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REGULATORY IMPACT ANALYSIS FOR PROPOSED ENERGY CONSERVATION STANDARDS FOR ELECTRICAL DISTRIBUTION TRANSFORMERS

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1.0 INTRODUCTION

Under the Process Rule, the Department works to continually explore non-regulatory alternatives to standards. The Department will prepare a draft regulatory analysis pursuant to Executive Order 12866, "Regulatory Planning and Review," which will be subject to review under the Executive Order by the Office of Information and Regulatory Affairs (OIRA). 58 FR 51735. The Department identified six major alternatives to standards as representing feasible policy options to achieve customer product energy efficiency. It will evaluate each alternative in terms of its ability to achieve significant energy savings at a reasonable cost, and will compare the effectiveness of each one to the effectiveness of the rule.

The non-regulatory means of achieving energy savings that DOE proposes to analyze are:

- no regulatory action,
- consumer tax credits,
- manufacturer tax credits,
- performance standards,
- rebates,
- voluntary energy efficiency targets,
- early replacement, and
- government bulk procurement.

The technical support document (TSD) in support of DOE's Notice of Proposed Rulemaking (NOPR) will include a complete quantitative analysis of each alternative, the methodology for which is discussed in brief below.

2.0 METHODOLOGY

The Department will use the national energy savings (NES) Spreadsheet Model to calculate the NES and the net present value (NPV) corresponding to each alternative to the proposed standards. The NES Spreadsheet Model is discussed extensively in Chapter10. To compare each alternative quantitatively to the proposed conservation standards, it will be necessary to quantify the effect of each alternative on the purchase and use of energy-efficient consumer products. Once each alternative is properly quantified, DOE will make the appropriate revisions to the inputs in the NES Spreadsheet Model. Key inputs that DOE may revise in the NES Spreadsheet Model are:

- energy prices and escalation factors;

- implicit market discount rates for trading off purchase price against operating expense when choosing transformer efficiency;

- customer purchase price, operating cost, and income elasticities;

- customer price versus efficiency relationships; and

- transformer stock data (purchase of new equipment or turnover rates for inventories).

The key measures of the impact of each alternative will be:

- Commercial and industrial energy use (EJ = 10^{18} joule): Cumulative energy losses of the transformers from the effective date of the new standard to the year 2030. The Department will report electricity consumption as primary energy.

- NES: Cumulative national energy use from the base case projection less the alternative policy case projection.

- NPV: The value of future operating cost savings from transformers bought in the period from the effective date of the new standard to the year 2030. The Department calculates the NPV as the difference between the present value of equipment and operating expenditures (including energy) in the base case, and the present value of expenditures in each alternative policy case. The Department discounts future operating and equipment expenditures to 2001 using a 7 percent real discount rate. It calculates operating expenses (including energy) for the life of the transformers.