Innovation Fund

First call for small-scale projects

Award criteria

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#InnovationFund
# Award criteria overview

<table>
<thead>
<tr>
<th>DEGREE OF INNOVATION</th>
<th>GHG EMISSIONS AVOIDANCE</th>
<th>PROJECT MATURITY</th>
<th>SCALABILITY</th>
<th>COST EFFICIENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beyond incremental innovation</td>
<td>Absolute &amp; relative emissions</td>
<td>Implementation maturity (e.g. MoU or contract with customer)</td>
<td>Project &amp; regional level</td>
<td>Relevant costs = total project CAPEX</td>
</tr>
<tr>
<td>Encouragement of specific activities</td>
<td>Below ETS benchmark</td>
<td>Financial maturity</td>
<td>Sector level</td>
<td>EU contribution requested per tCO₂ avoided</td>
</tr>
<tr>
<td>Criterion</td>
<td>Max score</td>
<td>Min threshold after normalisation</td>
<td>Weighting</td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
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<td>-----------------------------------</td>
<td>-----------</td>
<td></td>
</tr>
<tr>
<td>Innovation</td>
<td>5</td>
<td>3</td>
<td>x2</td>
<td></td>
</tr>
<tr>
<td>GHG avoidance</td>
<td>5</td>
<td>None (minimum requirements apply)</td>
<td>x1</td>
<td></td>
</tr>
<tr>
<td>Project maturity</td>
<td>5</td>
<td>3</td>
<td>x2</td>
<td></td>
</tr>
<tr>
<td>Scalability</td>
<td>5</td>
<td>1</td>
<td>x1</td>
<td></td>
</tr>
<tr>
<td>Cost efficiency</td>
<td>5</td>
<td>None (projects with ratio higher than 600 EUR / t CO2-eq get 0)</td>
<td>x1</td>
<td></td>
</tr>
</tbody>
</table>
Degree of Innovation

**Project goes beyond state of the art**
- Describe the state of the art
- Describe the extent to which the project goes beyond it

**Project goes beyond incremental innovation**
- Proposed technology / product / business model goes beyond minor changes
- Projects contributing to SET-Plan implementation targets likely to go beyond incremental innovation

**Specific encouraged activities**
- Products substituting carbon intensive ones
- Direct Air Capture (DAC) plus CO₂ storage or use
- Potential for net carbon removal

Consult Annex B to call text
### GHG Emission Avoidance

<table>
<thead>
<tr>
<th>Sub-criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Absolute GHG emission avoidance</strong></td>
<td>the difference between the expected GHG emissions of the project and the GHG emissions in the reference scenario during 10 years after entry into operation*</td>
</tr>
<tr>
<td><strong>Relative GHG emission avoidance</strong></td>
<td>the absolute GHG emission avoidance of the project divided by the GHG emissions in the reference scenario</td>
</tr>
</tbody>
</table>

*default monitoring and reporting period once the project has entered into operation: 3 years*
1) Calculate the potential for absolute GHG emission avoidance
2) Calculate the potential for relative GHG emission avoidance
3) Support the calculation with:
   • Copy of own detailed calculation as one editable Excel document (mandatory).
   • Please use the available templates.
   • Detailed explanation of the assumptions made and consistency with the methodology.

+ [ELI] Comparison with EU ETS benchmark emissions: Calculate the GHG emissions of the project per unit of product and compare with the equivalent EU ETS benchmark(s) applicable at the deadline of submission of the application

+ Sustainability of biomass: Projects using biomass as feedstock should explain how they will procure biomass that will at least meet the sustainability requirements of the Renewable Energy Directive and originate from feedstocks with a low risk of causing indirect land-use change
<table>
<thead>
<tr>
<th>Category of the project</th>
<th>[category name from list: (Energy storage, Renewable energy, Production facilities, Energy Intensive Industries, CCU, Substitute products, CCS)]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sector of the project¹</td>
<td>[sector name from list: Must be the same sector as chosen in Application Form part A (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 &amp; steel, Non-ferrous metals, Glass, Ceramics &amp; construction material, Chemicals, Hydrogen, Other, CO2 Transport and Storage)]</td>
</tr>
<tr>
<td>Principal product(s)²</td>
<td>[all products chosen for principal products must belong to the same sector as explained in the Methodology for GHG emission avoidance calculation; (if substitute product(s), please indicate the product substituted)]</td>
</tr>
<tr>
<td>Other products³</td>
<td>[list any other final products of the project which are not considered principal products]</td>
</tr>
</tbody>
</table>

