input_cdm_01

Scope

This methodology applies to afforestation and reforestation (A/R) project activities implemented in degraded mangrove habitats.

Applicability

This methodology is applicable under the following conditions:

(a) The land subject to the project activity is degraded mangrove habitat;

(b) More than 90 per cent of the project area is planted with mangrove species. If more than 10 per cent of the project area is planted with non-mangrove species then the project activity does not lead to alteration of hydrology of the project area and hydrology of connected up-gradient and down-gradient wetland area;

(c) Soil disturbance attributable to the A/R clean development mechanism (CDM) project activity does not cover more than 10 per cent of area.

A project activity applying this methodology shall also comply with the applicability conditions of the tools contained within the methodology and applied by the project activity.

Entry into force

The date of entry into force of the revision is the date of the publication of the EB 75 meeting report on 4 October 2013.

input_cdm_02

Scope

This methodology is applicable to small-scale afforestation and reforestation (A/R) project activities under the clean development mechanism (CDM). It does not apply to large-scale A/R CDM project activities.

Applicability

This methodology is applicable under the following conditions:

(a) The land subject to the project activity does not fall in wetland category;

(b) Soil disturbance attributable to the project activity does not cover more than 10 per cent of area in each of the following types of land, when these lands are included within the project boundary:

(i) Land containing organic soils;

(ii) Land which, in the baseline, is subjected to land-use and management practices and receives inputs listed in appendices 2 and 3 to this methodology.

A project activity applying this methodology shall also comply with the applicability conditions of the tools contained within the methodology and applied by the project activity.

Entry into force

The date of entry into force is the date of the publication of the EB 85 meeting report on 24 July 2015.

input_cdm_03

Scope

This category comprises cable cars substituting traditional road-based transport trips.

The calculation of baseline and project emissions is based on total emissions from trip origin (O) to trip destination (D) using distinctive modes of transport.

Applicability

The methodology is applicable to project activities that reduce emissions through the construction and operation of new cable cars for passenger transport wherein the passenger performs partial or total trip on the cable car. Extensions of existing cable cars are not eligible under this methodology.

Cable cars are established as a means of mass transit. The cable car must be built in an area that is accessible by road, i.e. origin and final destination of the cable car;

Fuels used in the baseline and or project case are electricity, gaseous or liquid fossil fuels. If Bio fuel blends are used as liquid fuels, the specific fuel consumption value and emission factors used for determining baseline and project emissions shall be adjusted accordingly.

The analysis of possible baseline scenario alternatives leads to the baseline scenario of continuation of the current public transport system that reasonably represents the anthropogenic emissions by sources of greenhouse gases (GHG) that would occur in the absence of the proposed project activity.

Measures are limited to those that result in emission reductions of less than or equal to 60 kt CO2e annually.

Entry into force

The date of entry into force is the date of the publication of the EB 85 meeting report on 24 July 2015.

input_cdm_04

Scope

This methodology is applicable to on-site building energy supply and whole building energy efficiency projects whose associated emission reductions can be determined with a whole building computerized simulation tool.

Applicability

The methodology applies to commercial buildings for both retrofit and new construction (i.e. Greenfield) projects. Allowable projects include energy efficient building design features; energy efficient appliances, equipment and/or technologies; energy management controls; on-site renewable energy projects; on-site cogeneration; and/or fossil fuel switching – alone or in combination.

All technologies (e.g. equipment or appliances) used in the project activity must be new and not transferred from another project activity.

This methodology is not applicable to project activities that affect off-site district heating and/or cooling plants and distribution networks even if they supply energy to the subject building(s).

If the energy efficient equipment contains refrigerants, then the refrigerant used in the project case shall have no Ozone Depleting Potential (ODP).

If the project activity includes fuel switching, the requirements in AMS-III.B "Switching fossil fuels" for establishing a baseline for fuel switching shall be followed.

None of the project equipment, systems or actions used for claiming emission reductions may be included in another CDM project in order to avoid possible double counting of emission reductions.

The Project Design Document (PDD) shall document how the potential for double counting of emission reductions, for example due to equipment manufacturers or others claiming credit for emission reductions for project activities, are avoided.

The aggregate electricity savings by a single project shall not exceed 60 GWh per year.

input_cdm_05

Scope

This category comprises renewable electricity generation units, such as solar photovoltaic, hydro, wind and renewable biomass that supply electricity to individual households/users or groups of households/users.

