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The Bakers' Perspective
Testimony of Robb MacKie
President & CEO, American Bakers Association

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American Bakers Association
The Voice of the Baking Industry Since 1897

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**STATEMENT OF ROBB MACKIE, PRESIDENT & CEO, AMERICAN BAKERS ASSOCIATION
HOUSE ENERGY AND COMMERCE COMMITTEE
SUBCOMMITTEE ON ENERGY AND POWER
JUNE 19, 2012**

Mr. Chairman, members of the Subcommittee. Good morning and thank you for the opportunity to be with you. My name is Robb MacKie, and I am President and CEO of the American Bakers Association. ABA is the voice of the wholesale baking industry. ABA advocates on behalf of more than 700 baking facilities and baking company suppliers nationwide. ABA members produce bread, rolls, crackers, bagels, sweet goods, tortillas and many other wholesome, nutritious, baked products for America's families. The baking industry generates more than \$102 billion in economic activity annually and employs over 630,000 highly-skilled people.

Introduction

I would like to share our industry's concerns regarding the EPA's Tailoring Rule and its impact on the baking industry. If the Clean Air Act CO₂e trigger thresholds are lowered from 100,000 tons per year to 250 tons, many more bakeries will be subject to expensive and unnecessary Title V requirements and prevention of significant deterioration (PSD) regulations. The costs to impacted bakeries could be economically devastating. Approximately 20% of the baking industry currently has Title V permits. Many bakers have accepted federally enforceable limits on production (i.e., synthetic minor permits) to minimize their emissions and to avoid the cost and regulatory burden of the Title V permit program. If the potential CO₂e emissions threshold is lowered to 250 tpy, a much larger portion of the baking industry could be forced into the Title V process. This would needlessly increase compliance costs, seriously constrict baker's ability to respond to market demand, and potentially require expensive controls on CO₂ emissions despite the industry already relying upon clean natural gas for its ovens. Importantly, EPA would likely take the position that its PSD regulations also cover so-called "biogenic" CO₂ processes including the natural fermentation of yeast from rising dough. In 2009, Administrator Jackson promised that EPA would not regulate "every cow and Dunkin' Donuts," but that is exactly what would happen.¹ Let me explain in more detail.

¹ http://www.nytimes.com/2009/10/01/science/earth/01epa.html?_r=1&emc=eta1

Profile of a Typical Bakery

There are three stages of the baking process. First, ingredients such as flour, sugar, yeast and water are mixed together into dough. The dough is then allowed to “rest” in a proofing area where the yeast ferments sugars in the dough to create CO₂ and ethanol that makes the dough rise. I remember my grandmother being very upset if I disturbed the rising bread or cake dough in her kitchen. While the scale is different, the process is the same in a commercial bakery. After rising, the dough is then baked in a clean natural gas fired oven at temperatures ranging from 180 to 200 degrees Fahrenheit.

Many bakery products, particularly breads and sweet goods, are made with yeast. Yeast is not an unpronounceable industrial chemical it is a living organism that creates a natural chemical process. Yeast cells, which are living organisms, use food, moisture, warmth and air to ferment and help the dough rise and create CO₂ as a byproduct like we do when we breathe.

Yeast is the most commonly used leavener in bread making, and serves three main functions. First, CO₂ production during yeast fermentation results in stretching and expansion of the dough, giving bread its characteristic open structure as well as nooks and crannies. Second, yeast fermentation strengthens the flour in the dough so that it better captures and holds the CO₂ that is produced. Finally, yeast fermentation provides the distinctive flavors, aromas and texture that make baked products so appealing. As bread dough is baked, the CO₂ that was produced by the yeast activity is released. This CO₂ then enters the carbon cycle, where it becomes available to grow more wheat, sugar cane, sugar beets or corn, all of which provide the ingredients for the production of more bread.

The emissions from yeast in bread production are extremely difficult to estimate. Any EPA rule that requires precise quantification will be technologically challenging and exceedingly expensive. There are several reasons that the Clean Air Act is a poor fit for natural biological processes like yeast fermentation and bread baking. First,

bakers make a variety of products that have different levels of yeast. These products change seasonally and with customer demand. Second, weather affects emissions. The protein levels of wheat can change dramatically from year to year. If the wheat is low or high in protein, then the recipe must be adjusted to maintain the proper balance of flour and sugars. Third, there is no smokestack, so to speak, at which to measure fermentation emissions, but instead bakers would have to use predictive models, altering the inputs every time the product type and recipe are changed, and of course, expensive consultants and additional measuring equipment would be needed to accomplish these tasks.

In contrast to natural CO₂ emissions, bakers can easily determine their fuel usage for ovens and their contribution towards the baker's CO₂ emission profile. But as mentioned, bakeries already use clean-burning natural gas as fuel for the ovens and can't use windmills or solar panels. Carbon dioxide and water vapor are the products of efficient and clean combustion. While bakers continue to explore the cost and technical feasibility of co-generation and other efficiency measures, it is difficult for the industry to find "greener" ovens to bake our products.

Impact of a 250-Ton CO₂ Threshold

Lowering the Clean Air Act regulatory threshold would sweep in many bakeries with considerable economic impacts. For purposes of illustration, a typical mid-sized bakery might have 3 production lines for bread and roll products. Each line would operate an average of 500 hours per month with an average production of 2000 tons of product per month. This bakery would consume approximately 7,000,000 cubic feet of natural gas per month with annual CO_{2e} emissions (from fuel use only) of 4,500 tons per year, well over the 250 ton threshold but well below the current 100,000 ton regulatory threshold. Thus under a revised Clean Air Act threshold, this bakery would be subject to EPA's onerous PSD rules in under a month of operation. In terms of biogenic CO₂, the emissions from natural yeast fermentation, the bakery would produce 37 tons of CO₂ per month, and thus trigger PSD review between 6 and 7 months of operation.

