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# Methodology for calculation of GHG emission avoidance

## First call for proposals under the Innovation Fund

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TURQUOISE Finance | Energy, Environment, Efficiency

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# Organisation of the methodology

## Main principles | Basis of methodologies and cross-cutting assumptions

- Low-carbon projects in energy-intensive industries, including biorefineries, substitute products and carbon capture and utilisation (CCU);
- Carbon capture and geological storage (CCS);
- Renewable energy (RES) projects, including production facilities
- Energy storage projects, including production facilities

- Scope
- Boundaries
- **Absolute GHG emissions avoidance: *first and second stage equations***
- Data and parameters: *default values to be used*
- Monitoring, reporting and verification of performance: *for disbursement and for knowledge-sharing purposes*

# Application of the methodology

- To support applicants quantifying GHG emissions avoidance potential over the first 10 years of operation
- To form the basis of the scoring for the "GHG emission avoidance effectiveness" criterion and cost efficiency
- To serve as KPI for project monitoring and disbursements of grants
- To inform on requirements for knowledge-sharing purposes

## Selection criteria

Projects will be selected based on:

1. Effectiveness of greenhouse gas emissions avoidance
2. Degree of innovation
3. Project viability and maturity
4. Scalability
5. Cost efficiency (cost per unit of performance)

# Main principles

# Absolute GHG emission avoidance

Absolute GHG emission avoidance will be the difference between:

- the **emissions that would occur in the absence of the project (*Ref*)** , and
- the **emissions from the project activity (*Proj*)**

Timescale: 10-years

*unless project timeline shorter

Forecasting: emission factors are fixed for the 10 years of calculation

**Absolute GHG emissions avoidance**

$$\Delta GHG_{abs} = \sum_{y=1}^{10} (Ref_y - Proj_y)$$

# Relative GHG emission avoidance

**Absolute GHG emissions avoidance**

$$\Delta GHG_{abs} = \sum_{y=1}^{10} (Ref_y - Proj_y)$$

in tonnes $CO_2e$

**Relative GHG emissions avoidance**

$$\Delta GHG_{rel} = \frac{\Delta GHG_{abs}}{\sum_{y=1}^{10} (Ref_y)}$$

in %

# Classification

| | SECTOR<br>defined by grouping EU ETS activities (activity codes 20-47) where applicable | PRODUCTS<br>products of sector, derived from EU ETS activities and PRODCOM |
|---|---|---|
| **Energy storage**, and production facilities for components | Intra-day electricity storage | electricity |
| | Other energy storage | electricity |
| | | heating/cooling |
| | | e-fuels |
| | | hydrogen |
| **Renewable energy**, and production facilities for components | Wind energy | electricity |
| | Solar energy | electricity |
| | Hydro/Ocean energy | electricity |
| | Geothermal energy | electricity, CHP |
| | Bio-electricity | electricity, CHP |
| | Renewable Heating/Cooling | heating/cooling |
| **Energy Intensive Industries**, CCU and substitute products | Refineries | fuels (incl. e-fuels) |
| | Biofuels and bio-refineries | biofuel, bio-based products |
| | Iron & steel | coke |
| | Non-ferrous metals | aluminium |
| | Cement & lime | cement |
| | Glass, ceramics & construction material | flat glass |
| | Pulp & paper | chemical pulp |
| | Chemicals | organic basic chemicals |
| | Hydrogen | Hydrogen |
| **CCS** | CO2 transport and storage | CO2 Transport and Storage |

# Classification

- The applicant chooses the most appropriate sector when submitting the application
- The application may only be submitted for one sector
- If a project will earn revenues from the sale of several products, the applicant should define the ‘principal product(s)’

# Implications

- To derive the score: the ***absolute*** GHG emission avoidance of the project will be compared to the largest absolute GHG emission avoidance among submitted projects in the chosen sector
- To calculate the ***relative*** GHG emission avoidance, the project’s absolute value of GHG emission avoidance will be compared to the GHG emissions in the reference scenario from the chosen sector

# Hybrid projects

- **Absolute GHG emission avoidance**: calculate separately using respective methodologies and add them up. Remove double counting of avoidance and/or emissions, if any.

- **Relative GHG emission avoidance**: calculate based on the cumulated emission avoidance and the cumulated project emissions

# Reference scenario

| Sector | Reference GHG emissions are based on: |
|---|---|
| Energy intensive industry / CCS | EU ETS benchmark(s) |
| Renewable electricity | Expected 2030 electricity mix |
| Renewable heat | Natural gas boiler |
| Energy storage | Single-cycle NG turbine (peaking power) |

# Forecasting of grid electricity

## For calculations of emissions due to generation and use

| Sector | Grid electricity substituted by net electricity export or discharging, for energy storage | Net grid electricity consumed or charging, for energy storage |
|---|---|---|
| Energy intensive industry / CCS | Expected 2050 electricity mix | Expected 2050 electricity mix |
| Renewable electricity / heat | Expected 2030 electricity mix for net export | Expected 2050 electricity mix for net import (in heat projects) |
| Energy storage | Emissions for electricity produced with single-cycle NG turbine (used for peaking power) | Expected 2050 electricity mix |

# Simplifications for first stage

## Energy intensive industry

- applicant may select a bigger share of inputs that are considered *minor* (30% instead of 15%) or *de minimis (10% instead of 5%):* they can be derived from literature or disregarded