Applicability

The methodology is applicable to project activities that involve new installations (greenfield) or replace existing onsite fossil-fuel-fired generation.

The applicability of the methodology is limited to individual households and users that do not have a grid connection except when:

(a) A group of households or users are supplied with electricity through a standalone mini-grid powered by renewable energy generation unit(s) where the capacity of the generating units does not exceed 15 MW (i.e. the sum of installed capacities of all renewable energy units connected to the mini-grid is less than 15 MW), e.g. a community-based stand-alone off-the-grid renewable electricity systems; or

(b) For renewable energy-based lighting applications, the emission reductions per system is less than 5 tonnes of CO_2e a year and it shall be demonstrated that that fossil fuels would have been used in the absence of the project activity by:

(i) A representative sample survey of target households; or

(ii) Official statistics from the host country government agencies;

(c) A group of households or users are connected to a grid prior to the start date of the project activity (or the start date of validation with due justification), however the electricity from the grid is available for the households and users for less than 36 hours in any given calendar month during the crediting period or the grid connected household coverage in the host country is less than 50%.

The methodology is not applicable to project activities that include units that will be connected to the grid at any time during the crediting period.

Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology:

(a) The project activity is implemented in an existing reservoir with no change in the volume of reservoir;

(b) The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity is greater than 4 W/m2;

(c) The project activity results in new reservoirs and the power density of the power plant, is greater than 4 W/m2.

Combined heat and power (cogeneration) systems are not eligible under this category.

If the electricity generation unit added has both renewable and non-renewable components (e.g. a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the unit added co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15 MW.

Project activities that involve retrofit or replacement of an existing renewable electricity generation unit are included in this category. To qualify as a small-scale project, the total output of the modified or retrofitted unit shall not exceed the limit of 15 MW.

In the case of project activities that involve the addition of renewable electricity generation units to an existing renewable electricity generation facility, the total capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units.

Entry into force

The date of entry into force is the date of the publication of the EB 115 meeting report on 8 September 2022.

Applicability of sectoral scopes

For validation and verification of CDM projects and programme of activities by a designated operational entity (DOE) using this methodology, application of sectoral scope 01 is mandatory and application of sectoral scope 13 and 15 is conditional.

input_aktg

Section 23
Establishment of the by-laws

(1) The by-laws must be established by way of being recorded by a notary. Authorised representatives may act only if they have a power of attorney certified by a notary.

(2) The deed is to set out the following particulars:

1. the founders;

2. for par-value shares: the nominal amount; for no-par-value shares: their number, the issue price and, if several classes of stock exist, the classes of the stock that each founder will acquire;

3. the amount of the share capital that has been paid in.

(3) The by-laws must determine:

1. the company's business name and its seat;

2. the purpose of the enterprise; specifically, industrial and trade enterprises are to provide details regarding the nature of the products and goods that it is intended to manufacture and trade;

3. the amount of the share capital;

4. the division of the share capital either into par-value shares or into no-par-value shares; for par-value shares, their nominal amounts and the number of the shares per nominal amount are to be cited; for no-par-value shares, their number; furthermore, if several classes of stock exist, the class of the stock and the number of shares of stock making up each class;

5. whether the shares of stock are issued as bearer shares or registered in the names of their holders;

6. the number of members the management board is to have, or the rules according to which this number will be established.

(4) Furthermore, the by-laws must include determinations as to the formal requirements applying to the company's notices by publication.

(5) The by-laws may deviate from the provisions of the present Act only where this has been expressly permitted. Supplementing the by-laws by additional determinations is permissible unless the present Act provides conclusively for the matter.

input_patg

Section 34

(1) An application for the grant of a patent for an invention is to be filed with the German Patent and Trade Mark Office.
...

(3) The application must contain:

...

1. the name of the applicant;

2. a request for the grant of a patent which clearly and concisely describes the invention;

3. one or more patent claims which indicate what is to be protected as patentable;

4. a description of the invention;

5. the drawings referred to in the patent claims or the description.

(4) The application must disclose the invention in a manner which is sufficiently clear and complete for it to be carried out by a person skilled in the art.

(5) The application must relate to one invention only or to a group of inventions so linked as to form a single general inventive concept.

(6) The Federal Ministry of Justice and Consumer Protection is authorised to issue, by statutory instrument, provisions concerning the form and other requirements of the application. It may, by statutory instrument, delegate this authorisation to the German Patent and Trade Mark Office.

(7) At the request of the German Patent and Trade Mark Office the applicant is to specify the state of the art to the best of his or her knowledge, fully and truthfully, and to include it in the description (subsection (3)).

(8) The Federal Ministry of Justice and Consumer Protection is authorised to issue, by statutory instrument, provisions concerning the deposit of biological material, access to biological material, including those persons who are entitled to access biological material, and the redeposit of biological material where an invention involves the use of or concerns biological material which is not available to the public and cannot be described in the application in such a manner as to enable the invention to be carried out by a person skilled in the art (subsection (4)). The Federal Ministry of Justice and Consumer Protection may, by statutory instrument, delegate this authorisation to the German Patent and Trade Mark Office.

input_coffee

Coffee Roasting Handbook 1st Edition Exclusive:

About our Coffee:

We roast our own coffee in the coffeehouse on a weekly basis. There are two primary things to know about our coffee roasting: where we get our beans and how we roast them.

Coffee does not grow in the United States. We import green coffee beans from the coffee growing regions of the world, which are generally between the Tropic of Cancer and the Tropic of Capricorn, where conditions are ideal for coffee cherries to grow. We have teamed up with some great importers and farmers to get the absolute best coffee that benefits everyone involved, from the farmer to the importer to the coffee drinker here in Greenwood.

The coffees we source are, at a minimum, Fair Trade certified. The goal of Fair Trade is to create partnerships and terms of trade that will be financially and ethically beneficial to producers. In simpler terms, this means the beans we roast are bought at a fair price that allows the hardworking people growing the coffee to make a living off their wages.

Additionally, we will refer to some of the coffees we offer as "direct trade." While there is no international certification for direct trade, as there is with Fair Trade, the general concept of direct trade is that our importers purchase beans directly from individual farmers. Fair Trade beans are typically purchased through coops, where several farmers deliver their beans which are then combined for sale, so there is no direct traceability of the bean back to a particular farm. With direct trade we are able to tell you the specific farmer who produced the beans. These beans are typically of the highest quality and the farmer ends up receiving a higher percentage of the price you pay for your coffee here in Greenwood.

Once the beans arrive at the coffeehouse in 50-65 pound bags and boxes, we then roast them on-demand in our roasting room. We use what is referred to as a fluid bed roaster, as opposed to a drum roaster used by most other coffee roasters. We believe there are some unique advantages to our fluid bed roasting process. The fluid bed roasting process, also known as hot air roasting, uses forced hot air to agitate and roast coffee beans. The perfectly controlled hot air flows over a tilted bed and circulates through the beans, roasting each bean evenly. This hot air reaches temperatures of between 450 and 485 degrees Fahrenheit.

We believe this method of roasting creates some of the best coffee you will ever taste for a few reasons. First, it has a unique method of removing the chaff that the coffee beans shed as they heat. This is important because coffee beans are so absorbent if the chaff remained in the chamber during the roast, as it does in drum roasters, it would soak up some of that unwanted flavor.

Another reason is its efficiency in heat transference. Our machine can reach higher temperatures in half of the time of many drum roasters, which is absolutely essential to ensuring a smooth cup of coffee with the least amount of acidity possible. Before the roasting process can truly extract the essential flavors of a given coffee bean, the natural moisture needs to be extracted and the longer it takes to do this the more time it allows for acids to build up and block the real flavor of the bean and potentially cause stomach irritation. So by reaching a higher temperature faster we minimize acid buildup and truly showcase the natural flavors of the bean.

Just like corn here in Indiana, coffee is a seasonal crop so you may notice different coffees during different times of the year. This is because we are committed to providing the freshest and tastiest cup of coffee we can, and that means sometimes a certain type of bean just isn't in season.

We provide brief descriptions of each bean and blend on the bags. Our goal is to present highly drinkable coffee through blends and single-origins (more information about these terms is in the About Coffee section of the handbook).

Controls and Basic Settings:

Power Switch:

The power switch is the upper-left knob on the main power system visible in the control panel. It turns stiffly, as it is a mechanical timer. The on position is fully clockwise, and the off position is fully anticlockwise. Its primary function is a safety switch; it will automatically switch off the roaster if not manually reset periodically. The switch can also function as a timer, in which case it operates as follows:
-> 9 o'clock: 10 minutes
-> 12 o'clock: 20-minutes
-> 3 o'clock: 30-minutes
Before charging the roaster with green beans, turn the switch fully on. Alternatively, set it to run for a little longer than the predicted time for the roast. If the roaster stops during the process, immediately turn the switch back on.

Heater Control:

The knob at the bottom-left of the control panel steplessly adjusts the heater current from fully-off to fully-on. As the heaters warm and cool, their resistance changes slightly, which causes the current to drift away somewhat from the

intended setting. Thus, it is necessary to readjust the electrical current back to the desired setting a few minutes after changing the setting to obtain a precise heat level.

Ammeter:

The ammeter is on the upper-left of the control panel. It measures the electrical current flowing through the heaters. Each mark on the meter corresponds to 0.5-Ampere. One can convert the displayed electrical current to the consumed power with the formula $P=I*E$, where P is the power (watts), I is the current intensity (amperes), and E is the electromotive force (volts). Alternatively, use an energy monitor such as a KIll-a-Watt®.

Blower Control:

The blower is multi-purpose; it moves air through the roaster, removes chaff from the roasting chamber, and can cool the roasted beans. The knob at the bottom-right of the control panel steplessly adjusts the blower level. There are two versions of this control. On some models, the blower is always on. On other models, the blower stays off from the lowest setting to about 3.8, at which point it begins to turn. Although the dial has higher graduations, it does not turn past 8.

Thermometer:

The bean temperature displayed on the thermometer is a relative value, not the actual bean temperature. The BT indicated by thermometers on all roasters varies, mainly depending on the probe's placement and the batch size. It is advisable to correlate the displayed temperature to the actual bean temperature at known points. The appendix contains a table to record corrected values for future reference. The temperature displayed via the ET port, on the other hand, is accurate.

Circuit Breaker:

The circuit breaker is at the roaster's back, next to the power cord. It shuts down the roaster if there is a failure causing an excessive current draw. If the roaster does not operate, reset the breaker by depressing the button. If the breaker opens again, the roaster needs repair.

Roasting process:

We roast our own coffee in the coffeehouse on a weekly basis. There are two primary things to know about our coffee roasting: the roasting degrees, the height of the coffee trays, and the oven temperatures.

Roasting Degrees:

Coffee roasting is one of the most influential factors of coffee taste. Roasting transforms green beans into the aromatic and flavorful coffee that wakes our senses in the morning. However, roasting beans at various levels achieves more than merely darkening the bean; it also changes many of the beans' physical attributes as well.

Height of Coffee Trays:

Every coffee pile in a tray has a different height measured in mm (millimetres). Obviously, the higher the pile, the more heat an oven would require to achieve the desired roasting degree. The reverse effect happens on lower piles, which would require less oven heat. Therefore, the height of our coffee in the trays is a factor of most importance to the successful accomplishment of our excellent coffee roasting process and thus needs to be considered whenever analyzing a the result of a roasting process!

Oven Temperatures:

In total our facility possesses 5 ovens, each oven is equipped with 3 heat state-of-the-art sensors. For our use-case, it is obviously important to analyze the highest and lowest temperatures recorded by the heat sensors. The lowest recordable temperature is 0° and the highest is 1000°. The sensors themselves were handcrafted by our own engineers who not only have years of background in the coffee roasting industry but also wanted to outdo themselves and create a unique temperature sensor specifically for our niche! If any damages or malfunctions are to be experienced, then it is crucial that the upper management is notified without any delays! Insulating the Roasting Chamber is also an option: Some owners add a layer of heat-proof insulation around the exterior of the roasting chamber. This insulation allows the Quest to retain more heat, increasing capacity and the speed of heating. However, the downside is that if the user wishes to dump heat when a roast is getting too hot, it will be slower.

Roasting Guidelines:

In general, we first distinguish between three roasting degrees: light, medium and dark. Secondly, we have acknowledge the coffee pile height in the tray as that play a big role in the temperature of the roasting ovens which are the third and last constraint that needs to be abided to.

For better understanding, we describe temperature rules with boundary temperatures t_min and t_max and distinguish between:
> open brackets, e.g., (t_min, t_max), this means that the boundary temperatures ARE NOT included in the rules.
> closed brackets, e.g., [t_min, t_max], this means that the boundary temperatures ARE included in the rules.

> Light Roast:
Goes through roasting oven 1,2 and 3.
Light roasts are light brown with no oil on the bean surface, with a toasted grain taste and noticeable acidity. A common misconception is that Light Roasts don't have as much caffeine as their darker, bolder counterparts. However, the truth is exactly the opposite! As beans roast, the caffeine slowly cooks out of the bean. Therefore, because lightly roasted beans cook for a shorter time and at a lower temperature, they retain more caffeine from the original green coffee bean. Other roasters refer to a Light Roast as Light City Roast, New England Roast, or Cinnamon Roast.

