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Quantifying the Outputs of the State Energy Program: the Enumeration Indicators Approach

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ABSTRACT

Under the sponsorship of the U.S. Department of Energy (DOE), staff at Oak Ridge National Laboratory have developed a set of Enumeration Indicators to quantify key accomplishments of the State Energy Program (SEP), which sponsors a wide variety of state-operated energy conservation and renewable energy activities throughout the country. The broad range of SEP activities was divided into 21 key "program areas," each of which describes a related set of energy-conserving efforts. A number of Indicators were identified for each program area to provide a clear description of SEP accomplishments for that topic. Together, the full set of Enumeration Indicators allows the major outputs of the State Energy Program to be quantified in a way that is consistent over time and across state boundaries.

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INTRODUCTION

The U.S. Department of Energy's State Energy Program (SEP) is designed to promote the conservation of energy through the development and implementation of state-operated energy efficiency and renewable energy programs throughout the United States (General Services Administration, 2001). The State Energy Program was established in 1996 by merging two long-standing programs, the State Energy Conservation Program (SECP) and the Institutional Conservation Program (ICP), both of which had been in existence since 1976 (U.S. DOE, 2001). Under the SEP, the federal government provides financial and technical assistance to the states, and the federal funding typically is augmented by monies from the states as well as from other sources. Mandatory activities that must be part of each state's energy conservation efforts include: establishing lighting efficiency standards for public buildings; promoting carpools, vanpools, and public transportation; adopting energy-efficient procurement practices; enacting thermal efficiency standards for new and renovated structures; and allowing right turns at red lights. Optional activities that are allowed - but not required - under SEP cover a very broad range of energy-saving activities, including: offering energy-efficiency education; financing conservation and renewable energy measures in buildings; providing energy audits for commercial and industrial facilities; adopting integrated energy plans; and providing training in improved building design and a host of other subject areas.

Since 1998, staff at Oak Ridge National Laboratory (ORNL) have been working to develop a series of metrics for the State Energy Program, which would allow the states and DOE to clearly measure the program's accomplishments. An investigation of the options for achieving this improved measurement found that two major tools could be developed to quantify key SEP accomplishments: (1) a set of Enumeration Indicators that would characterize the key "outputs"of the states' efforts in a manner that would be uniform from state to state and year to year; and (2) a set of Handbook pages that would provide consistent methods and simplified formulae for measuring program "outcomes" (Jones and Berry, 1998). According to the terms of the Government Performance and Results Act (GPRA, 1993), "outputs" are the activities or efforts of a program, while "outcomes" are the actual results of a program activity compared to its intended purpose. For the SEP, an example of a key output is the number of workshops or training sessions developed for a given energy-consuming sector (e.g., residential, commercial). The outcome of such an effort would be the amount of energy saved by participants at those workshops or training sessions.

Clearly, the Enumeration Indicators, which focus on program outputs, paint a different picture of SEP accomplishments than do the Handbook pages, which focus

on the ultimate outcomes of the program. However, both approaches to quantifying program results are considered useful for state and federal officials seeking to understand the full scope of the State Energy Program. Accordingly, staff at ORNL have been working to develop a set of Enumeration Indicators as well as a collection of Handbook pages for DOE. This paper reports only on the results of the Enumeration Indicators project. As part of that project, the broad range of SEP activities was broken down into 21 key "program areas," each of which describes a related set of energy-conserving efforts. Within each program area, a number of quantifiable Indicators were identified to provide a clear description of SEP accomplishments for that topic.

After a brief discussion of the methods used to develop the Indicators (below), we present a detailed description of each of the 21 program areas in which the states perform energy efficiency activities under the State Energy Program. For each of those program areas, we list all of the Enumeration Indicators that were developed in order to present a full picture of SEP activities. We then conclude with a brief summary of our findings and their significance.

