (NPS), and Department of Defense (DOD) – can thereby have large effects on overall U.S. land use, and energy and natural resources development. Yet these agencies’ policies often fail to recognize the potential of federal lands to generate financial return for U.S. taxpayers and mitigate the U.S. contribution to global emissions.

The policies of the agencies managing federal lands and waters, in particular the Department of the Interior and Forest Service, are derived from laws that are decades old and long neglected by Congress.

To better guide federal land and water management and remedy the failure of current policies, Congress must update its authorizing statutes to prevent the continued giveaway of federal lands and waters for minimal fiscal return and emissions mitigation. Congress should focus on reforming policies with the greatest climate impact, like those governing development of fossil fuels on federal lands and waters, the sale of timber from national forests, and permitting for grazing, among others.

Congress should enact beneficial policies like higher royalty rates and low emissions standards, while reforming the offshore leasing system to require better coverage of ecological liabilities, more competition in the leasing system, and higher valuation of federal oil and gas. Ensuring federal oil and gas resources are appropriately valued at market rates and developed on fair terms will better capture the climate liabilities associated with production.

The BLM's management of onshore federal oil and gas development needs a complete overhaul. Every step of the current federal leasing process devalues federal lands, and allows oil and gas companies to develop oil and gas at below-market rates, often with impunity for wasting federal resources. Congress must update laws like the Mineral Leasing Act of 1920, which was last amended in 1987, to set the federal oil and gas program on a more responsible path. This path should include higher rental rates for federal land, a nomination and leasing process that's more transparent and competitive, the elimination of the noncompetitive leasing system, higher royalty rates, better bonding requirements, and stringent standards for the limitation of methane emissions. This revision would not only increase returns for taxpayers, it would likely correct the BLM's current over-prioritization of fossil fuel development, discourage development below market prices, and open up federal lands for other uses.

With appropriate pricing of federal oil and gas production, the development of renewable energy resources like wind and solar on federal lands and waters would become more competitive. Any market-driven shift from fossil fuel development to renewable development would have large net effects on the overall climate footprint of federal lands, while avoiding the controversy and instability associated with outright development prohibitions or mandates.

In addition, Congress should enact a series of reforms aimed at maximizing the ability of federal lands to absorb carbon from the atmosphere when other uses are unjustified. The 193 million acres of forest and grasslands that make up the National Forest System constitute more than 30 percent of all federal landholdings.²² Unlike the federal oil and gas programs, the Forest Service is not required to generate fair market value of taxpayers from logging within National Forests.²³ As a result, the Forest Service currently facilitates the sale of billions of board feet of timber every year with minimal intent or ability to achieve financial efficiency. This amounts to taxpayer-subsidized harvest of timber stands with significant carbon sink potential.²⁴

²² The U.S. Forest Service reports 192.9 million acres in the National Forest System as of Sept. 30 2018. This is 31% of the 621,473,785 total acres of federal land.

USFS: Land Areas Report (LAR)— Table 1, at <http://www.fs.fed.us/land/staff/lar/LAR2018/lar2018index.html>.

CRS: Federal Land Ownership: Overview and Data, March 3 2017, at <https://crsreports.congress.gov/product/pdf/R/R42346>

²³ The Outer Continental Shelf Lands Act (43 U.S.C. §1334(a)(4)) states "Leasing activities shall be conducted to assure receipt of fair market value for the lands leased and the rights conveyed by the Federal Government." No analogous provision appears in the "National Forest Management Act of 1976" or the "Forest and Rangeland Renewable Resources Planning Act of 1974."

²⁴ See, for example, TCS analysis of the Forest Service's timber program in the Tongass National Forest, "[Cutting Our Losses: 20 Years of Money-Losing Timber Sales in the Tongass](#)," October 2019.

To correct for this problem, Congress should enact new measures that allow the Forest Service to sell timber from National Forests only when the revenue generated exceeds agency expenditures. Before then, Congress should condition Forest Service funding in annual appropriations bills on the comprehensive audit of the timber sale program in every Forest Service region. The Forest Service should then be statutorily prevented from conducting timber sales in areas of National Forests that haven't historically generated net positive receipts and cannot reasonably be expected to in the future.

Finally, Congress should make relatively small changes to statutes authorizing the permitting of grazing on federal lands. The BLM's grazing fees have traditionally lagged behind state and private fees by a significant margin. In 2018, the BLM rate of \$1.41/AUM was not only less than the rate set in 1976, it was also less than seven percent of the \$21.30/AUM average charged by private landholders in 17 states.²⁵ Increasing the grazing fee would not only increase the fiscal return from the federal grazing program it would also fund better management of federal rangeland and promote the revitalization of natural landscapes after decades of degradation. The restoration of rangelands managed by the BLM and the Forest Service would inevitably lead to greater carbon capture by natural vegetation.