We first distinguish between a tray height of less than 180mm and higher or equal to 180mm:

--> Coffee tray height lower than 180mm:
We inherently can not allow a temperature of roasting oven 1 to go below 120° or above 400°. Roasting oven 2 should maintain its temperature as [220°, 500°]. The final product will present a good quality if the highest temperatures of roasting oven 3 remain at 550°.

--> Coffee tray height of at least 180mm:
Roasting oven 1 should follow temperature rule [140°, 420°]. Afterwards, it is not allowed for roasting oven 2 to go above 520° or below 240°. Finally, the product will not pass the quality standard if roasting oven 3 fails to maintain its temperatures below 571°.

> Medium Roast:
Goes through roasting oven 1,2,3 and 4.
Medium roasts are medium brown to brown with no oil on the surface, although darker roasts in this group may appear slightly shiny. They are balanced, exhibiting significant flavor and aroma. Medium Roast coffees are brown and have a little thicker body than a Light Roast. Unlike Light, Medium starts to take on a bit of the taste from the roasting process, losing some of the bright floral flavors that are typical of a Light Roast. Instead, they carry much more of a balanced flavor with a medium amount of caffeine. A Medium is roasted until just before the second crack.
For a successful medium roast of coffee beans the following technical requirements should be followed:

--> Coffee tray height of at most 170mm:
Temperatures of roasting 1 should follow [170°,450°].
Temperatures of roasting 2 should follow [270°,550°].
Temperatures of roasting 3 should follow [370°,650°].
Temperatures of roasting 4 should not exceed 550°.

--> Coffee tray height of at least 170mm:
Temperatures of roasting 1 should avoid (0°,180°) and (460°,1000°).
Temperatures of roasting 2 should avoid (0°,290°) and (570°,1000°).
Temperatures of roasting 3 should avoid (0°,390°) and (670°,1000°).
Temperatures of roasting 4 should reach at most 560°.

> Dark Roast:
Dark roasts are dark brown to almost black, coffee beans roasted until they exude oils and therefore have an oil sheen glowing on the surface. The roasting process's flavor overwhelms the beans' flavor, and the coffee from some beans may taste spicy, bitter or smoky. To be considered Dark, beans roast to a temperature of anything higher than 440° or essentially to the end of the second crack. If beans roast much hotter than 780°, the coffee will start to taste more and more of charcoal and will not pass the final quality check. This roasting degree is the only one that requires the use of roasting oven 5. If the coffee pile on the tray reaches 175mm and beyond, then the roasting oven 5 should not have its temperatures exceed 580°. Similarly, for coffee piles smaller than 175mm, roasting oven 5 should not go beyond 560°.
Many other big-batch roasters cut corners by roasting larger quantities faster at extremely high temperatures for a short amount of time but it is important for us to still respect a new pattern of roasting beginning at oven chamber 1, if the coffee pile is at least 175mm high then roasting oven 1 should not exceed 580° and the lowest temperature allowed

would be 220°, similarly for roasting oven 2 the temperatures reach at most 680° and go no lower than 320°. Continuing the process, if roasting oven 3 goes above 780° or if roasting oven 4 exceeds 680°, the final product will be rejected! The same outcome will happen if roasting oven 3 fails to maintain at least 421° or if roasting oven 4 goes lower than 320°.

However, for piles of other heights, roasting oven 1 should remain between 200° and 560° including both temperatures. These piles of other sizes can also accept temperatures of at least 300° and up to 660° for roasting chamber 2, however, if they surpass 760° or if the temperature drops below 400° at roasting oven 3, then the final product will undoubtedly be rejected. Finally, please respect that in order to achieve the first crack in the coffee beans, oven chamber 4 should go as high as 680° but not drop below 320°.

Additional Information:

Increasing Capacity by painting the drum:

Some Quest owners–to increase the maximum batch capacity or alter the roast environment's thermal dynamics–paint the roasting drum's exterior with high-heat matte black spray paint. Doing so causes the drum to efficiently absorb and conduct more infrared heat to the roast chamber independent of airflow speed (convection). Increasing the drum's ability to absorb infrared heat increases the batch capacity, and heat changes are faster, even for large batch sizes (EG. <10 minutes, 300g roasts on an 400° M3).