## Renewable electricity and heating

- Project emissions are disregarded, except for bio-electricity and bio-heating

## Energy storage

- On-site project emissions are excluded in the first stage

# Monitoring, reporting and verification

## For disbursement

A monitoring plan consisting of a detailed, complete and transparent documentation of the parameters used in calculations and data sources shall be submitted at the second stage of application, and shall contain for each project-specific parameter used in GHG avoidance calculation:

- Source of data
- Measurement methods and procedures
- Monitoring frequency
- Quality assurance and control procedures
- Responsibility for collection and archiving

## For knowledge-sharing

Additional parameters will be monitored, which will **allow estimating actual GHG emissions avoided** during operation and **exchange of lessons learned**

# GHG emission avoidance calculation

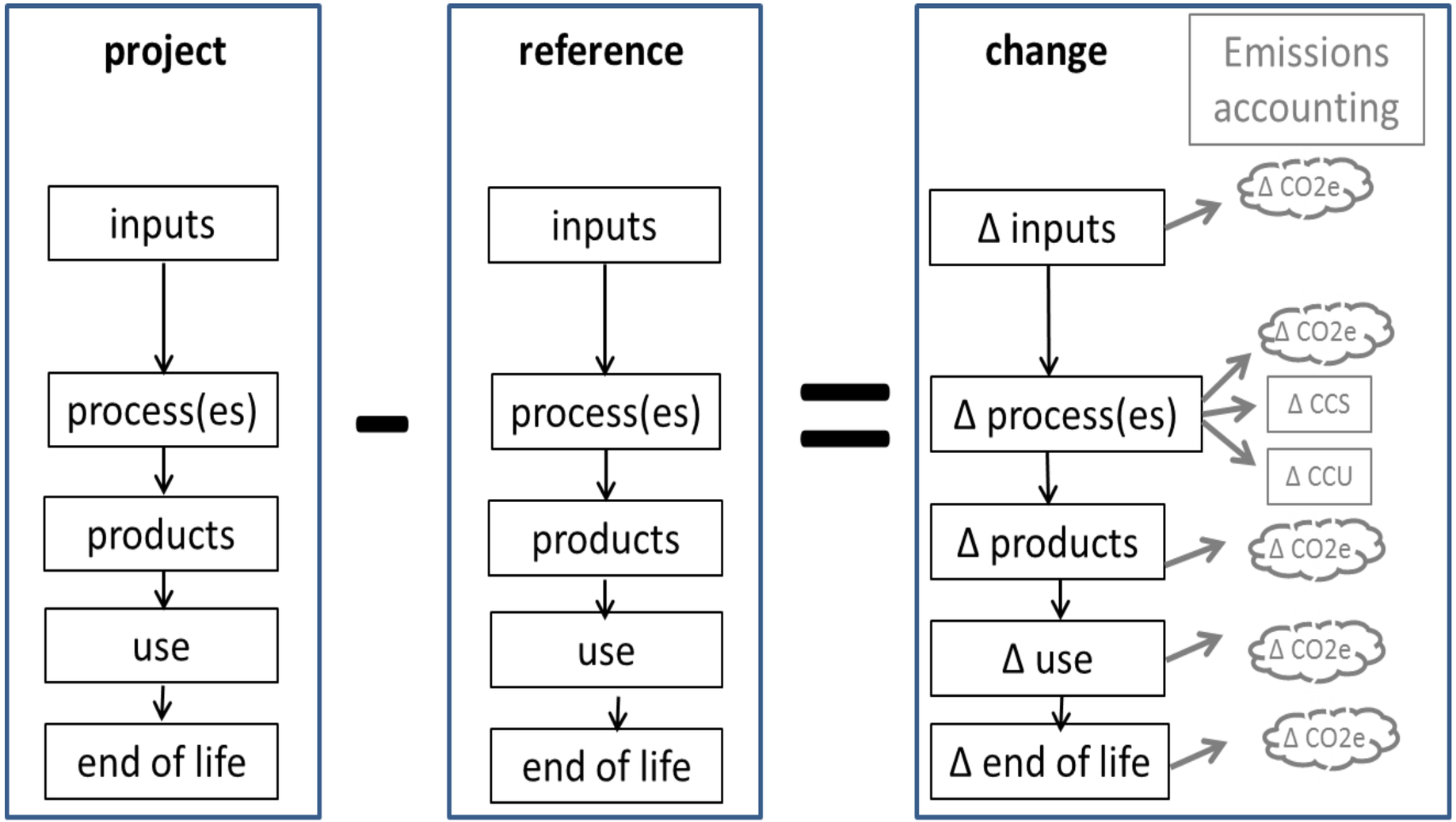
# Energy-intensive industries, incl. substitute products, bio-refineries and CCU

Overall principle: changes in emissions of project compared to reference scenario over first 10 years

"Processes" :

- produce the "principal products"
- are under the control of the applicant
- Use EU ETS calculation rules and MRV

*"Use"* and *"end-of-life"* emissions can be ignored <u>if they don't change</u>



# Energy-intensive industries

**Reference scenario**

- Reference for new processes uses EU ETS benchmarks (where possible)
- Reference for modifying existing plant may be existing plant, if EU ETS benchmarks are met overall
- Fuel products are judged against fossil fuel comparator derived from REDII

