

# ENERGY CONSERVATION ( NORMS AND STANDARDS FOR DESIGNATED CONSUMERS FORM, TIME WITHIN WHICH, MANNER OF PREPARATION AND IM

g«o-33004/99 REGD. NO. D. L-3300Q99 Che Gazette of •tidia 1511 1511 EXIRAORDINARY PART 11—Section 3—Sub-section (i) PUBLISHED BY AUTHORITY 30, 2012/4\* 10, 1934 NEW DELHI, FRIDAY, MARCH 30, 2012/CHAITRA 10, 1934 30 qN, 2012 2001 14U (i) 14 (B) (UT) 56 (zr). (6.47) Ql@azã t, 312-117. 31fÄt-a fãkT (37t 3öæ 3fi-a-( a-u-r-v GTTtr 2012 tl 2. (1) 3-TFZNT 33'r 2001 t (u) 3TfSqü?T 4 3fr( 6 1178 GV2012 (1) 2 THE GAZETTE OF INDIA : EXTRAORDINARY [PART [I—SEC. (7T) 3-N,ET qf\*4T t @a--u 31fiftd 3frã-a t, 3ft 14 Ég (3) (GO 2007" 174(3) atra 2 2007 æiva--Tvr q•va-a tfr) GzrR, 2007 t (\$T) 2008" 486 (3) afra 26 2008 æiva-TT Ri-âtT 2008 tl (31) 3-7fãÜFT t I #rærr \*r 3 fãfãf& -a-r-a-qã 3-rærq•aa -ãaT tl (6) 3-T%-TR aã azra \*r 3T2BT (UT) 3--ITVZT 31 3. 3Gã (1) 14 (g) uz.TT -a-ft-a, 3--T2XdT 3Tfãf&T t, 010 (81) 4 5 3Gfr 2008 GT6i -R! 4 (3) THE GAZETTE OF INDIA EXTRAORDINARY [PAIK -JTtT 3TTfãzTJT (2) F) ag (a) 33} t. q-afã 14 (T) 3ft OTTI (4) 14 ag (S) 32 uyeT 4. ur:rer 'T, F) 3-TTVR 3--frv 3-TTÜR q? «r FR-;zr qñFR-:zr 331 (v) 3Gfr 9-TR7 394 (3) afra 12 2007 g-v ( i i) R\$T, 3T2-TdT fũ-cr 3Gfr (iii) 3-T21@T fig (ivy (v) 3Tfãim3 ! \_ug 30) ; 34fSif&f ftv 3q:a t, 3ifSMta E-qt-ã -\$T tJTr (31) 3q&T, 3-hx 3-1-74 (u) 2007 31f1f&T 2008 0, 3-TIVR ai (g.) Tã•a8r fãfãfãsa- a-TJ37T Gr ß--u;2T 14 3-q-âtT 3T2ã-a:\_ (i) (ii) (iii) (iv) 31?rtfã -ãi-fã -h fa-\$r 6 THE GAZETTE OF INDIA : EXIRAORDINARY [PART 11—SEC. 30]] (2) 375 \*7tr, t?lfãv 3 314 2 (3) (2) 3--rtT7 3fr( 31@ft-a 3CO-Th-am A, (4) åzrr-v far (5) (6) 5. (3) Å fülé 14 ag (S) 31f\*fr-er ai- 14 zyg (Z) 3-fr( 3-q3-fiÄ:aT3-Ti Q-T 3--lh Riva--IÜT åzn-c tfr (1) 4 3qfã-u-JT (6) qfã - F) 3Fzr Fra-au af 3--FR:RTJT FT) 3-121<1 331 3q:-TYJT 6. fataæuv ( 1 ) Rfãf& (g.) (2) 3(i) ] &1fãÄtk3 2007 1 q-æ 2008 rRq-1, gu-3 far 3-fr t, Är, .2008 -2 q-öT-3 -Garci 3AT-zã 3-@vrc-a 3--11fTR 31fãfrFT e-zflt, aa---a qRaã q-rq qarlfüa 3Gã fãfraa qaaT 3-T21<T 3-rxa-r 3-fr( fũ@Rtrr, altra, 3-iaãd æiva--TUT -817 5--år Q-a 34fãft-a 31fãÄ-(JT 3-qfi-a-ær (l) qn-æ9.T azra 8 THE GAZETTE. OF INDIA EXTRAORD[NARY {PART w.sec. (70 (ii) (iii) (5) eft71T, fãf& 3--fr( fÄv 3--fiv \*EdT, Ha-âtÄa 0, 3i?TãfãFi t; 31fãf&T 3-ifr 3 Gã 9 65,) q-ff#TTR 3R-T\*f alit, fãfãf& 331 312ET 3?rv qfraãöT, t, 3ifãfra (6). zrt2 3-rq#r 3Ttr \*r a-ft qi, e-c.qUfr, a, 33'r far, aa--rrr (33\ a-ur æß#ra-TT trR 3iaxra) 2010 3ft (ii) aa--T?lT üa-TUT 1178Gl/2012—2 THE GAZETTE OF INDIA : EXTRAORDINARY [PART IPSEC. 3(i)] 3-tlx 3-qpf (U) 3ffÄfBö (i) 3-trt (ii) 3-fit Ga-Terr (iii) fãfif& uqa, fav Å 3-qra 3Ffta-pr åZTR æitra-TT errvfr 3-?R 31fãf&T 3q\*dT aur \*-a1T, 31@fra (8) - (1) 3qq-ra7 31tr ditra a. (2) (2) fõ-afãfiü-a • 11 (i) (ii) (T) 3ifhffi-r qfã ttv, 3-FIQ7FF fõ6-ar 3fi?ö1fũö1 3-T2RT 3-TZ17T 3-T2BT fãfud ag (u) fifty (EO GIGI, t. (i) fav ælqtra--F6 (ii) z-u-a Rs---ar (g.) a-aT ai 331 fũfua (3) qfö74T 12 (4) THE GAZEITE OF INDIA : EXTRAORLÂNakY 3--?R 3q€tr 3Ttr 3T2RT zr6 3izr- q#-ar 31-a-ããa æezrrfia fav t 5Gfr OTT OTT, a-a Q@lfär 3-r-æ-af&ö fiZÄüT, 31i-qsgf af 3FTT#T a-4 3B5\$T 3-1Favr 13 (5) (6) (U) (7) (8) (9) 271T. frqhé fũfQÄ% 3P-@T 3i<t fr-q+ -a;-v-ã 31fÄÄft1fii-a t. 3FTfÄ--a 3Tq-ãi 31fÄf&T (10) (U) (11) (12) (13) 14) TIIF. GAZETTE OF INDIA : EXTRAORDINARY t. at qfãQ17 3Efü?T grca 63•ff 3GTfũ--a• a; e-ær atra a; æiãfua t ai \*r ft-cqufr ti 3qfãu-a (11) 31fãft-a 3-fr{ ft-« fũfãfãv 3-T2RT 3--12TdT 3-ru-ar 31tr I 31fãR7 aaT3ü 311045rã. aaT3ã f\*4T t. (13) aaT3fr q-ta-TT 3-&JIT (ZF) 3fltTR 31fÄfta 11 30) t (u) 3Gã 31f\*lfrit--a feüé (JT) 3Efua (15) 3-lf#ruv-l (9) fãfiäy 3ffÄitd 31fãÄf&ä 34t@-ft-a 31T3-frör (16) 3-TT\*-TR GTTVTTI ( 17) q-c 318T t. 9. 3C19-fi\*aT I 3Gã -Ä Aft-ur - (1) 1932 (1932 9) 1956 (1956 1) 3-vuaT 3-TFZT 3-Tf?aa. ala t. t. zr 16 W) (u) (2) (3) (4) (5) (6) THE GAZETTE OF INDIA : EXTRAORDINARY [PART II—SEC. t, 31k Off, 3%va-PT) 2010 7 fS7\* 3iiv a-Hrzt aq;år\$R 10 a-nx fõv qrca (1) 3cvãtx w.bee-india.nic.in (5) fãfQ1ct 10. (2) (3) (4) (5) 1178GU2012—3 30]] \*r (1) 3RRT 3izr- Rv, \*7TT, an, 3T2.BT 3?R, 3-r2.1ÄT 31Fzr 9-fr?R æi-qtra-TT 3iaãR?T qr, OTT 3Gã a-ai t, QTã 3i€T- ald 45Tã 3-T2ÄT R-v F) aT8r 17 [PART IL—SEC. (0) (Q) (go Jiff-Äfßd (8) (9) (10) fõv Otr RkT, 3fifã z-æ--a1ã3, 3B7Ta grr, 3-tr är qalTfaa ( I) q€3ã (i i) fir, -a-Rr fav 3--fr( (11) (12) (13) (14) 11. qaaTfua 3--121dT 3-TZI@T 4fãa I 3Gã 3?rt \*-JTT I 3Tã tT(. JTV 14 13 (2) (Qi T) (ii) fav 20 (2) (3) THE GAZEITE OF INDIA : EXTRAORDINARY [PART (Fra-au 33'r AFT Fra-:zr t 3-1k 3-tT KTXT qv. f-rrvr 13 (2) 3N#r CR. OIT- (i) 1 artr = 1 - (3--1Tf-.lT( - Fra:u + - 1 as ag) x 800,6 x 3-eq-raa (ii) 1 = (1 + 3--TIÜR x 10: (iii) 2 X 80% X 10: 21 (iv) 2 = 1 - x 10 (v) Fra---zr qTtr aTã = {(31Tt1R zx)] - FR--zr ai } x 3-1Tt-TR 3?qza/10 + 33ã I (U) 3-ræzr (i) 1 3TtT = - 33'r - far + - 1 aqa) x 80% x (ii) 1 = æzr - (1 3--4r + 3-TTüt( (iii) 2 af = {I(3T1f-1R + 3] — aã qfã x 80% x 31Tf-.1R (iv) 2 ai Rfãf& - 1 (v) aTã - fififæ - üfãf& [PART 11—SEC. 2 THE GAZETTE OF INDIA :

EXTRAORDINARY (vi) Airer - 1 12. (1) #rzt IO 3Tå tR, ?TTtra 3Gå (2) (3) (4) (5) (6) (7) 13. OTT I 37\*r a-åH17 t, qqr 3qzå3T 3BT-å 3qq-rFT 3-ya@ fäfüHTFzt 3ia F) 331 14. 15

