Terms of Reference (TOR)

for commissioning a Consultancy to produce a Comparative Study on the Methodologies used or proposed in European countries to measure and evaluate CO2e emission reductions in public works tenders

A. Background

The **European Climate Law** writes into law the goal set out in the European Green Deal for Europe's economy and society to become **climate-neutral by 2050**. This law also sets the intermediate target of **reducing net greenhouse gas emissions by at least 55% by 2030** (this means within 5 years), compared to 1990 levels. Climate neutrality by 2050 means achieving net zero greenhouse gas emissions for EU countries as a whole, mainly by cutting emissions, investing in green technologies and protecting the natural environment.[1]

The **building and construction sector** is the **largest emitter of greenhouse gases**, accounting for approximately **37% of global emissions**. The production and use of materials such as cement, steel, and aluminium have a significant carbon footprint. Solutions to mitigate the 'embodied' carbon emissions – originating from the design, production, and deployment of materials such as cement, steel, and aluminium – in the construction sector have been lagging so far. To effectively address this challenge, international action and collaboration must bring together all stakeholders from across the entire lifecycle of the construction eco-system.[2]

Public procurement is the key lever for shaping the construction market in general and specifically for greening the construction sector. In the EU, public purchasing represents around 15% of its GDP, acting as a major influencer on the market through the products and services acquired by governments from the local to national levels. While the **EU and many of its Member States alike have recognised 'Green Public Procurement' (GPP)** as an important tool to meet climate goals, the **formalisation of GPP requirements at the EU level** or among local and national governments has been **fragmented**. Therefore, the Stockholm Environment Institute (SEI) has called for **harmonisation** to achieve the consistency, scale and focus required to make GPP practices a powerful decarbonisation tool.[3]

B. Objective

The objective of the Study is to produce a comprehensive document that the Client can use for **lobbying EU Institutions and EU Member States' governments** and to **inform them about existing methodologies to quantify and calculate CO2e emissions in public tenders in Europe** and to **make bidders' capacity to reduce CO2e emissions an award criterion**.

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[1] https://climate.ec.europa.eu/eu-action/european-climate-law_en.
[2] United Nations Environment Programme, & Yale Center for Ecosystems + Architecture (2023). Building Materials and the Climate: Constructing a New Future. https://wedocs.unep.org/20.500.11822/43293 .
[3] Stockholm Environment Institute (SEI), Green Public Procurement: a key to decarbonizing construction and road transport in the EU, February 2023.

I. To achieve this goal the Consultant shall undertake, firstly, a **detailed mapping of the different methodologies** used or proposed **within the European Union as well as in Norway and in the United Kingdom** to **measure and evaluate CO2e emission reductions in 'public works'**[4] **tenders**.

II. Based on a detailed mapping exercise, the Study shall, secondly, **describe the commonalities and differences of the methodologies** used or proposed across Europe and **analyse the corresponding impact on the legal obligations and liabilities of construction companies** participating in public tenders.

III. Based on the above-described two-step analysis, the Study shall, thirdly, **identify best practices** and **propose specific recommendations** for helping public authorities to develop the most adequate methodology to measure and evaluate CO2e emission reductions in public works tenders, for both **building and civil engineering works**, to be **implemented on EU level**. In this context, it should be borne in mind that **Article 68 (3) of Directive 2014/24 EU** stipulates that *'Whenever a common method for the calculation of life-cycle costs has been made mandatory by a legislative act of the Union, that common method shall be applied for the assessment of life-cycle costs'*.

