ERRATA to DEER Database 2011 Update Documentation

Updated December 7, 2011

The DEER team has identified typos and errata in the DEER 2011 Update Report and DEER 2011 Update Report Appendices. This document details those items.

1. Page ES-2, Table ES1, first row; Change the hourly estimates for internal CFL as shown below in the revised table below.

   Table ES-1: Proposed Changes in Hours of Use for Residential Lighting and Impact on Unit Savings UES Estimate

Measure	Updated (2011) Daily Hours of Use	2008 DEER Daily Hours of Use	% change in Unit Energy Savings UES
Interior CFL's	~~2.18~~ 1.48	~~1.48~~ 2.18	-32%
Exterior CFL's	3.42	3.10	+10%

2. Page ES-5; Table ES-5, last row, first column add the words and Specialty" to the first cell in the measure columns. The cell should read " Residential Basic <u>and Specialty</u> CFL's"

3. Page 4-12, Table 4-12 Delta Watts CFLs – Commercial sector. The estimates in column 2008 Delta Watts were inadvertently copied from column 4 Pre Wattage. The correct delta watts estimates are highlighted in yellow in the revised column 5 in the table below.

Table 4-2: Delta Watts – CFLs

Post-Wattage/ Ranges	Proposed 2011 Updates			2008 DEER		Delta Watts % Change
	Ratio	Pre-Wattage	Delta Watts	Pre-Wattage	Delta Watts	
3 W - 11 W	4.1	Various	Various	Various	Various	60%
12	3.8	57.0	45.0	42.4	30.4	48%
13	3.5	58.0	45.0	45.9	32.9	37%
14	3.2	59.0	45.0	49.4	35.4	27%
15	3.0	59.9	44.9	53.0	38.0	18%
16	2.8	60.8	44.8	56.5	40.5	11%
17	2.6	61.6	44.6	60.0	43.0	4%
18	2.5	62.4	44.4	63.5	45.5	-3%
19	2.3	63.1	44.1	67.1	48.1	-8%
20	2.2	63.8	43.8	70.6	50.6	-13%
21	2.1	64.4	43.4	74.1	53.1	-18%
22	2.0	65.0	43.0	77.7	55.7	-23%
23	1.9	65.6	42.6	81.2	58.2	-27%
24	1.8	67.4	43.4	84.7	60.7	-29%
25	1.8	69.1	44.1	88.3	63.3	-30%
26	1.7	70.9	44.9	91.8	65.8	-32%
> 26 W	1.7	Various	Various	Various	Various	-33%

4. Page 6-4, Table 6-1, Master Table of NTGR, column 4, NTGR in the 2008 DEER v2.05, several of the commercial and industrial values in this column should be corrected from 0.54 to 0.64 as shown in the revised portion of Table 6-1 below.

EEM	Sector	Program Delivery Methods*	2008 DEER v2.05			2006 – 2008 Evaluation Studies			Recommended 2011 DEER Updates			Future Adjustments for 2013
			NTGR revised	Source	Method	Source	NTGR	Method	NTGR	Building Types or Sales Channels	Utility Specific or Statewide	
Pump-Off Controllers	Industrial	CIDN	0.64	Itron-KEMA, 2008	SRA	Itron, PG&E 2010[1] & Itron Memo, 2009[2]	PGE Major 0.45 PGE/SCE Major 0.42 PGE/SCE Independent 0.74 (Combined since there isn't a simple way to define independents)	SRA	0.45	Oil & Gas Producers	Statewide	None
Pipe Insulation	Industrial	CIDN	0.64	Itron-KEMA, 2008	SRA	Itron, see footnote 2 in document	SCG 0.72 PGE 0.49	SRA	0.71	Industrial	Statewide	None
Steam Traps	Small Comm.	PRDN	0.64	Itron-KEMA, 2008	SRA	Itron, Southern California Industrial and Agricultural	PGE 0.62 SCG 0.70 SDGE 0.72	SRA	0.68	Small Comm.	Statewide	None
Steam Traps, High Pressure	Industrial	CIDN	0.64	Itron-KEMA, 2008	SRA	Itron, Footnote 4 in document	0.52	SRA	0.52	Industrial High Pressure	Statewide	None
Steam Traps, Low Pressure	Industrial	CIDN	0.64	Itron-KEMA, 2008	SRA	Itron, Footnote 4 in document	0.57	SRA	0.52	Industrial Low Pressure	Statewide	None
Custom – Electric	Comm. / Industrial	CIDN	0.64	Itron-KEMA, 2008	SRA	Itron Footnote 1 in document, FN3, SBW (2010)[3] and ADM, 2010[4]	PGE 0.60 SCE Intgrtd. 0.63 SCE Std Prfrm0.59 PGE High Tech 0.47 PGE Lg Com 0.60 Based on kWh; kW values not statistically significant	SRA	0.60 (Weighted average based on energy savings from four studies)	Commercial / Industrial	Statewide	None

[1] Itron, PG&E Fabrication, Process and Manufacturing Group, February 2010.