METHODS

The first step in developing a comprehensive set of Enumeration Indicators was to understand the types and distributions of energy-saving activities undertaken by the states as part of SEP. We gathered and reviewed any available materials that described program activities for any of the years that the SEP was operating. We also examined recent internal SEP records showing the types of activities funded by the program in the different states. Interviews were conducted with SEP state managers in several of the states with the most comprehensive record keeping and evaluation efforts. After using these methods to study the various program activities undertaken and reviewing the function and activity names listed in the SEP files as well as past classification schemes, we identified a set of 21 distinct program areas into which all the individual activities could be placed. Each of those program areas can contain activities in a number of different project sectors. So, for example, programs that address the broad topic of codes and standards could operate in the industrial, commercial, institutional, and residential sectors.

As part of the scoping study mentioned above, a bibliography was assembled that listed several hundred articles and reports describing and evaluating a broad range of energy programs. We proceeded to identify the most relevant works from the bibliography and to review them with an eye for what they said about quantifying the outputs of the different kinds of energy programs undertaken by SEP. This literature base also was used extensively to guide the development of Handbook pages. A partial listing of the reports and articles reviewed for this study

is given in the **References** section at the end of this article.

The 21 program areas for which Enumeration Indicators were developed are: (1) Information Inquiries; (2) Mass Media; (3) School Education Programs; (4) Workshops/Training; (5) Retrofits; (6) Low-Income Weatherization; (7) Energy Audits; (8) Procurement of Energy-Efficient Products; (9) Technical Assistance; (10) Loans and Grants; (11) Codes and Standards; (12) Rating and Labeling; (13) HERS and EEMs; (14) Incentives; (15) Interest Subsidies; (16) Alternative Fuels; (17) Planning; (18) Tax Credits; (19) Traffic Signals and Controls; (20) Research, Development, Demonstration, and Deployment; and (21) Carpools and Vanpools.

DESCRIPTION OF INDICATORS

The 21 program areas listed above make up a comprehensive classification scheme for describing the various activities supported by SEP funds. Each of the 21 separate program areas and its associated Enumeration Indicators are described below.

Information Inquiries

An information project assembles a body of relevant information, provides a mechanism for delivering it to the public, and advertises the fact that answers to a specified range of questions are available upon request. Information can be provided by an information clearinghouse staffed by people knowledgeable in the relevant subject area(s) or by a web site. While project sponsors could expend considerable effort in compiling the necessary information and advertising its availability to the public, this effort would not achieve the desired results without people asking questions of clearinghouse staff or accessing the web site. Consequently, we find that the most useful indicator of project outputs is the one presented below, despite the fact that this indicator is not entirely under the control of the project manager:

- number of inquiries, by type of contact [i.e., telephone calls, e-mail queries, website "hits," written requests, and face to face inquiries (e.g., at information booths and exhibits)].

Mass Media

Mass media can be divided into the distinct categories of electronic and printed media. Electronic media can be further subdivided into radio/television and internet web sites, while printed media can be placed into the subcategories of newspapers/magazines and other publications. Some mass media projects will develop new articles or advertisements, some will disseminate previously-developed articles, and some will do both. The output indicators for the different media have

considerable structural similarity, but there are enough differences to make their separate treatment valuable. We recommend the use of the following enumeration indicators:

Electronic media: radio/television
- number of different radio or television features or advertisements developed; and
- number of radio or television interviews given.

Electronic media: internet web sites
- number of different articles or announcements developed for posting on a web site; and
- number of different web sites on which articles or announcements are posted.

Printed media: newspapers/magazines
- number of different articles or advertisements developed;
- number of different newspapers or magazines in which articles or advertisements appear; and
- number of different press releases developed for newspapers or magazines.

Printed media: other publications
- number of different manuals, booklets, and similar publications developed;
- number of manuals, booklets, and similar publications distributed;
- number of newsletters, factsheets, and similar publications developed; and
- number of newsletters, factsheets, and similar publications distributed.