Coffee Bean Cooling:

The supplied rectangular bean collector placed in the chaff collector cools the beans. This works but has several drawbacks. First, it is slow. Second, there is no air circulation through the roasting chamber with the bean collector inserted into the chaff collector. Use an external cooler instead, such as the optional one from the manufacturer or make one. Make a small box with a muffin fan in it and set the bean collector on top. The flow of ambient air through the beans is much more efficient than the Quests' inbuilt cooling function.

output_aktg

c1 = ({check certification of authorised representatives}, {check completeness of deed}, {directly follows}, {representative_authorisation == notary})

c2 = ({check completeness of deed}, {check completeness of determination by by-laws}, {directly follows}, {deed_founders == contained AND deed_share_capital_details == contained AND deed_amount_share_capital == contained})

c3 = ({check completeness of determination by by-laws}, {check requirements for company's notices by publication}, {directly follows}, {determination_company_details == contained AND determination_enterprise_purpose == contained AND determination_amount_share_capital == contained AND determination_share_capital_details == contained AND determination_share_characteristics == contained AND determination_management_board == contained})

c4 = ({check requirements for company's notices by publication}, {check if by-laws comply with present act}, {directly follows}, {requirements_for_noticese == requirements})

c5 = ({check if by-laws comply with present act}, {establish by-laws}, {directly follows}, {present_act_compliance == compliant})

c6 = ({check if by-laws comply with present act}, {check permission for deviation}, {directly follows}, {present_act_compliance == not_compliant})

c7 = ({check permission for deviation}, {establish by-laws}, {directly follows}, {permission_for_deviation == permission})

output_cdm_01

c1 = ({check project activities}, {check habitat}, {directly follows}, {activity_type == ar_activitiy})

c2 = ({check habitat}, {check percentage of mangrove species}, {directly follows}, {habitat_type == degraded_mangrove_habitat})

c3 = ({check percentage of mangrove species}, {check soil disturbance attributable to project}, {directly follows}, {mangrove_species > 90})

c4 = ({check soil disturbance attributable to project}, {check compliance with applicability conditions of contained tools}, {directly follows}, {area_percentage <= 10})

c5 = ({check compliance with applicability conditions of contained tools}, {apply methodology}, {directly follows}, {contained_tools_compliance == compliant})

output_cdm_02

c1 = ({check project scope and activities}, {check type of land}, {directly follows}, {project_scope == small_scale AND activity_type == ar_activity})

c2 = ({check type of land}, {check soil disturbance attributable to project}, {directly follows}, {land_type != wetland})

c3 = ({check soil disturbance attributable to project}, {check compliance with applicability conditions of contained tools}, {directly follows}, {(soil_organicity == not_organic OR (soil_organicity == organic AND area_percentage <= 10)) AND (lu_mm_practices_subj_input == not_subject_no_input OR (lu_mm_practices_subj_input == subject_and_input AND area_percentage <= 10))})

c4 = ({check compliance with applicability conditions of contained tools}, {apply methodolgy}, {directly follows}, {contained_tools_compliance == compliant})

output_cdm_03

c1 = ({check project context}, {check impact on emissions}, {directly follows}, {project_context == substitution})

c2 = ({check impact on emissions}, {check accessibility by road}, {directly follows}, {(relevancy_for_trip == part_of_trip OR relevancy_for_trip == total_trip) AND project_type == no_extension})

c3 = ({check accessibility by road}, {check compliance of fuels used in baseline or project case}, {directly follows}, {cable_car_accessibility == accessible_by_road})

c4 = ({check compliance of fuels used in baseline or project case}, {check emission reductions of measures}, {directly follows}, {fuel_complinace == compliant})

c5 = ({check emission reductions of measures}, {apply methodology}, {directly follows}, {annual_emission_reductions <= 60})

output_cdm_04

c1 = ({check building type}, {check relevant project characteristics}, {directly follows}, {building_type == commercial_building})

c2 = ({check relevant project characteristics}, {check technologies used}, {directly follows}, {(project_nature == retrofit OR project_nature == new_construction) AND (project_type == ee_building_design_features OR project_type == ee_appliances_equip_tech OR project_type == e_mm_controls OR project_type == os_renewable_e_projects OR project_type == os_cogeneration OR project_type == fossil_fuel_switching)})

c3 = ({check technologies used}, {check affect of project activities}, {directly follows}, {technologies_used == new})

c4 = ({check affect of project activities}, {check if equipment contains refrigerator}, {directly follows}, {activity_affects != os_district_heating_plant OR activity_affects != os_district_cooling_plant OR activity_affects != distribution_networks})

c5 = ({check if equipment contains refrigerator}, {check refrigerant type}, {directly follows}, {refrigerant == contained})

c6 = ({check if equipment contains refrigerator}, {check fuel switch}, {directly follows}, {refrigerant == not_contained})

c7 = ({check refrigerant type}, {check fuel switch}, {directly follows}, {refrigerant == no_odp})

c8 = ({check fuel switch}, {follow AMS-III.B}, {directly follows}, {activity_type == fuel_switch})

c9 = ({check fuel switch}, {check claimed emission reductions}, {directly follows}, {activity_type != fuel_switch})

c10 = ({follow AMS-III.B}, {check claimed emission reductions}, {directly follows}, {activity_type == fuel_switch})

c11 = ({check claimed emission reductions}, {check existence of project design document}, {directly follows}, {emission reductions == unique})

c12 = ({check existence of project design document}, {check annual aggregate electricity savings}, {directly follows}, {project_design_document == existent})

c13 = ({check annual aggregate electricity savings}, {apply methodolgy}, {directly follows}, {electricity_savings <= 60})

output_cdm_05

c1 = ({check project type}, {check connection type}, {directly follows}, {project_type == new_installation OR project_type == replacing_fossil_fuel})

c2 = ({check connection type}, {check power plant type}, {directly follows}, {connection_type == individual_households AND grid_connection == existing})

c3 = ({check connection type}, {check grid exceptions}, {directly follows}, {connection_type != individual_households AND grid_connection == existing})

c4 = ({check grid exceptions}, {check power plant type}, {directly follows}, {(sum_of_all_capacities < 15) OR (project_applications == involves_renewable_lighting AND emission_reductions < 5 AND (demonstration == representative_sample OR demonstration == official_statistics)) OR (available_electricity < 36 OR coverage < 50)})

c5 = ({check power plant type}, {check heat and power cogeneration}, {directly follows}, {power_plant_type != hydro_power_plant})

c6 = ({check power plant type}, {check hydro power plant conditions}, {directly follows}, {power_plant_type == hydro_power_plant})

c7 = ({check hydro power plant conditions}, {check heat and power cogeneration}, {directly follows}, {(reservoir == existing AND reservoir_volume == no_change) OR (reservoir == existing AND reservoir_volume == increased AND power_denisity > 4) OR (reservoir == new AND power_denisity > 4)})

c8 = ({check heat and power cogeneration}, {check non-renewable components}, {directly follows}, {system != combined_heat_and_power})

c9 = ({check non-renewable components}, {check retrofit or replacement}, {directly follows}, {(unit_added == renewable_and_non_renewable AND capacity_renewable < 15) OR (unit_added == renewable_only)})

c10 = ({check retrofit or replacement}, {check existing renewable electricity generation facility}, {directly follows}, {((implementation == retrofit OR implementation == replacement) AND final_output < 15) OR (implementation != retrofit AND implementation != replacement)})

c11 = ({check existing renewable electricity generation facility}, {apply methodology}, {directly follows}, {addition_of_renewable_units == no_addition OR (addition_of_renewable_units == addition AND capacity_added < 15 AND type_of_units_added == physically_distinct)})

output_coffee

<!-- Topology Order -->
c1 = ({go to roasting chamber 3}, {go to roasting chamber 4}, {directly follows}, {roasting_degree == medium OR roasting_degree == dark})
c2 = ({go to roasting chamber 4}, {go to roasting chamber 5}, {directly follows}, {roasting_degree == dark})

<!-- Gold Standard: light -->
c3 = ({go to roasting chamber 1}, {go to roasting chamber 2}, {directly follows}, {roasting_degree == light AND height < 180 AND 120 <= t1 <= 400})
c4 = ({go to roasting chamber 2}, {go to roasting chamber 3}, {directly follows}, {roasting_degree == light AND height < 180 AND 220 <= t2 <= 500})
c5 = ({go to roasting chamber 3}, {retrieve final product}, {directly follows}, {roasting_degree == light AND height < 180 AND t3 <= 550})

c6 = ({go to roasting chamber 1}, {go to roasting chamber 2}, {directly follows}, {roasting_degree == light AND height >= 180 AND 140 <= t1 <= 420})
c7 = ({go to roasting chamber 2}, {go to roasting chamber 3}, {directly follows}, {roasting_degree == light AND height >= 180 AND 240 <= t2 <= 520})
c8 = ({go to roasting chamber 3}, {retrieve final product}, {directly follows}, {roasting_degree == light AND height >= 180 AND t3 <= 570})

