

ICS 27.010
CCS F01



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 30180-2024

Replacing GB 30178-2013

**Norm of energy consumption per unit production of coal to
olefins, coal to synthetic natural gas and coal to liquids**

煤制烯烃、煤制天然气和煤制油单位产品能源消耗限额

Issued on: April 29, 2024

Implemented on: May 1, 2025

**Issued by: State Administration for Market Regulation;
Standardization Administration of China**

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Foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting: This document replaces GB 30178-2013 "Energy consumption limits per unit product of coal direct liquefaction", GB 30179-2013 "Coal-to-gas GB 30178-2013 "Energy consumption limit per unit product of coal-to-olefins": Compared with GB 30179-2013 and GB 30180-2013, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

- a) The scope has been changed (see Chapter 1, Chapter 1 of GB 30178-2013, Chapter 1 of GB 30179-2013 and Chapter 1 of GB 30180- 2013, Chapter 1);
- b) Deleted the output of coal-to-olefins, comprehensive energy consumption of coal-to-olefins, output of coal-to-natural gas, comprehensive energy consumption of coal-to-natural gas, and direct coal liquefaction Definitions of oil production output and comprehensive energy consumption of direct coal liquefaction (see 3:1 and 3:2 of GB 30180-2013, GB 30179- 2013, 3:1 and 3:2, GB 30178-2013);
- c) Changed the definition of energy consumption per unit product of coal-to-olefins, coal-to-natural gas, and coal-to-liquid direct oil (see 3:1~3:3, 3:3 of GB 30180-2013, 3:3 of GB 30179-2013 and 3:3 of GB 30178-2013);
- d) Change the advanced value, entry value and limit value of energy consumption per unit product of coal-to-olefins, coal-to-natural gas and direct coal liquefaction to Energy consumption limit levels 1, 2 and 3 (see 4:1 to 4:3, 4:1 to 4:3 of GB 30180-2013, 4:1 to 4:3 of GB 30179-2013) 4:1~4:3 and 4:1~4:3 of GB 30178-2013);
- e) Changed the energy consumption statistics scope (see 6:1, 5:1 of GB 30178-2013, 5:1 of GB 30179-2013 and 5:1 of GB 30180- 2013, 5:1);

- f) Added the calculation method of the output of coal-to-olefins, coal-to-natural gas, direct coal liquefaction to oil, and indirect coal liquefaction to oil products (see 6:2:1);
- g) Deleted the calculation formula for comprehensive energy consumption (see 5:2:1 of GB 30178-2013, 5:2:1 of GB 30179-2013 and GB 30180-2013, 5:2:1);
- h) The calculation formula for energy consumption per unit product has been changed (see 6:2:2, 5:2:2 of GB 30178-2013, 5:2:2 and 5:2:2 of GB 30180-2013);
- i) Energy-saving management and measures (see Chapter 6 of GB 30178-2013, Chapter 6 of GB 30179-2013 and Chapter 6 of GB 30180-2013) have been deleted: 2013, Chapter 6);
- j) Added the energy consumption limit level, statistical scope and calculation method of coal-to-olefins per unit product without deducting the energy used for raw materials (see Appendix A);
- k) Added the calculation method for raw material energy consumption of enterprises producing non-energy products (see Appendix D): Please note that some of the contents of this document may involve patents: The issuing organization of this document does not assume the responsibility for identifying patents: This document is proposed and coordinated by the National Standardization Administration: The previous versions of this document and the documents it replaces are as follows:

---First published in: 2013 as GB 30178-2013, GB 30179-2013 and GB 30180-2013 respectively:

---This is the first integrated revision: Unit products of coal-to-olefins, coal-to-natural gas and coal-to-liquids Energy consumption limit

1 Scope

GB 30180-2024 is the Chinese national standard on norm of energy consumption per unit production of coal to olefins, coal to synthetic natural gas and coal to liquids, in the field of energy and heat transfer engineering. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 29 April 2024 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 May 2025. Classification: ICS 27.010, CCS F01. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the limit levels, technical specifications and energy consumption per unit product (hereinafter referred to as "energy consumption") of coal-to-olefins, coal-to-natural gas and coal-to-liquids: Requirements, statistical scope and calculation

methods: This document applies to the energy consumption of coal (via methanol) to olefins, coal to natural gas, direct coal liquefaction to oil, and indirect coal liquefaction to oil production enterprises: Calculate, assess, and control energy consumption of new construction, renovation, or expansion projects: This document is not applicable to enterprises that produce olefins using coke oven gas or multiple raw materials, nor is it applicable to enterprises that produce olefins using purchased methanol:

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document: For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document:

GB/T 3484 General principles for energy balance of enterprises

GB/T 12723 General rules for the compilation of energy consumption limits per unit product

GB 17167 General rules for the allocation and management of energy metering instruments in energy-consuming units

GB/T 33445 Synthetic Natural Gas from Coal

3 Terms and definitions

The terms and definitions defined in GB/T 12723 and the following apply to this document: 3:

1 The ratio of total energy consumption of coal-to-olefins calculated by prescribed methods to product output during the statistical reporting period: 3:

2 The ratio of total energy consumption of coal-to-natural gas to product output calculated using the prescribed method during the statistical reporting period: 3:

3 During the statistical reporting period, the ratio of the total energy consumption of direct coal liquefaction to the product output calculated using the prescribed method: 3:

4 During the statistical reporting period, the ratio of the total energy consumption of indirect coal liquefaction to the product output calculated using the prescribed method:

4 Energy consumption limit levels

1 Coal-to-olefins The energy consumption limit level of coal-to-olefins per unit product (raw material energy is not included in energy consumption) is shown in Table 1, among which level 1 has the lowest energy consumption: