



HELLENIC ELECTRICITY DISTRIBUTION NETWORK OPERATOR S.A.

NOTICE OF REQUEST FOR TENDERS No ND-207

PROJECT: "Pilot Telemetering and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"

ISSUE A'
INVITATION

Notice Of Request for Tenders For The Project: **"Pilot Telemetering and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"**

INVITATION

TABLE OF CONTENTS

REQUEST FOR TENDERS WITH OPEN PROCEDURE	2
Article 1. Name - Address of Competent Department for the Request for Tenders Place and time of the Request for Tenders	5
Article 2. Institutional Framework	5
Article 3. Project's location, description and essential characteristics	7
Article 4. Participation in the Request for Tenders	15
A) Experience in the Whole Project:	16
B) Experience In The Supplied Equipment (Meters & Communication Devices)	17
C) Experience For The Offered System (AMI & MDM Systems)	18
D) Experience In Works For The Installation Of Meters and Communications Devices	19
E) Experience in the operation of the AMI and /or MDM systems	19
Article 5. Tests for the supplied equipment for the Technical Evaluation of Tenders. 20	
Article 6. Receipt of issues of the Notice of the Request for Tenders	22

Notice Of Request for Tenders For The Project: **"Pilot Telemetering and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"**

REQUEST FOR TENDERS WITH OPEN PROCEDURE

Hellenic Electricity Distribution Network Operator SA (HEDNO), 20 Pervou & 5 Kalirois Street, 11743 Athens, hereby invites the Tenderers, in accordance with Directive 2004/17/EC of the European Parliament, Presidential Decree 59/Government Gazette No A63/16.03.2007 as currently in force, the provisions of Works, Procurements and Services Regulation of HEDNO (BoD Decision No 206/30.09.2008 and HEDNO's BoD Decisions No. 139/05.12.2013) and this Notice of Request for Tenders, to take part in an open Tender Procedure and criterion of the lowest price for the election of Project Contractor: "Pilot Telemetering and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids", of a total Budget according to the HEDNO's (herein after the "Company") assessment of **eighty six million and five hundred thousand (86,500,000.00) EURO which is broken down as follows:**

- **Forty one million (41,000,000.00) EURO for the main project which involves the following:**

a. The design, engineering, and construction of the entire Metering Data Telemetering and Processing System (Main and Back-Up), with the capacity to communicate with 300,000 metering points, as well as its procurement and installation, testing, commissioning and delivery to HEDNO as a "turn-key job".

b. The procurement, installation and integration into the System of electricity meters with communication devices (PLC and mobile telecommunication GSM/GPRS/3G), of the metering devices for 170,000 Household, Small Commercial Consumers and also small Producers of the LV Distribution Network, that belongs to either the Interconnected or Non-Interconnected System, and the provision of all relevant services for the Project's sound construction.

c. All the relevant operation, maintenance and telecommunication services until the final acceptance of the project.

d. Training of HEDNO's personnel on the system's installation, operations and field work.

e. Comparative assessment study of the project's results prior and after its implementation, and also delivery of integrated data for the preparation of a cost-benefit study. The assessment criteria shall involve:

- Reduction of energy consumption.
- Shift of system peak.
- Cost reduction of reading and cut-offs for the Network Operator

Notice Of Request for Tenders For The Project: **"Pilot Telemetering and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"**

- Better estimation of the load forecast and more accurate clearance of the wholesale market.
- Increased competitiveness by enabling the possibility of alternative and dynamic tariffs.
- Assessment of technologies regarding the aforementioned benefits.
- Working methods for the design of the nationwide project.
- Voltage quality and interruptible electrical energy provision services.

of a budget for (a), (b), (c), (d) and (e) at thirty nine million (39,000,000.00) EURO, according to Company's assessment.

f. The construction (procurement, installation and integration into the System), additionally to the point's (b) 170,000 metering devices, of up to 5,000 new metering connections per year occurred during the implementation of the project (approximately 10,000 parts in total, limitedly budgeted at two million (2,000,000.00) EURO, according to the Company's assessment).

