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Ethanol Loses Ground at U.N. Climate Conference: Congress Should Rethink Energy Bill Mandate

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The United Nations Climate Conference in Bali, Indonesia, wrapped up on December 14. During the conference, debate intensified over whether to include in any climate change agreement greenhouse gas emission targets for developed countries. While most alternative sources of energy are not economically viable at this point, environmentalists and policymakers are hopeful for technological breakthroughs that would provide a cost-effective, plentiful source of energy that protects biodiversity.

Like many experts and economists, conference participants showed little enthusiasm for first-generation biofuels produced from agriculture—primarily from corn-based ethanol. Biofuels are hitting consumers at the pump, at the grocery store, and even at tax time. Without a doubt, the extremely high cost of biofuel production outweighs its supposed environmental benefits; biofuel production may actually harm the environment more than it helps.

Unfortunately, Washington has yet to get the message. The Senate energy bill includes a mandate to increase the nation's ethanol supply. The House will soon have a chance to avoid that mistake when it returns to working on its version of the bill. Mandates for both first-generation and second-generation biofuels would come at a steep price and would not solve the nation's long-term energy and transportation problems. Congress should remove biofuel mandates from the energy bill and let the market discover the best energy solutions.

First-Generation Biofuels. The 2005 energy bill mandated that 4 billion gallons of renewable fuel be

included in the gasoline supply in 2006; the mandate is set to increase to 4.7 billion gallons in 2007 and 7.5 billion gallons by 2012. A proposal in the latest energy bill would increase the mandate to 36 billion gallons by 2022. As a result of the ethanol mandate, production increased to 5 billion gallons in 2006—up 1 billion gallons from the year before—and is expected to top 10 billion gallons by 2009.¹

Congress and the Administration are overlooking the following problems with ethanol:

- **High Food Costs.** Despite the increased production, the corn producers are directing their supply of corn away from other industries, particularly food. At the supermarket, consumers have noticed skyrocketing prices for beef, poultry, and dairy products. Prices have also increased for soda and many other products containing corn syrup. As a result of the mandate, the U.S. Department of Agriculture predicts that the upward pressure on the food prices will continue for years to come.² The current proposal to expand the ethanol mandate would severely exacerbate this problem.
- **Dubious Effects on the Environment.** The claim that ethanol production is good for the environ-

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ment is misleading for a number of reasons. *First*, transporting ethanol is costlier and requires more energy than transporting other fuels. Ethanol must be transported by petroleum-using trucks, barges, and railroads, because any moisture in the pipelines will contaminate the ethanol and make it virtually useless.³ *Second*, planting corn requires farmers to use a number of pesticides and fertilizers that harm the environment. 1995 Nobel Laureate P.J. Crutzen concluded that the nitrous oxide emitted from biofuel production contributes as much or more to global warming than the cooling caused by fossil fuel reduction.⁴ *Third*, the proposed mandate would lead to greatly expanded ethanol production; consequently, more acreage would be shifted to corn—either by clearing forestland or by converting farmland previously used to grow products like soybeans or wheat.⁵ The first option would damage the environment through deforestation; the second would push food prices even higher.

- ***Problems Noted by the Bali Climate Conference.*** The costly effects of biofuel mandates are resonating not only with consumers but also professionals in positions to influence policy. One survey presented at the Bali conference polled 1,000 respondents from 105 countries. When respondents were asked to rate the energy technologies in terms of their potential to reduce carbon levels over the subsequent 25 years, first-generation biofuels from agricultural crops finished dead last out of 19 possible choices.⁶ First-

generation biofuels have been disparaged even in Bali, yet Washington continues to propose higher mandates that would be detrimental to consumers and the environment.

A Second Look at Second-Generation Biofuels.

Knowing that first-generation fuels are losing credibility as an efficient energy solution, advocates of biofuels are beginning to consider second-generation biofuels. Second-generation biofuels constitute fuel generated from forest and field waste, switchgrass, crop residues, and cellulosic biomass. Interestingly, second-generation biofuels were ranked seventh by respondents to the aforementioned survey.

