

TENDER SPECIFICATIONS ATTACHED TO THE INVITATION TO TENDER

Invitation to tender No. ENER/C3/2012-439 for a Study on energy efficiency and energy saving potential in industry and on possible policy mechanisms

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1. Information on tendering

1.1. Participation

Participation in this tender procedure is open on equal terms to all natural and legal persons coming within the scope of the Treaties and to all natural and legal persons in a third country which has a special agreement with the Union in the field of public procurement on the conditions laid down in that agreement. Where the Multilateral Agreement on Government Procurement¹ concluded within the WTO applies, the participation to the call for tender is also open to nationals of the countries that have ratified this Agreement, on the conditions it lays down.

1.2. Contractual conditions

The tenderer should bear in mind the provisions of the draft contract which specifies the rights and obligations of the contractor, particularly those on payments, performance of the contract, confidentiality, and checks and audits.

1.3. Joint tenders

A joint tender is a situation where a tender is submitted by a group of economic operators (consortium). Joint tenders may include subcontractors in addition to the joint tenderers.

In case of joint tender, all economic operators in a joint tender assume joint and several liability towards the Contracting Authority for the performance of the contract as a whole.

These economic operators shall designate one of them to act as leader with full authority to bind the grouping or the consortium and each of its members. It shall be responsible for the receipt and processing of payments for members of the grouping, for managing the service administration and for coordination. The composition and constitution of the grouping or consortium, and the allocation of the scope of tasks amongst the members, shall not be altered without the prior written consent of the Commission.

The tenderers should indicate in their offer whether the partnership takes the form of:

a) A <u>new or existing legal</u> entity which will sign the contract with the Commission in case of award;

or

b) A group of partners not constituting a new legal entity, who via a <u>power of attorney</u>, signed by an authorised representative of each partner (except the lead partner), designate one of the partners as lead partner, and mandate him as lead contractor to sign the contract with the Commission in case of award.

1.4. Subcontracting

Subcontracting is permitted in the tender but the contractor will retain full liability towards the Contracting Authority for performance of the contract as a whole.

Tenderers must give an indication of the part of the services and proportion of the contract that they intend to subcontract.

Tenderers are required to identify subcontractors whose share of the contract is above 20%.

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¹ See http://www.wto.org/english/tratop E/gproc e/gp gpa e.htm

During contract execution, the change of any subcontractor identified in the tender will be subject to prior written approval of the Contracting Authority.

1.5. Content of the tender

The tenders must be presented as follows:

Part A: Identification of the tenderer (see section 1.6)

Part B: Evidence for exclusion criteria (see section 2.2)

Part C: Evidence for selection criteria (see section 2.3)

Part D: Technical offer (see section 2.5)

Part E: Financial offer (see section 2.6)

Part F: Power of attorney (for consortia only)

1.6. Identification of the tenderer: legal capacity and status

- The tenderer's identification form in Annex 1 shall be filled in and signed by:
 - o The tenderer (including any member of a consortium or grouping);
 - Subcontractor(s) whose share of the work represent more than 20% of the contract.
- In order to prove their legal capacity and their status, all tenderers (including any member of a consortium of grouping) must provide a signed Legal Entity Form with its supporting evidence. The form is available on:

 http://ec.europa.eu/budget/contracts_grants/info_contracts/legal_entities/legal_entities

en.cfm

Tenderers that are already registered in the Contracting Authority's accounting system (i.e. they have already been direct contractors) must provide the form but are not obliged to provide the supporting evidence.

- If it has not been included with the Legal Entity Form, tenderers must provide the following information
 - For legal persons, a legible copy of the notice of appointment of the **persons authorised to represent the tenderer** in dealings with third parties and in legal proceedings, or a copy of the publication of such appointment if the legislation which applies to the legal entity concerned requires such publication. Any delegation of this authorisation to another representative not indicated in the official appointment must be evidenced.
 - For natural persons, where applicable, a proof of registration on a professional or trade register or any other official document showing the registration number.
- The tenderer (only the leader in case of joint tender) must provide a Financial Identification Form and supporting documents. The form is available on: http://ec.europa.eu/budget/contracts_grants/info_contracts/index_en.cfm

2. EVALUATION AND AWARD

2.1. Evaluation steps

The evaluation is based on the information provided in the submitted tender. It takes place in three steps:

- (1) Verification of non-exclusion of tenderers on the basis of the exclusion criteria;
- (2) Selection of tenderers on the basis of selection criteria;
- (3) Evaluation of tenders on the basis of the award criteria (technical and financial evaluation).

Only tenders meeting the requirements of one step will pass on to the next step.

2.2. Exclusion criteria

All tenderers shall provide a declaration on their honour (see Annex 2), duly signed and dated by an authorised representative, stating that they are not in one of the situations of exclusion listed in the Annex 2.

The declaration on honour is also required for identified subcontractors whose intended share of the contract is above 20%.

The successful tenderer shall provide the documents mentioned as supporting evidence in Annex 2 before signature of the contract and within a deadline given by the contracting authority. This requirement applies to all members of the consortium in case of joint tender In case of doubt on this declaration on the honour, the contracting authority may also request the evidence for subcontractors whose intended share of the contract is above 20%.

2.3. Selection criteria

Tenderers must prove their economic, financial, technical and professional capacity to carry out the work subject to this call for tender.

The tenderer may rely on the capacities of other entities, regardless of the legal nature of the links which it has with them. It must in that case prove to the Contracting Authority that it will have at its disposal the resources necessary for performance of the contract, for example by producing an undertaking on the part of those entities to place those resources at its disposal.

2.3.1. Economic and financial capacity criteria and evidence

In order to prove their economic and financial capacity, the tenderer (i.e. in case of joint tender, the combined capacity of all members of the consortium) must comply with the following criteria:

• The tenderer (or, for a consortium, total turnover of its members) must have an average annual turnover for the last three years for which the accounts are closed of at least 400,000.00 EUR.

The following evidence should be provided:

- Copy of the profit & loss account for the last three years for which accounts have been closed.

- Failing that, appropriate statements from banks,

If, for some exceptional reason which the Contracting Authority considers justified, a tenderer is unable to provide one or other of the above documents, he or she may prove his or her economic and financial capacity by any other document which the Contracting Authority considers appropriate. In any case, the Contracting Authority must at least be notified of the exceptional reason and its justification in the tender. The Commission reserves the right to request any other document enabling it to verify the tenderer's economic and financial capacity.

2.3.2. Technical and professional capacity criteria and evidence

a. Criteria relating to tenderers

Tenderers (in case of a joint tender the combined capacity of all tenderers) must comply with the following criteria:

- 1. The tenderer shall have successfully completed, as contractor, over the past 3 years, at least 2 projects covering all of the following fields energy efficiency, industrial production, technologies and organisation and modelling. At least one of the completed studies should have a minimum value of 100.000 € (VAT included).
- 2. The tenderer must prove experience of working in English with at least 10 projects delivered in the last three years showing the necessary language coverage.
- 3. The tenderer must prove experience in all of the following: data collection; policy analysis; modelling and statistical analysis; and drafting reports and recommendations.

b. Criteria relating to the team delivering the service:

The team delivering the service should include, as a minimum, the following profiles:

- 1) The tenderer shall propose a team of *minimum* 4 experts with very good communication and drafting skills in English. Evidence of these aspects needs to be included in the offer.
 - 2) The team must be composed of members having at least the following qualifications:
 - 1 senior staff member with at least 8 years of professional experience, including experience in the fields of industrial energy efficiency, energy management systems and energy system analysis and planning, industrial processes across all major energy intensive industrial sectors, energy generation, heating and cooling, market analysis (including knowledge of the structure and functioning of the relevant markets and industrial sectors) and financial management relevant for securing financing for energy efficiency investments.
 - 3 qualified experts with at least 3 years of experience in one or more of the following areas, taking into account that all areas should be covered:
 - a) Providing expertise in industrial engineering, industrial processes, energy system management, planning and design including cogeneration, heat recovery, heating and cooling;

- b) Providing expertise in energy efficiency legislation, policies and measures, financing of energy efficiency investment, including EU legislation impacting energy efficiency in industry and EU funding options;
- c) Modelling and Impact Assessment;
- d) Collecting, analysing and structuring relevant information;
- e) Ability to analyse, synthesise and draw conclusions from a complex body of evidence.

c. Evidence:

The following evidence should be provided to fulfil the above criteria:

- A list of principal assignments and services provided in the past 3 years that are relevant for this tender, together with a statement of the price of the service, the period of work and whether the service was rendered to public or private clients (name of client to be indicated).
- The educational and professional qualifications of the persons who will provide the service for this tender (CVs) including the management staff. Each CV provided should indicate the intended function in the delivery of the service. CVs shall include educational background, degrees and diplomas, professional experience, research work, publications and linguistic skills of each team member. The CVs shall be presented, preferably, in accordance to the Commission Recommendation on a common European format for *curricula vitae*, published in OJ L79 of 22 March 2002, p. 66;

Changes or additions to the team initially proposed must be notified to the Commission in writing. The Commission will have the right to object to any changes of members of the team from those initially proposed.

2.4. Award criteria

The tender will be awarded according to the best-value-for-money procedure. The quality of the tender will be evaluated based on the following criteria. The maximum total quality score is 100 points.

N°	Award Criteria	Weighting (pts)
1	Relevance of the tender Overall relevance of the tender with respect to the needs, the	10
	objectives and the scope of the tender. Assessment of the level of understanding of the tenders' requirements as reflected in the offer.	
2	 Methodology of work Fulfilment of the needs, the objective and the scope of the tender specifications; Clarity, completeness and full coverage of the tasks (15 pts.). Quality and appropriateness of proposed detailed approach for gathering sectoral and sub-sectoral data for each EU Member State (15 pts) Quality and appropriateness of proposed approach for methodology and tools for validating, analysing, modelling and presenting information (40 pts.). 	70
3	Management	15

	Appropriateness of the project planning and management, and the human and financial resources allocated to cope with and fulfil the obligations of the contract. Quality of the work-plan and schedule.	
4	Clear and consistent <u>presentation of the offer</u>	5
Total number of points		100

Tenders must score above 60% for each criterion, and above 70% in total. Tenders that do not reach the minimum quality thresholds will be rejected and will not be ranked.

After evaluation of the quality of the tender, the tenders are ranked using the formula below to determine the tender offering best value for money.

Score for tender A =
$$\frac{\text{Price of lowest tender}}{\text{Price of tender A}} \times 0.3 + \frac{\text{Total quality score for award}}{\text{100}} \times 0.7$$

2.5. Technical offer

The technical offer must cover all aspects and tasks required in the technical specification and provide all the information needed to apply the award criteria. Offers deviating from the requirements or not covering all requirements may be excluded on the basis of non-conformity with the tender specifications and will not be evaluated.

2.6. Financial offer

The price for the tender must be quoted in euro. Tenderers from countries outside the euro zone have to quote their prices in euro. The price quoted may not be revised in line with exchange rate movements. It is for the tenderer to assume the risks or the benefits deriving from any variation.

Prices must be quoted free of all duties, taxes and other charges, including VAT, as the European Union is exempt from such charges under Articles 3 and 4 of the Protocol on the privileges and immunities of the European Union. The amount of VAT may be shown separately.

The quoted price must be a fixed amount which includes all charges (including travel and subsistence). Travel and subsistence expenses are not refundable separately.

The indicative price including all charges for this service contract is: 250,000.00 EUR

3. TECHNICAL SPECIFICATIONS

3.1. Introduction and objectives of the study

Energy efficiency is one of the priorities of Europe's 2020 Strategy for smart, sustainable and inclusive growth² and its Energy strategy³ and Roadmap⁴ because of its important contribution towards improved economic competitiveness and sustainability, lower emissions and reduced energy dependency and its employment possibilities and social impacts.

The energy efficiency target is one of the three energy and climate objectives for 2020 agreed by the EU leaders in March 2007. In the recently adopted Energy Efficiency Directive⁵ this target was clearly defined as an EU energy consumption in 2020 of no more than 1474 Mtoe of primary energy or no more than 1078 Mtoe of final energy⁶. This new Directive and the current policy framework at EU level (including Energy Performance of Buildings Directive, Eco-design and Energy Labelling Directives and various programmes and initiatives under Intelligent Energy Europe Programme and Cohesion policy funds) and measures at national level would provide additional impetus to energy efficiency and would lead to significant advancements towards this EU energy efficiency target.

Industrial efficiency is a key pillar of EU energy efficiency policy and an integral part of the Europe's 2020 Strategy's flagship initiatives. Improved industrial efficiency should contribute to the achievement of the Europe 2020 targets, including the 20% target for energy efficiency, and pave the way towards longer term goals for 2050.

The importance of promoting industrial efficiency for EU growth and sustainability strategies is reflected in a number of EU legislative instruments and policy initiatives. Among the legislative instruments, the EU Emissions Trading Scheme⁷ and the Effort Sharing Decision⁸, the Industrial Emissions Directive⁹, the Energy Taxation Directive¹⁰, the Internal Energy Market Package¹¹ and the Energy Efficiency Directive should be specifically mentioned as they are aimed at creating a favourable market and regulatory framework to drive efficiency improvements in industry and increase market uptake of efficiency products and solutions. Among the policy

² COM(2010) 2020

³ COM/2010/0639

⁴ COM/2011/0885

⁵ Directive 2012/27/EU, OJ L 315, 14.11.2012, p. 1.

