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MEMORANDUM

SUBJECT: A Toolkit for States: Using Supplemental Environmental Projects (SEPs) To Promote Energy Efficiency (EE) and Renewable Energy (RE)

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The purpose of this memorandum is to share with you a new document "A Toolkit for States: Using Supplemental Environmental Projects (SEPs) To Promote Energy Efficiency (EE) and Renewable Energy (RE)." This document provides state and local governments information and resources for pursuing energy efficiency or renewable energy projects through non-federal enforcement settlements.

This Toolkit contains useful information regarding SEPs pursued at the state or local level and highlights opportunities for projects involving energy efficiency and renewable energy, which are often overlooked. The Toolkit provides information describing why states and local governments may wish to pursue EE and RE projects within settlements, examples of actual projects, summaries of cases, resources, contact information, basic information on SEP concepts, and "how to" steps. Although this Toolkit is designed for state and local regulatory agencies, it also contains useful information, including potential SEP ideas, for federal enforcement officials. All federal SEPs continue to be governed by EPA's SEP Policy, found at http://cfpub.epa.gov/compliance/resources/policies/civil/seps/.

This document is prepared and published by the State and Local Capacity Building Branch of the Climate Protection Partnership Division of the Office of Atmospheric Programs. The Toolkit is being made available online at OECA's website. If you wish to receive paper copies, please contact Art Diem of OAR's State and Local Capacity Building Branch at (202)343-9340 or diem.art@epa.gov.

Enclosure (1)

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A Toolkit for States: Using Supplemental Environmental Projects (SEPs) to Promote Energy Efficiency (EE) and Renewable Energy (RE)

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Disclaimer:

This document provides general information to state and local governments concerning inclusion of energy efficiency or renewable energy projects in state or local enforcement settlements. Any reference to a particular project, non-profit organization, for profit company, or other entity does not constitute or imply its endorsement, recommendation, pre-approval, or favoring by the United States Government. This document does not create any substantive or procedural right or benefit that is enforceable at law by a party against the United States, its agencies, its officers, or any person. This document does not supercede any statutory or regulatory requirements, or EPA policy.

A Toolkit for States:
Using Supplemental Environmental Projects (SEPs) to Promote
Energy Efficiency (EE) and Renewable Energy (RE)

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A Toolkit for States:
Using Supplemental Environmental Projects (SEPs) to Promote Energy Efficiency (EE) and Renewable Energy (RE)

I. Introduction

This document provides state and local governments with information on how to promote energy efficiency and renewable energy (EE/RE) projects in the settlement of an enforcement action through Supplemental Environmental Projects (SEPs)[1]. A SEP is an environmentally beneficial project that a violator voluntarily agrees to undertake in settlement of a civil penalty action. The settlement process can be an effective way to implement many diverse types of environmentally beneficial SEP projects other than just energy efficiency and renewable energy projects. However, this document synthesizes key ideas, examples, and resources available to state and local governments for enhancing the environmental benefit of compliance actions by using state and local SEPs to promote energy efficiency and renewable energy practices and technologies. Certainly, other environmentally beneficial projects could be promoted through SEPs and there are several other mechanisms to promote energy efficiency and renewable energy projects other than through enforcement settlements. However, these are not being explored in this document.

This state and local SEP Toolkit (hereafter referred to as the "Toolkit") pieces together relevant experience and information from many sources, including the United States Environmental Protection Agency (EPA), the Department of Energy (DOE), DOE's National Renewable Energy Laboratory (NREL), and several state and local governments.

This is the first version of the document. EPA intends to update this document on a periodic basis to keep information current and to provide additional information about energy efficiency and renewable energy projects in enforcement settlements. EPA welcomes comment on this document at any time and will consider those comments in any future revision of this guidance document. If you wish to comment on this document, please see Appendix H.

Energy Efficiency and Renewable Energy Are EPA Priorities

EPA strongly supports renewable energy and energy efficient technologies and their environmental benefits. The EnergyStar program (a joint EPA and Department of Energy program), the Green Power Partnership, and the Combined Heat and Power Partnership embody recent EPA activities that promote the use of energy efficiency and renewable energy technologies. Additionally, EPA's Office of Enforcement and Compliance Assurance (OECA) is encouraging more widespread use of SEPs in state enforcement actions.[a] To bring these important priorities together, this document focuses on how state and local governments can

[1] The term Supplemental Environmental Project, or SEP, is used generically throughout this document. This term does not imply federally implemented SEPs or EPA's SEP policy unless they are specifically mentioned.

incorporate energy efficiency and renewable energy projects into environmental enforcement settlements.

State and Local Government Role

EPA also recognizes the important role state and local governments play in improving the environmental quality of the nation. State and local governments develop and implement innovative policies that protect the environment, make energy more reliable and affordable, and enhance the economy.

Because state policies vary greatly, this document will discuss federal SEPs only as an introduction to the concept of SEPs and as a point of reference. As indicated in the discussions, state policies are not bound by the EPA SEP policy. However, because many state SEP policies incorporate similar concepts and some states have decided to use EPA's policy, the discussion of some of the key federal SEP concepts is an important introduction. This document does not establish any policies or opinions on federal SEPs, but does highlight official policies issued to date by the EPA's Office of Enforcement and Compliance that may be useful to state officials.

Can Local Governments Use SEPs?

While many states are gaining experience with Supplemental Environmental Projects, local governments can also use this policy tool to support clean energy. SEPs are a valid option for jurisdictions granted the authority to issue and settle enforcement actions. Depending on the locality, this authority may rest with a county, city, metropolitan planning organization, or similar governmental body.

This Toolkit includes:

- An overview of SEPs and EE/RE projects, including general orientation to federal and state SEP policies and requirements (Section I);
- An explanation of key SEP and EE/RE benefits, particularly those that motivate both violators and regulators to pursue EE/RE SEPs (Section II);
- EE/RE SEP project ideas and examples (Section III);
- A basic "roadmap" describing how state and local governments can pursue EE/RE SEPs, including barriers and solutions (Section IV); and
- Resources for EE/RE SEPs and helpful peer exchange (Section V and Appendices).

What is a Supplemental Environmental Project (SEP)?

A SEP is an environmentally beneficial project that a violator voluntarily agrees to undertake in settlement of a civil penalty action, as an option to offset some portion of the monetary penalty. The SEP should be a project that a violator will not otherwise be required to perform. One main goal of SEPs is to improve the environmental health of communities that have been put at risk due to the violation of an environmental law.

For settlements involving violations of federal laws or regulations in which EPA is a party, the SEP must follow official SEP policy and guidance established by EPA. For violations of state or local laws or regulations, the applicable state policy should be followed. State and local SEP policies generally contain concepts consistent with the federal SEP guidance, but they vary, and they are not required to match EPA's SEP policy. Some state policies are more flexible than EPA policy, while some are more restrictive. Others may simply specify use of the EPA policy.

Please note, the acronym "SEP" in this document is describing "Supplemental Environmental Projects" and is not referring to the United States Department of Energy (DOE) program called the State Energy Program, which uses the same acronym. [b] DOE's State Energy Program provides grants to State Energy Offices (SEOs) for energy efficiency and renewable energy demonstration projects as well as analyses, evaluation, and information dissemination. Thus, DOE's grants can potentially complement the goals and results of State Supplemental Environmental Project funding applied to energy efficiency and renewable energy. Note that federal SEP policy precludes projects for which a violator is already receiving federal financial assistance. However, state settlements are not bound by this restriction unless specifically adopted in the specific state policy.

What are EE/RE Projects?

Increasing energy efficiency reduces the amount of energy that is needed to perform a particular task. Energy efficiency technologies can be applied either at the point where usable energy is generated or at the point of energy consumption. Example applications of energy efficient technologies include combined heat and power, advanced lighting technologies, advanced equipment controls, light emitting diode traffic signals, Energy Star appliances, high efficiency motors and pumps, advanced heating ventilation and air conditioning equipment, and building envelop technologies and materials.

> Energy efficiency or renewable energy (EE/RE) projects utilize energy technologies and/or practices that ultimately reduce the need for energy generated from conventional fuels and consequently reduce emissions associated with conventional power production. Emissions reduced include nitrogen oxides (NOx), sulfur dioxide (SO2), carbon monoxide (CO), particulate matter, mercury, hydrocarbons, and carbon dioxide (CO2)

Renewable energy technologies generate energy from renewable resources and usually have low or no emissions associated with the energy generation. There are many specific definitions of renewable energy developed by different federal, regional, state and local, laws, regulations, and programs. However, a resource is generally considered renewable if it can be replenished naturally and if its use can be sustainable. Most definitions include wind, solar, geothermal, and some biomass resources. Example applications of these technologies include wind turbines, photovoltaic electricity generation, solar hot water heating, and energy from landfll and digester gases.

Energy efficiency and renewable energy projects can provide energy services for electricity, transportation, buildings, or industrial uses. They can dramatically lower environmental emissions and environmental risks compared to conventional technologies. For more information on the environmental benefits of EE/RE technologies, please see Section II (p. 12) of this document.

Overview of SEP Policies and Requirements

SEP policies and practices differ from state to state. Where allowed, the authority to issue SEPs usually originates in an agency's authority to settle enforcement actions or is specifically cited in statute. There are several key concepts and considerations for policy makers interested in pursuing SEPs. Table 1 and the paragraphs that follow provide a summary overview of key SEP requirements. Please also refer to Appendix A of this document for a reference list to EPA and state SEP policies.

Voluntary nature of entering into a SEP
For either federal or state actions, a SEP is a settlement option that a violator may voluntarily choose to enter into a settlement. This voluntary nature of a SEP does not preclude the enforcing agency from mentioning to the violator in the beginning stages of a settlement process that the violator may wish to consider a SEP and does not preclude the agency from suggesting general project ideas or resources the violator can use for further research into SEP projects. However, unless allowed in state policy, the enforcing agency should be careful not to direct the violator to a particular SEP project nor be too insistent on encouraging a SEP, which would detract from the voluntary nature of a SEP. Both the violator and the enforcing agency should agree that the particular project is appropriate for the particular settlement. If the parties agree to a SEP and it becomes part of a finalized settlement agreement, then the terms of the SEP are not voluntary and must be carried out by the violator in accordance with the settlement.

Federal SEP policy and requirements
Given the wide variation among state SEP policies, EPA SEP policy is discussed here mainly as a point of reference for state SEP opportunities. EPA's SEP Policy and similar policies of many states are posted on-line as indicated in Appendix A (see listed websites). There are a few concepts central to EPA's SEP policy that are common to some state SEP policies. Discussion of these key concepts follows.

<u>Nexus</u>
The federal SEP policy requires that a relationship, or nexus, exist between the violation and the proposed project. For federal SEPs, nexus exists only if a proposed project meets one of the following criteria:

- The project is designed to reduce the likelihood that similar violations will occur in the future; or
- The project reduces the adverse impact to public health or the environment to which the violation at issue contributes; or
- The project reduces the overall risk to public health or the environment potentially affected by the violation at issue.[c]

Under federal SEP policy, a SEP is not required to occur at the same facility where the violation occurred provided that it is within the same ecosystem or within the immediate geographical area. However, location alone is not sufficient to satisfy the nexus requirement. There is some flexibility in the interpretation of nexus, as long as the nexus criteria is met. For example, a SEP can potentailly reduce multiple pollutants in multiple media if there is a valid nexus link and if the SEP is not inconsistent with the underlying statute which was violated.

Designation of funds

Federal SEPs must not violate the Miscellaneous Receipts Act (MRA) which preserves congressional prerogatives to appropriate funds as provided for in the U.S. Constitution. Some states may have similar provisions; other states may not be subject to such restrictions. The MRA prevents federal SEPs from containing projects that:

- Donate funds to third parties;
- Call for EPA management of funds obtained through a SEP;
- Augment appropriations (absent express congressional authorization);
- Satisfy EPA's statutory obligation to perform a particular activity; or
- Supplement projects for which a violator is already receiving federal financial assistance, that is, a federal loan, contract or grant. [d e]

Minimum Penalty Requirements and Penalty Mitigation

In EPA settlements including SEPs, a minimum penalty amount is still required to maintain the deterrent effect of violating environmental laws and regulation. Also, a violator should not obtain an economic advantage over competitors that complied. For these reasons, the EPA SEP policy calls for a minimum penalty amount when a SEP project is part of a settlement agreement, which is the greater of the following: 25 percent of the gravity component[2], or the economic benefit of noncompliance plus 10 percent of the gravity element.

For the majority of SEPs, the federal SEP policy provides for mitigation credit of up to 80 percent of the value of the SEP. An exception to this mitigation percentage is made for pollution prevention projects, which may receive 100 percent mitigation credit. The percent of mitigation credit is applied to the calculated value of the SEP. The resulting figure is the amount by which the agreed upon settlement amount may be mitigated by the SEP.

