# WRAP Economic Analysis Framework Test Application Status Report – September 2004

In 2002, WRAP members (states and tribes) indicated they needed help in considering the economic issues (benefits, costs and impacts) that will come up as they seek to comply with the Regional Haze Rule. Economic issues are important, but most WRAP states and tribes have very few internal resources for this type of analysis.

The WRAP's Economic Analysis Forum completed an *Economic Analysis Framework* in 2002-2003 to assist WRAP stakeholders. The *Framework* provides consistent and practical guidance for assessing and comparing a broad range of costs, benefits, and other economic impacts associated with alternative emission control strategies for reducing regional haze in the West.

The purpose of our current project is to do an "application test" of the *Framework*. The application test may lead to refinements of the *Framework*, will help communicate the benefits of the *Framework* to WRAP stakeholders, and will help identify the resources necessary to use it in SIP and TIP development, adoption, and implementation. Given resource constraints, the application test is focusing on three states (Arizona, Montana and North Dakota) and three tribes (Confederated Salish-Kootenai Tribes, Salt River Pima-Maricopa Indian Community and the Spirit Lake Nation) that volunteered to be a part of the application test.

Since it is too early to be certain what types of emission controls might be included in the next round of haze SIPs and TIPs, the Forum and its contractors have developed two hypothetical but realistic control scenarios. Specifically, we are evaluating scenarios to control emissions from in-use, off-road diesel vehicles in the three states and three tribes participating in the application test. The WRAP projects that off-road vehicles (the vast majority of which are diesel) will be emitting more pollutants than on-road vehicles by the end of the 2008-2018 haze planning period. The Forum wants to emphasize, however, that the analysis of these two scenarios in the test application is strictly for purposes of further developing tools for economic analysis and does not imply endorsement or recommendation of either scenario by the WRAP or the participating states and tribes.

## Status of the Application Test

Over the past several months, considerable progress has been made on the application test. Thus far, the Forum and its contractors have:

- Developed baseline economic and demographic projections for each of the participating states, including sub-state regions and affected industries, through 2018. These projections have been designed to be as consistent as possible with previously developed state population and employment forecasts and have been reviewed with state sources.
- Begun working with the participating tribes to gather tribally approved data needed for the test application.

- Specifically defined the two evaluation scenarios:
  - Scenario A will reflect a command and control-type approach and examine effects if all construction engines over 50 horsepower and all agricultural engines over 175 horsepower were required to be fitted with Diesel Oxidation Catalysts (DOCs) beginning in 2010.
  - Scenario B will examine effects of an incentive-based program targeted at the same populations and emission reduction technologies identified for the mandatory scenario. For purposes of the analysis, we are assuming each state would have $1 million available per year to fund this program. Each participating tribe would have $100 thousand per year. Applications offering the greatest particulate matter (PM) reduction for the dollar would be chosen for funding first.
  - We will evaluate the effects if the participating tribes implemented comparable programs on their own lands and also examine "spillover" effects on the tribes that could result from the implementation of either scenario in the case study states.
- Developed cost and emission reduction estimates for the two scenarios. The Forum's contractors have developed estimates of the capital and operating costs and the PM and NOx reductions from each scenario at the county-level. These estimates are now being updated to reflect inventory changes prior to the 2010 implementation date incorporated in the scenarios.

### Next Steps

The next steps in the application test include:

- Incorporate the estimated emission reductions into WRAP's air quality models to estimate changes in visibility and pollutant concentrations by location.
- Estimate dollar values of health and visibility benefits resulting from the scenarios for each participating state, tribe and for sub-state regions.
- Examine and quantify economic impacts of the scenarios on the agricultural and construction industries, related industries and overall state, tribal and regional economies. Examine administrative requirements and costs for each scenario.
- Examine benefits of any localized spending on pollution control equipment.
- Compare benefits and costs of the scenarios.
- Document the test application and present results to WRAP stakeholders.
- Make further refinements to the Framework based on lessons learned from the test application.

The application test is already helping to identify and find ways to resolve important questions and analytical challenges that the states and tribes will face in considering potential strategies for SIPs and TIPs. We look forward to sharing further results with you as the application test moves to completion.