**Simplification of emissions for INPUTS at different stages of the application**

**1st stage:** inputs with joint emissions **<10%** of project emissions savings: ignore
inputs with joint emissions **< 30%:** take emissions from literature
other inputs: actual emissions calculation if possible

**2nd stage:** inputs with joint emissions **<5%** of project emissions savings: ignore
inputs with joint emissions **<15%:** take emissions from literature
other inputs: actual emissions calculation if possible

# Energy-intensive industries

**Inputs**

- *rigid inputs*: if the supply of an input is fixed, its emissions are those avoided in its existing or alternative use (can be positive or negative) (so called *displacement emissions*)
- *elastic inputs:* emission factor equals the emissions involved in supplying the extra input

**Bio-based inputs make** use of REDII “defaults” or “actual values“ (-15% as upstream emissions are not covered by the EU ETS)

**Fossil-fuel inputs** according to EU ETS rules

**Attribution of emissions to “principal products”** by a simplified ISO procedure (only needed to calculate relative emission avoidance)

# Energy-intensive industries

**Carbon capture and use (CCU)**

- Both CO2 capture and use are part of the project boundary
- If CO2 use results in additional CO2 captured, then it is counted as emission reduction
- Link with EU ETS must be established: emissions coming from an EU ETS activity or EU ETS substitute products

**Corrections for:**

- **by-products** that are not balanced between “project” and “reference” scenarios
- any changes in the efficiency of the **product in use**, or in **end-of-life emissions**

# Carbon Capture and Storage (CCS)

## Scope (examples)

| Plant of origin | Technologies | Storage sites |
|---|---|---|
| ▪ Energy intensive industries<br>▪ Fossil fuel power generation facilities<br>▪ Natural gas processing | ▪ Pre-combustion<br>▪ Post-combustion<br>▪ Oxyfuel combustion<br>▪ Chemical looping combustion | ▪ Depleted (or nearly depleted) oil and gas reservoirs<br>▪ Unmineable coal beds<br>▪ Saline aquifers<br>▪ Basalts |

# Carbon Capture and Storage (CCS)
## Boundaries

| Scenario | Emission source | First stage | Second stage |
|---|---|---|---|
| **Reference** | $CO_2$ releases that would be to atmosphere in the absence of the project activity | ✓ | ✓ |
| **Project** | $CO_2$ capture activities, e.g. fuel combustion for compression and liquefaction of the $CO_2$ | ✓ | ✓ |
| | Transport of $CO_2$ by pipeline, e.g. leakages | ✓ | ✓ |
| | Transport of $CO_2$ by road, rail and maritime modal **[not covered under EU ETS]** | ✓ | ✓ |
| | Injection at the geological storage site, e.g. fuel combustion in booster stations | ✓ | ✓ |

# Carbon Capture and Storage (CCS)

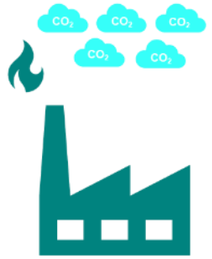
## Absolute GHG emissions avoidance: first and second stages of application

1 & 2

GHG avoided equals to the CO2 stored, minus emissions for CO2 capture, transport and injection

$$\Delta GHG_{abs} = \sum_{y=1}^{10} (Ref_y - Proj_y) = \sum_{y=1}^{10} \left( \right.$$

REFERENCE



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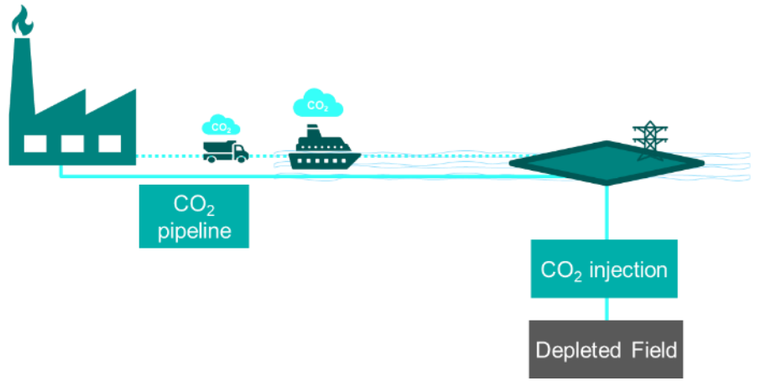
PROJECT

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***Part chain projects also possible**

$$= \sum_{y=1}^{10} \left( Ref_{release,y} = CO2_{transferred\ to\ the\ capture\ installation,y} - \left( Proj_{capture,y} + Proj_{transport\ pipeline,y} + Proj_{injection,y} + Proj_{transport\ road,y} + Proj_{transport\ maritime,y} \right) \right)$$

As defined in Commission Implementing Regulation (EU) 2018/2066 of 19 December 2018 (MRR)

# Carbon Capture and Storage (CCS)
## MRV for disbursement

| Parameters to be monitored | Data unit |
|---|---|
| Amount of $CO_2$ transferred to the capture installation | tonnes $CO_2$ |
| Distance travelled by road modals | km |
| Amount of $CO_2$ transported to the storage site by road modals | tonnes $CO_2$ |
| Distance travelled by rail modals | km |
| Amount of $CO_2$ transported to the storage site by train modals | tonnes $CO_2$ |
| Distance travelled by maritime modals | km |
| Amount of $CO_2$ transported to the storage site by maritime modals | tonnes $CO_2$ |