Determining the value of a SEP

In federal SEPs, the value of the SEP is dependent on all costs of implementing the project as well as any projected savings or income that may result from the SEP. EPA uses a software tool, called PROJECT, to calculate the net present after-tax value of a proposed project. The software is available at the following website:
http://www.epa.gov/Compliance/civil/programs/econmodels/index.html[f]

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[2] The gravity component of a penalty is the part that addresses the seriousness of the violation, including aspects such as the size of the business, the duration of the violation, the amount of the pollutant, the sensitivity of the environment, and the toxicity of the pollutant. For more information regarding the gravity component of violations, see the discussion beginning on p.8 in the EPA memorandum "Clarification of the Use of Appendix I of the Clean Air Act Stationary Source Civil Penalty Policy"
http://www.epa.gov/compliance/resources/policies/civil/caa/stationary/penpol.pdf

Recently, EPA issued *Guidance for Determining Whether a Project is Profitable, When to Accept Profitable Projects as Supplemental Environmental Projects, and How to Value Such Projects* on the acceptability as SEPs of projects that are profitable to the alleged violator. Previously, EPA generally had disallowed profitable projects as SEPs in federal settlements. This recent memorandum clarifies that some projects could be acceptable as federal SEPs if they have longer profitability time frames (for example, five or more years or, for small businesses, three or more years) and meet certain criteria. The document also recommends that profitable projects receive a mitigation credit of no more than 80 percent for pollution prevention SEPs and no more than 60 percent for other profitable SEPs. For more information on this topic, the memorandum may be downloaded from the following page:
http://cfpub.epa.gov/compliance/resources/policies/civil/seps/

State SEP policy and requirements

If a case is related to the violation of a state or local requirement and if EPA is not a party to the SEP portion of the settlement, then the SEP would be designed using applicable state laws and policies. However, state policies may address a number key considerations similar to EPA policy.

Nexus

State policies usually require some sort of relationship between the violation and the SEP project. The extent of this required relationship in a state's SEP policy may or may not contain the same nexus requirements as EPA's SEP Policy. Many states, such as Montana, Hawaii, and Kentucky, look to EPA's SEP policy for guidance. Some states, such as Louisiana, have a much more flexible relationship requirement within their state policy.

Designation of funds

Some states face restrictions on the use of SEPs funds similar to those imposed by the federal Miscellaneous Receipts Act (described above on page 9). In contrast, other states face no such limitations, and some states even specify that compliance funds go directly toward environmental protection departments and/or functions. Most states' restrictions on the designation of the SEP funds are not as limiting as those for federal SEPs.

Penalty mitigation

Most states limit the amount of a penalty that can be offset by a SEP. For example, Texas limits SEPs to no more than 50 percent of the penalty of for-profit entities. Also, in Pennsylvania, a Community Environmental Project (Pennsylvania's terminology for a SEP) may not discount the penalty more than 75 percent.

State policies differ greatly regarding SEP mitigation percentage or multiplier. For example, in Missouri, a SEP must have a value two times the proposed penalty amount and leave a portion of the proposed penalty to be paid. In Colorado, like in EPA's policy, a strong pollution prevention project will receive a 1:1 multiplier.

Project income

States may allow project income from the SEP project according to their policy. States may wish to consider using the EPA software PROJECT to calculate the real value of the project considering project income.

Table 1. Summary of Key SEP Considerations

Key Consideration	General Concept	Federal	States
Established SEP Policy	Are there specific SEP policies to follow?	Yes - EPA SEP Policy	Some Yes. Some No. See Appendix A for complete list of policies available online.
Nexus	What must be the nature of the "connection" between the violation and the supplemental project?	EPA SEP policy indicates that a project may meet nexus requirements if it will: • reduce future similar violations • reduce impacts to public health or the environment relating to the violation, or • reduce the overall risk to public health or the environment relating to the violation. Other considerations include proximity of the project to the area affected by the regulation.	Some states have strict nexus policies, for example requiring the SEP to be located within 20 miles of the point of violation. Other states have much less strict policies.
Designation of Funds	Can SEPs supplement legislative designation of funds to environmental agencies?	No, the Miscellaneous Receipts Act prevents certain funding situations. See discussion below.	Varies by state.
Penalty Mitigation • **minimum monetary penalty** • **SEP credit toward offset**	• Are there restrictions on the amount of a monetary penalty that a SEP can offset? • How much credit toward the offset will each dollar spent on a SEP represent (i.e., will $1 spent on a SEP represent $1 of credit)?	• Yes, the penalty amount must be, at a minimum, the greater of the following: a. 25 percent of the gravity component, or b. the economic benefit of noncompliance plus 10 percent of the gravity element • Generally, mitigation credit is limited to 80 percent of the value of the SEP. Strong pollution prevention SEPs can receive a higher mitigation cerdit (up to 100 percent).	• Many states limit the amount a SEP may mitigate a penalty, but some do not. • State SEP policies also vary regarding the level of credit allowed for each dollar spent on SEP.
Project Savings	Are violators allowed to realize savings or income from SEP projects?	Income or savings accruing to the violator will be factored into the calculations that determine the value of a SEP.	Varies by state.

II. What Motivates Violators and Regulators to Pursue EE/RE SEPs in State Settlements?

There is a wide range of reasons that regulators, violators, communities, and other stakeholders are interested in pursuing SEPs in general and more specifically to fund EE/RE SEPs. The top reason is to use compliance dollars to achieve real environmental benefits, especially multipollutant emission reductions. In general, SEPs are an efficient way to achieve real environmental progress in the wake of an environmental violation. Parties engaged in a settlement negotiation should consider energy efficiency and renewable energy projects, where applicable, not only for the multipollutant benefits that can be achieved, but also for potential ancillary benefits such as enhancing domestic energy sources and energy security.

Why Pursue Environmental Projects in Settlements?

SEPs present a wide range of opportunity and benefits for regulators and regulated entities as well as for public and environmental health. Following this discussion on SEPs in general is a discussion about pursuing energy efficiency and renewable energy projects in SEPs.

Motivation for violators
There are several reasons why a violator would consider a SEP when entering into settlement. A few of these reasons include: 1) corporate responsibility, 2) interest in the community, 3) corporate image, and 4) desire to achieve environmental benefits. Additional environmental and financial benefits provide incentives as well.

<u>Environmental</u>
SEPs inherently are designed to allow the violator to perform an action that improves the environment in a meaningful way.

<u>Financial</u>
The primary financial benefit to a SEP is penalty mitigation. The violator may value such penalty mitigation even though the total payment (the fine plus the SEP) is at least as much as the original settlement amount. This value may have to do with how a company reports to various entities the amount of money expended on penalties versus other activities.

As an indirect financial advantage, there may be some positive public relations in proceeding with the SEP especially in the community where the violation occurred. However, some state policies regarding settlements may limit public relations activities and may require acknowledgment of the enforcement action that precipitated the project.

Motivation for regulators
SEPs can accomplish direct environmental benefits that would not otherwise be achieved. With a SEP, there is an opportunity to achieve some "beyond compliance" environmental benefit, even while maintaining the deterrent for non-compliance. State regulators seeking innovative approaches can give violators the option of investing in environmentally beneficial projects through SEPs. This approach represents an alternative to traditional "command-and-control"

regulation while maintaining the integrity of the regulatory process and providing lasting environmental benefit.

SEPs can demonstrate new technologies (or other new environmental practices) that otherwise would not occur due to financial constraints or requirements for a project to quickly reach a "breakeven" point. Accordingly, SEP projects may help build markets for new environmentally beneficial technology.

Why Pursue Energy Efficiency and Renewable Energy Projects in SEPs?

Energy efficiency and renewable energy technologies have multiple benefits. Installing new EE/RE projects through state SEPs can achieve environmental benefits that would otherwise not occur. This section describes how energy efficiency and renewable energy projects in state SEPs can yield significant benefits for the environment and public health, energy, and the economy through the use of environmental compliance dollars.

In addition to the benefits mentioned below, for federal SEPs and some state SEPs, it is important to note that violators may be more motivated to pursue energy efficiency and renewable energy projects over some other projects because they may be considered pollution prevention projects, which may receive a higher mitigation credit percentage. A higher percentage means that more of the project value can mitigate the civil penalty. The environmental benefits of an EE/RE project for a state SEP also represent an opportunity for a defendant to eventually take a leadership role in supporting energy efficiency and renewable energy technologies or practices if they are continued beyond the duration of the state SEP agreement.

Healthy communities and environment
As mentioned above, an EE/RE project will reduce the generation of energy from conventional fuels and thereby displace emissions associated with such energy generation. Energy efficiency and renewable energy projects can achieve multi-media and multi-pollutant emission reductions. The benefits of the project can enhance a local community economically as well as environmentally. The violator may also realize environmental, energy, and financial benefits associated with energy efficiency and renewable energy projects implemented through a SEP.

<u>Pollution prevention objective</u>
Pollution Prevention is one of several factors to be considered under the federal SEP policy and many states policies. Energy efficiency and renewable energy projects prevent pollution by displacing the use of fossil fuels to provide energy. The pollution prevent aspect of a project may allow a greater percentage of the value of the project to mitigate a portion of the penalty, depending on the particular state policy.

<u>Multiple pollutant reductions</u>
Energy efficiency and renewable energy projects do not just reduce emissions from one pollutant or class of pollutants as typical "end-of-pipe" pollution control technologies do. Energy efficiency and renewable energy projects will displace all emissions associated with the

displaced energy generation, including oxides of nitrogen (NOx), sulfur dioxide (SO2), mercury (Hg) and other metals, carbon monoxide (CO), as well as carbon dioxide (CO2).

Table 2. Comparing Multipollutant Reductions of EE/RE Projects with Traditional Controls

EE/RE Projects Reduce All Emissions [g]			
NOx Control Type	**Percent NOx reduced on a per MWh basis**	**Percent CO2 reduced on a per MWh basis**	**Percent PM reduced on a per MWh basis**
Cheapest Combustion Controls	50	0	0
Average Combustion Controls	55	0	0
Average Selective NonCatalytic Reduction	37	0	0
Average Selective Catalytics Reduction	75	0	0
Energy Efficiency & most Renewable Energy	100	100	100

Note: Traditional control options usually are applied to all of the output of a facility, whereas EE/RE measures may offset only a portion of the output of a facility or group of facilities. Therefore, the total emission reductions associated with traditional control measures may be greater than EE/RE measures depending on the costs and effectiveness of the particular control measure and EE/RE measure.

There are several ways to estimate the emission reductions associated with energy efficiency and renewable energy projects. For projects that are expected to displace grid produced electricity, one would estimate the generation and emissions of the sources that would provide electricity to the grid in the absence of the EE/RE project.

The first and simplest way to estimate the emission reductions is to apply an emission factor to the energy generation or energy savings. This emission factor can be an average emission rate for a specific set of electric generators within a given region or a marginal emission rate. A marginal emission rate is the emission rate of the generators that operates "on the margin," that is the last generator dispatched to deliver power to the grid at a particular time. Both marginal and average emission rates have been used to estimate emission reductions of particular SEP projects.

Another way to estimate the emission reductions is to perform some dispatch modeling or make other assumptions about what generation would be

In addition to eGRID, EPA provides several other green power and clean energy tools that may be useful at http://www.epa.gov/cleanenergy/

- Power Profiler: http://www.epa.gov/cleanenergy/powpro/screen1.html
- Green Power locator: http://www.epa.gov/greenpower/locator/index.htm

displaced by the project to calculate the emissions benefits. One would also need to account for any emissions of the project itself when estimating the emissions benefits of the of the project.

EPA's Emissions and Generation Resource Integrated Database (eGRID)[h] is a good source of information for fossil fuel average emission rates or average emissions rates from electricity generators. The information is available at several different levels: for example, by plant, by state, by power control area, by region, and the United States total. Other emission estimation methods are available, many of which are highlighted in a report conducted by the North American Commission for Environmental Cooperation. [3] [i]

Multimedia pollutant reductions

In addition to reducing air pollutant emissions, as described above, energy efficiency and renewable energy projects can also reduce environmental impacts from traditional energy production affecting water resources, land, and waste production or management. More specifically, energy efficiency and renewable energy projects can:

- Conserve water by decreasing the amount used in traditional generation processes (e.g., fossil fuel electricity generation typically uses a source of water for cooling processes); and
- Decrease air pollutant deposition on land and in water bodies due to power production (e.g., reduced SO_2 emissions can result in reduced acidification of lakes, streams, soils, and ground water).
- Reduce solid wastes from electric generation, for example flyash.

Energy benefits

Energy efficiency and renewable energy projects may achieve a range of energy benefits for the installation site as well as for surrounding communities, including:

- Building Experience with EE/RE technologies;
- Hedging against volatile fuel prices (long-term);
- Enhanced power quality and reliability;
- Enhanced energy security and domestic power source; and
- Diversity of power generation technologies.

Energy efficiency and renewable energy projects can generate cost savings for electricity customers while enhancing energy reliability and security through development of clean, renewable energy sources. By reducing energy consumption, EE projects can play a key role in managing peak loads. When combined with load curtailment programs, EE projects can help avert energy price spikes during peak load periods when electricity demand surges. Similarly, renewable energy projects, which have no fuel costs, also reduce price volatility by providing a "hedge" against natural gas price spikes as evidenced in a recent report by the Lawrence Berkeley National Laboratory. [j] Also, the National Petroleum Council recently released a report on natural gas that states “greater energy efficiency and conservation are vital near-term and long-term mechanisms for moderating price levels and reducing volatility”.[k]

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[3] The Commission for Environmental Cooperation (CEC) is an international organization created by Canada, Mexico and the United States under the North American Agreement on Environmental Cooperation (NAAEC). The CEC was established to address regional environmental concerns, help prevent potential trade and environmental conflicts, and to promote the effective enforcement of environmental law. The Agreement complements the environmental provisions of the North American Free Trade Agreement (NAFTA).

States can improve the reliability and security of the electrical power grid by locating renewable energy projects at or near electricity customer facilities (e.g., a school or hospital). Onsite sources (also known as "distributed generation") can generate electricity during episodic blackouts or power interruptions. RE projects use domestic sources of energy. With net metering, excess electricity generation can be sold back to the utility for use by other customers on the electricity grid. Energy efficiency and renewable energy projects are particularly beneficial for regions or facilities where access to the electricity transmission grid is constrained or unavailable.

Economic benefits

Energy efficiency and renewable energy projects can also provide some economic benefits to an area, by providing a local source of energy generation, by stimulating energy service companies or renewable energy companies in the area. On-site (a.k.a. distributed) renewable energy projects and energy efficiency projects can also provide significant energy cost savings to the point of installation. To the extent that the projects increase the energy price stability in the local area, such benefits would be enjoyed by the local community.

III. Project Examples and Ideas

This portion of the Toolkit provides examples of actual environmental compliance actions settled at federal and state levels that include energy efficiency and renewable energy projects and other related technologies (e.g., alternative fuels). General ideas for additional EE/RE projects are also presented, along with resources for finding other ideas (e.g., through SEP libraries, experienced EE/RE SEP contacts, and state or regional energy contacts).

Actual Settlements Involving Energy Efficiency and Renewable Energy Projects

Tables 3, 4, and 5 below present a sample of energy efficiency, renewable energy, and alternative fuel technology options that have been included in actual federal and state case settlements. Along with each listed technology option is a very brief description of a the project in which it has been applied, the monetary value of the project, and the regulating entity or entities (i.e., state, federal, or a mix). These projects span several technologies, applications, monetary values, and geographic locations. However, they represent only a small sample of projects, and there is a wide range of opportunity for energy efficiency and renewable energy projects beyond those presented.

Energy efficiency
Energy efficient technology ranges from energy efficient lighting for homes to sustainable or "green" design for buildings of all sizes. Federal and state case settlements shown in Table 3 demonstrate how these technologies can be applied in SEPs. There are numerous other applications of EE in SEPs as indicated in Table 6.

Table 3. Sample of Actual SEPs Involving Energy Efficiency Technology

Technology Option	Example	SEP Value	Regulating Entity(s)
ENERGY EFFICIENCY			
Light change-out	An airport agreed to replace traditional lights with energy efficient lights (in a 2001 settlement for violating air quality standards). [1]	$57,600	State of Colorado
Green roofs/roof gardens and low impact development	A public water and sewer authority agreed to undertake or fund storm water pollution prevention projects (in effect promoting efficient energy use for wastewater management) including low impact development (e.g., vegetative buffers, rain barrels and cisterns, increased tree cover) and a fund for developing roof gardens (in a 2003 settlement for violations of the Clean Water Act).	$1.7 million	EPA

Technology Option	Example	SEP Value	Regulating Entity(s)
ENERGY EFFICIENCY			
EE assessment and implementation	A manufacturer agreed to fund an EE assessment at its manufacturing facility, and implemented the study recommendations to install motion light detectors and energy efficient lights (in a 1999 settlement for violating air quality standards).[m]	$55,400	State of Colorado
Energy management system upgrades	A university agreed to purchase and install tight-fitting fresh air dampers and to connect additional air handling units to its energy management computer control system to allow more precise control of operating times and to reduce cold air leakage to improve EE (in a 2000 settlement for violating air quality standards).[n]	$35,000	EPA - Region 5 (Wisconsin)
EE audit, report, and implementation for public facilities	A utility agreed to perform an energy audit at a primary or secondary school in the vicinity, issue a summary report, and implement conservation and/or reliability measures recommended in the report (in a 1999 settlement for violating air quality standards).	$5,000	State of Maryland

Renewable energy

Table 4 below provides examples of actual case settlements involving renewable energy SEPs. These examples include both state and federal settlements spanning wind and solar power.

Table 4. Sample of Actual SEPs Involving Renewable Energy Technology

Technology Option	Example	SEP Value	Regulating Entity(s)
RENEWABLE ENERGY			
Wind power	An industrial gas compression company agreed to purchase wind power premiums from its servicing utility over a five-year period (in a 2000 settlement for violations of CFC maintenance requirements). The utility managed the funds in an escrow account, which the utility used to pay for wind power generation over the five year period. To meet the increased demand generated by the settlement, the utility is installing a new wind turbine.[o] Also, earnings on the escrow account are invested in additional clean power.	$303,000	State of Colorado
Solar power (photovoltaic)	A utility agreed to install small photovoltaic systems on three public buildings in the same county as the facility, including two schools and an environmental center (in a 2002 revised settlement for violations of visible emission standards).[p]	$75,000	State of Maryland

Technology Option	Example	SEP Value	Regulating Entity(s)
RENEWABLE ENERGY			
Wind power	A steel manufacturer agreed to implement community-based SEPs in communities near company facilities, including (among many others) wind turbine power generation (in a 2000 settlement for violations of CAA, CWA, EPCRA, and RCRA - illegal pollutant emissions in air, water, and soil).	$2 million	EPA and four States: • Arkansas • Utah • South Carolina • Nebraska
Wind power	A state power utility system agreed to purchase wind-generated electrical power over a five year period and to publicize its agreement, stating that it was part of a 2003 settlement for violating air quality standards. Utah (and other states) often use "green tags" in settlements such as this.[4]	$1.43 million	State of Utah

As referenced in Table 4 (State of Utah) and in Table 6 below, "green tags" or renewable energy credits (RECs) represent the comprehensive environmental benefits of "units" of renewable energy produced. A defendant (as well as private individuals) can purchase green tags over a specific period of time from a power provider or a from a green tag broker. Often the provider or broker manages the funds in an escrow account, which is used to pay for wind power generation over a specified period of time. The purchaser pays for green tags separate from the actual power it uses. However, the purchase funds are invested directly into green power production and/or the development of green power infrastructure (e.g., wind turbines).

Green tags can offer a wide range of benefits. A few key benefits are that they:

- provide an alternative when there is no renewable energy power to purchase in a given state or region;
- can be used to "offset" a defendant's emissions even when they are capped or travel across borders into several other states;
- are easily applied to small or large penalty amounts;
- are easy to negotiate (i.e., with little to no transaction costs); and
- can create jobs and/or income in a range of communities (e.g., on Native American lands in the northern Great Plains and Montana).

In order to help ensure that renewable power and green tag purchasers are getting what they pay for, EPA has been supporting green power certification work by the nonprofit Center for Resource Solutions (CRS). Green-e is a voluntary certification program for renewable electricity products. The Green-e Program sets consumer protection and environmental standards for electricity products, and verifies that Green-e certified products meet these standards. Electricity products that meet the Green-e Standard for environmental excellence are denoted by the Green-e logo. Additional information regarding Green-e is available at http://www.green-e.org/.

[4] See description of green tags following this table.

Alternative fuels and other alternative energy technology
A third category of technology that can be included in SEPs is alternative fuels and other alternative energy (AF/AE). Various applications of AF/AE technology result in energy efficiency and environmental benefits very similar to energy efficiency and renewable energy technologies, as discussed in Section II (Why Pursue EE/RE Projects in SEPs?). Table 5 presents a number of state and federal settlements which included AF/AE projects, including truck stop electrification (idle reduction) as well as alternative fuel vehicles, buses, and fueling stations. Note that several of these examples demonstrate environmental benefits for multiple pollutants and/or multiple media, even though the violation may have taken place for one pollutant or in one media.

Table 5. Sample of Actual SEPs Involving Alternative Fuels and Other Alternative Energy Technology

Technology Option	Example	SEP Value	Regulating Entity(s)
ALTERNATIVE FUELS / ALTERNATIVE ENERGY			
Alternative fuel equipment and vehicles	A chemical company agreed to purchase alternative fuel equipment and vehicles for the City of Houston (in a 2002 settlement for violating air quality standards).	$25,937	State of Texas
Truck stop electrification	An oil refinery will work with Northeast States for Coordinated Air Use Management (NESCAUM) to partially fund the installation of electrical hookups (for 175 parking spaces) to eliminate diesel emissions from idling trucks at a truck stop/travel center in Gloucester County (in a 2003 settlement for violating state and federal air pollution laws).	$1million	State of New Jersey and EPA
Diesel retrofit, compressed natural gas (CNG) vehicles, and CNG fueling stations	A New York municipality agreed to install diesel retrofits on diesel vehicles, purchase ten CNG sanitation trucks, and install six CNG fueling stations (in a 2000 settlement for CFC violations).	$2 million	EPA Region 2 (New York State)
Cleaner diesel fuel	A metallurgical facility agreed to fund a Clean School Bus pilot project - funding the installation of diesel retrofit pollution control devices on about 40 buses in Norwich school district and paying the additional funds needed to purchase ultra low sulfur diesel fuel for the buses (in a 2001 settlement for violations of air and water pollution regulations).	$250,000	State of Connecticut
Alternative fuel vehicles (AFVs) and fueling stations	An energy supplier agreed to fund the purchase of AFVs and the construction of a natural gas fueling station for the AFVs in Weld County, Colorado (in a 2001-2002 settlement for violation of air quality standards).	$238,500	State of Colorado
CNG vehicles and public CNG fueling stations	A Kansas municipality agreed to install and operate a public CNG fueling station and to purchase ten CNG vehicles over a three-year period (in a 1998 settlement for violating water quality standards).	$205,000	EPA Region 7 (Kansas)

Technology Option	Example	SEP Value	Regulating Entity(s)
ALTERNATIVE FUELS / ALTERNATIVE ENERGY			
Alternative fuel mass-transit buses and system	A polymers manufacturer agreed to contribute toward a new mass transit system in the City of Odessa, Texas, using low-emission, alternative-fueled buses. They also agreed to purchase such buses for the Odessa Senior Citizen's Center (in a 2002 settlement for violating air quality standards).	$70,000	State of Texas
CNG vehicles and fueling stations	A vehicle manufacturer agreed to donate CNG vehicles and install CNG fueling stations at three national airports (in a 1998 settlement for violating national air quality standards).	$1.5 million	EPA (Washington, D.C, Oakland, Palm Springs)
Hybrid Vehicles	A electric generating company agreed to spent about $14 million for environmental projects in the five states, including $1 million to buy hybrid vehicles in Virginia's Shenandoah National Park	$1 million	EPA

Additional Energy Efficiency and Renewable Energy Project Ideas for State SEPs

Table 6 provides a range of additional project ideas involving energy efficiency, renewable energy and AF/AE technologies. These ideas are intended to spur more thinking about using state settlements to fund such projects. Note that these are general ideas, and that not all of them would satisfy every state enforcement agency's SEP policy. Also, many of the concepts described below can be applied to all three types of projects (EE, RE, and AF/AE) even though they may only be presented here under one category.

Resources for more potential EE/RE SEP ideas are provided in Section V (Resources for EE/RE SEPs and Peer Exchange) and associated Appendices, including more case settlements, existing listings or "libraries" of project ideas, and a peer exchange network. In addition, all state regulators have access to State Energy Offices (SEOs). SEOs can assist environmental regulators in many ways, including:

- providing awareness and expertise regarding clean energy technologies and estimates of environmental benefits;
- suggesting appropriate projects and providing necessary review;
- providing a "pipeline" of different clean energy project ideas;
- educating regulators about possibilities for clean energy SEPs in states with narrow nexus requirements (e.g., identifying SEPs for schools or specific geographic areas);

Contact information for State Energy Offices can obtained from either of the following two webpages:
Department of Energy
http://www.eere.energy.gov/state_energy_program/seo_contacts.cfm
National Association of State Energy Offices
http://www.naseo.org/members/states.htm

- building working relationships between SEOs and state attorney generals'(AG) offices to identify and/or address potential barriers to clean energy projects;
- identifying SEOs as useful "go to" contacts for AG offices in instances when swift technical input or action is needed regarding potential clean energy SEPs; and
- complementing existing energy efficiency and renewable energy project grants (under separate funding authorities).

Table 6. Sample of Additional Project Ideas Involving Energy Efficiency, Renewable Energy and Alternative Fuels

Technology or Mechanism	Project Idea
ENERGY EFFICIENCY	
Energy Efficient Building Technologies	Fund the application of energy-efficient building technologies for new public structures.
Installation of ENERGY STAR qualified products at public buildings	Install ENERGY STAR qualified light-emitting diode (LED) traffic signals in a local municipality. Replace exit signs in large public facilities (or in own facilities) with new ENERGY STAR qualified LED exit signs. Re-invest energy cost savings into additional other EE measures and activities.
ENERGY STAR Homes	Assist in the administrative processing of new home building permits for ENERGY STAR labeled homes. Fund a local financial pool with local lenders to "buy-down" market interest rate for mortgages for ENERGY STAR labeled homes.
ENERGY STAR light fixtures	Replace indoor and outdoor light fixtures in low income housing with ENERGY STAR qualified fixtures.
Weatherization	Install improved insulation in select buildings on a public or private campus and/or in low-income housing to leverage public programs.
EE assessment and break-even analysis	Fund or perform EE assessments and/or break-even analyses for small businesses and public operations.
RENEWABLE ENERGY	
Purchase Renewable Energy Certificates (RECs)	Purchase RECs to:[5] • "offset" emissions from current electricity consumption, • fund RE infrastructure development, and/or • help "buy-down" the cost of RE power production and subsequently enhance market development.
RE project "buy-down" fund	Establish and pay into (over time if appropriate) a fund that will be used to subsidize initial investment in projects to supplement the energy supplies of local or state agencies (e.g., at schools, community centers, libraries, other government buildings).