- **Seventeen million (17,000,000) euro for Operations & Maintenance services and seventeen million (17,000,000) euro for the extension option, that involves:**

g. Five-year (5) provision of services for the operation, technical support and maintenance of the System, as well as for services of fault recovery for all metering and communications equipment (and for the new metering devices as well), including costs for telecommunication services (herein after "Operations & Maintenance") budgeted at, according to the Company's assessment, two million four hundred thousand (2,400,000.00) EURO per year or twelve million (12,000,000.00) EURO for the five-year provision of services, with the possibility of five (5) years' extension and also an additional expenditure of twelve million (12,000,000.00) EURO, at the discretion of the Company, as regards the extension period of the "Operations & Maintenance" service.

h. The maintenance services provision also includes the construction (procurement, installation and integration into the System) of up to 5,000 new metering devices per year occurred during the project (approximately 25,000 metering devices in total, limitedly budgeted at five million (5,000,000.00) euro, and in respect of the Table of Materials and Prices of the main project and also an additional expenditure of five million (5,000,000.00) EURO, at the discretion of the Company, as regards the extension period of the "Operations & Maintenance" service.

- **Eight million (8,000,000.00) euro for the put option for the five-year provision of services and 2,000,000.00 euro for the extension option, that involves:**

Notice Of Request for Tenders For The Project: **"Pilot Telemetering and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"**

i. The procurement, installation and integration into the System of electricity meters with communication devices (PLC and mobile telephony GSM/GPRS/3G) of an indicative total of 30,000 units, for the following islands:

- Thira island
- Kythnos island
- Milos island

of a budget according to the Company's assessment of six million (6,000,000.00) euro.

j. The geographically respective five-year (5) provision of services for the operation, technical support and maintenance of the System, as well as for services of fault recovery and of costs for telecommunication services budgeted at, according to the Company's assessment, four hundred thousand (400,000.00) EURO per year or two million (2,000,000.00) euro for the five-year provision of services and an additional expenditure of two million (2,000,000.00) EURO, at the discretion of the Company, as regards the extension period of the "Operations & Maintenance" service.

The possibility of extension (i) can be applied by HEDNO up until the project's temporary acceptance. In that case the project's total duration shall be extended by six (6) months.

- **One million five hundred thousand (1,500,000.00) euro** for the put option regarding:

k. The possibility of procurement of metering and communication equipment, of budget at up to 1,500,000.00 EURO regarding the aforementioned equipment (metering and communication equipment), as provided by the Table of Materials and Prices.

The above possibility can be applied until the final acceptance of the project.

The above budgeted prices **do not include VAT. Said budget constitutes the cap for tender offers both in terms of total budget and individual budgets as per above. Bids that are higher than the budgeted value will be rejected. Alternative offers are not acceptable.**

The pilot project is under inclusion to the co-financed projects from EU and is included in the co-financed, from the PPC budget, HEDNO projects.

Notice Of Request for Tenders For The Project: **"Pilot Telemetering and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"**

Article 1. Name - Address of Competent Department for the Request for Tenders Place and time of the Request for Tenders

The Service of HEDNO in charge of the Request for Tenders, which is also responsible for all matters related to it, is the Network Department, 24, Syggrou Avenue, Athens, tel. +30 210-9090822.

The deadline for receipt of Tenders is **October 21** ~~September 21~~, 2015, **Wednesday** ~~Monday~~. The time for the Tenders submission deadline is 10:00 am. The opening of bids will take place the same day at 12:00 in the events room, at 24 Syggrou Avenue, ground floor, Athens.

Tenders may also be submitted by registered mail or courier service to the registration office of the NETWORK DEPARTMENT, 24, Syggrou Avenue, 5th Floor, 117 42 Athens. Tenderers shall assume full responsibility for both the timely delivery of the tender and the tender's contents.

In case of submission by mail or submission to the Registration Office, the Tender envelopes will be accepted only if delivered sealed to the Registration Office of the above Department no later than the closing date and time for receipt of tenders, as defined above.

