



**GENERAL INVESTMENT DIVISION  
INVESTMENT & PROCUREMENT DIVISION**

**TED 058/2021  
OPEN CALL FOR TENDER FOR  
THE PROCUREMENT AND INSTALLATION OF THREE STANDBY POWER GENSETS**

**TENDER PROCEDURE SUMMARY**

<b>OPEN TENDER</b>	
<b>ECONOMIC OPERATOR</b>	<b>THESSALONIKI PORT AUTHORITY SA</b> Main activity: Port services Address: Inside the Port of Thessaloniki PC 54625, Thessaloniki Tel.: 2310593121, Fax: 2310510500 Email address: <a href="mailto:secretariat@thpa.gr">secretariat@thpa.gr</a> Website address: <a href="http://www.thpa.gr">http://www.thpa.gr</a>
<b>Deadline for the submission of bids</b>	<b>09/04/2021</b>
<b>Deadline for the submission of clarification requests</b>	<b>04/04/2021</b>
<b>Award criterion</b>	Most advantageous bid based on price
<b>Information/clarifications</b>	<b>On the tender procedure</b> Name: Giorgos Papageorgiou E-mail: <a href="mailto:gpapageorgiou@thpa.gr">gpapageorgiou@thpa.gr</a> Phone: 2310 593305 Name: Paraskevi Theologou E-mail: <a href="mailto:pthelogou@thpa.gr">pthelogou@thpa.gr</a> Phone: 2310 593363 <b>On technical issues</b> Name: Anastasia Sachinidou Email: <a href="mailto:asachinidou@thpa.gr">asachinidou@thpa.gr</a> Phone: 2310 593354

**PART A:**  
**GENERAL TERMS**

**ARTICLE 1– Procurement description**

The subject of the tender is the procurement, installation and commissioning of three (3) 630KVA, 25KVA and 45-50KVA standby power gensets suitable to act as an auxiliary power unit for the direct and automatic supply of electricity to ThPA SA installations facing a power problem due to inappropriateness or complete network failure. The subject of the tender includes all necessary installation, support, earthing works, safety devices and electrical panels and a two-year performance warranty bond and maintenance of the procured gensets. A detailed description of the procured items is set out in Part B hereof.

Interested parties may inspect the area, after contacting the competent ThPA SA department, Mrs Anastasia Sachinidou (tel. 2310593354).

**Note that participants may submit a bid either for all or some of the requested gensets.**

**ARTICLE 2 - Award Criterion**

This procurement will be awarded to one or more suppliers. The award criterion is the lowest price per genset, provided that all the terms herein are met.

**ARTICLE 3 – Eligibility – Selection Criteria**

**3.1 Eligible Participants**

**3.1.1.** Eligible to participate in the tender are the natural or legal persons engaged in a commercial, industrial or craft activity related to the subject of the procurement. Economic operators established in Greece must be registered in the Chamber of SMEs or the Chamber of Commerce and Industry.

**3.1.2.** Participants shall:

- Not be under bankruptcy, liquidation or administration;
- Not have been irrevocably convicted (the administrators for the case of limited partnerships or limited liability companies, the Chairman and the CEO for the case of SAs and the natural persons performing management duties in other cases) for:
  - a) Participation in a criminal organisation, as defined in Article 2(1) of Council Joint Action No. 98/733/JHA.
  - b) Bribery, within the meaning of Article 3 of the Council Act of 26 May 1997(21) and Article 3(1) of Council Joint Action 98/742/JHA
  - c) fraud in the sense of article 1 of the Convention on the protection of financial interests of the European Communities,
  - d) money laundering, according to article 1 of the Council Directive 91/308/EEC of 10 June 1991 on the prevention of the use of the financial system for the purpose of money laundering;
  - e) embezzlement (article 375, Criminal Code)
  - f) fraud (article 386-388, Criminal Code)
  - g) extortion (article 385, Criminal Code)
  - h) forgery (article 216-218, Criminal Code)
  - i) perjury (article 224, Criminal Code)
  - j) bribery (article 235-237, Criminal Code)
  - k) bankruptcy fraud (article 398, Criminal Code)

If interested economic operators participate as an association or joint venture, the above requirements shall be met by every member of the joint venture.

In the case of a bid by an association of economic operators, all its members are jointly and wholly liable to the contracting entity.

### **3.2 Technical & Professional Capacity**

The technical and professional capacity that the economic operators participating in this tender are required to have is:

- Over the last five (5) years, they must have procured, installed at least thirty (30) closed type gensets with an equal or higher power than the power of the procured gensets.
- They shall have their registered office or a branch in the prefecture of Thessaloniki.

### **3.3 Quality Assurance Standards**

Participants shall comply with the following standards:

- ISO 9001:2015 (or equivalent) Quality Management System
- ISO 14001:2015 (or equivalent) Environmental Management System
- ELOT 1801:2008 / OHSAS 18001:2007 or 45001: 2018 Occupational Health and Safety System

## **ARTICLE 4 – Proof of Fulfilment of the Participation Criteria**

4.1 In order for participants to demonstrate that they meet the selection criteria of par 3.1 Eligible Participants, along with their bid, they submit the following participation documents:

- A certificate of registration to the corresponding chamber (domestic economic operators) and a similar certificate/approval/licence from the competent authority in their country of origin (foreign economic operators).
- A solemn statement that the economic operator and his legal representatives do not fall under any of the exclusion cases set out in par. 2.2 and that there is no reason to believe that there will be such impediments during the tender validity period or any of its extensions.

4.2 To prove their technical professional capacity of par. 3.2, participants produce:

- A table presenting their experience in the execution of similar contracts. On the table, at least 30 closed type genset units with an equal or higher power than the power of the procured gensets that have been procured and installed over the last 5 years by the participant will be listed on the table. The list shall be accompanied by recommendation letters of the buyers indicating the date of execution of the procurement and the functional behaviour of the gensets to date.
- A detailed presentation of the company and a detailed presentation of the aftersales service department in the Prefecture of Thessaloniki.

4.3 To prove their compliance with the quality assurance standards, participants shall produce:

- ISO 9001:2015 certificate (or equivalent)
- ISO 14001:2015 certificate (or equivalent)
- ISO 45001:2018 certificate (or equivalent)
- ELOT 1801:2008/ OHSAS 18001:2007

## **ARTICLE 5 - Means & Time for Submitting Bids**

Interested parties can submit their bids by email by **09/04/2021**, at the latest, at the Procurement & Investment Department of ThPA SA in the following email address [ptheologou@thpa.gr](mailto:ptheologou@thpa.gr) and [asachinidou@thpa.gr](mailto:asachinidou@thpa.gr) with a copy to [gpapageorgiou@thpa.gr](mailto:gpapageorgiou@thpa.gr).

## **ARTICLE 6 – Provision of Clarifications on the Call**

Clarification requests are submitted electronically five days at the latest before the expiry of the deadline for submitting bids, as follows:

A) questions on technical issues are submitted to the e-mail address [asachinidou@thpa.gr](mailto:asachinidou@thpa.gr) with a copy to the email address [gpapageorgiou@thpa.gr](mailto:gpapageorgiou@thpa.gr) and [ptheologou@thpa.gr](mailto:ptheologou@thpa.gr).

b) questions on issues pertaining to the tender procedure are submitted to the email address [ptheologou@thpa.gr](mailto:ptheologou@thpa.gr) with a copy to the email address [gpapageorgiou@thpa.gr](mailto:gpapageorgiou@thpa.gr) and [asachinidou@thpa.gr](mailto:asachinidou@thpa.gr).

Clarification requests submitted in other forms shall not be examined.

The clarifications are posted electronically on ThPA SA website [www.thpa.gr](http://www.thpa.gr).

---

#### **ARTICLE 7 – Tender extension, amendment, addition or annulment**

ThPA SA reserves the right to extend the time for submitting bids or to cancel the award procedure, or to decide to repeat it at any stage, without any liability, cost or penalty, following a decision by its competent body. It also reserves the right to modify the terms of the procedure with transparency.

---

#### **ARTICLE 8 – Bid content**

The content of the bid is as follows:

##### **8. 1. Participation Documents**

In order to participate in the tender, the economic operators must submit the following participation documents:

- A solemn statement whereby Candidates declare that they have been apprised on the special terms and requirements of the Tender Object and unreservedly accept the terms of the Tender Notice.
- The documents specified above, in Article 4 - Proof of Fulfilment of the Participation Criteria
- An information document on the processing of personal data, within the meaning of Article 13, GDPR 679/2016, signed by the Candidate (Annex A).
- To prove their lawful incorporation and representation, the economic operators submit the corresponding legal establishment and lawful representation documents such as statutes, general certificate from GEMI, BoD formal establishment, other documents published in GEMI, etc.) depending on the legal form of the tenderer). The above documents must establish the lawful establishment, the person(s) legally binding the company on the date of the tender (legal representative, right of signature, etc.), any third parties that have been granted the power of representation, and their term of office

##### **8.2. Technical Bid**

The Technical Bid consists of the following:

- A detailed and clear technical description of the procured items and installation works, accompanied by the necessary plans and diagrams, technical specifications and any other official technical form documenting the compliance of the equipment offered with the technical specifications herein.
- A Completed Conformity Form, in accordance with the template of **Annex 2** attached hereto, with a full description of how each and every requirement of the Technical Description is met.
- Submitted Installation Drawing of every genset unit
- Solemn declaration that upon taking up the Project, he will submit an Occupational Risk Assessment Study and any other necessary documentation according to the legislation of the Safety and Health in a project.
- Project implementation timetable
- Pricelist of the spare parts - accessories and consumables, which, according to the Supplier, are necessary for ensuring the operation of the genset and the switchbox under normal operating conditions for two years.
- A training programme.
- A solemn declaration by the bidder stating:
  - the manufacturer of the genset stating that upon delivery, the genset will be accompanied by an original EC Declaration of Conformity by the manufacturer.