[2] Itron, July 7, 2009 Early Feedback Memo to Support CPUC and IOU Planning Regarding Pump-Off Controller Interventions in 2009-2011.

[3] SBW Major Commercial Contract Group - Final Impact Evaluation Report 2006-2008 Program Years.

[4] ADM, Commercial Facilities Contract Group - 2006-2008 Direct Impact Evaluation, February 2010.

Custom Electric RFP or Bid	Comm. / Industrial	CI	0.64	Itron-KEMA, 2008	SRA	ADM, 2010[5]	SDGE3010	0.70	SRA	0.70	Commercial / Industrial	Statewide	None
Custom Gas	Comm. / Industrial	CIDN	0.64	Custom Default	SRA	Itron, PG&E 2010; see Footnote 1 in document	PG&E SCG	0.31 0.54	SRA	0.35	Industrial	Statewide	None

5. Page 13-2,13-4 and 13-5, Tables 13-1, 13-4 and 13-5, The measure name in the first column is given as Residential Gas Storage/ Instantaneous Water heaters with EF >.62. This description should be replaced with the words " Residential Gas Storage Water Heaters with EF>.62 and EF<=0.65" in all three tables where this measure name is given for to describe the characteristics of gas water heaters.

6. The Code/Standard Technology for some HVAC measures incorrectly describe the 2005 Title-24 code required technologies instead of the 2008 Title-24 code required technologies. The associated energy impacts are correct, only the code technology descriptions are incorrect. The following table lists the correct technology descriptions for the affected measures:

Measure ID	**Incorrect Code/Standard Technology Description**	**Corrected Code/Standard Technology Description**
NE-HVAC-airAC-Pkg-lt65kBtuh3phs-12p0seer	Pkg AC SEER = 9.70; EER = 9.22; Clg EIR = 0.306; Supply Fan W/cfm = 0.445794; no econo	Pkg AC SEER = 13.00; EER = 11.06; Clg EIR = 0.256; Supply Fan W/cfm = 0.379; no econo
NE-HVAC-airAC-Pkg-lt65kBtuh3phs-13p0seer	Pkg AC SEER = 9.70; EER = 9.22; Clg EIR = 0.306; Supply Fan W/cfm = 0.445794; no econo	Pkg AC SEER = 13.00; EER = 11.06; Clg EIR = 0.256; Supply Fan W/cfm = 0.379; no econo
NE-HVAC-airAC-Pkg-lt65kBtuh3phs-14p0seer	Pkg AC SEER = 9.70; EER = 9.22; Clg EIR = 0.306; Supply Fan W/cfm = 0.445794; no econo	Pkg AC SEER = 13.00; EER = 11.06; Clg EIR = 0.256; Supply Fan W/cfm = 0.379; no econo
NE-HVAC-airAC-Split-	Split AC SEER = 10.00; EER = 9.50; Clg EIR = 0.297;	Split AC SEER = 13.00; EER = 11.06; Clg EIR = 0.256;

