

TERMS OF REFERENCE AND TECHNICAL SPECIFICATIONS

1. General information

Assignment name	Comprehensive assessment of the potential for efficient heating and cooling (HAC) in Albania in full compliance with the requirements of the Energy Efficiency Directive (EU/2023/1791)
Beneficiary	Government of Albania (GoA) Ministry of Infrastructures and Energy (MIE)
Country	Albania
Total estimated months of the contract	6 months

2. Context and justification of the need

The **Agence Française de Développement** (AFD) has launched a program of **Technical Assistance** (TA) to support the Albanian Government in the energy sector reform. **Expertise France** (EF), the French public agency for international technical assistance, was entrusted by the AFD with the implementation of the project. As part of several commitments undertaken by the Government of Albania (GoA) in pursuit of its accession to the European Union, the country is engaged in an in-depth reform of its energy sector, including operational, financial, and structural aspects.

Technical Assistance (TA) aims in supporting the development of a modern legal framework with a focus placed on supporting the transposition of the EU acquis into the national energy sector legislation. From the discussion initiated with the Ministry of Infrastructure and Energy (MIE) in order to identify the priorities where the support of the TA project is needed, it was decided that one of the priorities of the MIE is to complete a comprehensive assessments on efficient heating and cooling as required by the revised [Energy Efficiency Directive](#) (EU/2023/1791). Considering that the Electricity Generation in Albania is 100% renewable, decarbonizing the heating and cooling sector is central to achieving the energy transition. The process of replacing fossil fuels with renewables and other zero-carbon solutions in heating and cooling has so far been slower in Albania and this assessment is a first step to accelerate the development of the renewables in this sector.

For more information: [Albania Energy Reform Technical Assistance](#)

3. Objectives and desired results

3.1 General objective

As part of its integrated national energy and climate plan and its updates pursuant to Regulation (EU) 2018/1999, Albania is expected to **carry out comprehensive assessment of efficiency of the**

heating and cooling in the country. This assessment shall be carried out in full compliance with the requirements of the [Energy Efficiency Directive](#) (EU/2023/1791), more specifically as required by the Article 25 and Annex X of the Directive. It is extremely important that the consultants ensure that all relevant parties, including public and relevant private stakeholders, are given the opportunity to participate in the preparation of this comprehensive assessment.

3.2 Specific objectives

1. To conduct an overview of heating and cooling system at the national level (Part I)
2. To draft an overview of objectives, strategies and policies measures (Part II)
3. To conduct an analysis of the economic potential for efficiency in heating and cooling (Part III)
4. To draft an overview of potential new strategies and policy measures (Part IV)

4. Description of the assignment

4.1. Planned activities

As per Annex X of the [Energy Efficiency Directive](#) (EU/2023/1791), the comprehensive assessment of national heating and cooling potentials referred to in Article 25 shall include and shall be based on the following:

Part I - OVERVIEW OF HEATING AND COOLING

1. Heating and cooling demand in terms of assessed useful energy and quantified final energy consumption in GWh per year (2) by sector:

- (a) residential;
- (b) services;
- (c) industry;
- (d) any other sector that individually consumes more than 5 % of total national useful heating and cooling demand;

2. The identification, or, in the case of point (a), the identification or estimation, of current heating and cooling supply:

(a) by technology, in GWh per year, within the sectors referred to in point 1 where possible, distinguishing between energy derived from fossil and renewable sources:

(i) provided on-site in residential and service sites by:

- heat only boilers;
- high-efficiency heat and power cogeneration;
- heat pumps;
- other on-site technologies and sources;

(ii) provided on-site in non-service and non-residential sites by:

- heat only boilers;
- high-efficiency heat and power cogeneration;
- heat pumps;
- other on-site technologies and sources;

(iii) provided off-site by:

- high-efficiency heat and power cogeneration;

waste heat;
other off-site technologies and sources;

(b) the identification of installations that generate waste heat or cold and their potential heating or cooling supply, in GWh per year:

- (i) thermal power generation installations that can supply or can be retrofitted to supply waste heat with a total thermal input exceeding 50 MW;
 - (ii) heat and power cogeneration installations using technologies referred to in Part II of Annex II with a total thermal input exceeding 20 MW;
 - (iii) waste incineration plants;
 - (iv) renewable energy installations with a total thermal input exceeding 20 MW other than the installations specified under points (i) and (ii) generating heating or cooling using the energy from renewable sources;
 - (v) industrial installations with a total thermal input exceeding 20 MW which can provide waste heat;
- (c) reported share of energy from renewable sources and from waste heat or cold in the final energy consumption of the district heating and cooling (4) sector over the past 5 years, in accordance with Directive (EU) 2018/2001;

3. Aggregated data on cogeneration units in existing district heating and cooling networks in five capacity ranges covering:

- (a) primary energy consumption;
- (b) overall efficiency;
- (c) primary energy savings;
- (d) CO₂ emission factors;

4. Aggregated data on existing district heating and cooling networks supplied from cogeneration in five capacity ranges covering:

- (a) overall primary energy consumption;
- (b) primary energy consumption of cogeneration units;
- (c) share of cogeneration in district heating or cooling supply;
- (d) district heating system losses;
- (e) district cooling system losses;
- (f) connection density;
- (g) shares of systems per different operating temperature groups;

5. A map covering the entire national territory, which, while preserving commercially sensitive information, identifies:

- (a) heating and cooling demand areas following from the analysis of point 1, while using consistent criteria for focusing on energy dense areas in municipalities and conurbations;
- (b) existing heating and cooling supply points identified under point 2(b) and district heating transmission installations;
- (c) planned heating and cooling supply points of the type described under point 2(b) and identified new areas for the district heating and cooling;

6. A forecast of trends in the demand for heating and cooling to maintain a perspective of the next 30 years in GWh and taking into account, in particular, projections for the next 10 years, the change in demand in buildings and different sectors of the industry, and the impact of policies and strategies related to the demand management, such as long-term building renovation strategies under Directive (EU) 2018/844 of the European Parliament and of the Council;

Part II - OBJECTIVES, STRATEGIES AND POLICY MEASURES

7. Planned contribution of Albania to its national objectives, targets and contributions for the five dimensions of the Energy Union, as laid out in Article 3(2), point (b), of Regulation (EU) 2018/1999, delivered through efficiency in heating and cooling, in particular related to Article 4, point (b), points 1 to 4 and to Article 15 (4), point (b) of that Regulation, identifying which of those elements is additional compared to the integrated national energy and climate plan notified pursuant to Article 3 and Articles 7 to 12 of that Regulation;

8. A general overview of the existing policies and measures as described in the most recent report submitted in accordance with Articles 3, 20 and 21 and Article 27(a) of Regulation (EU) 2018/1999;

Part III - ANALYSIS OF THE ECONOMIC POTENTIAL FOR EFFICIENCY IN HEATING AND COOLING

9. An analysis of the economic potential of different technologies for heating and cooling shall be carried out for the entire national territory by using the cost-benefit analysis referred to in Article 25(3) and shall identify alternative scenarios for more efficient and renewable heating and cooling technologies, distinguishing between energy derived from fossil and renewable sources where applicable.

The following technologies should be considered:

- (a) industrial waste heat and cold;
- (b) waste incineration;
- (c) high efficiency cogeneration;
- (d) renewable energy sources, such as geothermal, solar thermal and biomass, other than those used for high efficiency cogeneration;
- (e) heat pumps;
- (f) reducing heat and cold losses from existing district networks;
- (g) district heating and cooling;

10. The analysis of economic potential shall include the following steps and considerations:

- (a) Considerations:
 - (i) the cost-benefit analysis for the purposes of Article 25(3) shall include an economic analysis that takes into consideration socioeconomic and environmental factors, and a financial analysis performed to assess projects from the investors' point of view, both economic and financial analyses using the net present value as a criterion for the assessment;
 - (ii) the baseline scenario should serve as a reference point and take into account existing policies at the time of compiling this comprehensive assessment, and be linked to data collected under Part I and Part II, point 6 of this Annex;

(iii) alternative scenarios to the baseline shall take into account energy efficiency and the renewable energy objectives of Regulation (EU) 2018/1999, each scenario presenting the following elements compared to the baseline scenario:

economic potential of technologies examined using the net present value as criterion;

- GHG emission reductions;
- primary energy savings in GWh per year;
- impact on the share of renewables in the national energy mix.