- all offered items comply with all EU Directives integrated into the Greek Legislation.
- the reported manufacturer is the same as the one on the EC Declaration of Conformity.
- There is a possibility of providing support and maintenance of the procured Gensets including spare parts, repairs, calibration, relevant information etc. for at least ten years.
- The bidder undertakes (without any additional charge) to train the necessary technical staff of ThPA SA on the operation, control, maintenance and on the protective safety measures for the procured genset.
- The bidder undertakes (without any additional charge) in the situation that he will be the contractor will apply all the necessary documentation that is included in the Greek Legislation FEK 3433/B/11-09-2019 about each unit of genset.
- Any other element that the interested party deems necessary.

### **8.3 – Financial Bid**

The financial bid shall bear the stamp of the participating economic operator and the signature of his legally authorized representative and will indicate:

- The offered price in euros (without VAT) for the procurement, installation and commissioning of every Genset
- the delivery time according to Article 15.2 hereof
- The performance guarantee time, according to Article 15.6
- The payment method, according to Article 15.5
- The bid validity period, according to Article 9 of this Call.

### **ARTICLE 9 – Bid Validity Period**

The submitted bids shall be valid for **one hundred eighty (180) days** from the Tender bid closing date.

The offer validity may be extended, if requested by ThPA SA, prior to its expiry, for a maximum period of time equal to the initial offer validity period specified in the Call.

### **ARTICLE 10 – Price Adjustment**

The offered prices are considered **fixed and final** and are not subject to any adjustment for any reason and cause until the end of the procurement. For that reason, the participation of any interested party in the tender entails his explicit, unconditional and irrevocable resignation from any right to adjust the prices offered and possibly resulting from another relevant provision.

### **ARTICLE 11- Counteroffers**

Alternative offers, counteroffers or amended offers or any proposals that may be construed as counteroffers shall not be considered and shall be rejected by the THPA SA competent body, after an opinion has been delivered by the Tender Committee.

### **ARTICLE 12 - Language**

The official language of the procedure is Greek and English. All tender documents shall be drawn up either in Greek or English or (of drawn up in the language of their country of origin) they shall be accompanied by an official translation into one of the above languages. In case of discrepancy, the translation into one of the tender languages shall prevail.

### **ARTICLE 13– Bid Evaluation**

During the evaluation, ThPA SA may address requests for clarifications to the participating economic operators, who are obliged to provide them within the specified deadlines, as the case may be.

After the evaluation, participants are informed about the acceptance or rejection of their bid.

### **ARTICLE 14 – Contract**

After the announcement of the tender result, a contract is signed between ThPA SA and the selected economic operator.

The contract may be amended during its term of validity, without the need for a new contract conclusion procedure, following an agreement between the two parties.

## **ARTICLE 15 – Special Terms for the performance of the procurement**

### **15.1 Performance bond**

For the full and proper performance of the terms of the procurement, the Contractor shall present a Performance Guarantee, the amount of which is set at five per cent (5%) of the contract value, not including VAT.

The above Guarantee is issued by credit institutions and covers entirely and without exceptions the application of all terms of the contract and any claim of ThPA SA against the Contractor and is submitted before or during contract signing.

The Letter of Guarantee produced shall cover the entire duration of the procurement and shall expire at least sixty (60) days after the expiry of the contractual delivery period.

The performance guarantee shall be returned after the successful reception and forfeited in the event of breach of the contract terms, as specified therein.

### **15.2. Delivery**

Every Genset unit will be delivered and installed at the responsibility and expense of the Contractor at the sites indicated by ThPA SA, in the area near the Substations, as detailed in Table 1, Part B of the Call.

Upon delivery, the equipment will be delivered by certificates and other documents (measurements etc.) establishing that all routine test have been completed successfully and all the other terms referred to in Part B of the Call.

The maximum acceptable time for the delivery, installation and commissioning of the equipment is set as follows:

<b>Type of Genset</b>	<b>Point of installation</b>	<b>Delivery time</b>
630Kva Genset to meet the reefer needs	Substation 6σ	4 months
25Kva Genset to meet the OCR needs	Substation 6A	1 month
45-50Kva Genset to meet the needs of Gate 16	Substation 6E	50 days

In case of late delivery, a 1% penalty on the contractual price shall apply for each day of delay up to a maximum of 5%.

### **15.3 Project execution timetable**

Within five (5) days from the signing of the Contract, the Contractor shall submit to ThPA SA a final timetable of all execution phases of the procurement-installation for every type of Genset.

### **15.4. Tests - Training - Delivery**

The object of this Contract includes a demonstration of the operation of the Genset and the training of the Technical Staff of ThPA SA according to Article eight (8), Part B hereof.

Following procurement and installation of the equipment and the training of the staff, the competent body of ThPA SA shall carry out, in the presence of the Contractor, a quantitative and qualitative acceptance of the Genset, according to Article nine (9), Part B hereof.

### **15.5. Payment method**

The CONTRACTOR's payment will be made within sixty (60) days from the issue of the relevant invoice and the confirmation of the proper functioning of the equipment by the competent body of ThPA SA

### **15.6 Good Performance Warranty**

#### **15.6.1 Performance Warranty period**

The warranty period is set at two (2) years commencing on the date when ThPA SA is to take physical possession of the equipment.

During this period, the Contractor is responsible for the proper operation of the equipment and undertakes the responsibility to maintain it fully at his responsibility and expense, according to the instructions of the manufacturer. More specifically, during the warranty period, the Contractor shall take all preventive and corrective maintenance action assuming the cost of labour and parts.

The maximum acceptable response time of the Contractor's engineers from the failure/dysfunction notification shall be four (4) hours.

#### **15.6.2 Performance Warranty Bond**

A Performance Warranty Bond, the amount of which is set at five per cent (5%) on the contract value, not including VAT, expiring sixty (60) days after the end of the performance warranty period, is delivered after the reception of the equipment.

In the case where the Contractor fails to comply with his contractual obligations, ThPA SA's competent body shall recommend the forfeiture of the Performance Warranty Bond, in all or in part.

#### **15.7 Miscellaneous terms**

- The Contractor shall bear full and exclusive responsibility for any damage or failure that may be caused to a person or object of ThPA SA, the personnel he employees or any third party, due to this project or in connection with the Contractor's or Contractor's crew actions.
- The Contractor's staff will work in these premises under the supervision and instruction of the Contractor's competent bodies. It is explicitly specified that this staff has no employment relationship with ThPA SA
- The Contractor shall use its own equipment and tools for the full installation of the Gensets.
- The Contractor shall perform the above-described project in full alone and for the entire duration specified by the Contract, without the right to assign or in any way substitute it in whole or in part.
- The Contractor shall take all necessary measures for the safe performance of works and comply with the Workers' Health and Safety Regulation (decision number 2643/27.06.2005) of ThPA SA

## **PART B - TECHNICAL TERMS AND SPECIFICATIONS**

### **1. Overview**

The object of the Tender is the study, procurement and installation of three standby power, closed type Gensets with soundproof and waterproof Container-type enclosure, suitable for outdoor use, which will be connected to the substations in the Port area. Floor plans of the substations are available in Annex 4 of the Call. **Line diagrams are available following agreement with the Procurement Department of ThPA SA**

Each of the three required Gensets must include all the devices and sets required for an automatic operation in line with the specifications of DIN 6271, ISO 8528/1 & 3046, BS 5514. More specifically, each of the Gensets consists of the following parts:

1. A Genset i.e. A generator, an engine, a fuel tank and all their accessories for its full operation
2. Wiring cables without the switching device  
The Switchboard and the base frame
3. The grounding system - if deemed necessary and

The items under procurement and installation are specified below:

S/N	TYPE OF GENSET (Prime power)	SUBSTATION TO BE CONNECTED	UNITS
1.	Genset to meet the reefer needs (630kva)	Substation 6σ	1
2.	Genset to meet the OCR needs (25kva)	Substation 6A	1
3.	Genset to meet the needs of Gate 16 (45- 50kva)	Substation 6E	1

#### Constitution of the Genset

Every Genset will be new, closed type, of robust built, prime power 630 KVA, 25KVA and 45/50KVA and at least 10% standby power that can run for one hour, as detailed on the following table, and is suitable for use as a standby power plant for the immediate and automatic power supply of the installation in case of a complete power failure or unsuitability of PPC power, even at one phase of its network. It will be able to assume consumption loads immediately and automatically and run in full power for continuous operation. The Genset will have a high-efficiency soundproof enclosure.

S/N	TYPE OF GENSET (Prime power)	Prime Power (kva)
1.	Genset to meet the reefer needs (630kva)	630
2.	Genset to meet the OCR needs (25kva)	25
3.	Genset to meet the needs of Gate 16 (45- 50kva)	45 -50

## 2. Technical - General Features of every Genset

### 2.1 Genset composition

The Genset will be of robust built, designed as a single unit with a metal frame base and will constitute a stand-alone, ready for operation. Preferably, it will be entirely manufactured and assembled in Europe (the engine and the generator) by a recognized manufacturer, built and tested according to strict internationally recognized rules. It will be manufactured based on the EU Directives and regulations, as provided for by the applicable Legislation PD 57/2010, OGG A 97/25-06-2010 and will bear CE marking both for the entire set and for the individual parts, if built by different manufacturers.