⁶ Modified by Croatia Accession Treaty: 1483 Mtoe of primary energy or 1086 Mtoe of final energy for the EU 28.

⁷ Directive 2003/87/EC, OJ L 275, 25.10.2003 (consolidated version 25.06.2009) and its implementing legislation

⁸ Decision 406/2009/EC, OJ L 140, 5.6.2009, p. 136.

⁹ Directive 2010/75/EU, OJ L 334, 17.12.2010, p.17.

¹⁰ Directive 2003/96/EC, OJ L 283, 31.10.2003, p. 51.

Directive 2009/72/EC, Directive 2009/73/EC, Regulation 713/2009/EC, Regulation 714/2009/EC, Regulation 715/2009/EC

initiatives, Resource Efficient Europe¹², Industrial Policy for the Globalisation Era¹³ and its update¹⁴, the Innovation Union¹⁵ and the Agenda for new skills and jobs¹⁶, and more recently the Horizon 2020 initiative¹⁷, which will succeed the EU FP7 R&D programme, define the EU framework for the shaping of industrial efficiency. This EU framework is also to include the results of the reflexion on a post 2020 period as outlined in the Green Paper on a 2030 framework for climate and energy policy¹⁸.

Industry and enterprises in economically productive sectors account for 40% of the EU final energy consumptions (industry 25.3%, services 13.2%, agriculture 2.2% in 2012)¹⁹. Considerations for decrease of costs to improve competitiveness have prompted many industries to make energy efficiency improvements. In particular, large energy intensive (chemical, petrochemical, iron, steel, cement, pulp and paper, etc.) have made substantial energy efficiency improvements over the last decades to decrease costs and improve competitiveness. Overall, between 2000 and 2010, energy efficiency in industry has on average improved by 1.3% per year²⁰. Despite the steady energy efficiency improvement, still significant opportunities remain not only in large energy intensive industries, but even more so in other enterprises active in products manufacturing, services or agriculture, in particular in SMEs, for which energy is not a major cost and, therefore, has not elicited so far management and operational focus.

Expert literature estimates various saving potentials of a widely disparate range from single digit percentages up to 50% and more, depending on the sectors, time-horizon and type of potentials (economic or technical). In addition to autonomous improvements mostly driven by markets and competition, energy efficiency and saving in industry can be a result of many factors: technological (e.g. equipment, materials, processes), managerial and organisational innovation (e.g. process organisation and facility design), behavioural changes, and learning curves (e.g. dissemination of good practices and know-how) and regulation.

One of the most important drivers of energy efficiency is technology. Technologies creating improvement potentials can be grouped into industry/sector specific and cross-cutting/horizontal technologies. There are a number of horizontal technologies that can certainly lead to energy savings and energy efficiency improvements across many sectors when applied. These include more efficient motor driven systems (motors, fans, pumps, compressors and conveyors), combined with electric drive controls (e.g. variable speed drive) in order to optimise the functioning of the complete system, more efficient heat and steam production, ventilation and cold production technologies (e.g. boilers, burners, stoves, furnaces, chillers,



13 COM/2010/614

¹⁴ COM/2012/582

¹⁵ COM/2010/546

¹⁶ COM/2010/682

¹⁷ COM/2011/808

¹⁸ COM/2013/169

¹⁹ Eurostat

²⁰ Odyssee-MURE project (http://www.odyssee-indicators.org/)

heat pumps), increased energy/heat recovery and energy harvesting mechanisms, energy storage, more efficient energy conversion processes (e.g. cogeneration, tri-generation and higher conversion efficiency), integration of renewable energies, waste/energy recovery in production processes, cogeneration and trigeneration, increased recycling. Horizontal solutions also include insulation, new and advanced materials (e.g. high temperature coating), new and advanced processes²¹. These can be used across many sectors and would achieve considerable savings, especially if deployed at a large scale.

Organisational, management and design innovation are equally important ways of increasing energy efficiency of production and operation. These include process monitoring control and optimisation practices, innovation in and deployment of energy audits and energy management systems for enterprises, which is also a requirement of the Energy Efficiency Directive (with the exception of SMEs for which Member States shall develop programmes to encourage their energy audits), measurement, monitoring, control, analysis and implementation tools (software and hardware) of energy management. Innovative energy management tools help make energy efficiency solutions easily applicable, understandable and easy and cost-effective to install and can facilitate their large scale market up-take and deployment in all enterprises, in particular SME, which lead to larger scale adoption and utilisation of energy efficient technologies, products and solution. Organisational tools include, for example, holistic long-term planning of the whole industrial production (from raw materials supply to improvement of manufacturing processes, shifting to secondary production by use of recycled material and production with different materials, e.g. lighter cars that then use less fuel), which as reported by expert literature can lead to higher uptake of existing potentials. Clustering of industrial production, the energy efficient planning and design of industrial facilities can also be a driver for improved energy and resource efficiency, as properly designed facilities can bring considerable energy savings.

Sectoral solutions are tied to specific materials, processes or practices characterising a given sector, e.g. the pulp and paper, the steel or chemical industries. Sectoral technology pathways could adopt holistic and long-term perspective, e.g. through planning and organisation, leading to higher energy efficiency and savings.

Regulatory compliance, such as with the EU energy efficiency legislation, is another driver of energy efficiency. The Energy Efficiency Directive clearly establishes requirements for achieving the EU 20% energy efficiency target and mandates the setting of commensurate indicative national targets; it lays down a number of instruments that provides direct or indirect push-and-pull mechanism for energy efficiency. The EU Ecodesign and Labelling Directive and the Energy Performance of Building Directive regulate energy efficiency performance requirements for products and buildings within the EU internal market and exercise significant impact on the development of energy efficiency. According to a study²², proper implementation of the Ecodesign Directive would yield yearly savings of up to 600 TWh of electricity and 600 TWh of heat in 2020, as well as net savings for European consumers and businesses of €90 billion per year − 1% of EU's current GDP − in year 2020 (meaning net savings of €280 per

decentralised cold generation equipment.

The highest calculated energy saving potentials are the following: for electrical motors: variable speed drives, synchronous permanent motors, and IE3 motors; for building heating: non-continuous heating and destratification; for heat generation (boilers): economiser and combustion air pre-heater; for heat transport: leaks remediation; for ventilation: high efficiency fans, leak reduction; for pumping: distribution network optimisation; for compressed air: leak reduction, improvement of pneumatic components; for industrial refrigeration: floating high pressure and

²² Economic benefits of the EU Ecodesign Directive. Improving European economies. By: Edith Molenbroek, Maarten Cuijpers, Kornelis Blok. © Ecofys 2012 by order of: Natuur en Milieu

household per year). Market surveillance activities also have been identified as relevant for energy efficiency²³. It was estimated that globally, around 200 TWh/year could be lost due to non-compliance with standards and labelling programmes²⁴.

Future EU initiatives such as the revision of the Labelling directive in 2014 and the 2014 review foreseen in the Energy Efficiency Directive (which will be accompanied – if necessary – by proposals for further measures), will also have an impact on energy efficiency in industry, e.g. through possible specific actions supporting products policy implementation triggering the innovation, boosting market uptakes, etc.

Energy efficiency is also impacted by the overall technological, economic and social landscape. For example the 'smartness' of appliances and their demand response readiness in the context of the continued deployment of smart grids and the development of demand response as required by the EU Internal Electricity Market legislation and the Energy Efficiency Directive clearly present important efficiency improvement opportunities that can be realised in the industrial sectors.

Energy efficiency improvement and savings resulting from the market up-take of new and innovative solutions, from innovation and behavioural or cognitive changes are also factors which should be examined, especially for SMEs, in light of the specific barriers as well opportunities For example, innovative energy efficiency measures are not traditional core business of most SMEs or are sidelined due to lack of skills, information or accessible financing. However, SMEs are also often more flexible and leaner which makes them faster and more innovative in adapting certain solutions.²⁵

Despite the significant improvement over the last decades, major and potentially bigger and faster improvement potentials in industry and enterprises lay ahead, which will need to be examined in view of the on-going energy sector transition towards the EU 2020 and the longer term targets. By using innovative cost-effective energy solutions, the industry sector could further considerably reduce both its primary and final energy consumption²⁶, thus gaining in competitiveness and contributing to Europe sustainability and energy challenges. There remain important barriers and challenges related to industrial efficiency in many domains, such as applied materials, products, manufacturing techniques, planning, organisation and knowledge and the deployment of energy efficiency enabling mechanisms, such as demand response and energy management systems.

No recent, comprehensive EU-wide assessment of the energy efficiency and energy saving potentials of industry, its historic and future trends, drivers, barriers, opportunities and the possible (soft or regulatory) measures is available. Such study could be beneficial so that the policy priorities in the industry could be clearly identified, defined and further addressed.

²⁴ Waide, P. (2010) How much energy could we save through compliance? Presentation at the IEA conference, London, September 2010.

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²³http://www.atlete.eu;http://www.eaci-projects.eu/iee/page/Page.jsp?op=project_detail&prid=2613, http://www.ecopliant.eu; http://www.eaci-projects.eu/iee/page/Page.jsp?op=project_detail&prid=2644

Prognos (2010) have analysed the key barriers working against the uptake of energy efficiencies in SMEs in Germany.

http://www.isi.fraunhofer.de/isi-media/docs/e/de/publikationen/BMU_Policy_Paper_20121022.pdf http://www.isi.fhg.de/isi-en/e/projekte/bmu_eu-energy-roadmap_315192_ei.php

3.2. Scope of the contract

For the purposes of this study, energy efficiency is understood as an encompassing term that includes energy efficiency and energy savings technologies and practices that result in reduced or more efficient transformation and use of energy (in industry, residential, tertiary and transport sectors).

The bidders should ensure compliance with the following aspects:

- <u>Sectors to be covered</u>: manufacturing sectors of the economy (NACE section C) and selected groups of other economic activities (selected groups of NACE sections B, D-Q) need to be studied with focus on those that are mainly impacted as described in Task 1 below.
- <u>Timeframe</u>: the overview of the current situation in terms of technologies, organisational and management solutions, energy intensity, and final and primary energy consumption should be provided for the year with the most recent data available (and not earlier than 2010). When future outlook is required the timeframe should be until 2050 (with impacts provided at least in five-year intervals). Past trends should be described in the relevant timeframe as when they started and by default at least from the beginning of the 20th century.
- Geographical entities: the study should encompass the EU as a whole, individual Member States including Croatia and EEA countries with a focus however on EU28. A description of each EU Member State should be provided in addition to EU aggregates. When relevant, regional aggregates within the EU should also be provided.
- Level of analysis: The analysis of energy consumption, energy intensity, technology, techniques and know-how diffusion, technological, organisation, management and design solutions, learning curves, skill base and behaviour when appropriate, as well as the impacts and trends should be done at least at the sectoral level (identified as NACE groups or, when so agreed by groups of NACE groups). It should include quantification in terms of primary and final energy savings, cost savings and GHG emissions reduction, and qualifications of the direct and indirect, absolute and net impacts. The analysis should differentiate between energy savings due to structural effects and efficiency-policy induced savings. For this, a convincing methodology will need to be put forward.
- <u>Data sources</u>: The quantitative analysis should be based on EU data (e.g. national statistics and accounts, Eurostat statistics, sector specific surveys and statistics, etc.), other relevant publicly available national and international statistical data sources (OECD, IEA, UN, etc.), general and sectors surveys, branch organisation publications, industry publications and a comparative overview of expert literature, including previous potential studies and roadmaps to 2030 and 2050 prepared at EU, national and international levels.
- Methodology: The quantitative assessment of energy efficiency technologies, techniques, organisational, managerial, design and behavioural and learning curve impacts (Task 2-4) should be carried out by model-based approach and be complemented by qualitative assessment.

In addition, the contractor should perform at least one presentation of the intermediate and final results at events in Brussels following a discussion with DG ENER. The contractor is expected to take up the issues highlighted in the discussion on the draft final results in the final report.

Inputs provided by the contractor: All data and studies shall be gathered by the contractor. (An indicative list of literature collected in this area is provided in Section 5)

3.3. Description of Tasks

The study comprises of six tasks as specified below. The bidder should further develop these tasks in the offer and could also propose well defined supplementary analysis.

Task 1: Statistical data, base-line scenario and literature overview

Establishing reliable and coherent statistical data is a necessary precondition for sound analysis.

The bidder should:

- Establish a statistical data base on the current final energy consumptions of the economic sectors (as a main rule at NACE group levels in NACE Section C and aggregated group levels for selected groups in selected NACE sections upon agreement with the Commission). The data set should be built on the latest available EU, national and international statistics, which should be not older than 2010, supplemented and corrected as needed with data from literature overview and branch/sector publications. In order to align or control the differences of this data-base with the existing Eurostat data, the contractor will be expected to liaise and exchange with Eurostat. Data other than provided by Eurostat may and should be used, when Eurostat data do not exist or data collected by Eurostat is not satisfactory for the study (e.g. for reasons of data definition). Data differences with Eurostat should be explained in the study.
- Establish a baseline taking into account current trends in final energy consumption and the impact of EU and national legislation; the baseline should be established in agreement with the Commission.
- Establish a comparative expert literature review (data, saving potentials, energy efficiency solutions, trends, and forecasts and competing scenarios).