<!-- Gold Standard: medium -->
c9 = ({go to roasting chamber 1}, {go to roasting chamber 2}, {directly follows}, {roasting_degree == medium AND height < 170 AND 170 <= t1 <= 450})
c10 = ({go to roasting chamber 2}, {go to roasting chamber 3}, {directly follows}, {roasting_degree == medium AND height < 170 AND 270 <= t2 <= 550})
c11 = ({go to roasting chamber 3}, {go to roasting chamber 4}, {directly follows}, {roasting_degree == medium AND height < 170 AND 370 <= t3 <= 650})
c12 = ({go to roasting chamber 4}, {retrieve final product}, {directly follows}, {roasting_degree == medium AND height < 170 AND t4 <= 550})

c13 = ({go to roasting chamber 1}, {go to roasting chamber 2}, {directly follows}, {roasting_degree == medium AND height >= 170 AND 450 < t1 < 170})
c14 = ({go to roasting chamber 2}, {go to roasting chamber 3}, {directly follows}, {roasting_degree == medium AND height >= 170 AND 550 < t2 < 270})
c15 = ({go to roasting chamber 3}, {go to roasting chamber 4}, {directly follows}, {roasting_degree == medium AND height >= 170 AND 650 < t3 < 370})

c16 = ({go to roasting chamber 4}, {retrieve final product}, {directly follows}, {roasting_degree == medium AND height >= 170 AND t4 <= 550})

<!-- Gold Standard: dark -->
c17 = ({go to roasting chamber 1}, {go to roasting chamber 2}, {directly follows}, {roasting_degree == dark AND height < 175 AND 200 <= t1 <= 560})
c18 = ({go to roasting chamber 2}, {go to roasting chamber 3}, {directly follows}, {roasting_degree == dark AND height < 175 AND 300 <= t2 <= 660})
c19 = ({go to roasting chamber 3}, {go to roasting chamber 4}, {directly follows}, {roasting_degree == dark AND height < 175 AND 400 <= t3 <= 760})
c20 = ({go to roasting chamber 4}, {go to roasting chamber 5}, {directly follows}, {roasting_degree == dark AND height < 175 AND 300 <= t4 <= 660})
c21 = ({go to roasting chamber 5}, {retrieve final product}, {directly follows}, {roasting_degree == dark AND height < 175 AND t4 <= 560})

c22 = ({go to roasting chamber 1}, {go to roasting chamber 2}, {directly follows}, {roasting_degree == dark AND height >= 175 AND 220 <= t1 <= 580})
c23 = ({go to roasting chamber 2}, {go to roasting chamber 3}, {directly follows}, {roasting_degree == dark AND height >= 170 AND 320 <= t2 <= 680})
c24 = ({go to roasting chamber 3}, {go to roasting chamber 4}, {directly follows}, {roasting_degree == dark AND height >= 170 AND 420 <= t3 <= 780})
c25 = ({go to roasting chamber 4}, {go to roasting chamber 5}, {directly follows}, {roasting_degree == dark AND height >= 170 AND 320 <= t4 <= 680})
c26 = ({go to roasting chamber 5}, {retrieve final product}, {directly follows}, {roasting_degree == dark AND height >= 170 AND t4 <= 580})

output_patg

<!-- Gold Standard -->
c1 = ({check if invention}, {check if competent authority}, {directly follows}, {nature_of_prod_or_serv == invention})

c2 = ({check if competent authority}, {check completeness and clarity of application}, {directly follows}, {authority_type == german_patent_and_trade_mark_office})

c3 = ({check completeness and clarity of application}, {check number of contained inventions}, {directly follows}, {application_name == contained AND application_request_for_grant == contained AND application_patent_claim == contained AND application_description == contained AND application_drawings == contained AND application_clarity == clear})

c4 = ({check number of contained inventions}, {file application}, {directly follows}, {number_of_inventions == 1})

c5 = ({check number of contained inventions}, {check if inventions are linked}, {directly follows}, {number_of_inventions > 1})

c6 = ({check if inventions are linked}, {file application}, {directly follows}, {content_relationship == together})