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SAB Environmental Economics Advisory Committee: Retrospective Cost Analysis

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BETTER PRACTICES
BETTER PLANET **2020**
Continuing AF&PA's Commitment to Sustainability

Overview

- AF&PA presented to SAB on April 19th concerning water costs from 1990s Effluent Guideline for paper mills
- New information: June NCASI analysis of MACT/air costs for paper mills
- Discuss choice of baseline year and baseline costs: May 10th AF&PA supplemental comments on water costs

Air Costs: Ex-post

- Three periods of Cluster MACT costs
 - MACT I/Phase I – low volume off-gases, 1999-2001
 - MACT I/Phase II – high volume off-gases, 2002-2007
 - MACT II – chemical recovery combustion sources , 2001-2004
- First cost analysis relies on NCASI expenditure data
 - \$830 million thru 2003 (survey ended)
 - baseline expenditures of \$208M (very similar to NCEE's, \$202M)

Air Costs:

- Second analysis extrapolates from actual P&P mill costs
 - Total - \$1.8 B
 - MACT I (phase I & II) = \$1.7 B
 - MACT II = \$0.1 B – less than projected due to bubbling
- NCEE looked at NCASI data thru 2002
 - \$610 M in 1995 dollars becomes \$633 M in 2002 dollars
- Ex-ante costs roughly \$800 M (EPA and industry)

Air Cost Comparison

Organization	Period	Projected Cost: (2002 \$)	Actual Cost: (\$2002)	Underestimate
Industry (1997)	1997-2007	\$800 M	\$1.8 B	56%
EPA (1997)	All three rule phases	\$784 M	NA	56%
NCEE (2012)	1999-2001	NA	\$633 M	65%

- Expenditures as reported by mills
- Costs underestimated by more than a factor of two

Water Costs: baseline issues

- May 10th supplemental
- Two issues: 1) when to “start the clock”; and 2) what is the baseline of non-Cluster Rule expenditures
- Start the Clock: Two periods of large investments totaling \$3.8 billion in capital costs alone:
 - Period 1: 1987 to 1993 (\$1.8 billion; not necessary to resolve; not included in ex ante projections; set aside)
 - Period 2:
 - 1993 (Industry estimate) to 2000
 - 1995 (EPA estimate) to 2000

Water Costs: baseline issues

- Reasons to include costs incurred starting in 1993 (industry starting point) v. 1995 (EPA starting point)
 - 1988 consent decree required proposed rule by October 1993
 - Proposed rule issued October 1993 (FR on Dec 17, 1993)
 - The direction on technology choices was clear before 1993
 - RTI Whitepaper documented that companies announced compliance projects after proposal in 1993 and completing them by 1995
 - Investments in earlier period based on the same technology were demonstrating desired results

Water Costs: baseline issues

- Second Baseline Issue (NCEE Analysis): Which costs are attributable to Cluster Compliance and which are “routine” and in the baseline?
 - NCEE costs for compliance: \$65 million (1998-2000)
 - EPA baseline level of spending: ~\$300 M per year in 1995-1997
 - Correct baseline: Slightly over \$100 million per year in 1987

Water Cost Comparison

Organization	Period	Projected Cost (2002 Dollars)	Actual Cost (2002 dollars)	Underestimate
NCASI	1993-2000	\$1,875 million	\$1,895 million	1%
NCASI	1995-2000		\$1,445 million	
EPA	1995-2000	\$1,079 million		43%
NCEE	1998-2000		\$68 million	96%

- Industry water total for all years was \$3.8 B
- EPA underestimated costs by about 43% in its projection; industry estimate was close to actual costs.
- With \$1.8 B in air costs, grand total for Cluster is: \$5.6 B

Existing Policies Support Different Baseline

- OMB's Circular A-4 emphasizes the choice of baseline is very important and should consider world without the regulation
- EPA's economic analysis guidance allows EPA to consider different baselines including cost from date of proposal or even earlier (see Chapter 5)
- Without Cluster regulations, mills could change pollution control practices