The "TENDER ENVELOPE" must necessarily bear the trade name of the Economic Operator submitting the tender, its business address, the name and telephone number of its Attorney-in-Fact and be marked as follows:

"Tender for the Notice of the Request for Tenders ND-207"

Project: "Pilot Telemetering and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"

Article 2. Institutional Framework

The Pilot Project shall be included for co-financing from the European Regional Development Fund (ERDF) and national resources, according to the European Commission's decision SG-Greffe (2013) D/14714/19.9.2013. ERDF's mission is to reduce disparities in development and living standards among different regions, minimize the delinquency at the least favored regions, to redress the main regional imbalances in the Community by participating in the development and structural adjustment of belated regions and as well as to social and economic reconstruction of regions. The Pilot Project is part of a wider action category "Energy for uninterrupted supply of electricity, security of supply and increase the stability of the system."

According to E.C. Directive 2004/17/EC, P.D. 59/2007, L.3614/2007 about

Notice Of Request for Tenders For The Project: **"Pilot Telemetry and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"**

NSRF, as currently in force, the article 59 of L.4001/2011, the decision of the Deputy EEC Minister ratified in GG B 297/13.2.2013 "INTELLIGENT SYSTEMS DEVELOPMENT OF MEASUREMENT TO HEDN", in which the Deputy EEC Minister approved the large-scale gradual replacement of the existing metering systems of final electricity consumption in the HELLENIC ELECTRICITY DISTRIBUTION NETWORK (HEDN) respectively with smart metering systems in accordance with Article 59 of L. 4001/2011 (A 179), the positive opinion of RAE No. 10/2012 and HEDNO's Procurement & Works Regulation (BoD Decision No. 206/30.09.2008 and HEDNO's BoD Decision No. 139/05.12.2013) that set the institutional framework for the current tender.

During implementation of the Pilot Project HEDNO will ensure in accordance with the aforementioned Ministerial Decision that:

"a. The composition of the sample application serves the required representativeness of the results of the pilot.

b. The Pilot Project includes planning and actions to explore the potential use of metering systems in order to enable consumers on energy saving and demand management.

c. The metering systems cover the functions listed below:

- Ability to read metering data directly from the customer or any third party designated by the consumer.*
- Updating meter readings frequently enough to enable the use of information to achieve energy savings.*
- Possibility of remote meter reading by the operator.*
- Provision for bidirectional communication between the smart metering system and external networks for maintenance and control of the metering system.*
- Frequent metering data capability so that the information is used for network programming.*
- Support advanced billing systems.*
- Ability to remotely start / stop the connection and / or the provision or limitation of the power.*
- Provision of secure communication for data.*
- Prevention and detection of fraud."*

Article 3. Project's location, description and essential characteristics

HEDNO is planning to implement a Pilot Project to install, test and operate approximately 170,000 meters in selected geographic areas of the distribution network through which it will be possible to document from a techno-economic point of view a final recommendation for the selection of the appropriate combination of Meters, Telecommunications and Collection Centers, and Metering Data Processing technologies. HEDNO reserves the right to specifically stipulate meter counts by "geographical area" to ensure adequate sample composition for each area. HEDNO further requires telecommunication and enterprise support necessary to maintain (or exceed) specified operational standards at each area of deployment to ensure that sample data is adequately gathered, treated and analyzed for each "geographical area".

The Pilot Project requires an integrated, "Turn-key solution", system: the creation, deployment, and operation of an Advanced Meter Infrastructure (AMI) system as well as a separate Meter Data Management (MDM) system. The Pilot Project shall cover the engineering, preparation of required functional and construction studies, procurement of all necessary equipment, equipment installation, and acceptance testing for the AMI/ MDM system, including facilities, hardware, and software systems.

The Pilot Project also includes the supply, installation and integration of state-of-the-art electronic LV power meters into the AMI/ MDM system. The state-of-the-art meters will be installed in selected geographical areas of the distribution network to achieve efficient sample composition for each area and will be communicating with the central system sufficiently to achieve collection, validation, estimation and processing of the metering data. Existing metering devices of the distribution network's LV customers will be dismantled and the equipment for installing metering devices (e.g. meter cabinets, mini circuit-breakers seals etc.) will be modernized. All dismantled material will be returned by the Contractor to HEDNO's warehouses. The technical specifications of the equipment for installing metering devices shall be made available by HEDNO to the participants for their supply and installation during the project. The cost of this equipment will be included in the Project's total cost.

The geographical areas of the network which are selected for the implementation of the pilot project include urban, suburban and rural areas of mainland Greece and island complexes in order to gain experience from the operation of an AMI/MDM system on a representative sample within the Greek territory. More specifically, the areas selected and an indicative number of metering connections are illustrated in the table below:

Notice Of Request for Tenders For The Project: **"Pilot Telemetering and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"**

Geographical Area	Region or Prefecture / Local Authority	Percentage / Pilot LV Meters
East Macedonia - Thrace	Xanthi Prefecture	~60.000
North Aegean	Lesvos Prefecture (Lesvos island, Limnos island, Agios Efstratios island)	~80.000
Ionio islands	Lefkada Prefecture	~20.000
Athens	Attica	~7.000
Thessaloniki	Central Macedonia	~3.000
	Total	~170.000
<i>Option</i>		
Cyclades	Thira island	~17.000
	Kythnos island	~3.000
	Milos island	~10.000
	Total	~30.000

The communication technologies that will be tested in the Pilot Project are:

1. PLC (Power Line Carrier) communication technology through power distribution lines and appropriate concentrators installed at each substation MV/LV.
2. Wireless technology GPRS (General Packet Radio Services) communication, including 2G/3G mobile technologies.

Each of the above technologies (PLC, GPRS) will be applied to at least 20% of the total meters of the Pilot Project (at least 20% PLC and at least 20% GPRS per geographical area). It is at the Contractor's discretion to select either PLC or GPRS technology for the remaining 60% per geographical area. It is noted that the actual ratio of installed communications' technology may not deviate from the suggested ratio per area and in total.

Meters installed in the same location can communicate with the central system using a common GPRS communication device and appropriate connection between them (i.e. RS-485). Those meters shall be considered as GPRS meters for the 20-80% percentage regarding the installed meters.

The Pilot Project is expected to include the comprehensive design, procurement and installation of the equipment, the execution of all necessary tests and configuration, and the delivery to HEDNO, ready for commercial operation, ("Turn-key solution") of the following:

The Contractor shall perform all the necessary studies, have all the required

Notice Of Request for Tenders For The Project: **"Pilot Telemetry and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"**

licences, proceed to the procurement of all the necessary equipment and required software, to the lease contract for available resources, construct the necessary works, install, configure and finally construct the system in full, according to the terms of the issues of this Tender.

In particular, the pilot project includes:

- Assessment Study of the consequences of the smart meter technologies under implementation, telemetry systems and smart grid to personal data protection.
- Central Systems AMI/MDM (main & backup) for the collection and processing of metering data of the customers of the distribution network with a capacity of at least 300,000 metering points;
- The infrastructure that is required for the operation of the AMI/MDM network;
- Approximately 140,000 single-phase and 30,000 three-phase electronic LV meters compatible with the approved CENELEC standards and /or emerging standards currently under examination by CENELEC /TC 13.
- Installation of the above smart meters and simultaneous dismantlement of existing meters estimated as 85,000 person-hours for such works.
- The meters should come from at least two different manufacturers for each type of single-phase or three-phase meter, with a 20% minimum percentage per manufacturer. Interoperability and interchangeability between the offered meter types at the level of a substation concentrator with PLC technology, will be demonstrated prior to the project's execution.

Meter manufacturers are defined as the manufacturers possessing their own design, expertise and professional specialization in the study, development, construction and testing of the offered meters, and hold their intellectual property rights (IPRs) – not through third party licenses.

- 30,000 devices (In Home Displays - IHDs) capable of displaying energy data.
- A consumer web-portal that allows customers to access consumption or production data sourced from MDM mirror database.
- A consumer mobile platform that allows customers to access consumption or production data that is sourced from MDM's mirror database. Support for the communication through the mobile infrastructure that will include the capability for sending/receiving of messages.
- Approximately 4,300 three-phase electronic meters to connect to current-transformer (CT) accompanied with the respective adequate transform ratio and accuracy, as specified in Issue 9, current transformers

Notice Of Request for Tenders For The Project: **"Pilot Telemetering and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"**

for monitoring LV transformers associated with distribution substations in the selected areas.

- The Pilot's central Systems will provide the option to collect and elaborate metering data from concentrators and load curves of variable integration and will interconnect with existing HEDNO systems:
 - HEDNO's IT system (ERMIS) and also its successor with bidirectional communication
 - HEDNO's AMR systems for large LV customers.
 - The SCADA-DMS systems of the non-interconnected islands and Attica, that have to receive periodically data from the Contractor's meters, installed at the LV output point of the MV/LV distribution transformers.
 - The Geographical Information System – GIS.
 - MDM systems aiming at exporting metering data to them.
- Training of HEDNO's personnel on the system's installation and operations and also on field work, as described in the Tender Special Terms.
- Comparative assessment study of the project's results prior and after its implementation, and also delivery of integrated data for the preparation of a cost-benefit study. The assessment criteria shall involve:
 - Reduction of energy consumption.
 - Shift of system peak.
 - Cost reduction of metering and disconnection services for the Network Operator.
 - Better estimation of the load forecast and more accurate clearance of the wholesale market.
 - Increased competitiveness by enabling the possibility of alternative and dynamic tariffs.
 - Assessment of technologies regarding the aforementioned benefits.
 - Working methods for the design of the nationwide project.
 - Voltage quality and interruptible electrical energy provision services.

Based on the requirements of the GG B 297/13.2.2013 Ministerial Decision, the above information will be used by HEDNO (with possible external consultant collaboration) for drafting the final project assessment study both with respect to economic cost-benefit and with respect to improvement of services provided to the users.

Notice Of Request for Tenders For The Project: **"Pilot Telemetering and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"**

Implementation Schedule - Phases of the Pilot Project:

The Pilot Project will be executed in two phases:

Phase A Includes:

- Assessment Study of the consequences of the smart meter, telemetering systems and smart grid technologies under implementation to personal data protection.

The study above should be considered during the stage of design, requirement analysis and specifications setting, in order to timely identify the high risk areas, in which the security measures of the Information Security Management System (ISMS) and the personal data protection mechanisms should focus.

The assessment study of the consequences in personal data protection must comply with HEDNO's Personal Data Protection Policy.

- Design, supply, installation and commissioning of the main AMI/MDM central system and also installation and operation of at least 10,000 meters (designated by HEDNO) and at least 500 in-home displays (designated by HEDNO).

The set of customers chosen for meter installation during phase A will form a representative customers sample, including exclusively residential load substations, commercial usage load substations, industrial usage, etc and of different social and financial status.

The selection of customers for the installation of the 500 in-home displays will be implemented based on the tariff and the level of their consumption, including customers with time charge (night tariff) and customers with tariff based on power and energy charge, as well as based on new criteria that may arise during the project implementation and after proposals from Authorities, HEDNO or HEDNO's consultants, as well as the Electrical Energy Suppliers.

- The interconnection and the communication between the main Central System and the information system "ERMIS HEDNO".
- The consumer web-portal
- The consumer mobile devices platform
- Implementation time of Phase A: nine (9) months from the Project's contract award.

Prerequisite for the completion of Phase A is the successful execution of (quantitative / qualitative) acceptance testings.

Phase B – Involves the following:

Notice Of Request for Tenders For The Project: **"Pilot Telemetry and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"**

- Implementation and Commissioning of the backup central system within three months from phase A acceptance.
- Replacement of the remaining, approximately 160,000 meters in the selected areas and integration of the meters into the AMI/MDM system.
- Installation of the remaining in-home displays.
- Installation of meters for connection to current-transformer (CT) at distribution substations.
- Implementation of the remaining interconnections of the Central Systems.
- Comparative assessment study of the project's results prior and after its implementation, and also delivery of integrated data for the preparation of a cost-benefit study. Potential past consumption data that will be required for the comparative assessment prior the project's implementation, will be given by HEDNO.
- Training of HEDNO's personnel on operating and maintaining the central system and also on field work.
- Implementation time of Phase B: Fifteen (15) months.

Prerequisite for the completion of Phase B is the Project's Temporary Acceptance.

The Pilot Project also includes:

- The operation of the system from the beginning and for at least five (5) years after the final acceptance.
- The maintenance of the system, of the metering and communications equipment as well as end-to-end failure restoration from the beginning and for at least five (5) years after the final acceptance.
- The costs for the telecommunication links between the meters and the AMI/MDM systems for data transfers and telecommunication links between the central and the backup system for the entire period of the Pilot Project, its delivery, and the five (5) year system operation.