**Table:**

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

**Classify your project:**

1. Define project and its 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
Choice of a sector

1) determine *principal product(s)* and *use*

2a) **if one principal product**: the choice is straightforward: e.g. wind energy or cement production

…but may be **influenced by the use**: e.g. ethanol can be used in chemicals or as a fuel (refineries)

2b) **if more than one principal product but all in the same sector**: also straightforward: e.g. different chemicals (chemicals) or fuels (refineries)

2c) **if principal products from 2 or more sectors**: choose one of the sectors of the principal products

3) don’t forget to list all ‘*other products*’
Choice of a sector: *example*

The main aim of the project may determine the sector and the reference emissions:

*Example:* a project produces hydrogen with electricity: if the main aim of the project is

… to *store otherwise curtailed renewable electricity*, the sector is ‘energy storage’

… to *produce as much hydrogen as possible*: then the sector is ‘hydrogen’ and the reference is EU ETS benchmark for hydrogen

… to *produce hydrogen for transport applications*: sector still hydrogen but reference is fossil fuel comparator for the transport fuel displaced

… if it is *combined with innovative renewable electricity*: then either ‘renewable electricity’ or ‘energy storage’
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

2. Energy-intensive industries, including substitute products, biofuels and CCU
3. Carbon capture and storage

Sections of the Methodology
4. Renewable electricity, heating and cooling, including manufacturing plants for components
5. Energy storage including manufacturing for components

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

Relative GHG emissions avoidance:
\[ \Delta \text{GHG}_{\text{rel}} = \frac{\Delta \text{GHG}_{\text{abs}}}{\sum_{y=1}^{10} \text{Ref}_y} \]

Hybrid projects: combine the methodology from different sections
Tools available to support the calculation for EII, CCS, RES and energy storage projects. Due to the variety of possible cases in the EII sectors, applicants may tailor their calculations using the provided Excel template, and are encouraged to:

- Split calculation of reference and projects emissions, for the ease of verification
- Maintain projected input data separated by year
- Not hardcode conversion factors into the formulas, so that these are easily traceable and updatable
- Use the suggested colour code for input and linked/calculated data
- Provide a full description of the data traceability and responsibility
## Define project and organisational boundaries

1. **Describe the project**
   - **Category / Sector:**
     - Energy Intensive Industry
     - Biofuels
     - CCS
     - Renewable electricity
     - Renewable heat
     - Renewable cooling
     - Energy storage
     - Heat / Hydrogen storage
     - Energy storage in vehicles
   - **Reference scenario:**
     - EU ETS benchmark(s) for the product(s) or the existing plant in case of modification or fossil fuel comparators
     - Fossil fuel comparators
     - CO2 is not captured, but released/available in atmosphere
     - Expected 2030 electricity mix
     - Natural gas boiler
     - Expected 2030 electricity mix or fossil fuel comparator in some cases
     - Single-cycle natural gas turbine (peaking power)
     - ETS benchmark for heat / hydrogen production
     - Diesel-fuelled internal combustion engine
   - **Project scenario (1st stage):**
     - Changes in inputs, processes, products, use and end of life.
     - Fully decarbonised electricity mix for electricity inputs
     - Emissions from capture, transport and storage
     - Emissions from the production and supply of biomass-derived fuels and emissions due to leakage during the operation of geothermal power plants
     - Direct and indirect emissions from the use of fossil fuels and generation of heat, process-related emissions from the production of hydrogen as well as from transmission losses associated with the grid transport.
     - Fully decarbonised electricity mix for electricity inputs.

