

US Greenhouse Gas Reduction Policy:

Constellation Energy Perspective

Executive Summary

The growth in greenhouse gas (GHG)¹ emissions must be slowed, stopped and reversed. The ultimate worldwide goal must be to reach – and remain at or below – a GHG emissions level that protects our environment.

A challenge of this magnitude defies simple solutions. Meeting this challenge will require a broad, steadfast commitment on the part of producers in emissions-intensive industries, consumers and policymakers. It is time for the United States to move forward on a long term, comprehensive program to address climate change.

In Constellation Energy's view, a meaningful national climate change program must:

1. be capable of linking with other international efforts,
2. reflect a market-based² approach to achieving mandated emissions reductions,
3. apply on an economy-wide scale, perhaps in sector phases, and
4. provide sufficient regulatory clarity and stability to enable markets to form and long term investment to take place.

Constellation advocates a cap-and-trade approach to GHG emissions reductions, augmented as necessary by other effective complementary mechanisms, such as energy efficiency programs, vehicle performance standards, fiscal policy, tax incentives, and investment in new technology development and energy supply diversity (e.g. new nuclear, renewables, and clean coal).

Constellation's position on GHG policy is informed by the company's long-standing commitment to free and competitive markets as the most efficient means of allocating limited resources. Within a framework of mandatory GHG reductions, we maintain that the key to successful global emissions reductions will be establishing an efficient worldwide market for GHG emissions permits that can appropriately value and price CO₂ (and CO₂ equivalent) emissions.

Setting the Cap

Based on current scientific analysis, the goal of a US GHG program should be to reduce emissions by 80 percent from current levels by 2050. It is important to recognize that even if GHG emissions were stabilized today, global climate change would continue to occur for a long period of time. The efforts we make today to reduce emissions may not return the climate system to its current/past state for a hundred years or more.

An essential step in making progress on an emissions target must be to mandate emissions reporting for all anticipated covered sources as soon as possible to establish accurate data gathering and to enable future compliance verification.

Allowance Distribution Methodology

Constellation advocates initially allocating emission allowances to covered sources and phasing out these allocations over 5 to 15 years. Over time, the program should transition to a distribution mechanism under which all available allowances are auctioned.

An efficient and equitable allocation system should be based on the following set of key principles:

- 1) Reward – or at minimum not penalize – innovation, investment in energy efficiency and early reductions,
- 2) Provide robust mechanisms for mitigating effects on low income energy consumers.

Constellation advocates an allocation methodology that includes distribution to merchant coal to help mitigate costs in wholesale electricity markets. Remaining allowances net of the merchant coal distribution should be allocated according to the recently developed EEI methodology which balances output-based and historical emissions based methodologies across the industry.

Globally Linked

Any US GHG reduction program should be capable of being linked with other existing and future GHG reduction programs around the world. The most efficient and effective response to global climate change is through global mechanisms rather than local, independent, or parallel programs. A US GHG program that participates in global mechanisms can help establish a worldwide market for carbon and enable US market participants to benefit from the least cost, highest impact GHG reduction projects available.

Creating market-based incentives for countries like China and India to participate is the most effective way to motivate the participation of developing countries in a global GHG abatement scheme. Rather than waiting for developing countries to make international GHG reduction commitments, the US should create its own GHG program now and ensure that its domestic program is capable of linking with other international programs such as the EU ETS. As the US program advances, it will be important to ensure continuous engagement with other emitting countries to maintain a credible market and align participation in achieving sufficient GHG reduction progress.

Transitioning to a low carbon emissions global economy will require next-generation technologies aimed at energy efficiency, renewable energy and emissions reduction. The US can benefit from transitioning to a low carbon emissions global economy by participating in the development of the technological solutions such a transition will require and that a robust emissions market can drive. Taking global linkage into account

when designing a GHG program can facilitate the development of new technologies and create potential new sources of US competitiveness and job growth while helping protect the global environment.

Compliance Flexibility

A price collar mechanism may facilitate consensus for a national policy across a broad range of stakeholders. The ‘price floor’ of this collar should ensure a sufficient minimum carbon price signal to motivate changes in behavior and consumption patterns. The ‘price ceiling’ of the collar should be designed to lessen market volatility and establish predictability. Care should be taken when establishing the price ceiling: limitations on the price of carbon must be balanced with the need to incentivize transition to low-carbon technologies. The price must be allowed to increase rapidly enough to reflect market demand and adequately incent development of new mitigation technologies. Other mechanisms that preserve the integrity of the emissions cap – such as banking allowances and the use of carbon offsets (e.g. certified emissions reductions (CERs)), – should also be employed to permit compliance flexibility. Verified carbon offset projects, regardless of the project location, can provide significant environmental benefit and may succeed in reducing GHG emissions at a fraction of the cost of additional marginal US reductions. Reasonable limits on the percentage of total emissions that can be offset rather than covered by allowances should be explored.

Federal Program

Constellation supports the overall goals of California AB 32 and the Northeast Regional Greenhouse Gas Initiative (RGGI) but believes it is critical that these be harmonized in a single US GHG program as soon as possible. States should, however, focus on their ability to use incentives, tax policy, and other means to pursue environmental objectives not addressed by a federal program.

Transportation and Other Sectors

Effectively addressing the various sources of emissions may mean employing mechanisms, in addition to cap-and-trade, appropriate for different economic sectors. For example, the transportation sector may not lend itself to a cap-and-trade regime and may be best addressed through a combination of cap-and-trade for upstream facilities and fuel and vehicle emissions standards for end-use reductions. Policymakers should implement mandatory reduction programs in each of these sectors in order to ensure that reductions are made as efficiently as possible while spreading the costs of emissions reductions across the broadest possible spectrum of the economy.

Nuclear Power

Constellation believes that nuclear power must be part of the global solution to the GHG challenge. Nuclear power’s competitive prospects will be enhanced substantially by its minimal operating emissions. Some critics argue that nuclear energy is not truly “carbon free” when the carbon emissions involved in nuclear fuel production are considered. However, studies have demonstrated that even when comprehensive lifecycle carbon emissions are included, nuclear power is much less carbon intensive than many other sources of baseload power. On a lifecycle emissions basis, regardless of calculation method, it is clear that there is an order-of-magnitude difference between nuclear GHG emissions and those of coal and natural gas. Nuclear emissions, even given a wide

confidence interval around most estimates, are on par with emissions from renewable resources, including solar.

Constellation Energy is committed to working with all other stakeholders to enact an environmentally effective, economically sustainable, and fair climate change program consistent with our principles at the earliest possible date.

¹ While CO₂ is the most commonly discussed greenhouse gas and “carbon” is often used as shorthand for all greenhouse gases, it is critical that an effective US program include reductions in all greenhouse gases (GHG). Any gas that absorbs infra-red radiation in the atmosphere is a greenhouse gas, including, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), ozone (O₃), perfluorinated carbons (PFCs) and hydrofluorocarbons (HFCs). GHGs vary in impact and time in the atmosphere, but they may be measured in units of equivalent CO₂ to create a standard, tradable emission allowance.

² Market-based means a regulatory approach – such as cap-and-trade – in which government sets the overall reduction goal but leaves it to industry and consumers to determine the measures and technologies that they will deploy to achieve the environmental goal.