[5] Ibid

lt65kBtuh3phs-12p0seer	Supply Fan W/cfm = 0.433; no econo	Supply Fan W/cfm = 0.379; no econo
NE-HVAC-airAC-Split-lt65kBtuh3phs-13p0seer	Split AC SEER = 10.00; EER = 9.50; Clg EIR = 0.297; Supply Fan W/cfm = 0.433; no econo	Split AC SEER = 13.00; EER = 11.06; Clg EIR = 0.256; Supply Fan W/cfm = 0.379; no econo
NE-HVAC-airAC-Split-lt65kBtuh3phs-14p0seer	Split AC SEER = 10.00; EER = 9.50; Clg EIR = 0.297; Supply Fan W/cfm = 0.433; no econo	Split AC SEER = 13.00; EER = 11.06; Clg EIR = 0.256; Supply Fan W/cfm = 0.379; no econo
NE-HVAC-airAC-SpltPkg-135to239kBtuh-10p8eer	Pkg AC EER = 9.50; Clg EIR = 0.275; Supply Fan W/cfm = 0.419; Cond Fan W/Btuh = 0.0079; w/ econo	Pkg AC EER = 10.80; Clg EIR = 0.262; Supply Fan W/cfm = 0.269514; Cond Fan W/Btuh = 0.00535136; w/ econo
NE-HVAC-airAC-SpltPkg-135to239kBtuh-11p5eer	Pkg AC EER = 9.50; Clg EIR = 0.275; Supply Fan W/cfm = 0.419; Cond Fan W/Btuh = 0.0079; w/ econo	Pkg AC EER = 10.80; Clg EIR = 0.262; Supply Fan W/cfm = 0.269514; Cond Fan W/Btuh = 0.00535136; w/ econo
NE-HVAC-airAC-SpltPkg-135to239kBtuh-12p0eer	Pkg AC EER = 9.50; Clg EIR = 0.275; Supply Fan W/cfm = 0.419; Cond Fan W/Btuh = 0.0079; w/ econo	Pkg AC EER = 10.80; Clg EIR = 0.262; Supply Fan W/cfm = 0.269514; Cond Fan W/Btuh = 0.00535136; w/ econo
NE-HVAC-airAC-SpltPkg-240to759kBtuh-10p5eer	Pkg AC EER = 9.30; w/ furnace; w/ econo	Pkg AC EER = 9.80; w/ furnace; w/ econo
NE-HVAC-airAC-SpltPkg-240to759kBtuh-10p8eer	Pkg AC EER = 9.30; w/ furnace; w/ econo	Pkg AC EER = 9.80; w/ furnace; w/ econo
NE-HVAC-airAC-SpltPkg-240to759kBtuh-9p8eer	Pkg AC EER = 9.30; w/ furnace; w/ econo	Pkg AC EER = 9.80; w/ furnace; w/ econo
NE-HVAC-airAC-SpltPkg-65to89kBtuh-11p0eer	Pkg AC EER = 10.10; Clg EIR = 0.262; Supply Fan W/cfm = 0.385; Cond Fan W/Btuh = 0.0054; no econo	Pkg AC EER = 11.00; Clg EIR = 0.257; Supply Fan W/cfm = 0.298; Cond Fan W/Btuh = 0.0053; no econo

NE-HVAC-airAC-SpltPkg-65to89kBtuh-11p5eer	Pkg AC EER = 10.10; Clg EIR = 0.262; Supply Fan W/cfm = 0.385; Cond Fan W/Btuh = 0.0054; no econo	Pkg AC EER = 11.00; Clg EIR = 0.257; Supply Fan W/cfm = 0.298; Cond Fan W/Btuh = 0.0053; no econo
NE-HVAC-airAC-SpltPkg-65to89kBtuh-12p0eer	Pkg AC EER = 10.10; Clg EIR = 0.262; Supply Fan W/cfm = 0.385; Cond Fan W/Btuh = 0.0054; no econo	Pkg AC EER = 11.00; Clg EIR = 0.257; Supply Fan W/cfm = 0.298; Cond Fan W/Btuh = 0.0053; no econo
NE-HVAC-airAC-SpltPkg-90to134kBtuh-11p0eer	Pkg AC EER = 10.10; Clg EIR = 0.262; Supply Fan W/cfm = 0.385; Cond Fan W/Btuh = 0.0054; w/ econo	Pkg AC EER = 11.00; Clg EIR = 0.257; Supply Fan W/cfm = 0.298; Cond Fan W/Btuh = 0.0053; w/ econo
NE-HVAC-airAC-SpltPkg-90to134kBtuh-11p5eer	Pkg AC EER = 10.10; Clg EIR = 0.262; Supply Fan W/cfm = 0.385; Cond Fan W/Btuh = 0.0054; w/ econo	Pkg AC EER = 11.00; Clg EIR = 0.257; Supply Fan W/cfm = 0.298; Cond Fan W/Btuh = 0.0053; w/ econo
NE-HVAC-airAC-SpltPkg-90to134kBtuh-12p0eer	Pkg AC EER = 10.10; Clg EIR = 0.262; Supply Fan W/cfm = 0.385; Cond Fan W/Btuh = 0.0054; w/ econo	Pkg AC EER = 11.00; Clg EIR = 0.257; Supply Fan W/cfm = 0.298; Cond Fan W/Btuh = 0.0053; w/ econo
NE-HVAC-airAC-SpltPkg-gte760kBtuh-10p2eer	Pkg AC EER = 9.00; w/ furnace; w/ econo	Pkg AC EER = 9.50; w/ furnace; w/ econo
NE-HVAC-airAC-SpltPkg-gte760kBtuh-9p5eer	Pkg AC EER = 9.00; w/ furnace; w/ econo	Pkg AC EER = 9.50; w/ furnace; w/ econo
NE-HVAC-airAC-SpltPkg-gte760kBtuh-9p7eer	Pkg AC EER = 9.00; w/ furnace; w/ econo	Pkg AC EER = 9.50; w/ furnace; w/ econo