[5] See discussion of green tags following Table 3 (p. 17).

Technology or Mechanism	Project Idea
Biomass power - direct-fired combustion, co-firing, gasification, small modular biopower	Generate electricity from biomass resources (e.g., timber residues, manure from consolidated animal feeding operations, landfill methane, dedicated crops such as switchgrass) instead of fossil fuel by installing new biopower capacity.
ALTERNATIVE FUELS	
Hybrid and alternative fuel vehicles	Purchase hybrid or alternative fuel buses, trucks, or light-duty vehicles for own fleet or for a public fleet. Alternative fuels include hydrogen, biodiesel, ethanol, and natural gas (among others).

IV. State Regulator's Roadmap to EE/RE SEPs

This section of the Toolkit provides an overview of the general process regulators (at the state or local level) may follow to pursue SEPs, particularly those involving energy efficiency, renewable energy, and other emerging energy technologies (e.g., alternative fuels). The discussion below describes nine basic steps in the process, potential barriers, and potential solutions.

Nine Basic Steps

Regulators can use the following basic steps to help incorporate EE/RE SEPs into routine practices with relative ease and to subsequently maximize the environmental benefit of compliance enforcement penalty funds.

Step 1: Before you have a case in-hand, familiarize yourself with enforcement settlement rules and policies applicable to your area or jurisdiction.
Regulators may refer to guidance on state enforcement policies through readily available resources. Appendix A of this Toolkit (EPA and State SEP Policies and Guidance) contains state policies that are available online. Although many states refer to the term "Supplemental Environmental Project," some states may use other terms such as "Supplemental Project," or "Community Project." For further insight, regulators are also encouraged to assess:

- whether or not there are any "deal-breaker" provisions in their state that could prevent or impede developing a SEP project, especially an EE/RE project,
- how their state's environmental penalty funds are presently earmarked or used, and
- if there are any prior EE/RE projects in settlements in which your state has been involved.

Step 2: Brainstorm EE/RE project ideas to have a few ideas "in-pocket" for easy recall and consideration.

- "Ready-made" project ideas are likely to help move settlement processes along.
- Both the regulator and the regulated are best served if one or both of them already have some project ideas in mind for consideration in a settlement. Both parties can keep a running list of ideas as a handy resource and as a reminder to make connections with key stakeholders.
- Consider what viable energy efficiency and renewable energy resources are available in (or near) your state, including: wind, solar, biomass, energy efficiency programs, existing utility "green pricing," or similar programs.
- Use available resources, including key stakeholders.

Step 3: Before or during the development of a Notice of Violation (NOV), consider SEPs as one of many settlement options.

- Consider briefly informing the violator of this option in initial NOV correspondence.

Step 4: Educate key stakeholders and partners about the concept of including energy efficiency and renewable energy projects in state enforcement settlement "into the loop" as early as you can; if possible, during settlement negotiations (before a consent decree is signed).
Only parties to the settlement can participate in the settlement process and settlement negotiations. However, key stakeholders, such as the Attorney General's Office, State Energy Office,

DOE/NREL, and EPA can provide valuable information that may facilitate consideration of including energy efficiency and renewable energy projects in state settlements. The main objectives of this step are to: 1) promote "buy-in" and 2) gain useful insight, particularly regarding the technical feasibility, realistic expense, and environmental benefits of potential EE/RE projects.

- Informing key players (such as state Attorneys General) early about EE/RE project ideas will serve to remind them of the SEP option and, more specifically, to allow time to educate them about the technical feasibility and/or environmental benefits of a given project.
- State Energy Offices (SEOs) represent another type of key player, who can provide timely, important technical information on a range of EE/RE technology options (including accurate estimates of capital costs and environmental benefits).
- DOE/NREL can provide relevant technical information and/or project ideas whenever helpful.
- If an environmental project planning and management organization is involved at an early stage, it may also offer meaningful project ideas and more importantly plan with the state regulator how it will take on SEP project management, monitoring, and closure roles if the regulator so desires.
- Other important contacts are provided in Appendix C.

Step 5: Clearly inform violators that EE/RE SEPs are a *voluntary* option that they may want to explore for inclusion in a settlement, although they are not required to do so.
Inform violators that EE/RE projects are an option (among others) in settlements, and that they are completely free to propose or decline the inclusion of a SEP in the settlement, with no negative ramifications. You may also consider providing a very brief overview of the applicable state enforcement policy, including an indication of the portion of the enforcement penalty that may be offset by inclusion of an EE/RE project.

Step 6: Once a violator expresses interest in learning more about EE/RE projects, enter into further dialogue to ensure all parties are aware of the process, resources for project ideas, including energy efficiency and renewable energy technologies or applications, and benefits.

- Explain the public and environmental benefits of such projects. Ssee Section II (p. 12).
- Give them more detail about the relevant state enforcement policies or process.
- Point them to potential resources for developing specific project ideas (see Section III, Section V, and related Appendices).
- Remind them about whether the regulating agency will or will not be able to discuss the pursuit of a SEP any further unless a violator first proposes it, depending on state enforcement policy.

Step 7: Once a violator proposes a project, assess its value and decide if it is acceptable, requires modification, or is unacceptable according to the applicable state enforcement policy.
State Energy Office staff and DOE/NREL's SEP Support Team can also help assess the technical feasibility, realistic expense, and environmental benefits of the proposed project. Section I of this Toolkit provides an overview of SEP policies and requirements, but it cannot be used to determine if a SEP meets state policy. Regulators should be extremely familiar with applicable state enforcement policies and obtain legal counsel if necessary.

Step 8: Tap into resources available to help develop and negotiate an EE/RE SEP, to manage the project, and to ultimately complete the SEP process (including project monitoring).

As presented in Section III and Section V, there are a number of sources for information and technical assistance that can be very helpful in developing and/or negotiating an EE/RE SEP. The Toolkit also provides website links to samples of state and federal settlement agreements (see Appendices D and E). For help in managing, monitoring, and completing the SEP process regulators and/or violators may use environmental organizations (See Appendix G for a list). These organizations can also help identify appropriate EE/RE projects, pulling from project "pipelines" or lists they maintain. Some of these organizations also aggregate smaller settlement dollars into larger pools when appropriate for funding larger projects (according to applicable SEP policy). Other organizations serve as brokers for green tags.[6] It is important to note that EPA neither supports nor endorses any non-governmental entity that offers assistance or services regarding SEPs. State and local governments who consider working with such entities regarding SEPs should ensure that any activities are performed in accordance with applicable enforcement policies.

Step 9: Determine if extra time may be needed initially to negotiate a settlement agreement that includes an EE/RE SEP, and if so, plan to provide that time.
For regulators who have never before negotiated an EE/RE project or any other type of project as part of an enforcement settlement, they may wish to allow more time than they do for traditional settlements. However, as more regulators and defendants/respondents become familiar with such settlements and incorporate the basic steps into their core practices, the process will become faster. In the long run, project negotiation may ultimately serve to save time and increasingly protect public and environmental health through enforcement actions.

Clearing Barriers Along the Way

Regulators and violators alike may face barriers to including EE/RE projects in settlements, both real and perceived. Table 7 briefly describes some of these potential barriers as well as suggestions for overcoming them. Discussion following the table provides further insight into less tractable barriers and, in contrast, ideas for changing stakeholder perspectives to promote energy efficiency and renewable energy in state SEPs.

Table 7. Solutions for Potential Barriers to EE/RE Projects in State SEPs

Potential Barrier	Potential Solution
Demonstrating "nexus" or relationship between the benefits of an EE/RE SEP (i.e., reducing energy demand or "purchasing" renewable energy) and a violation by a party other than a power producer. • Pursuing goals for SEP benefits to accrue directly to the community in which the violation occurred, while the power producer is located elsewhere.	**Confirm the state enforcement policy requirements** in your state. **Many state SEP policies have more flexibility** than EPA's SEP Policy with regards to nexus requirements. • Environmental benefits due to reduced power production through traditional means can potentially result in broad benefits to more than one community (including the one in which the violation occurred).

[6] For a description of green tags, see the discussion following Table 4 (p.18).

Potential Barrier	Potential Solution
Limited awareness among stakeholders about energy effiiciency and renewable energy technologies, including the wide variety of project options, realistic costs, and benefits.	**Use the Toolkit and tap into the readily accessible expertise** identified herein, including State Energy Offices, DOE/NREL's SEP Support Team, or other relevant contacts.
Estimating/quantifying the environmental benefits of an EE/RE project.	**Utilize free technical assistance and estimation tools** available from DOE/NREL's SEP Support Team, EPA, and others provided in the Toolkit.
Stakeholder perception that EE/RE SEPs are too labor intensive in that they do not have the time or resources to develop project ideas, manage the process, and/or monitor the project**.**	**Use resources (including human resources) provided in this Toolkit to facilitate all phases** of EE/RE SEP development and implementation. Contacts are eager to help and templates are available or forthcoming.
Fear of defendants/respondents misinterpreting regulators' presentation of the SEP option as indication that a SEP is mandatory (although SEPs are voluntary).	As explained under Step 5 above, regulators can **clearly inform (and remind) defendants that they are free to propose or decline SEPs** in a settlement. **DOE/NREL's SEP Support Team** may also provide assistance.
Perception that small negotiated penalties do not provide adequate funds to support an EE/RE project. • transaction costs • many, small penalty settlements	Provided that relevant state SEP policies allow flexibility (as most states do), consider: • **permitting the defendant/respondent to buy "green tags,"**which can be purchased with any amount of funds at very low to zero transaction costs; and • **pooling penalty funds from several settlements to form larger funds** • **leveraging other funds** such as system benefit charges (e.g., to buy-down wind farms/turbines) and DOE's State Energy Program.
Perception of "letting violators off easy" via • reduced penalties and/or • potential project income.	Recognize and convey to stakeholders that: • **violators will pay a minimum of the total amount of penalty dollars** - some of the dollars will simply go directly into an environmentally beneficial project (SEP); • there are **provisions for limiting anticipated project income** if appropriate (see Section I "project income" p. 11); • **project income may be funneled into additional environmental projects.**

Other potential barriers to EE/RE projects in SEPs

Unfortunately, there are some potential barriers about which you have no control. The following list summarizes a few of the main ones.

- Some state policies require that penalty funds (or SEP benefits) accrue directly to the community in which the violation occurred, and in some instances to schools. These policies may essentailly prohibit EE/RE projects or may just limit the types of EE/RE projects or their locations.
- Some states have zoning laws that prohibit structures such as wind turbines or solar panels.
- SEP settlement funds depend entirely on environmental enforcement proceedings, which can be lengthy and complicated.

- In federal settlements, SEP funds cannot be used for an environmentally beneficial project if the potential fund recipient (e.g., the violator) is already receiving an EPA grant. This is important to note if some states copy the federal SEP policy.

"Crawling out of the box"
Regulators with experience in state SEPs also provide meaningful insight into strategies for developing and negotiating for successful EE/RE projects, including ideas for changing stakeholder perspectives to promote innovative compliance enforcement. In Appendix G, one state regulator from Utah provides a number of ideas toward this result (which he terms, "crawling out of the box."). As mentioned previously, please keep in mind that some state SEP-related ideas may not be consistent with all enforcement or SEP policies (i.e., federal or other states' policies). However, the ideas in Appendix F reflect the flexibility that some states may have in applying EE/RE projects in SEPs.