- Source of data
- Measurement methods and procedures
- Monitoring frequency
- QA/QC procedures
- Responsibility for collection and archiving

**+ ETS MRV requirements**

# Carbon Capture and Storage (CCS)
## Data and parameters

| Parameters to be monitored only for knowledge-sharing (fixed ex-ante for calculations and disbursement) | Data unit |
|---|---|
| Emission factor for liquid CO2 transport by heavy truck | kg $CO_2$e / tonne.km |
| Emission factor for freight by rail modals | kg CO2e / tonne.km |
| Emission factor for freight by maritime modals | kg CO2e / tonne.km |

# Carbon Capture and Storage (CCS)
## MRV for knowledge sharing

CCS : KS

- **Capture ratio,** in tonnes CO2e emitted / tonne CO2 fossil transferred to the capture installation
- **Transport by pipeline ratio,** in tonnes CO2e / tonne CO2 fossil transferred to the capture installation
- **Injection ratio**, in tonnes CO2e emitted / tonne CO2 fossil transferred to the capture installation
- **Type(s) of modal(s)** used in the transportation of the CO2 from the site of origin to the storage site
- **Weight fraction of the truck, train wagon or ship occupied** by the compressed CO2 and, separately, the empty tank (i.e. fully or partially loaded), per trip and modal
- High-level mapping of **environmental impacts** and mitigation measures
- High-level **risk screening** and mitigation measures
- **Lessons learned** and experiences

# Renewable electricity and heating

## Scope (examples)

| Products | Types of projects |
| --- | --- |
| ▪ Grid-connected electricity from wind, solar, hydro/ocean, geothermal energy and biomass<br>▪ Heating and cooling, including from bio-heat<br>▪ Combined heat and power generation<br>▪ Components for renewable energy installations (e.g. production of innovative heat pumps, PV modules and wind turbines) | ▪ Construction of a power plant that will use renewable energy sources to generate electrical and thermal energy<br>▪ Retrofitting (or repowering), rehabilitation (or refurbishment), replacement or capacity addition of an existing renewable power plant<br>▪ Construction of a manufacturing plant of components of innovative renewable technologies |

# Renewable electricity and heating

## Boundaries

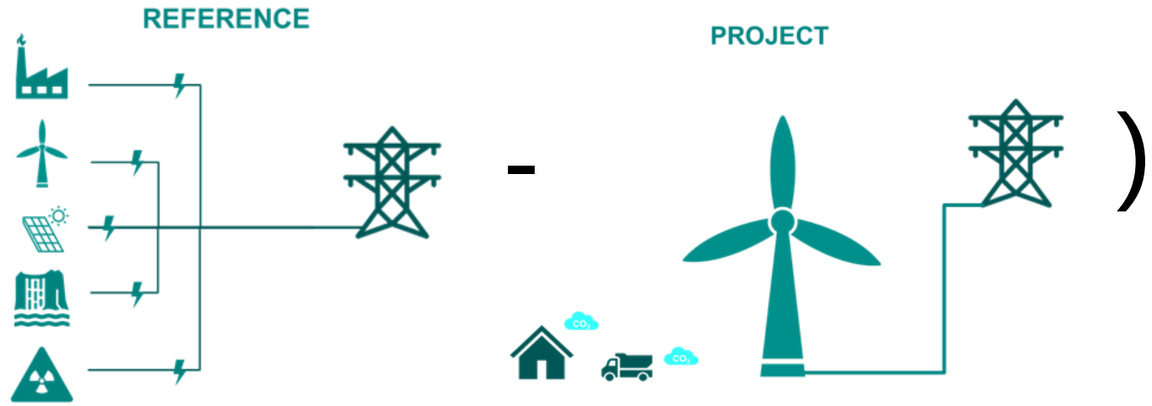
| Scenario | Emission source | First stage | Second stage |
|---|---|---|---|
| **Reference** | Generation of grid-connected electricity or heating in fossil fuel fired power plants, which will be displaced due to the project activity | ✓ | ✓ |
| **Project** | GHG emissions due to purchased electricity and fossil fuel consumption in stationary machinery and on-site vehicles at the project site | | ✓ |
| | GHG emissions due to leakage during the operation of geothermal power plants | | ✓ |
| | GHG emissions from the supply of consumed materials other than fuels **[REDII]** | ✓ | ✓ |

# Renewable electricity and heating

1 & 2

## Absolute GHG emissions avoidance: First and second stages

$$\Delta GHG_{abs} = \sum_{y=1}^{10} (Ref_y - Proj_y) = \sum_{y=1}^{10}$$



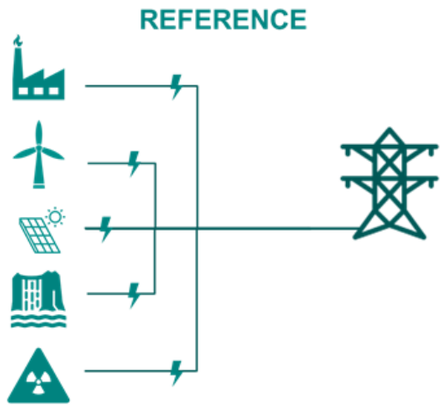

| Rationale |
| --- |
| RE displaces the energy (and associated emissions) produced at the conventional plant: 2030 EU mix for electricity and NG boiler for heating<br>Project emissions are disregarded, except for bio-electricity/heating |
| Comparison of most significant emission sources within the project boundaries, with a pre-defined reference scenario and factors |