QUESTION 9: Non-CO2 Greenhouse Gases:

What policies should Congress adopt to reduce emissions of non-CO2 greenhouse gases, including methane, nitrous oxide, and fluorinated gases?

EPA estimates suggest that 72 percent of U.S. methane emissions comes from the oil and gas production.²⁶ To mitigate the losses, Congress should start by requiring the capture of all methane from federal well sites. Provisions discarded from the BLM's 2016 Methane Waste Rule should be enacted into law, and federal royalties, fines, and fees should be assessed on any wasted gas. Those provisions include requirements for the implementation of Leak Detection and Repair (LDAR) programs, the measurement of gas waste, and the replacement of emissions-prone equipment.

Recent research suggests that emissions from the oil and gas sector are significantly greater than EPA's estimates,²⁷ but so too are fugitive emissions in urban areas,²⁸ particularly those with older distribution networks. To deal with these emissions, Congress should prioritize funding within current levels to bolster the EPA's ability to estimate methane emissions accurately and better identify emissions sources. Congress should also push federal agencies to crack down on bad actors with unmitigated emissions sources.

²⁵ TCS, "A Bovine Buffet at the Public Trough." July 2018. <https://www.taxpayer.net/energy-natural-resources/a-bovine-buffet-at-the-public-trough/>

²⁶ <https://www.epa.gov/natural-gas-star-program/estimates-methane-emissions-sector-united-states>

²⁷ <https://science.sciencemag.org/content/361/6398/186>

²⁸ <https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2019GL082635>

QUESTION 11: Resilience and Adaptation

a. What adjustments to federal disaster policies should Congress consider reducing the risks and costs of extreme weather and other effects of climate change that can no longer be avoided?

Federal disaster policies need significant reforms to be forward looking, encourage mitigation and adaptation activities, and rebuild smarter and safer. Presidential disaster declarations have tripled since the 1960s. The federal share of disaster assistance has increased from less than 30 percent after Hurricane Hugo in 1989 to more than 75 percent after Superstorm Sandy. Federal policies should provide incentives for communities and states to plan for the inevitable disasters, and adopt building codes and programs that lessen their impact. In order to get the maximum amount of assistance, states should be required to plan and mitigate before the disasters. For instance, the state of Vermont reduces a community's share of disaster costs if they do more to prepare. The Disaster Recovery Reform Act allowed a small portion of Disaster Relief Funds to be used for pre-disaster mitigation.²⁹ This should be expanded.

After each disaster a new Community Development Block Grant – Disaster Recovery (CDBG-DR) program is stood up. In most cases CDBG-DR dwarfs the regular CDBG funded through the regular budget. This program should be statutorily authorized to provide consistency, predictability, and enhanced Congressional oversight. In addition, after the 2017 storms significant CDBG funds were appropriated to fund mitigation activities in certain areas affected by disaster in the previous three years.³⁰ The limitation to those recently affected ignores the fact that disasters strike everywhere in the country and recency bias gets in the way of prioritizing mitigation needs. After Wilma in 2005, Florida wasn't hit by a major hurricane for ten years, yet no one would argue that Florida is not at severe risk from climate change.

The National Flood Insurance Program (NFIP) is in dire need of reform. NFIP has borrowed \$36 billion from the Treasury and even after \$16 billion has been forgiven, the program will never pay back its remaining debt. The program suffers from significant inequities. The CBO estimates an annual expected revenue shortfall of \$1.4 billion, but coastal counties represent a shortfall of \$1.5 billion, whereas inland counties have a nearly \$200 million surplus.³¹ According to the GAO, 78 percent of subsidized properties are in counties with the highest home values (the top three deciles), while only five percent of subsidized properties are in counties with the lowest home values (bottom five deciles).³² Rates must be commensurate with risk. Any premium

²⁹ Congressional Research Service. The Disaster Recovery Reform Act of 2018: A Summary of Selected Provisions. July 8, 2019. Available at

https://www.everycrsreport.com/files/20190708_R45819_a0c5be964c60f0090fb3c22048fded6a8e268693.pdf

³⁰ Department of Housing and Urban Development Notice. Available at

<https://files.hudexchange.info/resources/documents/FR-6109-N-02-CDBG-Mitigation-Notice.pdf>

³¹ Congressional Budget Office. The National Flood Insurance Program: Financial Soundness and Affordability. September 2017. Available at <https://www.cbo.gov/system/files/115th-congress-2017-2018/reports/53028-nfipreport2.pdf>

³² U.S. Government Accountability Office. July 2013. Flood Insurance: More Information Needed on Subsidized Properties. (Publication No. GAO-13-607). Retrieved from: <http://www.gao.gov/assets/660/655734.pdf>

assistance should be means-tested and outside the rate structure to aid risk communication. NFIP should not be available for new construction in designated Special Flood Hazard Areas.

