

CONTRACT SUMMARY

PTOLEMAIDA SES UNIT V - ENGINEERING, PROCUREMENT, TRANSPORTATION, INSTALLATION AND PUTTING IN OPERATION OF A STEAM UNIT OF GROSS POWER 660 MW_e, BURNING PULVERIZED LIGNITE AND WITH A CAPACITY TO SUPPLY 140 MW_{th} THERMAL POWER FOR DISTRICT HEATING.

CONTRACTOR: TERNA S.A.

Subsupplier/Subcontractor of Steam Generator: HITACHI POWER EUROPE GmbH

Subsupplier of Steam Turbine: HITACHI Ltd

Subsupplier of Generator: HITACHI Ltd

Subsupplier of installation of Desulphurisation System: HITACHI POWER EUROPE GmbH

Subsupplier of Ash Electrostatic Precipitators: HAMON ENVIRONMENTAL GmbH

1. SITE OF INSTALLATION

The Unit will be built in the Northwestern Greece, within the depleted lignite minefields of Komanos, at a distance of approximately 4 kms from the existing Ptolemaida SES, which consists of 4 lignite-fired units, and at approx. 8 kms and 20 kms distance from Ptolemaida and Kozani towns respectively.

2. SCOPE OF THE CONTRACT

The Project Scope indicatively includes, amongst other, the following:

The design, study, industrialisation, construction, supply, factory tests, transportation and storage at the site of the Project, assembly, installation, on site testings of the Project, training of PPC's personnel, commissioning of the equipment and supply of the spare parts L-1 of the Project of total electric power output of 660 MW_e and heat output capacity of 140 MW_{th} for district heating, comprising one Steam Electric Unit, consisting of one steam generator and one steam turbine-generator, of steam supercritical characteristics, equipped with the necessary anti-pollution system, auxiliary equipment and with provision of space allocation for future installation of systems for CO₂ capture, as well as for denitration, with pulverized lignite as fuel.

The Project Scope also includes the supply of the necessary technical and other services of any nature, as well as the design, study and construction of the necessary related Civil Engineer works, the construction of the Cooling Tower and the delivery of the Project after the execution of Performance Tests.

The execution of the Contract will be carried out in two Stages, that is:

The first Stage, of 20-24 months duration, starting at the date that the Contract enters into force, concerns the study for the Project licensing and the issuance of the Building Permit.

The second Stage, of 50 months duration from the issuance of the Building Permit, concerns the construction and the commencement of the Commercial Operation of the Unit.

3. MAIN GUARANTEED FIGURES OF THE UNIT

Guaranteed Figures at Maximum Continuous Rating - (100%) of the Load capacity of the Unit at Reference Conditions

- Gross electric power output, $P_{e, gross}$ (I1): ** $\geq 660,000$ kWe
- Net heat rate of the Unit (F1): ** $\leq 8,674.7$ kJ/kWh
- Total auxiliary power consumption, $P_{aux, 100\%}$: ** $\leq 42,322$ kWe
- Total losses of the main step-up Transformer as result from the factory tests, $P_{loss, t/f, 100\%}$: ** $\leq 1,934$ kWe

Guaranteed Figures at 50% of the Load capacity of the Unit at Reference Conditions

- Gross electric power output, $P_{e, gross}$ (I2) : ** $\geq 330,000$ kWe
- Net heat rate of the Unit (F2): ** $\leq 9,350.6$ kJ/kWh
- Total auxiliary power consumption, $P_{aux, 50\%}$: ** $\leq 28,055$ kWe
- Total losses of the main step-up Transformer as result from the factory tests, $P_{loss, t/f, 50\%}$: ** ≤ 718 kWe

Environmental Guarantees (Emissions)

For operation of the Unit with lignite, within the contractual quality range at any load capacity from 50% up to 100% of MCR (load capacity) of the

Unit, the Contractor shall guarantee the following environmental performance :

- Nitrogen oxide (NO_x), as NO₂: ** ≤200mg/Nm³
- Particulates: ** ≤10mg/Nm³
- Sulphur dioxide (SO₂): ** ≤150mg/Nm³

4. CONTRACTUAL PRICE

The Contractual Price of the Project amounts to 1,388,634,137.82 €.

5. PAYMENT TERMS

5.1 The amount, which will be paid to the Contractor for preparing the required studies and drawings for the licensing of the Project (**first stage of Contract execution**) equals to 5 % of the total Contractual Price.