# Renewable electricity and heating

## Absolute GHG emissions avoidance: First stage of application

1

$$\Delta GHG_{abs} = \sum_{y=1}^{10} (Ref_y - Proj_y) = \sum_{y=1}^{10} \left( \right.$$

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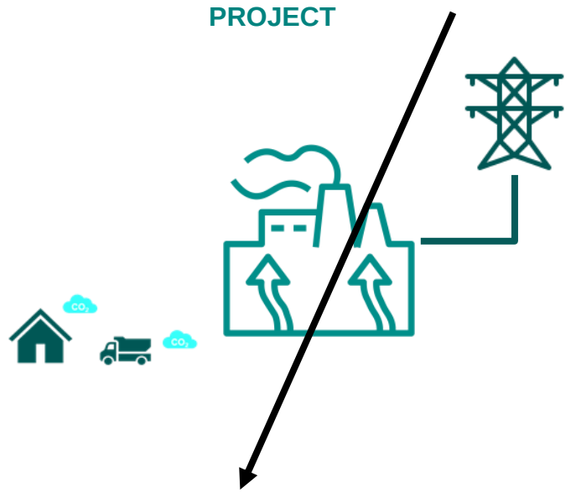



$$\left. \right)$$

$$= \sum_{y=1}^{10} \left( Ref_{grid} \text{ or } Ref_{heat} - 0 \right)$$

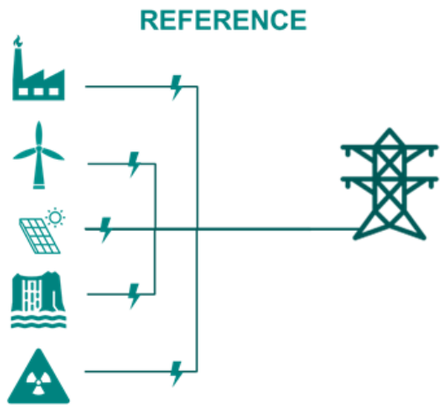
GHG emissions for the generation of grid-connected electricity or heating in fossil fuel fired power plants, which will be displaced due to the renewable technology

= Net energy generated * Emission Factor for the reference technology

# Renewable electricity and heating

## Absolute GHG emissions avoidance: Second stage

$$\Delta GHG_{abs} = \sum_{y=1}^{10} (Ref_y - Proj_y) = \sum_{y=1}^{10} \left( \right.$$

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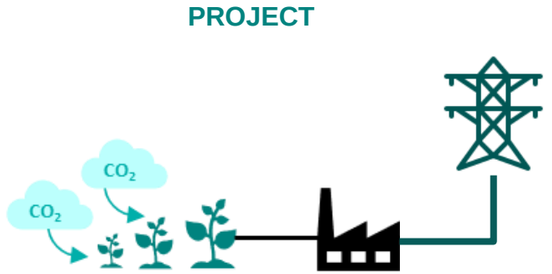



$$\left. \right)$$

$$= \sum_{y=1}^{10} \left( Ref_{grid} \quad or \quad Ref_{heat} - (Proj_{on\text{-}site} + Proj_{geo} + Proj_{,bio,y}) \right)$$

As defined in Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (Recast)

# Renewable electricity and heating

## MRV for disbursement

- Source of data
- Measurement methods and procedures
- Monitoring frequency
- QA/QC procedures
- Responsibility for collection and archiving

Alternatively: installed capacity, load factor, operating hours

| Parameters to be monitored | Data unit |
|---|---|
| Net amount of electricity to be generated by the renewable technology and fed into the grid | MWh |
| Net amount of thermal energy to be generated by the renewable technology | MWh |
| Quantity of fossil fuel type FF combusted in stationary sources at the project site | Litres or $m^3$ |
| Quantity of fossil fuel type FF combusted in mobile sources at the project site | litres |
| Amount of electricity imported from the grid and consumed at the project site | MWh |
| Quantity of steam produced | tonnes steam |
| Quantity of steam entering the geothermal plant | tonnes steam |
| Quantity of steam leaving the geothermal plant | tonnes steam |
| Quantity of working fluid leaked/reinjected | tonnes working fluid |
| Global Warming Potential for the working fluid used in the binary geothermal power plant. | tonnes CO2 / tonnes working fluid |
| Amount of bio-based fuel ‘f’ consumed by the project | MJ |
| GHG emissions from the supply of bio-based fuel ‘f’ | tonnes CO2e /MJ |

# Renewable electricity and heating
## Data and parameters: fixed

| Description | Data unit |
|---|---|
| Emission factor for combustion of natural gas | tonnes $CO_2e$ / MWh, tonnes $CO_2$/TJ and in tonnes $CO_2e$ / $m^3$ |
| Emission factor for the combustion of gasoline | tonnes $CO_2e$ / litre and in tonnes $CO_2e$ /TJ |
| Emission factor for the combustion of diesel | tonnes $CO_2e$ / litre and in tonnes $CO_2e$ /TJ |
| Emissions of electricity production in 2030 (ref.) | tonnes $CO_2e$ / MWh |
| Emissions of electricity production in 2050 (proj.) | tonnes $CO_2e$ / MWh |