Second-generation biofuels are far from a proven technology. Doubts abound concerning whether that they can meet energy demands and protect the environment. Foisting a new mandate before infrastructure or technology is adequately developed is misguided.

In fact, the next generation of biofuels may be as environmentally damaging as the first. A Competitive Enterprise Institute study released in June 2007 reported that no manufacturing plants exist that are capable of producing mass amounts of cellulosic ethanol. Plants can only produce enough for demonstration purposes. Additionally, distinguished agriculturalists are reluctant to endorse second-generation biofuels because of the adverse ecological effects.⁷ They claim that only a portion of crop residue can be removed from fields to produce cellulosic ethanol, because that residue is imperative to

1. Paul C. Westcott, "U.S. Ethanol Expansion Driving Changes Throughout the Agricultural Sector," *Amber Waves*, September 2007, at www.ers.usda.gov/AmberWaves/September07/Features/Ethanol.htm.
2. U.S. Department of Agriculture, *Agricultural Projections to 2016*, February 2007, pp. 20–26, at www.ers.usda.gov/publications/oc071/oc071.pdf.
3. Ben Lieberman, "The Ethanol Mandate Should Not Be Expanded," Heritage Foundation *Backgrounder* No. 2020, April 11, 2007, pp. 2–3, at www.heritage.org/Research/EnergyandEnvironment/bg2020.cfm.
4. P.J. Crutzen, A.R. Mosier, K.A. Smith, and W. Winiwarter, "N₂O Release from Agro-Biofuel Production Negates Global Warming Reduction by Replacing Fossil Fuels," *Atmos. Chem. Phys. Discuss.*, 7, 11191–11205, 2007.
5. Dennis Avery, "Biofuels, Food or Wildlife? The Massive Land Costs of U.S. Ethanol," Competitive Enterprise Institute *Issue Analysis* No. 5, September 21, 2006, at www.cei.org/pdf/5532.pdf.
6. Climate Decision Maker Survey, Bali Climate Conference, Indonesia, December 10, 2007, at www.iucn.org/en/news/archive/2007/12/10_climate_change_survey.pdf.
7. Frances B. Smith, "Corn-Based Ethanol: A Case Study in the Law of Unintended Consequences," Competitive Enterprise Institute, *Issue Analysis* No. 6, June 2007, at www.cei.org/pdf/5976.pdf.

recycling organic matter, retaining moisture, and preventing soil erosion on farms. Furthermore, according to an Iowa State study, switchgrass will not have the ability to compete with corn for the production of ethanol.⁸ It does not bode well for the industry that the only way for corn-produced ethanol to be competitive is through preferential treatment from Washington.

Still in its infancy, the production of second-generation biofuels remains a tentative bet. Congress should not make the same mistake it made with first-generation biofuels by hastily subsidizing the industry through mandates and other government preferences without fully measuring the costs and benefits. If biofuels are to succeed as a competitive fuel source, congressional legislation should not be necessary to mandate its production. Moreover, Congress should not force specific technologies on Americans, especially if they are unproven technologies. Instead, Congress should unleash the power of free enterprise, letting researchers and the markets discover the best new viable alternatives.

Federal mandates limit choices and hinder free enterprise from finding the most efficient, cost-effective solution. The high costs of ill-conceived energy plans will simply be passed on to the consumers.

Conclusion. Given the past problems with the ethanol mandate and its harmful economic and environmental effects, Congress should take a cue from the Climate Change Conference in Bali and abandon its quest to expand the mandate for first-generation biofuels. Moreover, it should take a serious look at second-generation biofuels before rushing to legislate. Biofuels are hitting consumers' wallets at both the pump and the supermarket; an expansion would undoubtedly exacerbate this problem. Before impetuously rushing to mandate any biofuels, including for the next generation, Congress and the public should completely understand the costs and benefits of such a path.

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8. *Ibid.*