C. Scope of Work and Expected Output

The scope of works and expected outputs/deliverables will be the following:

I. **Collect information and analyse the various methodologies already applied, either by public procurement law or by standard practice of Contracting Authorities in European countries**[5] **to measure and evaluate CO2e emission reductions in public works** (both building and civil engineering) **tenders**, in the following countries:

1) Nordic countries (Denmark, Finland [e.g. *MELI*], Norway [e.g. *VegLCA*] and Sweden [e.g. *Klimatkalkyl*]);

2) The Netherlands [e.g. *DuboCalc*] and the CO2 performance ladder;

3) the United Kingdom;

4) Other EU countries systematically using CO2e methodologies, if any;

5) Methodologies proposed by FIEC or EIC, such as 'SEVE' in France or CO2e shadow pricing in Germany, to **measure and evaluate CO2e emission reductions in public works** (both building and civil engineering) **tenders**.[6]

6) Optional (please quote separately): Peer Review: Australia (NSW Government: Embodied Carbon Measurement for Infrastructure).

[4] 'Public works' means building or civil engineering works as per definition in Article 2 of Directive 2014/24/EU.
[5] CO2 methodologies or life-cycle assessments in public tenders prescribed by law or applied as standard practice of Contracting Authorities in European countries shall be part of the research of the consultant.
[6] CO2 methodologies or life-cycle assessments in public tenders proposed by European construction federations shall be collected by the Client.

II. Based on the analysis of the CO2e measurement methodologies referred to above, **refine the attached Draft Table of Content for the Comparative Study** (cf. Annex 2), to be approved by the Client before further elaboration of the details.

III. **Produce a well-written Study** in English language ('fit for publication') comprising the following elements:

1) Executive Summary (3-4 pages)

2) Introduction (4-8 pages)

a) Explanation of the Carbon Cycle in the Built Environment, from raw material extraction to end of life stage, considering building and civil engineering works (in 'dry' and 'wet' construction).

b) Introduction to Life cycle assessment (LCA) to analyse the environmental impact of public works (buildings and civil engineering), including a description of the most relevant international and European technical standards whose purpose is to describe and evaluate the sustainability of construction works, such as ISO 14040, ISO 14064, EN 15804, EN 15978, EN 17472.

c) Overall introduction to Green Public Procurement and green infrastructure concept, as defined by the EU.

NB: This part should remain concise and to the point. It mainly aims at setting the scene and clarifying the main aspects of the overall framework.

3) Present and analyse the various methodologies already applied or proposed in two work streams for building and for infrastructure (50 – 60 pages)

a) Methodologies prescribed either by public procurement law or applied as standard practice of Contracting Authorities in European countries to measure and evaluate CO2e emission calculation and reductions in public works.

b) Methodologies proposed by FIEC or EIC to measure and evaluate CO2e emission and reductions in public works (both building and civil engineering) tenders.

c) Undertake a short peer review by analysing the Australian methodologies such as *'NSW Government: Embodied Carbon Measurement for Infrastructure'*.

d) The above analysis will comprise Internet links to the websites[7] where the applied or proposed methodologies are explained, preferably in an English version[8].

4) **Describe and analyse the commonalities and differences of the methodologies used or proposed** across Europe and define the **main prototypes of the methodologies analysed (10 – 16 pages)**

   a) Commonalities

   b) Differences

   c) Definition of prototypes

   d) Impact on the legal obligations and liabilities of construction companies participating in such public tenders

5) **Identify best practices and propose specific recommendations for helping public authorities to develop the most adequate methodology (10 – 20 pages)**