The focus should be on the sectors with economic relevance for the EU energy consumption patterns and future trends. The contractor should define the list of NACE sectors. The list of sectors needs to be submitted to DG ENER for approval. The list on which the statistical data series are to be drawn should as a default include manufacturing industries (NACE C) and sectors (groups and selected groups of NACE sections) the consumption of which are directly affected by energy efficiency technologies, solutions and practices or create demand for such technologies or materials (e.g. construction and engineering sector, IT, leisure and health services providers). All tasks should be performed on the same sectoral break-down as established in Task 1 and refined/specified for the specific Tasks.

Task 2: Identification of energy efficiency improvement factors and their barriers

Identification, description, analysis and comprehensive overview of the various drivers and factors of energy efficiency should be carried out. This should cover factors that enable reducing energy intensity, enhancing energy efficiency and result in primary or final energy savings or the need for less energy input on a lasting/structural basis.

The contractor should:

- Establish a comprehensive typology and description of energy efficiency improvement sources/drivers/factors and opportunities, technologies, including energy recovery solutions, organisation and management methods, materials, processes, design, financing solutions, behaviour patterns, learning, qualification and skills and The contractor should establish a comprehensive typology of drivers;
- Identify by sectors the most important horizontal and sector specific sources/drivers/factors of energy efficiency, as well as opportunities and trends that could lead to significant energy savings and energy efficiency improvements in that specific sector on the time horizons of 2020, 2030, 2040 and 2050;
- Identify barriers and ways / measures that could help overcome the barriers with an estimate of the costs;
- Identify primary and final energy saving potentials, the resulting GHG emissions reduction, costs and costs savings on the time horizons of 2020, 2030, 2040 and 2050.
- Identify impacts on energy export and imports, industrial export positions and competitiveness

The results should present a portfolio of energy efficiency improvement measures by each major sectors with the absolute energy saving numbers, complemented with quantitative impact on costs and cost savings, the impact on greenhouse gas emissions (GHG), and the impact on energy and industrial exports and imports in comparison with the baseline (e.g. without energy efficiency policy, with economic crisis, etc.), proposed by the contractor and approved by DG ENER

Task 3: Identification of energy saving potentials and scenarios

The contractor should identify technical and economic energy saving potentials by sectors and/or sub-sectors or elected groups of sectors or sub-sectors, approved by the Commission and should establish scenarios of energy savings and efficiency improvement on the time horizons of 2020-2050 with at least five years intervals.

When identifying the saving potentials and the scenarios the contractor should:

- Express the savings in terms of final and primary energy and translate it into GHG emissions reduction;
- Identify the corresponding, lasting energy efficiency and energy intensity improvement indicators:
- Identify the costs of realising the potential and the costs savings from realising the potential;
- Compare the saving potential, the costs and energy savings with the baseline scenario established under Task 1 by sector and/or sub-sectors and in relevant aggregates; assess the relative importance of saving potentials within the EU and national economies and in comparison with the other main segments of the economy (e.g. households, transport).

Bidders should propose in their offers methodologies and explain the calculation of the saving potentials and their costs over the required time frame.

Task 4: Identification of the cost-effective saving potentials and recommendations of measures (soft or regulatory) to realise them

The contractor should establish a list of cost-effective potentials by sectors, sub-sectors or groups of sector's groups based on Task 1's sector break-down. The list of sectors and sub-sectors or, as appropriate, groups of sector's groups for which cost-effective saving potentials and recommendations should be established are subject to the Commission's preliminary approval. The contractor should make reasoned recommendations of those potentials that justify/require taking specific measures (soft or regulatory) in light of the EU energy, climate and relevant strategic objectives and after appraising their societal, economic, environment and energy system benefits. The lists of potentials should be accompanied with lists of recommended measures or packages of measures together with qualitative and quantitative reasoning, describing their nature and the likely resources needed for their implementation (investments, financing, skills, qualification and administrative costs and capacities, etc.).

Task 5: Assessment of the potentials and the measures in light of EU and international trends, markets and legislation

The contractor should provide an analysis on the reasons why the improvement factors and potentials identified in Tasks 2-4 could not be realised without the recommended measures. The analysis should take into account the impact of existing EU legislation and EU and global market and technological developments and trends. It should, in particular, analyse the impact of the EU Emissions Trading Directive (Directive 2003/87/EC as amended by Directive 2009/29/EC), the Industrial Emissions Directive (2010/75/EU) and the Renewable Energy Directive (2009/28/EC). In addition, it should provide a qualitative assessment of the impact of the EU energy efficiency related legislation (e.g. Eco-design Directive 2009/125/EC, Energy Labelling Directive 2010/30/EU, the Energy Performance of Buildings Directive 2010/31/EU and the Energy Efficiency Directive 2012/27/EU) and instruments, on the top of the inclusion of those in the baseline scenario. The impact of the EU competitive position before and after the potentials' realisation should be specifically addressed.

Task 6: Assessment of the impact of the recommended measures

In addition to the energy impacts included under Tasks 1-5, the contractor should assess the broader economic, social and environmental impacts. The contractor should identify direct and indirect environmental, economic and social impacts and how they occur; identify who is affected by these impacts (including those outside the EU) and in what way; identify whether there are specific impacts that should be examined (SMEs, consumers, competition, international, national, regional); assess the impacts in qualitative, quantitative and monetary terms or explain why quantification is not possible or proportionate and consider the risks and uncertainties in the policy choices, including expected compliance patterns. When assessing the impacts, the contractor should take into consideration of the Commission Impact Assessment Guidelines and related documents.²⁷

The contractor should in particular deliver the estimates of impacts of analysed scenarios on competitiveness and industries and the export and import positions of the EU. It should include quantified analysis and figures about export positions and trends of the proposed energy efficiency measures.

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http://ec.europa.eu/governance/impact/commission_guidelines/commission_guidelines en.htm; http://ec.europa.eu/governance/impact/commission_guidelines/docs/iag_2009_en.pdf

In performing Tasks 1-6 the contractor should build upon the existing knowledge and ensure that the study leads to substantially new analysis and data; i.e. simple copying and paraphrasing existing knowledge available for the Commission or from the Commission will not fulfil the requirements of contract.

3.4. Reports and documents to produce - Timetable to observe

Execution of the tasks begins after the date on which the Contract enters into force.

In principle, the deadlines set out below cannot be extended. The Contractor is deemed solely responsible for delays occasioned by subcontractors or other third parties (except for rare cases of force majeure). Adequate resources and appropriate organisation of the work including management of potential delays should be put in place in order to observe the timetable below.

A **kick-off meeting** will take place in Brussels, at the latest **21 working days** following the signature of the contract, in order to settle all the details of the study to be undertaken.

A first *interim* **meeting** will take Brussels, at the latest **5 months** following the signature of the contract in order to discuss the progress and Commission's observations on the approach and on the outline of the final report. Drafts of these documents will have to be provided by the contractor **10 working days** before the meeting.

At second *interim* meeting will also take place in Brussels, at the latest **9 months** following the signature of the contract in order to discuss the Commission's observations. If the observations are considered as minor by the Commission, the Contractor will have to submit additional information as part as the final report. If the observations are considered as major by the Commission, the Contractor will be request to provide a new report.

A final meeting will finally take place in Brussels, at the latest **21 working days after delivery of the draft final report** (12 months following the signature of the contract) in order to discuss the Commission's observations on the draft final report.

Minutes of meetings

The contractor will draft the **minutes** of all meetings performed within this contract. Draft minutes shall be sent to the Commission at the latest 10 working days after the meeting.

Progress reports

At latest **4 months** following the signature of the contract a **1**st **interim report** and the framework of the final report shall be provided. The **1**st interim report shall contain the methodology and approach and a comprehensive collection and list of materials and data, a preliminary analysis of those materials and data and the outline of the final report. The draft report will have to be provided by the contractor at the latest **21 working days before the first interim meeting.**

A 2nd interim report showing progress of the work shall be submitted to the Commission, in principle, 8 months after the date of signature of the contract. This report will detail the work done by the Contractor at this time, covering additional materials and data, analysis of the data and materials, the preliminary results of the modelling and a comprehensive description of the

preliminary finding and conclusions. The drafts of the report will have to be provided by the contractor at the latest **21 working days before the second interim meeting**.

A 3rd interim report containing all the materials and data relevant to the subject matter, the final results of the modelling and the findings and conclusions of the study shall be submitted to the Commission, in principle, 10 months after the date of signature of the contract. This report will also detail the work done by the Contractor at this time.

Final report

The contractor will submit the final report to the Commission at the latest **12 months** after the signature of the contract.

The final report will consist in analysing the overall results of the tasks 1-6 (See sections 3.1-3.3).

It will include an executive summary. All the documents drafted during the contract will be annexed; inter alia the final minutes of all meetings, statistical data gathered and modelling results in Excel and word files.

Report format and publication

3 copies of the reports shall be supplied in paper form and one copy in electronic form in MS Office format.

The Commission may publish the results of the study. For this purpose, the tenderer must ensure that the study is not subject to any restrictions deriving from intellectual property rights of third parties. Should he intend to use data in the study, which cannot be published, this must be explicitly mentioned in the offer.

Reports have to be drafted in English in a properly literate manner and must be fully comprehensive in terms of grammatical structure (complete sentences, punctuation, explanation of abbreviations the first time they are used, etc.) using clear language.

3.5. Duration of the tasks

The duration of the tasks shall not exceed 12 months. This period is calculated in calendar days

3.6. Place of performance

The tasks will be performed on the Contractor's premises. However, meetings between the contractor and the Commission may be held on Commission premises in Brussels.

4. CONTENT, STRUCTURE AND GRAPHIC REQUIREMENTS OF THE FINAL DELIVERABLES

All studies produced for the European Commission and Executive Agencies shall conform to the corporate visual identity of the European Commission by applying the graphic rules set out in the European Commission's Visual Identity Manual, including its logo²⁸.

The Commission is committed to making online information as accessible as possible to the largest possible number of users including those with visual, auditory, cognitive or physical disabilities, and those not having the latest technologies. The Commission supports the <u>Web Content Accessibility</u> Guidelines 2.0 of the W3C.

For full details on Commission policy on accessibility for information providers, see: http://ec.europa.eu/ipg/standards/accessibility/index en.htm

Pdf versions of studies destined for online publication should respect W3C guidelines for accessible pdf documents. See: http://www.w3.org/WAI/GL/WCAG20-TECHS/pdf.html

4.1. Content

4.1.1. Final study report

The final study report shall include:

- An abstract of no more than 200 words and an executive summary of maximum 6 pages, both in English and French;
- The following standard disclaimer:

"The information and views set out in this [report/study/article/publication...] are those of the author(s) and do not necessarily reflect the official opinion of the Commission. The Commission does not guarantee the accuracy of the data included in this study. Neither the Commission nor any person acting on the Commission's behalf may be held responsible for the use which may be made of the information contained therein."

- Specific identifiers which shall be incorporated on the cover page provided by the Contracting Authority.

4.1.2. Publishable executive summary

The publishable executive summary shall be provided in both in English and French and shall include:

- The following standard disclaimer:
 - "The information and views set out in this [report/study/article/publication...] are those of the author(s) and do not necessarily reflect the official opinion of the Commission. The Commission does not guarantee the accuracy of the data included in this study. Neither the Commission nor any person acting on the Commission's behalf may be held responsible for the use which may be made of the information contained therein."
- Specific identifiers which shall be incorporated on the cover page provided by the Contracting Authority.

²⁸ The Visual Identity Manual of the European Commission is available upon request. Requests should be made to the following e-mail address: comm-visual-identity@ec.europa.eu

4.2. Structure

All the documents drafted during the contract will be annexed, inter alia the final minutes of all meetings, statistical data gathered and model results.

4.3. Graphic requirements

For graphic requirements please refer to the template available at Annex 4. The cover page shall be filled in by the contractor in accordance with the instructions provided in the template.

5. LIST OF RELEVANT STUDIES (TO FURTHER DEVELOP)

ABB. (2007). Energy Efficiency in the Power Grid. Norwalk.

Ademe - Agence de l'Environnement et de la Maîtrise de l'Energie, 2006. Energy consumption for refrigeration in Europe.

Ademe, 2009 Energy Efficiency Trends and Policies in the Household & Tertiary sectors in the EU 27.

Almeida et. Al., 2000. Improving the penetration of energy efficient motors and drives. European Commission, Directorate-General for transport and Energy, SAVE II Programme, Contract 4.1031/Z/96-044

Almeida, A. (2000). VSDs for electric motor systems. Coimbra: ISR-University of Coimbra.

Almeida, A. (2008). *Preparatory study for the Energy Using Products (EuP) Direc-tive - Lot 11: Motors*. Coimbra.

Ashok, S., Banerjee, R. 2000, Load management applications for the industrial sector. Applied Energy 66, 105-111.

Adnot, J. (1999). Limiting the Impact of Increasing Cooling Demand in the Euro-pean Union: Results from a Study on Room Air-Conditioner Energy Efficiency. Paris.

Adnot, J.. (2003). Energy Efficiency and Certification of Central Air Conditioners (EECCAC) - Final Report. Paris.

Adnot, J. (2004). Technisches Modul zum Thema Klimatisierung. Paris.

AGEB. (2012). *Einheitenumrechner*. Arbeitsgemeinschaft Energiebilanzen. http://www.agenergiebilanzen.de/viewpage.php?idpage=67. Accessed March 13, 2012. Berlin.