7. Page A-5/6: Revise section under heading “Packaged HVAC Specifications” as follows:

Packaged HVAC specifications

Previous versions of DEER estimate different UES values for 3-phase and 1-Phase split system air conditioners due to differences in code baselines. The current code baseline is the same for 1-phase and 3-phase units (13 SEER). Therefore the technology distinction for electrical phase has been removed and results for small split systems apply to all units.~~The single-phase and three-phase distinction for SEER-rated packaged HVAC equipment (SEER 12, 13 and 14) has been eliminated. There are still entries in the database for three-phase units, but their performance and energy impact results are the same as for the units that do not specify the phase distinction.~~

8. Page A-1-7 table titled “Changes to DEER T12 Linear Fluorescent Fixture Watts for STD to ES Magnetic Ballasts” is revised:

Fixture Code	Lamp Type	Lamp Size	Lamps per Fixture	Lamp Code	Ballast Type	~~Ballasts~~ Lamps per Ballast ~~Fixture~~	DEER Watts Per Fixture	
							2008	2011
F41EIS	T12	48 inch	1	F48T12/ES	Mag-STD	1	51	43
F41SIS/T2	T12	48 inch	1	F40T12	Mag-STD	2	52	44
F41SIS	T12	48 inch	1	F40T12	Mag-STD	1	60	48
F42EIS	T12	48 inch	2	F34T12/ES	Mag-STD	2	82	72
F42SIS	T12	48 inch	2	F40T12	Mag-STD	2	84	74
F43EIS	T12	48 inch	3	F48T12/ES	Mag-STD	1	133	109
F43SIS	T12	48 inch	3	F40T12	Mag-STD	1	136	112
F81ES/T2	T12	96 inch	1	F96T12/ES	Mag-STD	2	64	62
F81ES	T12	96 inch	1	F96T12/ES	Mag-STD	1	75	64
F81EHS	T12	96 inch	1	F96T12/HO/ES	Mag-STD	1	112	105
F82ES	T12	96 inch	2	F96T12/ES	Mag-STD	2	128	123
F82EHS	T12	96 inch	2	F96T12/HO/ES	Mag-STD	2	227	207
F83ES	T12	96 inch	3	F96T12/ES	Mag-STD	1 + 2	203	185
F83EHE	T12	96 inch	3	F96T12/HO/ES	Mag-ES/STD	1 + 2	319	312
F83EHS	T12	96 inch	3	F96T12/HO/ES	Mag-STD	1 + 2	380	312
F84ES	T12	96 inch	4	F96T12/ES	Mag-STD	2	256	246
F84EHS	T12	96 inch	4	F96T12/HO/ES	Mag-STD	2	454	414
F86EHS	T12	96 inch	6	F96T12/HO/ES	Mag-STD	2	721	621

9. Page A-1-8 Revise section under heading “Residential Interior Lighting Profile for CFLs” is revised:

Residential Interior Lighting Profile for CFLs

The residential lighting profile used for indoor lighting in general, and for the CFL lamp replacement measure specifically, was reformulated based on the lighting logger study performed by KEMA as part of the evaluation of the 2006-2008~~2006~~ upstream lighting program. The profiles were updated based on a model that projects saturation of CFLs in the year 2013 and are intended to represent the typical hours of use of CFLs in that program year. The figure below compares the average annual CFL usage profiles for DEER v4.00 (2011) and v2.05 (2008).

10. Page A-1-10 Revise section under heading “9 Residential Interior Lighting Profile for CFLs” is revised:

Residential Exterior CFL Lighting Operating Hours

Residential exterior CFL lighting operating hours have been revised based on the lighting logger study performed by KEMA as part of the evaluation of the 2006-2008~~2006~~ upstream lighting program. The operating hours were updated based on a model that projects saturation of CFLs in the year 2013 and are intended to represent the typical hours of use of incandescent lamps that are most likely to be replaced by CFLs in that program year. Coincident demand factors for exterior lighting remain unchanged at zero. The table below compares DEER v4.00 (2011) and v2.05 (2008) exterior hours of use.