Our Ocean Backyard

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Progress on Climate Change

The ocean does a lot for us, but we haven’t always treated her so well. The waters of the ocean absorb about 25-30 percent of all of the carbon dioxide we produce, which has kept the climate from being even warmer. There is a huge cost of this absorption, however, in that carbon dioxide and water form a weak acid (carbonic acid), which has produced a gradually more acidic ocean. It has become clear that more acidic seawater threatens the ability of coral and shellfish (oysters and clams, for example) and also crustaceans (Dungeness and King crabs, as well as lobsters) to grow and preserve their shells or skeletons. A more acidic ocean is something we need to avoid.

The oceans have also absorbed over 90 percent of all of excess heat trapped by greenhouse gas emissions. While enormous, about 335 million cubic miles, the oceans aren’t infinite and the life in the oceans is feeling the impacts of the increasing temperature. Bleaching of coral reefs if occurring more often, where the animal component of the coral reef partnership casts off the algae, leaving reefs dead and bleached, with only the white calcium carbonate skeleton left.

The oceans also provide about 85 million tons of seafood annually, which is the major source of protein for many Asian countries. There is general agreement, however, that an additional 35 million tons goes unreported, putting total catch at closer to 120 million tons yearly. And the global catch is now maxed out. It may be surprising that only about two-thirds of the fish caught today are actually consumed by humans; the other one-third is used for food for other animals, such as pigs, chickens, and farmed tuna and salmon, as well as some industrial products.

The oceans, like the land and the atmosphere, are feeling the effects of climate change and human exploitation, whether overfishing, ocean acidification and warming, drilling and extraction of oil and gas and the resulting transport by supertankers and the occasional spill. One of the challenges for a resource like the water or the air is that there is no ownership, leading to the concept developed many years ago, the Tragedy of the Commons. There is little incentive to preserve or protect those resources that are owned in common from being overexploited. If I don’t catch the fish then someone else will. Similarly, as long as I can make billions by extracting oil and gas from the ocean bottom and burning it to produce energy, why should I cut back on profits when there are still profits to be made?

Well, there was a huge breakthrough in Washington, DC, this week, after years of political stalemate. The most ambitious and far-reaching climate bill in the history of this country was passed, at a time when we need it most. While it was a compromise of sorts, which is necessary today to get anything through congress, it will make some truly massive and encouraging investments in a wide range of climate policy incentives and issues. The climate and tax agreement will pump billions of dollars into programs designed to speed the nation’s transition away from a fossil fuel economy to one based on cleaner renewable sources. The deal will provide billions of dollars in tax credits over ten years for companies that build new sources of emission-free electricity, such as wind turbines, solar panels, battery storage, geothermal plants or advanced nuclear reactors.

Some of the major components include:

• Lowering energy costs by investing $9 billion in rebates for Americans buying and retrofitting their homes with energy efficient and electric appliances.

• A decade of consumer tax credits that will lower the costs of heat pumps, rooftop solar, water heaters, and electric heating, ventilation and air conditioning.

• Extending a popular consumer tax credit of up to $7,500 for the purchase of new electric vehicles and offers for the first time a credit of $4,000 for used electric vehicles.

• A fee on excess methane leaking from oil and gas wells, pipelines and other infrastructure.

• Investments of over $60 billion to support low-income communities and communities of color that are disproportionately burdened by the environmental and public health effects of climate change. This includes grants for zero-emissions technology and vehicles, as well as funding to mitigate the negative effects of highways, bus depots, and other transportation facilities, along with construction projects located near disadvantaged communities.

•An additional $20 billion would be set aside for programs to cut emissions that come from cows and other livestock, as well as from agricultural and rice production. Funds would also be granted to support forest conservation, the development of fire-resilient forests and increased urban tree planting, along with the conservation and restoration of coastal habitats.

While this legislation will provide for $485 billion for energy and climate programs, $100 billion in health care benefits and Medicaid prescription drug benefits, it will also pay down $305 billion of the federal deficit. And where will this money come from? $315 billion will come from 15% corporate minimum tax, $125 billion in IRS tax enforcement, $120 billion in prescription drug pricing reform by repealing a Trump-era drug rebate rule, $100 billion from drug price inflation cap, and $100 billion in negotiation of certain drug prices.

By necessity, this is a concise summary of the big issues. This passed the senate with a 51-50 vote with California’s Kamala Harris casting the tie-breaking vote. Every single Republican senator, all 50 of them, voted against this legislation, the most important climate bill ever, which will allow us to speed up this transition to renewable energy and help the oceans, the atmosphere, the land, and us.