Payment of the said amount will be made gradually as follows:

- 1% of the total Contractual Price upon the coming into force of the Contract
- 1%, 1.5% and 1.5% of the total Contractual Price, upon delivery and review by the Corporation of all necessary documents for the issuance of the building permit after 10, 12 and 16 months respectively.

5.2 Payments of the remaining contractual price (95% of the Contractual Price) will be made upon the arrival of equipment at site, upon monthly certifications for the execution of works, the completion of the tests and in monthly installments for Other Services.

5.3 With regard to each payment to the Contractor, Good Performance Guarantee amounts shall be retained, which are set at five per cent (5%) on the certified value of each payment.

5.4 Advance Payments

- Within 10 working days from the date of the issuance of the Building Permit, the Company will pay to the Contractor, following a request by the Contractor which will be submitted within 18 months at the latest from the date the Contract has come into

force, an amount up to 15 % of the remaining Contractual Price (95% of the Contractual Price), against a Letter of Advance Payment Guarantee for 114.6% of the amount of the advance payment.

- On the sixth month after the issuance of the Building Permit, the Company will pay to the Contractor, following a request by the Contractor which will be submitted within 4 months at the latest from the date of issuance of the Building Permit, an additional amount up to 15 % of the remaining Contractual Price (95% of the Contractual Price), against a Letter of Advance Payment Guarantee for an amount equal to 114.6% of the amount of the advance payment. Furthermore, the Contractor will submit, with his request for the said advance payment, proof data for the order of parts of the main equipment (steam generator, steam turbine, generator, flue gas desulphurization system, electrostatic precipitators), of total value not less than three times the amount of the additional advance payment, in accordance with the "List of Materials and Prices".

Above Advance payments shall not bear interest.

6. The Contractual Price is subject to escalation, with the exception of the 5 %, which will be paid during the first Stage of the Contract and which is not subject to review.

7. PENALTY CLAUSES

Penalty clauses are provided for delays, for interruption of operation and for operation with temporarily reduced power, as well as penalties for non-achievement of guaranteed figures, which cannot exceed in total 12% of the Contractual Price.

8. LETTERS OF GOOD PERFORMANCE GUARANTEE.

- Submission by the Contractor of Good Performance Letters of Guarantee in favor of PPC corresponding to 10 % of the Contractual Price.
- Delivery to PPC's S.A. in hand, as receiver-manager, by the Steam Generator Subsupplier/Subcontractor of a Good Performance Letter of

Guarantee in favor of the Contractor corresponding to 6 % of the Contractual Price.

9. GUARANTEE PERIOD

12 months, after the Temporary Acceptance of the Unit.

10. The settlement of a dispute, following a request by the Contractor, shall be finally resolved on the basis of the Arbitration regulation of the International Chamber of Commerce (ICC), by three judges, who shall be appointed according to said regulation. The Arbitration shall be governed by Greek legislation and it shall take place in Athens. The language for the Arbitration procedure shall be the English Language.

Before the Contractor resorts to Arbitration, he may ask for the resolution of his dispute by friendly negotiations.

11. TERMINATION OF THE CONTRACT

11.1 Termination at the Contractor's fault

The Contract is terminated at the Contractor's fault, in case the Contractor fails to comply with his obligations, that results in forfeiture of the Contractor.

Against the finally forfeited Contractor, without prejudice to the Company's rights to compensation, the following consequences cumulatively apply:

- a. the part of the advance payment that has not been amortised becomes directly payable
- b. the Good Performance Letters of Guarantee for the Project are forfeited for the Company
- c. any due Penalty Clauses until the date of the termination become directly payable.

11.2 Termination at no default

According to the General Terms of any Contract of PPC, in the event that the Contract is terminated due to the Company's fault and works, of a value less than three quarters (3/4) of the Contractual Price have been executed, the Company shall pay to the Contractor, in excess, the outstanding value of his installations, that have not

yet been amortised, as well as compensation for the presumed benefit, that cannot exceed 5% of the remaining amount of the contractual price after same has been decreased by one fourth (1/4) and after deducting the non amortised part of Contractor's installations, the cost of works and materials which have been invoiced and the remaining amounts for which the Contractor is compensated.

12. The Contract shall be exclusively interpreted and governed by the Greek State's Legislation.