Scenarios that are not feasible due to technical reasons, financial reasons or national regulation may be excluded at an early stage of the cost-benefit analysis, if justified on the basis of careful, explicit and well-documented considerations.

The assessment and decision-making should take into account costs and energy savings from the increased flexibility in energy supply and from a more optimal operation of the electricity networks, including avoided costs and savings from reduced infrastructure investment, in the analysed scenarios.

(b) Costs and benefits - The costs and benefits referred to in point (a) shall include at least the following costs and benefits:

(i) costs:

capital costs of plants and equipment;
capital costs of the associated energy networks;
variable and fixed operating costs;
energy costs;
environmental, health and safety costs, to the extent possible;
labour market costs, energy security and competitiveness, to the extent possible.

(ii) benefits:

value of output to the consumer (heating, cooling and electricity);
external benefits such as environmental, greenhouse gas emissions and health and safety benefits, to the extent possible;
labour market effects, energy security and competitiveness, to the extent possible.

(c) Relevant scenarios to the baseline:

All relevant scenarios to the baseline shall be considered, including the role of efficient individual heating and cooling. The cost-benefit analysis may cover either a project assessment or a group of projects for a broader local, regional or national assessment in order to establish the most cost-effective and beneficial heating or cooling solution against a baseline for a given geographical area for the purpose of planning.

(d) Boundaries and integrated approach:

- (i) the geographical boundary shall cover a suitable, well-defined geographical area;
- (ii) the cost-benefit analyses shall take into account all relevant centralised or decentralised supply resources available within the system and geographical

boundary, including technologies considered under Part III, point 9, of this Annex, and heating and cooling demand trends and characteristics.

(e) Assumptions:

- (i) Member States shall provide assumptions, for the purpose of the cost-benefit analyses, on the prices of major input and output factors and the discount rate;
- (ii) the discount rate used in the economic analysis to calculate net present value shall be chosen according to European or national guidelines;
- (iii) Member States shall use national, European or international energy price development forecasts, if appropriate, in their national, regional or local context;
- (iv) the prices used in the economic analysis shall reflect socio-economic costs and benefits. External costs, such as environmental and health effects, should be included to the extent possible, namely when a market price exists or when it is already included in European or national regulation.

(f) Sensitivity analysis: a sensitivity analysis shall be included to assess the costs and benefits of a project or group of projects and be based on variable factors having a significant impact on the outcome of the calculations, such as different energy prices, levels of demand, discount rates and other.

Part IV - POTENTIAL NEW STRATEGIES AND POLICY MEASURES

11. An overview of new legislative and non-legislative policy measures (9) to realise the economic potential identified in accordance with points 9 and 10, together with a forecast of:

- a) greenhouse gas emission reductions;
- b) primary energy savings in GWh per year;
- c) impact on the share of high-efficiency cogeneration;
- d) impact on the share of renewables in the national energy mix and in the heating and cooling sector;
- e) links to national financial programming and cost savings for the public budget and market participants;
- f) estimated public support measures, if any, with their annual budget and identification of the potential aid element.

4.2. Anticipated deliverables

Considering that the assignment is highly dependent on the data collection activity the deliverables will be divided to ensure that the assignment is completed successfully:

	Deliverables	Expected contents	End date
#1	Inception Report	The Consultant shall present an Inception Report outlining work plan, timelines, scope, potential bottlenecks and mitigation measures. AFD will provide comments on the inception report to the Consultant.	TBD in technical proposal

#2	Draft document of Part I - Overview of Heating and Cooling	The Consultant will submit and present a Draft document of the first part of the assignment on data collection, defining the missing data and responsible institutions to gather the data.	TBD in technical proposal
#3	Final Draft of Part I (incorporating comments) and Draft document of the Part II, III, IV of the assignment	The final draft will reflect all comments addressed during the Presentation of previous deliverable.	TBD in technical proposal
#4	Final Draft (incorporating comments) of Parts II to IV	The Consultant will submit and present a Draft document of the second, third and fourth parts of the assignment.	TBD in technical proposal
#5	Comprehensive HAC assessment in Albania	All final deliverables to be finalized in English and Albanian Language. The final deliverables will also include preparation of presentation for dissemination event	TBD in technical proposal

4.3. Coordination

The service provider shall designate a single contact person for project implementation purposes. Ms Rita Chiara Mele, Project Manager of the Sustainable Development Department will be the service provider's sole contact person for Expertise France administrative matters.

E-mail: rita-chiara.mele@expertisefrance.fr

A launch meeting shall be held within 5 days after the contract award has been notified. A coordination meeting could be settled upon request on a weekly/monthly basis.

Close collaboration must take place with MIE personnel from assignment preparation right up to completion.

5. Place, duration and terms of performance

Implementation period: **6 months**

Start date: April 2025

End date: October 2025

6. Required expertise and profile

The service provider shall provide a Team of experts with the required skills and experience to successfully conduct the assignment. The number, roles, and profiles of the experts shall be detailed by the service provider in its technical proposal. CVs of the Team members shall be included in the bid.

6.1 Qualifications and skills of the Project Manager (Team Leader):

- Degree in Engineering or equivalent degree in Energy, Thermodynamics, or relevant discipline
- Advanced degree in relevant discipline is desirable and will be considered an asset
- At least 10 years' professional experience in the field of energy/energy efficiency, with comprehensive experience of similar assignments in the Western Balkans (WeB).
- The candidate should demonstrate management and administration experience, including experience with procedures of international financing agencies.
- Previous experience in conducting heating and cooling assessments for other EU Member States, countries similar or Early Transition countries, is extremely desirable.

6.2 Qualifications and skills of the other technical specialist(s) and engineer(s):

- A minimum of 5 years' professional experience in energy/energy efficiency with specific experience in heating and cooling plants.
- One technical specialist is required to be located in Albania and have fluency in Albanian to ensure the knowledge of local Energy Efficiency legislation and ensure cooperation with local stakeholders in data gathering needed.

6.3 Specific professional experience:

- Previous experience in conducting heating and cooling assessments for other EU Member States, WeB countries or Early Transition countries, is extremely desirable.
- Strong knowledge of European Union legislation and regulation in the relevant field
- Proven experience in managing and gathering data in challenging context
- Proven ability to collaborate with a variety of stakeholders and in different contexts
- Ability to produce high-quality reports within tight deadlines

The Consultant should integrate local professional skills/cooperate with local consulting companies, in order to provide national experience. The Consultant shall engage local language speaking staff on their team or arrange for translation/interpreting when necessary.

6.4 The **evaluation process for this position will consider:**

- Qualification of the candidates.
- Experience in similar projects.
- The required technical proposal.
- The financial offer (number of person/days * daily rate plus additional costs including travels and local accommodation) divided by the deliverables.

Only candidates who meet the minimum level of education, relevant years of experience will be considered for the technical evaluation. The technical evaluation may also include interviews with shortlisted candidate(s).

After the successful candidate is selected, the proposal will be finalized in cooperation with the Expertise France and with MIE team.

7. Monitoring-evaluation

Deliverables	Immediate effects	Intermediate effects	Verification sources
Comprehensive assessments of the potential for efficient heating and cooling in full compliance with the requirements of the Energy Efficiency Directive (EU/2023/1791)	The national potential for efficient heating and cooling has been assessed		Validation of the HAC national assessment

8. Practical information

- 8.1 All travel costs shall be borne by the service provider and be included as part of the financial proposal in a separate budget line than daily rate.
- 8.2 Experts remain solely responsible for organizing their own travel, accommodation, transport, insurance, communication and internet costs.
- 8.3 Expertise France will reimburse mission expenses upon proof of travel.
- 8.4 Given the assignment is funded through the AFD's donor funded technical cooperation programme, the Consultant will be required to support the Client to ensure visibility of these resources. Measures could include but not be limited to:
- All documents produced by the Consultant should mention donor support and bear the logo of the donor, when appropriate.
 - Donor support to the project should be acknowledged in any public communication (press releases, launch of facilities).
 - Local representatives of donors should be invited to any public event organised to promote the project (press conferences, inaugurations, possibly stakeholder participation programmes).
- 8.5 The consultant should be available for presenting the final draft to the national counterparts and submit the assessment to national validation.