# Renewable electricity and heating
## MRV for knowledge sharing

**RES : KS**

- [All RES] Energy generated by hour, based on the **actual** load factor, and technology efficiency per operating hour
- [All RES] **Key raw materials and feedstock** used at the power plant, and their origin
- [Geothermal] **Composition of steam** by month, in % of each element
- [Geothermal] **Average loss**, by month, i.e. Quantity of steam leaving the geothermal plant / Quantity of steam entering the plant, in %
- [Geothermal] Average amount working fluid leaked/reinjected by month, in t working fluid/t steam entering plant
- [Geothermal] Electricity and heat **production** by month, in kWh / t steam entering plant
- [Waste to energy] **Original use/treatment** of the feedstock
- [Bioelectricity and heat] **Type of bio-based fuel used**. Any pre-treatment(s) of biomass before processing
- [Bioelectricity and heat] **Type(s) of modal(s)** used in the transportation of solid biomass fuels from the site of origin to the biorefinery or power plant
- High-level mapping of **environmental impacts** and mitigation measures
- High-level **risk screening** and mitigation measures
- **Lessons learned** and experiences

# Energy storage
## Scope (examples)

| Services and products | Technologies | Energy sources/sinks |
|---|---|---|
| ▪ Short-term electricity storage such as arbitrage<br>▪ Auxiliary services to electricity grids<br>▪ Avoidance of renewable energy curtailment<br>▪ Other energy storage<br>▪ Manufacture of components for energy storage, e.g. batteries | ▪ Electricity storage tech<br>▪ Heat & cold storage tech<br>▪ Hydrogen storage tech<br>▪ Gaseous fuel storage tech<br>▪ Liquid fuel storage tech<br>▪ Combinations of the above, including smart grid technologies | ▪ Electricity grid<br>▪ Heat grid<br>▪ Gas grid<br>▪ Pipelines and trailers<br>▪ Renewable energy plants<br>▪ Waste heat recovery<br>▪ Fueling stations<br>▪ Industrial plants |

# Energy storage

## Boundaries

| Scenario | Emission source | First stage | Second stage |
|---|---|---|---|
| Reference | Emissions related to the provision of energy in the absence of the project activity | ✓ | ✓ |
| | Emissions related to the provision of auxiliary services to the grids in the absence of the project activity | ✓ | ✓ |
| Project | Emissions related to the provision of energy caused by the project activity | ✓ | ✓ |
| | On-site emissions of fugitive GHGs and from energy use other than energy storage | | ✓ |

# Energy storage

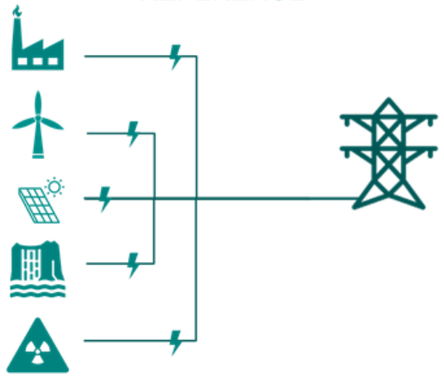
## Absolute GHG emissions avoidance: First and second stages

1 & 2

$$\Delta GHG_{abs} = \sum_{y=1}^{10} (Ref_y - Proj_y) = \sum_{y=1}^{10} \left( \right.$$

energy supply by storage units avoids reference emissions

REFERENCE



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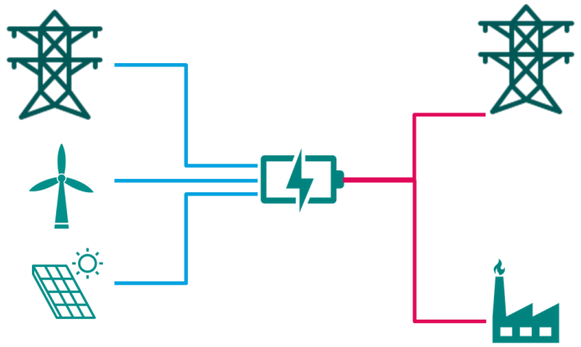
energy use of storage units may create emissions

PROJECT



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**Rationale**

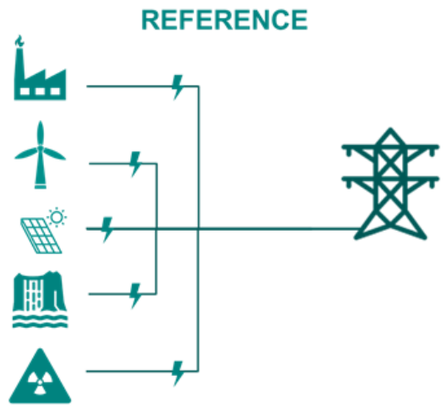
Comparison based on annual energy stored using emission factors depending on type of usage

# Energy storage

## Absolute GHG emissions avoidance: First stage

1

$$\Delta GHG_{abs} = \sum_{y=1}^{10} (Ref_y - Proj_y) = \sum_{y=1}^{10} \left( \right.$$

