
Changes to legislation: There are outstanding changes not yet made to Commission Delegated Regulation (EU) 2019/331. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) [View outstanding changes](#)

Commission Delegated Regulation (EU) 2019/331 of 19 December 2018 determining transitional Union-wide rules for harmonised free allocation of emission allowances pursuant to Article 10a of Directive 2003/87/EC of the European Parliament and of the Council (Text with EEA relevance)

Changes to legislation: There are outstanding changes not yet made to Commission Delegated Regulation (EU) 2019/331. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

ANNEX VII

Data monitoring methods

8. RULES FOR ASSIGNING FUELS AND EMISSIONS OF COMBINED HEAT AND POWER PRODUCTION (CHP) FOR THE PURPOSE OF UPDATING BENCHMARK VALUES

This section applies to situations where an operator, for the purpose of updating benchmark values, has to attribute inputs, outputs and emissions of cogeneration units to sub-installations.

For the purposes of this section, ‘cogeneration’ is used as defined in point (30) of Article 2 of Directive 2012/27/EU of the European Parliament and of the Council⁽¹⁾.

The emissions of a cogeneration unit are determined as

$Em_{CHP} = \sum AD_i \cdot NCV_i \cdot EF_i + Em_{FGC}$	(Equation 8)
--	--------------

Where Em_{CHP} are the annual emissions of the cogeneration unit expressed as t CO₂, AD_i are the annual activity data (i.e. quantities consumed) of fuels i used for the CHP unit expressed in tonnes or Nm³, NCV_i the net calorific values of fuels i expressed as TJ/t or TJ/Nm³, and EF_i the emission factors of fuels i expressed in t CO₂/TJ. Em_{FGC} are process emissions from flue gas cleaning expressed in t CO₂.

The energy input to the CHP unit is calculated in accordance with Equation 6. The respective annual average efficiencies of heat production and electricity (or mechanical energy, if applicable) production are calculated as follows:

$\eta_{heat} = Q_{net}/E_{IN}$	(Equation 9)
$\eta_{el} = E_{el}/E_{IN}$	(Equation 10)

Where η_{heat} (dimensionless) is the annual average efficiency of heat production, Q_{net} is the annual net amount of heat produced by the cogeneration unit expressed as TJ as determined in accordance with section 7.2, E_{IN} the energy input as determined using Equation 6 expressed as TJ, η_{el} (dimensionless) is the annual average efficiency of electricity production, and E_{el} the net annual electricity production of the cogeneration unit, expressed as TJ.

Where the operator provides evidence to the satisfaction of the competent authority that the determination of the efficiencies η_{heat} and η_{el} is technically not feasible or would incur unreasonable costs, values based on technical documentation (design values) of the installation shall be used. If no such values are available, conservative default values of $\eta_{heat} = 0,55$ and $\eta_{el} = 0,25$ should be used.

The attribution factors for heat and electricity from CHP are calculated as

$F_{CHP,Heat} = \frac{\eta_{heat}/\eta_{ref,heat}}{\eta_{heat}/\eta_{ref,heat} + \eta_{el}/\eta_{ref,el}}$	(Equation 11)
$F_{CHP,El} = \frac{\eta_{el}/\eta_{ref,el}}{\eta_{heat}/\eta_{ref,heat} + \eta_{el}/\eta_{ref,el}}$	(Equation 12)

Changes to legislation: There are outstanding changes not yet made to Commission Delegated Regulation (EU) 2019/331. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Where $F_{CHP,Heat}$ is the attribution factor for heat and $F_{CHP,El}$ is the attribution factor for electricity (or mechanical energy, if applicable), both expressed without dimension $\eta_{ref,heat}$ is the reference efficiency for heat production in a stand-alone boiler, and $\eta_{ref,el}$ the reference efficiency of electricity production without cogeneration. For the reference efficiencies the operator shall apply the appropriate fuel-specific values from the Commission Delegated Regulation (EU) 2015/2402⁽²⁾ without application of the correction factors for avoided grid losses in Annex IV to that Regulation.

For attributing the energy input or emissions of the cogeneration unit to the production of heat and electricity (or mechanical energy, if applicable), the operator shall multiply the total energy input or emissions with the respective attribution factor for heat or electricity.

The specific emission factor of the CHP-related measurable heat to be used for the attribution of heat-related emissions to sub-installations in accordance with section 10.1.2 is calculated as

$EF_{CHP,Heat} = Em_{CHP} \cdot F_{CHP,Heat} / Q_{net}$	(Equation 13)
---	---------------

Where $EF_{CHP,heat}$ is the emission factor for the production of measurable heat in the cogeneration unit expressed as t CO₂/TJ.