**16. Sri)) e-d 3Gå æzr AV, SET' å, ærzi7 \*r 3--YTVR tar F) 33Sr g-xr (u) 3-qzr 3Q7T (T) 9-&JTT, 3-TF4 (1 toe) .24 qr\$ THE GAZETTE OF INDIA : EXTRAORDINARY 3--fræ:Ta [PART 11—SLc. tafat-g - æi-åfr-a fäg-a 3--lüt 31Tt.TR æ[å--tr (toe ai (toe (toe å) 3-rrtTR ær#r (toe Å) • (gEa{öfr) æ-tr (toe 3fifBa (toe (gzæ• 3-TTüR af (toe å) af (toe å) (2) ai 2011-12 aqa 7T\$ 10,154 (3) 311 (2) fir. Jtæzr qfå [ qrq 1.. 2. 4. 5. 6. (45) (7T) 1178GV2012—4 5 art) (31@t-a gru 3T7T) a-rR (817 qi) ar?rv aTtrÜ toe/ton 3-12BT toe,ZFT 26 THE GAZETTE OF INDIA : EXTRAORDINARY [PART IPSEC. 3(i)] (3-rT1ü@T) (3-rrtTR 7T. SEC (t5Tå 7. V) Er. aa-:q, 37t 9. a-å7Tff (ar«å) toe/ton 312BT kcal/kwh toeZ7 3T2.RT 312raT 2. 3. 1 : 'F 3TV, : 14 (C) • å-æTr 7T21T gatr 2TJå-a 3g-a-H 3-TTÜT( qfiNT a-FT THE GAZEITE OF NDIA : EXTRAORDINARY (PART IPSEC. 3fr( fig qtnr\*r 311trrftd Rt5T\$T?r, tQIT qrrr 5. 6. F) (U) (T) (u) (g.) 7. 8. : a-afar 33'r 3fltrrt at) : 1 , ( ) : 3FRIT(, qa-8T avrrt, frtrzt ) : 3FRTR, avrrt 3-T2RT 2 3-FFHR, : 11 (S) Qtr (Fu-QT aqa) d, 3Ttr)l (SEC) (S) 9. f-äfirg : 3fræ&-a (3m-rrt@T) (7.& t) : (Érz:-tr Gr 3FqT<FT) 3-ruar 8. Fra-:q, d, (J\*z-tr äFr 3RRT 8. 3Gå q-Rp-r-q7 • 10 2011-2014 : 3rr3-fr\*7T3å q-å-a 3V4AT 30 THE GAZETTE OF INDIA : EXTRAORDINARY a-GT [PART 11—SEC. 30)) V. åRT. ffrü-tz Rv, Efi at qn•ar (Qi) 2007 2008 q-F-q 1 qfå 3TiZF5T 1 2 fizrJT 2008 aa-:q a-å 3-11VR aa-:q åå 3-FZT2TT 31f57R-d 5Gå GTTtT 3-12üt JTRRfiza, NqM, zt2fifü•-€T QiT 31 t, GRT,• fig, 3-12BT -e-ä7 B-zrÆT 2007 2008 3-BtTFT 1 öre-:zr &itT 3Ti@iBT Ni-zrr 2 3 2008 3xrrzå 53å 3fr( rrrzr , 3-1N2.1T (El) (S.) 3LT2-ÜZFaT . .....(æian) 'Qi' 3izr-æra11t17 ftqM, Furqa a-a-R 3fr( 3tk n 2 3 4 5 6 THE GAZETTE OF NDIA : EXTRAORDINARY 12 at) 3?rc (3fir7 a•rvrr) æivzrr 311-a-h [PAT 11—SEC. 30)) i. 3. 3(i)] 31fRd : 14 ag (B) : tFT\$-JT 3fr( 3-q-&FZR mr 3mrrfi7 31ß.nfi•a 31Tq-rft7 fig dtö 3fr{ \$:q-ra 1178GI/2012—5 Fqi3 [PART LI—SEC. 3(i)] 5. THE GAZETTE OF INDIA : EXTRAORDINARY m-cr 3--9r (Qi) : 3-ifrfåa +ve ft-q \*--\$ -asr \_ve 33'r - (7T) • 33'r DC 3fr( DC @ (-ve) \*TZTäi æT&r ziü 312rar 3fitFT 3T2üt 3-TN t, -fi -€5\* Bfh 35 1.1 ü@rtz 31fåR-a qfå (Toe) (V\$TF) Qi 31TZR) (RViT\$atr) (V7TT-a-E5) (åiQ G17T) pzi (gartr 3-11 q-»TJT3 eel 36 TI-Æ GAZETTE OF NDIA : EXTRAORDINARY 1.2. auf #zi7 i, 3?rt a-fi mar, #07110 3-rezr frouTO 3-ru-aT I - 11 3-TN 7r\$ ftOJJTO [PART IPSEC. traT3å 11 S. 37 R-2Tfå -111: mga faga fir fifi, \$1 X (åfgqpu) (frö07J[O fig -IV: mga, 3{ifQÄm - æaziÄ t, 31ifW ag 3åq #ziÄ u. 31Ra-xå-a from) 38 THE GAZETTE OF INDIA : EXTRAORDINARY 3fr( OOJXTO) &OJJTO) (tre() Run-VI: 3fr( #0010 a (traj öiE) I 31fifEF [PART 11—SEC. 7110) frouTO) 1. qan.- (@i) 31fåfår t, a-qi 2007-08, 2008-09, 2009-10 31t\* GTIV7TT, QQi (aqf) 3V4YJT q2ET 31f57f&a El-aft 39 a--TJRT 3#-a (Emi) fth#r t, (T) dRTö, 3-TfÄ•R7 t, at zrv 3qzi-JT (q) å, 3Ffi 3TWTT, a--vrrar (70%) ai fät 37 a-T-aaT STIVTTI (S.) J}, 33å 7TUT•aT 14 æ1TJTJtT, 37tnz (U) 3Gå 31fÄ-qifi\$ (toe) mTT-fåter (i) (ii) (iii) altru (GCV) (GCV) t, -a fäga #c-zrr 394(31), 12 2007 aTtrq G-TTQJTT 40 107 (v) 1.4. (Qi) GAZETCE OF INDIA : EXTRAORDINARY [PART 3--sfr = fig fog-a (Kwh) x JÄ 504T at 2009-10 fäerfåfå-a CTIKieeti 31föX•fB-a fäfüwz 4 afi--a fifi Fh-å a-TFdT 3-så (SEC) febzrr 3TQ71Tl fa•fQrce = f SEC, (T) GIT3T t, 3trzWT æi-zi7 a-TR (PLF) R-ræra•r J} 4 ÄZi3UT qi ZT{T. f&4T 11---.g 30) ] (ii) qq-a (iii) a-T&taT 3•q-F (iv) (3.) aürzt (T) (u) "R--TJTdT \*izi7 EFREF" (€1) 7TUTa-r 2. aTtrzt 2.1 31fåRa GTTwrr. 2.2 8réT 3T2åq 2007-08, 2008-09, 2009-10 fig, 14 mga tga Faq 41 THE GAZETTE OF INDIA : EXTRAORDINARY (10%) (17%) (24%) 2.3 'RTZT', F, 14 3qæ:1R, , 92.5 H - qi--u-å cfiera-aT G.C.V. = = za-37T -å gfi 0.05% [PART 11--sæ. 301 43 3(i)] 3. 3.1 -å, 3fifra 536 aqi 3-ru-aT qq (151.5) - 3.2 . gra, seq-rz æi•qfufåa (ii) (iii) (iv) Gi-JR qYås (OPC) qlé-ås (PPC) ui-a-q-u•r (PSC) 3T2BT (FTra GT) 44 THE GAZETTE OF INDIA : EXTRAORDINARY [PART II—SEC. 3(i)] a-JR, 31Tåi (vi) #ræ = a(i) + a(ii) + a(iii) + a(iv) (iqra : æio a(v) 3.3 (SEC) (i) aT1trzt arttrzt = (FiT@ x [F x 100] (ii) 860 - fig tga (aTa x 2717 10] 2717 (iii) ag 31TZTTfra üga mga = [31zrrRFT x (3208 - 860) 3208 a--i7 5C3:rr tl (iv) fäKT 3(i)] (v) GIT?fi • 3Tåtii?T TET) x sr;c = (iqra zfiE) x 3208 + x + fü-g-a qfä-t) x zfrz) + (ö{1q + föga (Fircr Zkfåe)] fav arurar SEC x 1000 + SEC (\$erea x (fiftrq-öt ash-a) (vi) (vii) 3.4 (Gtrå\$) 53tr \$rå-\$r + b(ii) + b(iii) + b(iv) + b(v) åi.H) GTC (öfr&l\$) fufå-se Gtr&str (SEC) -G + G z7) x 100 toe ± 0.5% Ofrl T!-Æ GAZETTE OF INDIA : EXTRAORDINARY [PART 11—SEC. 4.1 ai, fäKT 3fi@a Grqa 3t:ra-cqr 3--TQT 4.2 qi toe ± 0.5% -WIG æi•qtra-TT qTta 7TqT aai EFT (M Kcal) = [F + {fig (M 860 (M tga 47 2.1åa 3iöf (Q\*3T (Gi) \* 5.4 (u) 3-ITZRET a-H 3Få æqiöt #zi7 3hx aqi = (P3T 33} 3-TTZR7 (GT) 5.5 (T) æqia 31rzRFT æqiGT Fqi3 31TZT(FT F: ærJTdFzr 31TZRFT æiqftafrT t, \_ Fqi3 affrzt 3Gå g-AET/Fqi3 34TZJGT {(GT/GT\* 48 THE GAZETtE OF IND[A : EXTRAORDINARY [PART 3(i)] VT-a-a (za) (Z71) 5.6 q-qiØT fa:iur (#Tk-T 3TN 3qa-iÄ ä, uiafta fig-a 49 (F 31•rz1GT) 5.10**

(3) \$FT\$Ti sqa-H R--,a-ra--€R - (q-aT 5.11 toe ± O. 50/0 I 6. 6.1 3fi\*r 53å 31fÄR7 3tr&iGT3å FtEFTå 1178GV2012—7 THE GAZETTE OF INDIA : EXTRAORDINARY 6.3 6.4 7. 7.1 (8) [PART IPSEC. 1.0 0.0615 13.889 0.219 æizä it 60 GTTü, 60 : 60 x 860 ä-zi-\* x 3 qå/10000000 60 zrå : 60 x 2717 i) x 3 at/loooooo 3ratTROT ± 0.5?6 31k v-21TfÜ7 3Tfäi?7 36 9k, 3q-ai crt. [ qpT 3(i)] 51 (iii) 7.2 7.3 8. 8.1 €7Ttr, qifi\$R 100% fufQice (3.TTGfivtfi) 1-00% 0.5% THE GAZETTE OF NDIA : EXTRAORDINARY [PART IPSEC. 8.2 3113üzFdT3å, 3FqTZ7 t, (\$rq«rJT) 125 4. \$r t, 8.3 0.5% 9.1 sårZF i, 2.53 9T.H/#rztr fit, \$1 2.53 3Ti\* 4.46 0.567 q•zrr Rftrtz 9.2 3q\*zr 0.5% [151. 10/6/2008-#] 53 MINISTRY OF POWER NOTIFICATION New Delhi, the 30th Mar&i, 2012 GS.R. exercise of the powers conferred by clauses (f),(g), (k), (Ia)and (raa)-of section 56, read with clauses (g) and (o) of section 14, sub-section (1) of section14Aand section 14B of the Energy Conservation Act, 2001 (52 of 2001), the Central Government nereoy mares ute ronuwing rules, namety.- 1. Short title and commencement.- (1) These rules may be called the Energy Conservation (Energy Consumption Norms and Standards for Designated Consumers, Form, Time within which, and Manner of Preparation and Implementation of Scheme, Procedure for Issue of Energy Savings Certificate and Value of Per Metric Ton of Oil Equivalent of Energy Consumed) Rules, 2012. (2) They Sha" come into force on the date of their publication in the Official Gazette. 2. (a) (b) (c) Definitions.-(l ) In these rules, unless the context otherwise requires. - "Act" means the Energy Conservation Act, 2001 ; "baseline year" means the year in which the base level of energy consumption is used as a reference point for establishment and assessment of performance with regard to compliance of energy consumption norms and standards under rule 4 and rule 6 respectively; "certification" means the process of certifying the verification report or check- verification report by the accredited energy auditor to the effect that the entitlement or requirement ofenergy savings certificate is quantified accurately in relation to compliance of energy consumption norms and standards by the designated consumer during the target year, (d) "check-verification" means an independent review and ex-post determination by the Bureau through the accredited energy auditor, of the energy consumption norms and standards achieved in any year of the three year cycle which have resulted from activities undertaken by the designated consumer with regard to compliance of the energy consumption norms and standards: (e) "cycle" means the period of three years available to a designated consumer to comply with the energy consumption norms and standards, (GAZLITE OF INDIA : EXTRAORDINARY [PART 11—SEC. lil , (f) (9) (h) (j) (m) (n) (o) (2) "energy consumption norms and standards" means the specific energy consumption of the designated consumer for the specified year notified under clause (g) of section 14; "form" means the form annexed to these rules; "Rules 2007" means the Energy Conservation (the form and manner for submission of report on the status of energy consumption by the designated consumers) Rules. 2007 notified in the Official Gazette vide number G.S.R 174 dated the 2nd March, 2007; "Rules 200m means the Energy Conservation (Form and Manner and Time for Furnishing information With Regard to Energy Consumed and Action Taken on Recommendations of Accredited Energy Auditor) Rules, 2008 notified in the Official Gazette vide number G.S.R 486(E), dated the 26th June, 2008; "Schedu!e" means the Schedule annexed to these rules; Osection" means a section of the Act, "specific energy consumption' rmeans the ratio of the net energy input into the designated consumers' boundary to the total quantity of output exported from the designated consumers' boundary, calculated a; per the following formOla:- specific energy consumption = net energy input into the designated consumers' boundary total quantity of output exported from the designated consumers' boundary and expressed in terms- of the metric ton of oil equivalent (toe)/per unit of product; "target year• means the year by which a designated consumer shall achieve compliance with the enefgy consumption norms and standards; "verification" means a thorough and independent evaluation by the accredited energy auditor of the activities undertaken by the designated consumer for compliance with the energy consumption norms and standards in the target year compared to the energy consumption norms and standards in the baseline year and consequent entitlement or requirement of energy savings certificate; "year" means the financial year beginning on the ISt day of April and ending on the 31 st day of March following. Words and expressions used herein and not defined but demed in the Act shall have the meanings respectively assigned to them in the Act.

**3. Establishment of energy consumption norms and standards Government, in consultation with the Bureau, shall establish, amend energy consumption norms and standards for designated consumers**  
**clause (g) of section 14.55** notified (2) The energy consumption norms and standards shall be specific for every consumer and shall be determined as under:- (a) where energy audit of the designated consumer's plant has been completed, energy saving measures and action plan for their implementation has been finalised in consultation with the energy manager of the plant under regulations 4 and 5 of the Bureau of Energy Efficiency (Manner and Intervals of Time for Conduct of Energy Audit) Regulations, 2010, the energy consumption norms and standards shall be based on the timely submission of



Form 2 and Form 3 under Rules 2008; (b) where energy audit of the designated consumers' plant has not been completed or undertaken, the energy consumption norms and standards shall be determined taking into account the following factors, namely (i) average rate of reduction in specific energy consumption across all the designated consumer sectors' determined on the basis of the analysis of data of the last three years; (ii) policy objectives of keeping the target of reducing the specific energy consumption a few percentage points above the average rate of reduction keeping in view the incentive provided through the issue of energy savings certificate. (3) Where the energy consumption norms and standards have been determined in accordance with clause (a) or clause (b) of sub-rule (2), the said methodology shall not be reviewed after the commencement of the energy consumption norms and standard notified under clause (g) of section 14. The designated consumers shall achieve compliance with the energy (4) consumption norms and standards as notified under clause (g) of section 14 within period of three years from the date of commencement of the said notification. Procedure for establishment of energy consumption norms and standards.-(1) 4. For the purpose of establishment of energy consumption norms and standards, the technical committee set up by the Bureau shall- (a) calculate specific energy consumption in the baseline year and projected specific energy consumption in the target year covering different forms of net energy going THE GAZETTE OF INDIA : EXTRAORDINARY [PART IPSEC. 3(i)] into the boundary of the designated consumers' plant and the products leaving it over the relevant cycle on a gate-to-gate basis; (b) in the net energy input to the plant. (i) convert the calorific values of all forms of energy sources into a single unit, namely, ton of oil equivalent using the conversion formulae specified in the Government of India. Ministry of Power notification number S.O.394(E). dated the 12th March, 2007; (ii) consider all forms of energy that is, electricity, solid fuel, liquid fuel, gaseous fuel, or any other form of energy imported into the plant for consumption as energy for production of output; (iii) not take into account energy consumed in the colony attached to the plant, temporary or major construction work, and for outside transportation system or energy consumed through renewable energy sources not connected to the grid; (iv) take into account the energy exported out of the designated consumers' boundary (v) if any designated consumers' plant does not have disaggregated figures for energy consumed, consider the net energy consumed for calculation both in baseline year and in the target year: Provided that the said designated consumer shall give adequate reasons that it was not feasible to make adjustment for energy consumed in the colony, temporary or major construction work. Provided further that such designated consumer shall make necessary arrangements for disaggregation of data for energy consumption to ensure that actual energy consumed for production is considered in the next cycle: (vi) where more than one product is produced, select the main product produced or an equivalent product worked out from the product mix as per standard practice prevalent in the concerned designated consumers sector: Provided that where the production of the said main product is stopped, the designated consumer shall inform the necessary details in that regard to the Bureau and the concerned state designated agency, 1178 (c) (d) (f) (g) 3(i)] calculate the specific energy consumption for the baseline year as well as the target year and normalise it by taking into account the capacity utilisation mix of grid and captive electricity, and any other factors consumption as specified in the Schedule; calculate the annual specific energy consumption the baseline year by verifying the data in the previous three years. year-wise. the data under submitted by the designated consumers', under Rules 2007 Rules 2008; calculate the effect of capacity utilisation and other factors on the specific energy consumption for the previous three years; calculate the specific energy consumption, production, capacity Q, in the- baseline year by taking the average of the previous three years the first cycle and for subsequent cycles, the provisions of rule 14 shall apply; take into consideration the effect on capacity utilisation or the plant's or average energy consumption in the target year on account of the following factors, namely:- (i) natural disaster; or (ii) outbreak of social unrest; or (iii) major change in the Government policy including environmental standards; or (iv) impact of market (shortage of raw material or sales) in any of the previous three years. (2) The said technical committee shall prepare a report containing designated consumer-specific basis of methodology referred to in sub-rule 2 of rule 3, consultation with the designated consumers. and submit the said report to the Bureau. (3) The Bureau shall examine the report submitted under sub-rule (2) and finalise its report containing its recommendation regarding the energy consumption norms and standards for each designated consumers' plant. (4) The details regarding methodology used, formulae adopted, exceptions considered, principles adopted, for preparation of energy consumption norms and standards shall be as specified in the

Schedule. (5) The Bureau shall submit the report referred to in sub-rule (3) to the Central Government. The Central Government after considering the said report shall by notification,- (6) 58 5 THE GAZETTE OF INDIA : EXTRAORDINARY [PART II—SEC. (a) establish and specify the energy consumption norms and standards for every designated consumers' plant under clause (g) of section 14; give direction to all consumers for compliance with the energy (b) consumption norms and standards (n) of section 14 and inform the Bureau: and also the Form, manner and time for preparation of scheme for implementation of efficient use of energy and its conservation.-(1) Every designated consumer, within three months of the issue of notification under sub-rule (6) of rule 4 shall submit a scheme to State designated agency with a copy to Bureau, which may include (a) action plan containing inter-alia, a brief description of identified energy saving measures to comply energy consumption norms and standards by the target year; the estimated cost of each identified energy saving measures; (b) (c) implementation plan to achieve energy consumption norms and standards through implementation of energy saving measures or through purchase of energy savings certificates. Assessment of performance..(1) Every designated consumer, within three 6. months of the conclusion of the target year from the baseline year shall submit to the State designated agency, with a copy to the Bureau, the performance assessment document in Form 'A' covering the performance for the relevant cycle specifying the compliance with energy consumption norms and standards, duly verified together with certificate in Form 'B' given by the accredited energy auditor and accompanied by the following documents, namely:- (a) (b) (c) (d) copy of unique number of registration given to the designated consumer; proof of timely submission of reports in Form I under Rules 2007 for the previous three years; proof of timely submission of reports in Form I, Form II and Form III under Rules 2008 along with copies thereof including the reports for the target year; details of energy savings measures implemented for compliance with the energy consumption norms and standards in Form II and Form III of Rules 2008, for each year, covering the relevant cycle enclosing therewith, a brief about the year-wise energy savings measures, details of investment made, photographs in support of measures implemented in each year, if II (2) 59 (f) feasible, percentage improvement in energy savings achieved in every year following the baseline year until the target year: details of energy consumption norms and standards of the designated consumers in the baseline year, achievement made in every year following the baseline year and upto the target year together with the opinion of the accredited energy auditor on the achievement of energy consumption norms and standards, entitlement or requirement of energy savings certificates along with the details of calculation and correctness of entitlement or requirement duly certified by the accredited energy auditor: name and particulars of the energy manager, his date of appointment, details of duties performed including initiatives undertaken for improvement in energy conservation and energy efficiency, The designated consumer, within three months after the end of first or second year of the relevant cycle, may submit performance assessment document in Form 'A' to the State designated agency, with a copy to the Bureau, for issuance of proportionate energy savings certificates covering the performance for a period of not less than one year from the date of notification specifying the energy consumption norms and - standards. duly verified together with certificate in Form 'B' given by accredited energy auditor along with the documents mentioned in sub-rule (I). (3) The accredited energy auditor shall independently evaluate each activity undertaken by the designated consumer for compliance with the energy consumption norms and standards and entitlement or requirement of energy savings certificate, to ensure that they meet with the requirements of these rules. (4) The accredited energy auditor, in order to assess the correctness of the information provided by the designated consumer regarding the compliance with energy consumption norms and standards shall- (a) (b) (c) (d) apply standard auditing techniques; follow the rules and regulation framed under the Act; integrate all aspects of verification, and certification functions; make independent technical review of the opinion and decision of the verification team; also take into consideration, a situation where a particular activity may or may not form part of the activities related to the compliance with the energy consumption norms and standards, and the procedure for the assessment shall include,- (A) document review, involving- GAZETTE OF INDIA EXTRAORDINARY [PART II—SEC. 3, review of data and its source, and intention to verify the correctness credibility and interpretation of presented information: check consistency between information in the audit report and if comparable information is available from sources other than those used in the audit report, the information from those other sources and independent background investigation; (B) follow up action, involving- (i) (iii) site visits, interviews with personnel responsible in the designated consumers'

plant; cross-check of information provided DY interviewed personnel to ensure that no relevant information has been omitted or over or under valued; review of the application of formulae and calculation, and reporting of the findings in the verification report. The accredited energy auditor shall report the results of his assessment in a verification report and the co report shall contain:- the summary of the verification process, results of assessment and his opinion along with the supporting documents; the details of verification activities carried out in order to arrive at the conclusion and opinion, including the details captured during the verification process and conclusion relating to compliance with energy consumption norms and standards, increase or decrease in specific energy consumption with reference to the specific energy consumption in the baseline year; of interaction, if any, between the accredited energy auditor and the designated consumer as well as any change made in his assessment because of the clarifications, if any, given by the designated consumer. If the accredited energy auditor records a positive opinion in his verification (6) report, Bureau shall consider that all the requirements with regard to the compliance energy consumption norms and standards, entitlement about issue or liability to purchase energy savings certificate have been met. (7) After submission of duly verified Form 'A' by designated consumer, state designated agency may convey its comments, if any, on Form A' to the Bureau within fifteen days of the date of submission of Form 'A' 301 Procedure for and verification A I) The designated consumer consultation with accredited energy shall put in place and arrangements for independent audit consumption on the Energy Efficiency (Manner and Intervals of Time for Conduct of Energy Audit) 2010 for compliance with the energy consumption norms; and standards. The said arrangements (a) preparation and maintenance of quarterly data reports by the designated consumers- (i) performance of the plant and production processes; (ii) on the internal field audits of plant and production processes for the purpose of identification of factors inhibiting improvements in energy efficiency and conservation, and taking of measures to reduce energy consumption and to improve energy efficiency. (b) preparation and maintenance of yearly data reports by the designated consumers- (i) on the performance of plant and production processes; (ii) the outcome of internal field audits of plant and production processes identifying factors inhibiting improvements in energy efficiency and its conservation. and taking of measures to reduce energy consumption and improve energy efficiency and measures taken to improve the efficiency of the production processes during each year; (iii) regarding a year-wise report on production achieved, energy consumed, and specific energy consumption achieved, specific energy consumption reduction achieved, measures adopted for energy conservation and quantity of energy saved; (c) preparation and of the end of the cycle data reports Of production achieved, energy consumed, specific energy consumption achieved, specific energy consumption reduction achieved, measures adopted energy conservation and quantity of energy saved. (2) All the activities undertaken by the designated consumers under these rules shall be scrutinised by the accredited energy auditor for the purpose of . preparation of verification report and the designated consumer shall furnish the full and complete data, provide necessary documents and other facilities required by the accredited energy auditor for the purpose of performing the function of verification under these rules. 8 Check-verification H I) The Bureau may on its own, or on receipt of a complaint regarding any error or Inconsistency or misrepresentation. within one year from the date\* THE GAZETTE OF INDIA : EXTRAORDINARY (PART II SEC. 30)) of submission of the compliance report or within six months from the date of issue of energy savings certificates, whichever is later, shall initiate action for review of compliance report in accordance with the provision of sub-rule (2). (2) The Bureau shall initiate action in accordance with the following procedure, namely- (a) (b) (c) (d) a notice shall be issued to the designated consumer as well as to the accredited energy auditor who had submitted the verification report with a copy to relevant state designated agency, to provide comments in reply to the said notice within ten working days from the date of receipt of aforesaid notice; the comments furnished by the designated consumer and accredited energy auditor shall clearly state that- (ii) they stand by the compliance report and verification report submitted by them and submit a confirmation report giving point wise replies with necessary documents in response to the said notice; or they accept the errors or inconsistencies or misrepresentation pointed out in the aforesaid notice and shall give detailed explanations in respect of each point in the notice and work out the impact of such errors or inconsistencies or misrepresentation on the submitted compliance report; within ten working days from the date of the receipt of the comments referred to in clause (b), Bureau shall after taking into consideration the said comments, decide to undertake or not to undertake review and the Bureau shall record the reasons in

writing for its decision; where the Bureau, in consultation with state designated agency, decides to undertake review, (i) it shall appoint an accredited energy auditor. who has not performed the verification functions with respect to the concerned designated consumer, to conduct the check-verification; (ii) on a complaint. the said check-verification shall be carried out at the cost of the complainant; where the Bureau decides not to undertake the said review, the designated consumer, his accredited energy auditor, and the complainant shall be informed in that regard in writing. (3) The check-verification process shall involve assessment to ensure that, 11—uOZ (a) (b) (c) the activities relating to the compliance with energy consumption norms and standards have been performed and the issue or purchase of energy savings certificate are in accordance with the provisions of these rules; the monitoring and verification process are in accordance with the provisions of rule 6; the details of the data and the activities referred to in rule 7 are evaluated and conclusion made that errors, omissions or misrepresentations or aggregation thereof in the said data do not affect the energy consumption norms and standards achieved by the activities and issue or purchase of energy savings certificates by more than the threshold limit specified in the Schedule. (4) The said accredited energy auditor shall assess and verify that the activities performed by the designated consumer for compliance with the energy consumption norms and standards are in accordance with these rules, and the assessment and check-verification process shall involve— .18 (a) (b) (c) (d) (e) a review of the documents as well as the on-site assessment referred to in rule 6 to verify that the activities performed to comply with the energy consumption norms and standards are in accordance with these rules and in case the aforesaid accredited energy auditor decides that it was not possible or appropriate to make a site visit, then he shall record reasons in writing in this regard; a review of both quantitative and qualitative information on the energy consumption norms and standards, the quantitative information comprising of the reponed data in 'Form A', and the qualitative information comprising of information on internal management controls, calculation procedures, procedures for transfer of data, frequency of energy consumption norms and standards achieved every year following the baseline year until the target year, reports and review of internal field audit of calculations or data transfers; a review of previous verification reports; a review of any other information and documents relevant to or having a bearing on the activities performed under these rules; a review of the monitoring and verification process referred to in rule 7. (5) The designated consumer shall furnish full and complete data, provide necessary documents and other facilities\*required by the accredited energy auditor for the purpose of performing the function of check-verification under these rules 64 THE OF : EXTRAORDINARY [PART IPSEC. 30]) (6) The eccjedied energy auditor in-charge of check-verification function shall report the results of his assessment in a check-verification report and the said report shall contain,- (a) the summary of the verification process, results of his assessment and his opinion along with the supporting documents; (b) the details of check-verification activities carried out in order to arrive at the conclusion and opinion including the details captured during the verification process and conclusion relating to compliance with energy consumptions norms and standards, increase or decrease Vin specific energy consumption with reference to the specific energy consumption in the baseline year, entitlement about the issue or liability to purchase energy savings certificate. (7) If the accredited energy auditor records in his check-verification report, a positive opinion, it shall be concluded that all the requirements with regard to the compliance with energy consumption norms and standards and the issue or purchase of energy savings certificates have been met. -the .accredited energy auditor records in his check-verification report, a negative opinion, the effect of such opinion on the energy consumption norms and Standards. issue or purchase of energy savings certificate, the liability of khe accgedited energy auditor in giving the verification report and amount of the unfair gain gained by the designated consumer as a result of such verification report shall be calculated by the accredited energy auditor conducting the check-verification, The accredited energy auditor in-charge of check-verification shall submit his (9) report with due certification in Form 'C' to the Bureau and the concerned State Designated Agency. (10) Where the verification report given by the accredited energy auditor secures an unfair or undue gain due to the deficiencies or inconsistencies or errors or misrepresentation by the designated consumer, the quantum of such gain shall be calculated having regard to the following factors, namely:- (a) the value of the amount payable by such designated consumer Shall be as worked out in the verification report plus twenty-five per cent. cf such value because of unfair practice used by the said designated consumer for obtaining unfair advantage; (b) (c) the amount of metric ton of oil equivalent of energy specified because of unfair gain identified due to check-verification; cost of

check-verification. 30) ] 65 (11) The State designated agency may furnish its comments on the report within ten days from the receipt of the report from the said accredited energy auditor and in case no comments are received from the concerned state designated agency, it shall be presumed that they have no comments to offer in the matter. (12) The Bureau after the expiry of ten days referred to in sub-rule (11), shall issue show cause notice to the designated consumer as well as to his accredited energy auditor specifying the deficiencies or inconsistencies or errors or misrepresentation noticed against the designated consumer and his accredited energy auditor. (13) The designated consumer as well as his accredited energy auditor shall submit their replies to the said show cause notice within a period of fifteen working days to the officer of the Bureau who has issued that show cause notice. (14) The Bureau after examining the said replies to the show cause notice referred to in sub-rule (13), shall forward the report to the concerned State designated agency specifying the following details for the purpose of initiating the penalty proceedings, namely:- (a) (b) (c) (d) the number of energy savings certificates wrongfully obtained by the designated consumer on the basis of verification report found to be wrong and false on check-verification; the number of energy savings certificates which the designated consumer was liable to purchase for non-compliance with the energy consumption norms and standards as found in the check-verification report; details Of the misrepresentation, if any and the unfair gain due to such misrepresentation; the cost of check- verification. (15) The State designated agency within two months from the date of the receipt of the report referred to in sub-rule (9) shall initiate- (a) (b) (c) action to recover from the designated consumer the loss to the Central Government by way of unfair gain to the designated consumer; penalty proceedings against the persons mentioned in the said report, under intimation to the Bureau; register complaint for such fraudulent unfair gain if designated consumer does not pay penalty and loss to the exchequer in the specified time mentioned in the penalty proceedings. (16) Where the check-verification has been initiated on the basis of a complaint received by the Bureau, the cost of check-verification shall be borne by the complainant, 1178G1/2012—9 THE GAZETTE OF : EXTRAORDINARY [PART II—SEC. 3(i)] in case it was found' on check-verification that the designated consumer has submitted correct information in Form 'A'. (17) Where the check-verification has been initiated on the basis of a complaint received by the Bureau, the cost thereof shall be borne by the designated consumer in case it was found on check-verification that the designated consumer has submitted false and incorrect information in Form 'A'