It will consist of the following components:

- Diesel engine
- The cooling system of the diesel engine which is specially designed and built for tropical climates.
- The electric generator
- A special coupling and coupling chamber.
- The special steel welded base with the following parts:
  - Suitable vibration dampers / bearing springs of the Genset with viscose mass with natural frequency  $f_0 < 3.5\text{Hz}$  that will interfere between the engine/ generator unit and the base, for satisfactory operation and behavior as a stable system in case of network disturbances (abrupt load coupling or uncoupling, short circuits). The technical bid will include a detailed description thereof.
  - The fuel tank, whose components must be built-in the Genset frame.
  - Exhaust gas system
- Indication, operation and automation display and generator protection display (on the Genset).
- The control and automation panel on the Genset with a **4-POLE - for the 25 and 45/50 KVA electric generator and 3-POLE for the 630 KVA** electric generator
- The auxiliary float charging of batteries by PPC.
- The necessary switches, terminals and fuses for the main and auxiliary circuits of the Genset devices with the necessary wiring of the board.

Every Genset will be accompanied by an EC declaration of conformity of the manufacturer. A template of the declaration shall be submitted together with the bid of every supplier indicating that the declared manufacturer is the same as the one mentioned on the EC declaration of conformity. This can be guaranteed by the ISO 9001 certificate of the manufacturer regarding the design and construction of the Gensets and is delivered along with a testing certificate.

### 2.2 Genset mode of operation

All the equipment of every Genset unit must be suitable, on the one hand, for short-term operation (frequent starts and long idle periods) and, on the other hand, for uninterrupted continuous operation without time limit (stop only for oil change).

When a signal is received indicating a problem with the mains current, the startup delay time will be activated. This adjustable time delay will help avoid wrong starts from momentary PPC power cuts or

momentary variations. When the above delay time has elapsed, the starting signal of the Genset engine will be given.

When the engine and the generator of the Genset reach the appropriate speeds, the loads of the installation will be transferred to the Genset for the entire duration of the cut or malfunction of the power mains.

If the Genset does not start, then an **audible and visual signal** will alert for control.

After the restoration of all three phases of the PPC power mains to normal voltage, the delay time of the switch from the Genset to the power mains will be activated and when the adjusted time has elapsed, the load will be transferred to the PPC. If during the above time delay a network error reappears, the order to stop the Generator will be cancelled and the loads will be transferred directly to the PC. If no errors occur in the network, the engine cooling time (adjustable) will ensure the operation of the Genset without load, so that the engine cools down before it stops operating.

The Gensets must have a system for remote control and transmission of their operating parameters through a telemetry system (output port for Ethernet network and remote communication with a computer through special software).

## **2.3 Diesel engine characteristics**

### **2.3.1 Type of engine**

The offered engine type will be industrial type **INDUSTRIAL TYPE DIESEL, FOUR-STROKE, WATER-COOLED ENGINE, MANUFACTURED BY AN OFFICIAL MANUFACTURING HOUSE**, with overcharged turbo and direct electric start without pre-lubrication.

It must be manufactured in accordance with the internationally accepted quality standards of a recognized manufacturer for application in a Genset. In all charging conditions it must have a guaranteed good combustion and quiet vibration-free operation.

### **2.3.2 Engine power**

The net (NETO) power of the offered engine corresponding to the continuous power (DIN 6271, ISO 3046, BS5514) (with the possibility of overcharging by 10% for one hour) will be enough for the Genset to have the apparent necessary power according to the technical requirements for each category of Genset (630, 25 and 45-50) kva and with 0.8 power factor. This power will be given by the Manufacturer for the rated operating conditions. In no case will the overall efficiency of the engine-generator set be less than **0.91**.

The engine speed will be  $n_N=1500$  rotations per first minute with a frequency adjustment range of the Genset from 51.25 to 46.25 Hz.

The engine will take its nominal load in two step charges. (LOAD ACCEPTANCE). The load bearing resistance of the engine in one step charging will be at least **70%**.

### **2.3.3 Starting device – Speed control**

- a. The engine will start automatically and will be water cooled - see paragraph 2.3.4-. The starting safety must exceed 90%. The panel automation will include a device for repeating the start (**5 starts**).
- b) there must be an electric start with a rated operating voltage max 24V. The starter will ensure unobstructed movement of the Genset at the required ignition speed and start duration of 10 seconds.
- c. The drive will be electronic, highly sensitive suitable for maintaining the engine speed according to the standards BS 5514 Class A1/ISO 3046.

### **2.3.4 Cooling system**

The engine will be cooled with water, in a closed circuit through a pump. For water cooling, there will be a special industrial honeycomb refrigerator, suitable for tropical climates, an engine-driven fan and a special thermostat in case of water overheating.

### 2.3.5 Lubrication system

The engine will be lubricated by forced circulation of the lubricating oil under pressure (DIN6267) through a gear pump equipped with a pressure relief valve. The oil pumps must be driven by the DIESEL engine with gear wheels.

The lubrication circuit will be equipped with an oil filter with an easily replaceable internal element. The oil cooler will be cooled with the help of the circulating fresh water, before entering the main body of the engine, will have an oil pressure gauge, as well as a pressure valve for the protection system against low pressure of the lubricating oil. Refilling and changing the oil will be possible without difficulty.

A manual pump and device for evacuating the engine of the lubricating oil will be built in the Genset.

f) the supplier shall indicate on his bid:

- ***The type of lubricating oil.***
- ***The specific lube oil consumption (gr/HP\*h).***

### 2.3.6 Fuel feed system

The fuel system is direct fuel injection system and consists of the fuel feed pump, the electronically controlled hydraulic injectors per cylinder and the electronic controller (engine control module) which measures the amount of oil injected to the injectors, controls the speed and the following ten operating parameters: **1)** accelerator position (throttle), **2)** camshaft position, **3)** injection control pressure, **4)** air pressure generated in the intake manifold (boost pressure), **5)** lubricating oil temperature, **6)** lubricating oil pressure, **7)** coolant temperature, **8)** ambient temperature, **9)** barometric pressure, **10)** exhaust back pressure.

Constant and ongoing electronic control of speed and all parameters of the engine is carried out.

### 2.3.7 Air filter

The air intake pipe will be fitted with an enhanced dry powder retention filter, with an easily replaceable component and equipped with a throttling indicator in case the filter is blocked.

### 2.3.8 Control and protection system

There will be a complete control system with the help of an electric coil that causes the automatic shutdown of the engine (via printed circuit) together with the necessary markings for the following cases:

- a. Shutdown in case of oil pressure drop.
- b. Shutdown due to high temperature.
- c. Shutdown due to hypertrophy
- d. Shutdown due to low coolant level

### 2.3.9 Camshaft system

The camshaft will have specially machined hard steel cams. The transmission from the crankshaft to the camshaft will be done with cogwheels. Each piston of the engine will have two compression springs and a special oil construction, with an internal special spiral spring along the entire length of the inner circumference. The base and dummy bearings will not be repairable but will be replaced. The configuration of the engine body will be easy and convenient for inspection and extraction of various parts and all its moving parts will be covered by metal grids for protection.

### 2.3.10 Crankshaft system

The crankshaft with all the masses on it, as well as its extension, i.e. the axis of the generator with the rotating masses will form an elastic system dynamically balanced, so that the current generated to be vibration-free.

### 2.3.11. Battery system

There will be an array of 12 or 24 V DC batteries, heavy lead-acid type, of European origin, on the base of the Genset.

It will aim at the automatic start via the electric starter after the shutdown or the prolonged voltage drop and will have a capacity sufficient for at least three repeated starts of the Genset. It will consist of an amplified alternator with a special direct current transformer. The array will be accompanied by the necessary connection cables and terminals, while there will be an alternative system of auxiliary float charging by PPC.

The accumulators will be delivered dry charged and will be placed in an anti-seismic scaffold.

For charging the starter batteries, during the operation of the Genset, a suitable generator will be provided, that will be driven by the engine while the engine is running and will exclude the supply of the batteries from the charger.

There will be an automatic switch or electronic protection and adjustment device to protect the generator.

### 2. 3. 12 Local Fuel Tank

The fuel supply for the Genset will consist of a built-in local daily tank, which includes all filling and ventilation pipes as detailed below, level indicator and start valve. There will be a safety collection base below the tank according to ISO 14001.

The tanks capacity must have been calculated for a continuous operating time of the Genset **of at least 8 hours at full load.**

### 2.3.13 Exhaust gas system

The gases will be exhausted from the engine will be through a special industrial type of muffler and through a suitable piping section.

The fuel system will consist of the main high-pressure pump and the nozzles for the fuel inlet, the auxiliary fuel supply pump and an additional manual mechanism. There will be a filter at the inlet of the fuel line. The drive will have a high sensitivity suitable for changing the speed of rotation less than 2.5% for a smooth change of the engine load.

The technical bid will include the fuel consumption for different load values according to the table below.

FUEL CONSUMPTION	
110% load	.....l/h
100% load	.....l/h
75% load	..... l/h
50% load	..... l/h

### 2.3.14 Electric Preheating system

The electric Preheating system will be 230V, 50HZ, of suitable power with isolation switch, with thermostatic switch to keep the diesel engine in constant pre-heating during the rest time of the Genset so that it can start running even in adverse weather conditions.

## 2.4 Generator

### 2.4.1. Type of generator

The generator will be three-phase, modern, self-regulating, self-excited without brushes with 230 / 400V nominal voltage and 50 Hz frequency. Its connection will be by star. The generator will be designed and manufactured according to the international standards BS4999-5000, IEC 60034-1 (34-1), CEI 2-, 3, VDE0530, NF 51-100,111, OVE M-10, NEMA MG1-22. The generator rotor will rest on both ends. The generator rotor will be dynamically balanced and vibration free. It rotates through the front bearing and the self-lubricating bearing of long life, closed type, located in the front part of the generator (single bearing type).

