

This document is a correction to the Department of Energy's notice of proposed rulemaking: Energy Conservation Standards for Distribution Transformers, a rulemaking action issued by the Department of Energy. Though it is not intended or expected, should any discrepancy occur between the attached document and the document published in the Federal Register, the Federal Register publication controls. This document is being made available solely as a means to facilitate the public's access to this document.

[6450-01-P]

DEPARTMENT OF ENERGY

10 CFR Part 431

[Docket Number EERE-2010-BT-STD-0048]

RIN: 1904-AC04

Energy Conservation Program: Energy Conservation Standards for Distribution Transformers; Correction

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

ACTION Notice of proposed rulemaking and public meeting; correction.

SUMMARY: The U.S. Department of Energy (DOE) published a notice of proposed rulemaking on February 10, 2012, which proposed to amend DOE regulations regarding energy conservation standards for distribution transformers. It was recently discovered that values in certain tables of the proposed rule are inaccurate or absent. This notice corrects these inaccuracies as described.

DATES: DOE will accept comments, data and information regarding this correction before and after the February 23, 2012, public meeting, but no later than April 10, 2012.

FOR FURTHER INFORMATION CONTACT:

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SUPPLEMENTARY INFORMATION:

Background

Title III, Part B of the Energy Policy and Conservation Act of 1975 (EPCA or the Act), Pub. L. 94-163 (42 U.S.C. 6291-6309, as codified), established the Energy Conservation Program for “Consumer Products Other Than Automobiles.” Part C of Title III of EPCA (42 U.S.C. 6311–6317) established a similar program for “Certain Industrial Equipment,” including distribution transformers. The Energy Policy Act of 1992 (EPACT 1992), Pub. L. 102-486, amended EPCA and directed DOE to prescribe energy conservation standards for distribution transformers. (42 U.S.C. 6317(a)) On October 12, 2007, DOE published a final rule that established energy conservation standards for liquid-immersed distribution transformers and medium-voltage, dry-type distribution transformers (72 FR 58190). The Energy Policy Act of 2005 (EPACT 2005), Pub. L. 109-25, amended EPCA to establish energy conservation standards for low-voltage, dry-type distribution transformers. (42 U.S.C. 6295(y)) On February 10, 2012, DOE

published a proposed rule with amended energy conservation standards for liquid-immersed, medium-voltage dry-type, and low-voltage, dry-type distribution transformers (77 FR 7282).

Need for Correction

As published, values in certain tables of the proposed rule are inaccurate or absent. DOE solicits public comment on the changes contained in this document as part of the February 10 NOPR.

Corrections

In proposed rule FR Doc. 2012–2642 appearing on page 7282 in the issue of Friday, February 10, 2012, the following corrections should be made:

1. On page 7285, Table I.5 is corrected to read as follows:

Table I.5. Proposed Electrical Efficiencies for all Liquid-Immersed Distribution Transformer Equipment Classes (Compliance Starting January 1, 2016)

Standards by kVA and Equipment Class			
Equipment Class 1		Equipment Class 2	
kVA	%	kVA	%
10	98.70	15	98.65
15	98.82	30	98.83
25	98.95	45	98.92
37.5	99.05	75	99.03
50	99.11	112.5	99.11
75	99.19	150	99.16
100	99.25	225	99.23
167	99.33	300	99.27
250	99.39	500	99.35
333	99.43	750	99.40
500	99.49	1000	99.43
667	99.52	1500	99.48
833	99.55	2000	99.51
		2500	99.53

2. On page 7344, Table V.9 is corrected to read as follows:

Table V.9. Summary Life-Cycle Cost and Payback Period Results for Design Line 6 Representative Unit

	Trial Standard Level					
	1	2	3	4	5	6
Efficiency (%)	98.00	98.60	98.80	99.17	99.17	99.44
Transformers with Net Increase in LCC (%)	0.0	71.5	17.6	36.2	36.2	93.4
Transformers with Net LCC Savings (%)	0.0	28.5	82.4	63.8	63.8	6.6
Transformers with No Impact on LCC (%)	100.0	0.0	0.0	0.0	0.0	0.0
Mean LCC Savings (\$)	0	-125	303	187	187	-881
Median PBP (Years)	0.0	24.7	12.8	16.3	16.3	32.4

3. On page 7346, Table V.20 is corrected to read as follows:

Table V.20 Rebuttable-Presumption Payback Periods (years) for Low-Voltage Dry-Type Distribution Transformers

Design Line	Rated Capacity (kVA)	Trial Standard Level					
		1	2	3	4	5	6
6	25	0.0	15.9	13.5	15.0	15.0	26.5
7	75	4.2	4.2	4.4	6.4	6.4	14.9
8	300	6.8	6.8	10.4	9.7	20.2	20.2

