This document, concerning portable air conditioners is an action issued by the Department of Energy. Though it is not intended or expected, should any discrepancy occur between the document posted here and the document published in the Federal Register, the Federal Register publication controls. This document is being made available through the Internet solely as a means to facilitate the public's access to this document.

#### [6450-01-P]

### **DEPARTMENT OF ENERGY**

# 10 CFR Part 430

#### [Docket No. EERE-2013-BT-STD-0033]

**RIN: 1904-AD02** 

# Energy Conservation Standards for Portable Air Conditioners: Public Meeting and Availability of the Preliminary Technical Support Document

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

**ACTION:** Notice of public meeting and availability of preliminary technical support document.

**SUMMARY:** The U.S. Department of Energy (DOE) will hold a public meeting to discuss and receive comments on the preliminary analysis it has conducted for purposes of establishing energy conservation standards for portable air conditioners (ACs). The meeting will cover the analytical framework, models, and tools that DOE is using to evaluate potential standards for this product; the results of preliminary analyses performed by DOE for this product; the potential energy conservation standard levels derived from these analyses that DOE could consider for this product; and any other

issues relevant to the development of energy conservation standards for portable ACs. In addition, DOE encourages written comments on these subjects. To inform interested parties and to facilitate this process, DOE has prepared an agenda, a preliminary technical support document (TSD), and briefing materials, which are available on the DOE website at:

http://www1.eere.energy.gov/buildings/appliance\_standards/rulemaking.aspx?ruleid=76.

**DATES:** Meeting: DOE will hold a public meeting on Wednesday, March 18, 2015, from 1 p.m. to 5 p.m., in Washington, DC. The meeting will also be broadcast as a webinar. See section IV, "Public Participation," of this notice of public meeting (NOPM) for webinar registration information, participant instructions, and information about the capabilities available to webinar participants.

Comments: DOE will accept comments, data, and information regarding this preliminary analysis before and after the public meeting, but no later than **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER PUBLICATION]**. See section IV, "Public Participation," for details.

**ADDRESSES:** The public meeting will be held at the U.S. Department of Energy, Forrestal Building, Room 8E-089, 1000 Independence Avenue, SW., Washington, DC 20585-0121.

Any comments submitted must identify docket number EERE-2013–BT–STD–0033 and/or regulatory information number (RIN) number 1904-AD02. Comments may be

submitted using any of the following methods:

- <u>Federal eRulemaking Portal</u>: <u>www.regulations.gov</u>. Follow the instructions for submitting comments.
- <u>E-mail</u>: <u>PortableAC2013STD0033@ee.doe.gov</u>. Include the docket number EERE-2013-BT-STD-0033 and/or RIN 1904-AD02 in the subject line of the message.
- <u>Mail</u>: Ms. Brenda Edwards, U.S. Department of Energy, Building Technologies Program, Mailstop EE-5B, 1000 Independence Avenue, SW., Washington, DC 20585-0121. If possible, please submit all items on a compact disc (CD), in which case it is not necessary to include printed copies. [Please note that comments and CDs sent by mail are often delayed and may be damaged by mail screening processes.]
- <u>Hand Delivery/Courier</u>: Ms. Brenda Edwards, U.S. Department of Energy, Building Technologies Program, 950 L'Enfant Plaza, SW., Suite 600, Washington, DC 20024. Telephone (202) 586-2945. If possible, please submit all items on CD, in which case it is not necessary to include printed copies.

<u>Docket</u>: The docket is available for review at <u>www.regulations.gov</u>, including <u>Federal Register</u> notices, comments, and other supporting documents/materials. All documents in the docket are listed in the <u>www.regulations.gov</u> index. However, not all documents listed in the index may be publicly available, such as information that is exempt from public disclosure. A link to the docket web page can be found at:

<u>http://www.regulations.gov/#!docketDetail;D=EERE-2013-BT-STD-0033</u>. The regulations.gov web page contains instructions on how to access all documents in the docket, including public comments.

**FOR FURTHER INFORMATION CONTACT:** Mr. Ronald Majette, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies, EE-5B, 1000 Independence Avenue, SW., Washington, DC 20585-0121. Telephone: (202) 586-7935. E-mail: <u>ronald.majette@ee.doe.gov</u>.