APS. (1999). *Energy Answers: Energy-Efficient Home Appliances*. Arizona: Ari-zona Public Services Company.

ATKearney. (2009). Energiewirtschaft macht mobil. Düsseldorf.

Bassols, J., Kuckelkorn, J., Langreck, J., Schneider, R., Veelken, H., 2002. Trigeneration in the food industry. Applied Thermal Engineering 22, 595-602.

Boverket, 2005, Energy statistics in the European Union 2004, In: www.iut.nu

BIOIS. (2007). *Preparatory Studies for Eco-design Requirements for EuP – Lot 12: Commercial refrigerators and freezers.* Paris: Bio Intelligence Service.

BITKOM. (2008). Energy efficiency in the data centre. Berlin: BITKOM.

Blum, O. (2007). Revision of Best Available Technique Reference Document for the Pulp & Paper Industry: Use of Energy Saving Techniques. München: Papier-technische Stiftung.

BMU. (2009). Energieeffiziente Rechenzentren - Beispiele aus Europa, USA und Asien. Berlin: BMU.

Bührer, C.; Hagemann, H. (2009). *Efficient magnetic billet heating by direct current*. Elektro Wärme International – Zeitschrift für elektrothermische Prozesse 2 2009.

Bundesregierung Deutschland, (2011). *Merkel: Elektroautos gehört die Zukunft*. Available at http://www.bundesregierung.de/Content/DE/Artikel/2011/05/2011-05-14-podcast.html. Accessed July 30, 2011.

Capros, P., Mantzos, L., Tasios, N., De Vita, A. and Kouvaritakis, N., 2010. EU energy trends to 2030: 2009 Update, ed. Office for official publications of the European Communities, Luxemburg.

CEFIC, 2010, Facts and Figures 2010, The European Chemical Industry in a worldwide perspective.

CEMBUREAU, 2009.Co-Processing of alternative fuels and raw materials in the European cement Industry.

CEC. (2003). California State fuel-efficient tire report: Volume I. California Energy Commission.

CEMEP. (2011). *Energy saving motors result 1998 – 2009*. Available at http://www.cemep.org. Accessed March 15, 2011.

CEPI, 2009. Key Statistics 2009, European Pulp and Paper Industry

CISCO. (2008). Approaching the Zettabyte Era. CISCO.

Coulomb, D., 2008. Refrigeration and cold chain serving the global food industry and creating a better future: two key IIR challenges for improved health and environment. Trends in food Science & Technology 19, 413-417

Datamonitor, 2006., Global food, Beverage & Tobacco. Industry profile.

Deivasahayam, M. (2005). Energy Conservation through Efficiency Improvement in Squirrel Cage Induction Motors by using copper die cast rotors. EEMEDS.

dena. (2009). Green IT - Potential für die Zukunft. Berlin: dena.

DGES. (2011). *Vergleich verschiedener Technologien*. Available at: http://www.dges.de/relaunch/23.html. Accessed March 15, 2011.

DLR. (2006). *Trans-Mediterranean Interconnection for Concentrating Solar Power*. Stuttgart: Deutsches Institut für Luft- und Raumfahrt.

Doppelbauer, M. (2005). Performance Characteristics of Driver Motors Optimized for Die-cast Copper Cages. EEMEDS.

Papers presented at the ECEEE Industrial Energy Efficiency Study, Arnhem, 11 - 14 September 2012 (80 papers in industrial efficiency) and some of the papers presented at the regular eceee summer studies.

ECF. (2010a). Roadmap 2050. A practical guide to a prosperous, low-carbon Europe. Den Haag: European Climate Foundation

ECF. (2010b). *Energy savings* 2020 – *How to triple the impact of energy saving policies in Europe*. Den Haag: European Climate Foundation.

ECOFYS. (2005). Cost-effective Climate Protection in the Building Stock of the New EU Member States. Beyond the EU Energy Performance of Buildings Direc-tive. Brussels, Cologne: European Insulation Manufacturers Association (EURIMA).

eepotential. (2012). Data Base on Energy Saving Potentials. http://www.eepotential.eu. Accessed March 15, 2012.

Energynautics. (2011). European grid study 2030/2050. Langen.

Erhard, K. (2010). Einsparung von Prozessenergie und Steuerung von Papierei-genschaften durch gezielte chemische Fasermodifizierung. European Journal of Wood and Wood Products

Ecofys, JRC-IPTS, 2009. Sectoral Emission Reduction Potentials and Economic Cost for Climate Change (SERPEC-CC). Industry & refineries sector, ed. Office for official publications of the European Communities, Luxemburg.

Ecofys, 2009a, Fraunhofer institure for Systems and Innovation Research and Öko-Institute. Methodology for the free allocation of emission allowances in the EU ETS post 2012. Sector report for the chemical industry.

Ecofys, 2009b. Fraunhofer Institute for Systems and Innovation Research, Öko-Institut. Methodology for the free allocation of emission allowances in the EU ETS post 2012. Sector report for the iron and steel industry.

Ecofys, 2009c. Fraunhofer Institute for Systems and Innovation Research, Öko-Institut. Methodology for the free allocation of emission allowances in the EU ETS post 2012. Sector report for the cement industry.

Ecofys, 2009d. Fraunhofer Institute for Systems and Innovation Research, Öko-Institut. Methodology for the free allocation of emission allowances in the EU ETS post 2012. Sector report for the pulp and paper industry.

Ecofys, 2009e. Fraunhofer Institute for Systems and Innovation Research, Öko-Institut. Methodology for the free allocation of emission allowances in the EU ETS post 2012. Sector report for the ceramics industry.

Ecoheat & Power WP1, 2005. The European Heat Market.

Ecoheat & Power WP2, 2005. The European Cold Market.

Edelgard Grube, Ilias Sofronis, Rinto Dusée, Stefan Plesser, 2007. Detailed analysis of electricity consumption in tertiary buildings as a basis for energy efficiency policies, ECEEE 2007

Energie Verwertungs Agentur, 1998, Analysis of Energy Efficiency of Domestic Electric Storage Water Heaters.

Esdaile-Bouquet, T., Cogen Europe. Optimum integration of polygeneration in the food industry – quantifying the technical potential in the food transformation industry

European Parliament resolution with recommendations to the Commission on heating and cooling from renewable energy sources, 2006, OJC 290E.

European Parliament and the Council, 2006b. Directive 2006/32/EC of the European Parliament and of the Council of 5 April 2006 on energy end-use efficiency and energy services, Brussels, Belgium.

European Parliament and the Council, 2009. Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of eco-design requirements for energy-related products, Brussels, Belgium.

European Parliament and the Council, 2010. Directive 2010/31/EC of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings, Brussels, Belgium.

European Commission JRC-IPTS IPPC, 2006. Reference Document on Best Available Techniques in the Food Drink and Milk Industries, ed. Office for official publications of the European Communities, Luxemburg.

European Commission, 2007a. Directorate-General for Energy and Transport. European Energy and Transport Trends to 2030 – Update 2007, ed. Office for official publications of the European Communities, Luxemburg.

European Commission, 2007b. Directorate General for Economic and Financial Affairs. European Economy. Economic papers. N298. Imposing a unilateral carbon constrain on energy-intensive industries and its impact on their international competitiveness – Data and analysis, ed. Office for official publications of the European Communities, Luxemburg.

European Commission JRC-IPTS IPPC, 2009a. Draft reference Document on Best Available Techniques for the Non-Ferrous Metals Industries.

European Commission JRC-IPTS IPPC, 2009b. Reference Document on Best Available Techniques for Energy Efficiency, ed. Office for official publications of the European Communities, Luxemburg.

European Commission JRC-IPTS IPPC, 2009c. Draft Reference Document on Best Available Techniques in the Glass Manufacturing Industry.

European Commission JRC-IPTS IPPC, 2009d. Draft Reference Document on Best Available Techniques in the Ceramic Manufacturing Industry.

European Commission IE-JRC, 2010a. SET-Plan workshop on Technology Innovations for Energy Efficiency and Greenhouse Gas (GHG) emissions reduction in the Pulp and Paper Industries in the EU27 up to 2030 (Brussels)

European Commission IE-JRC, 2010b. SET-Plan workshop on Technology Innovations for Energy Efficiency and Greenhouse Gas (GHG) emissions reduction in the iron and Steel Industries in the EU27 up to 2030 (Brussels).

European Commission IE-JRC, 2010c, SET-Plan workshop on Technology Innovations for Energy Efficiency and Greenhouse Gas (GHG) emissions reduction in the cement Industries in the EU27 up to 2030 (Brussels).

European Commission JRC-IPTS IPPC, 2010a. Draft Reference Document on Best Available Techniques for the Production of Pulp and Paper.

European Commission JRC-IPTS IPPC, 2010b. Reference Document on Best Available Techniques in the Cement, Lime Manufacturing Industries, ed. Office for official publications of the European Communities, Luxemburg.

European Commission, 2010. Draft of the Commission Progress Report on Implementing The Cogeneration Directive. Deliverable 1.2 within the framework of the Administrative Arrangement on Cogeneration between DG ENER and JRC.

European Commission DG-ENER, 2010, EU energy trends to 2030, ed. Office for official publications of the European Communities, Luxemburg.

European Environment Agency (EEA), 2010, The European environment state and outlook. Consumption and the environment, 68 p.

Eurostat statistics, 2010, In: http://epp.eurostat.ec.europa.eu

Eurostat, 2011. In: http://epp.eurostat.ec.europa.eu/

Fraunhofer Institute for Systems and Innovation Research (ISI): Concrete Paths of the European Union to the 2°C Scenario: Achieving the Climate Protection Targets of the EU by 2050 through Structural Change, Energy Savings and Energy Efficiency Technologies Karlsruhe, 20 March 2012

Granade, H.C., Creyts, L., Derkatch, A., Farese, P., Nyquist, S. and Ostrowski, K., 2009, *Unlocking Energy efficiency in the US economy*.

Häfele, W., 1977. On Energy Demand. Scientific afternoon lecture at the 21st general conference of the International Atomic Energy Agency, Vienne, September 1977.

IEA definitions, 2010, Oil market report-glossary. In: http://omrpublic.iea.org/.

International Energy Agency (IEA), 2007. Tracking Industrial Energy Efficiency and CO₂ emissions. In: www.iea.org/

International Energy Agency (IEA), 2008a. World Energy Outlook 2008. In: www.iea.org/

International Energy Agency (IEA), 2008 b, Worldwide Trends in Energy Use and Efficiency, Key Insights from IEA Indicator Analysis, In: www.iea.org/

International Energy Agency (IEA) Scoreboard 2009, In: www.iea.org/
International Energy Agency, OECD, 2009. World Economic Outlook 2008. In: www.iea.org/

International Energy Agency (IEA), 2011, Energy Efficiency in Buildings-Heating and Cooling Equipment. In: www.iea.org/

International Energy Agency (IEA), (2011). Energy Statistics. In: www.iea.org/

International Energy Agency (IEA), 2009a. Energy Technology Transitions for Industry. In: ww.iea.org/

International Energy Agency, 2009b. Energy technology transitions for industry. Strategies for the next industrial revolution. In: www.iea.org/

International Energy Agency. 2009c. Chemical and Petrochemical sector. Potential of bet practice technology and other measures for improving energy efficiency. In: ww.iea.org/

International Energy Agency. 2009d. Energy Technology Transitions for Industry.

International Energy Agency, 2010. Energy technology perspectives 2010. Scenarios & Strategies to 2050. In: www.iea.org/

Intergovernmental Panel on Climate Change (IPCC), 2005. Special report on Carbon dioxide Capture and Storage. Cambridge University Press. 2005

Ivan Scrase, White-collar CO₂ - Energy consumption in the service sector, The Association for the Conservation of Energy, London, August 2000.

James, S.J., James, C., 2010. The food cold chain and climate change. Food Research International 43 1944-1956

Joachim Schleich, Barriers to energy efficiency: A comparison across the German commercial and services sector, Ecological Economics 68 (2009) 2150–2159

Kletzan-Slamanig, D., Köppl,A., Wüger,M., 2009. The impact of lifestyles on private household's energy demand for housing and transport in Austria, Austrian Institute of Economic Research. In: www.esee2009.si

Lapillonne, B., 1978. MEDEE 2: A model for long-term energy demand evaluation. International Institute for Applied Systems Analysis, Research Report, RR-78-17, November 1978.

McCracken, M. (2011). In: www.teachmefinance.com

Mlecnik, E., Visscher, H., Van Hal, A., 2010, Barriers and opportunities for labels for highly energy-efficient houses, Energy Policy 38 (2010), pp. 4592-4603.

Moritz, P, Borggref, F., 2011. The potential of demand-site management in energy-intensive industries for electricity markets in Germany. Applied Energy 88, 432-441

Morna, I. and Van Vuren, D. P., 2009, Modelling global residential sector energy demand for heating and air conditioning in the context of climate change, Energy Policy 37 (2009), 507–52.

Natural Resources CANada (NRCAN), 2011. "Description of Heating Project Load and Energy Calculation". RETScreen Combined Heat and Power (CHP) model. In: www.retscreen.net

Neelis, M., Patel, M., Blok, K., Haije, W., Bach, P., 2007. Approximation of theoretical energy-saving potentials for the petrochemical industry using energy balances for 68 key processes. Energy 32, 1104-1123

Nemry, F., Uihlein, A., Makishi Colodel, C., Wittstock, B., Braune, A., Wetzel.C., Hasan. I., Niemeier, S., Frech, Y., Kreißig, J. and Gallon, N., 2008, *Environmental Improvement Potentials of Residential Buildings*.