2. **Classify your project**
   - Identify the appropriate methodology and tools, if any

3. **Identify the reference scenario for your project type and sector**
   - Apply your projected operational data to adequate(s) methodology(ies)

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

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### Energy Intensive Industry

- **Reference Scenario:**
  - EU ETS benchmark(s) for the product(s) or the existing plant in case of modification or fossil fuel comparators

### Biofuels

- **Reference Scenario:**
  - Fossil fuel comparators

### CCS

- **Reference Scenario:**
  - CO2 is not captured, but released/available in atmosphere

### Renewable electricity

- **Reference Scenario:**
  - Expected 2030 electricity mix

### Renewable heat

- **Reference Scenario:**
  - Natural gas boiler

### Renewable cooling

- **Reference Scenario:**
  - Expected 2030 electricity mix or fossil fuel comparator in some cases

### Energy storage

- **Reference Scenario:**
  - Single-cycle natural gas turbine (peaking power)

### Heat / Hydrogen storage

- **Reference Scenario:**
  - ETS benchmark for heat / hydrogen production

### Energy storage in vehicles

- **Reference Scenario:**
  - Diesel-fuelled internal combustion engine
Forecasting of Grid Electricity
For calculations of emissions due to generation and use

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

*Electricity is treated as zero carbon presuming full decarbonisation of the electricity mix by 2050*
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
GHG Emissions Avoidance Scoring of proposals

Absolute GHG emission avoidance
Score is calculated by comparing the absolute GHG emission avoidance for the project to the “best in sector”, i.e. the application with the highest value of absolute GHG emission avoidance, which also meets min project maturity criteria and min requirements re ETS benchmarks and biomass.

The best in each sector gets 5 points, the worst gets 0 points.

Relative GHG emission avoidance
To derive the score for the relative emission avoidance, the resulting percent for the relative emission avoidance is normalised across all submitted proposals to a score between 5 and 0. 100% or more results in 5 points.

More than 100% relative emission avoidance will be considered under degree of innovation.

Points may be reduced if calculations are not robust and accurate

- Clerical errors: minor errors, normally caused by inadvertent negligence in the application of formulas, or conversion of units, and that can be easily corrected (e.g. wrong links in formulas, wrong unit conversions, inadequate EF)
- Manifest errors: discrepancies that can be seen to influence the GHG avoidance estimates significantly and, consequently, the result of the evaluation / scoring. Such errors could derive from an incorrect application of the GHG emission methodology, omission or miscalculation, etc. → leads to a zero score and rejection of the proposal
Project maturity

Implementation maturity
• Technical feasibility
• Credibility of implementation planning
• Project team
• Permitting procedures
• Contracts or MoU with customers

Financial maturity
• Viability of financial plan and bankability
• Soundness of financial model
Implementation Maturity

Technical feasibility of achieving the GHG emission avoidance within project’s operational environment

- describe the degree of technology readiness (TRL) of your project and individual components before and after the project is implemented.

- describe the technical readiness of the project site, expected project output and technical feasibility of achieving this output, including GHG avoidance.

- how the proposed technology has already performed at the TRL preceding this proposal (i.e. at a pilot or smaller-scale demonstration).

- how changes in scale or change in circumstances compared to previous testing/projects have been taken into account in the project design, where applicable.

• Robust feasibility study addressing at least points in application form is a mandatory document

• Applicants may use an existing technical feasibility study

• Always provide precise references to the text in supporting documents

• Technical design of project should be consistent with financial/operational set-up.

• Key question:

CAN THE TECHNOLOGY DELIVER THE EXPECTED OUTPUT AND GHG EMISSIONS AVOIDANCE?
Implementation Maturity

Implementation planning of project and key milestones

Describe **key deliverables and work plan for development, construction and entry into operation** (ensure consistency with both work packages/milestones in section 7.1 & timetable template in section 7.2)

Describe **status of steps concluded so far** (e.g. FEED study, initial permits, etc.)