Ms. Sarah Butler, U.S. Department of Energy, Office of the General Counsel,

GC-33, 1000 Independence Avenue, SW., Washington, DC 20585-0121. Telephone:

(202) 586-1777. E-mail: <u>Sarah.Butler@hq.doe.gov</u>.

For further information on how to submit a comment or review other public comments and the docket, contact Ms. Brenda Edwards at (202) 586-2945 or by email: <u>Brenda.Edwards@ee.doe.gov</u>.

## SUPPLEMENTARY INFORMATION:

## **Table of Contents**

- I. Authority
- II. History of Energy Conservation Standards Rulemaking for Portable Air Conditioners A. Background
  - B. Current Rulemaking Process
- III. Summary of the Analyses Performed by DOE
  - A. Engineering Analysis

- **B.** Markups To Determine Prices
- C. Energy Use Analysis
- D. Life-Cycle Cost and Payback Period Analyses
- E. National Impact Analysis
- **IV.** Public Participation
  - A. Attendance at Public Meeting
  - B. Procedure for Submitting Requests to Speak
  - C. Conduct of Public Meeting
  - D. Submission of Comments
- V. Approval of the Office of the Secretary

## I. Authority

Title III, Part B<sup>1</sup> of the Energy Policy and Conservation Act of 1975, as amended, (EPCA or the Act), Pub. L. 94-163 (42 U.S.C. 6291-6309, as codified) sets forth a variety of provisions designed to improve energy efficiency and established the Energy Conservation Program for Consumer Products Other Than Automobiles, a program covering most major household appliances.<sup>2</sup> EPCA authorizes DOE to establish technologically feasible, economically justified energy conservation standards for covered products or equipment that would be likely to result in significant national energy savings. (42 U.S.C. 6295(o)(2)(B)(i)(I)–(VII)) In addition to specifying a list of covered products, EPCA contains provisions that enable the Secretary of Energy to classify additional types of consumer products as covered products. For a given product to be classified as a covered product, the Secretary must determine that:

(1) Classifying the product as a covered product is necessary for the purposes of EPCA; and

<sup>&</sup>lt;sup>1</sup> For editorial reasons, upon codification in the U.S. Code, Part B was redesignated Part A.

<sup>&</sup>lt;sup>2</sup> All references to EPCA in this document refer to the statute as amended through the American Energy Manufacturing Technical Corrections Act (AEMTCA), Pub. L. 112-210 (Dec. 18, 2012)

(2) The average annual per-household energy use by products of each type is likely to exceed 100 kilowatt-hours (kWh) per year. (42 U.S.C. 6292(b)(1))

To prescribe an energy conservation standard pursuant to 42 U.S.C. 6295(o) and (p) for covered products added pursuant to 42 U.S.C. 6292(b)(1), the Secretary must also determine that:

(1) The average household energy use of the products has exceeded 150 kWh per household for a 12-month period;

(2) The aggregate 12-month energy use of the products has exceeded 4.2 terawatthours (TWh);

(3) Substantial improvement in energy efficiency is technologically feasible; and

(4) Application of a labeling rule under 42 U.S.C. 6294 is unlikely to be sufficient to induce manufacturers to produce, and consumers and other persons to purchase, covered products of such type (or class) that achieve the maximum energy efficiency that is technologically feasible and economically justified. (42 U.S.C. 6295(1)(1))

Under EPCA, the energy conservation program consists essentially of four parts: (1) testing, (2) labeling, (3) Federal energy conservation standards, and (4) certification and enforcement procedures. The testing requirements consist of test procedures that manufacturers of covered products must use as the basis for: (1) certifying to DOE that their products comply with the applicable energy conservation standards adopted under EPCA, and (2) making representations about the efficiency of those products. Similarly,

DOE must use these test procedures to determine whether the products comply with any relevant standards promulgated under EPCA.