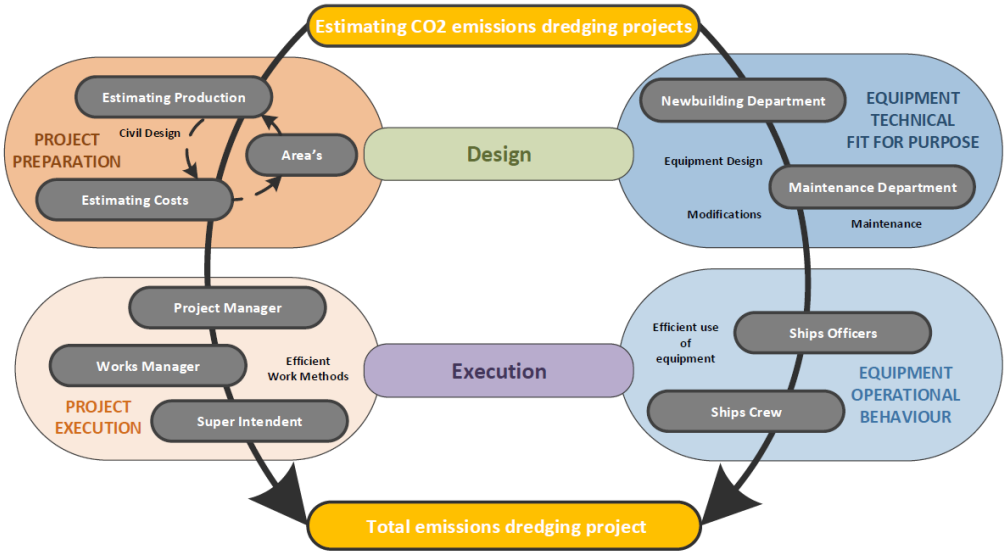
   to measure and evaluate CO2e emission reductions in public works tenders, for both building and civil engineering works, according to their needs and capacities, as well as to the typology of works. Such best practices and recommendations should aim at fostering "green" and climate-mitigation solutions in public procurement.

6) The Consultant shall elaborate also on the procurement option of Early Contractor Involvement (ECI, click here, see also EuDA 2023 position paper p. 8 - attached): projects are unique and need a case-by-case approach; the lack of local knowledge (in the local/regional/national administrations) can be compensated by ECI in order to improve approaches and project design at early stage (leaving the contributors with the opportunity to participate in the tenders afterwards).

NB: recommendations should specify which of the following 4 categories for improvement they address:

[7] Example: https://bransch.trafikverket.se/for-dig-i-branschen/miljo---for-dig-i-branschen/minskad-klimatpaverkan/Klimatkalkyl/

[8] Example: https://bransch.trafikverket.se/contentassets/eb8e472550374d7b91a4032918687069/klimatkalky_report_v_5_0_and_6.0_english.pdf



1. Project Design – 2. Project Execution – 3. Equipment Design – 4. Equipment Operations

IV. A **detailed PowerPoint presentation** has to be made by the Consultant after the completion of the Comparative Study explaining the outcome.

D. Methodology

The Consultant will strictly follow the work plan, and the time schedule agreed with the Client[9] in undertaking the contract assignment.

1) An appropriate methodology for developing the Comparative Study will have to be developed by the Consultant in consultation with the Client's Project Team.

2) The Consultant will undertake the research concerning the methodologies already applied, either by public procurement law or by standard practice of Contracting Authorities, to measure and evaluate CO2e emission reductions in public works (both building and civil engineering) tenders in European countries, as mentioned above and will collect all required documents and information from the publicly accessible websites of these Contracting Authorities. The Consultant will produce a comprehensive list of footnotes or endnotes so that the Client can double-check specific information and statements. The Consultant will inform the Client Project Team in case a required document or information is not published and ask the Client to provide such document.

3) The Client will make available to the Consultant the methodologies proposed by FIEC or EIC to measure and evaluate CO2e emission reductions in public works (both building and civil engineering) tenders in English language. The Client will also make available the document from Australia for a peer review.

4) The Consultant will undertake the review, assessment and judgment of the documents and information in consultation with the Client Project Team and will prepare a short summary summarising the conformity of the analysed document with the Concept Note.

[9] The 'Client' will be a Partnership of European associations, namely FIEC, EIC and EuDA.

E. Duration of Work

I. The contract shall start immediately after signature and the scope of the works comprises the following stages:

1) 120 days research work to perform the work described in chapters C-I to C-III/4 as well as C-III/6 (Part 1 of the Study);

2) 30 days pause to give the Client time to study the Part 1;

3) Joint Workshop between Client and Consultant to agree on the content of Chapter C-III/5 (Part 2 of the Study);

4) 30 days for producing the Draft Recommendations for Part 2;

5) 30 days for finalising the Draft Recommendations with the Client.