V. Resources for EE/RE SEPs and Peer Exchange

The Appendices of the Toolkit provide a wealth of additional information for regulators potentially interested in pursuing EE/RE SEPs now or in the future. As referenced in previous sections, these appendices include:

- Appendix A - EPA and state SEP policies and guidance
- Appendix B - SEP libraries – EPA and state
- Appendix C - SEP contacts and Peer Exchange Network
- Appendix D - Cases and settlements including EE/RE SEPs
- Appendix E - Sample SEP outreach documents
- Appendix F - "Crawling Out of the Box"- ideas to spur agency culture that supports EE/RE SEPs
- Appendix G - Non-governmental entities that can provide assistance on SEPs
- Appendix H - Comments/Suggestions for next version

APPENDIX A: EPA, State, and Local SEP Policies and Guidance

Agency	Policy	If not available, other SEP, organizational or contact information
U.S. EPA	Supplemental Environmental Projects (SEPs) Policy and Guidance http://cfpub.epa.gov/compliance/resources/policies/civil/seps/ http://www.epa.gov/compliance/civil/programs/seps/index.html	
Alabama	Not available	Office of General Counsel http://www.adem.state.al.us/AgencyOverview/GenCounselOV.htm
Alaska	Not available	http://www.law.state.ak.us/department/civil/civil.html#enviro Craig Tillery, Chief Assistant Attorney General, Section Supervisor, 907-269-5100
Arizona	COMPLIANCE & ENFORCEMENT HANDBOOK Arizona Department of Environmental Quality, Office of Special Counsel, Version - 7/1/02 http://azdeq.gov/function/forms/download/handbook/fullhandbookw.pdf (pp. 8-3 through 8-9) (pp. 51 of 567 through 57 of 567) referring page: http://www.azdeq.gov/function/forms/docs.html#hand	
Arkansas	Supplemental Environmental Project (SEP) Policy and Proposal Guidelines http://www.adeq.state.ar.us/legal/sep.htm (Updated as of August 07, 2003)	
California	CAL/EPA Recommended Guidance on Supplemental Environmental Projects, October 2003 http://www.calepa.ca.gov/Enforcement/Policy/SEPGuide.pdf	
California - local	Bay Area Air Quality Management District Supplemental Environmental Projects Policy http://www.baaqmd.gov/pln/plans/ozone/2003_meetings/sepp.pdf	
Colorado	Colorado Department of Public Health and Environment Agency-wide Supplemental Environmental Projects Policy, January 2003 http://www.cdphe.state.co.us/ap/down/settlemanual.pdf	

Connecticut	POLICY ON SUPPLEMENTAL ENVIRONMENTAL PROJECTS, March 25, 1993, rev'd February 15, 1996 http://www.dep.state.ct.us/enf/policies/sep.pdf referring page: http://www.dep.state.ct.us/enf/enfpol.htm	
District of Columbia	Not available	Environmental Health Administration, Air Quality Division http://dchealth.dc.gov/services/administration_offices/environmental/services2/air_quality/servicesce.shtm
Delaware	Policy on Penalty Assessments Associated with Administrative Enforcement Actions http://www.dnrec.state.de.us/dnrec2000/admin/enforcement/penaltyassessment/penaltyassessmentpolicy.htm	
Florida	Directive 923, SETTLEMENT GUIDELINES FOR CIVIL AND ADMINISTRATIVE PENALTIES, January 24, 2002 http://www.dep.state.fl.us/admin/depdirs/pdf/923.pdf http://www.dep.state.fl.us/admin/depdirs/directives.htm	
Georgia	Not available	Enforcement Orders http://www.dnr.state.ga.us/dnr/environ/enforder_files/orders.htm Contact Information for the Air Protection Branch http://www.dnr.state.ga.us/dnr/environ/aboutepd_files/branches_files/apb.htm
Hawaii	Not available	The Environmental Notice February 23, 2003 http://www.state.hi.us/health/oeqc/notice/notice/23feb2003.pdf lists a count of SEP projects and cites the Environmental Planning Office as a point of contact for the table (808)586-4337. Current issues are available at http://www.state.hi.us/health/oeqc/notice/
Idaho	DEQ GUIDANCE DOCUMENT #GD98-1: Supplemental Environmental Projects http://www.deq.state.id.us/about/policies/gd98_1.cfm	

Illinois	Not available	Performance Partnership Agreement http://www.epa.state.il.us/ppa/ See p.117 of the 2001 agreement for reference to expanding role of Supplemental Environmental Projects
Indiana	Supplemental Environmental Project Policy, April 5, 1999 http://www.in.gov/idem/enforcement/oe/policy/nrp/supplemental.html	
Iowa	Not available	David Wornson 515-242-5817 Michael Murphy 515-281-8973
Kansas	KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT BUREAU OF WASTE MANAGEMENT POLICY 00-03 related to Supplemental Environmental Projects, July 20, 2000 http://www.kdhe.state.ks.us/waste/policies/BWM_00-03_SEP.pdf	
Kentucky	Not available	Pat Johnston, Enforcement mailto:pat.johnston@mail.state.ky.us
Louisiana	Not available	List of settlements: http://www.deq.state.la.us/enforcement/bep/bep.asp Enforcement Administrator, Peggy Hatch (225)765-0634
Maine	Supplemental Environmental Projects Policy http://www.maine.gov/dep/pubs/sep_pol.pdf linked on page http://www.maine.gov/dep/poliguid.htm	Jim Dusch 207-287-8662
Maryland	No state SEP policy	Frank Courtright (410) 537-3220 fcourtright@mde.state.md.us
Massachusetts	Interim Policy on Supplemental Environmental Projects: Policy ENF-97.005 http://www.state.ma.us/dep/enf/enf97005.pdf linked on page: http://www.state.ma.us/dep/enf/enfpol.htm	
Michigan	Department of Environmental Quality Policy and Procedures, Supplemental Environmental Projects (SEPs) for Penalty Mitigation, November 10, 1997 http://www.deq.state.mi.us/documents/deq-wmd-opmemo-sep.pdf	
Minnesota	Not available	Scott Parr (651)296-7636
Mississippi	Not available	
Missouri	Not available	

Montana	Montana Law requires that all air penalties go into an alternative energy revolving loan fund: http://data.opi.state.mt.us/bills/mca/75/2/75-2-401.htm	
North Carolina	Not available	
North Dakota	Not available	
Nebraska	Not available	SEPs are mentioned on the following page: http://www.deq.state.ne.us/AirDivis.nsf/pages/AirCaE
New Hampshire	Not available	SEPs are mentioned in the following document: http://www.des.state.nh.us/legal/carp/carp-ch-5.pdf linked from page: http://www.des.state.nh.us/legal/carp/
New Jersey	Not available	
New Mexico	Civil Penalty Policy, p.22 http://www.nmenv.state.nm.us/aqb/enforce_compliance/Civl-Penalty.pdf linked on page: http://www.nmenv.state.nm.us/aqb/enforce_compliance/compliance.html	
New York	Environmental Benefit Project Policy http://www.dec.state.ny.us/website/ogc/egm/ebp.html	
Nevada	Not available	Compliance Michael Yamada Supervisor Staff Engineer IV 8:00-5:00 M-F 775-687-9342 myamada@ndep.nv.gov
Ohio	Brochure for companies: http://www.epa.state.oh.us/opp/p2regint/p2sepinf.pdf See also: http://www.epa.state.oh.us/opp/p2regint/p2sep1.html and http://www.epa.state.oh.us/opp/p2regint/enforce2.html	
Oklahoma		

Oregon	Oregon Department of Environmental Quality, Internal Management Directive - Civil Penalty Mitigation for Supplemental Environmental Projects http://www.deq.state.or.us/programs/enforcement/enforcementSEPDir.pdf linked from page: http://www.deq.state.or.us/programs/enforcement/enforcementprocess.htm	
Pennsylvania	Policy for the Acceptance of Community Environmental Projects in Conjunction with Assessment of Civil Penalty http://www.dep.state.pa.us/eps/docs/cab200149b1126000/fldr200149e0051190/fldr200149e32441b3/doc20026o8182701e/012-4180-001.pdf	
Rhode Island	Policy on Supplemental Environmental Projects, SOP Number: BEP-AWC, Effective Date: 7/15/04 http://www.state.ri.us/dem/programs/benviron/compinsp/pdf/seppolcy.pdf	
South Carolina	Currently not pursuing SEPs.	Jerry Chalmers (803)898-4113 Enforcement Policy: http://www.scdhec.net/eqc/admin/pubs/admproc.pdf
South Dakota		
Tennessee	Not available	
Texas	SEP Main Page http://www.tceq.state.tx.us/legal/sep/index.html	Project List http://www.tceq.state.tx.us/legal/sep/index.html
Utah	Not available	McCann, Steve 536-4185 Administration Environmental Scientist
Vermont		Christian B. Jones, Compliance Section Chief or call the APCD at 802-241-3840.
Virginia	Commonwealth of Virginia, Department of Environmental Quality, Enforcement Manual, December 1, 1999, p 5-1 (p 89 of 167) http://www.deq.state.va.us/pdf/enforcement/enforcementmanual.pdf	Amy Owens (804) 698-4512
Washington	Not available	

West Virginia	Not available	Office of Legal Services: Perry McDaniel, Chief 1356 Hansford Street Charleston, West Virginia 25301 Phone: (304) 558-9160 Fax: (304) 558-4255
Wisconsin		Steve Sisbach - Director of Environmental Enforcement (608)266-7317 Neil Baudhuin - Air Region Supervisor (715)365-8958 Rick Wulk - GreenBay AirRegion Supervisor (920)492-5881 DOJ - Environmental Enforcement Unit Leader Thomas Dawson (608)266-8987
Wyoming	Not available	

APPENDIX B: SEP Libraries - EPA and state

Information on SEPs in concluded federal settlements is now publicly available on Enforcement and Compliance History Online (ECHO). This site now allows users to search specifically for SEPs using a variety of search fields.
http://www.epa.gov/echo/

EPA's Project Ideas for Potential Supplemental Environmental Projects, Updated 04-20-04, contains renewable energy and energy efficiency project ideas (pp. 9-10)
http://www.epa.gov/compliance/resources/policies/civil/seps/projectsideas42004.pdf

EPA Region 1 maintains a "library" for SEP proposals that might be appropriate for implementation in the settlement of a case and is actively seeking SEP ideas.
http://www.epa.gov/NE/enforcement/sep/index.html

EPA Region 3 SEP Index
http://www.epa.gov/region03/enforcement/sepindex.htm

EPA Region 5 lists Annual Reports of SEPS on the following page
http://www.epa.gov/reg5oorc/reports.htm

Region 6 has a SEP library and is actively seeking SEP project ideas
http://www.epa.gov/Arkansas/6en/6en-sep.htm

Illinois has a SEP idea bank
http://www.epa.state.il.us/enforcement/sep/

APPENDIX C: SEP Contacts and Peer Exchange Network

Organization	General SEP Contact	Type of Assistance
Federal		
EPA OECA HQ	Melissa Raack Washington DC 202-564-7039 raack.melissa@epa.gov Beth Cavalier Washington DC 202-564-3271 cavalier.beth@epa.gov	EPA SEP Coordinator EPA SEP Coordinator
EPA-OAR	Art Diem Washington DC 202.343.9340 diem.art@epa.gov	General Information Contact EE/RE Projects
EPA Region 1	Amelia Katzen Boston MA 617-918-1869 katzen.amelia@epa.gov	EPA SEP Coordinator
EPA Region 2	Rudolph Perez New York NY 212-637-3220 perez.rudolph@epa.gov	EPA SEP Coordinator
EPA Region 3	Catherine King Philadelphia PA 215-814-2657 king.catherine@epa.gov	EPA SEP Coordinator
EPA Region 4	Bill Bush Atlanta GA 404-562-9538 bush.william@epa.gov	EPA SEP Coordinator
EPA Region 5	Kathleen Schnieders Chicago IL 312-353-8912 schnieders.kathleen@epa.gov	EPA SEP Coordinator
EPA Region 6	Efren Ordonez Dallas TX 214-665-2181 ordonez.efren@epa.gov	EPA SEP Coordinator

Organization	General SEP Contact	Type of Assistance
EPA Region 7	Becky Dolph Kansas City KS 913-551-7281 dolph.becky@epa.gov	EPA SEP Coordinator
EPA Region 8	Jim Stearns Denver CO 303-312-6912 stearns.james@epa.gov	EPA SEP Coordinator
EPA Region 9	Allan Zabel San Francisco CA 415-972-3902 zabel.allan@epa.gov	EPA SEP Coordinator
EPA Region 10	Juliane Matthews Seatlle WA 206-553-1169 matthews.juliane@epa.gov	EPA SEP Coordinator
DOE	Jerry Kotas Golden, CO 303.275.4850 gerald.kotas@ee.doe.gov	EE/RE Projects
DOE-NREL	Adam Chambers Washington DC 202-646-5051 adam_chambers@nrel.gov	EE/RE Projects
DOE-NREL	Karin Sinclair Golden, CO 303-384-6946 karin_sinclair@nrel.gov	EE/RE Projects
DOE-NREL	Roya Stanley Golden, CO 303-275-3057 roya_stanley@nrel.gov	EE/RE Projects
State		
Maryland	Frank Courtright 410-537-3220 fcourtright@mde.state.md.us	SEP Contact
Utah	Rick Sprott 801-536-4151	SEP Contact
Colorado	Jill Cooper 303-692-2007	SEP Contact
Local		

APPENDIX D: Cases and Settlements Including EE/RE SEPs

This appendix provides more detail on case settlements that are publicly available and that include projects incorporating energy efficient or renewable energy technologies.

