

Climate Change and the Construction Industry

The Issue

Climate change and GHG emissions are on the forefront of environment and energy discussions in the news and in state and federal policymaking. The building and development industries are under tight scrutiny about their contributions to overall U.S. GHG emissions. AGC has spent the last few years educating members on green construction practices with the understanding that green projects increase the energy efficiency of the built environment. Although the construction industry itself does not contribute greatly to GHG emissions, AGC does not ignore the GHG emissions from individual construction firms and has issued a challenge to members to take a common sense approach to reduce emissions from their equipment. (See information below on reducing emissions from construction.)

The latest figures attest that individual construction firms emit very little GHG emissions from their equipment and energy use. Consider the size of the industry: Construction spending totaled \$1.14 trillion (8.2 percent of GDP) in 2007 and employed 6.8 million people in 778,000 companies (2005). Despite its enormous size, the construction industry primarily is made up of small businesses. In 2005, 92 percent of construction firms had fewer than 20 employees. The industry includes residential and nonresidential building construction, highway construction, heavy industrial construction, municipal utility construction, and special trades such as plumbing, heating, and demolition contractors. Consider the emissions attributed to the industry: The most recent EPA inventory of GHG emissions and sinks indicates that the equipment from construction *and mining combined* emitted 0.95 percent of total U.S. manmade GHG emissions in 2007. Another recent report from EPA, see below, focuses solely on construction and estimates that construction equipment and energy use accounts for 1.7 percent of total U.S. GHG emissions.

Perhaps the most important message AGC and its members can send to the public and policymakers about climate change is that the construction industry helps reduce GHG emissions from all other sectors without being a major source of emissions itself. In fact, construction and renovation ultimately are the most immediate and effective ways to improve the energy efficiency of our vertical and horizontal infrastructure through:

- Improving energy efficiency of existing and new buildings and industrial facilities
- Reducing transportation congestion through expansion and improvements to vital infrastructure - roadways, airports, railways, and waterway systems - and the construction of mass transit options
- Increasing availability and efficiency of energy production through upgrades to existing power plants and the construction of new sources of energy (cleaner coal-burning plants, nuclear, and alternative energy)

Potential for Reducing Greenhouse Gas Emissions in the Construction Sector

Construction companies currently have no technological options available for limiting CO₂ emissions from construction equipment. EPA does not regulate CO₂ emissions from new off-road engines. EPA's voluntary diesel retrofit program does not track CO₂ emissions or identify whether EPA's "verified" after-treatment technologies would cut back on CO₂. Recently, however, there has been much more discussion of black carbon present in the particulate matter (PM) from equipment emissions, which does bring the technologies for reducing PM emissions into play.

In February 2009, EPA Sector Strategies Program released a report on common sense ways that contractors can reduce GHG emissions from equipment and energy use. The report indicates that

contractors can see modest gains in emissions reductions by cutting fuel use (efficiency, reducing idling, equipment maintenance, driver training, properly sized equipment, replaced or repowered equipment, fuel choices such as biofuels, alternatives to diesel generators, etc.) and conserving electricity (alternative energy sources, efficient office equipment, efficient electrical powered equipment, etc.). The report also highlights the important role that recycling of construction and demolition debris has on averting GHG emissions mainly from avoiding the steps associated with harvesting and processing of raw materials. AGC encourages members to review this report at <http://www.epa.gov/sectors/pdf/construction-sector-report.pdf>.

AGC Position

AGC supports climate change policies that allow construction to reduce emissions through important upgrades to the nation's infrastructure. As such, AGC oppose measures that could halt or impede future construction and major renovation of buildings or that jeopardize funding for highway and transportation projects. (See advocacy update section for more information.)

AGC Action

- AGC green construction and recycling efforts greatly contribute to positioning contractors to help reduce GHG emissions from the built environment.
- Through testimony, comments to regulatory agencies, and media and industry press, AGC has spread the word about construction's valuable contribution to reducing GHG emissions. Below are recent examples of this outreach. (Access the links to the documents online from the 3-09 issue of *AGC's Environmental Observer*.)
 - AGC Green Construction Talking Points
 - AGC Environmental Stewardship and Green Construction Initiatives
 - AGC Environmental Observer Special Climate Change Issue June 2008
 - AGC Comments to EPA on Regulating GHG Emissions under the Clean Air Act
 - AGC Testimony on Constructing a Green Transportation Policy
 - AGC Letter Encouraging an Inclusive Definition of Green Jobs
 - *Constructor* Magazine March/April 2009 Issue: Focus on Green Construction
 - Treading Lightly
 - Interview, Greening the Bottom Line
 - Case Study, Diplomatic Ingenuity
 - Interview, A Green Future
 - On the Road
- AGC and its members offered input on (and circulated) the EPA report, *Potential for Reducing Greenhouse Gas Emissions in the Construction Sector*, published in 2009.