

July 14, 2015

VIA ELECTRONIC FILING AND ELECTRONIC MAIL

Dr. Holly Stallworth
Science Advisory Board Staff Office
Environmental Protection Agency
202-564-2073
[stallworth.holly@epa.gov]

RE: FRL-9924-34-OA; Notification of a Teleconference and a Face-to-Face Meeting of the Science Advisory Board Economy-Wide Modeling Panel, Federal Register Vol. 80, No. 49 (Friday, March 13, 2015).

Dear Dr. Stallworth:

The U.S. Chamber of Commerce and the American Chemistry Council offer the following comments in anticipation of the Environmental Protection Agency's ("EPA") Science Advisory Board ("SAB") July 15 Teleconference and Meeting of the SAB Economy-Wide Modeling Panel.

The U.S. Chamber of Commerce ("the Chamber") is the world's largest business federation representing the interests of more than 3 million businesses of all sizes, sectors, and regions, as well as state and local chambers and industry associations. The Chamber is dedicated to promoting, protecting, and defending America's free enterprise system.

The American Chemistry Council ("ACC") represents the leading companies engaged in the business of chemistry. ACC members apply the science of chemistry to make innovative products and services that make people's lives better, healthier and safer. ACC is committed to improved environmental, health and safety performance through Responsible Care®, common sense advocacy designed to address major public policy issues, and health and environmental research and product testing. The business of chemistry is an \$801 billion enterprise and a key element of the nation's economy.

The Chamber and ACC ("the Associations") believe that whole economy modeling should be the standard modeling tool for EPA Clean Air Act (CAA) regulations in order to more fully and accurately portray the effects of these far-reaching regulatory actions. The Chamber has previously noted that the EPA has too often relied upon partial economy, or partial equilibrium analysis, in its modeling of the economic impacts of CAA regulations.¹ Research has demonstrated how disparate the costs and labor market impacts of rules can be when the

¹ NERA Economic Consulting, "Estimating Employment Impacts of Regulations: A Review of EPA's Methods for Its Air Rules," pp. 14-16.

effects of regulation outside the directly regulated market are considered versus when they are ignored.

The Associations provided a list of recommendations on issues that the SAB should consider in its deliberations on the role of economy-wide modeling in EPA air regulation analyses in comments filed last year to the EPA Office of Environmental Information.² In preparation for the July 15, 2015 public teleconference on the SAB Economy-Wide Modeling Panel and in consideration of the topics to be discussed during that teleconference, the Associations attach hereto their previous comments on the issues the SAB should consider in terms of economy-wide modeling for EPA air regulations.

Thank you for your consideration on this important matter. If you have any follow up questions regarding these comments, please feel free to reach out to William L. Kovacs, Senior Vice President of Environment, Technology & Regulatory Affairs at the U.S. Chamber of Commerce at (202) 463-5457 or by e-mail: wkovacs@uschamber.com.

Sincerely,

William L. Kovacs

² See Comments of the U.S. Chamber of Commerce, the American Chemistry Council, the American Forest & Paper Association, and the National Lime Association; Docket ID EPA-HQ-OA-2014-0129; <http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OA-2014-0129-0009>.

ATTACHMENT

April 7, 2014

VIA ELECTRONIC FILING AND ELECTRONIC MAIL

Office of Environmental Information
Environmental Protection Agency
Mailcode: 28221T
1200 Pennsylvania Ave. NW
Washington, DC 20460
[oei.docket@epa.gov]

RE: Docket ID No. EPA-HQ-OA-2014-0129; Comment Request; Draft Supporting Materials for the Science Advisory Board Panel on the Role of Economy-Wide Modeling in U.S. EPA Analysis of Air Regulations, Federal Register Vol. 79, No. 24 (Wednesday, February 5, 2014).

Dear Sir/Madam:

The U.S. Chamber of Commerce, American Chemistry Council, American Forest & Paper Association, and National Lime Association (collectively, the “Associations”) offer these comments on the Environmental Protection Agency’s (“EPA”) Notice on Comment Request; Draft Supporting Materials for the Science Advisory Board Panel on the Role of Economy-Wide Modeling in U.S. EPA Analysis of Air Regulations, 79 F.R. 6899 (February 5, 2014) (“SAB”). As discussed below, the Associations offer the following recommendations on issues that the SAB should consider in its deliberations on the role of economy-wide modeling in EPA air regulation analyses.

The **U.S. Chamber of Commerce** (“Chamber”) is the world’s largest business federation, representing the interests of more than three million businesses and organizations of all sizes, sectors, and regions, as well as state and local chambers and industry associations, and is dedicated to promoting, protecting, and defending America’s free enterprise system.

The **American Chemistry Council** (ACC) represents the leading companies engaged in the business of chemistry. ACC members apply the science of chemistry to make innovative products and services that make people's lives better, healthier and safer. ACC is committed to improved environmental, health and safety performance through Responsible Care®, common sense advocacy designed to address major public policy issues, and health and environmental research and product testing. The business of chemistry is a \$770 billion enterprise and a key element of the nation's economy. It is one of the nation’s largest exporters, accounting for twelve percent of all U.S. exports. Chemistry companies are among the largest investors in research and development. Safety and security have always been primary concerns of ACC members, and they have intensified their efforts, working closely with government agencies to improve security and to defend against any threat to the nation’s critical infrastructure.

