Appraisal guide: Fossil free heat and power

THEMATIC SUPPORT UNIT 1 JANUARY 2025

Sida's climate and environmental policy states that Sida does not support investments in energy system solutions based on fossil fuels. Sida excludes interventions that involve fossil fuels for electricity and heat production (extensive), including new investments or subsidies that directly extend or expand the use of existing fossil fuel-based alternatives. In some cases exceptions can be motivated. The appraisal guide for fossil free heat and power supports officers in the interpretation and practical application of Sida's Climate and environment policy as regards fossil free heat and power production in Sida's intervention management.

Type of activity OECD Sector code	Standpoint	Exceptions	Requirement
1) Fossil fuels prospecting, exploration, refinement or delivery (32262, 32261, 32220, 32167, 23641)	Not supported		
2) Power or heat production based on fossil fuels (23310, 23320, 23330, 23340, 23410, 23610, 23620)	Only supported in exceptional cases	Exceptions can be made for humanitarian or otherwise urgent needs.[1]	**The partner is required to:** **(i)** Present to Sida that the intervention is humanitarian or otherwise urgent character and that fossil free alternatives are not readily available in the short term. **(ii)** Include as a dialogue issue avenues for phasing out fossil investment.
3) Efficiency measures up streams to power- and heat-generation that create lock-in effects (32262, 32261, 32220, 32167)	Not supported		
4) Carbon Capture Usage and Storage (CCUS) for power plants or heat plants[2] (23350)	Not supported		
5) Use of thermal power plants or gas-turbines for upholding the power system functionality[3] (23310, 23320, 23330, 23340, 23410, 23610, 23620)	Only supported in exceptional cases	Exceptions can be made in a system transition or system evolution process[4] where the system will involve high proportions of variable renewable energy[5].	**The partner is required to:** **(i)** Justify why alternative, fossil free solutions[6] are not available in the short term[7]. **(ii)** Justify the investment by outlining the below 3 aspects.[a]
6) Diesel gensets in standalone applications or as power supply back-up for example in mini-grids (23330, 23410)	Only supported in exceptional cases	Exceptions can be motivated in cases when the battery or UPS alternative is clearly not a reasonable option, despite a reasonable system load factor.	**The partner is required to:** Justify why a diesel genset as a stand-alone or power supply back-up is a better alternative by outlining the below 3 aspects.[a]
7) Cooking with Liquified Petroleum Gas (LPG) (32174)	Only supported in exceptional cases	Exceptions can be made if an alternative with lower net-emission of greenhouse gases[8] is clearly not a reasonable option.	**The partner is required to:** Justify why LPG is a better alternative than electric or biofuel based cooking, when including deforestation impacts, by outlining the below 3 aspects.[a]

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Type of activity OECD Sector code	Standpoint	Exceptions	Requirement
8) Decommissioning of coal power plants, coal heat plants or other thermal plants (23320, 23330)	Supported with conditions		Decommissioning is only supported with guarantees and on condition that it is backed up by political will and a credible national policy framewwork for reducing emissions from power and heat generation. Support is only granted for installations that have been commissioned before 31 December 2022[9] and provided that the Contracting Party can ensure that **(i)** the plant is permanently decommissioned and fully decommissioned by 2030 for oil-fired installations and by 2040 for coal-fired plants, **(ii)** the total lifetime of the plant does not exceed 35 years, **(iii)** the installation's annual emissions are reduced or remain unchanged during the remaining operating life, and **(iv)** freed-up resources are not reinvested in fossil energy.
9) Use of fossil gas in transportation or vehicle fleets for cases when this requires that new gas-infrastructure is required (23640)	Only supported in exceptional cases	Exceptions can be made if fossil gas is used in a transitional phase and represents a declining proportion[10] of the energy demand of a new transport system where existing gas infrastructure can be used with investment only in distribution infrastructure.	**The contracting party needs to:** Justify the investment by outlining the following 3 aspects[a] and that a best available technology[11] test has been performed.
10) Use of fossil fuels or feedstocks for heat or chemical reactions in industrial processes (321)	Only supported in exceptional cases	Exceptions can be made for hard to abate use cases serving critical needs.[12]	**The contracting party needs to:** Validate and document that the investment is motivated or confirm that the intervention de facto leads to reduced GHG emissions and that the lifetime of the fossil based alternative is not extended. **The contracting party needs to:** Justify the investment by outlining the following 3 aspects.[a]

a/ Three aspects to assess:

(1) Life cycle cost analysis and technical analysis for the proposed investment and compared to at least one fossil-free alternative, including and excluding external costs for at least greenhouse gas emissions (where the cost of 1 tonne of CO2 equivalent is assessed according to the EU ETS, Emission Trading System or other locally determined price). Other external costs that can be included are e.g. health aspects and biodiversity. The analysis shall include any taxes and subsidies.

(2) The additional cost of the fossil-free alternative and who is likely to have to bear that cost and if likely that additional cost can be borne.

(3) A feasible decarbonisation and substitution strategy and a follow-up plan for the decarbonisation and substitution strategy. For interventions which cover a number of sites, portfolios, a number of loans and where each site or subproject is below utility-scale (based on local regulations or investment mandates this can for example be below e.g. 10 MW or 25 MW) the aforementioned analysis can be made on a macro-, portfolio- or programme level using reasonable assumptions for site profiles such as load profiles, logistics and trade-offs between externalities and impact. This may especially be applicable to guarantee contributions.

The decarbonisation and substitution strategy must be within the control of the contracting party. If the contracting party does not have temporal control after its interventions, such as lending, are terminated this requirement shall be construed as **i)** control during the time span of the partner's contractual relationships with its counterparties such as borrowers, suppliers **ii)** a requirement to provide a plan with credible and reasonable assurance that the intervention is highly likely to meet Sida's criteria for decarbonisation an avoidance of fossil energy.

Endnotes

1 As a non-prescriptive example, typically less than 5 years.
2 Valid for 2023-2030. ODA financing is not used for CCUS for heat- and power plants since the technology is currently not deemed sufficiently mature. The matter should be re-assessed 2030. In IEA's analysis it is antcipated that CCUS can become a realistic option over time for all categories. (Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach – Analysis - IEA, 2023)
3 This may for example be services providing balancing power, addressing diurnal- or seasonal profiles or peaking and redundancy needs.
4 For example represented in a Nationally Determined Contribution (NDC), MDB-programme or credible national programme.
5 Variable Renewable Energy (VRE)
6 Depending on the system, fossil free solutions can be for example power electronics, water magazines or other energy storage solutions.
7 As a non-prescriptive example, short term for the functionality of the power system is up to 10 years. In addition, based on IEAs analysis and Net Zero Roadmap, unabated gas turbines should generally not exceed 5 % of the total power produced in 2040. Unabated oil power plants should not be in use beyond 2030. Unabated coal power plants should not be in use beyond 2040.
8 Net emissions refer to CO2-eqvivalents including emissions and contributions from LULUCF (Land Use, Land Use Changes and Forestry).
9 Date indicated in the statement signed by Sweden (Statement on International Public Support for the Clean Energy Transition - UN Climate Change Conference (COP26) at the SEC – Glasgow 2021 (nationalarchives.gov.uk).
10 An example could be that a vehicle fleet initially uses fossil CNG but that depreciation periods/equipment life and credible plans demonstrate decarbonization of the system on a reasonable time horizon.
11 In this context, 'best available techniques' means a technology that provides the best possible emission performance, but is economically feasible[1], industrially demonstrated and where customary guarantees are offered by suppliers.
12 As an example, a criterion for an exemption could be the use of fossil energy or raw materials for facilities or infrastructure in Least Developed Countries (LDCs) or a low- and middle income countries (LMICs) where the following applies: i) a critical need of a significant scale can be demonstrated, ii) there is no feasible fossil-free alternative, and iii) Best Available Techniques are used to minimize emissions (refer to 11 above).

Art. no.: sida62759en, urn:nbn:se:Sida-62759en Print: Ljungbergs Tryckeri 2025

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