To inform the policy recommendations of the Select Committee, please provide responses to the questions below by November 22, 2019 by emailing ClimateCrisisRFI@mail.house.gov. **This request is optional, and you need only reply to the questions that are relevant to your organization or expertise. Please submit your response as both a Word document and PDF.**

Sector-Specific Policies

1. 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
b. Electric power. The Select Committee would like policy ideas across the electricity sector but requests specific comment on two areas:
    i. If you recommend a Clean Energy Standard, how should it be designed?
    ii. How can Congress expedite the permitting and siting of high-voltage interstate transmission lines to carry renewable energy to load centers.
c. Industry
d. Buildings

1. Transitioning to renewable electricity in buildings and transportation will reduce the need for fossil fuel and cut greenhouse gas emissions. The U.S. should systematically invest in and encourage the development and deployment of advanced and sustainable energy technologies which hold great promise to reduce the fossil energy supplied to buildings and transportation, the two largest current energy users. Furthermore, incentives such as subsidies, taxes, and regulations should be employed to enable these sustainable energy technologies to operate under comparable economic advantages relative to incumbent energy sources.

a. The U.S. should support incentives that promote electric vehicles and the infrastructure to support their use.
    i. Research prioritizing the continued development of better renewable electricity production technology, low resistance super conducting materials, improved batteries, heat pumps, and other technologies using carbon-free electricity should be supported.
d. When considering energy to be used in buildings, programs that support better grid integration and the move to renewable resources should also be emphasized.

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

2. To develop the foundations for innovative manufacturing and clean technologies, and to address immediate and future economic and national interests including decarbonization, the U.S. should maintain predictable and sustained federal investment for all phases of R&D. In addition, the U.S. should implement corporate tax and trade policies to make U.S. firms competitive with our international rivals. Such steps will help the U.S. remain leaders in the global economy. More immediately, improving domestic energy efficiency and conservation is the easiest, least expensive, and most practical route to make positive impacts on fuel consumption and energy use. The government can support these goals through policies promoting energy technologies to foster safe, secure, efficient, and innovative use of resources in alignment with a sustainable food-energy-water system. Furthermore, the government

should maintain leadership in energy efficiency by periodically strengthening mandatory fuel-efficiency standards for light-duty, heavy-duty and fleet vehicles. Supporting more energy efficient building codes and standards and adopting measures such as efficiency labeling and tax incentives to encourage the sale of more efficient vehicles and buildings will also help to promote clean technologies and manufacturing. Voluntary standards and assessment systems should be continued and expanded. All incentives and regulations should be predictable and ongoing to encourage efficiency and conservation at the residential and commercial level.

3. What policies should Congress adopt to ensure that environmental justice is integral to any plan to decarbonize these sectors?

3. Though ACS does not endorse specific policies in the arena of environmental justice, it believes that the inevitable impacts of climate change must be addressed by planning and action to minimize potential societal upheaval, loss of life, and destruction of property. In particular, the government should work to protect disadvantaged groups who might be disproportionately impacted by climate change and lack the means or resources to prepare, adapt, or respond.

Cross-Cutting Policies

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.

b. How could sectoral-specific policies, outlined in questions 1-3, complement a carbon pricing program?

4b. Coal, oil and natural gas continue to be important energy sources in the United States, but the full environmental, economic, and security costs associated with using these resources must be factored in to their market prices and considered in national energy decision-making. A price should be established for CO_2 emissions. More broadly, economic policies and structures should be reformed so as to internalize the externalities of pollution into business decisions. Decisions about U.S. technology deployment should incorporate comprehensive life cycle analysis of the environmental, health, safety, economic and social impacts of new and existing technologies.

5. Innovation:

a. Where should Congress focus an innovation agenda for climate solutions? Please identify specific areas for federal investment and, where possible, recommend the scale of investment needed to achieve results in research, development and deployment.

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

5a. The foundations for innovation to address immediate and future economic and national interests begin with predictable and sustained federal investments for all phases of R&D, including supporting infrastructure such as necessary training, equipment, tools, and technologies. The United States should prioritize scientific research on climate change and its consequences and the most effective ways to respond to and prepare for its impacts. In particular, the U.S. Government should provide robust and uninterrupted federal funding for a comprehensive Earth systems research program, including full investigation of the interactions

of Earth systems with vital societal systems. Research to evaluate the effectiveness and implications of climate change response strategies, using the findings from this research to inform climate change response planning, coordination, and decision making on a local, national, and global level should also be prioritized.

The U.S. should prioritize sustainability when investing public funds in the maintenance and improvement of infrastructure. This includes promoting electrification of transportation, using recycled and benign materials in construction of roads and other infrastructure projects, and adopting full cost accounting (including long-term financial, social, and environmental costs in procurement of goods and services).

Finally, to build a STEM workforce that can contribute to innovative approaches and climate solutions, the U.S. should assure resources and support for developing and implementing curricula integrating sustainability and green chemistry concepts across all levels of education.