Federal Settlements
South Carolina Public Service Authority (Santee Cooper) March 16, 2004 Synopsis of SEP Project(s) Santee Cooper shall spend at least $1.0 million in Project Dollars to purchase and install at state-funded universities innovative and environmentally beneficial energy technologies designed to minimize the use of electric power and improve energy self-sufficiency. The technologies may include advanced renewable energy supply sources (such as next-generation solar panels or fuel cells) and energy-efficient building systems such as highly-efficient HVAC and water heating systems, passive lighting systems, dynamic window coatings, and innovative framing and insulation materials. Santee Cooper shall spend no less than $1.0 million in Project Dollars to install technologies to reduce the demand for energy consumption, to subsidize the installation of technologies that reduce the demand for energy consumption, and to implement strategies that will reduce the demand for energy consumption. The plan may include the distribution of energy efficient lighting and/or the use of thermally-efficient design measures. Source: http://www.epa.gov/compliance/resources/cases/civil/caa/santeecooper.html See pp. 44-45 of consent decree
Coastal Eagle Point Refining Settlement October 1, 2003 Synopsis of SEP Project(s) Coastal is required to spend$1 million to be used exclusively to install IdleAire technology at approximately 100 parking spaces at the Paulsboro Travel Center (located at Exit 18A of Interstate 295 in Paulsboro, New Jersey) in order to significantly reduce emissions of NOX, particulate matter, and hydrocarbons. Source: http://www.epa.gov/compliance/resources/cases/civil/caa/coastal.html See p 65 of consent decree

Virginia Electric and Power Company (VEPCO) April 17, 2003 Synopsis of SEP Project(s) Photovoltaic (PV) Project – To Be Conducted in New York State $2.1 million to accomplish the installation of solar photovoltaics ("PVs") on municipal buildings in New York. These building would then use the PV-generated energy, in part to help remove some demand for energy from the electrical grid during peak demand periods. The project will be administered through the New York State Energy Research and Development Authority's (NYSERDA) Solar Photovoltaics program. Source: http://www.epa.gov/compliance/resources/cases/civil/caa/vepco.html See pp C-3 of consent decree
Nucor Corporation, Inc. Multimedia Settlement December 19, 2000 Synopsis of SEP Project(s) Nucor shall spend at least $2 million on three (3) or more of the following SEPs in the communities at or near Nucor facilities: (a) Wind mill power generation; (b) Scrap recycling days; (c) Creation of wetland "buffer zones"; (d) Emergency equipment donations; (e) Sanitary sewer line expansion; (f) Community facility asbestos abatement projects; and (g) Up to $50,000 for community-based recycling education projects. Source: http://www.epa.gov/compliance/resources/cases/civil/mm/nucor.html See p. 74 of consent decree
State Settlements

APPENDIX E: Sample SEP Outreach Documents

The pages shown in this appendix can be found at the following website:

http://www.eere.energy.gov/windandhydro/windpoweringamerica/seps.asp

School Wind Energy Project Ideas for Supplemental Environmental Project (SEP) Settlements

Wind & Hydropower Technologies Program
Harnessing America's abundant natural resources for clean power generation

Introduction

The Spirit Lake Community School District in Spirit Lake, Iowa, uses energy from the wind to fund its educational programs. The district's two wind turbines not only power the school buildings with clean energy, but they also provide revenue for the district (the local utility purchases the excess energy generated by the turbines).

Spirit Lake funded its wind turbines with grants and low-interest loans, but school districts faced with budget cuts and a diminishing tax base have another funding option: Supplemental Environmental Projects (SEPs). SEPs are a policy vehicle designed by the U.S. Environmental Protection Agency (EPA) to give violators an alternative to standard fines for noncompliance. Instead of paying the full amount of its fines, the company can volunteer to fund environmentally friendly projects. SEP settlement negotiations for many types of violations can be used to fund wind project development.

This list of project concepts is offered in the spirit of brainstorming. Some project ideas may not apply to all jurisdictions.

1 **Provide an onsite dedicated wind turbine.** A school or community with a good wind resource can benefit from an onsite dedicated turbine to meet energy needs. An onsite wind turbine can reduce a school's energy bills, allowing these funds to be used for other purposes. If the turbine provides more energy than the school requires, the excess can be sold back to the utility, further improving the economics of the project.

2 **Add a turbine to a wind farm.** Using SEP funds to support the addition of a turbine to an existing wind farm would leverage existing infrastructure costs, including challenges such as siting, and operations and maintenance responsibilities. The turbine (and its energy production) could be dedicated to the school. Net revenue generated from the sale of electricity could be used to reduce the costs of school programs.

3 **Install a turbine on state lands.** A school might not have a good onsite wind resource. However, most states have state lands that are suitable for wind turbines. SEP funds could be used to install turbines on state lands, with the understanding that revenue from the power generated would be returned to the school in offsets or in actual revenue for school programs.

4 **Fund a district project.** A utility-scale wind turbine can be a large project for an individual school, but it may be more manageable for a school district. A district also has more lands available, offering a greater number of siting opportunities. SEP funds could be used for any portion of such a project: feasibility analysis, site selection, installation, or even training local students or staff to maintain the turbine. This community-based effort would benefit the school system in energy cost savings and, if power is sold to the grid, in revenue that could be used for school programs.

Susan Innis, Western Resource Advocates/PIX12800

University of Colorado (CU) students voted to increase student fees by $1 per semester for 4 years to purchase wind power from Public Service Company of Colorado's Ponnequin wind farm. The increase in fees raised $50,000 per year to purchase the output of a wind turbine (seen here decorated with CU's buffalo mascot).

5 **Blend wind energy with energy efficiency**. Studies have shown that total energy and energy cost savings are maximized per unit investment when efficiency measures are combined with renewables installations. SEP funds could be used to produce an investment/sizing tool that optimizes the benefits of blending energy efficiency with wind energy for schools and to develop some demonstrations of those benefits.

6 Fund wind power for a local school application. SEP funds could address specific needs of a school by providing wind-generated electricity directly to the school for that purpose. The best applications would be highly visible, such as lighting for school activities, water heating for showers, and space heating for hallways.

These direct applications are more accessible and understandable to the public and decision-makers involved and can provide higher benefit to the school by offsetting energy with a higher value than the utility may be willing to credit.

7 Fund the development of a wind energy booth/tabletop exhibit/kiosk for state and county fairs. The idea is to 1) raise the consciousness of and support for wind power options in rural areas, and 2) support local and regional action directed toward installing a wind power facility in the area.

A compelling kiosk could include:

- Attractive background or graphics
- Turbine/tower hardware showing possible configurations
- Animated graphics (video or slide show with technical and policy information)
- Gift (cardboard wind blade toy, etc.)
- Wind information handouts.

8 Purchase the wind "premium" for a local school. A utility might charge more for wind energy than for energy from traditional sources. SEP funds could be used to pay for this wind premium (cents/kWh) for a school for a certain time period. The premium is determined as the cost of wind energy less avoided cost.

Spirit Lake Community School District/PIX11342

The 250-kW wind turbine (left) at Spirit Lake Community School District in Spirit Lake, Iowa, provides all of the electricity for the elementary school. After paying for itself, the turbine has provided about $25,000 in revenue from sales of electricity to the utility company, which is reinvested in the school's instructional programs. The 750-kW turbine (right) is connected to the grid in a net-metering arrangement that provides power to the remaining buildings in the school district, including the high school, the middle school, the administration building, a technical building, the bus barn, and the football stadium's lights.

Further Information

For further information on using SEP funds for school wind energy projects, please contact:

Marguerite Kelly
marguerite_kelly@nrel.gov
303-384-7441

Wind Powering America Web site
www.eere.energy.gov/windpoweringamerica

9 Purchase green tags[1] (or buy down green tags). SEP funds could be used to purchase green tags for schools or to reduce the cost of the green tags, thus increasing the amount of tags the school could purchase. Funds could be placed in an escrow account to pay for a specified amount of green tags during an agreed-upon time frame.

10 Address local economic development by identifying and developing wind power job opportunities and associated curriculum needs. The benefits of new wind power jobs in the rural sector are optimized when local residents participate. SEP funds can be used to identify existing academic and vocational resources. Community colleges and vocational schools can develop curricula that will train students for wind power jobs, including construction, routine turbine maintenance, operational trouble-shooting, and facilities sizing and planning. Installing a wind turbine at the educational or training facility can be a natural extension of this education and training.

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[1] "Green tags," or renewable energy credits (RECs), are the environmental attributes of clean energy. They are purchased separate from the actual power. This option is desirable in a number of situations—for example, in jurisdictions in which there is no green power to purchase or in situations in which the violator operates in areas where emissions are capped or across several states. Green tags are easy to negotiate and are easily applied to small or large penalty amounts.

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Energy efficiency and clean, renewable energy will mean a stronger economy, a cleaner environment, and greater energy independence for America. Working with a wide array of state, community, industry, and university partners, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy invests in a diverse portfolio of energy technologies.

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Conference Paper

A Different Kind of "Deal": Selling Wind as Environmental Compliance

Preprint

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To be presented at WINDPOWER 2003
Austin, Texas
May 18-21, 2003

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A DIFFERENT KIND OF "DEAL": SELLING WIND AS ENVIRONMENTAL COMPLIANCE

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USA

Supplemental Environmental Projects (SEPs), an environmental regulatory mechanism available at both State and Federal levels, show promise as a marketing venue for wind developers. SEPs are an alternative available to defendants who have been assessed penalties for environmental non-compliance, allowing them to offset a significant amount of penalties by investing in environmentally beneficial projects. An industrial violator in Colorado used this option to invest in the wind energy program of a local utility and contributed funds sufficient to purchase an additional turbine for the utility's wind farm.

In 1999, the dollar value of Federal SEPs negotiated by the U.S. Environmental Protection Agency (EPA) totaled $277 million. In addition, cumulative state enforcement actions may be settled with SEPs. Aside from some compressed natural gas projects, no clean energy projects have been undertaken with the funds.

Environmental regulators are usually not familiar with wind and other renewable energy technologies and do not routinely suggest renewable energy SEPs in the settlement process. Moreover, surveys of regulators reveal that the voluntary nature of SEPs is a factor that often inhibits regulators from suggesting specific projects to defendants.

Wind and other clean energy developers can play a unique role in introducing wind energy projects into the SEP negotiating process. More to the point, wind developers can "capitalize" on the market development potential of the SEP regulatory mechanism.

WHAT ARE SEPS?

Once a violation of environmental law has occurred, the defendant and regulator negotiate the terms of the settlement agreement. Violators must take three actions:

1. Promptly cease the violation(s).
2. To the extent feasible, remediate any harm caused by the violation(s).
3. Pay monetary penalties intended to be punitive; thus, a deterrent to future violations.

Calculating the amount of monetary penalties is complicated, involving a number of formulas. The intent is to ensure that the defendant does not in any way profit from violating environmental standards.

Defendants may voluntarily offset a significant part of the monetary penalty by undertaking a SEP. Under EPA policy, seven categories of projects may qualify as SEPs:

1. Public Health
2. Pollution Prevention (Most energy efficient and renewable energy SEPs are likely to fit this category.)
3. Pollution Reduction
4. Environmental Restoration and Protection
5. Assessments and Audits (for pollution prevention and environmental quality)
6. Environmental Compliance Promotion (training or technical support to other members of the regulated community)
7. Emergency Planning and Preparedness (for environmental events)

A key criterion for acceptability of a project as a SEP is its nexus with (relationship to) the violation. Depending on the regulatory jurisdiction, nexus can be determined in relatively broad or narrow fashion. State regulatory agencies have developed their own SEP policies. Some track EPA policy closely, but others might not.

Arguably, clean energy projects—such as wind—have a well-defined nexus to air quality violations. Some states, like Colorado, permit a “cross-media” SEP settlement—for example, addressing a water quality violation with an air quality project.

A CASE IN POINT: THE COLORADO WIND SEP

During routine inspections, a Denver company was determined to be in violation of air pollution prevention regulations and was assessed a noncompliance penalty of about $30,000. In addition, the Colorado Department of Public Health and Environment (CDPHE) fined the company a civil penalty of $395,000. Because the firm cooperated with the State, CDPHE reduced the civil penalty to $316,000.

To offset this penalty, the company developed a SEP through which it agreed to purchase wind energy premiums from the local electric utility’s wind program for a minimum of five years. The cost of this SEP was $303,360, or 80% of the civil penalty. This is approximately equivalent to the cost of the premiums of one additional turbine.

The defendant deposited the entire amount of the SEP with the utility company, which placed it in an interest-bearing escrow account. The utility is applying the SEP funds to purchase wind energy premiums on behalf of the violator. If funds remain in the escrow account after the fifth year, the utility will use the balance to continue paying the wind premium on behalf of the violator.

FIGURE 1: THE COLORADO WIND SEP RESULTED IN THE PURCHASE OF GREEN TAGS FROM XCEL'S WINDSOURCE PROGRAM (FROM THE PONNEQUIN WINDFARM) FOR AT LEAST 5 YEARS (SOURCE: NREL/PIX07158).

The National Renewable Energy Laboratory (NREL) and U.S. Department of Energy (DOE) assisted in calculations estimating the environmental benefits of this SEP. Resulting reductions in air emissions have been estimated as follows:

Total NO_x avoided: 97 tons per year
Total SO_2 avoided: 73 tons per year
Total CO_2 avoided: 3,640 tons per year

BENEFITS OF CLEAN ENERGY SEPS

Benefits derived from clean energy SEPs vary, depending on the stakeholder. Each party may have a different perspective. If all perspectives are met, the clean energy SEPs have a multi-party win-win outcome.

The Regulatory Perspective

Clean energy projects—wind in particular—do not generate harmful air emissions. To the extent that they offset fossil-fuel-generated electricity, they result in environmental benefits greater than simply mitigating the violation. Because environmental enforcement officers tend to be strong environmental advocates, they can be expected to be philosophically predisposed to support clean energy SEPs if they understand and have confidence in the broader environmental benefits.

The Violator's Perspective

There are potential internal financial and reporting advantages, as well as potential public relations benefits, to negotiating SEPs instead of paying penalties. Telling shareholders about "investment" in clean energy projects may be preferable to reporting that penalties were paid for environmental violations. In addition, accounting treatments may be applied that could be beneficial to the violator investing in a SEP.

The "Clean Energy" Industry Perspective

Penalty funds used to capitalize SEPs are "found" money. If not for the violation, those funds would not be available for investment in wind or other clean energy projects.

