



CLIMATE BILL COMPLIANCE

U.S. policymakers at the federal, regional and state level are discussing market-based policies to reduce carbon dioxide (CO₂) and other greenhouse gas (GHG) emissions. Below are answers to commonly asked questions about the scope of such legislation and the costs and benefits for business.

WILL MY FACILITY NEED TO COMPLY WITH CLIMATE CHANGE POLICY?

Rather than regulating all GHG emissions, most approaches focus on the largest sources. This typically involves large “smokestack” emissions (e.g., from electric power plants), as well as the upstream bulk sale or import of fuels (e.g., petroleum) that emit GHGs when used. This helps limit the number of facilities under direct regulation while still covering most GHG emissions—approximately 80 percent in some cases. Facilities that are not directly regulated would still have a cost incentive to reduce their indirect GHG emissions (e.g., from electricity consumption) where compliance costs are passed through from regulated fuel and electricity suppliers.

Recent legislative proposals in the U.S. Congress seek to regulate facilities that emit 25,000 metric tons of CO₂-equivalent per year which is roughly equivalent to the CO₂ emissions of a 4 MW gas turbine running at full load with 98 percent availability. These “covered entities” would include electric power plants and large industrial facilities. Federal legislative proposals would also cover GHG-emitting fuels sold by natural gas utilities (local distribution companies) and petroleum refiners and importers. For more information on the point of regulation, see WRI’s federal climate policy summary:

<http://www.wri.org/project/us-federal-climate-policy>

In addition to federal proposals, there are regional and state programs a business may need to consider. Regional and state climate policies vary in their respective points of regulation. For more information on regional programs, see WRI’s summary on regional cap-and-trade programs:

<http://www.wri.org/publication/bottom-line-regional-cap-and-trade-programs>

WILL MY FACILITY NEED TO REPORT GHG EMISSIONS?

Beginning in 2010, a new mandatory GHG reporting rule went into effect that requires large “smokestack” and other selected sources to report emissions to the U.S. Environmental Protection Agency (EPA). For more information on this rule, see the EPA’s FAQ document on GHG emissions reporting:

www.epa.gov/climatechange/emissions/ghg_faqs.html

In addition to the EPA GHG reporting rule, individual states may also have reporting requirements. For example, the Regional Greenhouse Gas Initiative (RGGI) requires energy generation plants larger than 25MW to report GHGs.

WHAT ARE THE COMPLIANCE COSTS FOR REGULATED FACILITIES?

Compliance costs depend on how efficient a facility is in reducing its GHG emissions and what policy mechanisms or programs are implemented to reduce costs. A regulated facility would need to weigh the various costs of these options to understand full compliance costs. In a cap-and-trade program, for example, covered facilities would need to hold GHG allowances equal to their annual emissions, so costs depend on how much the facility emits and the price of GHG allowances (estimated to be about \$32 per ton CO₂e in 2020 according to a Department of Energy analysis of a recent federal proposal¹). The trading option would allow entities to buy and sell allowances (meant to encourage the most cost-effective emission reduction options and lower overall compliance costs).

Most federal proposals provide these or other flexibility options (including allowances allocated for specific purposes in early years or tax incentives) to reduce costs and encourage investment in GHG emission reduction projects. For more information, see WRI’s Bottom Line on Cost Containment:

www.wri.org/bottom-line-cost-containment.

WHAT COSTS CAN NON-REGULATED FACILITIES EXPECT?

Facilities that are not directly regulated by climate policies may see upstream costs passed down from energy providers and other suppliers. Costs could be high for facilities that source from suppliers that are major GHG emitters. Meanwhile, costs could be minimal for facilities that source from suppliers that produce few or zero GHG emissions.

1. [http://www.eia.doe.gov/oiaf/servicerpt/hr2454/pdf/sroiaf\(2009\)05.pdf](http://www.eia.doe.gov/oiaf/servicerpt/hr2454/pdf/sroiaf(2009)05.pdf) (pp 12)

WILL FACILITIES BE ABLE TO LEVERAGE NEW COMPETITIVE ADVANTAGES?

Both regulated and non-regulated facilities could see new market opportunities and competitive advantages. Facilities that produce clean, low-GHG emissions technologies could see increased market demand for those products and services. Price signals and funding programs may provide additional incentives for GHG reduction projects, such as both supply- and demand-side efficiency upgrades, fuel switching from more carbon-intensive to less carbon-intensive fuel sources and clean energy equipment. In general, facilities that reduce their GHG emissions—as well as upstream (supplier) and downstream (customer) emissions—can optimize competitive positioning.

WILL CLIMATE LEGISLATION INCREASE ENERGY BILLS?

According to analyses of recent federal proposals, climate legislation will increase the price of producing energy from resources that emit GHG pollution (e.g., coal and petroleum). Higher energy prices or electricity rates, however, do not always translate to higher energy bills. Facilities that reduce total energy use by increasing their energy efficiency or that

purchase power from low-GHG energy sources can mitigate energy costs or reduce energy bills.

The table below presents estimates from the Energy Information Administration (EIA) for how energy prices could change under the American Clean Energy and Energy Security Act (ACESA) that passed the House of Representatives in 2009.

WHAT TYPES OF INCENTIVES AND PROGRAMS WILL BE AVAILABLE TO REDUCE GHG EMISSIONS AT MY FACILITY?

Climate policies often incorporate additional incentives and financing programs to assist facilities in reducing GHG emissions. These can involve funding for federal, state and local programs. These funds are generally distributed in the form of competitive grants, rebates and tax credits. Below are a few examples of activities typically eligible for such support:

- Clean energy technology deployment (including wind turbines, solar panels, electric vehicles and fuel cells)
- Industrial electricity and thermal energy efficiency, including combined heat and power (CHP)
- Worker training for energy efficiency
- Building efficiency retrofits
- Motor efficiency upgrades

ADDITIONAL RESOURCES

- WRI's US Federal Climate Policy website: <http://www.wri.org/project/us-federal-climate-policy>
- US Energy Information Administration energy-related emissions data and environmental analyses: <http://www.eia.doe.gov/environment.html>
- The US Department of Energy's office of Energy Efficiency and Renewable Energy: <http://www.eere.energy.gov/>
- Congressional Budget Office analysis on the cost of reducing emissions: http://www.cbo.gov/ftpdocs/104xx/doc10458/11-23-GHG_Emissions_Brief.pdf
- Energy Market and Economic Impacts of H.R. 2454, the American Clean Energy and Security Act of 2009 prepared by the Energy Information Administration: <http://www.eia.doe.gov/oiaf/servicerpt/hr2454/>

NOTE

This issue builds on topics and policy mechanisms discussed in previous issues. See:

www.wri.org/publication/bottom-line-climate-policy-terminology
www.wri.org/publication/bottom-line-cap-and-trade

August 2009 EIA analysis estimating energy price changes with and without a federal cap-and-trade program (2007 dollars per million Btu, unless otherwise noted)

| | 2010 | 2015 | 2020 | 2025 | 2030 |
|---------------------------------------|---------|---------|---------|---------|---------|
| Electricity (Reference) | \$24.28 | \$25.45 | \$27.16 | \$27.79 | \$29.46 |
| Electricity (Basic Case Scenario)* | \$24.31 | \$26.65 | \$27.86 | \$28.23 | \$35.20 |
| % Difference in Electricity Prices | 0.156% | 4.71% | 2.55% | 1.61% | 19.5% |
| Natural Gas (Reference) | \$7.94 | \$8.14 | \$8.51 | \$8.87 | \$9.66 |
| Natural Gas (Basic Case Scenario)*† | \$7.41 | \$8.96 | \$10.05 | \$10.25 | \$12.64 |
| % Difference in Natural Gas Prices | -0.189% | 10.9% | 8.96% | 11.8% | 21.3% |
| Coal (Reference) | \$1.89 | \$1.94 | \$1.99 | \$2.02 | \$2.08 |
| Coal (Basic Case Scenario)* | \$1.87 | \$3.95 | \$4.86 | \$6.09 | \$7.83 |
| % Difference in Coal Prices | -0.929% | 104% | 144% | 202% | 277% |
| Motor Gasoline (Reference) | \$17.71 | \$26.13 | \$29.94 | \$30.44 | \$31.58 |
| Motor Gasoline (Basic Case Scenario)* | \$17.59 | \$27.40 | \$31.61 | \$32.61 | \$34.50 |
| % Difference in Motor Gasoline Prices | -0.665% | 4.84% | 5.58% | 7.13% | 9.25% |

* For the underlying assumptions and data in EIA's ACESA Basic Case Scenario, see [http://www.eia.doe.gov/oiaf/servicerpt/hr2454/pdf/sroiaf\(2009\)05.pdf](http://www.eia.doe.gov/oiaf/servicerpt/hr2454/pdf/sroiaf(2009)05.pdf).

† Any natural gas used as feedstock (not combusted) would not be subject to carbon pricing.