The **American Forest & Paper Association** (AF&PA) serves to advance a sustainable U.S. pulp, paper, packaging, and wood products manufacturing industry through fact-based public policy and marketplace advocacy. The forest products industry accounts for approximately 4 percent of the total U.S. manufacturing GDP, manufactures approximately \$210 billion in products annually, and employs nearly 900,000 men and women. The industry meets a payroll of approximately \$50 billion annually and is among the top 10 manufacturing sector employers in 47 states.

The **National Lime Association** (NLA) is the national trade association for manufacturers of high calcium quicklime and dolomitic quicklime (calcium oxide), and hydrated lime (calcium hydroxide), which are collectively and commonly referred to as “lime.” Lime is commonly known as the “versatile chemical.” Lime is used in a broad array of critical applications and industries, including environmental control and protection, metallurgical, construction, chemical and food production. NLA’s members produce greater than 99 percent of the U.S. calcium oxides and hydroxides.

Background

The U.S. Chamber of Commerce has taken the position that whole economy modeling should be the standard modeling tool for EPA Clean Air Act (CAA) regulations in order to more fully and accurately portray the effects of these far-reaching regulatory actions. The Chamber has previously noted that the EPA has too often relied upon partial economy, or partial equilibrium analysis, in its modeling of the economic impacts of CAA regulations.¹ Research has demonstrated how disparate the costs and labor market impacts of rules can be when the effects of regulation outside the directly regulated market are considered versus when they are ignored.

NERA Economic Consulting found in a review of EPA’s methods of estimating employment impacts that properly applying a whole economy model rather than relying on partial economy analysis and outdated, inappropriately applied empirical studies resulted in a massive and consistent shift in estimated impacts across examined regulations. For instance, EPA in its Regulatory Impact Analysis (RIA) estimated that the 2011 Mercury and Air Toxics Standard (MATS) rule would create 46,000 temporary construction jobs and 8,000 net new permanent jobs, while application of an economy-wide, multi-sector model found that in fact the rule would actually have negative employment impacts equivalent to 180,000 to 215,000 lost jobs in 2015 tapering to 50,000 to 85,000 annual jobs annually.² Obviously, properly applied economy-wide modeling can make a significant difference in the scope of impacts estimated as well as the accuracy of those impact estimates.

In light of the shortcomings of some recent EPA modeling practices, the Associations welcome the opportunity to offer suggestions to the EPA’s proposed Science Advisory Board

¹ NERA Economic Consulting, “Estimating Employment Impacts of Regulations: A Review of EPA’s Methods for Its Air Rules,” pps. 14-16.

² *Id.* at 26-29.

(SAB) Panel on the use of whole economy models in order to better inform the rulemaking process for EPA CAA rules.

Recommendations

While the Associations appreciate the EPA's efforts in providing an analytical blueprint and charge questions documents for the SAB on using whole economy modeling for rulemaking economic analyses, there are some critical issue areas that EPA's draft documents fail to address either at all or in a sufficient manner. The Associations therefore has a number of additional issues that the SAB should be specifically tasked to address in order to ensure that any future systematic use of economy-wide models for CAA regulation analyses provide the most useful information possible to policymakers.

The Associations' recommendations to the EPA for the SAB panel to consider are outlined below and cover two broad areas. First, recommendations one through six include suggestions for more detailed analytical requirements on the cost side that are important for improving the utility of whole economy models as well as recommendations for ensuring that models produce robust results. Second, recommendations seven and eight present caveats concerning the vast differences in analytical challenges in incorporating costs and benefits into economy-wide models. Costs tend to be certain, expensed in the near term, and accounted for easily via market transactions, and are therefore simpler to include in models and produce sensible outputs. Benefits tend to be uncertain, cover vast potential ranges, are often unrealized for long and indeterminate time periods extending into the future, and are often difficult to verify and measure upon realization, making them exceedingly difficult to incorporate into analytical models of market transactions in ways that produce meaningful outputs.

In particular, EPA should charge the panel to consider the appropriateness and applicability of the operating principles and questions and provide through its "Blueprint" document support materials described below:

1) Economy-wide models should include significant industry sector detail

Any model used for assessing the broad impacts of CAA regulation on the economy should include sufficient detail by industry sector to enable detailed views of both direct and indirect industry impacts. When assessing regulation, the distribution of impacts is as important as the overall impact. While it is important for cost-benefit modeling to capture economy-wide impacts, it should not be accomplished at the expense of reducing the level of modeling detail, such as employment losses and plant shutdowns, regarding highly-impacted industries. The Associations recommend adopting a model with as much detail as possible in terms of both industry sector and labor occupational differentiation, so that transitional adjustment costs can be inferred from the comparison of base case versus post regulation equilibria.

