



Template EPC-AHEF.119.MD

AFB.22.03.1 Specification for project development report yy-mm-dd.doc

EPC-PROJECT FOR ORGANISATION NN

TENDER DOCUMENTS

dd/mm/yyyy

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DESCRIPTION OF PROJECT DEVELOPMENT REPORT

The minimum requirements for information that is to be included in the Project Development report as a result of Phase 1 are specified below.

1. Preconditions

1.1 Building

Specify:

- Building ID, house type, activity, activity period, area (Atemp), etc.
- Current projects and its impact on the EPC Project as well as what collaboration there could be.

1.2 State of Emissions

Specify:

- Emissions that impact on dimensioning conditions.

1.3 Indoor climate

- Specify current indoor climate regarding the internal environmental factors radon (this information gained from Employer), air change rate/airflow (this information can be gained from existing records and drawings) and light intensity. Only those internal environmental factors impacted by the energy saving measures (including operating efficiency) need to be specified.

1.4 Form of energy



Specify:



- Energy meter and its ID.
- Method of energy supply; district heating, electricity, water, etc.
- Actual media consumption levels (heating, water and electricity) as well as time period (years) for them.
- Reference values



1.5 Establishment of reference values, calculation of saving



For reference values, the Contractor shall account for his method of establishing these values as agreed. The Contractor shall submit to the Employer all equations, input data, assumptions, calculations, readings, etc.



The Contractor shall also account for his method of calculating savings as agreed. The Contractor shall submit to the Employer all equations, input data, assumptions, calculations, etc.

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<p>Document AFB 22.04.6 “Excel-sheet displaying the calculations of energy savings as a part of project development report” shall be used for reporting. Columns A to CW shall be filled.</p> <p>1.6 Follow-up of savings</p> <p>The Contractor shall account for how savings will be followed up and reported as agreed. The Contractor shall submit to the Employer the selected method, all equations, input data, etc. The method of calculating changes in use of buildings, temperature, etc., that impact on savings during Phase 3 must also be specified.</p> <p>The Contractor shall account for his follow-up methodology.</p> <p>Document AFB 22.04.6 “Excel-sheet displaying the calculations of energy savings as a part of project development report” shall be used for reporting. Columns A to CW shall be filled.</p> <p>2. Energy Saving Measures</p> <p>Proposed measures shall be described in such a way that the extent is clearly indicated with a degree of detail that enables final inspection.</p> <p>A list of manufacturers shall be drawn up within two months of the signing of the agreement for Phase 1 and be submitted to the Employer for approval.</p> <p>The Contractor shall account of the principle flow charts/operating instruction charts for the installations.</p> <p>2.1 Air treatment installations</p> <p>Describe measures for:</p> <ul style="list-style-type: none"> – Air treatment (heating, cooling and filtering) – Form of air distribution – Reduction of losses (ducts in cold areas, etc.) – Heat recovery – Operating times for air treatment systems before energy saving measures – Other <p>2.2 Heating installations</p> <p>Describe measures for:</p> <ul style="list-style-type: none"> – Form of heat generation – Form of heat distribution – Heat recovery – Changes to subscriptions (power requirements and flow, etc.) – Reduction of losses (culverts, cold areas, etc.) – Other 							

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<p>2.3 Cooling installations Describe measures for:</p> <ul style="list-style-type: none"> - Form of cooling generation - Form of cooling distribution - Cooling recovery - Changes to subscriptions (power requirements and flow, etc.) - Reduction of losses (culverts, warm areas, etc.) - Other 						
<p>2.4 Waste water installations Describe measures for:</p> <ul style="list-style-type: none"> - Waste water installations. - Other 						
<p>2.5 Tap water installations Describe measures for:</p> <ul style="list-style-type: none"> - Tap water installations - Hot water installations - Changes to subscriptions (flow, etc.) - Other 						
<p>2.6 Electrical installations Describe measures for:</p> <ul style="list-style-type: none"> - Lighting facilities - Lift facilities - Low energy electrical control - Other electrical installations - Changes to electricity plan (tariff and power requirements, etc.) - Other 						
<p>2.7 Control, regulation and monitoring systems. Describe measures for control, regulation and monitoring systems:</p> <ul style="list-style-type: none"> - Type, standards - System overview (principle diagram and text) giving a clear overview of system structure. At least the following must be apparent in documents: <ul style="list-style-type: none"> - Number of DDCs including displays (make/type/), what they serve and location - Communication solution between DDCs, between DDC and equipment, an between DDC and parent system. - Reporting, alarm and follow-up systems - Number of work stations and their locations. - Gathering of readings and energy measurements at building level plus individual readings for tenant/activity when these are missing. 						

