

# SAB Meeting on Strategic Research Directions— Economics and Decision Sciences

National Center for Environmental Economics  
February 16, 2010

## EDS Program Overview

Prior to 2008, ORD’s National Center for Environmental Research (NCER) was responsible for administering and funding the Economics and Decision Science (EDS) program. The program was moved in FY2008 from NCER to OPEI under the Regulatory/Econ Management and Analysis program project, and thirty-eight (38) active grants were moved from NCER to NCEE at this time.

When the EDS program moved funding was cut by 50% (new baseline budget of \$1million) and was cut again due to 40 percent OPEI-wide cut. OPEI also absorbed a substantial cut in the FY2009 continuing resolution, resulting in no new obligations of funds in FY2008 and FY2009. As a result of new priorities and a better budget picture for OPEI, the EDS research program is projected to fund \$1.0 M in FY2010, and continue this into FY2011 under the President’s Budget.

The following table provides an overview of the funding and FTE for the EDS program since FY2006, along with NCEE funding provided for our own competitive solicitations for grants. NCEE staff members also conduct research directly, sometimes supported by contracted efforts, but these are not included here.

	2006		2007		2008		2009		2010 (estimate)		2011 (estimate)	
	\$\$	FTEs	\$\$	FTEs	\$\$	FTEs	\$\$	FTEs	\$\$	FTEs	\$\$	FTEs
EDS	2.3M	4	2.3M	3	0	2	0	2	1M	3	1M	3
NCEE	0.9M	**	0.2M	**	0.7M	**	0.2M	**	0.4M	**	0.5M	**
Total	3.2M	4+	2.5M	3+	0.7M	2+	0.2M	2+	1.4M	3+	1.5M	3+

\*\* = most NCEE staff are engaged in many of these research efforts in a collaborative and/or advisory capacity so a total FTE is difficult to calculate.

The increase from 2009 to 2010 has enabled the office to primarily pursue two efforts: (1) finance the outcome of FY09 EDS solicitation and support new research/workshop solicitation to be issued in 2010; and (2) resume the PACE survey. The following sections have more information on these directions and other current research efforts at NCEE.

## Current/Future Awards

NCEE funded seven grants (out of 22 applications) to support environmental economics workshops from 2008 base NCEE research program. Some of these were single event, topic-focused on subjects such as land use, meta-analysis, experimental methods, and micro-econometrics. Others were multi-year awards to support dissemination of research findings (Heartlands, Camp Resources, NBER Summer series)

NCEE's review panel recommended six awards (out of 11 applications) for dissertation/early career research in environmental economics from 2009 EDS competitive solicitation. This solicitation was specifically designed to support "gathering data for use in doctoral dissertations and other early career research in those areas of environmental economics involving pollution control." NCEE considers these kinds of award to be a cost-effective way to encourage research.

The review panel also recommended three awards (out of 23 applications) for research on market mechanisms in 2009 EDS competitive solicitation. This part of the solicitation was to support "normative or positive research in the design of policies for pollution control using market mechanisms, particularly second-best and piecemeal approaches to regulation as well as multiple, hybrid, or adaptive policies to control one or more externalities or other problems."

NCEE is completing a new competitive solicitation to support additional workshop and dissertation/early career research projects. The expectation is the solicitation will be announced and awards made in FY2010, using FY2010 and FY2011 funding (if not fully financed at the time of award).

## NCEE Internal Research

NCEE economists and scientists engage directly in research to fill gaps in knowledge, often with support from other EPA offices. NCEE staff research continues to present research at professional conferences, and to publish in peer reviewed journals, producing between 20-30 papers per year in economics and risk science fields. NCEE also supports its own working paper series and added 6 entries in FY 2009 (there are 73 papers total in the series).

Ongoing research includes efforts to:

- account for uncertainty in the economic analysis of climate change policies,
- conduct a national scale assessment of the environmental justice implications of air pollution regulation,
- link EPA's air quality data with the National Center for Health Statistics survey data,
- analyze how regulation-based induced technological change impacts emissions and marginal abatement costs over time, and
- measure economic benefits of reducing air toxics emissions.

## Other Activities: Workshops and EDS Products

NCEE hosted Market Mechanisms workshop in April 2009, with presentations by EDS recipients and other researchers on use of incentives on (1) fuel economy, water quality, and land use; (2) distributional consequences of using market incentives; and (3) panel discussion on the role of market mechanisms and incentives to climate change.

We are currently planning a 2010 workshop showcasing EDS-funded research on the Economic Benefits of Information Disclosure. Other activities include a report that lists all publications resulting from EDS program and develops citation metrics to help communicate and evaluate results of program. In addition, we are compiling results of EDS benefits transfer grants as they are completed over next two years to help support regulatory development efforts.

## Other Activities: Pollution Abatement Costs and Expenditures (PACE) Survey

This survey of ~20,000 U.S. manufacturing facilities collects data on overall pollution abatement expenditures (by type and media), but is not designed for collecting cost information on impacts of specific regulations. Census conducted and funded the PACE Survey from 1973-1994; Census collected PACE data in 1999 and 2005 with funding by EPA.

EPA uses PACE data in some regulatory analyses and for periodic reports on national or program costs (e.g., Cost of Clean and Environment Investments), CAA 812 Retrospective Cost Analysis, EPA's Strategic Plan). Government & academic researchers also rely upon PACE data, using it to analyze the impact of environmental regulations on important economic and environmental outcomes (e.g., job growth; competitiveness; environmental performance; opening and closing of manufacturing facilities; and productivity growth).

EPA and NCEE plan to collect PACE data on a more routine basis, with the goal of producing annual reports, next to be 2009 or 2010 data. Other next steps include exploring how the PACE survey can be used to study GHG-related control and monitoring costs and a proposal for funding support was included in FY 2010 President Budget (\$750K). This is an opportunity to collect information at outset of potential new program. The 2011 President's Budget includes a proposed increase to help better sustain the PACE survey on a more continual basis, and not on the intermittent basis it has experienced since the mid-1990s.

The Environmental Economics Advisory Committee of the SAB has been very supportive of EPA's efforts to collect annual PACE data.