**9. Procedure regarding compliance with energy consumption norms and standards and issue of energy savings certificate.**—(1) A firm registered under the Indian Partnership Act, 1932 (9 of 1932) or a company incorporated under the Companies Act, 1956 (1 of 1956) or any other legal entity competent to sue or to be sued or enter into contracts shall be entitled to undertake verification and check-verification regarding compliance with the energy consumption norms and standards and issue or purchase of energy savings certificate if it,- (a) (b) (c) (d) has at least one accredited energy auditor whose name is included in the list of the accredited energy auditors maintained by the Bureau under regulation 7 of the Bureau of Energy Efficiency (Qualifications for Accredited Energy Auditors and Maintenance of their List) Regulations, 2010: has at least three energy auditors; has adequate expertise of field studies including observations, probing skills, collection and generation of data, depth of technical knowledge and analytical abilities for undertaking verification and check-verification; has a minimum turnover of ten lakhs rupees per annum in at least one of the previous three years or in case of a newly formed organisation, a net worth of ten lakhs rupees. (2) The Bureau shall invite applications from the firms, companies and other legal entities to undertake the work of verification and check-verification for the purpose of preparing a panel of such firms, companies and other legal entities. (3) The applications referred to in sub-rule (2) shall be accompanied by a certificate Of registration or incorporation as the case may be. (4) The applications so received shall be scrutinised in accordance with the provisions of sub-rule(1) and a panel of eligible applicants shall be prepared which shall be displayed on the web site of the Bureau, that is, [www.bee-india.nic.in](http://www.bee-india.nic.in). (5) The selected applicants shall be issued a certificate of empanelment in support their selection to undertake the function of verification and check-verification as accredited energy auditor. (6) A unique identification number shall be issued to the accredited energy auditors referred to in sub-rule (5). IO. Obligations of accredited energy auditor.- (I) For the work of verification and check verification, the accredited energy auditor shall constitute a team comprising of a team head and other members including experts: Provided that a person who was in the employment of a designated consumer within the previous four years, shall not be eligible to perform the work of verification or check-

verification for such designated consumer; Provided further that any person or firm or company or other legal entity, who was involved in undertaking energy audit in any of the designated consumer within the previous four years, shall not be eligible to perform the work of verification or check- verification for such designated consumer. (2) The accredited energy auditor shall ensure that persons selected as team head and team members must be independent, impartial and free of potential conflict of interest in relation to activities likely to be assigned to them for verification or check- verification. (3) The accredited energy auditor shall have formal contractual conditions to ensue that each team member of verification and check-verification teams and technical experts act in an impartial and independent manner and free of potential conflict of interest. (4) The accredited energy auditor shall ensure that the team head, team members and experts prior to accepting the assignment inform him about any known, existing, former or envisaged link to the activities likely to be undertaken by them regarding verification and check verification (5) The accredited energy auditor must have documented system for determining the technical or financial competence needed to carry out the functions of verification and check -verification and in determining the capability of the persons referred in sub-rule (2), the accredited energy auditor shall consider and record among other things the following aspects, namely:- (a) complexity of the activities likely to be undertaken; (b) risks associated with each project activity; (c) technological and regulatory aspects; (d) size and location of the designated consumer; (e) type and amount of field work necessary for the verification or check- verification. (6) The accredited energy auditor shall have documented system for preparing title plan for verification or check-verification functions and the said plan shall contain the 68 THE GAZETTE OF INDIA : EXTRAORDINARY [PART 11--SEC. 3(i)] tasks required to be carried out in each type of activity, in terms of man days in respect of designated consumers for the purpose of verification and check -verification. (7) The names of the verification or check-verification team members and their bio- data shall be provided by the accredited energy auditor to the concerned designated consumer in advance. (8) The verification or check-verification team shall be provided by the accredited energy auditor with the concerned working documents indicating their full responsibilities with intimation to the concerned designated consumer. (9) The accredited energy auditor shall have documented procedure- (i) to integrate all aspects of verification or check-verification functions; (ii) for dealing with the situations in which an activity undertaken for the purpose of compliance with the energy consumption norms and standards or issue of energy savings certificate shall not be acceptable as an activity for the said purposes. (10) The accredited energy auditor shall conduct independent review of the opinion of verification or check-verification team and shall form an independent opinion and give necessary directions to the said team if required. In preparing the verification and check-verification reports, the accredited (11) energy auditor shall ensure transparency, independence and safeguard against conflict of interest. (12) The accredited energy auditor shall ensure the confidentiality of all information and data obtained or created during the verification or check verification report. (13) In assessing the compliance with the energy consumption norms and standards and issue of energy savings certificates, the accredited energy auditor shall follow the provisions of the Act, rules and regulations made thereunder. (14) After completion of the check-verification, the accredited energy auditor shall submit the check-verification report, together with the certificate in Form-JC', to the Bureau

**11. Recommendation for issue of energy savings certificates.-** (1) The Bureau on satisfying itself about the correctness of verification report, and check-verification report, wherever sought by it, send its recommendation under clause (aa) of sub-section (2) of section 13 to the Central Government, based on the claim raised by the designated\* consumer in Form 'A', within ten working days from the last date of submission of said Form 'A' by the concerned state designated agency, for issuance Of energy savings certificates under section 14A and the recommendation shall specify.- (a) (b) (c) (2) the exact number of energy savings certificates to be issued to the designated consumer and the entitlement for such energy savings certificates after determining by the following formula: (i) for thermal power plant sector: number of energy savings certificates = (heat rate notified for the target year — heat rate as achieved in the target year) x production in the baseline year in million kwh/10 (ii) for other sectors: number of energy savings certificates (specific energy consumption notified for the target year — specific energy consumption as achieved in the target year) x production in the baseline year the identity of the concerned designated consumers; the certification that all the requirements for issue of energy savings certificates have been complied with, by the designated consumer and his entitlement has been certified in the •verification

report by the accredited energy auditor. The designated consumer may seek issue of energy savings certificates in 11 2 d d s proportion of its performance achieved during the first or second or target year with respect to compliance with the energy consumption norms and standards and the Bureau on satisfying itself about the correctness of verification report, and check- verification report, wherever sought by it, send its recommendation under clause (aa) of sub-section (2) of section 13 to the Central Government, based on the claim made by the designated consumer in Form 'A', for issue of energy saving certificates not exceeding eighty percent. of the entitlement in a year other than the target year under section 14A. (3) The total amount of energy savings certificates recommended under sub rule (2) shall be adjusted against the entitlement on conclusion of the target year as per the following formulae:- (A) for thermal power plant sector: (i) energy savings certificate to be issued after year I  $\{[\text{heat rate in the baseline year} - (\text{heat rate in the baseline year} - \text{heat rate notified for the target year}) + 3] - \text{THE GAZETTE OF INDIA : EXTRAORDINARY heat rate achieved in year I} \} \times 80\% \times \text{production in million kwh in the baseline year} / 10$ ; adjusted heat rate after year1 = (ii)  $\text{heat rate notified for target year} - (\text{energy savings certificates issued in year 1} + \text{production in million kwh in the baseline year}) \times 10$ ; [PART 11—SEC. 30)] energy savings certificate to be issued after year 2 = (iii)  $\{[\text{heat rate in the baseline year} - (\text{heat rate in the baseline year} - \text{heat rate adjusted after year1}) \times 2 + 3] - \text{heat rate achieved in year 2}\} \times 80\% \times \text{production in million unit in the baseline year} / 10$ ; adjusted heat rate after year2 =  $\text{heat rate adjusted after year1} - (\text{energy savings certificates issued in year 2} + \text{production in million in the baseline year}) \times 10$  (v) energy savings certificate to be issued in the target year =  $\{[\text{heat rate in the baseline year} - (\text{heat rate in the baseline year} - \text{heat rate adjusted after year2})] - \text{heat rate achieved in the target year}\} \times \text{production in million kWh in the baseline year} / 10$ ; (VD total number of energy savings certificates issued in the cycle = energy savings certificates issued in year I + energy savings certificates issued in year 2 + energy savings certificates issued in target year. (B) for other sectors: (i) energy savings certificate to be issued after year 1 =  $\{[\text{specific energy consumption in the baseline year} - (\text{specific energy consumption in the baseline year} - \text{specific energy consumption notified for the target year}) - \text{specific energy consumption achieved in year 1}] \times 80\% \times \text{production in the baseline year} / 10$ ; adjusted specific energy consumption after year1 =  $\text{specific energy consumption notified for target year} - (\text{energy savings certificates issued in year 1} - \text{production in the baseline year})$ ; (iii) energy savings certificate to be issued after year 2 =  $\{[\text{specific energy consumption in the baseline year} - (\text{specific energy consumption in the baseline year} - \text{specific energy consumption adjusted after year1}) \times 2 + 3] - \text{specific energy consumption achieved in year 2}\} \times 80\% \times \text{production in the baseline year}$ ; (iv) adjusted specific energy consumption after year2 =  $\text{specific energy consumption adjusted after year1} - (\text{energy savings certificates issued in year 2} - \text{production in the baseline year})$  (v) energy savings certificate to be issued in the target year =  $\{[\text{specific energy consumption in the baseline year} - (\text{specific energy consumption in the baseline year} - \text{specific energy consumption adjusted after year2})] - \text{specific energy consumption achieved in the target year}\} \times \text{production in the baseline year}$ ; (vi) total number of energy savings certificates issued in the cycle = energy savings certificates issued in year 1 + energy savings certificates issued in year 2 + energy savings certificates issued in target year

**12. Procedure for issue of energy savings certificate.**-(1) The Central Government, on the receipt of recommendation from the Bureau under rule 10, shall on satisfying itself in this regard, issue energy savings certificates of required value to the concerned designated consumer within fifteen working days from the date of receipt of such recommendation from the Bureau (2) The energy savings certificate shall be issued in electronic form. (3) The value of one energy savings certificates shall be equal to one metric ton of oil equivalent of energy consumed. (4) The designated consumer who has been issued energy savings certificates may sell them through the power exchange. 72 (5) THE GAZETTE OF INDIA : EXTRAORDINARY [PART IPSEC. The designated consumer who has been issued the energy savings certificates during the current cycle may use them for the purpose of banking until the next compliance cycle. (6) The energy savings certificates issued in a cycle period shall remain valid till the completion of the compliance period of the next cycle. (7) The energy savings certificates purchased by a designated consumer for the purpose of compliance with the energy consumption norms and standards shall after - their submission to the Bureau stand expired

**13. Compliance of energy consumption norms and standards.**-(1) The designated consumer for the purpose of achieving the compliance with the energy consumption norms and standards during the target

year, in the relevant cycle shall take the following action and after completing the said action, furnish the status of compliance to the concerned state designated agency with a copy to the Bureau in Form 'D' by the end of five months from the last date of submission of Form (a) by implementation of energy conservation and energy efficiency improvement measures or; (b) where the measures implemented in terms of clause (S) are found inadequate for achieving compliance with the energy consumption norms and standards, the designated consumer shall purchase the energy savings certificates equivalent in full satisfaction of the shortfall in the energy consumption norms and standards worked out in terms of metric ton of oil equivalent

**14. Establishment of new baseline for next cycle.-** The energy consumption norms and standards achieved by the designated consumer on the completion of the target year, as mentioned in the compliance report in Form-'D' shall be the baseline for establishment of new plant specific energy • consumption norms and standards for designated consumers for the next cycle

**15. Obligations of the designated consumers.-**The designated consumers shall,- (a) (b) for assessment of their performance for compliance with the energy consumption norms and standards, get the work of verification done through accredited energy auditors; take all measures including implementation of energy efficiency projects recommended by the accredited energy auditor and good practices prevalent or in use in the concerned industrial sector so as to achieve the optimum use of energy in their plant ; (c) furnish the full and complete data, provide necessary documents and other facilities required by the accredited energy auditor for the purpose of performing the function of verification and check-verification