Project business model – your **business plan**

- describe **target markets, key customers, the value the innovation will deliver** compared to other solutions, **how it addresses market gaps** and who are the main competitors.
- describe **demand for products/services** delivered.
- set out **specific market entry barriers**.

Relevance and track record of **project management team** and soundness of the project organisation

Describe the **project management team**, its professional capacity, key qualifications and relevant track record.

Set out proposed **project government structure** and **alignment of interests between management and investors**.

Describe **decision-making structures** and processes.

Describe **key business continuity approach** in case of key individuals leave project.

- **Business plan is a mandatory** document, to cover duration of project and including financial model and detailed implementation planning (e.g. Gantt chart)
- Detailed summary of business model
- Detailed plan of milestones and deliverables
- Focus on quality/relevance of the project team and partners for success of the project
- Key question:

IS YOUR BUSINESS MODEL SOUND?
Implementation Maturity

**State of play and credibility of the proposed plan for obtaining required permits, intellectual property rights or licences and other regulatory procedures.**
- required permitting and other relevant regulatory procedures/support, steps towards acquiring intellectual property rights or licences.
- list of permits/rights/licences already obtained, those still needed and envisaged timing for obtaining them.

**Strategy for ensuring public acceptance of the project**
- describe environmental impacts during construction and operation, the state of public acceptance of the technology and the project and how you propose to ensure it.

**Robustness and credibility of the strategy for securing the key supply and off-take contracts.**
- describe main commercial contracts envisaged and the contractual relationship between the main parties involved with the project.
- list and describe any preliminary agreements with suppliers or off-takers and strategy for timely conclusion of further required agreements.
- key contracts and how the required solidity/track record of suppliers and off-takers will be ensured.

**Conclusions of any relevant technical or legal due diligence report (where available) produced by an independent party.** Includes due diligence on intellectual property.

- Public acceptance, permits and licenses are the responsibility of applicants – think of related timing, procedures and steps
- Evidenced contracts or agreements with suppliers and off-takers increase the credibility of planning, e.g. pioneer customers

**Key questions:**
WHAT IS YOUR DEPLOYMENT STRATEGY?
HOW DO YOUR SALES LOOK LIKE?
WHO ARE YOUR PARTNERS AND OFF-TAKERS?
Financial Maturity

Project cash flow, COSTS AND REVENUES
- provide a detailed calculation of expected costs and revenues (cash flow projections) along project milestones in constant prices.
- provide breakdown of project costs and revenues, i.e. capital expenditure (CAPEX), operation and maintenance costs (OPEX) and expected revenues.
- detail the sensitivity of cash-flows to regulatory frameworks and market conditions, and robustness of off-take agreements / pioneer customers. Have a fall-back plan.

Total project costs, relevant costs and requested EU contribution
- state total project costs and project relevant costs (equivalent to CAPEX) and provide justification.
- provide background assumptions (if available by supplying letters of firm proposals (MoU) from contractors).

- Independent financial due diligence report (optional)
- Maximum amount of requested EU contribution cannot exceed 60% of relevant costs (CAPEX)
- Requested EU contribution should be consistent with the business plan and relevant cost calculation for cost efficiency criterion
- Be mindful that your requested grant level will impact the cost efficiency criterion, and hence the relative competitiveness of your application
- Key message:

NUMBERS REALLY MATTER!
HOW ROBUST AND CLEAR IS YOUR FINANCIAL MODEL (part of the business plan)?
Financial Maturity

Project financial viability
- describe project’s business viability measured by project’s NPV and IRR over expected lifetime of project, before and after requested Innovation Fund support.

Financing plan
- describe financial structure of project including a description of type, sources and use of funds (level and source of equity, level and source of debt, expected public subsidies and their source).
- describe how potential negative cash flows at the start of operation will be funded and how project scale up will be financed when the project has entered into operation but is not yet generating sufficient revenue to become self-sustainable.
- explain allocation of costs (in Work Packages) and consistency of project planning with financing plan.
- describe alignment of requested funding and milestones with profile of cash consumption linked to cash injection during the project cycle.