School Education Programs

School programs can have a range of objectives. Some efforts develop instructional programs, others aim at implementation, and some projects may attempt both. The output indicators we identify accommodate this diversity of project goals. It is important to note that an "instructional unit" is defined here as a single lesson for a specific grade level. The following enumeration indicators are considered most appropriate for use with school education programs:
- number of instructional units developed, by grade level (i.e., primary, secondary, post-secondary);
- number of schools using instructional units developed or distributed by program, by grade level; and
- if known, number of students taught with instructional units developed or distributed by program, by grade level.

Workshops/Training

Most workshops or training projects offer instruction to some type of student group, ranging from realtors and bankers to air conditioner repairmen. As with school education projects, it is useful to address projects that develop workshop or

training units as well as those designed to deliver such materials. The sector or sectors that a particular workshop or training project targets should not have much influence on the structure of the basic project output indicator. Because it is extremely difficult to quantify how much the trainees actually learn, we focus on the specific enumeration indicators presented below:

- number of workshops, training sessions, seminars, and other types of instructional presentations developed, by energy-consuming sector (i.e., residential, commercial, industrial, institutional, transportation, agricultural, and other);
- number of workshops, training sessions, seminars, and other types of instructional presentations given, by energy-consuming sector; and
- number of persons attending the workshops, training sessions, seminars, and other types of instructional presentations described above, by sector.

Retrofits

For all building types, the basic output is the individual retrofit. For a summary indication of project accomplishment, the number of buildings retrofit and the number of those buildings receiving various types of measures are two key measures. Building square footage, if known, is also a good indicator of program accomplishments. A detailed description of the information to be provided in these subject areas is as follows:

- number of buildings retrofit, by type of building (i.e., residential, general commercial, school, health care, state government, and industrial);
- number of buildings receiving various types of measure (i.e., insulation, windows, doors, sealing, lighting, furnace, water heater, repairs, other), if known, by building type; and
- building square footage, if known, by building type.

Low-Income Weatherization

Most of the direct installation of energy-efficiency measures in low-income dwellings is performed under the guidelines and regulations established by the DOE Weatherization Assistance Program. Even when funding comes from sources other than DOE, these resources tend to be channeled through the DOE program's network of state and local agencies. When weatherizations are implemented according to the DOE guidelines, the results of numerous evaluations are available that can be used to project expected energy savings. If the weatherizations are performed under some other set of guidelines, then determining expected savings will be more complicated. For this reason, the recommended enumeration indicators for low-income weatherization programs distinguish between those that are treated under the DOE Program guidelines and those that are not, as shown below:

- number of dwellings weatherized under the guidelines/regulations of the U.S. Department of Energy's Weatherization Assistance Program, by type (i.e., single family, multi-family containing 2-4 units, multi-family with more than four units, mobile homes); and
- number of dwellings, by type, weatherized under guidelines/regulations that differ from those of the DOE's Weatherization Assistance Program. For dwellings in this category, a description of the guidelines/regulations that were applied and of the procedures that were implemented will be needed.

Energy Audits

Energy audit projects use engineering models and staff expertise to identify appropriate energy efficiency measures and to estimate associated savings for various types of buildings and equipment. The number of audits performed is the main product that should be enumerated because it is the output over which the project manager has the most control. Total floor space audited is also a readily-available indicator of program accomplishment. In addition, total projected energy savings associated with audit recommendations can be an important indicator. A listing of the exact information to be gathered in this subject area is provided below:

- number of energy audits performed, by energy-consuming sector (i.e., residential, commercial, industrial, institutional);
- total floor space audited, by sector; and
- total projected energy savings, by sector (if available).

Procurement of Energy-Efficient Products by Government Purchasing Agents

A procurement project is designed to alter the behavior of government agencies so that more energy-efficient equipment (e.g., vehicles, office machines, heating systems, street lights) will be purchased. Such projects do *not* directly fund energy-efficient purchases. Because the average improvement in efficiency may differ for units that are purchased as replacements for existing products and those that represent *additions* to the current stock of products, it is important to know which type of unit is being purchased. The recommended enumeration indicators for this type of project are as follows:

- number of energy-efficient units purchased, by type [i.e., vehicles; office equipment; heating, ventilating, and air conditioning (HVAC); streetlights; and other];
- number of efficient units purchased that are replacements for older less efficient units, by type; and
- number of efficient units purchased that are additions to the inventory of units, by type.

Technical Assistance

Technical assistance projects suggest energy efficiency measures and/or strategies tailored to the needs and circumstances of individual buildings, clients, or production processes. These recommendations are the output over which the project manager has most control. Accordingly, the following enumeration indicator is recommended for measuring the output of technical assistance programs:

- number of recommendations made for energy efficiency measures and/or strategies, by energy-consuming sector (i.e., residential, commercial, industrial, institutional, transportation, agricultural, other).

Loans And Grants

We distinguish loans and grants from other financial incentive projects - such as mortgage subsidies, provision of in-kind services, shared savings programs, and rebates - which are covered in other enumeration categories. A grant can be defined as a direct cash disbursal for a specific purpose, with no expectation of repayment to the disbursing agency, while a loan must be repaid. The direct output of a loan or grant project is the volume of loans or grants it places. If several distinct loan and grant programs are operated from the same State Energy Office, the targets of the loans and grants (e.g., residential structures, commercial buildings) may differ. The following enumeration indicators are recommended for characterizing the outputs of loan and grant programs:

- number of loans, by energy-consuming sector (i.e., residential, commercial, industrial, institutional, transportation, agricultural, other);
- number of grants, by sector;
- monetary value of the loans, by sector;
- monetary value of the grants, by sector;
- number of loan programs operated by state and local governments, by sector; and
- number of grant programs operated by state and local governments, by sector.

Codes and Standards

State efforts related to codes and standards can include programs to develop or update energy-efficiency codes and standards, programs to influence state or local governments to *adopt* energy-efficiency codes and standards, and programs aimed at increasing code compliance by designers and builders. Additionally, energy-efficiency codes and standards themselves can apply to a number of different energy-consuming systems or technologies (e.g., lighting, HVAC, appliances, building shell) within several different building sectors (residential, commercial, industrial, and institutional). The enumeration indicators listed below are designed to accommodate this variability in project type:

Development/update of codes and standards

- number of energy-consuming systems or technologies (i.e., building shell, lighting, HVAC, appliances) for which energy-efficiency codes and standards are developed or updated; and
- types of buildings (i.e., residential, commercial, industrial, institutional) covered by new or updated codes.

Adoption of codes and standards

- number of energy-consuming systems or technologies for which new or updated energy-efficiency codes and standards are *adopted* at the state or local level;
- types of buildings covered by the codes that are adopted; and
- total square feet of buildings affected, if known.

Compliance with codes and standards

- number of individuals (e.g., designers, builders, code officials) trained in energy-efficiency code compliance.

Rating and Labeling

Rating and labeling systems are designed to provide information on the efficiency of energy-consuming devices, such as refrigerators and dishwashers. These ratings can provide information on the device in question to allow comparison among different products or they can provide an endorsement for any product that achieves a certain level of energy efficiency. Rating and labeling systems differ from codes and standards in that they provide information about a product's performance but do not establish a level of energy-efficiency that all devices of that type are *required* to meet. Because ratings systems that address the energy-efficiency of structures are covered under HERS/EEMs projects, this section deals primarily with non-structural energy-consuming devices. The following enumeration indicators provide a good description of program outputs in this subject area:

- number of energy-consuming devices (e.g., refrigerators, dishwashers, computers) for which energy-efficiency rating and labeling systems are developed;
- number of energy-consuming devices for which energy-efficiency rating and labeling systems are endorsed by the state; and
- number of manufacturers and retailers trained to implement energy-efficiency rating and labeling systems.