**16. Specification of value of energy.**-(1) The value of per metric ton of oil equivalent of energy consumed shall be determined by applying the following formula, namely:-  $P = W_c \times P_c + W_o \times P_o + W_g \times P_g + W_e \times P_e$  Where- P =price of one metric ton of oil equivalent(1toe); P<sub>c</sub>=average price of delivered coal; P<sub>o</sub>=price of fuel oil as declared by Indian Oil Corporation Limited; P<sub>g</sub>=price of gas as declared by Gas Authority of India Limited; P<sub>e</sub> = average price of one unit of electricity for industrial sector in the States of Chattisgarh, Gujarat, Maharashtra, Madhya Pradesh and Tamil Nadu as specified by the respective State Electricity Regulatory Commission; all prices shall be as on 1st April of the year for which value of energy is being specified. Weightage of coal (W<sub>c</sub>) = amount of coal consumed across all designated consumers in the baseline year (in toe). total energy consumption across all designated consumers in the baseline year(in toe) ' Weightage of oil (W<sub>o</sub>) = amount of oil consumed across all designated consumers in the baseline year (in toe) total energy consumption across all designated consumers in the baseline year(in toe) ' Weightage of gas (W<sub>g</sub>) = amount of gas consumed across all designated consumers in the baseline year (in toe) . total energy consumption across all designated consumers in the baseline year(in toe)' Weightage of electricity (W<sub>e</sub>) = amount of electricity consumed across all designated consumers in the baseline year (in toe) total energy consumption across all designated consumers in the baseline year(in toe) (2) The value of per metric ton of oil equivalent of energy consumed for the purpose of these rules shall be rupees 10154 for the year 2011-12. (3) The value of per metric ton of oil equivalent of energy consumed shall be reviewed every year for the purpose of sub-rule (2). 1178GI/2012—10 74 I. 2. 3. 4. 5. 6. a. b, c, d. THE GAZETTE OF INDIA : EXTRAORDINARY Form — A (See rule 5) PERFORMANCE ASSESSMENT DOCUMENT (To be filled by designated consumer) Name of designated consum« Registration number Sector Sub-sector Accredited energy auditor Name Registration number List of documents submitted Baseline data (three years)

Form I () Specify the year in the bracket Form I ( Specify the year in the bracket Form I ( Specify the year  
in the bracket Form 11 Form III Submitted/Not submitted Submitted/Not submitted Submitted/Not  
submitted Submitted/Not submitted Submitted/Not submitted Submitted/Not submitted [PART IPSEC.  
Date of submission Date of submission Date of submission Date of submission Date Of submission Date  
of submission 30) 7. a. b. c. 8. a. b. c, d. Target Year Notified target specific energy consumption for the  
cycle toe/ton Of product or Net Kcal/kWh Energy savings certificates issued Nos Mention the year  
Mention the year Mention the year Specific energy consumption Specific energy consumption (baseline)  
Production (baseline) Revised target SEC (from 7.b) Target after normalisation, if any 75 Revised target  
specific energy consumption for the cycle toe/ton of product or Net Kcal/kWh toe/ton or Net kcal/kWh ton  
or Million kWh toe/ton or Net kcal/kWh toe/ton or Net 76 e. f. 9. a. b. c. d. THE GAZEITE OF INDIA :  
EXTRAORDINARY Achieved specific energy consumption Energy savings certificates Energy  
Efficiency Project implemented during current cycle [PART LI—SEC. 3(i)] kcal/kWh toe/ton or Net  
kcal/kVh Project Year of Annual Annual Energy nos Energy tariff Investment Implementation Energy  
consumption consumption (after) (before) i Note I: Form A may be filled in accordance with the following  
guidelines, namely:- GUIDELINES I. Name of designated consumer: As per notification under clause (g)  
of section 14



**2. Registration No: As provided at the time of registration for this portal 3.** Sector: • Aluminium  
Cement Chlor Alkali Fertilizer Iron and Steel Pulp and Paper Textile Thermal Power Plant 11 i' 4. 5. 6. 7.  
8. 3(i)] Sub Sector: Cement on-urid S 'e Fertilizer Pulp and Paper Chlor-Alkali Bâsié fei 'S übséctQi  
Process Based Feedstock Based Raw Material Based Technolo Based Süb-Sectdi D , Wet filht ri€  
Natural Gas, Na tha Wood, Agro. Recycled Fibre \_ÄCZ\_ \* Membrane cell, Mercu Name of accredited  
energy auditor: As selected by designated consumer from list of accredited energy auditor empanelled by  
Bureau of Energy Efficiency. List of documents submitted. (a) Baseline data (three years): Submitted to  
Bureau of Energy Efficiency for Target Calculations (b)



Form I mention the year ( ): As per filing, attach acknowledgement of submission i.e. after completion of Ist year after notification (c) Form I mention the year ( ): As per filing, attach acknowledgement of submission i.e. after completion of 2nd year after notification (d) Form I mention the year ( ): As per filing, attach acknowledgement of submission i.e. after completion of target year (e) Form 11: As per filing, attach acknowledgement of submission (f) Form III: As per filing, attach acknowledgement of submission Target: Enter target as notified by Government of India under clause (g) of section 11 (target specific energy consumption). Enter energy savings certificates, if any, issued in last three years). Adjusted target calculated as per formulae mentioned in rules. Specific energy consumption (SEC) (a) Specific Energy Consumption (Baseline): As notified by Government of India as aforesaid 78 THE GAZETTE OF INDIA EXTRAORDINARY [PART IPSEC. 3(i)] (b) Production (Baseline): As notified by Government of India as aforesaid. (c) Revised target specific energy consumption (from 7.b): if any (in metric ton of oil equivalent unit production), or as notified by Government of India or enter 8.a (d) Target after normalisation, if any: as notified by Government of India as aforesaid (in metric ton of oil equivalent unit production) and calculated as specified in the schedule, else enter 8.c (e) Achieved specific energy consumption: Achieved specific energy consumption in the year of submission of Form 'A' (f) energy savings certificates: calculate as per formulae provided in the rule IO



**9. Project implemented during current cycle: Energy efficiency projects implemented by designated consumers during last three years.** Attach photograph of energy savings projects implemented.

Undertaking I We undertake that the information supplied in this Performance Assessment Document is accurate to the best of my knowledge and if any of the information supplied is found to be incorrect and such information result into loss to the Central Government or State Government or any of the authority under them or any other person affected, I/we undertake to indemnify such loss. I/me agree to extend necessary assistance in case of any enquiry to be made in the matter. Signature Name Designation For and behalf of Name of the Firm/Company/Organisation SEAL of the Firm (Company/Organisation 3(i)] I/We Form B (See rule 5) CERTIFICATE OF VERIFICATION the accredited energy auditor, have undertaken a thorough independent evaluation of the activities undertaken by MIS. ,a designated consumer for compliance with the energy consumption norms and standards specified under the Government of India Ministry of during the target dated the Power notification number year compared to the baseline year and consequent entitlement or requirement of energy savings certificates and certify that- (a) (b) (c) (d) Signature: the verification of the data collection in relation to energy consumed and specific energy consumption per unit of production in the baseline year and in the target year in



Form under Rules 2007 or Rules 2008, has been carried out diligently and truthfully; the verification of the identified energy efficiency measures, and the progress of their implementation given in Form 11 and Form III under Rules 2008 has been carried out diligently and truthfully; the verification of the compliance with energy consumption norms and standards during the target year has been carried out diligently and truthfully; the verification of the total amount of energy saved, year-wise, after the baseline year and until target year or otherwise and request made by the (Nos) energy designated consumer, the entitlement of savings certificate (s) required to be issued or purchased by him have been carried out diligently and truthfully; all reasonable professional skill, care, and diligence have been taken in verifying the various verification activities, findings and conclusions, documents, reports, preparing the documents including the performance assessment document in Form 'A' and verification report and the contents thereof are a true representation of the facts. Name of accredited energy auditor for verification Designation: SEAL 80 THE GAZETTE OF INDIA EXTRAORDINARY Form C (See rule 7) Certificate of Check — Verification [PART 11—SEC. 30)] Irwe the accredited energy auditor, have undertaken a thorough independent evaluation of the activities undertaken by Mfs. ,a designated consumer for compliance to the energy consumption norms and standards specified under the Government of India, Ministry of Power - notification numbers dated the during the target year compared to the baseline year and consequent entitlement or requirement of energy savings certificates, mentioned in the Performance Assessment Document in Form 'A' and compliance of energy consumption norms and standard document in Form 'D' and certify that- (b) (c) (d) (e) Signature: the check-verification of the data collection in relation to energy consumed and specific energy consumption per unit of production in the baseline year and in the target year in Form under Rules 2007 or Rules 2008, has been carried out diligently and truthfully; the check-verification of the identified energy efficiency measures, and the progress of their implementation given in Form 11 and Form III under Rules 2008 has been carried out diligently and truthfully; the check-verification of the compliance with energy consumption norms and standards during the target year has been carried out diligently and truthfully; the check-verification of the total amount of energy saved, year-wise, after the baseline year and until target year or otherwise and request made by the designated consumer, the entitlement of (Nos) energy savings certificate (s) required to be issued or purchased by him have been carried out diligently and truthfully; all reasonable professional skill, care, and diligence have been taken in check-verifying the various verification activities, findings and conclusions, documents, reports, preparing the documents including the information given in the Performance Assessment Document in Form 'A' and verification report submitted by the accredited energy auditor appointed by the designated consumer . for verification and the contents thereof are a true representation of the facts. Name of accredited energy auditor for check-verification Designation: SEAL 117 1 qrrr 3(i)] 81 Form-D (See rule 12) COMPLIANCE OF ENERGY CONSUMPTION NORMS AND STANDARD DOCUMENT o be filled in b desi nated consumer 2. 3. 4. 5. a. 6. a. b. c

**1. Name of designated consumer Registration number Sector Sub-sector List of documents submitted Performance Assessment Document (Form 'A') Compliance Energy Savings Certificates Energy Savings Certificates submitted for compliance Balance Energy Savings Certificates Date of Submission Issued/Recommended for purchase If recommended for purchase Nos Note 1: Form D may be filled in accordance with the following guidelines:- GUIDELINES Name of designated consumer: As per notification from Government of India (Gol) under clause (g) of section 14**

**2.Registration number:** As per E-filing **3. Sector:** • • • • • Aluminium Cement Chlor Alkali Fertilizer Iron and Steel Pulp and Paper Textile Thermal Power Plant '178GV2012—1f

**4. Sub Sector: Seqtor\_ .IME GAZETTE OF INDIA : EXTRAORDINARY Basis for Sub-sector 'Tfietmal Cement Process Based [PART 3(i)) Sub-Sector Cppl, Gas, Oil D , wet Fertilizer Feedstock Based Natural Gas, Na tha Pu and Pa r Chlor-Alkali Raw Material Based Wood, A ro, RCF hi Membrane cell, Mercu 5. List of Documents submitted: (a) Performance assessment document: Submitted to Bureau of Energy Efficiency for issue of energy savings certificates**