Nicolas Mairet, Fabrice Decellas, 2009. Determinants of energy demand in the French service sector: A decomposition analysis, Energy Policy 37(2009)2734–2744

Rafferty K., 2001, *Domestic hot water heating*, Geo heat Center Bulletin.

Rainer N, 2009. Burning Technology. Proceedings of the 6th International VDZ Congress 2009.

Rodríguez Morales J., 2011. The use of cogeneration in European key industry sectors, EU Sustainable Energy Week, Brussels.

Rong, F., Clarke, L., Smith, S. 2007. Climate Change and the long term evolution of the U.S. Buildings Sector, www.pnl.gov

Schlomann, B., Edelgard Gruber, Dr. Bernd Geiger, Heinrich Kleeberger, Urs Wehmhörner, Till Herzog, Daria-Maria Konopka, 2009, Energy consumption of the tertiary sector (trade, commerce and services) for the years 2004 to 2006 - Final report to the Federal Ministry of Economics and Technology (BMWi) and to the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU).

Schmitz, A., Kamiński, J., Scalet, B.M., Soria, A., 2011. Energy consumption and CO₂ emissions of the European glass industry. Energy Policy 39, 142-155

Schmitz, A., JRC-IPTS. Accompanying text document for energy and CO₂ saving measures in the chemical industry for the SERPEC-CC project

Swain, M., Food Refrigeration and process Engineering Research Centre (FRPERC). Energy use in food refrigeration. Calculations, assumptions and data sources.

Trojanowska, M. and Szul, T., 2006, *Modelling of energy demand for heating buildings, heating tap water and cooking in rural households*, Agricultural University of Cracow.

UNECE, 2005, *Bulletin of Housing Statistics for Europe and North America 2004*, Geneva 2005. Available at www.unece.org/

UK National Statistics Publication, Energy Consumption in the UK - Service sector data tables - 2010 update, 2010

WBCSD/CSI - ECRA (World Business Council for Sustainable Development/Cement Sustainability Initiative - European cement research academy), 2009. Development of state of the Art-Techniques in Cement Manufacturing: Trying to look ahead.

World Business Council for Sustainable Development(WBCSD), 2009, *Energy efficiency in buildings. Transforming the market*, 72 p.

ODYSSE-MURE project, 2009. Energy Efficiency Trends and Policies in the EU27. Results of the ODYSSE-MURE projects. Paris. In: www.odyssee-indicators.org

Panek, A., 2010. Impact, compliance and control legislation Summary report ASIEPI. In: www.asiepi.eu

Seyboth K., Beurskens, L., Langniss O., Sims, R.E.H, 2008, Recognizing the potential for renowable energy heating and cooling. Energy Policy 36 (7), 2460-2463.

Astrom S., Lindblad M., Sarnholm E., Soderblom J., 2010, Energy efficiency improvement in the European Household and Service Sector, Swedish Environmental Research Institute. In: www.ivl.se

EPA NR, 2011. Energy Performance Assessment of existing Non-Residential buildings. In: www.epa-nr.org

DOE, 2011. Manufacturing Energy and Carbon Footprint. In: www1.eere.energy.gov

ETSAP, 2011. Energy Technology Analysis Program, Industrial Combustion Boilers. In: http://iea-etsap.org

SPIRE Roadmap, March 2013, www.spire2030.eu

6. ANNEXES

- 1. Tenderer 's Identification Form
- 2. Declaration related to the exclusion criteria and absence of conflict of interest
- 3. Power of Attorney (mandate in case of joint tender)
- 4. Standard Word template for studies
- 5. Draft Contract

ANNEX 1

IDENTIFICATION OF THE TENDERER

(Each service provider, including any member of a consortium or grouping and subcontractor(s) whose share of the work is more than 20% of the contract must complete and sign this identification form)

Call for tender TENDER ENER/C3/2012-439

Identity		
Name of the tenderer		
Legal status of the tenderer		
Date of registration		
Country of registration		
Registration number		
VAT number		
Description of statutory social security cover (at the level of the Member State of origin) and non-statutory cover (supplementary professional indemnity insurance) ²⁹		
Address		
Address of registered office of tenderer		
Where appropriate, administrative address of tenderer for the purposes of this invitation to tender		
Contact Person		
Surname:		
First name:		
Title (e.g. Dr, Mr, Ms):		
Position (e.g. manager):		
Telephone number:		
Fax number:		
E-mail address:		
Legal Representatives		

²⁹ For natural persons

Names and function of legal representatives and of other representatives of the tenderer who are authorised to sign contracts with third parties		
Declaration by an authorised representative of the organisation ³⁰		
I, the undersigned, certify that the information given in this tender is correct and that the tender is valid.		
Surname:	Signature:	
First name:		

³⁰ This person must be included in the list of legal representatives; otherwise the signature on the tender will be invalidated.

ANNEX 2

Declaration of honour on exclusion criteria and absence of conflict of interest

(Complete or delete the parts in grey italics in parenthese) [Choose options for parts in grey between square brackets]

The undersigned	(insert name d	of the signator	v of this form)•
The undersigned	mser name	j ine signaior	y Oj inis joini,	/٠

in [his][her] own name (for a natural person)

□ representing the following legal person: (only if the economic operator is a legal person)

full official name: official legal form:

full official address:

VAT registration number:

- declares that [the above-mentioned legal person][he][she] is not in one of the following situations:
- a) is bankrupt or being wound up, is having its affairs administered by the courts, has entered into an arrangement with creditors, has suspended business activities, is the subject of proceedings concerning those matters, or is in any analogous situation arising from a similar procedure provided for in national legislation or regulations;
- b) has been convicted of an offence concerning professional conduct by a judgment of a competent authority of a Member State which has the force of *res judicata*;
- c) has been guilty of grave professional misconduct proven by any means which the contracting authorities can justify including by decisions of the European Investment Bank and international organisations;
- d) is not in compliance with all its obligations relating to the payment of social security contributions and the payment of taxes in accordance with the legal provisions of the country in which it is established, with those of the country of the contracting authority and those of the country where the contract is to be performed;
- e) has been the subject of a judgement which has the force of *res judicata* for fraud, corruption, involvement in a criminal organisation, money laundering or any other illegal activity, where such activity is detrimental to the Union's financial interests;
- f) is a subject of an administrative penalty for being guilty of misrepresentation in supplying the information required by the contracting authority as a condition of participation in a procurement procedure or failing to supply this information, or having been declared to be in serious breach of its obligations under contracts covered by the Union's budget.
 - (Only for legal persons other than Member States and local authorities, otherwise delete) declares that the natural persons with power of representation, decision-making or control³¹ over the above-mentioned legal entity are not in the situations referred to in b) and e) above;

This covers the company directors, members of the management or supervisory bodies, and cases where one natural person holds a majority of shares.

- declares that [the above-mentioned legal person][he][she]:
- g) has no conflict of interest in connection with the contract; a conflict of interest could arise in particular as a result of economic interests, political or national affinity, family, emotional life or any other shared interest;
- h) will inform the contracting authority, without delay, of any situation considered a conflict of interest or which could give rise to a conflict of interest;
- has not granted and will not grant, has not sought and will not seek, has not attempted and will
 not attempt to obtain, and has not accepted and will not accept any advantage, financial or in
 kind, to or from any party whatsoever, where such advantage constitutes an illegal practice or
 involves corruption, either directly or indirectly, inasmuch as it is an incentive or reward relating
 to award of the contract;
- j) provided accurate, sincere and complete information to the contracting authority within the context of this procurement procedure;
 - ➤ acknowledges that [the above-mentioned legal person][he][she] may be subject to administrative and financial penalties³² if any of the declarations or information provided prove to be false.

In case of award of contract, the following evidence shall be provided upon request and within the time limit set by the contracting authority:

For situations described in (a), (b) and (e), production of a recent extract from the judicial record is required or, failing that, a recent equivalent document issued by a judicial or administrative authority in the country of origin or provenance showing that those requirements are satisfied. Where the tenderer is a legal person and the national legislation of the country in which the tenderer is established does not allow the provision of such documents for legal persons, the documents should be provided for natural persons, such as the company directors or any person with powers of representation, decision making or control in relation to the tenderer.

For the situation described in point (d) above, recent certificates or letters issued by the competent authorities of the State concerned are required. These documents must provide evidence covering all taxes and social security contributions for which the tenderer is liable, including for example, VAT, income tax (natural persons only), company tax (legal persons only) and social security contributions.

For any of the situations (a), (b), (d) or (e), where any document described in two paragraphs above is not issued in the country concerned, it may be replaced by a sworn or, failing that, a solemn statement made by the interested party before a judicial or administrative authority, a notary or a qualified professional body in his country of origin or provenance.

If the tenderer is a legal person, information on the natural persons with power of representation, decision making or control over the legal person shall be provided only upon request by the contracting authority.

Full name Date Signature

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As provided for in Article 109 of the Financial Regulation (EU, Euratom) 966/2012 and Article 145 of the Rules of Application of the Financial Regulation

ANNEX 3

POWER OF ATTORNEY

mandating one of the partnes in a joint tender as lead partner and lead contractor 33

The undersigned:

- Signatory (Name, Function, Company, Registered address, VAT Number)

having the legal capacity required to act on behalf of his/her company,

HEREBY AGREES TO THE FOLLOWING:

- 1) To submit a tender as a partner in the group of partners constituted by Company 1, Company 2, Company N, and led by Company X, in accordance with the conditions specified in the tender specifications and the terms specified in the tender to which this power of attorney is attached.
- 2) If the European Commission awards the Contract to the group of partners constituted by Company 1, Company 2, Company N, and led by Company X on the basis of the joint tender to which this power of attorney is attached, all the partners shall be co-signatories of the Contract in accordance with the following conditions:
 - (a) All partners shall be jointly and severally liable towards the European Commission for the performance of the Contract.
 - (b) All partners shall comply with the terms and conditions of the Contract and ensure the proper delivery of their respective share of the services and/or supplies subject to the Contract.
- 1) Payments by the European Commission related to the services and/or supplies subject to the Contract shall be made through the lead partner's bank account: [Provide details on bank, address, account number].
- 2) The partners grant to the lead partner all the necessary powers to act on their behalf in the submission of the tender and conclusion of the Contract, including:
 - (a) The lead partner shall submit the tender on behalf of the group of partners.
 - (b) The lead partner shall sign any contractual documents including the Contract, and Amendments thereto and issue any invoices related to the Services on behalf of the group of partners.
 - (c) The lead partner shall act as a single contact point with the European Commission in the delivery of the services and/or supplies subject to the Contract. It shall co-ordinate the delivery of the services and/or supplies by the group of partners to the European Commission, and shall see to a proper administration of the Contract.

Any modification to the present power of attorney shall be subject to the European Commission's express approval. This power of attorney shall expire when all the contractual obligations of the group of partners towards the European Commission for the delivery of the services and/or supplies subject to the Contract have ceased to exist. The parties cannot terminate it before that date without the Commission's consent.

Signed in on	[dd/mm/yyyy]		
Place and date:			
Name (in capital letters), function, company and signature:			

³³ To be filled in and signed by each of the partners in a joint tender, except the lead partner;

ANNEX 4 **Standard Word template for studies**

ANNEX 5 **DRAFT CONTRACT**



SERVICE CONTRACT

CONTRACT NUMBER - ENER/C3/2012-439/SI2.XXX

The European Union (hereinafter referred to as "the Union"), represented by the European Commission (hereinafter referred to as "the Commission"), which is represented for the purposes of the signature of this contract by Mrs Marie Donnelly, Director in the Directorate-General for Energy, Directorate for Renewables, Research and Innovation, Energy Efficiency,

of the one part,

and

[official name in full]

[official legal form (Delete if contractor is a natural person or a body governed by public law.)]

[statutory registration number (Delete if contractor is a body governed by public law. For natural persons, indicate the number of their identity card or, failing that, of their passport or equivalent)]

[official address in full]

[VAT registration number]

(hereinafter referred to as "the Contractor"), [represented for the purposes of the signature of this contract by [forename, surname and function,]

[The parties identified above and hereinafter collectively referred to as 'the Contractor' shall be jointly and severally liable vis-à-vis the Commission for the performance of this contract.]

of the other part,

HAVE AGREED

to the **special conditions**, the **general conditions for service contracts** and the following annexes:

- **Annex I** Tender specifications (reference No ENER/C3/2012-439 of [insert date], OJEU n°)
- **Annex II** Contractor's tender (reference No [complete] of [insert date])

[Other annexes]

which form an integral part of this contract (hereinafter referred to as "the contract").

- The terms set out in the special conditions shall take precedence over those in the other parts of the contract.
- The terms set out in the general conditions shall take precedence over those in the annexes.
- The terms set out in the tender specifications (Annex I) shall take precedence over those in the tender (Annex II).

<u>I – SPECIAL CONDITIONS</u>

ARTICLE I.1 – SUBJECT MATTER

- **I.1.1** The subject matter of the contract is a study on energy efficiency and energy saving potential in industry and on possible policy mechanisms.
- **I.1.2** The contractor shall execute the tasks assigned to it in accordance with the tender specifications annexed to the contract (Annex I).

ARTICLE I.2 – ENTRY INTO FORCE AND DURATION

- **I.2.1** The contract shall enter into force on the date on which it is signed by the last party.
- **I.2.2** Under no circumstances may performance commence before the date on which the contract enters into force
- **I.2.3** The duration of the execution of the tasks shall not exceed 12 months. Unless otherwise specified, all periods specified in the contract are calculated in calendar days. Execution of the tasks shall start from the date of entry into force of the contract.

The period of execution of the task may be extended only in exceptional and duly justified cases and with express written agreement of the parties. If the request for extension is made by the contractor, he must send it to the contracting authority in good time before it is due to take effect and at all events one month before the period of the execution of the tasks elapses, except in cases duly substantiated by the contractor and accepted by the contracting authority.

I.2.4 N/A

ARTICLE I.3 –PRICE

- **I.3.1** The maximum total amount to be paid by the contracting authority under the contract shall be EUR [amount in figures and in words] covering all tasks executed.
- I.3.2 N/A
- I.3.3 NA

ARTICLE I.4 – PAYMENT ARRANGEMENTS

I.4. Interim payment

The contractor shall submit an invoice for an interim payment of EUR [amount in figures and in words] equal to 50 % of the total amount referred to in Article I.3.1.

The Invoice for the interim payment shall accompanied by the second progress report in accordance with the tender specifications. The contracting authority shall make the payment within 60 days from receipt of the invoice. The contractor shall have 20 days in which to submit additional information or corrections or a new progress report or documents if required by the contracting authority.

I.4. Payment of the balance

The contractor shall submit an invoice for payment of the balance.

The invoice shall be accompanied by the final progress report. The contracting authority shall make the payment within 60 days from receipt of the invoice. The contractor shall have 20 days in which to submit additional information or corrections, a new final progress report or other documents if it is required by the contracting authority.

[Where VAT is due in Belgium, the provisions of the contract constitute a request for VAT exemption No 450, Article 42, paragraph 3.3 of the VAT code (circular 2/1978), provided the contractor includes the following statement in the invoice(s): "Exonération de la TVA, Article 42, paragraphe 3.3 du code de la TVA (circulaire 2/1978)" or an equivalent statement in the Dutch or German language.]

[Where VAT is due in Luxembourg, the contractor shall include the following statement in the invoices: "Commande destinée à l'usage officiel de l'Union européenne. Exonération de la TVA Article 43 § 1 k 2ième tiret de la loi modifiée du 12.02.79." In case of intra-Community purchases, the statement to be included in the invoices is: "For the official use of the European Union. VAT Exemption / European Union/ Article 151 of Council Directive 2006/112/EC."]

ARTICLE I.5 – BANK ACCOUNT

Payments shall be made to the contractor's bank account denominated in [euro][insert local currency where the receiving country does not allow transactions in EUR], identified as follows:

Name of bank:

Full address of branch:

Exact designation of account holder:

Full account number including [bank] codes:

[IBAN³⁴ code:]

ARTICLE I.6 – COMMUNICATION DETAILS AND DATA CONTROLLER

For the purpose of Article II.6, the data controller shall be the Director of the Shared Resources Directorate. Communications shall be sent to the following addresses:

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Contracting authority:

European Commission Directorate-General for Energy Directorate C- Unit C3 Ms Eva Hoos DM 24 4/39 B-1049 Brussels

Email: eva.hoos@ec.europa.eu

Contractor:

[Ms/Mr/Mrs]
[Function]
[Company name]
[Full official address]
Email: [complete]

³⁴ BIC or SWIFT code for countries with no IBAN code.

-

ARTICLE I.7- APPLICABLE LAW AND SETTLEMENT OF DISPUTES

- **I.7.1.** The contract shall be governed by Union law, complemented, where necessary, by the law of Belgium
- **I.7.2.** Any dispute between the parties in relation to the interpretation, application or validity of the contract which cannot be settled amicably shall be brought before the courts of Brussels

ARTICLE I.8 - EXPLOITATION OF THE RESULTS OF THE CONTRACT

I.8.1 Modes of exploitation

In accordance with Article II.10.2 whereby the Union acquires ownership of the results as defined in the tender specifications (Annex I), these results may be used for any of the following purposes:

- (a) use for its own purposes:
 - (i) making available to the staff of the contracting authority
 - (ii) making available to the persons and entities working for the contracting authority or cooperating with it, including contractors, subcontractors whether legal or natural persons, Union institutions, agencies and bodies, Member States' institutions
 - (iii) installing, uploading, processing
 - (iv) arranging, compiling, combining, retrieving
 - (v) copying, reproducing in whole or in part and in unlimited number of copies
- (b) distribution to the public:
 - (i) publishing in hard copies
 - (ii) publishing in electronic or digital format
 - (iii) publishing on the internet as a downloadable/non-downloadable file
 - (iv) broadcasting by any kind of technique of transmission
 - (v) public presentation or display
 - (vi) communication through press information services
 - (vii) inclusion in widely accessible databases or indexes
 - (viii) otherwise in any form and by any method
- (c) modifications by the contracting authority or by a third party in the name of the contracting authority:
 - (i) shortening
 - (ii) summarizing
 - (iii) modifying of the content
 - (iv) making technical changes to the content:
 - necessary correction of technical errors
 - adding new parts
 - providing third parties with additional information concerning the result with a view of making modifications
 - (v) addition of new elements, paragraphs titles, leads, bolds, legend, table of content, summary, graphics, subtitles, sound, etc.
 - (vi) preparation in audio form, preparation as a presentation, animation, pictograms story, slide-show, public presentation etc.
 - (vii) extracting a part or dividing into parts
 - (viii) use of a concept or preparation of a derivate work
 - (ix) digitisation or converting the format for storage or usage purposes
 - (x) modifying dimensions
 - (xi) translating, inserting subtitles, dubbing in different language versions:
 - English, French, German
 - all official languages of EU

- languages used within EU
- languages of candidate countries
- (d) the modes of exploitation listed in article II.10.4
- (e) rights to authorise, license, or sub-license in case of licensed pre-existing rights, the modes of exploitation set out in any of the points (a) to (c) to third parties.

Where the contracting authority becomes aware that the scope of modifications exceeds that envisaged in the contract the contracting authority shall consult the contractor. Where necessary, the contractor shall in turn seek the agreement of any creator or other right holder. The contractor shall reply to the contracting authority within one month and shall provide its agreement, including any suggestions of modifications, free of charge. The creator may refuse the intended modification only when it may harm his honour, reputation or distort integrity of the work.

I.8.2 Pre-existing rights and transmission of rights

All pre-existing rights shall be licensed to the Union in accordance with Article II.10.3. The contractor shall provide to the contracting authority a list of pre-existing rights and third parties' rights including its personnel, creators or other right holders as provided for in Article II.10.5.

ARTICLE I.9 – TERMINATION BY EITHER PARTY

Either party may, unilaterally and without being required to pay compensation, terminate the contract by formally notifying the other party by giving two months notice. Should the contracting authority terminate the contract, the contractor shall only be entitled to payment corresponding to part-performance of the contract before the termination date. The first paragraph of Article II.14.3 shall apply.

For the contractor, [Company name/forename/surname/function] signature[s]: ______ signatures: _____ Done at [Brussels], [date] Done at Brussels, [date] In duplicate in English.

II – GENERAL CONDITIONS FOR SERVICE CONTRACTS

ARTICLE II.1 – PERFORMANCE OF THE CONTRACT

- **II.1.1** The contractor shall perform the contract to the highest professional standards.
- **II.1.2** The contractor shall be solely responsible for taking the necessary steps to obtain any permit or licence required for performance of the contract under the laws and regulations in force at the place where the tasks assigned to it are to be executed.
- **II.1.3** Without prejudice to Article II.4 any reference made to the contractor's personnel in the contract shall relate exclusively to individuals involved in the performance of the contract.
- **II.1.4** The contractor must ensure that the personnel performing the contract possesses the professional qualifications and experience required for the execution of the tasks assigned to it.
- **II.1.5** The contractor shall neither represent the contracting authority nor behave in any way that would give such an impression. The contractor shall inform third parties that it does not belong to the European public service.
- **II.1.6** The contractor shall be solely responsible for the personnel who executes the tasks assigned to the contractor.

The contractor shall stipulate the following employment or service relationships with its personnel:

- (a) personnel executing the tasks assigned to the contractor may not be given orders directly by the contracting authority;
- (b) the contracting authority may not under any circumstances be considered to be the employer of the personnel referred to in point (a) and the personnel shall undertake not to invoke against the contracting authority any right arising from the contractual relationship between the contracting authority and the contractor.
- **II.1.7** In the event of disruption resulting from the action of one of the contractor's personnel working on the contracting authority's premises or in the event that the expertise of a member of the contractor's personnel fails to correspond to the profile required by the contract, the contractor shall replace him without delay. The contracting authority shall have the right to make a reasoned request for the replacement of any such personnel. The replacement personnel must have the necessary qualifications and be capable of performing the contract under the same contractual conditions. The contractor shall be responsible for any delay in the execution of the tasks assigned to it resulting from the replacement of personnel.
- II.1.8 Should the execution of the tasks be directly or indirectly hampered, either partially or totally, by any unforeseen event, action or omission, the contractor shall immediately and on its own initiative record it and report it to the contracting authority. The report shall include a description of the problem and an indication of the date on which it started and of the remedial action taken by the contractor to ensure full compliance with its obligations under this contract. In such an event the contractor shall give priority to solving the problem rather than determining liability.

II.1.9 Should the contractor fail to perform its obligations under the contract, the contracting authority may - without prejudice to its right to terminate the contract - reduce or recover payments in proportion to the scale of the unperformed obligations. In addition, the contracting authority may claim compensation or impose liquidated damages in accordance with Article II.12.

ARTICLE II.2 – MEANS OF COMMUNICATION

- **II.2.1** Any communication relating to the contract or to its performance shall be made in writing and shall bear the contract number. Any communication is deemed to have been made when it is received by the receiving party unless otherwise provided for in this contract.
- **II.2.2** Electronic communication shall be deemed to have been received by the parties on the day of dispatch of that communication provided it is sent to the addressees listed in Article I.6. Without prejudice to the preceding, if the sending party receives a message of non-delivery to or of absence of the addressee, it shall make every effort to ensure the actual receipt of such communication by the other party.
 - Electronic communication shall be confirmed by an original signed paper version of that communication if requested by any of the parties provided that this request is submitted without unjustified delay. The sender shall send the original signed paper version without unjustified delay.
- **II.2.3** Mail sent using the postal services is deemed to have been received by the contracting authority on the date on which it is registered by the department responsible referred to in Article I.6.

Any formal notification shall be made by registered mail with return receipt or equivalent, or by equivalent electronic means.

ARTICLE II.3 - LIABILITY

- **II.3.1** The contractor shall be solely responsible for complying with any legal obligations incumbent on it.
- **II.3.2** The contracting authority shall not be held liable for any damage caused or sustained by the contractor, including any damage caused by the contractor to third parties during or as a consequence of performance of the contract, except in the event of wilful misconduct or gross negligence on the part of the contracting authority.
- **II.3.3** The contractor shall be held liable for any loss or damage sustained by the contracting authority in performance of the contract, including in the event of subcontracting, and for any claim by a third party, but only to an amount not exceeding three times the total amount of the contract. Nevertheless, if the damage or loss is caused by the gross negligence or wilful misconduct of the contractor or of its personnel or subcontractors, the contractor shall have unlimited liability for the amount of the damage or loss.
- **II.3.4** The contractor shall indemnify and hold the Union harmless for all damages and costs incurred due to any claim. The contractor shall provide compensation in the event of any action, claim or proceeding brought against the contracting authority by a third party as a result of damage caused by the contractor during the performance of the contract. In the event of any action brought by a third party against the contracting authority in connection with the performance of the contract, including any alleged breach of intellectual property

- rights, the contractor shall assist the contracting authority. Such expenditure incurred by the contractor may be borne by the contracting authority.
- **II.3.5** The contractor shall take out an insurance policy against risks and damage relating to the performance of the contract, if required by the relevant applicable legislation. It shall take out supplementary insurance as reasonably required by standard practice in the industry. A copy of all the relevant insurance contracts shall be sent to the contracting authority should it so request.

ARTICLE II.4 - CONFLICT OF INTEREST

- **II.4.1** The contractor shall take all the necessary measures to prevent any situation of conflict of interest. Such situation arises where the impartial and objective performance of the contract is compromised for reasons involving economic interest, political or national affinity, family or emotional ties, or any other shared interest.
- **II.4.2** Any situation constituting or likely to lead to a conflict of interest during the performance of the contract shall be notified to the contracting authority in writing without delay. The contractor shall immediately take all the necessary steps to rectify the situation. The contracting authority reserves the right to verify that the steps taken are appropriate and may require that additional steps be taken within a specified deadline.
- **II.4.3** The contractor declares that it has not granted and will not grant, has not sought and will not seek, has not attempted and will not attempt to obtain and has not accepted and will not accept, any advantage, financial or in kind, to or from any party whatsoever, when such advantage constitutes an illegal practice or involves corruption, either directly or indirectly, in so far as it serves as an incentive or reward relating to the performance of the contract.
- **II.4.4** The contractor shall pass on all the relevant obligations in writing to its personnel and to any natural person with the power to represent it or take decisions on its behalf and ensure that it is not placed in a situation which could give rise to conflicts of interest. The contractor shall also pass on all the relevant obligations in writing to third parties involved in the performance of the contract including subcontractors.