Personal Data Security and Protection

The Contractor must ensure all requirements for personal security and protection for the complete system, already by design (data protection by design) and by default (data protection by default).

As the Contractor defines the purposes (with HEDNO), the preconditions and the means for personal data processing, as Controller for Processing according to Law 2472/1997, shall comply with obligations arising from the National and European institutional framework.

Notice Of Request for Tenders For The Project: **"Pilot Telemetering and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"**

In particular:

- A. The Contractor is Controller for processing and shall comply to the provisions, as applied:
- a) of the national legal framework, especially Law 2472/1997 (and 3471/2006 for electronic communications)
 - b) of the European legal framework for personal data protection, as it applies, especially directive 95/46 and Recommendation 2012/148/EC, as well as the findings of the article 29 Working Group, especially their No 12/2011, 04/2013 and 07/2013 opinions, as well as
 - c) The procedures specified in the Integrated Information Security Management System (ISMS).

It is mentioned that:

The Controller shall adopt policies and implement appropriate measures to ensure and be able to demonstrate that the processing of personal data is performed in compliance with the regulations, as they apply.

The Controller shall, both at the time of the determination of the means for processing and at the time of the processing itself, implement appropriate technical and organizational measures and procedures in such a way that the processing will meet the requirements of the relevant regulations and ensure the protection of the rights of the data subject.

The Controller shall implement mechanisms for ensuring that, by default, only those personal data are processed which are necessary for each specific purpose of the processing and are especially not collected or retained beyond the minimum necessary for those purposes, both in terms of the amount of the data and the time of their storage. In particular, those mechanisms shall ensure that by default personal data are not made accessible to an indefinite number of individuals.

The Controller performs assessment (study) of the consequences of the specified processing acts with respect to personal data protection.

The assessment shall contain at least a general description of the envisaged processing operations, an assessment of the risks to the rights and freedoms of data subjects, the measures envisaged to address the risks, safeguards, security measures and mechanisms to ensure the protection of personal data and to demonstrate compliance with the regulations as they apply, taking into account the rights and legitimate interests of data subjects and other persons concerned.

The assessment of the consequences to personal data protection shall be based on the detailed presentation of the personal data types that shall be generated

Notice Of Request for Tenders For The Project: **"Pilot Telemetering and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"**

and collected by the system and on their specified processing operations, it includes assessment of the consequences for the rights and freedom of the data subjects, safeguards, mitigating measures procedures for personal data protection and provision of evidentiary documentation for compliance with the legal data protection framework (Law 2472/1997 and 95/46/EC Directive) as well as the 2012/148/EC Recommendation of the European Commission, taking into consideration the rights and legitimate interests of the data subjects and persons concerned.

This assessment shall be conducted by the Contractor before the development and start of processing in order to better understand in full the threats for personal data protection and the counter measures required for smart grids and smart metering systems. This assessment shall be performed timely, in order to identify the high risk areas, in which the security measures of the Integrated Information Security Management System (ISMS) and the personal data protection mechanisms should focus. During project implementation, regular evaluations are required, which may lead to improve the applied security and data protection measures.

In Addition, the Contractor must implement for the entire proposed system (meters, concentrators, communications, servers, AMI – MDM and in general all project software and hardware components) an Integrated Information Security Management System (ISMS).

The aim of the Pilot Project is:

- The collection and evaluation of information and experience on customer response towards the improvement of energy efficiency and the reduction of peak demand through the implementation of the new technology.
- To test the technologies and automatic meter data collection and meter data management.
- To highlight technical challenges in the required processes in order to develop the necessary expertise for the optimal design of the massive deployment of smart meters across the country.
- To examine the interoperability and interchangeability of the supplied metering equipment and to verify compatibility with the existing grid.
- To gather knowledge and experience concerning the feasibility of the use of advanced metering functions in HEDNO's respective processes.
- To evaluate the personal data security and protection procedures in cases of extended application of meter data collection.

The Project's individual works shall be performed so as to ensure the delivery

Notice Of Request for Tenders For The Project: **"Pilot Telemetering and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"**

and operation of the Pilot Project without any delay and with the minimum possible disruption to the functioning of the existing network, as well as with the minimum possible intervention by technical support teams of the Company.