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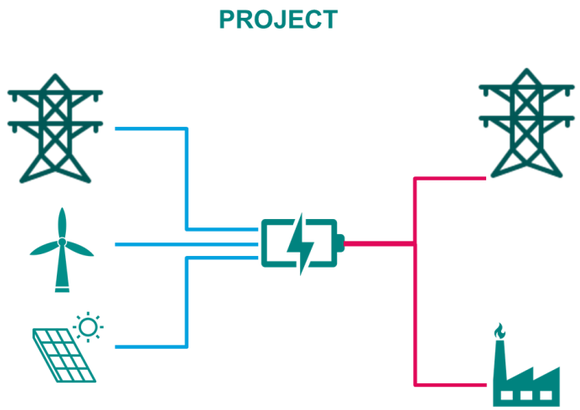



$$\left. \right)$$

$$= \sum_{y=1}^{10} \left( Ref_{energy,y} + Ref_{services,y} - Proj_{energy,y} \right)$$

= Net energy supplied * emission factor for reference technology

= Hours of service delivery * emission factor for reference service

= Fossil-based energy stored * fossil fuel emission factor

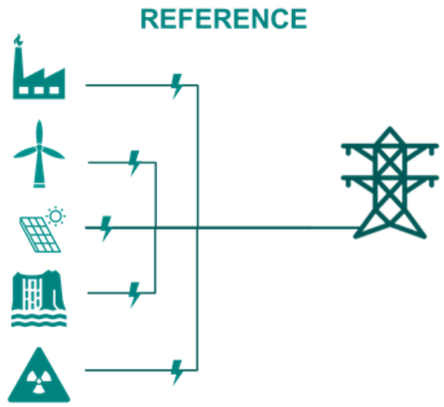
Ref EF el (discharging): single-cycle NG turbine used for peaking power
Proj EF el (charging): expected EU 2050 electricity mix

# Energy storage

## Absolute GHG emissions avoidance: Second stage



$$\Delta GHG_{abs} = \sum_{y=1}^{10} (Ref_y - Proj_y) = \sum_{y=1}^{10} \left( \right.$$

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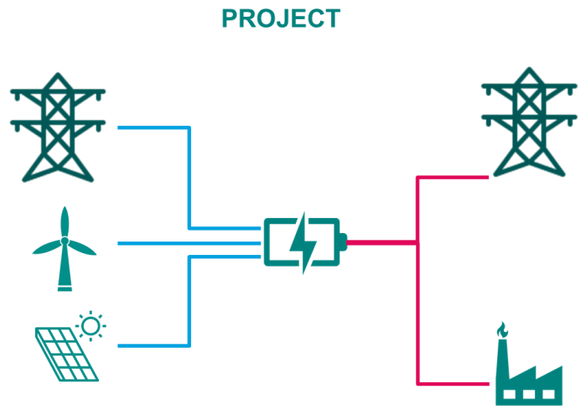



$$\left. \right)$$

$$= \sum_{y=1}^{10} \left( Ref_{energy,y} + Ref_{services,y} - Proj_{energy,y} - Proj_{on-site,y} \right)$$

= Fossil-based energy used on-site * fossil fuel emission factor

# Energy storage
## MRV for disbursement

| Parameters to be monitored | Data unit |
|---|---|
| Input power rating | MW |
| Output power rating | MW |
| Maximum storage capacity including degradation | TJ |
| Generator rating | MW |
| Reactive power rating | Mvar |
| Inertia capability rating | GVAs |
| Input-output efficiency including storage losses | % |
| Energy use by type | TJ |
| Energy supplied by type | TJ |
| Renewable energy used with proven additionality by type | TJ |
| Duration of delivery of service | h |
| Energy use in stationary sources (except in energy storage units) at project site by type | TJ |
| Energy use in mobile sources at the project site by type | TJ |
| Renewable energy with proven additionality used in stationary sources at project site by type | TJ |
| Renewable energy with proven additionality used in mobile sources at project site by type | TJ |
| Amount of fugitive emissions by type of greenhouse gas at the project site | tonnes |

- Source of data
- Measurement methods and procedures
- Monitoring frequency
- QA/QC procedures
- Responsibility for collection and archiving

# Energy storage
## Data and parameters

| Parameters not to be monitored (fixed ex-ante) | Data unit |
|---|---|
| Emission benchmark for generating hydrogen under the ETS in year *y* | $tCO_2e$ / TJ ($tCO_2e$ / tonne $H_2$) |
| Emission benchmark for generating heat under the ETS in year *y* | t $CO_2$-eq / TJ |
| Combustion emissions of natural gas | t $CO_2$-eq / TJ |
| Combustion emissions of diesel fuel or gasoil | t $CO_2$-eq / TJ |
| Combustion emissions of heavy fuel oil (residual fuel oil | t $CO_2$-eq / TJ |
| Combustion emissions many fossil fuels | t $CO_2$-eq / TJ |
| Emissions for electricity and steam production in 2050 | t $CO_2$-eq / TJ |
| Emissions for with single-cycle NG turbine (used for peaking power) | t $CO_2$-eq / TJ |
| Mean losses due to transport of electricity to consumers via the grid in the EU in 2018 | % |
| Mean losses due to transport of heat to consumers via heat networks in the EU in 2018 | % |
| Mean losses due to transport of gaseous fuels to consumers via the grid in the EU in 2018 | % |
| Mean increase of the emission intensity of grid electricity due the need for the auxiliary service | t CO2-eq per unit depending on service (MW/GVAs/Mvar) |