In prescribing a new or amended energy conservation standard, DOE is required to consider standards that: (1) achieve the maximum improvement in energy efficiency that is technologically feasible and economically justified; and (2) result in significant conservation of energy. (42 U.S.C. 6295(o)(2)(A) and (o)(3)(B)) To determine whether a proposed standard is economically justified, DOE will, after receiving comments on the proposed standard, determine whether the benefits of the standard exceed its burdens to the greatest extent practicable, using the following seven factors:

- The economic impact of the standard on manufacturers and consumers of products subject to the standard;
- The savings in operating costs throughout the estimated average life of the covered products in the type (or class) compared to any increase in the price, initial charges, or maintenance expenses for the covered products which are likely to result from the standard;
- The total projected amount of energy savings likely to result directly from the standard;
- 4. Any lessening of the utility or the performance of the covered products likely to result from the standard;
- 5. The impact of any lessening of competition, as determined in writing by the Attorney General, that is likely to result from the standard;

- 6. The need for national energy conservation; and
- 7. Other factors the Secretary of Energy considers relevant.

(42 U.S.C. 6295(o)(2)(B)(i))

Before proposing a standard, DOE typically seeks public input on the analytical framework, models, and tools that DOE will use to evaluate standards for the product at issue and the results of preliminary analyses DOE performed for the product. This notice announces the availability of the preliminary TSD, which details the preliminary analyses, discusses the comments DOE received from interested parties that are relevant to the rulemaking, and summarizes the preliminary results of DOE's analyses. In addition, DOE is announcing a public meeting to solicit feedback from interested parties on its analytical framework, models, and preliminary results.

# II. History of Energy Conservation Standards Rulemaking for Portable Air Conditioners

## A. Background

Under the authority established in EPCA, DOE published a notice of proposed determination that tentatively determined that portable ACs qualify as a covered product. 78 FR 40403 (July 5, 2013). DOE tentatively determined that (1) classifying portable ACs as a covered product is necessary or appropriate to carry out the purposes of EPCA, and (2) the average U.S. household energy use for portable ACs is likely to exceed 100 kilowatt-hours (kWh) per year. (42 U.S.C. 6292(b)(1)) DOE published a Notice of Data Availability (NODA) on May 9, 2014 (the May 2014 NODA), reviewing various industry test procedures for portable ACs and presenting results from its investigative testing. DOE requested comment and additional information regarding the results and potential methodologies. 79 FR 26639. Comments received in response to the May 2014 NODA have helped DOE identify issues related to the preliminary analyses, as well as informed the analysis for the test procedure rulemaking. On February 12, 2015, DOE issued a notice of proposed rulemaking (NOPR) for a portable AC test procedure which is available at:

http://www1.eere.energy.gov/buildings/appliance\_standards/product.aspx/productid/79.

### **B.** Current Rulemaking Process

DOE typically first develops a framework document that describes the approaches and methods DOE will use in evaluating the need for new or amended standards. For this rulemaking, DOE began the rulemaking process by publishing a notice of proposed determination (NOPD) on July 5, 2013 (hereinafter the "July 2013 NOPD"). 78 FR 40403. After the framework stage, or in this case the NOPD, DOE then presents the initial analytical results in a preliminary TSD such as this one.

Comments received since publication of the July 2013 NOPD have helped DOE identify and resolve issues related to the preliminary analyses. Chapter 2 of the preliminary TSD summarizes and addresses the comments received.

## **III. Summary of the Analyses Performed by DOE**

For the products covered in this rulemaking, DOE conducted in-depth technical analyses in the following areas: (1) engineering; (2) markups to determine product price; (3) energy use; (4) life-cycle cost and payback period; and (5) national impacts analysis (NIA). The preliminary TSD that presents the methodology and results of each of these analyses is available at:

http://www1.eere.energy.gov/buildings/appliance\_standards/rulemaking.aspx?ruleid=76.

DOE also conducted, and has included in the preliminary TSD, several other analyses that support the major analyses listed above or are preliminary analyses that will be expanded upon for a NOPR if DOE determines to proceed with an energy conservation standards rulemaking for portable ACs. These analyses include: (1) the market and technology assessment; (2) the screening analysis, which contributes to the engineering analysis; and (3) the shipments analysis, which contributes to the Life-Cycle Costs (LCC) and Payback Period (PBP) analysis and NIA. In addition to these analyses, DOE has begun preliminary work on the manufacturer impact analysis and has identified the methods to be used for the consumer subgroup analysis, the emissions analysis, the employment impact analysis, the regulatory impact analysis, and the utility impact analysis. DOE will expand on these analyses in any subsequent NOPR.

### A. Engineering Analysis

The engineering analysis establishes the relationship between the cost and efficiency levels of portable ACs. This relationship serves as the basis for the cost-benefit calculations performed for individual consumers and the nation.

As a first step in the engineering analysis, DOE established one product class, based on a characterization of the relevant portable AC products and markets. For this product class, DOE identified existing technology options that could improve the energy efficiency of portable ACs. DOE then reviewed each technology option to decide whether it (1) is technologically feasible; (2) is practicable to manufacture, install, and service; (3) would adversely affect product utility or product availability; or (4) would have adverse impacts on health and safety. The engineering analysis identifies representative baseline products, which is the starting point for analyzing technologies that provide energy efficiency improvements. "Baseline product" refers to a model or models having features and technologies typically found in minimally efficient products currently available on the market. DOE then identified design options to improve the efficiency of portable ACs and considered these options in the analysis as candidate standard levels (CSLs). DOE estimated the manufacturer production costs for the baseline and each of the four CSLs. The manufacturer production costs were derived from product teardowns, using more efficient components and modeling efficiency savings from alternative product configurations. The main outputs of the engineering analysis are the manufacturer production costs (including material, labor, and overhead) and efficiencies at the baseline and each of 4 CSLs as a function of cooling capacity for

the single product class. Chapter 5 of the preliminary TSD discusses the engineering analysis.

### B. Markups To Determine Prices

DOE derives customer prices based on manufacturer markups, retailer markups, distributor markups, contractor markups (where appropriate), and sales taxes. In deriving these markups, DOE determines the major distribution channels for product sales, the markup associated with each party in each distribution channel, and the existence and magnitude of differences between markups for baseline products (baseline markups) and higher-efficiency products (incremental markups). DOE calculates both overall baseline and overall incremental markups based on the markups at each step in each distribution channel. Chapter 6 of the preliminary TSD addresses the markups analysis.

## C. Energy Use Analysis

The energy use analysis provides estimates of the annual energy consumption of portable ACs. The energy use analysis seeks to estimate the range of energy consumption of the products that meet each of the efficiency levels considered in a given rulemaking as they are used in the field. DOE uses these values in the LCC and PBP analyses and in the NIA. Chapter 7 of the preliminary TSD addresses the energy use analysis.

### D. Life-Cycle Cost and Payback Period Analyses

The life-cycle cost (LCC) and payback period (PBP) analyses determine the economic impact of potential standards on individual consumers. The LCC is the total

cost of purchasing, installing, and operating a portable AC over the course of its lifetime. The LCC analysis compares the LCC of a portable AC designed to meet possible energy conservation standards with the LCC of a portable AC likely to be installed in the absence of standards. DOE determines LCCs by considering: (1) total installed cost to the consumer (which consists of manufacturer selling price, distribution chain markups, and sales taxes); (2) the range of annual energy consumption of portable ACs that meet each of the efficiency levels considered as they are used in the field; (3) the operating cost of portable ACs (e.g., energy cost); (4) portable AC lifetime; and (5) a discount rate that reflects the real consumer cost of capital and puts the LCC in present-value terms. The PBP represents the number of years needed to recover the increase in purchase price of higher efficiency portable ACs through savings in the operating cost. PBP is calculated by dividing the incremental increase in installed cost of the higher efficiency product, compared to the baseline product, by the annual savings in operating costs.

For portable ACs, DOE determined the range in annual energy consumption using outputs from the engineering analysis (power consumption at each efficiency level) and from publically available information on portable ACs. Total installed costs at each CSL are based on the engineering and markups analysis. Recognizing that several inputs to the determination of consumer LCC and PBP are either variable or uncertain (e.g., annual energy consumption, product lifetime, electricity price, discount rate), DOE conducts the LCC and PBP analysis by modeling both the uncertainty and variability in the inputs using Monte Carlo simulation and probability distributions.

The average annual energy consumption derived in the LCC analysis is used as an input in the NIA. Chapter 8 of the preliminary TSD addresses the LCC and PBP analyses.