Consequently, any project undertaken with SEP funds does not have to meet standard financial hurdle rates. SEP funds can help reduce the cost of projects that otherwise might be viewed as "borderline" projects by the investment community and assist wind developers in getting projects off the ground.

Clean energy SEPs give environmental regulators experience with the technologies and with calculating their environmental benefits. Once regulators are comfortable with the fact that these technologies result in environmental benefits that can be calculated and used in other regulatory proceedings and arenas, the market can be expected to grow almost exponentially. (For example, states that do not comply with national ambient air quality standards must file State Implementation Plans [SIPs] with the EPA. Once regulators are convinced that the emissions benefits are real, quantifiable, and sustained, clean energy technologies can be part of these plans.)

Many SEPs involve relatively small amounts of money, and most regulators seem to lack the authority to aggregate the monies into larger funding pools. However, smaller SEP funds can be used to capitalize small wind projects, which otherwise would not pass financial hurdle tests, and to purchase "green tags," used to help subsidize larger projects.

The Clean Energy Advocacy Perspective

SEPs provide an "off-budget" means of capitalizing clean energy projects and moving local markets for these technologies. Energy efficiency and renewable energy are promising options for economic development:

1. Jobs created through these technologies tend to be local, thus boosting local economies; and

2. Whether through increased energy efficiency or distributed renewable energy, monies are retained in local economies rather than exported to pay for imported electricity from central station power plants. Money retained in local economies is recirculated, creating secondary and tertiary economic benefits.

Other public policy goals also are achieved through clean, distributed energy technologies and increased energy efficiency. Prime among them is electric system reliability. Wind and other utility-scale renewable energy technologies allow utilities to diversify their generation portfolios and thus hedge against risk of several kinds (supply interruption, price volatility, etc.). In addition, because wind farms frequently are situated in rural areas, wind development can be a powerful impetus for rural revitalization and economic development.

Homeland security is another important public policy objective. Central station power plants and the massive transmission system are vulnerable both to natural disaster and terrorist attack. Small-scale on-site or distributed renewable energy takes the pressure off the nation's brittle electricity transmission system, as does energy efficiency.

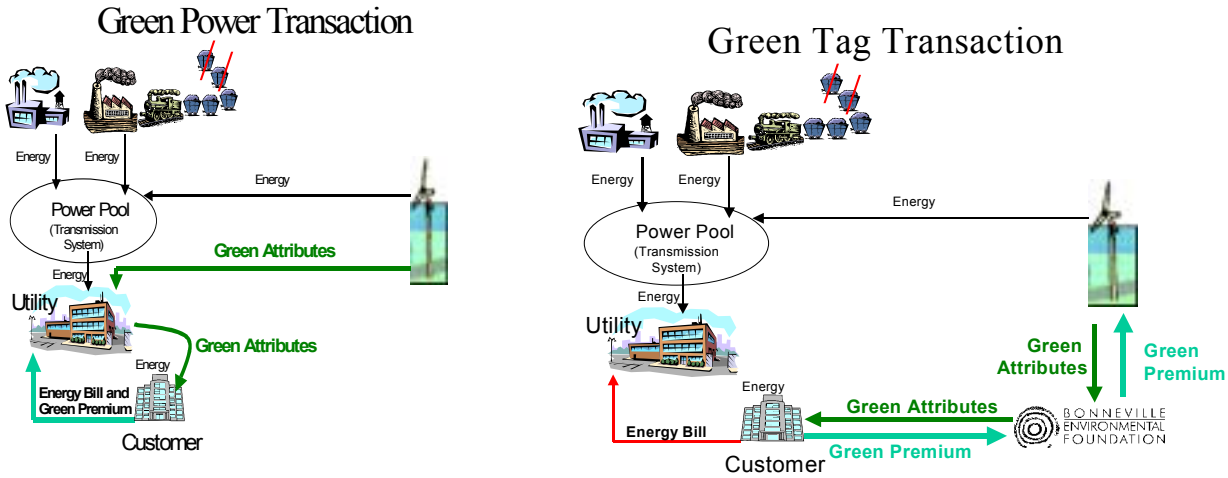

FIGURE 2A & 2B: GREEN TAG CONCEPT: CUSTOMERS MAY PURCHASE GREEN ATTRIBUTES DIRECTLY FROM THEIR UTILITY. ALTERNATIVELY THEY MAY PURCHASE THE ENVIRONMENTAL ATTRIBUTES FROM ELECTRICITY GENERATED FROM RENEWABLE ENERGY TECHNOLOGIES, EVEN IF THE ELECTRONS THEY USE ARE GENERATED FROM NON-RENEWABLE RESOURCES (SOURCE: BEF).

FIGURE 3: A WIND DEVELOPMENT SUPPORTED BY SEP FUNDS MAY RESULT IN THE RETENTION OF MONEY IN LOCAL ECONOMIES AND CAN BE PARTICULARLY HELPFUL IN SUPPORTING RURAL ECONOMIC DEVELOPMENT (SOURCE: NREL/PIX06331).

WHY DON'T WE SEE MORE CLEAN ENERGY SEPS?

To date, the Colorado SEP is the only wind SEP to have been negotiated anywhere in the country, although some violations have been settled with alternative fuel SEPs. Significant (but not insurmountable) challenges inhibit the negotiation of renewable energy SEPs.

The Regulatory Perspective

Enforcement attorneys are expert in the law, but they generally are unfamiliar with clean energy technologies and may not have time to learn. Most important, they do not have confidence in the emissions benefits of these technologies.

Regulators often are reluctant to suggest specific projects (clean energy or otherwise) for fear of appearing to suggest an acceptable course of action and thus undermine the voluntary nature of SEPs.

Regulators must ensure that there is a suitable nexus between the nature of violations (e.g. NO_x emissions) in settlement negotiations and potential clean energy SEP projects. Often, the relationship between the violations and clean energy technologies is not readily apparent.

Defendants sometimes propose inappropriate SEPs. This increases the "hassle factor" for both regulators and defendants.

The dollar amount of penalties suitable for conversion to SEPs is often small, particularly as a result of some or many state enforcement actions. It is unclear to regulators what these funds could purchase in terms of a clean energy SEP, especially if they are unfamiliar with the green tag mechanism.

SEP settlement negotiations can be protracted. Some regulators prefer to assess monetary penalties rather than negotiate SEPs of any kind because of deadlines and the lack of staff and other resources under stressed State government budgets.

Some regulators are philosophically predisposed to punishment as a deterrent to future violations. To the extent that they believe violators might benefit somehow from a SEP, regulators resist that option.

The Defendant's Perspective

Transaction costs associated with negotiating a SEP can be expected to be greater than settling the amount of penalty to be paid. Regulators must approve the project concept, and they can be expected to demand analysis and calculations to support the environmental benefits of the proposed project.

Defendants are not likely to have expertise in clean energy technologies, any more than regulators. Consequently, they are not likely to propose clean energy SEPs. In addition, they probably lack needed in-house expertise to manage such projects.

Defendants often want to settle the violation, put it behind them, and move on with their business.

The Clean Energy Advocacy Perspective

Regulatory processes are complex and are carried out in an atmosphere of confidentiality. Consequently, it is difficult for parties outside the process to understand it, participate in it, or time their input in an effective manner. Many in the advocacy community are not even aware of the SEP mechanism.

In times of budget shortfalls, State government decision-makers may prefer that regulators assess monetary penalties and deposit them in the State treasury, rather than divert this potential revenue source to clean energy projects.

HOW THE CLEAN ENERGY INDUSTRY CAN UNLEASH THE POWER OF SEPS

Wind and other clean energy developers should consider environmental compliance as an innovative marketing strategy. They can initiate contact with regulators in their states and educate them regarding technology costs and emissions benefits. They can provide analytical tools to help calculate costs and estimate environmental benefits, and they can provide other information that might be needed. By providing needed information and analysis, they can increase the comfort level of regulators with these technologies. This could result in more clean energy SEPs and, perhaps, a jump-start for local markets.

Potential defendants also can be educated regarding clean energy technologies and the benefits of negotiating clean energy SEPs rather than paying monetary penalties. Clean energy developers also can learn the needs of potential defendants and identify potential institutional or regulatory barriers that need to be addressed. In this sense, the clean energy industry can play an “honest broker” role between regulators and potential violators—all in the name of growing future domestic markets for these technologies.

A defendant could volunteer to establish a SEP that purchases wind-generated power for its own use. Alternatively, a wind SEP could include buying down the renewable energy cost “premium” for a project that would otherwise be uneconomic to develop. Purchasing or buying down green tags for groups that philosophically support “green” but are unlikely to be able to purchase green tags themselves (such as hospitals or nursing homes, schools or colleges, faith-based organizations, senior citizen centers, or Low-Income Home Energy Assistance Programs) is another potential wind SEP.

SEP funds could also be used to support the development of high-resolution wind resource maps for a state or establish local or statewide anemometer loan programs. If the violator is a generation and transmission provider, the SEP could result in investing in a member co-op’s mini wind farm. A utility defendant could fund a SEP to invest in a professional green energy marketing campaign through a third party (such as the Land and Water Fund of the Rockies).

FIGURE 4: FUNDED THROUGH A SEP, A SCHOOL'S ELECTRICITY NEEDS COULD BE OFFSET BY INSTALLING A WIND TURBINE. THE WIND TURBINE COULD ALSO BE USED AS AN EDUCATIONAL TOOL IN THE SCHOOL'S CURRICULUM (SOURCE: NREL/PIX12333).

CONCLUSION

SEPs and other environmental regulatory mechanisms provide a promising market for clean energy technologies. Significant funds are potentially available every year from State and Federal regulators to capitalize projects. However, past experience shows that the capital market potentially available from SEPs may not be tapped for wind or other renewable energy projects. This is due to system inertia, lack of incentives to proactively create clean energy SEPs, lack of information about clean energy technologies, and lack of nexus between violations and possible clean energy SEP settlements.

This promising market is unlikely to emerge unless those whose businesses stand to profit from clean energy SEPs take a proactive role to jump-start it.

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REPORT DOCUMENTATION PAGE

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13. ABSTRACT *(Maximum 200 words)*

Supplemental Environmental Projects (SEPs), an environmental regulatory mechanism available at both State and Federal levels, show promise as a marketing venue for wind developers. SEPs are an alternative available to defendants who have been assessed penalties for environmental non-compliance, allowing them to offset a significant amount of penalties by investing in environmentally beneficial projects.

In 1999, the dollar value of Federal SEPs negotiated by the U.S. Environmental Protection Agency (EPA) totaled $277 million. In addition, cumulative state enforcement actions may be settled with SEPs. Aside from some compressed natural gas projects, no clean energy projects have been undertaken with the funds. Wind and other clean energy developers can play a unique role in introducing wind energy projects into the SEP negotiating process.

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REPs for SEPs

Cleaner Air and Water, Courtesy of Polluters

Renewable energy projects can stimulate the economy, help ensure energy security, and improve the quality of your air and water. Supplemental environmental projects (SEPs) are a policy vehicle that can provide funding for your renewable energy projects (REPs). In 1999 alone, the federal government negotiated $237 million in supplemental environmental project settlements.

What Are Supplemental Environmental Projects?

When a company violates environmental regulations, it must pay a fine to the state or federal government. The U.S. Environmental Protection Agency (EPA) designed supplemental environmental projects to give violators an alternative to standard fines. Instead of paying the full amount of its fines, the company can volunteer to fund environmentally friendly projects. These projects can provide a positive outcome for the company and the community. Federal law permits all states to incorporate renewable energy into supplemental environmental projects, so communities can enjoy cleaner air and water, courtesy of the polluters.

✔ Diverse Economy

The economic benefits to states implementing renewable energy projects include new revenue and new jobs that often target underdeveloped areas, such as rural communities and American Indian reservations. Renewable energy projects also diversify energy portfolios, providing a hedge against future price spikes of traditional fuels.

- Farmers can benefit directly from the use of their land for renewable energy projects. For example, a 20-MW wind facility (which serves approximately 6,000 homes) located on a 1,000-acre farm would provide the farmer with more than $50,000 in additional revenue each year, while only using about 20 acres of the land.

- In Carbon County, Wyoming, the Foot Creek Rim Wind Plant will provide enough electricity to power 50,000 average U.S. homes. Even better, property tax revenue from the wind plant provides 30% of the county budget—a major economic impact in the community.

✔ Secure Energy

Now more than ever, energy security is in the spotlight. Renewable energy applications address valid concerns about reducing dependence on foreign oil and ensuring the safety of our nation's power plants. During a disaster, solar power can refrigerate vaccines and medical supplies and power communication equipment. Supplemental environmental project dollars can be used to outfit schools with solar power that will provide a learning opportunity for students and a secure, powered base of operations for a community during a disaster.

✔ Healthy Environment

Almost 98 percent of air pollution can be attributed to the production and use of energy. Renewable energy projects can reduce the need for building new fossil-fueled power plants. Supplemental environmental project dollars can fund renewable energy projects that have the potential to make an impact on a state's environment and public health. By using one kilowatt of renewable energy, it is possible to avoid annual emissions equal to driving more than 4,000 miles in an average passenger car.