Home Energy Rating Systems and Energy Efficiency Mortgages

Home Energy Rating Systems (HERS) are used to assess the energy efficiency of residential structures. In addition to providing information for designers, builders,

realtors, and home buyers, such a rating system can form the basis for lending decisions. Energy Efficiency Mortgages (EEMs) operate in conjunction with HERS to raise mortgage limits for buyers of energy-efficient homes, thus providing an incentive (in addition to the potential for lower operating costs) for would-be buyers. Enumeration indicators can address each of these components (i.e., HERS and EEMs) separately and can focus on the number of individuals and institutions involved in the program as well as on the number of households served. Suggested enumeration indicators for this category are as follows:

- number of individuals involved in home construction and sales (e.g., designers, builders, realtors) trained to use a Home Energy Rating System;
- number of homes rated for energy efficiency using a HERS;
- number of lending institutions offering Energy-Efficiency Mortgages in conjunction with a HERS; and
- number of EEMs issued in conjunction with a HERS.

Incentives

The most common state incentive programs are rebates or offers given to consumers in return for installing certain energy efficiency measures and direct payments to utility customers for energy savings (per kWh or therm). Giving grants to individuals or local governments to fund specified energy-efficiency activities and providing tax credits are other common incentives, but those approaches are addressed in separate sections. Indicators can describe the extent of participation in state and local incentive programs, can focus on program expenditures, and can also describe the type and intensity of all energy-efficiency incentive programs under way in the state. A fairly extensive set of enumeration indicators is suggested for this type of program, as shown below:

- number of participants receiving rebates or offers under each state and local incentive program, by energy-consuming sector (i.e., residential, commercial, industrial, institutional, transportation, agricultural, other);
- number of participants receiving direct payments for savings, by sector;
- number of participants receiving other incentives for savings, by sector;
- amount of financial incentives (in dollars) provided by each rebate or offer program, by sector;
- amount of financial incentives provided by each direct payment program, by sector;
- amount of financial incentives provided by each other incentive program, by sector;
- number of energy-efficiency rebate or offer programs operated by state and local governments, by sector;
- number of energy-efficiency direct payment programs operated by state and

local governments, by sector; and
- number of other energy-efficiency incentive programs operated by state and local governments, by sector.

Interest Subsidies

Interest subsidies consist of expenditures made to enable consumers to borrow money at lower-than-market rates of interest. Payments can be made to conventional lending institutions to compensate them for lost interest over the life of a low-interest loan, or the sponsoring agency can provide the loans directly and absorb the cost associated with collecting a sub-market interest rate. In any case, the subsidized low-interest loans typically would be available only for the purchase of energy-consuming systems or technologies that meet prescribed standards of energy efficiency. The specific indicators recommended for measuring the outputs of interest subsidy programs are as follows:
- Number of participants receiving interest subsidies under each program, by energy-consuming sector (i.e., residential, commercial, industrial, institutional, transportation, agricultural, other);
- amount of interest subsidies provided (in dollars) by each program, by sector; and
- number of interest subsidy programs operated, by sector.

Alternative Fuels

Most commonly, states' alternative fuels programs are designed to encourage the use of transport fuels other than gasoline in public sector buses and vehicle fleets. These programs are often described as "demonstrations" of the viability of alternative fuels. Use of alternative fuels in the public sector can be fostered through training programs for state and local government staff and the provision of grants and loans for the procurement of alternative fuel vehicles and equipment and for the installation of alternative fuel vehicle refueling stations. The procurement function can include the purchase of alternative fuel vehicles as well as the conversion of conventional vehicles to allow alternative fuel use. State programs also can disseminate information and make grants and loans to promote the use of alternative fuels in the *private* sector. The following enumeration indicators are considered most appropriate for use with alternative fuel programs:

Programs aimed at the public sector
- number of state and local government staff receiving training on the procurement and use of alternative fuel vehicles;
- amount of grants (in dollars) given to state and local government agencies for the procurement of alternative fuel vehicles and equipment;
- amount of grants (in dollars) given to state and local government agencies for

the installation of alternative fuel vehicle refueling stations;
- amount of loans (in dollars) given to state and local government agencies for the procurement of alternative fuel vehicles and equipment;
- amount of loans (in dollars) given to state and local government agencies for the installation of alternative fuel vehicle refueling stations;
- number of alternative fuel vehicles purchased by state and local government agencies;
- number of conventional vehicles converted by state and local government agencies to allow alternative fuel use; and
- number of alternative fuel vehicle refueling stations added as a result of SEP actions or partnership efforts.

Programs aimed at private sector participants
- number of informational reports and pamphlets about alternative fuels distributed to potential users in the private sector;
- number of displays presented;
- amount of grants (in dollars) given to private sector entities for the installation of alternative fuel vehicle refueling stations;
- amount of loans (in dollars) given to private sector entities for the installation of alternative fuel vehicle refueling stations; and
- number of alternative fuel vehicle refueling stations added as a result of SEP actions or partnership efforts.

Planning

State programs can provide support for various types of state and local government planning efforts. These include the preparation of energy emergency plans, energy-efficiency plans, and public benefits plans. Each of these types of plans can address a variety of topics or sectors. While plan implementation often is under the control of the planning agency, it would be prohibitive to develop enumeration indicators for all the possible energy-efficiency activities that could be specified in the plans referred to above. Also, a focus on implementation would go beyond the topic of "planning," as such. The enumeration indicators recommended to measure the key outputs of planning efforts are as follows:
- number of energy emergency plans developed by state and local governments, specifying the specific topics addressed (i.e., transportation fuels, heating fuels, electricity, other);
- number of energy-efficiency plans developed by state and local governments, specifying subjects addressed (i.e., procurement, growth and development, land use, transportation, other); and
- number of public benefits plans developed by state and local governments,

specifying energy-consuming sectors addressed (i.e., residential, commercial, industrial, institutional, agricultural, consumer education, other).

Tax Credits

Tax credits are designed to encourage consumers to invest in energy efficiency, but experience indicates that many consumers are not aware of the existence of various credits. While SEP funds cannot be used directly to subsidize tax credits for energy conservation or renewable energy, they can be used to increase public awareness of such credits and to encourage consumers to take the energy-saving actions necessary to reap the available tax benefits. Enumeration of the number of tax payers who claim the credit puts a lower bound on the number of consumers who may have known about or been motivated by the tax credit's availability. The monetary value of the tax credits given describes the magnitude of the assistance provided. Specifically, the enumeration indicators recommended for use with this topic are as follows:

- number of tax payers claiming the tax credit, by energy-consuming sector (i.e., residential, commercial, industrial, institutional, transportation, agricultural, other) and
- monetary value of tax credits given, by sector.

Traffic Signals and Controls

Traffic signal and control projects tend to fall into two categories: those that relate to improving the flow of traffic on city streets and those that focus on highway traffic. In the first category, attention focuses on managing traffic signals. In the second category, the emphasis is on controlling traffic entering highways as well as on managing high occupancy vehicle lanes, providing on-board information to travelers, and similar efforts. Some of the traffic projects undertaken involve the installation of equipment in proportion to mileage covered by the project (e.g., synchronized traffic lights), while others install a particular piece of equipment that covers the entire length of the project (e.g., an information relay system). In general, the energy and time savings of travelers are directly related to the length of the roadway to which the project applies and the population of the metropolitan area receiving the improvements. The specific enumeration indicators recommended for use with traffic signal and control projects are as follows:

- number of energy efficient traffic signals and controls installed;
- number of street or highway lane-miles covered by traffic signals and controls installed, if known; and
- population of metropolitan area where signals and controls are installed.