2) Economy-wide models should include significant regional detail

Any adopted model used for assessing economy wide impacts should include sufficient regional detail to identify changes in the regional distribution of output and employment, which may imply relocation adjustment costs imposed on labor and capital.

3) Economy-wide models should include international trade flows

The SAB panel should investigate the inclusion of trade flows to estimate the effects of regulatory costs on US tradable sectors. It is important to note the impacts of regulation on US competitiveness, a key element missing in virtually all partial equilibrium estimates of regulatory impacts and in many general equilibrium impacts estimates. Many industries are more susceptible to employment and production displacements due to fierce foreign competition; when this is the case the magnitude of regulatory compliance costs alone is insufficient to judge the true impact of a regulation.

4) Economy-wide models should employ dynamic analysis of adjustments

The SAB panel should investigate the appropriate dynamic analyses appropriate for examining the short-, medium-, and long-term adjustments required in capital and labor markets when regulations are imposed. Because most whole economy models are equilibrium models, they tend to provide snapshot results of the economy before and after regulatory impacts are fully incorporated into the simulated markets. While instructive, this often glosses over important adjustment effects that may move relevant markets away from equilibrium for extended periods of time. These effects are important to understand and should be an integral part of CAA economy-wide modeling.

5) Economy-wide models should be frequently and consistently validated

The SAB panel should investigate and consider recommending that EPA engage in an ongoing testing and validation exercise for whole economy modeling that includes public comment and participation. Because of the complexity of the models discussed in EPA's analytical blueprint, and their sensitivity to parameterization, ongoing testing and validation should be used to enhance model calibration over time. Additionally, whole economy models should be subjected to thorough sensitivity analysis in order to understand and quantify model robustness with respect to parameterization and specification.

6) EPA should provide the SAB Panel resources for model testing by panel members

Furthermore, the EPA should provide the SAB panel with the resources necessary to experiment with model technologies under consideration, including full access to models, necessary data for calibration, and all other resources necessary to produce model estimates. The Associations believe that the type of calibration and validation analyses

outlined are paramount in establishing the credibility, reliability, and robustness needed for these models to produce useful information for policy formulation.

7) Economy-wide models should be reviewed for validity of inputs, especially with respect to benefits

The SAB panel should carefully evaluate EPA's attempts to add benefits estimates that revolve around non-market impacts into economic models that evaluate the effects of policy on market transactions. Much of EPA's discussion in its analytical blueprint and draft charge questions revolves around incorporating benefits estimates into models, with the agency noting the magnitude of effects in previous model runs. The SAB should carefully investigate the mechanisms by which EPA proposes to include benefits, many of which affect non-market transactions or accrue to individuals through non-traded channels. It is imperative that the channels of transmission for estimates of price and quantity impacts of benefits claims be thoroughly and carefully vetted to ensure that "phantom" benefits do not inflate estimates and thereby short circuit the usefulness of economy-wide models for addressing the appropriateness of policy choices. It would be misleading if, for instance, EPA claimed economic benefits via labor market effects for benefits that would actually accrue only to retired individuals no longer in the labor force. Careful attention to detail in terms of the expected timing of costs and benefits is important to avoid such misleading results.

8) Economy-wide models should be reviewed to ensure that all relevant impacts be included

On a related note to point 7 above, any inclusion of changes to the status quo should be evaluated for effects on both costs and benefits – for example, if avoided medical expenses for premature morbidity and mortality are incorporated into a model as a benefit appropriately valued in a market-based model, then it is incumbent upon the agency to include the full value of changes over the lifecycle of individuals to which the benefits accrue.³

Conclusion

The Associations recommend that the SAB panel take great care to ensure that the cost analysis of any whole economy modeling that the EPA undertakes provides sufficient detail as to be useful in addressing current gaps in knowledge in typical regulatory impact analyses. Specifically, the EPA should be considering the impacts of regulations on industry sectors'

³ For example, if benefits accrue to individuals with compromised health, it is inappropriate to model benefits as if a delay in premature morbidity or mortality saves all relevant medical expenditures. Rather the savings arise from pushing medical expenditures further into the future where at some point expenditures will be realized (possibly more or less than the modeled savings). Incorporating this wrinkle in the modeling of savings to medical expenditures exposes the thorny nature and extreme assumptions that must be made in order to claim these benefits as realized savings in a market-based model.

competitiveness in global trade and the impacts of regulation on employment and how those employment impacts affect specific regional economies that are strongly tied to affected industries. The Associations also recommend that the SAB panel provide strong guidance on the appropriate methodology for incorporating benefits into economy-wide models. Such guidance should outline the care that must be taken in identifying and validating the channels through which benefits impact markets. Finally, EPA should make clear that its charge questions and “Blueprint” materials are not in any way intended to limit or restrict the work of the panel, and that the panel has full freedom to solicit additional input from the public and to incorporate materials of its choosing into its deliberations.

Thank you for the opportunity to participate in this proceeding. If you have any follow up questions regarding these comments, please feel free to reach out to William L. Kovacs, Senior Vice President of Environment, Technology & Regulatory Affairs at the U.S. Chamber of Commerce at (202) 463-5457 or by e-mail: wkovacs@uschamber.com.

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