



Building Your Quality of Life

Talking Points on Green Construction

THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA

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THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA TALKING POINTS ON GREEN CONSTRUCTION

The current focus on “green” is changing the way many people think about future development—spanning the location, design, and construction of buildings and other critical infrastructure in the United States. At the forefront of this change, construction professionals are seeking solutions to environmental challenges and educating themselves on advances in green technologies. Contractors have led the way towards implementing greener industry practices, such as recycling debris. Increasingly more contractors are interested in opportunities to build structures that use less energy, raw materials, and water. As the nation’s largest and oldest national construction trade association, the Associated General Contractors of America (AGC) provides resources on green construction issues and positions members to be leaders in this growing market.

The federal government and many state and local governments are launching initiatives that aim to conserve natural resources and to reduce the nation’s dependency on fossil fuel combustion for energy used in buildings and transportation. One motivator for this interest is that the process of burning fossil fuels for energy emits carbon dioxide (CO₂), a greenhouse gas (GHG). In the U.S., the operation of the existing commercial building stock accounted for 17.9 percent of the total energy consumption and 33.1 percent of the total electricity consumption during 2002.¹ Accordingly, the operation of those buildings contributed 17.5 percent of the nation’s total manmade CO₂ emissions for 2002.² That same year, transportation (the movement of goods and people from one place to another) accounted for 27 percent of the total U.S. energy consumption³ and a corresponding 31 percent of total manmade CO₂ emissions.⁴

By making improvements to existing and future commercial buildings and transportation-related infrastructure, contractors are an essential partner in the nation’s efforts to reduce national CO₂ emissions related to those sources. Green buildings often conserve raw materials, use less energy, and use renewable energy sources. New construction and major renovation green building projects offer a great opportunity for construction professionals to improve the energy efficiency of the nation’s buildings, thereby reducing CO₂ emissions. In addition, improvement projects to unplug traffic flow at 233 severe bottlenecks on the nation’s highways would conserve more than 40 billion gallons of fuel and the CO₂ emissions at those locations would drop by 77 percent.⁵ Likewise, the construction of new transportation projects relieves traffic congestion and provides communities with mass transit options.

The construction industry is not itself a significant source of GHG emissions. According to the U.S. Environmental Protection Agency (EPA) estimates, equipment used in construction generates only 0.86 percent of U.S. GHG emissions, due to the combustion of fossil fuel.⁶ In fact, it’s the operation and use of built structures—not the “construction” of those structures—that accounts for the far greater percentage of energy use.⁷

THE CONTRACTOR’S ROLE ON A GREEN PROJECT

Construction professionals are an important partner in the success of a green project. Some contractors may be involved in the design process; however, the contractor’s role in the implementation of a project is often limited by the project delivery system and the specifications already outlined in the contract. When contractors are involved in the design process, they can add innovations and expertise based on practical experience with materials supplies and application. Below are a few steps contractors may be capable of undertaking, if requested.

- Recycle and reuse construction and demolition debris
- Limit the use of hazardous materials on the jobsite
- Protect existing vegetation, donate cleared trees or mulch for use on site
- Make environmentally friendly purchasing decisions

¹ Annual Energy Review 2002. Energy Information Administration (EIA), U.S. Department of Energy, October 2003.

² Emissions of Greenhouse Gases in the United States 2002. EIA, U.S. Department of Energy, October 2003.

³ Annual Energy Review 2002. Energy Information Administration (EIA), U.S. Department of Energy, October 2003.

⁴ U.S. EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2002, May 2004.

⁵ Effective Relief for Highway Bottlenecks, American Highway Users Alliance, February 2004.

⁶ U.S. EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990 – 2004, EPA 430-R-06-002, Annex Table A-104, April 2006.

⁷ United Nations Environment Programme Sustainable Construction and Building Initiative, Buildings and Climate Change: Status, Challenges and Opportunities, Final Report, March 2007.

- Procure and install more energy efficient mechanical and electrical systems
- Perform building commissioning activities
- Reduce particulate matter and nitrogen oxide emissions from existing equipment (to the extent economically and technologically feasible)⁸

AGC OF AMERICA POSITION STATEMENTS

Sustainable Development Infrastructure – AGC supports reasonable and practical sustainable development initiatives that permit contractors to meet the nation’s growing infrastructure needs, foster economic growth in communities, and promote a greater quality of life.

Green Construction – AGC stands ready to facilitate and support members’ efforts to meet green construction goals. With respect to the construction of federal facilities, AGC urges the government to set clear and consistent standards. AGC does not promote one specific rating system over another. AGC doubts the benefit of a single definition of “green construction” for any and all purposes and would note, for example, that rating systems should allow for variations in regional, local, and site-specific conditions. Furthermore, private sector competition should be relied upon to encourage the creation of innovative technologies and common-sense solutions to environmental problems.

Green Bonds – AGC supports tax-exempt financing for green construction projects. Green bonds make it easier for construction project owners to offset the costs of site remediation, sustainable design features and environmentally-friendly technologies or products.

Recycling and Reuse – AGC facilitates members’ efforts to recycle construction and demolition debris. AGC supports the reuse of materials in construction only where those materials have proven performance thresholds.

AGC OF AMERICA RESOURCES AND ACTIONS

AGC provides contractors with the information and resources needed to achieve success on green projects. AGC’s environmental services appropriately address those aspects of the development process that contractors can control and influence—namely, the “means and methods” of construction. AGC continuously works to expand its services in this area, for example AGC is developing a resource book on green construction for builders. In addition, the AGC Education Foundation has funded research at Michigan State University, which should be completed in July 2007, on the contractor’s role on a building project seeking certification under the LEED® Green Building Rating System. A few resources and programs that AGC offers are below. Visit AGC’s Web site at <http://www.agc.org> for more information.

- Web pages, articles and case studies regarding the contractor’s role in green construction, recycling, environmental management systems, and other environmental concerns
- Joint educational sessions at industry events and programs with other industry partners that focus on green construction (for example, AGC has delivered educational programs, workshops, and conference calls on both LEED® and Green Globes™)

GREEN BUILDING STANDARDS AND GUIDELINES

Currently many standards and guidelines are available (and more are under development) to define or rate the “greenness” of a completed building or building components, such as LEED®, Green Globes™, EPA’s ENERGY STAR, and Building for Environmental and Economic Sustainability (BEES). The International Organization for Standardization (ISO), American National Standards Institute (ANSI), and ASTM International have standards available for use or under development that address green building concerns. In addition, the American Society of Heating, Refrigerating, and Air-Conditioning Engineers has teamed up with other organizations and is developing performance standards to move green into the mainstream construction market.

⁸ Construction companies currently have no technological options available for limiting CO₂ emissions from construction equipment. Indeed, EPA does not regulate CO₂ emissions from new nonroad engines. Likewise, EPA’s voluntary diesel retrofit program – aimed at reducing emissions from in-use equipment – does not attempt to track CO₂ emissions nor does that program identify whether EPA’s “verified” after-treatment technologies would cut back on CO₂.