The stimulation will be achieved through a rectifier bridge that includes 6 diodes and a protection device, through VARISTOR, against sudden overcurrent and overvoltage. The generator output voltage is self-regulating via an electronic automatic voltage regulator (AVR). The automatic voltage regulator has a built-in protection device against prolonged overstimulation that may be due to internal or external cause. The protection device de-stimulates the generator within a minimum of 5 sec

### 2.4.2. Generator power

a) In order for the generator to be able to cope (without cooperation problems) with the type of load and the percentage charge mentioned in Article 1, it shall, on the one hand, be of good quality and manufactured by a reputable European manufacturer, and on the other hand, its validity should meet the following relations:

$$S_{\text{Generator}} > S_{\text{Genset}}$$

$$S_{\text{Generator}} > (X_d''(\%) / 10) \times S_{\text{Genset}}$$

whereby:

$S_{\text{Genset}}$ : The rated power of the Genset in KVA

$S_{\text{Generator}}$ : The rated power of the Generator in KVA

$X_d''$ : the transient reaction of the Genset (%)

Referring to the nominal power  $S_{\text{GENERATOR}}$  and not to the power  $S_{\text{GENSET}}$ .

b) The nominal power of the Genset will be given with a 0.8 power factor of and with the aforementioned operating conditions.

The supplier is obliged to make the necessary reductions and to mention the power reduction relations in the above conditions, if the power of the Genset is given by its manufacturer in other conditions.

c) The supplier should indicate in his bid if the offered generator belongs to the conventional production line of the generator manufacturer and has the characteristics ( $S_{\text{GENSET}} / X_d''$ , etc.) that are mentioned in his commercial brochures that must be submitted, or if it is specially designed.

In case the offered generator is of special design, the supplier is obliged to attach to his bid a statement of the manufacturer of the generator that includes the components responsible for the specificity of the generator and the technical characteristics that differ, due to the special design, from those included in the technical leaflets.

In case of special design, the prices of **S GENERATOR Xd** will be confirmed by certificate of a recognized laboratory.

#### **2.4.3. Generator insulation**

The insulation of the windings will be of class F or better according to VDE 0530 or equivalent according to any other regulations, but its rated power will correspond to class F.

#### **2.4.4 Generator protection**

##### **2.4.4.1. Electrical Protection**

During its operation, the generator will be protected against overload and short circuit regardless of the protection provided in the control panel. The Participant in his bid must specify the way in which the above protection is guaranteed, indicating the corresponding devices on the drawing of the generator regulator.

##### **2.4.4.2. Mechanical protection**

During the operating period, the generator will be protected against fall of water and foreign matter inside the generator.

The protection will be IP 23 according to DIN 40050 or equivalent to any other regulations.

#### **2.4.5. Generator voltage**

##### **2.4.5.1. Nominal voltage value - Regulator**

The automatic voltage regulator AVR (operating principle and filters) of the generator must be suitable to ensure the smooth cooperation of the Genset with non-linear loads and the supply of voltage with the following characteristics. The Rated Voltage will be 230/400V with the possibility of manual adjustment  $\pm 5\%$  while the Rated Frequency of the Generator is set at 50Hz. The generator shall bear at an easily inspected position, the automatic electronic and fully watertight voltage regulator (AVR) with the ability to stabilize the voltage within  $\pm 1\%$  range of the nominal value at any change of load and power factor from 0.8 to 1 including of the change of speed.

##### **2.4.5.2. Static voltage change**

Voltage change for permanent status, between "vacuum" operation and rated load (VOLTAGE REGULATION)  $\cdot 5\%$ , for frequency change up to 5% and for power factor 0.7 to 1 inductive.

##### **2.4.5.3. Dynamic voltage change**

Dynamic change of voltage, for abrupt imposition of the maximum load allowed by the engine or removal of the nominal load of the Genset with a power factor of 0.8 inductive, must be less than 10% with a generator voltage recovery time of less than 300 msec .

##### **2.4.5.4. Form of voltage**

The generator voltage curve will be sinusoidal (according to VDE 0530\T 128 or BS 2613).

##### **2.4.5.5. Number of regulators**

In addition to the automatic regulator of the previous paragraph called "main", there will be a second automatic regulator, the "backup", which is completely identical to the "main" one, which will be in standby (off mode) and will be put into operation in the event of breakdown of the "main" one via selector switch.

The above two automatic regulators, i.e. the "main" and the "backup" one will be placed either in the generator shell or in the control panel of the Genset; they shall operate with independent circuits, so as not to affect each other's operation and allow for the dismantling of the damaged one.

#### **2.4.6. Pest prevalence**

The Genset must have class G and N pest protection or better according to VDE 0875 (<2%), or other equivalent regulation.

#### **2.4.7. Generator plate**

The generator will bear a plate with the details: manufacturer, type, continuous operating power, power factor, voltage, frequency, protection, insulation class, stimulation voltage, stimulation current.

### **3. Engine - generator assembly**

#### **3.1 Coupling - Anti-vibration base**

**3.1.1 Base** The diesel engine-generator set shall be mounted on a B3/B5-type steel welded heavy duty support base, according to DIN 42760, which will be fixed and rigid, made of steel sections. They will ensure full isolation of the vibrations of the rotating parts.

#### **3.1.2 Safety guards**

A special anti-accident protection mesh will surround the fan, fan pulleys and the battery charging alternator. Also, a special guard will be placed in the cooling system to protect the cell against shocks.

#### **3.1.3 Coupling**

The diesel engine and generator must be coupled using a flexible coupling of type A or C according to DIN-42948. will be directly connected (coaxially) to an adaptation sinker to avoid disclination after long use. The shaft of the generator will be connected to the engine flywheel coaxially and pneumatically in order to ensure vibration-free cooperation between the engine and the generator.

In general, the transmission will constitute a single unit, silent, flexible, strong and completely free of harmful vibrations and critical points, in order to minimize the unevenness of the unit and ensure that the electricity produced is of constant frequency. The engine-generator unit should preferably be designed in such a way as to ensure that the unit has small dimensions and ensure a vibration-free cooperation between the engine and the generator.

#### **3.2 Soundproof shell**

A closed metal shell will surround the Genset from all sides as well as its roof, it will have a high quality of insulation from moisture as well as anti-vibration support points. It will be made of metal frame of solid built, on which the side pieces (panels) of cover which will be made of sheet metal of sufficient thickness will be fixed. The compressed fiberglass 25 kg/m<sup>3</sup> will be fixed inside the metal pieces (panels), for the sound insulation of the Genset.

The metal shell will have undergone special treatment, removal of oil and phosphating before painting. The painting should consist of two coats of anti-corrosion substrate and RAL type paint for the side walls and the roof; the base with RAL 9005 type paint for a lifespan of over 20 years.

There will be inspection windows, control and maintenance doors that will close airtight and will have heavy type locks.

In appropriate places there will be blinds to let cooling air in and out and for the running of the engine.

The entire construction will be in accordance with international regulations and in accordance with paragraph 5.101.01 of IEC 298.

There will be lifting hooks on the roof for lifting and transporting the Genset.

The soundproof Genset will have a noise level lower than <70 db at a distance of at least 10 m and will be measured after installation.

### **3.3 Bearing base**

Each Genset will be installed on a base of suitable dimensions, which will protrude at least 1 m in perimeter, for maintenance work / repairs and inspections.

The base (platform) will be made of reinforced concrete, in order to withstand the weight of the Genset and its vibrations, after a relevant structural design.

The Contractor is obliged to build the appropriate grounding that will be connected to the neutral node of the Genset according to the EN 50164-1 and 2 standards depending on the needs of the space. The achieved grounding resistance shall be  $\leq 1\Omega$ , according to regulations, the achievement of which, if required, should be supplemented by any provision, at no particular cost.

The Genset support base shall in no case cover other installations such as cable trays, floor channels, etc.

### **4. Automation and control panel**

#### **Control & Automation Indicators Field**

The control and automation panel of the Genset will have a control unit (controller) and will have the form of a vertical cabinet with devices and various control and operation instruments.

The control and automation panel will have the following devices, components, controls and control instruments to achieve the operational and safety provisions of the Genset:

- An automatic 4-pole circuit breaker for protection of the Electric Generator, against overload and short circuit BREAKER of suitable power - current.
- An auxiliary charger 12 or 24 Vdc for the float charging of the batteries that will be automatically powered through the control panel by PPC, 1-230V-50 HERTZ.
- The system of the automatic preheating of the engine coolant that will be automatically powered through the control panel by PPC 1-230V-50 HERTZ.
- A voltage supervisor of PPC current that in case of inappropriateness or unsuitability of the quality of current even in one phase will give an order to start and take over the loads from the Genset.
- The appropriate connecting bars and the appropriate terminals for the input and output of all mains and auxiliary cables

Also on the outside it will have an emergency stop (mushroom).

#### **Controller**

On its front, the automation and control panel will have a control unit (controller).

The controller will have the following buttons:

- RUN
- AUTO
- STOP
- TEST
- Selection
- STOR siren sound

It is **pointed out** that the possibility of "TEST" without loads is extremely necessary and the lack of the above possibility is considered as a reason for rejection of the offer.

The controller will be the programmer operating unit of the Genset, i.e. the electronic device that will include all the control, operation and protection devices of the Genset.

The controller will have a screen that displays the following parameters:

- Load in amperes of each phase of the Genset
- Current in amperes of each phase of the Genset
- Current in Vole of each phase and the neutral point of the Genset
- Current in amperes of each phase of PPC network
- Genset frequency
- Water temperature
- Lubricating oil pressure
- Battery voltage
- Operating hours
- kW meter (active power)
- kVAR meter (reactive power)
- KVA meter (apparent power)
- Power factor (p.f)
- r.p.m

All the above operations will be performed via buttons.