ARTICLE II.5 – CONFIDENTIALITY

II.5.1 The contracting authority and the contractor shall treat with confidentiality any information and documents, in any form, disclosed in writing or orally in relation to the performance of the contract and identified in writing as confidential.

The contractor shall:

- (a) not use confidential information and documents for any purpose other than fulfilling its obligations under the contract without prior written agreement of the contracting authority;
- (b) ensure the protection of such confidential information and documents with the same level of protection it uses to protect its own confidential information, but in no case any less than reasonable care:
- (c) not disclose directly or indirectly confidential information and documents to third parties without prior written agreement of the contracting authority.
- **II.5.2** The confidentiality obligation set out in Article II.5.1 shall be binding on the contracting authority and the contractor during the performance of the contract and for five years starting from the date of the payment of the balance unless:

- (a) the disclosing party agrees to release the other party from the confidentiality obligation earlier;
- (b) the confidential information becomes public through other means than in breach of the confidentiality obligation, through disclosure by the party bound by that obligation;
- (c) the disclosure of the confidential information is required by law.
- **II.5.3** The contractor shall obtain from any natural person with the power to represent it or take decisions on its behalf, as well as from third parties involved in the performance of the contract, an undertaking that they will comply with the confidentiality obligation set out in Article II.5.1.

ARTICLE II.6 – PROCESSING OF PERSONAL DATA

- **II.6.1** Any personal data included in the contract shall be processed pursuant to Regulation (EC) 45/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data. Such data shall be processed by the data controller solely for the purposes of the performance, management and monitoring of the contract without prejudice to its possible transmission to the bodies charged with monitoring or inspection tasks in application of Union law.
- **II.6.2** The contractor shall have the right to access its personal data and the right to rectify any such data. The contractor should address any queries concerning the processing of its personal data to the data controller.
- **II.6.3** The contractor shall have right of recourse at any time to the European Data Protection Supervisor.
- **II.6.4** Where the contract requires the processing of personal data by the contractor, the contractor may act only under the supervision of the data controller, in particular with regard to the purposes of the processing, the categories of data which may be processed, the recipients of the data and the means by which the data subject may exercise his rights.
- **II.6.5** The contractor shall grant its personnel access to the data to the extent strictly necessary for the performance, management and monitoring of the contract.
- **II.6.6** The contractor undertakes to adopt appropriate technical and organisational security measures having regard to the risks inherent in the processing and to the nature of the personal data concerned in order to:
 - (a) prevent any unauthorised person from gaining access to computer systems processing personal data, and especially:
 - (i) unauthorised reading, copying, alteration or removal of storage media;
 - (ii) unauthorised data input, as well as any unauthorised disclosure, alteration or erasure of stored personal data;
 - (iii) unauthorised use of data-processing systems by means of data transmission facilities;
 - (b) ensure that authorised users of a data-processing system can access only the personal data to which their access right refers;
 - (c) record which personal data have been communicated, when and to whom;

- (d) ensure that personal data being processed on behalf of third parties can be processed only in the manner prescribed by the contracting authority;
- (e) ensure that, during communication of personal data and transport of storage media, the data cannot be read, copied or erased without authorisation;
- (f) design its organisational structure in such a way that it meets data protection requirements.

ARTICLE II.7 - SUBCONTRACTING

- **II.7.1** The contractor shall not subcontract without prior written authorisation from the contracting authority nor cause the contract to be de facto performed by third parties.
- **II.7.2** Even where the contracting authority authorises the contractor to subcontract to third parties, it shall nevertheless remain bound by its contractual obligations and shall be solely responsible for the proper performance of this contract.
- **II.7.3** The contractor shall make sure that the subcontract does not affect rights and guarantees granted to the contracting authority by virtue of this contract, notably by Article II.18.

ARTICLE II.8 – AMENDMENTS

- **II.8.1** Any amendment to the contract shall be made in writing before fulfilment of any new contractual obligations and in any case before the date of payment of the balance.
- **II.8.2** The amendment may not have the purpose or the effect of making changes to the contract which might call into question the decision awarding the contract or result in unequal treatment of tenderers.

ARTICLE II.9 – ASSIGNMENT

- **II.9.1** The contractor shall not assign the rights, including claims for payments, and obligations arising from the contract, in whole or in part, without prior written authorisation from the contracting authority.
- **II.9.2** In the absence of such authorisation, or in the event of failure to observe the terms thereof, the assignment of rights or obligations by the contractor shall not be enforceable against the contracting authority and shall have no effect on it.

<u>ARTICLE II.10 – OWNERSHIP OF THE RESULTS - INTELLECTUAL AND INDUSTRIAL PROPERTY RIGHTS</u>

II.10.1 Definitions

In this contract the following definitions apply:

- (1) 'results' means any intended outcome of the performance of the contract which is delivered and finally accepted by the contracting authority.
- (2) 'creator' means any natural person who contributed to the production of the result and includes personnel of the contracting authority or a third party.
- (3) 'pre-existing rights' means any industrial and intellectual property rights, including background technology, which exist prior to the contracting authority or the contractor ordering them for the

purpose of the contract execution and include rights of ownership and use by the contractor, the creator, the contracting authority and any third parties.

II.10.2 Ownership of the results

The ownership of the results shall be fully and irrevocably acquired by the Union under this contract including any rights in any of the results listed in this contract, including copyright and other intellectual or industrial property rights, and all technological solutions and information contained therein, produced in performance of the contract. The contracting authority may exploit them as stipulated in this contract. All the rights shall be acquired by the Union from the moment the results are delivered by the contractor and accepted by the contracting authority. Such delivery and acceptance are deemed to constitute an effective assignment of rights from the contractor to the Union.

The payment of the price as set out in the order forms or specific contracts is deemed to include any fees payable to the contractor in relation to the acquisition of ownership of rights by the Union including all forms of use of the results.

The acquisition of ownership of rights by the Union under this contract covers all territories worldwide.

Any intermediary sub-result, raw data, intermediary analysis made available by the contractor cannot be used by the contracting authority without the written consent of the contractor, unless the contract explicitly provides for it to be treated as a self-contained result.

II.10.3 Licensing of pre-existing rights

The Union shall not acquire ownership of the pre-existing rights.

The contractor shall license the pre-existing rights on a royalty-free, non-exclusive and irrevocable basis to the Union which may use the pre-existing right as foreseen in Article I.8.1 or in order forms or specific contracts. All the pre-existing rights shall be licensed to the Union from the moment the results were delivered and accepted by the contracting authority.

The licensing of pre-existing rights to the Union under this contract covers all territories worldwide and is valid for the whole duration of intellectual property rights protection.

II.10.4 Modes of exploitation

The Union shall acquire ownership of each of the results produced as an outcome of this contract which may be used for any of the following purposes:

- (a) giving access upon individual requests without the right to reproduce or exploit, as provided for by Regulation 1049/2001 of the European Parliament and of the Council of 30 May 2001 regarding public access to European Parliament, Council and Commission documents;
- (b) storage of the original and copies made in accordance with this contract;
- (c) archiving in line with the document management rules applicable to the contracting authority.

II.10.5 Identification and evidence of granting of pre-existing rights and rights of third parties

When delivering the results, the contractor shall warrant that they are free of rights or claims from creators and third parties including in relation to pre-existing rights, for any use envisaged by the contracting authority. This does not concern the moral rights of natural persons.

The contractor shall establish to that effect a list of all pre-existing rights and rights of creators and third parties on the results of this contract or parts thereof. This list shall be provided no later than the date of delivery of the final results.

In the result the contractor shall clearly point out all quotations of existing textual works. The complete reference should include as appropriate: name of the author, title of the work, date and place of publication, date of creation, address of publication on internet, number, volume and other information which allows the origin to be easily identified.

Upon request by the contracting authority, the contractor shall provide evidence of ownership or rights to use all the listed pre-existing rights and rights of third parties except for the rights owned by the Union.

This evidence may refer, inter alia, to rights to: parts of other documents, images, graphs, tables, data, software, technical inventions, know-how etc. (delivered in paper, electronic or other form), IT development tools, routines, subroutines and/or other programs ("background technology"), concepts, designs, installations or pieces of art, data, source or background materials or any other parts of external origin.

The evidence shall include, as appropriate:

- (a) the name and version number of a software product;
- (b) the full identification of the work and its author, developer, creator, translator, data entry person, graphic designer, publisher, editor, photographer, producer;
- (c) a copy of the licence to use the product or of the agreement granting the relevant rights to the contractor or a reference to this licence;
- (d) a copy of the agreement or extract from the employment contract granting the relevant rights to the contractor where parts of the results were created by its personnel;
- (e) the text of the disclaimer notice if any.

Provision of evidence does not release the contractor from its responsibilities in case it is found that it does not hold the necessary rights, regardless of when and by whom this fact was revealed.

The contractor also warrants that it possesses the relevant rights or powers to execute the transfer and that it has paid or has verified payment of all due fees including fees due to collecting societies, related to the final results.

II.10.6 Creators

By delivering the results the contractor warrants that the creators undertake not to oppose that their names be recalled when the results are presented to the public and confirms that the results can be divulged. Names of authors shall be recalled on request in the manner communicated by the contractor to the contracting authority.

The contractor shall obtain the consent of creators regarding the granting of the relevant rights and be ready to provide documentary evidence upon request.

II.10.7 Persons appearing in photographs or films

If natural, recognisable persons appear in a result or their voice is recorded the contractor shall submit a statement of these persons (or of the persons exercising parental authority in case of minors) where they give their permission for the described use of their image or voice on request by

the contracting authority. This does not apply to persons whose permission is not required in line with the law of the country where photographs were taken, films shot or audio records made.

II.10.8 Copyright for pre-existing rights

When the contractor retains pre-existing rights on parts of the results, reference shall be inserted to that effect when the result is used as set out in Article I.8.1 with the following disclaimer: © - year – European Union. All rights reserved. Certain parts are licensed under conditions to the EU.

II.10.9 Visibility of Union funding and disclaimer

When making use of the results, the contractor shall declare that they have been produced within a contract with the Union and that the opinions expressed are those of the contractor only and do not represent the contracting authority's official position. The contracting authority may waive this obligation in writing.

ARTICLE II.11 – FORCE MAJEURE

- **II.11.1** 'Force majeure' means any unforeseeable and exceptional situation or event beyond the parties' control which prevents either of them from fulfilling any of their obligations under the contract, which was not attributable to error or negligence on their part or on the part of subcontractors and which proves to be inevitable in spite of exercising due diligence. Any default of a service, defect in equipment or material or delays in making them available, unless they stem directly from a relevant case of force majeure, as well as labour disputes, strikes or financial difficulties, cannot be invoked as force majeure.
- **II.11.2** A party faced with force majeure shall formally notify the other party without delay, stating the nature, likely duration and foreseeable effects.
- **II.11.3** The party faced with force majeure shall not be held in breach of its contractual obligations if it has been prevented from fulfilling them by force majeure. Where the contractor is unable to fulfil its contractual obligations owing to force majeure, it shall have the right to remuneration only for the tasks actually executed.
- **II.11.4** The parties shall take all the necessary measures to limit any damage due to force majeure.

ARTICLE II.12 – LIQUIDATED DAMAGES

The contracting authority may impose liquidated damages should the contractor fail to complete its contractual obligations, also with regard to the required quality level, according to the tender specifications.

Should the contractor fail to perform its contractual obligations within the time-limits set by the contract, then, without prejudice to the contractor's actual or potential liability or to the contracting authority's right to terminate the contract, the contracting authority may impose liquidated damages for each and every calendar day of delay according to the following formula:

 $0.3 \times (V/d)$

V is the amount specified in Article I.3.1;

d is the duration specified in Article I.2.3 expressed in calendar days.

The contractor may submit arguments against this decision within 30 days of receipt of the formal notification. In the absence of a reaction on its part or of written withdrawal by the contracting

authority within 30 days of the receipt of such arguments, the decision imposing the liquidated damages shall become enforceable.

The parties expressly acknowledge and agree that any sums payable under this article are in the nature of liquidated damages and not penalties, and represent a reasonable estimate of fair compensation for the losses incurred due to failure to fulfil obligations which may be reasonably anticipated.

ARTICLE II.13 – SUSPENSION OF THE PERFORMANCE OF THE CONTRACT

II.13.1 Suspension by the contractor

The contractor may suspend the performance of the contract or any part thereof if a case of force majeure makes such performance impossible or excessively difficult. The contractor shall inform the contracting authority about the suspension without delay, giving all the necessary reasons and details and the envisaged date for resuming the performance of the contract.

Once the circumstances allow resuming performance, the contractor shall inform the contracting authority immediately, unless the contracting authority has already terminated the contract.

II.13.2 Suspension by the contracting authority

The contracting authority may suspend the performance of the contract or any part thereof:

- (a) if the contract award procedure or the performance of the contract prove to have been subject to substantial errors, irregularities or fraud;
- (b) in order to verify whether presumed substantial errors, irregularities or fraud have actually occurred.

Suspension shall take effect on the day the contractor receives formal notification, or at a later date provided in the notification. The contracting authority shall give notice as soon as possible to the contractor to resume the service suspended or inform the contractor that it is proceeding with the termination of the contract. The contractor shall not be entitled to claim compensation on account of suspension of the contract or of part thereof.