**6. Compliance (a) Energy savings certificates: enter +ve value if energy savings certificates issued to designated consumer or enter -ve value in case recommended for purchase of energy savings certificates (b) Energy savings certificates submitted for compliance: If designated consumer is recommended for purchase of energy savings certificates, then enter value of energy savings certificates submitted by designated consumer for compliance of energy consumption norms and standards- saving target of designated consumer.(c) Balance energy savings certificates:- Numbers of**

energy savings certificates balance. If balance is ZERO than DC is in accordance for compliance of energy saving target and if balance is -ve than DC will be recommended for penalty. Undertaking INVe undertake

that the information supplied in compliance with energy consumption and standard documents in this Form 'D' is accurate to the best of my/our knowledge and if any of the information supplied is found to be incorrect and such information result into loss to the Central Government or State Government or any of the authority under them or an; other person affected. I/we undertake to indemnify such loss. I/we agree to extend necessary assistance in case of any enquiry is made in the matter Signature Name Designation For and behalf of Name of the Firm/Company/Organisation SEAL of the Firm/Company/Organisation 1. 1.1

(a) Schedule [See rules 2, 4 and 7) Determination of baseline specific energy consumption.- Specific energy consumption (See rule 2(1)) The specific energy consumption (SEC) gives the indication of efficient utilisation Of different sources of energy in a plant operational boundary to produce one unit of product, which is defined as the ratio of total energy input to plant boundary and the quantity of products produced and specific energy consumption of an industry shall be calculated based on Gate-to-Gate concept with the following formula:- Specific Energy Consumption = Net energy input into the designated consumers' boundary Total quantity of output exported from the designated consumers' boundary and expressed in terms of the metric ton of oil equivalent (toe)/per unit of product; Note: value to be rounded to three decimal places. Table I: Definition of product to calculate specific energy consumption .9 Sector

Cement Fertilizer Iron and Steel (Integrated) iron and Steel (Sponge Iron) Aluminium (Refinery) Aluminium (Smelter) Aluminium (Integrated) Pulp and Paper (Pulping) Pulp and Paper (Only Paper Making) Pulp and Paper (Pulp and Paper) Textile (Spinning) Textile (Composite) Textile (Fibre) Textile (Processing) Chlor-Alkali Power Plant Main Broduct Cement Urea Crude Steel Sponge Iron Alumina Molten Aluminium Molten Aluminium Pulp Paper Paper Yarn Yarn/Fabric Fibre Fabric Equivalent Caustic Soda Electricity unit ton ton ton ton ton ton ton ton ton Kg kg kg kg ton Million k Nh 84 THE

GAZETTE OF INDIA : EXTRAORDINARY Gate-to-Gate designated consumer boundary (sector-specific) [PART IPSEC. 1.2 (a) As the specific energy consumption (SEC) is calculated on a Gate-to-Gate concept, the plant boundary shall be selected in such a manner that the total energy input and the above product defined in •Table 1, is be fully captured and the entire designated consumers' plant. The colony, residential complex and transportation system, mining operations in case of Iron and Steel, Aluminum and

Cement sectors are not part of designated consumers 'boundary. Once the 'designated •consumers' boundary has been fixed, the same boundaty Shall be considered for entire cycle, and any change in the said boundary such as capacity expansion, merger of two plants, division of operation etc. shall be duly intimated to the Bureau of Energy Efficiency. (c) The following designated consumers' boundaries will be considered in the first cycle:- Case -I: All energy purchased and consumed:- • Electricity is purchased from the grid Electricity (kWh) Furnace Oil (Liter) Natural Gas (SCM) coal (KG) Others (Kg or Ltr) C se -11:

Electricity partially generated purchased and consumed:- • Electricity is purchased from the grid and Electricity (KWH) A (Ltr) Furnace Oil (Liter) Natural gas (SCM) coal AKG) Others (KG ot Ltr) 1 Product (Kg) process by diesel generating(DG) set generated by DG set X ( kwh ),other energy Product (Kg) SFC (kwh/ltr) process Case -III: Electricity generated by captive power plant and other energy purchased and consumed, electricity partially sold to grid:- • Electricity is generated by coal based captive power plant, partially sold to grid- coal (KG) Natural Gas (SCM) Furnace Oil (Ltr) Others (KG or Ltr) Y (KWH) to Grid A (KG) X ( kwh) CPP Product (Kg) Heat Rate (Kcal/Kwh) Process GSÜV: Electricity generated by captive power plant(CPP), other energy purchased and consumed, electricity partially sold to gru from captive power plant:- Electricity is generated by coal based captive power plant. partially sold to grid and captive power plant is in separate boundary- Coal (KG) Others (KG or Ltr) Furnace oil (Liter) Natural gas (SCM) Coal (KG) Others (KG or Ltr) G (KWH) CPP Aux P (a%) Y (KWH) to Grid X (KWH) Product (Kg) PROCESS Case -V: Energy purchased and consumed, electricity and heat partially generated through co-generation plant THE GAZETIE OF INDIA : EXTRAORDINARY Electricity and heat are

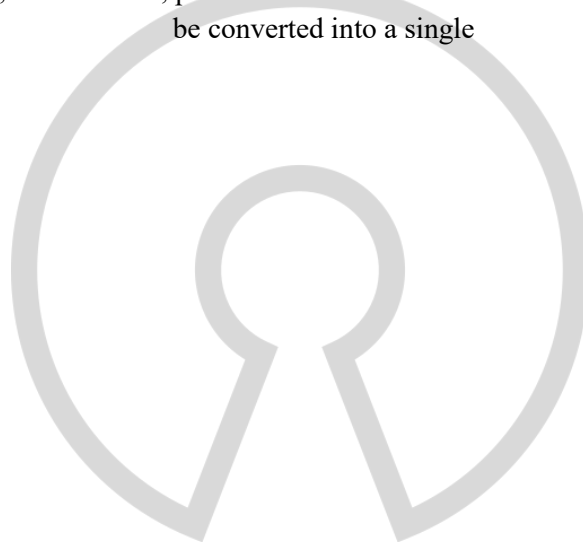
generated by co-generation Plant- Elect (KWH) coal (KG) Natural gas (SCM) Furnace oil (Ltr) Others (KG or Ltr) X ( kwh) Gen Y (Kcal) Plant Eff. (%) Process [PART IPSEC. 3(i)] I Product (Kg) CASE -VI: Energy purchased and consumed, heat energy partially met by waste or by- product of the process- Elect (KWH) coal (KG) PROCESS Natural Gas (SCM) Furnace Oil (Ltr) Others (KG or Ltr) Z Kcal Product (Kg) By-Product (X KG) 1.3 Methodology for calculating baseline specific energy consumption.- (a)

During the first cycle designated consumer having more than five years life, data for the previous three years, namely, 2007-08, 2008-09, 2009-10 shall be considered provided the capacity utilization is uniform. Normalisation, in a suitable statistical approach, shall be done in case of abnormality in capacity utilisation in any of the aforesaid three year (s). (b) During the first cycle designated consumer having more than five

years life and less than three years data has been reported, the same shall be considered provided the capacity utilisation is uniform and if the capacity utilisation is abnormally low in any of the aforesaid three year(s), the same shall not be considered. (c) During the first cycle, designated consumer having less than five years life and less than three years data has been reported, the available year's data shall be considered provided the capacity -4. 87 utilisation is uniform. If the capacity utilisation is abnormally low in any Of

the year(s). the same shall not be considered. (d) During the first cycle, in case of new designated consumer, the data shall be considered for those years where the capacity utilisation is greater than seventy percent. (70%) and if only one year data is reported, the same shall be considered irrespective of the capacity utilisation. (e) In the next cycle, baseline specific energy consumption shall be calculated in

accordance with the provisions of rule 14. (e) Few additional sector specific information like process technology, process flow, raw material, product mix etc. shall also be collected, All forms of energy shall be converted into a single



form i.e. metric ton of oil equivalent (toe) by the use of standard engineering conversion formula and the following general guiding principle shall be used in this regard:- (i) The reported gross calorific value (GCV) of fuels by the designated consumer, shall be considered for estimating the equivalent thermal energy. (ii) If gross calorific value (GCV) is not reported, then the values mentioned in the Government of India, Ministry of Power, notification number S.O 394(E), dated the 12<sup>th</sup> March, 2007 shall be considered.

Any other information as required shall be taken from standard industrial practice. (iii) The equivalent thermal energy of the electricity supplied to the grid shall be deducted from the total energy input to the designated consumer's boundary. The following expression shall be used:- Equivalent thermal energy supplied to grid (kWh) x national average heat rate in kCal/kWh in the baseline year. National average heat rate in year 2009-10 was 2717 kCal/kWh. (iv) Total energy input to the designated consumers' boundary shall be estimated with the following expression:- Energy input (toe) = Fuel consumed quantity (kg) x gross calorific value (kCal/kg) / 10<sup>7</sup> (v) Once the total energy input to the designated consumers' boundary is estimated, specific energy consumption shall be calculated by dividing the product quantity. 1.4

Procedure for normalisation Of specific energy consumption.- Variable factors as described in rule 4 may affect the energy consumption and 'Normalisation Factors' shall be considered in those cases. Capacity utilisation is one of the most important parameters to have a normalisation factor. The reported specific energy consumption (SEC) shall be normalised after incorporating the normalisation factor. 8 (b) THE GAZETTE OF INDIA : EXTRAORDINARY [PART II SEC. 3(i)] Normalized specific energy consumption = f (Reported SEC, normalization factors). The specific energy consumption shall be normalised, during baseline and target periods, based on statistical procedures. (c) The normalisation procedure is proposed to be applied if the capacity utilisation or Plant Load Factor (PLF) has a deviation of more than thirty per cent. It shall be applied only if capacity utilisation has deviated due to uncontrollable factors described in rule 4, and duly declared by the designated consumer with authentic proof or self certifications. (d) The normalisation shall be done by performing a statistical analysis of the specific energy consumption and production data by- (i) plotting the production versus energy consumption curves; (ii) performing statistical analysis to represent the relationship between the production and energy consumption; (iii) extrapolating the above relationship to generate capacity utilisation versus energy consumption and capacity utilisation versus specific energy consumption data for a suitable range of capacity utilisation values; (iv) the average capacity utilisation shall be used to identify the corresponding specific energy consumption value; (v) the normalised specific energy consumption shall be the value as computed in the previous step; (e) The "capacity utilisation" referred to in clauses (c) to (d) shall be replaced by "Plant Load Factor in case of designated consumers in the thermal power plant sector; (f) The above calculation determines the normalised specific energy consumption for the designated consumers