4. On page 7363, Table V.39 is corrected to read as follows:

Table V.39 Proposed Energy Conservation Standards for Liquid-Immersed Distribution Transformers

Standards by kVA and Equipment Class			
Equipment Class 1		Equipment Class 2	
kVA	%	kVA	%
10	98.70	15	98.65
15	98.82	30	98.83
25	98.95	45	98.92
37.5	99.05	75	99.03
50	99.11	112.5	99.11
75	99.19	150	99.16
100	99.25	225	99.23
167	99.33	300	99.27
250	99.39	500	99.35
333	99.43	750	99.40
500	99.49	1000	99.43
667	99.52	1500	99.48
833	99.55	2000	99.51
		2500	99.53

5. On pages 7363 and 7364, Table V.41 is corrected to read as follows:

Table V.41 Summary of Analytical Results for Low-Voltage, Dry-Type Distribution Transformers: Manufacturer and Consumer Impacts

Category	TSL 1	TSL 2	TSL 3	TSL 4	TSL 5	TSL 6
Manufacturer Impacts						
Industry NPV (2011\$ million)	203 to 236	200 to 235	193 to 240	173 to 250	164 to 263	136 to 322

Industry NPV (% change)	(7.7) to 7.7	(8.9) to 6.8	(12.2) to 9.1	(21.0) to 14.1	(25.2) to 20.0	(37.9) to 46.4
Consumer Mean LCC Savings (2010\$)						
Design line 6	0	-125	303	187	187	-881
Design line 7	1714	1714	1793	2270	2270	270
Design line 8	2476	2476	2625	4145	-2812	-2812
Consumer Median PBP (years)						
Design line 6	0.0	24.7	12.8	16.3	16.3	32.4
Design line 7	4.5	4.5	4.7	6.9	6.9	18.1
Design line 8	8.4	8.4	12.3	11.0	24.5	24.5
Distribution of Consumer LCC Impacts						
Design line 6						
Net Cost (%)	0.0	71.5	17.6	36.2	36.2	93.4
Net Benefit (%)	0.0	28.5	82.4	63.8	63.8	6.6
No Impact (%)	100.0	0.0	0.0	0.0	0.0	0.0
Design line 7						
Net Cost (%)	1.8	1.8	2.0	3.7	3.7	46.4
Net Benefit (%)	98.2	98.2	98.0	96.3	96.3	53.6
No Impact (%)	0.0	0.0	0.0	0.0	0.0	0.0
Design line 8						
Net Cost (%)	5.2	5.2	15.3	10.5	78.5	78.5
Net Benefit (%)	94.8	94.8	84.7	89.5	21.5	21.5
No Impact (%)	0.0	0.0	0.0	0.0	0.0	0.0

6. The first sentence on page 7365, column 1, paragraph 7 is corrected to read as follows:

“At TSL 3, the average LCC impact ranges from \$303 for design line 6 to \$2,625 for design line 8. The median PBP ranges from 12.8 years for design line 6 to 4.7 years for design line 7”.

7. On pages 7379 and 7380, §431.196, the “%” headings in the second row of the tables in paragraphs (a)(1) and (a)(2) are corrected to read as “Efficiency (%)”.

8. On page 7380, §431.196, interchange the tables in paragraphs (b)(1) and (b)(2) to read as follows:

(b) Liquid-Immersed Distribution Transformers.

(1) The efficiency of a liquid-immersed distribution transformer manufactured on or after January 1, 2010, but before January 1, 2016, shall be no less than that required for their kVA rating in the table below. Liquid-immersed distribution transformers with kVA ratings not appearing in the table shall have their minimum efficiency level determined by linear interpolation of the kVA and efficiency values immediately above and below that kVA rating.

Single-Phase		Three-Phase	
kVA	Efficiency (%)	kVA	Efficiency (%)
10	98.62	15	98.36
15	98.76	30	98.62
25	98.91	45	98.76
37.5	99.01	75	98.91
50	99.08	112.5	99.01
75	99.17	150	99.08
100	99.23	225	99.17
167	99.25	300	99.23
250	99.32	500	99.25
333	99.36	750	99.32
500	99.42	1000	99.36
667	99.46	1500	99.42
833	99.49	2000	99.46
		2500	99.49

Note: All efficiency values are at 50 percent of nameplate-rated load, determined according to the DOE Test- Procedure. 10 CFR Part 431, Subpart K, Appendix A.

(2) The efficiency of a liquid-immersed distribution transformer manufactured on or after January 1, 2016, shall be no less than that required for their kVA rating in the table below. Liquid-immersed distribution transformers with kVA ratings not appearing

in the table shall have their minimum efficiency level determined by linear interpolation of the kVA and efficiency values immediately above and below that kVA rating.