Changes to legislation: There are outstanding changes not yet made to Commission Delegated Regulation (EU) 2019/331. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) [View outstanding changes](#)

- (1) Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC ([OJ L 315, 14.11.2012, p. 1](#)).
- (2) Commission Delegated Regulation (EU) 2015/2402 of 12 October 2015 reviewing harmonised efficiency reference values for separate production of electricity and heat in application of Directive 2012/27/EU of the European Parliament and of the Council and repealing Commission Implementing Decision 2011/877/EU ([OJ L 333, 19.12.2015, p. 54](#)).

Changes to legislation:

There are outstanding changes not yet made to Commission Delegated Regulation (EU) 2019/331. Any changes that have already been made to the legislation appear in the content and are referenced with annotations.

View outstanding changes

Changes and effects yet to be applied to :

- Regulation applied (with modifications) by S.I. 2023/850 art. 20(1)
- Regulation revoked by S.I. 2019/916 reg. 62
- Regulation word substituted by S.I. 2020/1557 Sch. 1 para. 2

Changes and effects yet to be applied to the whole legislation item and associated provisions

- Signature words omitted by S.I. 2020/1557 Sch. 1 para. 32
- Annex 7 s. 4.2 sum substituted by S.I. 2020/1557 Sch. 1 para. 37(5)(a)(i)
- Annex 7 s. 4.2 sum substituted by S.I. 2020/1557 Sch. 1 para. 37(5)(a)(ii)(aa)
- Annex 7 s. 4.2 sum substituted by S.I. 2020/1557 Sch. 1 para. 37(5)(a)(ii)(cc)
- Annex 7 s. 7.3 word substituted by S.I. 2020/1557 Sch. 1 para. 37(7)(b)(ii)
- Annex 7 s. 7.3 word substituted by S.I. 2020/1557 Sch. 1 para. 37(7)(c)(ii)
- Annex 7 s. 1 words inserted by S.I. 2020/1557 Sch. 1 para. 37(2)(a)
- Annex 7 s. 4.4 words inserted by S.I. 2020/1557 Sch. 1 para. 37(5)(b)(i)
- Annex 7 s. 4.6 words inserted by S.I. 2020/1557 Sch. 1 para. 37(5)(d)(i)
- Annex 7 s. 7.3 words inserted by S.I. 2020/1557 Sch. 1 para. 37(7)(a)
- Annex 7 s. 7.3 words inserted by S.I. 2020/1557 Sch. 1 para. 37(7)(b)(i)
- Annex 7 s. 7.3 words inserted by S.I. 2020/1557 Sch. 1 para. 37(7)(c)(i)
- Annex 7 s. 10.1.2 words inserted by S.I. 2020/1557 Sch. 1 para. 37(8)(b)
- Annex 7 s. 1 words substituted by S.I. 2020/1557 Sch. 1 para. 37(2)(b)
- Annex 7 s. 2 words substituted by S.I. 2020/1557 Sch. 1 para. 37(3)(a)
- Annex 7 s. 2 words substituted by S.I. 2020/1557 Sch. 1 para. 37(3)(b)
- Annex 7 s. 3.1 words substituted by S.I. 2020/1557 Sch. 1 para. 37(4)
- Annex 7 s. 4.2 words substituted by S.I. 2020/1557 Sch. 1 para. 37(5)(a)(ii)(bb)
- Annex 7 s. 4.4 words substituted by S.I. 2020/1557 Sch. 1 para. 37(5)(b)(ii)
- Annex 7 s. 4.5 words substituted by S.I. 2020/1557 Sch. 1 para. 37(5)(c)
- Annex 7 s. 4.6 words substituted by S.I. 2020/1557 Sch. 1 para. 37(5)(d)(ii)
- Annex 7 s. 4.6 words substituted by S.I. 2020/1557 Sch. 1 para. 37(5)(d)(iii)
- Annex 7 s. 6.1 words substituted by S.I. 2020/1557 Sch. 1 para. 37(6)
- Annex 7 s. 10.1.1 words substituted by S.I. 2020/1557 Sch. 1 para. 37(8)(a)
- Annex 7 s. 4.2(f) words substituted by S.I. 2023/850 art. 14(2)
- Annex 4 s. 1.1 word omitted by S.I. 2020/1557 Sch. 1 para. 34(3)(a)(iii)
- Annex 4 s. 1.1 word substituted by S.I. 2020/1557 Sch. 1 para. 34(3)(a)(i)
- Annex 4 s. 2.6 word substituted by S.I. 2020/1557 Sch. 1 para. 34(4)(c)(i)
- Annex 4 s. 1.6 heading words inserted by S.I. 2020/1557 Sch. 1 para. 34(3)(d)(i)
- Annex 4 s. 1.6 words inserted by S.I. 2020/1557 Sch. 1 para. 34(3)(d)(ii)(aa)
- Annex 4 s. 2.3 words inserted by S.I. 2020/1557 Sch. 1 para. 34(4)(b)(i)
- Annex 4 s. 2.3 words inserted by S.I. 2020/1557 Sch. 1 para. 34(4)(b)(ii)
- Annex 4 s. 2.3 words inserted by S.I. 2020/1557 Sch. 1 para. 34(4)(b)(iii)
- Annex 4 s. 2.3 words inserted by S.I. 2020/1557 Sch. 1 para. 34(4)(b)(iv)
- Annex 4 s. 2.3 words inserted by S.I. 2020/1557 Sch. 1 para. 34(4)(b)(v)
- Annex 4 s. 2.3 words inserted by S.I. 2020/1557 Sch. 1 para. 34(4)(b)(vi)
- Annex 4 s. 2.3 words inserted by S.I. 2020/1557 Sch. 1 para. 34(4)(b)(vii)(bb)
- Annex 4 s. 2.6 words inserted by S.I. 2020/1557 Sch. 1 para. 34(4)(c)(iii)(bb)
- Annex 4 s. 1.1 words omitted by S.I. 2020/1557 Sch. 1 para. 34(3)(a)(ii)
- Annex 4 s. 1.4 words omitted by S.I. 2020/1557 Sch. 1 para. 34(3)(c)(i)
- Annex 4 s. 2.3 words omitted by S.I. 2020/1557 Sch. 1 para. 34(4)(b)(vii)(aa)
- Annex 4 s. 1.3 words substituted by S.I. 2020/1557 Sch. 1 para. 34(3)(b)(i)

- Annex 4 s. 1.3 words substituted by S.I. 2020/1557 Sch. 1 para. 34(3)(b)(ii)
- Annex 4 s. 1.4 words substituted by S.I. 2020/1557 Sch. 1 para. 34(3)(c)(ii)
- Annex 4 s. 1.6 words substituted by S.I. 2020/1557 Sch. 1 para. 34(3)(d)(ii)(bb)
- Annex 4 s. 2.1 words substituted by S.I. 2020/1557 Sch. 1 para. 34(4)(a)(i)(aa)
- Annex 4 s. 2.1 words substituted by S.I. 2020/1557 Sch. 1 para. 34(4)(a)(i)(bb)
- Annex 4 s. 2.1 words substituted by S.I. 2020/1557 Sch. 1 para. 34(4)(a)(ii)
- Annex 4 s. 2.6 words substituted by S.I. 2020/1557 Sch. 1 para. 34(4)(c)(ii)
- Annex 4 s. 2.6 words substituted by S.I. 2020/1557 Sch. 1 para. 34(4)(c)(iii)(aa)
- Annex 4 s. 2.7 words substituted by S.I. 2020/1557 Sch. 1 para. 34(4)(d)
- Annex 6 para. 1(c) omitted by S.I. 2022/1173 art. 24(2)(a)
- Annex 6 s. 1 word substituted by S.I. 2020/1557 Sch. 1 para. 36(2)(a)
- Annex 6 s. 1 words inserted by S.I. 2020/1557 Sch. 1 para. 36(2)(b)(i)
- Annex 6 s. 1 words inserted by S.I. 2020/1557 Sch. 1 para. 36(2)(b)(ii)
- Annex 6 s. 4 words substituted by S.I. 2020/1557 Sch. 1 para. 36(3)
- Annex 6 para. 1(d) words substituted by S.I. 2022/1173 art. 24(2)(b)
- Art. 2(1) Art. 2 renumbered as Art. 2(1) by S.I. 2020/1557 Sch. 1 para. 4(2)
- Art. 2.1(1) substituted by S.I. 2020/1557 Sch. 1 para. 4(3)(a)
- Art. 2(2)(3) inserted by S.I. 2020/1557 Sch. 1 para. 4(4)
- Art. 2.1(3) words inserted by S.I. 2020/1557 Sch. 1 para. 4(3)(b)
- Art. 2.1(4) words inserted by S.I. 2020/1557 Sch. 1 para. 4(3)(c)
- Art. 2.1(5) words inserted by S.I. 2020/1557 Sch. 1 para. 4(3)(d)
- Art. 2.1(10) words substituted by S.I. 2020/1557 Sch. 1 para. 4(3)(e)
- Art. 2.1(11) words substituted by S.I. 2020/1557 Sch. 1 para. 4(3)(f)
- Art. 2.1(14) substituted by S.I. 2020/1557 Sch. 1 para. 4(3)(g)
- Art. 2.1(15) omitted by S.I. 2020/1557 Sch. 1 para. 4(3)(h)
- Art. 2.1(19)-(23) inserted by S.I. 2020/1557 Sch. 1 para. 4(3)(i)
- Art. 2a inserted by S.I. 2020/1557 Sch. 1 para. 5
- Art. 3a inserted by S.I. 2020/1557 Sch. 1 para. 7
- Art. 4(1)(1A) substituted for Art. 4(1) by S.I. 2020/1557 Sch. 1 para. 8(3)
- Art. 4(2)(a) words omitted by S.I. 2020/1557 Sch. 1 para. 8(4)(a)(ii)
- Art. 4(2)(a) words substituted by S.I. 2020/1557 Sch. 1 para. 8(4)(a)(i)
- Art. 4(2)(b) words inserted by S.I. 2020/1557 Sch. 1 para. 8(4)(b)(i)
- Art. 4(2)(b) words inserted by S.I. 2020/1557 Sch. 1 para. 8(4)(b)(ii)
