

## ***POLICY MEMORANDUM***

**From:** *Group 4, ATHGO International Fifth Annual Global Forum at UCLA*

**Subject:** *Mandatory energy efficiency standards for new residential and commercial buildings*

### **I. Action-Forcing Event**

Energy use by residential and commercial buildings is among the highest of any sector. In 2005, 1/3 of global carbon emissions come from heating, cooling and powering residential and commercial buildings. For example, in the U.S., buildings consume 82% of total energy use, that is 46% for space heating and cooling, 22% for indoor lighting, and 14% for water heating.

### **II. Background/Analysis**

There are very substantial gains to be made in the efficient use of energy by buildings, that, in a sense, are the equivalent of untapped, clean energy sources. The technological capability to make these gains is already in existence, requiring only modest initial investment compared to the overall savings return over the lifecycle of the building, in the form of integrated building design strategies, such as passive solar design, photovoltaics, building placement and design, wise use materials, and daylighting. The current interest in Energy Star efficiency ratings for homes and appliances is certainly a good step, and we propose to move forward with gains in energy efficiency.

### **III. Recommendation**

In order to spur the utilization by society of these latent technologies and strategies for energy efficiency, and thereby reduce green house gas emissions to a significant degree, we recommend a policy mandate for a series of national efficiency standards for residential and commercial energy use for newly constructed or remodeled buildings. Beginning in 2013, these standards will be implemented over a 20 year period, and will achieve a target for all new buildings to meet or exceed the equivalent of the American Society of Heating, Refrigeration, and Air Condition Engineers (ASHARE) standards, which are well-recognized standards for ambitious, achievable and significant energy conservation levels. Once these standards are set, the market will sort out which strategies and technologies are most economically efficient to achieve these standards.

#### *Opposing arguments*

- Further top-down regulation is considered by many to be undesirable
- There is an added financial burden created by higher initial construction costs

#### *Arguments in favor:*

- This proposal will increase energy security by reducing dependence on fossil fuel imports
- By pursuing energy efficiency, this proposal essentially provides a significant source of clean, carbon-free energy at a small cost compared with other energy sources
- These benefits are achieved at a net financial gain on the initial investment in the form of lower, or even nonexistent energy bills

### **IV. Group's Role**

We will approach the major utility companies in the United States with the knowledge that they are explicitly committed to improving the efficiency of energy use. With their backing, we will take advantage of the current popular interest in global warming and other “green” topics, and push this proposal to corporations and NGO organizations and their lobbyists, with the hopes of eventual introduction into congress. We hope to gain the interest of major development firms by convincing them that legislation of this kind will increasingly become a centerpiece to energy policy rather than a fringe element, and that it is in their best interest to be active in the discussion.