## E. National Impact Analysis

The NIA estimates the national energy savings (NES) and the net present value (NPV) of total consumer costs and savings expected to result from potential new standards at each CSL. DOE calculated NES and NPV for each CSL as the difference between a base-case forecast (without new standards) and the standards-case forecast (with standards). Cumulative energy savings are the sum of the annual NES determined for the lifetime of portable ACs shipped during the analysis period. Energy savings include the full-fuel cycle energy savings (i.e., the energy needed to extract, process, and deliver primary fuel sources such as coal and natural gas, and the conversion and distribution losses of generating electricity from those fuel sources). The NPV is the sum over time of the discounted net savings each year, which consists of the difference between total operating cost savings and increases in total installed costs. NPV results are reported for discount rates of 3 percent and 7 percent.

To calculate the NES and NPV, DOE projected future shipments and efficiency distributions (for each CSL) for the single portable AC product class. DOE recognizes the uncertainty in projecting shipments and efficiency distributions, and as a result the NIA includes several different scenarios for each. Other inputs to the NIA include the estimated portable AC lifetime, consumer product costs, and average annual energy savings. Chapter 10 of the preliminary TSD addresses the NIA.

#### **IV.** Public Participation

DOE invites input from the public on all the topics described above. The preliminary analytical results are subject to revision following further review and input from the public. A complete and revised TSD will be made available upon issuance of a NOPR. The final rule establishing any new energy conservation standards will contain the final analytical results and will be accompanied by a final rule TSD.

DOE encourages those who wish to participate in the public meeting to obtain the preliminary TSD from DOE's website and to be prepared to discuss its contents. Once again, a copy of the preliminary TSD is available at:

http://www1.eere.energy.gov/buildings/appliance\_standards/rulemaking.aspx?ruleid=76. However, public meeting participants need not limit their comments to the topics identified in the preliminary TSD; DOE is also interested in receiving views concerning other relevant issues that participants believe would affect energy conservation standards for this product or that DOE should address in the NOPR.

Furthermore, DOE welcomes all interested parties, regardless of whether they participate in the public meeting, to submit in writing by **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]** comments, data, and information on matters addressed in the preliminary TSD and on other matters relevant to consideration of energy conservation standards for portable ACs. The public meeting will be conducted in an informal conference style. A court reporter will be present to record the minutes of the meeting. There shall be no discussion of proprietary information, costs or prices, market shares, or other commercial matters regulated by United States antitrust laws.

After the public meeting and the closing of the comment period, DOE will consider all timely-submitted comments and additional information obtained from interested parties, as well as information obtained through further analyses. Afterwards, the Department will publish either a determination that standards for portable ACs are not appropriate or a NOPR proposing to establish standards. The NOPR will include proposed energy conservation standards for the products covered by the rulemaking, and members of the public will be given an opportunity to submit written and oral comments on the proposed standards.

### <u>A. Attendance at Public Meeting</u>

The time and date of the public meeting are listed in the **DATES** and **ADDRESSES** sections at the beginning of this notice.

Please note that foreign nationals participating in the public meeting are subject to advance security screening procedures which require advance notice prior to attendance at the public meeting. If a foreign national wishes to participate in the public meeting, please inform DOE of this fact as soon as possible by contacting Ms. Regina Washington at (202) 586-1214 or by e-mail: <u>Regina.Washington@ee.doe.gov</u> so that the necessary

procedures can be completed.

DOE requires visitors to with laptop computers and other devices, such as tablets, to be checked upon entry into the building. Any person wishing to bring these devices into the Forrestal Building will be required to obtain a property pass. Visitors should avoid bringing these devices, or allow an extra 45 minutes to check in. Please report to the visitor's desk to have devices checked before proceeding through security.

Due to the REAL ID Act implemented by the Department of Homeland Security (DHS), there have been recent changes regarding ID requirements for individuals wishing to enter Federal buildings from specific states and U.S. territories. Driver's licenses from the following states or territory will not be accepted for building entry and one of the alternate forms of ID listed below will be required. DHS has determined that regular driver's licenses (and ID cards) from the following jurisdictions are not acceptable for entry into DOE facilities: Alaska, American Samoa, Arizona, Louisiana, Maine, Massachusetts, Minnesota, New York, Oklahoma, and Washington. Acceptable alternate forms of Photo-ID include: U.S. Passport or Passport Card; an Enhanced Driver's License or Enhanced ID-Card issued by the states of Minnesota, New York or Washington (Enhanced licenses issued by these states are clearly marked Enhanced or Enhanced Driver's License); a military ID or other Federal government issued Photo-ID card.

