UDENRIGSMINISTERIET
Ministry of Foreign Affairs of Denmark

Appendix 1 – Terms of Reference

Regarding **Energy and resources screenings, conducted by a Danish expert to French industrials**

Background and Context

The mission in Paris is continuing its work on exposing a group of Danish energy efficient solution providers for the industry, to the French market. The focus will be on various levers of decarbonisation, mostly for the food-processing sector, but with some planned activities in the pharmaceutical and chemical industry, in order to bring to the table a global solution for the French industry:

- Production of renewable energy: Heat and electricity
- Excess heat recovery
- Digitalisation and process optimisation
- Electrification
- Energy Efficient processes and utilities
- Water and resources efficiency
- …

Last year, the mission in Paris has conducted 2 studies to identified market opportunities in France at first, in the pharmaceutical sector to legitimise Danish competences, and also to map the various Danish solution providers for the industry, which resulted in the identification of about 35 companies, of which 19 are SMEs.

Moreover the Energy screenings will provide insights into technologies, services and regulatory practices in France where Denmark can support companies and institutions. This work is done to continue to build Government to Government collaboration between the Danish Energy Agency and France and to unlock exports potential.

Based on previous positive experiences, energy and resource screenings by Danish experts in other countries with Industry Alliances, and the work that we are doing towards companies in France, the project will provide valuable information about drivers and barriers, best practices and technology adaptation in French enterprises, with respect to energy efficiency, water use and decarbonisation.

Purpose

The Conducted work should support the work that TC Paris is planning with a group of Danish Companies forming a Sustainable Industry Alliance (SIA).The idea is to have a Danish expert coming to France and perform Energy-screenings on production sites, with the support of the

Trade Council in Paris, and then summarising the findings of the data and information provided by companies and observations during the site visit in a report for each company. (2,5 or 3 days are suggested).

The results are further to be discussed in an on-site workshop, with the industrials in France and various Danish solution providers.

Objective

The main objective of the assignment is to gain detailed insights about the opportunities for decarbonisation, and energy and resource efficient projects that could be conducted in two industrials companies in France (food processing sector). The expected results are to be used to engage with French enterprises and support the activities of the Trade Council within it's commercial work in relation to Industry decarbonisation, as the mission in France will identify opportunities for Danish solutions in those specific sectors in France.

Scope of Work

1) The Danish expert is to provide inputs to TC on needed data and information (e.g. P&ID, energy use and production data, SCADA screenshots) from companies during a kick-off meeting.
2) Carry out initial evaluation and screenings of requested data provided by the different production sites.
3) One online meeting with each of the participating companies, approximately 2 -3 weeks before the site visit, to present the approach of the energy screenings, possible focus areas during the site visit based on Danish experiences with energy efficiency and specify further requirements (e.g. data) to be shared before the site visit.
4) Perform energy screenings in minimum two production sites in France. The energy screenings are performed on site by the Danish expert with support from TC when needed. Requested days for each site will depend on the complexity of the processes, but should include a kick-off meeting, walkthrough of the production facilities, data collection onsite and discussion of initial findings.
5) Summarising the findings of the data and information provided by companies and observations during the site visit in a report for each company. The main outputs of the energy screenings are expected to include:
   (i) Breakdown of the energy use at the site by energy type, main users (e.g. production section, offices, losses) and utility type.
   (ii) Identification of opportunities for energy savings following the Danish approach
   (iii) Analysis and overall assessment of the energy use in the factory and comparison to Danish standards
   (iv) Overview of energy prices
   (v) Estimate of anticipated energy and resource efficiency potential
   (vi) Description and evaluation of the main possible energy efficiency measures and options for decarbonisation including possible (Danish) solutions
   (vii) Recommendations on focus area for the Sustainable Industry Alliance (SIA).
6) One online meeting with each of the participating companies, approximately 1-2 weeks after submission of the reports to explain main conclusions and allow for questions.
7) Pre-meetings with some Danish solutions providers (4 to 6 companies) to prepare the on-site workshops

8) On-site workshops and discussion of generalised findings from the energy screenings with Danish solution providers and discussion of concrete solutions.