Also, the following will be performed via button:

- Muting the hazard alarm and
- Testing the operation of the light indicators

#### Protection & Signalling Systems

The Genset will be automatically protected against the following hazards and malfunctions:

#### **A. ALARAM SIGNAL AND SIMULTANEOUS SHUTDOWN OF THE GENSET**

- Generator phase asymmetry
- Oil vacuum
- Coolant overheating
- Overspeed - over-frequency
- Coolant low level
- Short circuit
- Hypotension / Hypertension
- Genset overloading
- Emergency stop button
- Hypertrophy / Engine Hypotrophy

#### **Circuit breaker**

At a separate part of the indication display there will be a 4-POLE switch (circuit breaker) with the same power as the Genset, with thermal and magnetic components to protect the generator against overload and short circuit.

#### **B. ALARM SIGNAL**

- Failure to start after exhausting 3 automatic start attempts
- Over frequency
- Battery high voltage
- Battery low voltage

#### **Communication**

The Genset will have the following communication ports for the remote control & monitoring of the Genset:

- SNMP protocol RJ45 communication network port.
- RS485 for connection to a BMS system that will cover the transmission of all alarms via MODBUS-RTU protocol.

- USB port for connection to a PC via a suitable program.

### **Battery charger**

The automation panel will have an independent float charging system of the mains supply (PPC).

### **Remote communication**

The automation and control panel will have a free contact for remote alarm e.g. for the Genset in operation. The offered Genset will have RS 485, Ethernet & USB output ports as well as a suitable card to allow for remote communication (via internet) with a computer. The contractor will supply ThPA SA a special software, that will be able to remotely control the said Genset. The following will be achieved through remote computer communication:

- 1) Notification for warning alarms (e.g. low oil pressure or overheating),
- 2) Recording of events (e.g. PPC power cut),
- 3) Recording of Genset operating hours,
- 4) Information on the percent (%) levels of fuel in the tank.

### **Genset - PPC Switchboard**

It is the supplier's responsibility to supply the switchboard, which will be standalone.

The board will have a voltage of 400V, a rated current suitable for the Genset, a degree of protection of IP 54, made of metal, wall mounted, of suitable dimensions, with a space reserve of at least 20% and manufactured according to IEC/EN 60439-1 standards.

The switchboard will include the components required for the operation of the Genset:

Automatic switching device consisting of two (2) 4-pole relays of similar power with the Genset, category AC1,  $\theta < 40$  °C, that will be electrically and mechanically locked, and will have the appropriate auxiliary contacts for the main supply network and the generator.

The electrical and mechanical locking system of the two (2) switching relays will prevent the exclusion of the simultaneous power supply of the installations from the main and the Genset.

Indicator led lights that will show:

- voltage from PPC,
- voltage from the Genset

### **COMPONENTS OF THE SWITCHBOARD & CONTROL PANEL**

The construction of the switching and control panel will meet the following general principles:

- The whole construction of the panel will be metal
- The plate for the construction of the panel will be at least 1.5 mm thick
- The protection will be at least IP40 according to DIN 40050 (BL 1) and according to IEC 144
- The panel will be painted in a single color
- The frame of the panel will have suitable loops (eye bolts) in appropriate places, in order to be lifted and transported, and holes to allow for its fixing in its installation area.
- The panel will only be accessible from the front, to facilitate installation and maintenance. For this purpose there will be access doors with swivels. The doors will open with a single key or a screwdriver.

- In the panel, there must be lighting operating with a sharing switch.
- The lighting will be supplied by the starter battery of the Genset
- On the panel door the following will be placed:
  - The measuring instruments
  - The selector switches or control switches
  - The buttons and
  - The visual signals provided for each display by this Technical Specification. In all the above there will be appropriate identification - functional plates.
- The color of the visual signals will be as follows:
  - Functional visual signals: "Green"
  - Visual "hazard" signals: "red"
  - Visual "fault" signals: "Red" or "colourless"
- The doors will be grounded, with the fixed metal frame of the board.
- It will be taken into account that the interconnection (power circuits and auxiliary circuits) of the panel with the main, the Genset and the consumptions will be made from the bottom.
- The whole construction of the panel (bars, cables, insulations, fuses, distances, connections, etc.) will be calculated for the nominal power of the Genset (taking into account the increase by 20%), according to applicable Greek regulations (or the applicable VDE & DIN) and for its operating conditions (automatic - manual).
- Large switches and other heavy components must be secured to prevent vibrations from being transmitted to other devices.
- Switches, units, relays, instruments, etc. should be accessible and easily supervised.
- Where there are exposed bars of the power part on the fields, the bars will be insulated or a transparent PLEXI-GLASS will be inserted in front of them to protect the staff from accidental contact, after opening their port.
- The individual units and subunits will be interconnected via special multiple safety terminals (plugs) or corresponding terminals (clamps) and will be numbered according to the cables.
- The wiring of the auxiliary circuits will be extendable, supervisable, accessible and placed inside plastic channels, which will be visible and will allow the intervention. The cable bundle from the port to the rest of the panel will be protected by a special flexible pipe.
- For the departures of the power parts of the panel to the mains network, the Genset or the consumptions (both of the phase conductors and the neutral and ground conductor), suitable terminals will be placed, arranged in one level, which will be connected to the switches by the

manufacturer and will fit to the cross-sections of the respective conductors. A special angle bracket will be provided on which these conductors will be mounted thus ensuring that their weight does not stress the terminals.

- All the above departures will be marked as follows:
  - Of the phase conductors with L<sub>1</sub>,L<sub>2</sub>,L<sub>3</sub>
  - Of the neutral with N
  - Of the ground conductors with PE
- The connection of the control and automation section of the panel
  - With the operating or protection devices of the Genset
  - With the independent "signalling frame"

will be made with special terminal blocks.

- The boards that will be present in the field automation sections must meet the following requirements:
  - To be of good construction and with excellent quality materials.
  - Any integrated circuits used must be placed on high quality bases.
  - Have special test points, measurements, etc. (TEST POINTS), where this is deemed necessary to control their operation.
  - Have good quality socket-outlets (plugs) for their connection to the conductors of the auxiliary circuits.
  - Have them indelibly written on them at least
    - The ID name of the unit
    - The identifier or number of their connection limits, control points and, if any, adjustment potentiometers and auxiliary relays.

Generally all circuit boards, terminals, relays and cables of the automatic control unit will have a distinguishing number or letter.

These distinctive signs will also be indicated in the drawings.

There must be no "sealed" parts of the control panel or resin-impregnated boards that do not allow intervention.

In addition to all this, in an easily recognizable place, inside, there will be a metal sign indicating the following:

- Name of manufacturer
- Year of manufacture

- Nominal field strength
- Delivery Date

## 5. Connection

Each of the three procured Genset units will be installed in an area adjacent to the substation, i.e. in an outdoor area, indicated in Table 1 of the Technical terms of the Call. The connection to the automatic switchboard will be made with cables whose number and cross-section are laid down in the study that the Contractor is obliged to carry out and submit in the tender bid. Two cables of the above cross-section will be installed, as well as one (1) neutral and earthing conductor will be installed. The installation of a NYY cable of suitable cross-section is also required for the lighting installation and charging of batteries. The bidder in his study will also mention the way the cables are routed

## 6. Origin and compliance regulation of Gensets

Each Genset (engine, generator, fields) shall come from and be manufactured by a recognized manufacturer.

The prospective supplier shall submit recommendation letters from companies that have procured the same Gensets. The recommendation letters shall indicate the time of procurement of the Genset and its functional behaviour to date.

Every prospective supplier shall make known the following:

- ***Country of manufacture of the Diesel Engine***
- ***Country of manufacture of the Generator***
- ***Country of manufacture of the switchbox and control panel***
- ***Country of assembly of the Genset***

The manufacture and quality of materials will be governed by the Greek regulations as regards the materials covered by such regulations and by the regulations of the countries of manufacture for materials that are not governed by any Greek regulations (e.g. DIN, VDE, VDMA, BS, etc.). These regulations will cover aforementioned the environmental operating conditions. The entire set will consist of new devices and genset-specific industrial products.

## 7. Quality control - Acceptance

### ***ROUTINE TESTS***

After the installation of the Genset, the following tests will be performed on the spot under the care of and in presence of the manufacturer/supplier:

#### **Idle speed with measurement of:**

- Phase to neutral voltage (L1. N – L2 . N – L3 . n\_
- Phase to phase voltage (L1. L2 – L2 . L3 – L3 . L1)
- Frequency f

#### **Operation with load and measurement of oil pressure - water temperature, frequency, voltage and current for gradual increase:**

- 10% of rated power for 15 min
- 20 % of rated power for 15 min

- 40 % of rated power for 15 min
- 60 % of rated power for 15 min
- 80 % of rated power for 15 min
- 100 % of rated power for 30 min

**Operation of Genset and load bearing equal to 70% of the rated power in one step with measurement of the bearing time (desired time 15 sec).**

**Operation of the protection system of the Genset ON HOLD in the case of the following errors:**

- Low oil pressure
- High cooling water temperature
- Overspeed
- Start failure (after three failed starts)
- Emergency Button (mushroom)

The corresponding test protocols will be completed for all routine tests.

## **8. Training**

The Contractor undertakes the obligation to hold a series of trainings for the Technical Staff of ThPA SA both theoretically and practically for at least one day per category of Genset.

The above trainings must have been completed before the date of commissioning of the Genset. During the above trainings, in addition to the training program, the following materials should be delivered to the participating staff:

- a) Technical Brochure with Operating Instructions with a detailed description of the panel and its drawings, in Greek
- b) Technical Brochure with detailed maintenance instructions of the Genset (Generator, Panel, Engine) in Greek.
- c) Technical Brochure with parts lists
- d) Technical Brochure with detailed instructions for identifying the causes of the main failures of the Genset in Greek (Troubleshooting MANUAL)
- e) The appropriate software regarding the Genset and the switchboard.
- f) Full plan of the Genset installation site, with indicative positions of the required equipment
- h) Proposed test sheets of the Genset and the electrical panels. Once the proposed tests that will be performed by the installer supplier are approved, they will be submitted, before receiving the Genset, duly completed and signed.