**2. Thermal power plant sector.-** 2.1 The designated consumers for the thermal power plant sector shall be grouped based on the fuel used and they are as under:- 2.2 The energy consumption norms and standards for power stations shall be specified in terms of specific percentage of their present deviation of net operating heat rate, based on the average of previous three years, namely, for the first cycle, and for cycles thereafter in accordance with the provision of rule 14 from the net design heat rate. The power stations shall be grouped into various bands according to their present deviations, of operating heat rate from design heat rate and for power stations with higher deviations the energy consumption norms and standards shall be established at lower level and shall be grouped taking into account percentage deviation as under:- Deviation in net station heat rate from design net heat rate U to five per cent. More than five per cent and upto ten per cent More than ten per cent. and upto twenty per cent More than twenty per cent. Reduction target for percentage deviation in the net station heat rate Ten per cent (10%) Seventeen per cent. (17%) Twenty-one per cent. (21%) Twenty-four per cent (24%). Correction factor considered for effect on heat rate due to coal quality: (a) Average ash, moisture, and gross calorific value for the previous three years in case of baseline for first Cycle and as per rule 14 for consequent cycles and specified year in case of target year, shall be taken into account for the baseline year and correction factor shall be worked out based on the following boiler efficiency formula:- Where: A = Ash percentage in coal H; Hydrogen percentage in coal G.C.V = Gross calorific value in kcal/kg Station heat rate (Kcal/kWh) Turbine heat rate or Boiler efficiency (b) The permissible error shall be in terms of toe for the purpose of determining entitlement of energy savings certificates

**3. Cement sector.-** 3.1 For establishment of energy consumption norms and standards for designated consumers in the cement sector, the designated consumers shall be grouped based on similar major output or product with the available data to arrive at a logical and acceptable spread of specific energy consumption among the designated consumers which shall be grouped as under:-

- Portland Sag Cement Plant. Whiff ants . Clinkér nts qinEe,pizaii5n - Ylâ:its Plants Normalization Factors 117g GJ/JL—/Z 90 THE GAZETTE OF : EXTRAORDINARY PART LI—SEC. 3(i)] 3.2 Equivalent major grade of cement production.-The various product mixes shall be converted in to equivalent major grade of cement product by the designated consumer by using the following formulae:-

Conversion of Ordinary Portland Cement (OPC) production equivalent to major product OPC produced (Lakh ton)X Conversion factor Of OPC Equivalem major product = Conversion factor Of major 'product [Lakh ton]

Conversion of Portland Pozzolana (PPC) production equivalent to major product PPC produced (Lakh ton)X Conversion factor of PPC Equivalent major product = (iii) Conversion factor of major product [Lakh ton]

Conversion of Portland Slag Cement (PSC) or any other variety of cement production equivalent to major product PSC or anv othervar iety cement produced C Lakh ton)X Conversion factor of PSC or any other var iety cement Equivalent major product = (iv) Conversion factor of major product (Lakh ton)

Conversion of total exported clinker to major product Total exported clin ker (Lakh ton) Equivalent major product = [Lakh ton] Conversion factor of major product Where: Total exported clinker= [Clinker exported to other plants + clinker exported to clinker stock over and above the opening stock,]

Conversion of total imported clinker to major product Total imported clin ker (Lakh ton) Equivalent major product = [Lakh ton] Conversioniön factor of major product Where: Total Imported clinker= [Clinker Imported from other plants + clinker Imported from clinker stock, equivalent to the quantity by which the clinker opening stock gets reduced]

(vi) Total equivalent major product of cement 3(i)] It can be arrived at by summing up all the different grades of cements equivalent to major product calculated above: Total Equivalent major product of Cement = a(i) +a( ii) +a(iii) + iv) Note: S.no. a(v) is already accounted in major product

3.3 Calculation for Gate to Gate specific energy consumption (SEC) Total thermal energy consumption Total thermal energy consumption is to be calculated as:- 91 [Lakh ton] Total thermal energy consumption= (Fuel consumed (Lakh ton) X Gross calorific value of respected fuel (kcal/kg) X 100) [Million kcal]

Total electrical energy consumption Total electrical energy consumption is to be calculated as:- Total electrical energy consumption= [((Total electricity purchased from grid (Lakh kWh) X exported to grid (Lakh kWh) X 2717 [Million kcal] Where: - 2717 kcal/kWh is national average heat rate. (iii) Notional/ Normalisation energy for imported electricity from grid Notional energy for imported electricity= [Imported electricity (lakh kWh) x (3208- 860) (kcal/kWh)J /10 [Million kcal] Where: - 3208 kcal/kWh is weighted average heat rate of all designated consumers in cement sector. (iv) Notional/ Normalisation energy Required for grinding of exported clinker It is calculated by using.follbwing formula: Notional energy required = {Total exported clinker to major product (Lakh ton) x Elect/ical SEC of cement grinding (kWh/ton of cement) x Weighted average heat rate (kcal/kWh)}/10 [Million kcal] Where: -Weighted average heat rate (kcal/kWh) = [{Imported electricity (Lakh kWh) X 3208 (kcal/kWh)} + {diesel generation (lakh kWh) X diesel generator heat rate (kcal/kWh)} + {Captive power plant generation (lakh kWh) x Captive power plant heat rate (kcal/kWh)}] /{Imported electricity (Lakh kWh) +diesel generation (Lakh kWh) +Captive power plant generation (Lakh kWh)}

(v) Notional/ Normalisation energy required for clinkerisation of imported clinker It is calculated by using following formula: 1178GI/2012—13 92 THE GAZETTE OF INDIA : EXTRAORDINARY [PART 11—SEC. 30)) Notional energy required = {Total clinker imported (Lakh ton) x {Thermal SEC of clinkerization kcal/kg clinker) X 1000+eElectrical SEC Of clinkerization (kWh/ton ot conker)x Weighted average heat rate (vi) Gate to Gate (GtG) eneray consumption GtG energy consumption +b(ii) +b(iii) +b(iv) +b(v) (vii)Gate to Gate (GtG) specific energy consumption IMiiiion kcal] [Million kcal] GtG energy consumption (Million kcal) GtG SEC = Total equivalent major product qf cement (Lakh ton) X 100 [kcal/kg of equivalent cement]

3.4 The permissible error shall be in terms of toe for the purpose of determining entitlement of energy savings certificates.

**4 Aluminum sector.-** 4.1 For establishment of energy consumption norms and standards for designated consumers in the Aluminum sector, the designated consumers shall be grouped based on similar major output or product with the available data to .arrive at a logical and acceptable spread of specific energy consumption among the designated consumers which shall be grouped as under:-

4.2 The permissible error shall be in terms of toe for the purpose of determining entitlement of energy savings



Alloy Sponge iron Manganese Production A Ferro Manganese to Ferro sponge iron Manganese) +(Fe Sponge iron Manganese equivalent to Ferro Sponge iron Manganese) +(Ferro Chrome equivalent to Ferro Sponge iron Manganese) + (Pig Iron to Ferro Sponge iron Manganese) Gate to Gate Specific Energy Consumption —Total Energy consumption Total Equivalent Ferro Alloy Sponge iron Manganese Production 5.8 Ferro Chrome F) n u Ferro Chrome:-The Gate to Gate SEC for this subsector is given as follows- Gate to Gate Specific Energy Consumption of Ferro Chrome =Total Energy Consumption (Mkcal)/Total Ferro Chrome Production (Tonne). g.9 Mini Blast Furnace G) Mini Blast Furnace:-The G to G SEC r this subsector is given as follows- Gate to Gate Specific Energy Consumption •of Mini Blast Furnace • -Total Energy Consumption (Mkcal)/Total Production (Tonne). 96 5.10 Steel Processing Unit • .33 THE GAZETTE OF INDIA : EXTRAORDINARY [PART IPSEC. 3(i)] H) Steel Processing Units:- This subsector contributes towards the many such steel processing plants like rerolling, wire drawing, cold rolling, hot rolling etc. The Gate to Gate SEC for this subsector is given as follows- Gate to Gate Specific Energy Consumption teelProcessing Unit; Total Energy Consumption (Mkcal)/ Total Production of Steel Processing Unit (Tonne). 5.11 The permissible error shall be in terms Of toe for the purpose of determining 6 6.1 entitlement of energy savings certificates Chlor-Alkali sector.- For establishment of energy consumption norms and standards in the Chlor-Alkali sector, the designated consumers stfall be grouped based on similar characteristics with the available data to arrive at a logical and acceptable spread of specific energy consumption among consumers which may be grouped as under:- 6.3 Correction factors developed for variability: Product mix Caustic Soda Liquefied Chlorine (T) Compressed H drogen Lac NM Solid Flakes T) \*Méreaå-ry 1.0 of Equivalent Caustic Soda 0.0615 of Equivalent Caustic Soda 13.889 of E uivalent Caustic Soda 0.219 of Equivalent Caustic Soda (b) Membrane and Electrode Life 60 kWh/tonne per year is added into specific energy consumption in the baseline year for each plant. For example: Addition of 60 kWh per year: 60 kWh x 860 kCal (In case of Non CPP plants) x 3 years / 10000000 MTOE/tonne 6.4 7 7.1 3(i)] Addition of 60 kWh per year: 60 kWh x 2717kCal (In case of CPP plants) x 3 years/ 10000000 MTOE/tonne The permissible error shall be in terms of toe for the purpose of determining entitlement of energy savings certificates Pulp and Paper sector.- FOÉ establiShrment of energy consumption norms and standards in the Pulp and Paper sector, 07 thedesignatedconsumers shall be grouped based on similar characteristics with the available data to arrive at a logical and acceptable spread of specific energy consumption among the designated consumers dnd the following guidelines shall be applied to group the designated consumers based on similarity in input raw material and product output on the basis of availability of consistent data:- (i) The input raw materials are Wood, Agro and Recycled Fibre (RCF); (ii) The process outputs are of Chemical Pulping; Chemi-mechanical Pulping and 100% market pulping (iii) The product output of specialty paper, non-specialty paper and newsprint. 72 The groups made for Pulp and Paper sector under are: - Speciality Nõn Speciålit9. (RCF) 7.3 The permissible error shall be in terms of toe for the purpose of determining entitlement of energy savings certificates. 8 Textile sector.- 8.1 For establishment of energy consumption norms and standards in the Textile sector, the designated consumers shall be based on similar characteristics with the available data to-arrive at -a logical and acceptable spread of specific energy consumption among the designated and the group made are as under:- 98 THE GAZETIE OF NDIA : EXTRAORDINARY Textile [PART 11—SEC. 8.2 The designated consumers whose production is measured in meters of cloth, the average grams per square meter (GSM) as 125 and average width as 44 inches shall. be assumed for weight calculations. 8.3 The permissible error shall be ±0.05% in terms of toe for the purpose of determining entitlement of energy savings certificates. 9 9.1 Fertilizer sector.- Fertilizer Sector, for manufacturing Of Urea fertilizer, out of total energy consumed at designated consumer plant boundary, stoichiometric energy Of 2.53 Million Gcal/MT Urea is contained in urea product and goesout as Such. Thijs, the net energy utilized iii urea manufacture iS total energy input at designated consumers' boundary reduced by 2.53 Million Gcal/MT Urea. The figure is worked out by considering heat energy Of ammonia as 4.46 Million Gcal/MT Ammonia and specific consumption 0.567 MT of Ammonia / MT Urea. 9.2 The permissible error shall be in terms of toe for the purpose of determining entitlement of energy saving certificates. IF. No. 10/6/2008- ECI JYOTI ARORA, It secy Printed by the Manager, Government of India Press, Ring Road, Mayapuri. New Delhi-110064 and Published by the Controller Of Publications. Delhi-110054.