1. Name of Governmental Department or Agency
Department of Business, Enterprise and Innovation
2. Title of the Project
Assessment of Industry emissions and carbon abatement measures for Climate Action Plan 2020
3. Description of the Project
The purpose of the research project is to provide the Department and its stakeholders with a full analysis of industry sector carbon emissions data, an analysis of the data available to establish a sectoral breakdown of emissions, and to provide insight into what carbon abatement levels can be achieved through different measures or interventions. The project would aim to provide detailed analysis of the data sources available to better inform the department in the assessment of key carbon abatement targets; national, sectoral and enterprise-level reporting of carbon abatement and inform the future development of Government sectoral carbon budgets.
4. Project Scope
• The project would firstly seek to identify key data sources and resources in assessing carbon emissions in the industry sector, including, but not limited to, data from the EPA, DCCAE, the cross-departmental Technical Research and Modelling Group (TRAM), the ETS system and the SEAI. • Secondly, the research would establish how key sectoral data emissions data is compiled, analysed, aggregated and reported, for the purpose of better informing the department in the assessment of key targets, national and enterprise-level reporting and provide an evidence base for the future development of sectoral carbon budgets. It is envisioned that the project may include the identification, collection, cleaning and aggregation at sectoral level of raw data from DBEI sources, such as, the ABSEI dataset, and data available within the Department's agencies as well as collating data from other sources. The research might also assess company level data within industry where available, to facilitate greater understanding of carbon abatement potential and reporting. During the drafting of the Climate Action Plan McKinsey & Company consultants developed a Marginal Abatement Cost Curve (MACC) to demonstrate the cost efficiency of measures that could be taken to by Enterprise, Electricity, Transport, Built Environment and Agricultural sectors. The Climate Action Plan further identified that a 10-15% drop in Enterprise CO2 emissions was achievable through two abetment measures implemented in the Food & Drink Sector and the Cement Sector, these were: ○ Increase use of alternative fuels (e.g., waste) for cement production; and ○ Switch from oil to biomass and electricity in food industry.

The research should provide some insights to the Department as to how the targets and abatement measures were calculated, underlying assumptions made and a detailed assessment of what specific interventions were considered in the assessment of these measures. This will require input from DCCAE and analysis of any supporting materials available.

- Thirdly the research would aim to develop a MACC specific to Industry sectors, and to assess the cost efficiency of abatement measures in both the ETS and non-ETS sectors. The industry MACC analysis would seek to inform the identification of measures that could be implemented at an agency/sectoral/firm level to further abate CO2 emissions. In all cases, the research should identify how carbon abated under each intervention can be measured/calculated and reliably reported.

- The research would finally seek to identify and profile key firms, or groups of firms, outside the ETS sector, with significant carbon emissions profiles where direct engagement or specific interventions may useful be included in programmes such as LIEN, SEAI grant schemes or other identified interventions.

The researcher will develop an easily usable **database** that can be updated on an ongoing basis for industry sectors and potential abatement measures. It is envisioned that the researcher will develop the database and present the findings and updating instructions of the database in a written and oral report.

It is expected that the researcher will discuss their work and findings to team members on an ongoing basis and be available to provide **briefing and analysis** on key issues to team members on a regular basis. At the end of the project the researcher would provide a report to key stakeholders both written and orally, including to DBEI, Enterprise Ireland, IDA Ireland & Science Foundation Ireland.

The research should also provide concise briefing materials on the available emissions data, methods of establishing reliable sectoral carbon abatement measurement data and interventions identified in the **industry-specific MACC**.

It is expected that this analysis would be used in the development of a detailed industry sector marginal abatement measures and to **inform the actions and targets of future iterations of the Climate Action Plan.**

5. Skills/Expertise Required

The project would require the researcher to have some background knowledge of Environmental Economics and awareness of methods used to establish a Marginal Abatement Cost Curve (MACC).

The research project will require an extensive review of various data sources in the area of environmental emissions and carbon abatement technology / interventions. It would require the

researcher to be able to research issues in a number of different enterprise sectors and effectively report the potential abatement measures.

The researcher would be familiar with environmental data and would be required to have the necessary skills to develop and maintain a database of sectoral emissions and potential abatement measures.

Data analyses skills would be required to effectively assess data and formulate evidence-based findings.

The researcher should have strong written and oral communication skills in order to liaise effectively with stakeholders in the research project.

6. Expected Outputs of Project

- A detailed briefing on aggregation and measurement of industry sectoral emissions (ETS and non-ETS separately) from available data sources, to inform future discussions on carbon budgets.
- A Marginal Abatement Cost Curve for the Industry sector that would be developed following an analysis of sector level data, complemented by firm-level analysis where possible, that could be used to shape future targets and actions for the Climate Action Plan.
- The development of a database that outlines the large industry energy users (outside ETS), potential abatement measures and reliable abatement reporting methodology.
- A final written report and presentation outlining abatement measures for industrial sectors identified in the analysis.
- Input into briefing materials to inform establishment of carbon budgets, and update of the Climate Action Plan 2020.

7. Working Arrangements

The placement would be in the Department of Business, Enterprise & Innovation offices, 23 Kildare Street. Flexible and remote working arrangements will be accommodated.

8. Expected Timeline

It is expected that the research would take no longer than 9 full-time months and would feed into the development of the Climate Action Plan 2020. It is preferable that this project start as soon as possible.