Innovation Fund

Main principles of the GHG emission calculations
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 potential” 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. **Potential** of greenhouse gas emissions avoidance
2. **Degree of innovation**
3. **Project viability and maturity**
4. **Scalability**
5. **Cost efficiency** (cost per unit of performance)
Absolute GHG emission avoidance
Main rationale and use in GHG criteria

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. Forecasting: emission factor will be fixed for the 10 years of calculation

\[
\Delta \text{GHG}_{\text{abs}} = \sum_{y=1}^{10} (\text{Ref}_y - \text{Proj}_y)
\]

\[
\Delta \text{GHG}_{\text{rel}} = \frac{\Delta \text{GHG}_{\text{abs}}}{\sum_{y=1}^{10} (\text{Ref}_y)}
\]
Submitting an application
Step by step

1. Define project and organisational boundaries
2. Classify your project
3. Identify the appropriate methodology and tools, if any
4. Identify the reference scenario for your project type and sector
5. Apply your projected operational data to adequate(s) methodology(ies)
6. Upload estimated GHG emissions avoidance to submission portal alongside supporting calculation tool

Source: Adapted from INEA, 2020. Innovation Fund First stage of the large scale call. Application procedure
1. Define project and organisational boundaries
2. Classify your project
3. Identify the appropriate methodology and tools, if any
4. Apply your projected operational data to adequate(s) methodology(ies)
5. Upload estimated GHG emissions avoidance to submission portal alongside supporting calculation tool
6. Identify the reference scenario for your project type and sector

---

**Category of the project** (drop down list)  
- Energy storage
- Renewable energy
- Energy Intensive Industries
- Energy intensive industries, CCS

**Sector of the project** (drop down lists)  
- Intra-day electricity storage
- Other energy storage
- Wind energy
- Solar energy
- Hydro/Ocean energy
- Geothermal energy
- Bio-electricity
- Renewable Heating/Cooling
- Refineries
- Biofuels and bio-refineries
- Iron & steel
- Non-ferrous metals
- Cement & lime
- Glass, ceramics & construction material
- Pulp & paper
- Chemicals
- Hydrogen
- Other

**Products within sector** (product name from list: if substitute products, indicate the product substituted)
- Electricity
- Heating/cooling, e-fuels, hydrogen
- Electricity
- Electricity
- Electricity
- Electricity, CHP
- Electricity, CHP
- Heating/cooling
- Fuels (incl. e-fuels)
- Biofuel, bio-based products
- Coke, iron ore, iron steel, cast ferrous metals products, other
- Aluminium, precious metals, copper, cast non-ferrous metal products, other
- Cement, lime, dolime, sintered dolime, other
- Flat & container glass, glass fibres, tiles, plates, refractory products, bricks, houseware, sanitary ware, mineral wool, gypsum, other
- Chemical pulp, mechanical pulp, paper and paperboard, sanitary and tissue paper, other
- Organic basic chemicals, inorganic basic chemicals, nitrogen compounds, plastics in primary forms, synthetic rubber, other
- Hydrogen
- Electricity, heat, other

**Annex C, Methodology for calculation of GHG emission avoidance, Appendix C1 Classification of projects into sectors**

---

**Annex C, Methodology for calculation of GHG emission avoidance, Appendix C1 Classification of projects into sectors**

<table>
<thead>
<tr>
<th>Category</th>
<th>Sector</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy storage, incl. manufacturing plants for components</td>
<td>Intra-day electricity storage</td>
<td>electricity</td>
</tr>
<tr>
<td></td>
<td>Other energy storage</td>
<td>electricity, heating/cooling, e-fuels, hydrogen</td>
</tr>
<tr>
<td></td>
<td>Wind energy</td>
<td>electricity</td>
</tr>
<tr>
<td></td>
<td>Solar energy</td>
<td>electricity</td>
</tr>
<tr>
<td></td>
<td>Hydro/Ocean energy</td>
<td>electricity</td>
</tr>
<tr>
<td></td>
<td>Geothermal energy</td>
<td>electricity, CHP</td>
</tr>
<tr>
<td></td>
<td>Bio-electricity</td>
<td>electricity, CHP</td>
</tr>
<tr>
<td></td>
<td>Renewable Heating/Cooling</td>
<td>heating/cooling</td>
</tr>
<tr>
<td></td>
<td>Refineries</td>
<td>fuels (incl. e-fuels)</td>
</tr>
<tr>
<td></td>
<td>Biofuels and bio-refineries</td>
<td>biofuel, bio-based products</td>
</tr>
<tr>
<td></td>
<td>Iron &amp; steel</td>
<td>coke, iron ore, iron steel, cast ferrous metals products, other</td>
</tr>
<tr>
<td></td>
<td>Non-ferrous metals</td>
<td>aluminium, precious metals, copper, cast non-ferrous metal products, other</td>
</tr>
<tr>
<td>Energy Intensive Industries, incl. CCU, incl. substitute products, incl. CCS (CO2 capture and full scale)</td>
<td>Cement &amp; lime</td>
<td>cement, lime, dolime, sintered dolime, other</td>
</tr>
<tr>
<td></td>
<td>Glass, ceramics &amp; construction material</td>
<td>flat &amp; container glass, glass fibres, tiles, plates, refractory products, bricks, houseware, sanitary ware, mineral wool, gypsum, other</td>
</tr>
<tr>
<td></td>
<td>Pulp &amp; paper</td>
<td>chemical pulp, mechanical pulp, paper and paperboard, sanitary and tissue paper, other</td>
</tr>
<tr>
<td></td>
<td>Chemicals</td>
<td>organic basic chemicals, inorganic basic chemicals, nitrogen compounds, plastics in primary forms, synthetic rubber, other</td>
</tr>
<tr>
<td></td>
<td>Hydrogen</td>
<td>hydrogen</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>electricity, heat, other</td>
</tr>
<tr>
<td>CCS (CO2 transport and/or storage)</td>
<td>CO2 transport and/or storage</td>
<td>CO2 transport and/or storage</td>
</tr>
</tbody>
</table>
Define project and organisational boundaries

Classify your project

Identify the appropriate methodology and tools, if any

Identify the reference scenario for your project type and sector

Apply your projected operational data to adequate(s) methodology(ies)

Upload estimated GHG emissions avoidance to submission portal alongside supporting calculation tool

---

**Annex C**

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

---

Source: Adapted from INEA, 2020. *Innovation Fund First stage of the large scale call. Application procedure*
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.