## **9. Performance guarantee**

The warranty period commences upon completion of the installation of each Genset and lasts two (2) years.

During the warranty, the cost of all spare parts and consumables as well as the maintenance of the proper functioning of the Genset shall be incurred by the supplier.

Any damage/problem found by the company during the warranty period, obliges the Supplier to restore it immediately and at his own expense. The supplier must provide support throughout the warranty period. This service will include regular maintenance services based on the specifications of the manufacturer.

**Attachments:**

*Annex 1 - Information document on the protection of personal data*

*Annex 2 - Genset Technical Characteristics Compliance Sheet*

*Annex 3 - Financial Bid Document*

*Annex 4: Annex 4: - Floor Plans of Substations connected with the Genset*

**THE CHIEF EXECUTIVE OFFICER  
OF THPA S.A**

**FRANCO NICOLA CUPOLO**

## ANNEX 1– PROCESSING OF PERSONAL DAT

**ΕΝΗΜΕΡΩΣΗ ΓΙΑ ΤΗΝ ΕΠΕΞΕΡΓΑΣΙΑ των ΠΡΟΣΩΠΙΚΩΝ ΔΕΔΟΜΕΝΩΝ, κατά το άρθρο 13 του ΓΚΠΔ 679/2016 (συνοδεύει τα έντυπα των Αίτησεων Συμμετοχής σε Διαγωνισμούς-Προκηρύξεις-Διακηρύξεις-Προσφορές κλπ της Δνσης Προμηθειών και Επενδύσεων της «ΟΛΘ ΑΕ»).**

Η Ανώνυμη Εταιρεία με την επωνυμία «*Οργανισμός Λιμένος Θεσσαλονίκης*» (ΟΛΘ Α.Ε., νόμος 2688/99, ΦΕΚ 40Α/1-3-99), που εδρεύει στη Θεσσαλονίκη (Α΄ Προβλήτα, εντός Λιμένος, ΤΚ: 54625, τηλ.: 2310 593 118-121), όπως νόμιμα εκπροσωπείται, **ενημερώνει** με την παρούσα, και σύμφωνα με τις διατάξεις της κείμενης νομοθεσίας περί προστασίας δεδομένων προσωπικού χαρακτήρα, και ιδιαίτερας του Γενικού Κανονισμού ΕΕ 679/2016, **υπό την ιδιότητά της ως «Υπεύθυνος Επεξεργασίας»**, το φυσικό πρόσωπο (εφεξής καλούμενο «Υποκείμενο των Δεδομένων»), που υπογράφει την Αίτηση Συμμετοχής, την Προσφορά ή άλλο, παρόμοιου σκοπού, έντυπο της Δνσης Προμηθειών και Επενδύσεων της «ΟΛΘ ΑΕ», και υποβάλλει τα προβλεπόμενα δικαιολογητικά, είτε για τον εαυτό του και ως εκπρόσωπος ατομικής επιχείρησης, είτε ως Φ.Π. - νόμιμος εκπρόσωπος του συμμετέχοντος στη διαδικασία νομικού προσώπου, είτε με άλλη παρόμοια ιδιότητα νομιμοποίησης, ότι η ίδια η «ΟΛΘ ΑΕ» και οι αρμόδιες Υπηρεσίες-Διευθύνσεις-Τμήματα αυτής (όπως και οι υπάλληλοί της, που ενεργούν υπό την εποπτεία της, κατ' εντολή και για λογαριασμό της και στα πλαίσια των αρμοδιοτήτων τους, πιθανόν δε και άλλοι ως από καινού «Υ.Ε.», «Εκτελούντες την Επεξεργασία», τρίτοι ή αποδέκτες: υπόλοιποι μετέχοντες στη διαδικασία, υπουργεία, δημόσιες αρχές, ΔΟΥ, δικαστικές αρχές κλπ, βάσει συμμόρφωσης με έννομη υποχρέωση του «Υπευθύνου Επεξεργασίας» ή σε εκπλήρωση καθήκοντος του ή για εκτέλεση σύμβασης), **συνάλλει, επεξεργάζεται και τηρεί** τα προσωπικά δεδομένα που αναφέρονται στην Αίτηση Συμμετοχής, στην Προσφορά ή σε άλλο παρόμοιου σκοπού έντυπο της Δνσης Προμηθειών και Επενδύσεων της «ΟΛΘ ΑΕ», και στα συνοδευτικά αυτών έγγραφα, τα οποία αυτοβούλως υποβάλλει στην «ΟΛΘ ΑΕ» το «Υποκείμενο των Δικαιωμάτων», είτε για λογαριασμό του (ατομική επιχείρηση) είτε για λογαριασμό του Ν.Π. που το ίδιο εκπροσωπεί.

Τα δεδομένα αυτά θα χρησιμοποιηθούν για τις ανάγκες διεκπεραίωσης της Αίτησης Συμμετοχής, της Προσφοράς ή όποιου άλλου με παρόμοιο σκοπό εντύπου της Δνσης Προμηθειών και Επενδύσεων της «ΟΛΘ ΑΕ». Σκοπός της επεξεργασίας μπορεί να είναι: η αξιολόγηση της Αίτησης/Προσφοράς κλπ, ο έλεγχος των στοιχείων του «Υποκείμενου» ή της εταιρείας που αυτό εκπροσωπεί, που η διαδικασία απαιτεί, η αξιολόγηση της καταλληλότητας του «Υποκείμενου» ή της εταιρείας που αυτό εκπροσωπεί, ως υποψήφιου αντισυμβαλλόμενου της προς σύναψη σύμβασης με την «ΟΛΘ ΑΕ» ή στα πλαίσια πρόθεσης σύναψης σύμβασης (άρθρο 6 παρ.1β ΓΚΠΔ ΑιΣκ 44). Περαιτέρω, η «ΟΛΘ ΑΕ» επεξεργάζεται τα εν λόγω δεδομένα για να επικοινωνεί με το «Υποκείμενο», όποτε το κρίνει απαραίτητο, για ζητήματα σχετικά με την διαδικασία, και για την εναρμόνιση της «ΟΛΘ ΑΕ» με τις επιταγές του Κανονισμού και του νόμου (συμμόρφωση με έννομη υποχρέωσή του, άρθρο 6 παρ. 1γ ΓΚΠΔ. Τα δεδομένα αυτά διατηρούνται στο αρμόδιο Τμήμα Προμηθειών για το απαραίτητο χρονικό διάστημα ελέγχου της Αίτησης/Προσφοράς κλπ, και των υποβαλλόμενων δι'αυτών στοιχείων, για το χρονικό διάστημα διεκπεραίωσης της διαδικασίας, για το χρονικό διάστημα υποβολής τυχόν ενστάσεων και λοιπών ενδίκων μέσων και βοηθημάτων, που δυνατόν να προβλέπονται εσωτερικά ή από τη νομοθεσία, για το χρονικό διάστημα εκπλήρωσης των εκατέρωθεν υποχρεώσεων και παραγραφής των εκατέρωθεν αξιώσεων και γενικά για όσο απαιτείται από το γράμμα και το πνεύμα του Κανονισμού Ανάθεσης Υπεργαλαβικών Συμβάσεων και Προμηθειών και της σχετικής νομοθεσίας και των συμβάσεων που διέπουν τη λειτουργία της «ΟΛΘ ΑΕ», όπως αυτά εκάστοτε ισχύουν. Κατόπιν αρχειοθετούνται, είτε έγχαρτα είτε ηλεκτρονικά, με τρόπο που δεν παρέχει πρόσβαση σε μη εξουσιοδοτημένους υπαλλήλους. Προβλέπεται η ασφαλής καταστροφή τους μετά την πάροδο του απαραίτητου χρονικού διαστήματος, όπως ορίζει η οικεία νομοθεσία (για την περίοδο μέχρι την 23-3-2018 ισχύουν οι ρυθμίσεις του άρθρου 191 §2 του Ν.4610/2018 (Α'70) για την περίοδο μετά το χρονικό αυτό σημείο και τη μετατροπή του «Υπευθύνου Επεξεργασίας» σε ΑΕ, ισχύει η απώτατη παραγραφή του Αστικού Κώδικα). Η παροχή των δεδομένων αυτών είναι απαραίτητη για την παρούσα διαδικασία και, αν δε δοθούν από το «Υποκείμενο των Δεδομένων», η σχετική υπηρεσία δεν θα είναι δυνατή ούτε και η συμμετοχή του «Υποκείμενου» στη διαδικασία.

Το «Υποκείμενο των Δεδομένων» έχει δικαίωμα υποβολής αιτήματος στον «Υπεύθυνο Επεξεργασίας» για: πρόσβαση-ενημέρωση, διόρθωση, περιορισμό επεξεργασίας των δεδομένων που το αφορούν, αντίταξη στην επεξεργασία καθώς και για τη διαγραφή και τη φορητότητα, πάντα υπό τους όρους και τους περιορισμούς της κείμενης νομοθεσίας (πχ 17 παρ.3, 20 παρ.3, 23 ΓΚΠΔ). Τα δικαιώματα αυτά ασκούνται είτε με τη συμπλήρωση της αντίστοιχης αίτησης-φόρμας που υπάρχει διαθέσιμη στο Πρωτόκολλο και στη Δνση Προμηθειών και Επενδύσεων της «ΟΛΘ ΑΕ», είτε με αποστολή επιστολής στη διεύθυνση: «ΟΛΘ ΑΕ», Α΄ Προβλήτα, εντός Λιμένος, ΤΚ: 54625, Θεσσαλονίκη, τηλ.: 2310 593118-121, είτε με ηλεκτρονικό μήνυμα στη διεύθυνση: [dpo@thpa.gr](mailto:dpo@thpa.gr). Ο «Υπεύθυνος Επεξεργασίας» παρέχει στο «Υποκείμενο των Δεδομένων» πληροφορίες για την ενέργεια που πραγματοποιείται κατόπιν αιτήματος, δυνάμει των άρθρων 15 έως 22 ΓΚΠΔ χωρίς καθυστέρηση και σε κάθε περίπτωση εντός μηνός από την παραλαβή του αιτήματος. Η εν λόγω προθεσμία μπορεί να παραταθεί κατά δύο ακόμη μήνες, εφόσον απαιτείται, λαμβανομένων υπόψη της πολυπλοκότητας του αιτήματος και του αριθμού των αιτημάτων (βλ. αναλυκότερα: άρθρο 12 παρ. 3-4 ΓΚΠΔ. Επίσης, για τυχόν καταγγελία, το "Υποκείμενο των Δεδομένων" έχει το δικαίωμα να απευθυνθεί στην Αρχή Προστασίας Δεδομένων Προσωπικού Χαρακτήρα είτε εγγράφως (δνση: Κηφισίας 1-3, Τ.Κ. 115 23, Αθήνα) είτε με ηλεκτρονικό μήνυμα ([www.dpsa.gr](http://www.dpsa.gr)).