- Art. 4(2)(c) substituted by S.I. 2020/1557 Sch. 1 para. 8(4)(c)
- Art. 4(3)(4) inserted by S.I. 2020/1557 Sch. 1 para. 8(5)
- Art. 5(3a) inserted by S.I. 2022/1173 art. 20(2)
- Annex 8 inserted by S.I. 2023/850 art. 15
- Art. 8(6)(7) inserted by S.I. 2020/1557 Sch. 1 para. 12(5)
- Art. 8(7)(c) inserted by S.I. 2021/1455 art. 30(2)
- Art. 10(5)(b) words inserted by S.I. 2020/1557 Sch. 1 para. 14(5)(a)(i)
- Art. 10(5)(b) words inserted by S.I. 2020/1557 Sch. 1 para. 14(5)(a)(ii)
- Art. 10(5)(d) word substituted by S.I. 2020/1557 Sch. 1 para. 14(5)(b)(ii)
- Art. 10(5)(d) words inserted by S.I. 2020/1557 Sch. 1 para. 14(5)(b)(i)
- Art. 15a inserted by S.I. 2020/1557 Sch. 1 para. 18
- Art. 16(2)(a)-(d) words substituted by S.I. 2023/850 art. 12(2)
- Art. 16(2)(d) word substituted by S.I. 2020/1557 Sch. 1 para. 19(4)(a)(ii)
- Art. 16(10)-(12) inserted by S.I. 2020/1557 Sch. 1 para. 19(11)
- Art. 16(10) words substituted by S.I. 2023/850 art. 12(4)
- Art. 16(12) words substituted by S.I. 2023/850 art. 12(5)(a)
- Art. 16(12)(a) words substituted by S.I. 2023/850 art. 12(5)(b)
- Art. 16(12)(b) words substituted by S.I. 2023/850 art. 12(5)(c)
- Art. 16a16b inserted by S.I. 2020/1557 Sch. 1 para. 20
- Art. 17(1) Art. 17 renumbered as Art. 17(1) by S.I. 2020/1557 Sch. 1 para. 21(2)
- Art. 17(1) words substituted by S.I. 2020/1557 Sch. 1 para. 21(3)(a)
- Art. 17(1)(a) words omitted by S.I. 2020/1557 Sch. 1 para. 21(3)(b)
- Art. 17(1)(b) words inserted by S.I. 2020/1557 Sch. 1 para. 21(3)(c)
- Art. 17(1)(c) words inserted by S.I. 2020/1557 Sch. 1 para. 21(3)(d)
- Art. 17(2) inserted by S.I. 2020/1557 Sch. 1 para. 21(4)

- Art. 18(A1)(A2) inserted by S.I. 2020/1557 Sch. 1 para. 22(3)
- Art. 18(1)(a) words inserted by S.I. 2020/1557 Sch. 1 para. 22(4)(a)(ii)
- Art. 18(1)(a) words substituted by S.I. 2023/850 art. 13(2)
- Art. 18(1)(b) words substituted by S.I. 2020/1557 Sch. 1 para. 22(4)(b)
- Art. 18(2A) inserted by S.I. 2020/1557 Sch. 1 para. 22(6)
- Art. 18(7) inserted by S.I. 2020/1557 Sch. 1 para. 22(9)
- Art. 18a inserted by S.I. 2020/1557 Sch. 1 para. 23
- Art. 25(3)(b) words substituted by S.I. 2022/1173 art. 22(2)
- Art. 25(6)(b) words substituted by S.I. 2022/1173 art. 22(3)
- Art. 25(8)(a) words substituted by S.I. 2022/1173 art. 22(4)
- Art. 25(9)(b) words substituted by S.I. 2022/1173 art. 22(5)
- Art. 25(10)(c)(d) inserted by S.I. 2022/1173 art. 22(6)