5b. Fundamental research capabilities and activities in academic research environments and national laboratories should be expanded to enable partnerships between businesses and academic and national laboratories, strengthening the research capabilities of both. Initiatives facilitating technology transfer to businesses should also be supported, serving to both enable commercialization and provide training for a skilled workforce. It is important to also develop efficient and effective policies and tools for administration, personnel, intellectual property, and information sharing at institutions in all sectors to facilitate the movement of R&D breakthroughs to market. Examples include strengthening and developing successful late-stage technology transfer, development, and entrepreneurship programs, such as NSF I-CORPS, that enable scientists to pursue commercialization opportunities that result from federal investments in R&D. Award programs, such as the USEPA Green Chemistry Challenge Awards, should be maintained and expanded to recognize businesses and academic researchers for significantly advancing sustainability.

The U.S. government should also provide incentives to encourage capital investments and entrepreneurial activities, including providing grants, low-interest loans, and accelerated depreciation tax incentives to mitigate the high start-up or retooling costs associated with high-technology businesses. Gap funding mechanisms should be encouraged or established to serve as a source of seed money to encourage researchers to explore opportunities to license or commercialize their research. It would also be beneficial to make it easier and faster to apply for and receive government-sponsored grants, such as SBIRs, that encourage translational research. The U.S. and international systems for patent protection and voluntary consensus standards should be improved, as should the coordination between government and the private sector to facilitate updating, maintaining, and protecting the nation's energy infrastructure, especially with respect to physical and cyber threats.

Robust investments should be made in the procurement of energy from renewable energy resources and expand efforts to use renewable energy and materials in chemical manufacturing. This should include consistent, long-term policies to increase the competitiveness of renewable and sustainable technologies and to reduce greenhouse gas emissions. Tax incentives should be implemented to benefit early adopters of sustainable manufacturing technology and sustainable materials should be specified in procurement guidelines. The U.S. should pursue the

development of a circular economy to repurpose product materials after the end of first life, and consideration of preserving ecosystem services, such as natural water filtration, food production, and flood mitigation in governmental decision-making. Finally, new, national-level economic instruments should be provided to foster cradle-to-grave environmental accountability for products introduced into the market.

Agriculture

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

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

Oceans, Forestry and Public Lands

8. 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?

8. Congress should preserve core science-based environmental protections afforded by current regulatory programs under the Clean Water Act and the Clean Air Act. Furthermore, it should promote energy policies that consider full life cycle costs of energy sources and minimize environmental impacts. For instance, by providing new national-level economic instruments to foster consideration of preserving ecosystem services, such as natural water filtration, food production, and flood mitigation in governmental decision-making.

Non-CO2 Greenhouse Gases

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

9. The negative environmental impacts of burning fossil fuels including methane need to be addressed by implementing better management practices to further reduce carbon emissions. In addition, methane leaks during gas production, transport, storage and distribution need to be reduced in order to realize the greenhouse gas emission benefits of energy from natural gas in comparison to burning coal.

Carbon Removal

10. How can Congress accelerate development and deployment of carbon removal technology to help achieve negative emissions?

10. ACS supports more aggressive carbon mitigation and sequestration strategies that will reduce harmful environmental effects of fossil fuel combustion. Strategies to foster the development of these, and other sustainable technologies, is covered in depth in Question 5, Innovation.

Resilience and Adaptation

11. What policies should Congress adopt to help communities become more resilient in response to climate change? The Select Committee welcomes all ideas on resilience and adaptation but requests comments on three specific questions:

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

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?

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?

11a. Inevitable impacts of climate change, such as extreme weather, must be addressed by planning and action to minimize societal upheaval, loss of life and destruction of property. It is imperative that the costs of repairing or delaying the damages caused by climate change are weighed against the long term viability of these solutions, with a preference for investments that will lead to lasting solutions.

Climate Information Support

12. Our understanding and response to the climate crisis has relied on U.S. climate observations, monitoring and research, including regular assessment reports such as the National Climate Assessment. What policies should Congress adopt to maintain and expand these efforts in order to support solutions to the climate crisis and provide decision-makers – and the American people – with the information they need? Where possible, recommend the scale of investment needed to achieve results.

12. The U.S. Government should promote climate science literacy and education for citizens and policymakers about climate change impacts to help empower citizens and local and regional governments to make informed decisions and preparations to help protect homes, businesses, and communities against adverse impacts.

International

13. The climate crisis requires a global response. U.S. leadership is critical for successful global solutions. What policies should Congress adopt to support international action on the climate crisis?

13. Domestically, the U.S. should make national plans to implement the UN Sustainable Development Goals (https://sustainabledevelopment.un.org/sdgs). Internationally, the U.S. should engage other nations in the formulation and implementation of global environmental agreements (e.g., Stockholm Convention, accords under the UN Framework Convention on Climate Change, Minamata Convention). It is worth bearing in mind that it will be critical to support global competitiveness of U.S. business leaders in sustainability. Thus, the U.S. should advocate the interests of more sustainable American Businesses in global negotiations so as to support the global competitiveness of U.S. business leaders. With regards to energy sources, “clean coal” technology development and demonstration has underperformed in the U.S. energy market despite sustained support. Continued research in this field

should promote the transfer of clean coal technologies to developing nations where clean coal may be a more viable option to a lower carbon economy.

In addition to your responses to any of these questions, please include any other specific policies that you think Congress should adopt to solve the climate crisis and adapt to the impacts of climate change.

In addition to the answers provided above we have submitted a copy of our complete statement on Global Climate Change for your consideration.