II. The Consultant shall work closely with the Client Project Team and shall regularly, as proposed in the Technical Proposal, submit and share the progress of activities as agreed.

F. Scope of Financial Proposal and Schedule of Payments

I. The consultant will be offered a **lump sum fee** (all Taxes included).

II. The **payments will be made in instalments** based upon outputs/deliverables specified in the TOR and upon acceptance of satisfactory work as per work plan and endorsed by the Client's Project Team.

III. **25%** advance payment on **signing the contract** with an irrevocable bond in an accepted format to the Client's Project team.

IV. **30%** on completion of the accepted version of the work described in chapters C-I to C-III/4 as well as C-III/6 (**Part 1 of the Study**).

V. **30%** on submission of the accepted version of the work described in chapter C-III/5 as (**Part 2 of the Study**)

VI. **15%** final payment immediately after acceptance of the Study by the Client.

G. Criteria for Selection of the Best Offer

The evaluation of the consultant will be based on Combined Scoring method (QCBS) – where the **technical proposal is given 65% weightage** and **financial offer with be given 35% weightage**. Only consultants meeting a **minimum of 60 points in relation to the technical evaluation** would be considered for the financial evaluation.

Following specific criteria would be assessed:

Criteria	Weight (%)	Max. Points
Technical (65%)		
– **Demonstrated knowledge about methodologies used or proposed in European countries to measure and evaluate CO2e emission reductions in public works tenders**	30	30
– **Previous relevant projects in the field of the study**	30	30
– **CV of proposed experts and their relevant experience in CO2e measurement methodologies**	25	25
– **Methodology and Work plan, including a detailed chronogram**	15	15
Total	**100**	**100**

H. Documents

While submitting the Technical Proposal, the Applicant shall, in particular, ensure to attach the following:

I. Profile of the consultant (max 3 pages) explaining why they are the most suitable for the work.

II. Relevant experience (max 4 pages).

III. CV of the proposed staff highlighting their relevant experience.

IV. Detailed methodology and chronogram showing expected deliverables and timelines, team composition, man days required for each task (3-5 pages).

V. A short projection/forecast what could be the outcome of the study in terms of commonalities and differences of the relevant methodologies (maximum of 500 words).

The financial proposal shall specify a total lump sum amount (including a breakdown of costs for fee, and number of working days). Payments will be made in instalments based upon key outputs/deliveries (mentioned under payment schedule above).

ANNEX 1

Publication Date	**14 April 2025**	**Deadline for submitting tender**	**08 May 2025 24:00 CET**
Document	**TENDER FOR CONSULTING SERVICES - Comparative Study on the Methodologies used or proposed in European countries to measure and evaluate CO2e emission reductions in public works tenders**		
Name and address of Client (Coordinating Partner)	FIEC - European Construction Industry Federation Avenue des Arts, 20 1000 Brussels Tel: +32 2 514 5535 E-mail: info@fiec.eu with copy to E-mail: frank.kehlenbach@bauindustrie.de		
Short Description	The objective of the Study is to produce a comprehensive document that the Client can use for lobbying EU Institutions and EU Member States' governments and to inform them about existing methodologies to quantify and calculate CO2e emissions in public tenders in Europe and to make bidders' capacity to reduce CO2e emissions an award criterion.		
Contract type	Service Provider Contract		
Duration of contract	See Terms of Reference		
Procedure type	Open procedure		
Budget	Not fixed		
Language of submission	English		
Note	Questions on the Terms of Reference must be submitted in writing to the above E-mail addresses. Answers of the Client will be circulated to those candidates who indicate their interest in participating in the tender.		

ANNEX 2

Draft Table of Content for the Study