Bakeries are already subject to excessive control technology costs for ethanol emissions, which ironically is also a natural product of yeast fermentation. To meet current Clean Air Act requirements, the cost to larger bakeries for adding a catalytic oxidizer on a bread/roll bakery oven exhaust can be well in excess of \$500,000 (equipment & installation) plus \$150,000 to \$200,000 annually in operating expenses. The cost for completing the air permitting paperwork to control an oven can be up to \$50,000 depending on regulatory requirements of facility. So back to our mid-size baker, they are currently investing \$1.5 million dollars in capital investment to meet existing environmental requirements, before including CO₂. EPA's additional requirements for fuel-related CO₂, where bakers already use clean natural gas, and for biogenic CO₂, which is essentially regulating nature, would add a whole new cost dimension. We know EPA's ill-defined Title V and PSD rules are already extremely difficult to work through.

Real Marketplace Impact

As much as bakers would love it, selling bakery products is not a steady, consistent business. In other words, bakeries can't predict how much product they will need to bake on an annual basis, a monthly basis and let alone a weekly basis. Consumer tastes, seasonal variations, and retailer demands vary. With a 250-ton threshold, even a small increase in market demand for baked products and associated increase in the use of yeast and fuel could trigger a "major modification" under the PSD program, with expensive consequences. Would our baker tell a retail grocer to "wait" on filling a hot dog bun order while he applied for a permit modification? What would he tell his part-time workforce that was brought in to fill a large order "we will be back in touch after the paperwork is complete?"

No one knows how expensive these EPA requirements would be, but as an example, in the case of regulating natural ethanol emissions from yeast, the cost of emissions controls that EPA and state environmental agencies have forced bakeries to consider have ranged up to as much as \$80,000 per ton. Contrast that to less than \$1,000 per ton that it costs to scrub out sulfur from coal-fired power plants and a mere \$80 per ton to dispose of

municipal garbage. EPA's Tailoring Rule would disproportionately impact the baking industry - both large and small bakers would be burdened in the midst of a weak economy.

Conclusion

Bakers have proactively increased efficiency, lowered energy use and continue to do so on a daily basis. Bakers continue to be challenged by a highly volatile commodity and energy market. The baking industry will surely feel the heavy downstream cost impacts of a climate change regulatory program on the different sectors of the American economy.

According to the U.S. EPA's own calculations, the food industry represents an insignificant portion of emissions that contribute to climate change. Using EPA's "Technical Support Document for Food Processing Facilities",² one can calculate that emissions for the food processing industry (excluding emissions from on-site combustion of fuels) constituted less than two tenths of one percent (merely 0.159%) of net total emissions of CO₂e, and emissions from the baking sector specifically are, in turn, only a fraction of overall emissions from the food processing industry sector. One might ask, why is EPA trying to regulate nature – the same aroma of bread baking that you love in your kitchen?

The bottom line is that the cost of any new overly broad rules that regulate natural, agriculture-related CO₂ or clean natural gas used in baking ovens will ultimately force American families to pay more for baked goods. ABA thanks the subcommittee for taking up this important issue and asks Congress to give serious consideration to the impacts on the food sector in attempting to regulate such small amounts of emissions.

Thank you, I would be happy to answer any questions.

² *Technical Support Document for Food Processing Facilities: Proposed Rule for Mandatory Report of Greenhouse Gases*, Climate Change Division Office of Atmospheric Programs U.S. Environmental Protection Agency April 4, 2009.



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ROBB MACKIE

Robb MacKie serves as President and CEO of the American Bakers Association (ABA). He previously served for 11 years as Vice President of Government Relations. The ABA is a trade association representing the interests of the \$102 billion wholesale baking industry in Washington, D.C. Mr. MacKie oversees all aspects of the administration and operations of ABA and serves as the baking industry's chief advocate and spokesperson.

Mr. MacKie has appeared on CNBC's *Closing Bell* and *Power Lunch*, on Fox Business News, on CNN's *The Glenn Beck Show*; and on numerous local news programs in Washington, D.C. and in Baltimore. He has also been interviewed by Radio Hall of Fame broadcaster Orin Samuelson for *This Week in Agri-Business*.

Mr. MacKie is recognized as a leader in the Washington business community. He previously served on the steering committees of several issue-oriented coalitions including co-chairing the National Coalition on Ergonomics and the Food Industry Coalition on Hours of Service Regulations.

Before joining ABA, Mr. MacKie worked for Congressman Jim Kolbe of Arizona with a primary responsibility for domestic spending bills. He also worked for the American Subcontractors Association and the Associated General Contractors representing the construction industry's interests before the Congress.

Mr. MacKie provides strategic guidance as a member of the Kansas State University Grain Sciences Program Advisory Committee. In addition, he serves on the Board of Directors of BIPAC and is a member of the U.S. Chamber of Commerce's prestigious Committee of 100. He was named to the 2009, 2010, and 2011 "Influential 20" by Baking Management magazine. He remains very involved in local community and political activities in his home state of Maryland.

Mr. MacKie is a graduate of Frostburg State University with a degree in Political Science. He and his wife Barbara have two children.