ARTICLE II.14 – TERMINATION OF THE CONTRACT

II.14.1 Grounds for termination

The contracting authority may terminate the contract in the following circumstances:

- (a) if a change to the contractor's legal, financial, technical or organisational or ownership situation is likely to affect the performance of the contract substantially or calls into question the decision to award the contract;
- (b) if execution of the tasks has not actually commenced within three months of the date foreseen, and the new date proposed, if any, is considered unacceptable by the contracting authority, taking into account Article II.8.2;
- (c) if the contractor does not perform the contract as established in the tender specifications or fails to fulfil another substantial contractual obligation;
- (d) in the event of force majeure notified in accordance with Article II.11 or if the performance of the contract has been suspended by the contractor as a result of force majeure, notified in accordance with Article II.13, where either resuming performance is impossible or the

modifications to the contract might call into question the decision awarding the contract or result in unequal treatment of tenderers;

- (e) if the contractor is declared bankrupt, is being wound up, is having its affairs administered by the courts, has entered into an arrangement with creditors, has suspended business activities, is the subject of proceedings concerning those matters, or is in any analogous situation arising from a similar procedure provided for in national legislation or regulations;
- (f) if the contractor or any natural person with the power to represent it or take decisions on its behalf has been found guilty of professional misconduct proven by any means;
- (g) if the contractor is not in compliance with its obligations relating to the payment of social security contributions or the payment of taxes in accordance with the legal provisions of the country in which it is established or with those of the country of the applicable law of this contract or those of the country where the contract is to be performed;
- (h) if the contracting authority has evidence that the contractor or natural persons with the power to represent it or take decisions on its behalf have committed fraud, corruption, or are involved in a criminal organisation, money laundering or any other illegal activity detrimental to the Union's financial interests;
- (i) if the contracting authority has evidence that the contractor or natural persons with the power to represent it or take decisions on its behalf have committed substantial errors, irregularities or fraud in the award procedure or the performance of the contract, including in the event of submission of false information;
- (j) if the contractor is unable, through its own fault, to obtain any permit or licence required for performance of the contract.

II.14.2 Procedure for termination

When the contracting authority intends to terminate the contract it shall formally notify the contractor of its intention specifying the grounds thereof. The contracting authority shall invite the contractor to make any observations and, in the case of point (c) of Article II.14.1, to inform the contracting authority about the measures taken to continue the fulfilment of its contractual obligations, within 30 days from receipt of the notification.

If the contracting authority does not confirm acceptance of these observations by giving written approval within 30 days of receipt, the termination procedure shall proceed. In any case of termination the contracting authority shall formally notify the contractor about its decision to terminate the contract. In the cases referred to in points (a), (b), (c), (e), (g) and (j) of Article II.14.1 the formal notification shall specify the date on which the termination takes effect. In the cases referred to in points (d), (f), (h), and (i) of Article II.14.1 the termination shall take effect on the day following the date on which notification of termination is received by the contractor.

II.14.3 Effects of termination

In the event of termination, the contractor shall waive any claim for consequential damages, including any loss of anticipated profits for uncompleted work. On receipt of the notification of termination, the contractor shall take all the appropriate measures to minimise costs, prevent damages, and cancel or reduce its commitments. The contractor shall have 60 days from the date of termination to draw up the documents required by the special conditions for the tasks already executed on the date of termination and produce an invoice if necessary. The contracting authority may recover any amounts paid under the contract.

The contracting authority may claim compensation for any damage suffered in the event of termination.

On termination the contracting authority may engage any other contractor to execute or complete the services. The contracting authority shall be entitled to claim from the contractor all extra costs incurred in this regard, without prejudice to any other rights or guarantees it may have under the contract.

ARTICLE II.15 – REPORTING AND PAYMENTS

II.15.1 Date of payment

Payments shall be deemed to be effected on the date when they are debited to the contracting authority's account.

II.15.2 Currency

The contract shall be in euros.

Payments shall be executed in euros or in the local currency as provided for in Article I.5.

Conversion between the euro and another currency shall be made according to the daily euro exchange rate published in the *Official Journal of the European Union* or, failing that, at the monthly accounting exchange rate established by the European Commission and published on its website, applicable on the day on which the payment order is issued by the contracting authority.

II.15.3 Costs of transfer

The costs of the transfer shall be borne in the following way:

- (a) costs of dispatch charged by the bank of the contracting authority shall be borne by the contracting authority,
- (b) cost of receipt charged by the bank of the contractor shall be borne by the contractor,
- (c) costs for repeated transfer caused by one of the parties shall be borne by the party causing repetition of the transfer.

II.15.4 Invoices and Value Added Tax

Invoices shall contain the contractor's identification, the amount, the currency and the date, as well as the contract reference.

Invoices shall indicate the place of taxation of the contractor for value added tax (VAT) purposes and shall specify separately the amounts not including VAT and the amounts including VAT.

The contracting authority is, as a rule, exempt from all taxes and duties, including VAT, pursuant to the provisions of Articles 3 and 4 of the Protocol on the Privileges and Immunities of the European Union.

The contractor shall accordingly complete the necessary formalities with the relevant authorities to ensure that the supplies and services required for performance of the contract are exempt from taxes and duties, including VAT exemption.

II.15.5 Pre-financing and performance guarantees

Pre-financing guarantees shall remain in force until the pre-financing is cleared against interim payments or payment of the balance and, in case the latter takes the form of a debit note, three

months after the debit note is notified to the contractor. The contracting authority shall release the guarantee within the following month.

Performance guarantees shall cover performance of the service in accordance with the terms set out in the tender specifications until its final acceptance by the contracting authority. The amount of a performance guarantee shall not exceed the total price of the contract. The guarantee shall provide that it remains in force until final acceptance. The contracting authority shall release the guarantee within a month following the date of final acceptance.

Where, in accordance with Article I.4, a financial guarantee is required for the payment of prefinancing, or as performance guarantee, it shall fulfill the following conditions:

- (a) the financial guarantee is provided by a bank or an approved financial institution or, at the request of the contractor and agreement by the contracting authority, by a third party;
- (b) the guarantor stands as first-call guarantor and does not require the contracting authority to have recourse against the principal debtor (the contractor).

The cost of providing such guarantee shall be borne by the contractor.

II.15.6 Interim payments and payment of the balance

The contractor shall submit an invoice for interim payment upon delivery of intermediary results, accompanied by a progress report or any other documents, as provided for in Article I.4 or in the tender specifications.

The contractor shall submit an invoice for payment of the balance within 60 days following the end of the period referred to in Article I.2.3, accompanied by a final progress report or any other documents provided for in for in Article I.4 or in the tender specifications.

Upon receipt, the contracting authority shall pay the amount due as interim or final payment within the periods specified in Article I.4, provided the invoice and documents have been approved and without prejudice to Article II.15.7. Approval of the invoice and documents shall not imply recognition of the regularity or of the authenticity, completeness and correctness of the declarations and information they contain.

Payment of the balance may take the form of recovery.

II.15.7 Suspension of the time allowed for payment

The contracting authority may suspend the payment periods specified in Article I.4 at any time by notifying the contractor that its invoice cannot be processed, either because it does not comply with the provisions of the contract, or because the appropriate documents have not been produced.

The contracting authority shall inform the contractor in writing as soon as possible of any such suspension, giving the reasons for it.

Suspension shall take effect on the date the notification is sent by the contracting authority. The remaining payment period shall start to run again from the date on which the requested information or revised documents are received or the necessary further verification, including on-the-spot checks, is carried out. Where the suspension period exceeds two months, the contractor may request the contracting authority to justify the continued suspension.

Where the payment periods have been suspended following rejection of a document referred to in the first paragraph and the new document produced is also rejected, the contracting authority reserves the right to terminate the contract in accordance with Article II.14.1(c).

II.15.8. Interest on late payment

On expiry of the payment periods specified in Article I.4, and without prejudice to Article II.15.7, the contractor is entitled to interest on late payment at the rate applied by the European Central Bank for its main refinancing operations in Euros (the reference rate), plus eight points. The reference rate shall be the rate in force on the first day of the month in which the payment period ends, as published in the C series of the *Official Journal of the European Union*.

The suspension of the payment periods in accordance with Article II.15.7 may not be considered as a late payment.

Interest on late payment shall cover the period running from the day following the due date for payment up to and including the date of actual payment as defined in Article II.15.1.

However, when the calculated interest is lower than or equal to EUR 200, it shall be paid to the contractor only upon request submitted within two months of receiving late payment.

ARTICLE II.16 - REIMBURSEMENTS

- **II.16.1** Where provided by the special conditions or by the tender specifications, the contracting authority shall reimburse the expenses which are directly connected with execution of the tasks on production of original supporting documents, including receipts and used tickets, or failing that, on production of copies or scanned originals, or on the basis of flat rates.
- **II.16.2** Travel and subsistence expenses shall be reimbursed, where appropriate, on the basis of the shortest itinerary and the minimum number of nights necessary for overnight stay at the destination
- **II.16.3** Travel expenses shall be reimbursed as follows:
- (a) travel by air shall be reimbursed up to the maximum cost of an economy class ticket at the time of the reservation;
- (b) travel by boat or rail shall be reimbursed up to the maximum cost of a first class ticket;
- (c) travel by car shall be reimbursed at the rate of one first class rail ticket for the same journey and on the same day;

In addition, travel outside Union territory shall be reimbursed provided the contracting authority has given its prior written consent.

- **II.16.4** Subsistence expenses shall be reimbursed on the basis of a daily subsistence allowance as follows:
- (a) for journeys of less than 200 km for a return trip, no subsistence allowance shall be payable;
- (b) daily subsistence allowance shall be payable only on receipt of supporting documents proving that the person concerned was present at the destination;
- (c) daily subsistence allowance shall take the form of a flat-rate payment to cover all subsistence expenses, including meals, local transport which includes transport to and from the airport or station, insurance and sundries;
- (d) daily subsistence allowance shall be reimbursed at the flat rates specified in Article I.3;
- e) accommodation shall be reimbursed on receipt of supporting documents proving the necessary overnight stay at the destination, up to the flat-rate ceilings specified in Article I.3.

- **II.16.5** The cost of shipment of equipment or unaccompanied luggage shall be reimbursed provided the contracting authority has given prior written authorisation.
- **II.16.6** Conversion between the euro and another currency shall be made as specified in Article II.5.2.

ARTICLE II.17 – RECOVERY

- **II.17.1** If an amount is to be recovered under the terms of the contract, the contractor shall repay the contracting authority the amount in question according to the terms and by the date specified in the debit note.
- **II.17.2** If the obligation to pay the amount due is not honoured by the date set by the contracting authority in the debit note, the amount due shall bear interest at the rate indicated in Article II.15.8. Interest on late payments shall cover the period from the day following the due date for payment, up to and including the date when the contracting authority receives full payment of the amount owed.

Any partial payment shall first be entered against charges and interest on late payment and then against the principal amount.

II.17.3 If payment has not been made by the due date, the contracting authority may, after informing the contractor in writing, recover the amounts due by offsetting them against any amounts owed to the contractor by the Union or by the European Atomic Energy Community or by calling in the financial guarantee, where provided for in Article I.4.

ARTICLE II.18 - CHECKS AND AUDITS

II.18.1 The contracting authority and the European Anti-Fraud Office may check or have an audit on the performance of the contract. It may be carried out either directly by its own staff or by any other outside body authorised to do so on its behalf.

Such checks and audits may be initiated during the performance of the contract and during a period of five years which starts running from the date of the payment of the balance.

The audit procedure shall be deemed to be initiated on the date of receipt of the relevant letter sent by the contracting authority. Audits shall be carried out on a confidential basis.

- **II.18.2** The contractor shall keep all original documents stored on any appropriate medium, including digitised originals when they are authorised by national law and under the conditions laid down therein, for a period of five years which starts running from the date of payment of the balance.
- **II.18.3** The contractor shall allow the contracting authority's staff and outside personnel authorised by the contracting authority the appropriate right of access to sites and premises where the contract is performed and to all the information, including information in electronic format, needed in order to conduct such checks and audits. The contractor shall ensure that the information is readily available at the moment of the check or audit and, if so requested, that information be handed over in an appropriate form.
- **II.18.4** On the basis of the findings made during the audit, a provisional report shall be drawn up. It shall be sent to the contractor, which shall have 30 days following the date of receipt to submit observations. The final report shall be sent to the contractor within 60 days following the expiry of that deadline.

On the basis of the final audit findings, the contracting authority may recover all or part of the payments made and may take any other measure which it considers necessary.

- **II.18.5** By virtue of Council Regulation (Euratom, EC) No 2185/96 of 11 November 1996 concerning on-the-spot checks and inspection carried out by the Commission in order to protect the European Communities' financial interests against fraud and other irregularities and Regulation (EC) No 1073/1999 of the European Parliament and the Council of 25 May 1999 concerning investigation conducted by the European Anti-Fraud Office (OLAF), the OLAF may also carry out on-the-spot checks and inspections in accordance with the procedures laid down by Union law for the protection of the financial interests of the Union against fraud and other irregularities. Where appropriate, the findings may lead to recovery by the contracting authority.
- **II.18.6** The Court of Auditors shall have the same rights as the contracting authority, notably right of access, for the purpose of checks and audits.