Deliverables (output)

- At least one meeting with TC Paris to plan the project, discuss requirements and the approach.
- One online meeting with each of the two participating companies in preparation of the energy screenings.
- On-site energy screenings (2 -2.5 day(s)) for each of the two production sites in France.
- One energy screenings report for each of the factories in France, which covers the elements, described under the scope of work.
- One online meeting with each of the 2-3 participating companies to discuss main findings of the energy screenings.
- Two on-site workshops with presentation and discussion of generalized findings and conclusions of the energy screenings with the industrial and Danish solution providers.

Timing

Date	**Activity**	**Comments**
May 2023	Kick-off meeting with TC and Danish expert to specify required data, overall planning of the project and participating companies.	Date for the meeting TBD
May 2023	Online meetings with TC, Danish expert and production sites to present approach to energy screenings.	Dates for the online meetings will be suggested by TC Paris.
May/June 2023	TC will provide the Danish Expert with inputs from the selected production sites	Overview of the energy uses Process diagram and visit preparation
May/mi-June 2023	Mission to France: Energy screenings at 2 production sites.	Danish Expert with support from TC week 25.
July/August 2023	Submission of Energy screenings report to TC Paris.	
August/September 2023	Online meetings with each company to present and discuss results.	Dates for the online meetings will be suggested by TC Paris.
September/October 2023	Online meetings with some Danish solution providers	Dates for the online meetings will be suggested by TC Paris.

September/October 2023	Technical workshops on industrial sites to discuss concrete solutions with Danish solution providers	Place on the industrial sites to be defined
October 2023	Project completion: All deliverables are provided.	All expenses by the Danish Experts should be invoiced by December

Suitability

This work should help the Embassy; have an overview of the different challenges faced by French industrials when it comes to decarbonisation and Energy Efficiency. It should include the most possible alternatives on the processes, from production of renewable energy, speed controlled ventilation, heat recovery, and process parameters controls, water usage…Therefore, the consultant must be able to identify all the challenges and all the possible alternatives for improvement and energy savings.

Team and Organisation

Qualifications and Competence of Staff

The consultant team is expected to meet the following requirements:

1) MSc degree (or higher) in economics or engineering specializing in energy efficiency in the industrial sector (or other relevant discipline). The senior consultant has at least 10 years of relevant experience.

2) A profound knowledge and understanding of:

    a. The French energy system with a focus on the energy use in the industrial sector – including Energy Management Systems;
    b. Legislative and regulatory measures and procedures in the field of energy use and energy efficiency improvements in industry, hereto European energy taxation policies and subsidy schemes;
    c. Energy efficiency improvement and decarbonisation possibilities and technical solutions within the industrial sector, in particular in the food processing sector
    d. Financing of energy efficiency improvements, financial instruments and banking products in general.

3) Extensive work experience within:
    a. Energy screenings and energy management systems, as well as solid background in economic assessment of energy efficiency improvement projects;
    b. Technical solutions in the field of energy use within the industrial sector, in particular food processing industry;
    c. Preparing reports and recommendations on how to stimulate enterprises to conduct energy efficiency measures;

4) Good written and spoken communication skills in English.

The Danish Expert team is expected to provide project management and administration support. The Danish Expert team will also provide assistance and knowledge exchange, regarding the latest energy efficiency and decarbonisation in industry developments internationally, as well as quality assurance, where required.

Budget and Level of Effort

Please free to suggest a different organisation of resources to conduct the project.

Activity	**Units**	**Unit price**	**Amount (DKK)**
International consultant – Senior	10	8 500	85 000
International consultant – Junior	12	6 000	72 000
International travels (flight, per diem)*	2	14 000	28 000
Total			**185 000**

***Maximum budget: 190 000 DKK**

The total project budget (including workshop venue, translation etc. costs) cannot exceed DKK **190.000**.