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<ul style="list-style-type: none"> - Licences - Other <p>2.8 Building envelope Describe measures for envelope rebuild:</p> <ul style="list-style-type: none"> - Openings (windows, doors, etc.) - Insulation - Sealings, waterproofing - Thermal bridge - Façade materials - Other <p>2.9 Other systems Describe measures for other systems.</p> <p>2.10 Operating efficiency Specify how operating efficiency will be carried out and organised in Phase 2 and Phase 3.</p> <p>2.11 Operation and maintenance model Specify:</p> <ul style="list-style-type: none"> - Template for operating model. <p>3. Result of proposed energy saving measures</p> <p>3.1 Indoor climate Specify for each building:</p> <ul style="list-style-type: none"> - Compilation showing the minimum requirements prescribed in applicable statutes, standards and regulations regarding indoor climate for indoor temperatures, values of carbon dioxide in premises, air change rate in residences plus values of radon content, ventilation noise, air velocities in rooms and illumination, in the buildings covered by the project. - The requirements/levels of indoor climates regarding the interior environmental factors radon (this information gained from the Employer), air change rate/airflows and light intensity after the measures have been implemented. Only those internal environmental factors impacted by the measure (including operating efficiency) need to be specified. - The agreed indoor temperature is to be held in Phase 3. <p>3.2 Media usage/economy Specify for each building where meter structure allows and/or reference value group.</p> <ul style="list-style-type: none"> - Activity period (working times or activity times) - Consumption levels of media (heating, water and electricity) where appropriate coupled to the affected billing meter. 			

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<ul style="list-style-type: none"> - Outcome of tariffing (cooling, water, electricity and district heating) (Lei). - Savings from conversion (Lei). - Reduced consumption of media (cooling, water, electricity and district heating) where appropriate coupled to the affected billing meter. - Saving (Lei) - Total, fixed and variable, cost of media after saving measures. 							
3.3	Training	Specify:					
		<ul style="list-style-type: none"> - Training plan (courses, time schedule, course participants). - Cost per course and participant. 					
3.4	Follow up of savings and demands on indoor climate	Specify how these demands on indoor climate and savings will be followed up. The method of follow-up and calculation is to be given clearly for each measure.					
3.5	Financial	Specify for each building the ceiling prices (Lei) according to the division below.					
		<ul style="list-style-type: none"> - Air treatment system - Heating installations - Cooling installations - Waste water installations - Tap water installations - Electrical installations - Control, regulation and monitoring systems - Building envelope - Operating efficiency - Other systems - 					
		Specify ceiling price (Lei) of training.					
3.6	Time schedules	Specify:					
		<ul style="list-style-type: none"> - Time schedule for training - Implementation plan for measures in Phase 2. 					
3.7	Compilation	An Excel sheet with integrated equations with the following columns shall be submitted to the Employer in conjunction with the reporting on Phase 1, which shall include, e.g.:					
		<ul style="list-style-type: none"> - Reference value group - Property designation according to Property List - Building according to Property List 					

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<ul style="list-style-type: none"> - Address - Activity - Year of construction - Area, Atemp - Heating source before Phase 2 - Heating source after Phase 2 - Energy consumption of heating before Phase 2 (reference value group) expressed in MWh - Energy consumption of electricity before Phase 2 (reference value group) expressed in MWh - Water volume consumption before Phase 2 (reference value group) expressed in cubic metres. - Energy consumption of cooling before Phase 2 (reference value group) expressed in MWh - Key heating ratio before Phase 2. - Key building electricity ratio before Phase 2. - Key water ratio before Phase 2. - Key cooling ratio before Phase 2. - Key heating ratio after Phase 2. - Key building electricity ratio after Phase 2. - Key water ratio after Phase 2. - Key cooling ratio after Phase 2. - Reference price before Phase 2 - Reference price after Phase 2 for each type of media. - Energy cost before Phase 2 for each type of media. - Energy cost after Phase 2 for each type of media. - Ceiling price in Lei per building and in total. - Saving in Lei, of which <ul style="list-style-type: none"> o Saving in heating in Lei. o Reduced use of heat in MWh. o Reduced use of heat in %. o Saving in property electricity in Lei. o Reduced use of property electricity in MWh. o Reduced use of property electricity in %. o Saving in water in Lei. o Reduced use of water in cubic metres. o Reduced use of water in %. o Saving in cooling in Lei. o Reduced use of cooling in MWh. o Reduced use of cooling in %. o Saving in tariff in Lei. o Saving in conversion in Lei. - Straight pay-off period in years per building and in total. 						

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- Columns to be filled in during Phase 3 according to established follow-up methodology.
- Billing meter

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