Research, Development, Demonstration, and Deployment

While SEP funds cannot be used directly to conduct research on non-commercially available technology, it can be used for feasibility studies and demonstrations of new technologies and techniques that are commercially available and to disseminate the results from other research efforts. Although Research, Development, Demonstration, and Deployment (RDD&D) efforts are relatively difficult to evaluate, it can be useful to have basic information about the sectors in which those activities take place and the type of organization doing the RDD&D work. Knowing the technical sectors receiving RDD&D funding provides some indication of the type of energy likely to be saved. For example, projects falling into the transportation area would primarily be targeted to saving gasoline, whereas projects falling into the buildings areas would mainly save electricity and natural gas. The type of organization receiving RDD&D funding provides some indication of the type of research funded and its relative location on the pathway from concept to widespread adoption. For instance, one would expect that research funds provided to non-governmental organizations (NGOs) would support field testing of new technologies, while funding given to Energy Service Companies (ESCOs) and other private sector firms would probably support the initial stages of the full commercialization of the technology. The enumeration indicators recommended to measure the key outputs of RDD&D efforts are as follows:

- number of projects funded in each of the following technical areas—renewable resources, recycling, transportation, agriculture, institutional buildings, residential buildings, commercial buildings, industry, and utilities; and
- number of projects funded to each of the following types of organizations—universities, NGOs, ESCOs, other private sector firms, and other types of organizations.

Carpools/Vanpools

Carpool/vanpool projects operate by disseminating information about how to form new pools or join an existing one. Of course, responses from the public are required to accomplish the actual formation or expansion of carpools and vanpools. As with information projects, one important indicator of the performance of a carpool/vanpool project is the number of inquiries elicited. The complete set of recommended enumeration indicators for carpool/vanpool projects are:

- number of new carpool/vanpool applicants and
- number of new carpools/vanpools formed.

SUMMARY AND CONCLUSIONS

As shown above, ORNL's metrics-development effort resulted in the identification of Enumeration Indicators to classify State Energy Program activities in 21 different subject areas. The number of Indicators for each broad topical area ranged from a high of 13, for Alternative Fuels, to a low of one each for Information Inquiries and Technical Assistance. The median number of Indicators per program area is three. In combination, the set of Enumeration Indicators presented here allows state and federal-level assessors to quantify the major outputs of State Energy Program activities in a way that is clear and consistent from state to state and from year to year.

Because of possible overlap among some program areas, it may seem like the Enumeration Indicators could elicit a double-counting of program activities in some cases. For example, in the Workshops/Training program area, one Indicator is the number of attendees at workshops and other types of instructional sessions. Then, under Alternative Fuels, the number of state and local government staff receiving training on the procurement and use of alternative fuel vehicles is another Indicator. If some instructional sessions covered that topic, it would be appropriate to provide information in both program areas. That is not a problem, however, because the information provided under Alternative Fuels adds additional detail to the more general information provided under Workshops/Training. Double counting would occur only if the numbers given in different program areas were added together to provide a cumulative count of activities. However, we maintain that the calculation of a single cumulative measure describing *all* SEP activities in combination is not desirable because it would obscure the richer and more detailed view obtained by examining the program areas one by one.

Within each program area, the information elicited by the Enumeration Indicator or Indicators for that subject presents a clear picture of key SEP-funded activities. And when the pictures from all 21 program areas are combined, it yields a detailed mosaic that describes overall Program accomplishments. The use of Indicators that are uniform across states and across time shows program assessors how their accomplishments change from year to year and also how outputs compare from state to state. Such information not only allows the interested parties to quantify what has been achieved, but it also can suggest areas where changes in program operations could be worthwhile. It is our hope that use of the Enumeration Indicators to quantify the outcomes of the State Energy Program will prove useful at the state and federal level, and will add to the value of this important program.

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