Θεσσαλονίκη, \_\_\_ / \_\_\_ /20\_\_

ΕΚΔΟΣΗ 7<sup>ος</sup>/2020

Ελαβα γνώση της παρούσης Ενημέρωσης (υπογραφή και ολογράφως):

**ANNEX 2 - DECLARATION OF CONFORMITY OF TECHNICAL FEATURES OF GENSET - To be completed for every type of Genset**

PARAGRAPH SPECIFICATION	DESCRIPTION	ITEMS	
<b>GENERAL</b>			
1	Genset manufacturer		
2	Genset weight		kg
3	Genset dimensions (Length -width -height)	.....X.....X...	m
4	Genset Environmental Operating conditions		°C ,% TORR
<b>ENGINE</b>			
5.	Manufacturer Type of engine		
6.	Regulation governing the engine		
7.	Number of cylinders and Type of device		
8.	Engine capacity		cm <sup>3</sup>
9.	Weight of engine		kg
10.	Way of filling cylinders with air		
11.	Continuous power of engine with 1500στρ/1'		HP
12.	Reference conditions of the above power		°C % TORR

13.	Startup reliability		%
14.	Starter power		HP
15.	Starter battery capacity and voltage		AH V

16.	Specific air consumption for combustion at full load		m <sup>3</sup> /HP *h
17.	Fuel injection pump type		
18.	Specific fuel consumption at full load		Kgr/HP * h
19.	Net calorific value of the fuel used		Kcal/Kgr
20.	Specific lube oil consumption at full load		gr / HP * h
21.	Efficiency of the engine		
22.	Type of engine cooling		
23.	Noise after the muffler		DB
24.	Rotation speed		%
25.	Static rotation change		%
26.	Dynamic rotation change		%
27.	Rotation recovery time		SEC
28.	Nominal load acceptance time		SEC
30.	Percentage of nominal load at one-off charge		%
<b>GENERATOR</b>			

31.	Manufacturer and type of current		
32.	Regulation governing the engine		
33.	Short-circuit generator current		A
34.	Generator efficiency		
35.	Generator weight		Kgr
36.	Actual and apparent nominal power of generator		KW
37.	$\cos\phi=0.8$		KVA
38.	Subtransient reactance $X_d''$ (at nominal power of generator)		
39.	Insulation class of the generator		
40.	Protection of the generator against water and foreign matter		
41.	Static voltage change		%
42.	Dynamic voltage change		%
43.	Voltage recovery time		SEC
44.	Factor $K_v$ between one phase and the neutral point.		
<b>SWITCHBOX AND CONTROL PANEL</b>			
45.	Panel manufacturer		
46.	Field dimensions (length-width-height)	.... X.....X.....	m
47.	Table weight		Kgr

48.	Automatic circuit-breaker type and category		
49.	Class of panel voltmeter		
50.	Class of panel ammeter		
51.	Class of Genset pest control		
52.	Panel protection		

### ANNEX 3 - FINANCIAL BID FORM

Having regard to the Tender terms that I accept **fully and unconditionally**, I provide as follows:

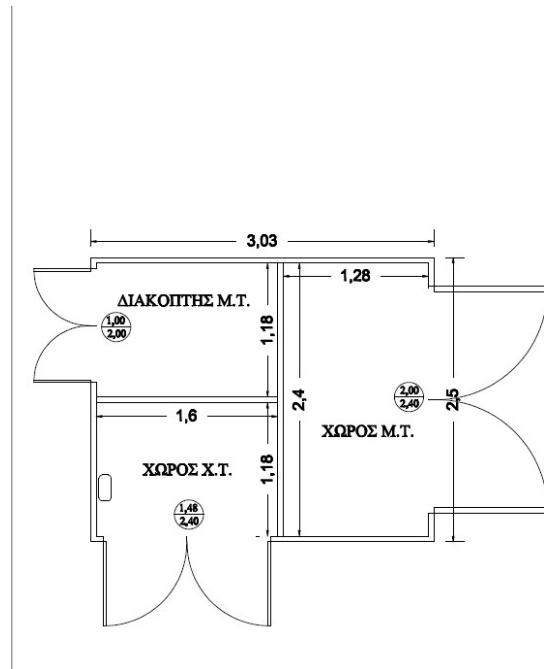
	DESCRIPTION	PRICE IN EUROS	Delivery period of Genset	Performance bond time	Payment method based on Article 15.5
1	630KVA 45-50KVA power Genset				
2	25KVA 45-50KVA power Genset				
3	45-50KVA 45-50KVA power Genset				

**BID VALIDITY:** ..... (.....)

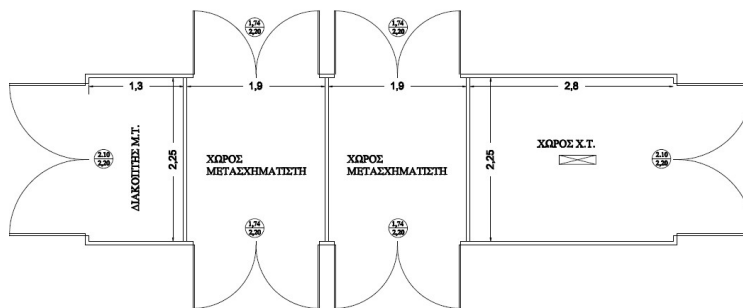
**Date,** \_\_\_\_\_

**Stamp, Signature**

**ANNEX 4 - GROUND PLANS OF SUBSTATIONS THAT WILL BE CONNECTED WITH GENSETS**



ΕΡΓΟ: ΑΠΟΤΥΠΩΣΗ ΥΠΟΣΤΑΘΜΟΥ 6E	
ΘΕΣΗ: ΕΝΤΟΣ ΛΙΜΕΝΟΣ ΘΕΣΣΑΛΟΝΙΚΗΣ	
ΜΕΛΕΤΗΤΗΣ: ΤΣΙΠΤΕΝΗΣ ΕΛΕΥΘΕΡΙΟΣ	
ΘΕΜΑ ΣΧΕΔΙΟΥ:  ΚΑΤΩΦΗ ΥΠΟΣΤΑΘΜΟΥ	ΑΡΙΘΜΟΣ ΣΧΕΔΙΟΥ: 4  ΚΛΙΜΑΚΑ 1:25
ΧΡΟΝΟΣ ΜΕΛΕΤΗΣ: ΙΑΝΟΥΑΡΙΟΣ 2020	
ΘΕΩΡΗΣΗ ΥΠΗΡΕΣΙΑΣ	ΣΥΝΤΑΞΑΣ ΜΗΧΑΝΙΚΟΣ



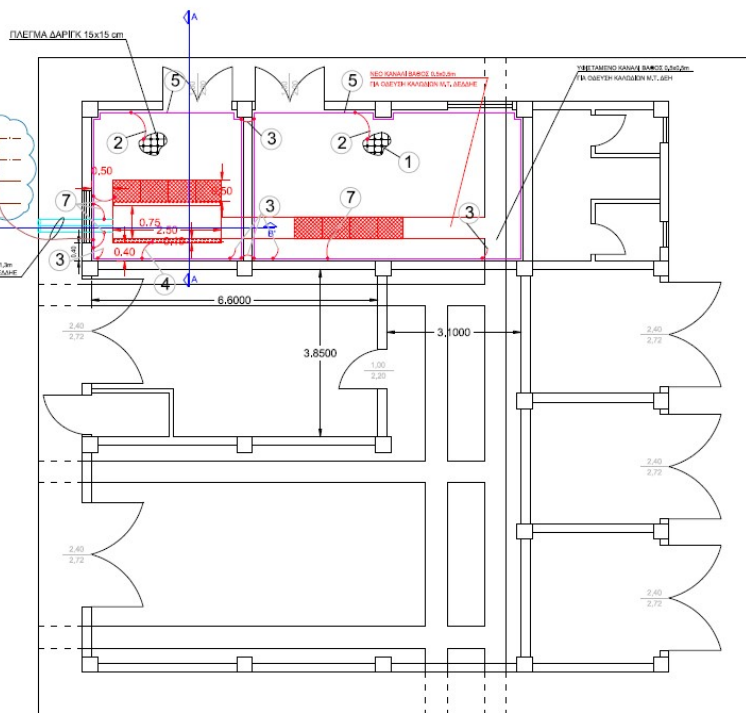
ΕΡΓΟ: ΑΠΟΤΥΠΩΣΗ ΥΠΟΣΤΑΘΜΟΥ 6EΓ	
ΘΕΣΗ: ΕΝΤΟΣ ΛΙΜΕΝΟΣ ΘΕΣΣΑΛΟΝΙΚΗΣ	
ΜΕΛΕΤΗΤΗΣ: ΤΣΙΠΤΕΝΗΣ ΕΛΕΥΘΕΡΙΟΣ	
ΘΕΜΑ ΣΧΕΔΙΟΥ:  ΚΑΤΩΦΗ ΥΠΟΣΤΑΘΜΟΥ	ΑΡΙΘΜΟΣ ΣΧΕΔΙΟΥ: 7  ΚΛΙΜΑΚΑ 1:25
ΧΡΟΝΟΣ ΜΕΛΕΤΗΣ: ΙΑΝΟΥΑΡΙΟΣ 2020	
ΘΕΩΡΗΣΗ ΥΠΗΡΕΣΙΑΣ	ΣΥΝΤΑΞΑΣ ΜΗΧΑΝΙΚΟΣ