Single-Phase		Three-Phase	
kVA	Efficiency (%)	kVA	Efficiency (%)
10	98.70	15	98.65
15	98.82	30	98.83
25	98.95	45	98.92
37.5	99.05	75	99.03
50	99.11	112.5	99.11
75	99.19	150	99.16
100	99.25	225	99.23
167	99.33	300	99.27
250	99.39	500	99.35
333	99.43	750	99.40
500	99.49	1000	99.43
667	99.52	1500	99.48
833	99.55	2000	99.51
		2500	99.53

Note: All efficiency values are at 50 percent of nameplate-rated load, determined according to the DOE Test- Procedure. 10 CFR Part 431, Subpart K, Appendix A.

9. On pages 7380 and 7381, §431.196, interchange the tables in paragraphs (c)(1) and (c)(2) to read as follows:

(c) Medium-Voltage Dry-Type Distribution Transformers.

(1) The efficiency of a medium- voltage dry-type distribution transformer manufactured on or after January 1, 2010, but before January 1, 2016, shall be no less than that required for their kVA and BIL rating in the table below. Medium-voltage dry-type distribution transformers with kVA ratings not appearing in the table shall have their

minimum efficiency level determined by linear interpolation of the kVA and efficiency values immediately above and below that kVA rating.

Single-Phase				Three-Phase			
BIL*	20–45 kV	46–95 kV	≥96 kV	BIL*	20–45 kV	46–95 kV	≥96 kV
kVA	Efficiency (%)	Efficiency (%)	Efficiency (%)	kVA	Efficiency (%)	Efficiency (%)	Efficiency (%)
15	98.10	97.86	-	15	97.50	97.18	-
25	98.33	98.12	-	30	97.90	97.63	-
37.5	98.49	98.30	-	45	98.10	97.86	-
50	98.60	98.42	-	75	98.33	98.12	-
75	98.73	98.57	98.53	112.5	98.49	98.30	-
100	98.82	98.67	98.63	150	98.60	98.42	-
167	98.96	98.83	98.80	225	98.73	98.57	98.53
250	99.07	98.95	98.91	300	98.82	98.67	98.63
333	99.14	99.03	98.99	500	98.96	98.83	98.80
500	99.22	99.12	99.09	750	99.07	98.95	98.91
667	99.27	99.18	99.15	1000	99.14	99.03	98.99
833	99.31	99.23	99.20	1500	99.22	99.12	99.09
				2000	99.27	99.18	99.15
				2500	99.31	99.23	99.20

*BIL means basic impulse insulation level

Note: All efficiency values are at 50 percent of nameplate rated load, determined according to the DOE Test- Procedure. 10 CFR Part 431, Subpart K, Appendix A.

(2) The efficiency of a medium- voltage dry-type distribution transformer manufactured on or after January 1, 2016, shall be no less than that required for their kVA and BIL rating in the table below. Medium-voltage dry-type distribution transformers with kVA ratings not appearing in the table shall have their minimum efficiency level determined by linear interpolation of the kVA and efficiency values immediately above and below that kVA rating.

Single-Phase				Three-Phase			
BIL*	20–45 kV	46–95 kV	≥96 kV	BIL*	20–45 kV	46–95 kV	≥96 kV
kVA	Efficiency (%)	Efficiency (%)	Efficiency (%)	kVA	Efficiency (%)	Efficiency (%)	Efficiency (%)

15	98.10	97.86	-	15	97.50	97.18	-
25	98.33	98.12	-	30	97.90	97.63	-
37.5	98.49	98.30	-	45	98.10	97.86	-
50	98.60	98.42	-	75	98.33	98.13	-
75	98.73	98.57	98.53	112.5	98.52	98.36	-
100	98.82	98.67	98.63	150	98.65	98.51	-
167	98.96	98.83	98.80	225	98.82	98.69	98.57
250	99.07	98.95	98.91	300	98.93	98.81	98.69
333	99.14	99.03	98.99	500	99.09	98.99	98.89
500	99.22	99.12	99.09	750	99.21	99.12	99.02
667	99.27	99.18	99.15	1000	99.28	99.20	99.11
833	99.31	99.23	99.20	1500	99.37	99.30	99.21
				2000	99.43	99.36	99.28
				2500	99.47	99.41	99.33

* BIL means basic impulse insulation level

Note: All efficiency values are at 50 percent of nameplate rated load, determined according to the DOE Test- Procedure. 10 CFR Part 431, Subpart K, Appendix A.

Issued in Washington, DC, on February 15, 2012.



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