The U.S. Army Corps of Engineers receives a significant portion of its budget through disaster appropriations.³³ Too often the funding goes to heavily subsidized beach replenishment projects, berms manufactured to mimic natural dunes, and structural flood control. Much of this funding should be directed to buyouts and non-structural nature-based solutions that reduce risk and are self-sustaining.³⁴ In addition, the Corps should be required to prioritize funding toward permanent risk reduction.

The Fish and Wildlife Service and Congress are constantly chipping away at the Coastal Barrier Resources System, a Reagan-era program that prevented federal subsidies or spending in designated undeveloped barrier islands. As maps are updated to digital, they often remove properties from the program. Considering the last significant additions to the program were nearly 30 years ago, no property owner currently in a CBRA zone should have an expectation of federal support and should not be removed from the system in any circumstance.³⁵

b. How can Congress better identify and reduce climate risks for front-line communities, including ensuring that low and moderate-income populations and communities that suffer from racial discrimination can effectively grapple with climate change?

More accurate risk-mapping is necessary to communicate risk to all communities. LiDAR (Light Detection and Ranging) should be used.

As mentioned above, flood insurance should include means-tested assistance to ensure its availability to lower income populations. CDBG-DR should have set asides and requirements for spending both recovery and mitigation dollars in low-income communities and areas.

Many minority neighborhoods and towns were located in risky areas because that was the only place they were allowed to build. This often reflected higher risk or less desirable areas. These communities have strong ties to these lands despite the risk. These should be targeted for mitigation assistance. In cases where mitigation is not possible or effective, whole communities and neighborhoods should be moved together.

While we certainly support a rigorous benefit-cost analysis, the Corps of Engineers application to flood and storm damage projects can lead to more protection for wealthier communities and less for the less affluent. Simply put, the benefits of these projects are calculated as the value of the property being

³³ Congressional Research Service. Army Corps of Engineers Annual and Supplemental Appropriations: Issues for Congress. October 1, 2018. Available at <https://fas.org/sgp/crs/natsec/R45326.pdf>

³⁴ U.S. Army Corps of Engineers. U.S. Army Corps of Engineers Identifies Long-Term Disaster Recovery Projects and Additional Short-Term Repairs to be Accomplished with 2018 Supplemental Funding. July 5, 2018. Available at <https://www.usace.army.mil/Media/News-Releases/News-Release-Article-View/Article/1567778/us-army-corps-of-engineers-identifies-long-term-disaster-recovery-projects-and/>

³⁵ Dave Collins. Associated Press. "Could Coastal Mansions in Connecticut Become Eligible for Disaster Aid. July 22, 2019. Available at <https://www.courant.com/news/connecticut/hc-news-connecticut-coastal-mansions-disaster-aid-20190722-khyeagmenzepbnt4mems4ue5sa-story.html>

protected. Therefore the more benefit, the more cost (protection) can be included in the project. There has to be an accommodation for lower income communities.³⁶

c. What standards and codes should Congress consider for the built environment to ensure federally-supported buildings and infrastructure are built to withstand the current and projected effects of climate change?

Enact the repealed Federal Flood Risk Management Standard as a law. This common sense policy simply required (in most cases) that federal funds for construction or reconstruction include a certain amount of “freeboard” above the 100-year floodplain (one percent annual flooding risk).

Instead of the simple design-build approach to infrastructure, the federal government should pursue design-build-warranty, which would require construction firms to stand by their work. In addition, states and communities should be required to purchase insurance for public infrastructure where possible or not receive disaster assistance.

Standards should be adopted for resilient highways, evacuation routes, and transit. Similarly, standards for resilient energy, electricity, and fuel systems should be adopted. Federal funding should be contingent on strong local building standards that reflect the federal goals.

³⁶ Government Accountability Office. Army Corps of Engineers: Consideration of Project Costs and Benefits in Using Natural Coastal Infrastructure and Associated Challenges. March 2019. Available at <https://www.gao.gov/assets/700/698019.pdf>