In addition, you can attend the public meeting via webinar. Webinar registration information, participant instructions, and information about the capabilities available to webinar participants will be published on DOE's website at: [LINK]. Participants are responsible for ensuring their systems are compatible with the webinar software.

### B. Procedure for Submitting Requests to Speak

Any person who has an interest in today's notice or who is a representative of a group or class of persons that has an interest in these issues may request an opportunity to make an oral presentation. Such persons may hand-deliver requests to speak, along with a computer diskette or CD in WordPerfect, Microsoft Word, PDF, or text (ASCII) file format to Ms. Brenda Edwards at the address shown in the **ADDRESSES** section at the beginning of this notice between 9:00 a.m. and 4:00 p.m. Monday through Friday, except Federal holidays. Requests may also be sent by mail to the address shown in the **ADDRESSES** section or email to <u>Brenda.Edwards@ee.doe.gov</u>.

#### C. Conduct of Public Meeting

DOE will designate a DOE official to preside at the public meeting and may also employ a professional facilitator to aid discussion. The meeting will not be a judicial or evidentiary-type public hearing, but DOE will conduct it in accordance with section 336 of EPCA. (42 U.S.C. 6306) A court reporter will record the proceedings and prepare a transcript. DOE reserves the right to schedule the order of presentations and to establish the procedures governing the conduct of the public meeting. After the public meeting, interested parties may submit further comments on the proceedings as well as on any aspect of the rulemaking until the end of the comment period. The public meeting will be conducted in an informal conference style. DOE will present summaries of comments received before the public meeting, allow time for presentations by participants, and encourage all interested parties to share their views on issues affecting this rulemaking. Each participant will be allowed to make a prepared general statement (within DOE-determined time limits) prior to the discussion of specific topics. DOE will permit other participants to comment briefly on any general statements.

At the end of all prepared statements on a topic, DOE will permit participants to clarify their statements briefly and comment on statements made by others. Participants should be prepared to answer questions from DOE and other participants concerning these issues. DOE representatives may also ask questions of participants concerning other matters relevant to this rulemaking. The official conducting the public meeting will accept additional comments or questions from those attending, as time permits. The presiding official will announce any further procedural rules or modification of the above procedures that may be needed for the proper conduct of the public meeting.

A transcript of the public meeting will be posted on the DOE website and will also be included in the docket, which can be viewed as described in the **Docket** section at the beginning of this notice. In addition, any person may buy a copy of the transcript from the transcribing reporter.

# D. Submission of Comments

DOE will accept comments, data, and other information regarding this rulemaking

before or after the public meeting, but no later than the date provided at the beginning of this notice. Please submit comments, data, and other information as provided in the **ADDRESSES** section. Submit electronic comments in WordPerfect, Microsoft Word, PDF, or text (ASCII) file format and avoid the use of special characters or any form of encryption. Comments in electronic format should be identified by the Docket Number EERE-20XX-BT-STD-0033 and/or RIN 1904-AD02 and, wherever possible, carry the electronic signature of the author. No telefacsimiles (faxes) will be accepted.

Pursuant to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit two copies: one copy of the document including all the information believed to be confidential and one copy of the document with the information believed to be confidential deleted. DOE will make its own determination as to the confidential status of the information and treat it according to its determination.

Factors of interest to DOE when evaluating requests to treat submitted information as confidential include: (1) a description of the items; (2) whether and why such items are customarily treated as confidential within the industry; (3) whether the information is generally known by or available from other sources; (4) whether the information has previously been made available to others without obligation concerning its confidentiality; (5) an explanation of the competitive injury to the submitting person which would result from public disclosure; (6) a date upon which such information might lose its confidential nature due to the passage of time; and (7) why disclosure of the information would be contrary to the public interest.

# V. Approval of the Office of the Secretary

The Secretary of Energy has approved publication of this NOPM.

Issued in Washington, DC, on

February 13, 2015

Kathleen B. Hogan Deputy Assistant Secretary for Energy Efficiency Energy Efficiency and Renewable Energy