## Ground plan of substation 6A

ΠΕΡΙΜΕΤΡΙΚΗ ΓΕΙΩΣΗ ΤΩΝ ΧΩΡΩΝ ΟΔΑ ΣΥΝΔΕΣΗ ΜΕ ΤΗΝ ΥΦΙΣΤΑΜΕΝΗ ΓΕΙΩΣΗ ΤΟΥ ΥΠΟΓΡΑΦΩΝΟΥ ΤΟΥΛΑΧΙΣΤΟΝ ΣΕ 4 ΣΗΜΕΙΑ. ΣΕ ΠΕΡΙΤΤΕΡΕΣ ΠΩΝ ΜΕΤΑ ΤΗΝ ΜΕΤΡΗΣΗ ΟΜΑ ΔΙΑΠΕΤΕΧΩΣΙ ΟΤΙ Η ΑΝΤΙΣΤΑΣΗ ΤΗΣ ΓΕΙΩΣΗΣ ΔΕΝ ΕΙΝΑΙ ΚΑΤΩ ΑΠΟ ΤΟ 10ΩΜ ΤΟΤΕ ΠΡΕΠΕΙ ΣΤΟ ΣΚΑΜΜΑ ΓΙΑ ΤΗΝ ΟΔΕΥΣΗ ΚΑΛΩΔΙΩΝ ΜΕΧΕ ΤΑΧΗΣ ΔΕΔΩΜΕ 'ΝΑ ΤΟΠΟΘΕΤΗΘΟΥΝ ΕΠΙΠΕΔΗ ΗΛΕΚΤΡΟΔΙΑ ΓΕΙΩΣΗΣ (ΓΙΝΗ ΝΑ ΠΕΣΟΥΝ ΤΑ ΚΑΛΩΔΙΑ ΜΕΧΕ ΤΑΧΗΣ ΔΕΔΩΜΕ). ΑΡΙΘΜΟΣ ΤΩΝ ΗΛΕΚΤΡΟΔΙΩΝ ΠΡΕΠΕΙ ΝΑ ΕΓΓΡΑΦΗ ΓΙΑ ΝΑ ΚΑΤΕΒΑΣΗ ΤΗΝ ΑΝΤΙΣΤΑΣΗ ΓΕΙΩΣΗΣ ΚΑΤΩ ΑΠΟ 10ΩΜ.

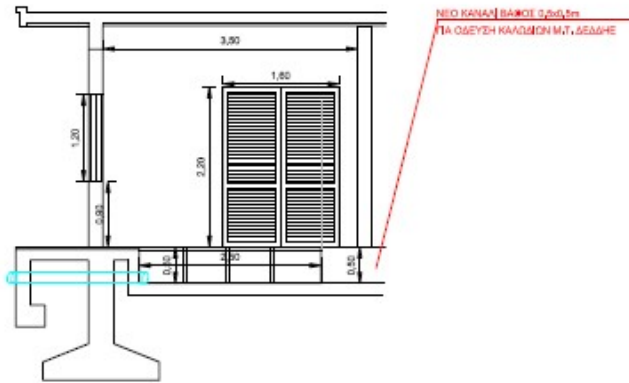
ΥΠΕΡΒΕΒΗΚΕ ΗΛΕΚΤΡΟΔΙΩΝ ΓΕΙΩΣΗΣ ΤΥΠΟΥ ΠΛΑΚΑΣ ΕΙΣ ΧΩΡΩΝ 'Φ' ΚΑΙ Η ΓΕΙΩΣΗ ΚΑΙ ΤΗΣ ΜΕ ΤΟΝ ΕΠΙΠΕΔΗ ΗΛΕΚΤΡΟΔΙΩΝ ΓΕΙΩΣΗΣ ΤΥΠΟΥ ΠΛΑΚΑΣ ΕΙΣ ΧΩΡΩΝ 'Υ' ΤΟΣΑ ΩΣΤΕ ΝΑ ΒΕΒΗΤΕΥΣΗΙ ΑΝΤΙΣΤΑΣΗ ΓΕΙΩΣΗΣ ΚΑΤΩ ΑΠΟ 10ΩΜ.

Σ ΣΤΟΙΧΙΕΣ ΓΑΒΑΝΗΣ 'Φ' 1,3ΩΜ  
ΤΑ ΟΔΕΥΣΗ ΚΑΛΩΔΙΩΝ Μ/Τ ΔΕΔΩΜΕ

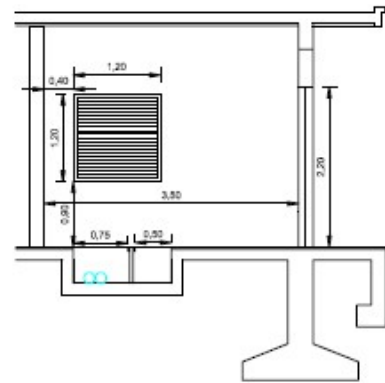


### ΤΕΧΝΙΚΟ ΥΠΟΜΝΗΜΑ

1. ΙΣΟΔΥΝΑΜΙΚΟ ΠΛΕΓΜΑ ΧΑΛΥΒΔΙΝΟ Φ6mm ΜΕ ΑΝΟΙΓΜΑΤΑ 15x15cm ΚΑΙ ΣΥΓΚΟΛΗΜΕΝΟΥΣ ΚΟΜΒΟΥΣ, ΤΟΠΟΘΕΤΗΣΗ 5cm ΚΑΤΩ ΑΠΟ ΤΟ Τ.Δ.
2. ΣΥΝΔΕΣΗ ΙΣΟΔΥΝΑΜΙΚΟΥ ΠΛΕΓΜΑΤΟΣ ΜΕ ΤΗΝ ΠΕΡΙΜΕΤΡΙΚΗ ΛΑΜΑ ΜΕ ΤΗ ΧΑΛΥΒΔΙΝΗ ΡΑΒΔΟ ΘΕΡΜΑ ΕΠΙΨΕΥΔΑΡΓΥΡΩΜΕΝΗ Φ10 ΣΥΓΚΟΛΟΥΜΕΝΗ ΣΤΟ ΠΛΕΓΜΑ ΚΑΙ ΣΥΝΔΕΟΜΕΝΗ ΣΤΗ ΛΑΜΑ ΜΕ ΕΙΔΙΚΟ ΔΙΜΕΤΑΛΛΙΚΟ ΣΦΙΓΚΤΗΡΑ
3. Η ΣΥΝΔΕΣΗ ΠΕΡΙΜΕΤΡΙΚΗΣ ΛΑΜΑΣ ΜΕ ΤΗΝ ΥΦΙΣΤΑΜΕΝΗ ΓΕΙΩΣΗ ΜΕ ΑΓΩΓΟ ΧΑΛΚΟΥ 50mm<sup>2</sup> ΓΙΝΕΤΑΙ ΜΕ ΔΙΜΕΤΑΛΛΙΚΟ ΣΦΙΓΚΤΗΡΑ ΔΙΑΣΤΑΥΡΩΣΕΩΣ
4. ΓΕΙΩΣΗ ΜΕΤΑΛΛΙΚΩΝ ΜΕΡΩΝ ΠΙΝΑΚΩΝ Μ/Τ ΜΕ ΑΓΩΓΟ ΧΑΛΚΟΥ 50mm<sup>2</sup>
5. ΠΕΡΙΜΕΤΡΙΚΗ ΛΑΜΑ ΓΕΙΩΣΗΣ ΧΑΛΚΙΝΗ 30x3.5mm ΣΕ ΥΨΟΣ 500mm ΑΠΟ ΤΟ Τ.Δ.
6. ΣΥΝΔΕΣΗ ΠΕΡΙΜΕΤΡΙΚΗΣ ΛΑΜΑΣ ΓΕΙΩΣΗΣ ΚΑΙ ΤΩΝ ΗΛΕΚΤΡΟΔΙΩΝ ΓΕΙΩΣΗΣ ΤΥΠΟΥ ΠΛΑΚΑΣ ΜΕ ΝΥΥ 1x70mm<sup>2</sup>.
7. ΓΕΙΩΣΗ ΜΕΤΑΛ. ΣΩΛΗΝΩΝ 6" ΓΙΑ ΤΗΝ ΔΙΕΛΕΥΣΗ ΚΑΛΩΔΙΩΝ Μ/Τ, ΟΛΩΝ ΤΩΝ ΜΕΤΑΛΛΙΚΩΝ ΜΕΡΩΝ ΨΕΥΔΟΔΑΠΕΔΟΥ ΤΟΥ ΧΩΡΟΥ ΔΕΗ ΚΑΙ ΛΑΜΑΡΙΝΩΝ ΤΩΝ ΚΑΝΑΛΙΩΝ ΜΕ ΤΗΝ ΠΕΡΙΜΕΤΡΙΚΗ ΛΑΜΑ ΜΕ ΑΓΩΓΟ ΝΥΥ 1x25mm<sup>2</sup>



TOMH B-B



TOMH A-A