# Energy storage
## MRV for knowledge sharing

**Energy storage: KS**

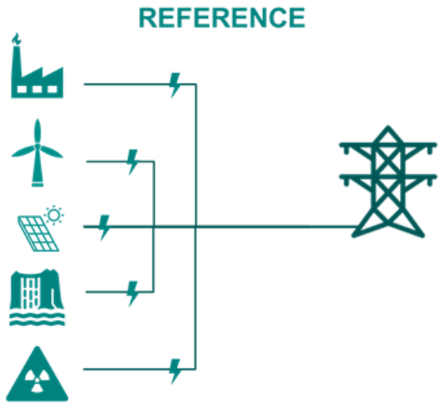
- **Energy supplied by each individual energy storage unit** (per annum)
- **Hourly profiles for use & feed-in of grid electricity** and **provided system services** (if applicable)
- **Hourly profiles for generation of electricity delivered to the project from PPAs** (if applicable)
- **Hourly profiles for avoided curtailment** based on final physical notifications of co-located RES plants or grid operator instructions (if applicable)
- **Reliability expressed according to reliability indicators** such as Energy Not Supplied,
- **Improvement in voltage variation in the grid and length of voltage variation** (if applicable)
- **Total Loss of Power, Restoration Time, Equivalent Time of Interruption** (if applicable)
- High-level mapping of **environmental impacts** and mitigation measures
- High-level **risk screening** and mitigation measures
- **Lessons learned** and experiences

# Production of components

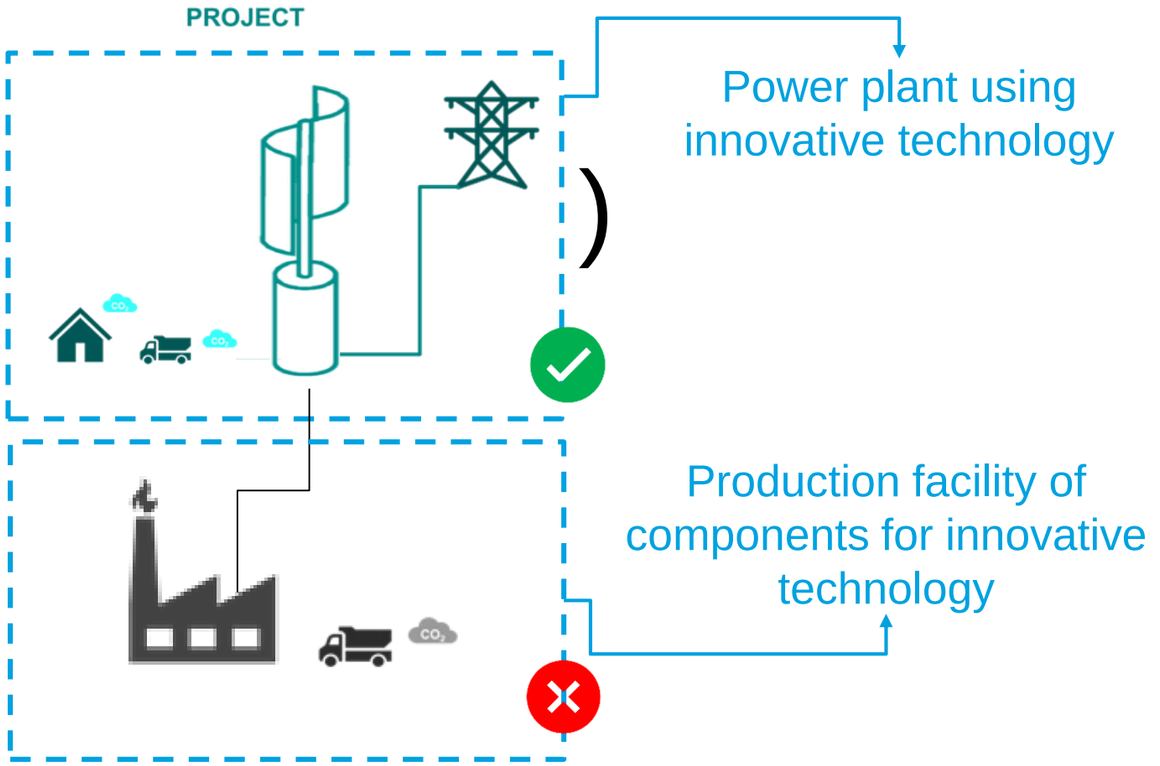
1&2

## Absolute GHG emissions avoidance: First and second stages of application

$$\Delta GHG_{abs} = \sum_{y=1}^{10} (Ref_y - Proj_y) = \sum_{y=1}^{10} \left( \right.$$




$$\left. \right) -$$




GHG avoidance will be equal to the emissions saved by the innovative technology when operating depending on the number of units sold

Emissions due to the manufacturing are out of the scope of GHG avoidance calculations

# Production of components
## Additional rules

- Applicants shall demonstrate the existence of a buyer (i.e. a company that will run the innovative technology) to ensure:
  - Accountability over the promised GHG emission avoidance
  - Use takes place in the territory of the EU/Norway/Iceland

- Provisional contract agreements will have to be presented to evidence the statements made

- The rationale for the assumptions adopted to forecast the performance of the component produced as well as of other components that will be needed at the power plant but are not necessarily covered by the production facility shall be presented

# Thank you