Renewable Energy Benefits Communities

Economic: Communities in rural Texas are finding out about the economic benefits of wind power firsthand. Ranchers in west Texas welcome the revenue from wind projects that is replacing revenue from soon-to-be-depleted oil wells. In fact, the perception of Texas as an oil exporter is being replaced by its new image as a leader in the renewable energy industry. The Lower Colorado River Authority estimates that its wind power project will contribute $300 million to the Texas economy in the next 25 years. Energy revenue is spent in local communities. In addition, building wind power projects can help contribute to a stronger infrastructure of roads and power lines, creating jobs in the process.

Energy security: Renewable energy not only provides a secure, domestic energy source, but it also has a long history of supplying power during disaster relief efforts. For example, when Hurricane Andrew ravaged Florida, solar power survived the storm and provided lights for several communities until utility power was restored weeks later.

Environment: When a Denver company violated pollution limits in Colorado, company officials worked with the state government to develop a Supplemental Environmental Project. As a result, the company is purchasing wind energy for at least five years. This project eliminates the need to burn 1,820 tons of coal, improving the state's air quality at a level equal to planting more than 1,000 acres of trees.

In Utah, as part of its settlement with EPA for violations of the Clean Air Act that caused excess emission of NO_x and SO_x, a company agreed to provide funding for additional wind turbines for the Utah Blue Sky Program. This will allow the program to provide more electricity generated by wind power (green power), thereby reducing emissions by reducing the generation needs from traditional power plants.

If green power is not available in an area, a violator can purchase "green tags." Under a green tag program, the violator will continue to purchase energy from its utility, but it can also purchase green tags from a renewable energy producer. Although the violator may not actually receive and use the power purchased from the green producer, it will receive credit for the environmental benefits of the green power purchase.

CONTACTS

The following contacts are ready to answer all of your questions about renewable energy supplemental environmental projects.

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For more information about renewable energy and projects, visit these Web sites:

State Energy Alternatives
www.eren.doe.gov/state_energy/

Wind Powering America
www.eren.doe.gov/windpoweringamerica/

Green Power Network
www.eren.doe.gov/greenpower/

Produced by the National Renewable Energy Laboratory, a DOE national laboratory

NREL/FS-500-32374 • July 2002

Supplemental Environmental Projects Using Renewable Energy: A New Approach to Addressing Air Quality Violation Penalties

Warren Gretz, NREL/PIX07236

Supplemental environmental projects can help companies mitigate all or part of penalties imposed as a result of air pollution violations. Supplemental environmental projects, or SEPs, are environmentally beneficial projects that offer pollution prevention, energy efficiency, green energy, and community-based programs that may include investment in cost-effective alternative energy technologies, such as wind energy.

In Colorado, one company is successfully mitigating 80% of a penalty through a SEP that takes advantage of the utility's wind energy program by purchasing wind energy for a minimum of 5 years. To meet the additional demand, the utility will need to add another turbine to its existing wind farm. The environmental benefits that result from this increased capacity include sustained emission reductions, including carbon dioxide (CO_2), nitrogen oxides (NO_x), and sulfur dioxide (SO_2). In addition, the increased capacity will increase the diversity of the utility's energy portfolio and take further advantage of a free, renewable energy source.

A Colorado Case Study

During routine inspections, a large Denver company was found to be in violation of air pollution prevention regulations and was required to pay a noncompliance penalty of $30,065. In addition, the company was assessed a civil penalty of $395,000. Because it cooperated with the state, the company's civil penalty was reduced to $316,000. To offset this penalty, the company developed a SEP through which it would purchase wind energy for a minimum of 5 years at a cost of $303,360, or 80% of the civil penalty.

To receive approval from the Colorado Department of Public Health & Environment, Air Pollution Division, the company had to certify that this SEP was developed exclusively for mitigation of the current violation and it cannot be applied to any past or future violations. In addition, the SEP cannot be used to meet the requirements of federal, state, or local laws and regulations.

To ensure smooth implementation of the SEP after it was approved, the company consulted with local environmental stakeholders. To minimize accounting

Environmental Benefits

The environmental benefits associated with using electricity generated from wind range from air emission reductions to non-emission reductions. Air emission reductions include reductions in NO_x, SO_2, CO_2, particulates, and mercury. Non-emission reductions include reductions in the need for landfill disposal and wastewater treatment.

Air emission reductions that will result from the Colorado SEP are estimated to be:

- Total NO_x avoided–97 tons per year
- Total SO_2 avoided–73 tons per year
- Total CO_2 avoided–3,640 tons per year

In general terms, these reductions are roughly equivalent to:

- 1,820 tons of coal NOT burned per year
- 1,011 acres of trees planted (one-time occurrence)

The emission reductions for the Colorado SEP were calculated assuming that:

Amount of penalty = $303,360

Wind premium = 2.5 cents per kilowatt-hour (kWh) or $2.50 per 100 kWh

Total number of kWh = 12,134,400

Length of wind purchase = 5 years

kWh per year for 5 years = 2,426,880

Number of blocks purchased per month = 2,022

Pollution avoided from the purchase of wind energy in Colorado:

NO_x = 8 lbs per 100-kWh block

SO_2 = 6 lbs per 100-kWh block

CO_2 = 300 lbs per 100-kWh block.

State air quality enforcement officials who would like a detailed analysis of the value of their SEPs can use the Environmental Protection Agency's (EPA's) detailed analysis modeling tool—PROJECT. A copy of the PROJECT computer program software and PROJECT User's Manual may be purchased by calling that National Technology Information Service at (800) 553-6847, and asking for Document #PB 98-500408GEI, or they may be downloaded from the World Wide Web at http://www.epa.gov/oeca/models/ or http://es.epa.gov/oeca/models/project.html

For more information, contact:

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Warren Gretz, NREL/PIX08616

costs, the company submitted the entire amount of its SEP purchase to the utility. The utility placed the money in an interest-bearing escrow account from which it will manage the funds. The utility will use the money in the account to pay the premium it charges for energy purchased by the company under the utility's WindSource Program for up to 5 years. If there are funds left in the escrow account after the 5th year, the utility will use the balance to continue paying the premium for the company.

U.S. Department of Energy Regional Offices www.eren.doe.gov/rso.html	Regional Office Contacts	States in Region
Atlanta Regional Office 730 Peachtree St., NE, Suite 876 Atlanta, GA 30308-1212 404-347-2696 www.eren.doe.gov/aro/	Dwight Bailey	Alabama, Arkansas, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Puerto Rico, U.S. Virgin Islands
Boston Regional Office JFK Federal Building, Suite 675 Boston, MA 02203 617-565-9700 www.eren.doe.gov/bro/	Dick Michaud	Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont
Chicago Regional Office One South Wacker Drive, Suite 2380 Chicago, IL 60606-4616 312-353-6749 www.eren.doe.gov/cro/	William Hui	Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, Wisconsin
Denver Regional Office 1617 Cole Blvd. MS1721 Golden, CO 80401 303-275-4826 www.eren.doe.gov/dro/	Steve Palomo	Colorado, Kansas, Louisiana, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, Wyoming
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Seattle Regional Office 800 Fifth Ave., Suite 3950 Seattle, WA 98104-3122 206-553-1132 www.eren.doe.gov/sro/	Curtis Framel	Alaska, Arizona, California, Hawaii, Idaho, Nevada, Oregon, Washington, American Samoa, Guam, Palau, North Marianas

Web sites
Green Power Network — www.eren.doe.gov/greenpower/apcd_0900_pr.html
Wind Powering America — www.eren.doe.gov/windpoweringamerica/

APPENDIX F: "Crawling Out of the Box"

Expanding Opportunities for Renewable Energy in SEPs, by Rick Sprott, Director, Utah Division of Air Quality, March 13, 2003

Removing barriers, Shedding prejudices, and Crawling out of the box

SEP dollars don't need to look like an emissions offset ration. Why require more money to clean up the environment than would go to some state slush fund or even a school fund?

Get over the idea that a SEP is "going easy" on a violator compared to a fine. A buck's a buck if it's not in the business plan.

Don't waste time worrying about calculating cost equivalency to the last penny. It's more important to get projects on the ground and move on.

Renewable Energy SEP's don't need to be big, expensive, time-consuming, "sexy" projects to help the environment.

Think cross-media; a bird is just as dead from flight hazards as DDT or Hazardous Air Pollutants.

Don't agonize over where the emissions are reduced; someone benefits from less pollution – think Earth Day.

Green power purchase not available in state? Find a program in the region and take credit for it in your regional haze SIP or NOx transport SIP if upwind.

Don't abandon SEPs because on one or two bad experiences or if you think they aren't painful enough for the violator. Our vision as environmental regulators should be Clean Air Act (or other Act) compliance and generally improving the environment - not retribution.

Make SEPs easy and the PREFERRED solution.

Make this a leadership priority and ensure the hearts and minds of lower management and staff follow.

Use small projects that match business or have general applicability (like energy efficiency and renewable energy)

Use SEPs for the renewable energy market, not the resource, that is, have the violator buy green power tags, not windmills.

Make it easy: Offer a SEP to every violator, have candidates ready. Use template documents for the settlement. Have literature and pamphlets to "sell" the idea; this makes green power purchases a no-brainer.

Offer incentive for using a SEP such as spreading out the "payments." Multi-year wind power purchase deals are actually better for the RE sector than large sporadic purchases.

Set up power purchase "trust fund" to avoid perception of promoting a particular company if there are competing utilities/providers.

RE SEPs generate business and provides incentive for more utilities to make green power available to customers; price difference should decrease.

APPENDIX G: Non-government Organizations

This document is intended to provide general information to state and local governments concerning the inclusion of energy efficiency and/or renewable energy projects in state or local enforcement settlements. Any reference to non-governmental, non-profit organizations, for profit companies, or other outside entities does not constitute or imply its endorsement, recommendation, pre-approval, or favoring by the United States Government.

Organization	Service	Website
StEPP Foundation	Provides Project Pipeline and Project Idea Bank	http://steppfoundation.org
Center for Resource Solutions	List of Providers of Tradeable Renewable Credits	http://green-e.org/your_e_choices/trcs.html
Evolution Markets LLC	Broker for Renewable Energy Credits	http://www.evomarkets.com/
Clean Air Action		http://www.cleanairaction.com/settlements.htm

APPENDIX H: Comments/Suggestions for Next Version

If you have any comments or further information that you wish to be considered for inclusion in the next version of this document, please email them to diem.art@epa.gov or fill in and fax the form below:

TO: Art Diem

FAX: 202-343-2667

FROM: _____

SUBJECT: Comments/Suggestions for "A Toolkit for states: Using Supplemental Environmental Projects (SEPs) to Promote Energy Efficiency (EE) and Renewable Energy (RE)"

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Endnotes

a. June 11, 2003, EPA memorandum from Assistant Administrator John Peter Suarez on "Expanding the Use of Supplemental Environmental Projects." http://www.epa.gov/Compliance/resources/policies/civil/seps/seps-expandinguse.pdf

b. For more information on the United States Department of Energy's State Energy Program, please see http://www.eere.energy.gov/buildings/state_energy/

c. October 31, 2002, EPA Memorandum from Director Walker B. Smith, "Importance of the Nexus Requirement in the Supplemental Environmental Projects Policy" http://www.epa.gov/Compliance/resources/policies/civil/seps/sepnexus-mem.pdf

d. June 11, 2003 , EPA Memorandum from Assistant Administrator John Peter Suarez "Expanding the Use of Supplemental Environmental Projects" http://www.epa.gov/compliance/resources/policies/civil/seps/seps-expandinguse.pdf

e. March 22, 2002, EPA Memorandum from Acting Assistant Administrator Sylvia K. Lowrance http://www.epa.gov/Compliance/resources/policies/civil/seps/sepguide-mem.pdf

f. EPA's Enforcement Economic Models, including the PROJECT Model (which calculates the net present value of a proposed supplemental environmental project), are located on the following webpage: http://www.epa.gov/Compliance/civil/programs/econmodels/index.html

g. Presentation, February 7, 2003 http://www.eere.energy.gov/regions/mid-atlantic/pdfs/jerry.pdf Source: Analyzing Electric Power Generation Under the Clean Air Act, US EPA, March 1998

h. EPA's Emissions and Generation Resource Integrated Database (eGRID) is available online at http://www.epa.gov/cleanenergy/egrid/

i. Estimating the Environmental Benefits of Renewable Energy and Energy Efficiency in North America: Experience and Methods Prepared Prepared by Geoffrey Keith, Bruce Biewald and Anna Sommer Synapse Energy Economics and Patrick Henn, Helios Centre Miguel Breceda, Energy Matters for the Commission for Environmental Cooperation, 22 September 2003 http://www.cec.org/pubs_docs/documents/index.cfm?varlan=english&ID=1214

j. Quantifying the Value That Wind Power Provides as a Hedge Against Volatile Natural Gas Prices; Mark Bolinger, Ryan Wiser, and William Golove; Ernest Orlando Lawrence Berkeley National Laboratory, June 2002 http://eetd.lbl.gov/ea/EMS/reports/50484.pdf

k. Balancing Natural Gas Policy – Fueling the Demands of a Growing Economy, Volume I, Summary of Findings and Recommendations, National Petroleum Council, Committee on Natural Gas, September 2003, p. 6

l. 2001-2003, “Examples of Recent Renewable Energy, Energy Efficiency, and Alternative Fuel SEPs,” StEPP Foundation, Incorporated.

m. Ibid.

n. Ibid.

o. Ibid.

p. Ibid.