- Provision of detailed insights from project financing plan, showing clear financial structure, sources of funding and demonstrating the financial sustainability of the financing plan
- Coherence with cash flow projections and project design and operational planning over project lifetime
- Key questions:
WHAT IS THE FINANCIAL STRUCTURE?
CAN THE FUNDING AND REVENUES COVER THE COSTS AND RETURN ON INVESTMENT?
HOW MUCH “SKIN IN THE GAME” DOES THE APPLICANT HAVE?
Financial Maturity

Robustness of project funders and investor commitments
- state expected date of financial close
- describe status, level and solidity of commitment of funding from project funders and investors, incl. own contribution by the applicant, external funding and financial support from Member States
- describe conditions of support provided by all parties and how funds will be injected into the legal entity owning the project and ownership structure
- Provide corresponding evidence (e.g. letters of interest/support, letters of approval from funders/shareholders or board confirming support of the project, MOU).
- Provide evidence of support from other sources including market mechanisms, or support from Member States

Conclusions of any financial due diligence report (where available)
- provide main conclusions produced by an independent party.

- Set out all funding sources other than the Innovation Fund
- Evidence on funding commitments may be integrated in the Business Plan as an annex
- Key questions:
  - HOW QUICKLY CAN THE PROJECT REACH FINANCIAL CLOSE WITHIN THE 4 YEARS?
  - IS THE PROJECT FUNDING SECURED AND EVIDENCED?
  - WHAT IS THE OWNERSHIP STRUCTURE?
Scalability

**Project and regional level**
- Expansion at project site / possible transfer to other sites
- Cooperation with other actors of the regional economy
- Knowledge sharing, communication and dissemination

**Sector level**
- Extent to which the technology of the project can be applied within the sector and contribute to GHG emissions avoidance
- Support with qualitative and quantitative indicators
- Consider demand and supply conditions

**Economy-wide**
- Contribution to wider economy impacts
- Potential to create new value chains or reinforce existing ones
- Support with qualitative and quantitative indicators
Cost Efficiency

Relevant costs less contribution by project applicant
Max 60% of relevant costs

Absolute GHG emission avoidance
During 10 years after entry into operation

It is mandatory to attach a detailed calculation of relevant costs (CAPEX) and cost efficiency as one editable Excel document.

Relevant costs = total capital expenditure (CAPEX) of the project
(e.g. construction costs, site infrastructure; development costs; Intangible assets)

Min. of €2.5M and max of €7.5M CAPEX

CAPEX to be certified by independent auditor during grant agreement negotiation
# Overview of Supporting Documents

## Mandatory documents

<table>
<thead>
<tr>
<th>Description</th>
<th>Page limit</th>
<th>Optional documents</th>
<th>Page limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detailed calculation of GHG emission avoidance potential, including (if relevant) detailed estimate of further emission avoidance that the project may be bringing and that are not covered under the GHG methodology. (in editable xls format)</td>
<td>n/a</td>
<td>Any existing due diligence reports (pdf format)</td>
<td>n/a</td>
</tr>
<tr>
<td>Feasibility Study (in pdf format)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Plan including financial model and, if available, any documents indicating support for the project (e.g. letters of interest, letters of support, letters of approval from funders, letters from shareholders or board) as an annex (in pdf)</td>
<td>100 in total for the feasibility study and the business plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detailed calculation of relevant costs and cost efficiency (in editable xls format)</td>
<td>n/a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description of the profiles of the people primarily responsible for managing and implementing the project (accompanied by a curriculum vitae)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>List of relevant recent projects and/or activities carried out by the applicant and relevant to delivery of the project</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Optional documents

- 20 in total including the description of profiles and the list of relevant projects
Helpdesk

Get support

Please read carefully all provisions below before the preparation of your application.

For IT helpdesk and to ask questions about this call:

Helpdesks and support services

For additional guidance:

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/support/contact-program;programCode=INNOVFUND;callType=
Thank you