The suitability of the basic items of equipment used in the Pilot Project's construction should be proven and certified, as further detailed in the Issues of the present Notice of Request for Tenders.

The detailed features of the Pilot Project and the required specifications are analyzed in the documents of the Notice of Request for Tenders.

Article 4. Participation in the Request for Tenders

In the Tender all interested Economic Bodies (Natural or Legal Persons or Companies'/Persons' Partnerships thereof) may participate, established in the Member States of European Union (EU) or in the countries of the European Economic Area (EEA) or in countries having signed the Government Procurement Agreement (GPA) of the World Trade Organization (WTO), ratified in Greece by Law 2513/1997 (Government Gazette A 139/27.06.97), provided that the present Contract is covered by the GPA, or in third countries having signed association agreements with the EU, or Legal Entities incorporated under the law of an EU Member-State or a country having signed the agreement for the European Economic Area (EEA) or of a country having signed the Government Procurement Agreement (GPA) of the World Trade Organization (WTO), provided that the present contract is covered by the GPA, and which have their central administration or principal place of business or registered office within the EU or the EEA or any country having signed the GPA of WTO, or, finally, in third countries which have entered into association agreements with the EU, that cover the experience requirements defined below.

HEDNO reserves the right to exclude any interested party in case that there are reasonable doubts regarding its future capability of receiving potential required approvals.

By way of illustration, the interested parties will be excluded if their head office is not located in one of the following states:

- Member-States of European Union
- Member- States of the European Economic Area
- Swiss Confederation
- United States of America
- Canada
- Japan
- People's Republic of China
- Russian Federation
- Kingdom of Bahrain
- Federal Republic of Brazil
- Hong Kong Special Administrative Region of People's Republic of China

Notice Of Request for Tenders For The Project: **"Pilot Telemetry and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"**

- Republic of India
- State of Israel
- State of Kuwait
- Malaysia
- Sultanate of Oman
- Republic of Philippines
- State of Qatar
- Kingdom of Saudi Arabia
- Republic of Singapore
- Republic of Korea
- United Arab Emirates

A) Experience in the Whole Project:

Tenderers shall be experienced in the design, construction and commissioning of respective automated electricity meter reading and meter data management systems (AMI - MDM) through any kind of communication such as fixed telephony, wireless RF, PLC network lines, etc., including the installation and integration in the central automated meter reading and meter data management system (AMI - MDM) of the meters and the communication devices (i.e. mobile communication modems or similar communication device).

Minimum acceptable experience in Project Management and management of Systems Integration Projects, as well as in their roll-out shall be the delivery, over the last decade, of similar projects, as described in the above paragraph, of which:

- One (1) project concerning the integration of at least 250,000 metering points in a central system (AMI - MDM) of an Electric Utility or a Network Operator

Or

- Two (2) projects, concerning cumulatively the integration of at least 250,000 metering points in a central system (AMI - MDM) of an Electric Utility or a Network Operator.

The minimum required experience listed above shall be evidenced by Acceptance Certificates from the owners of respective projects.

Tenderers should mention in their tender for every project for which they have not submitted an Acceptance Certificate at least the following details:

- The trade name of the Company which is the owner of the project.
- Detailed characteristics of the project.
- The name(s) of the person(s) responsible for the project's acceptance and operation from the Company that is the owner of the project.

Notice Of Request for Tenders For The Project: **"Pilot Telemetering and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"**

- Phone number(s), fax number(s) and email of the aforementioned persons.

B) Experience In The Supplied Equipment (Meters & Communication Devices)

The tenderers shall have the following necessary experience, evidenced upon submission of Acceptance Certificates from Electric Utilities or Network Operators for each manufacturer of the meters/communication devices.

B.1) Meters

For the procurement of the offered metering types to Electric Utilities or Network Operators, Acceptance Certificates have to be submitted including the following data:

- The trade name of the Company for which the meters were procured.
- The quantity and type of meters procured.
- The name(s) of the person(s) responsible for the meters' acceptance.
- Phone number(s), fax number(s) and email of the aforementioned persons.

The aforementioned Acceptance Certificates should evidence sales during the last six years of at least 30,000 units of similar kind/type of offered meters which have to be integrated in a Central Telemetering System.

The technical characteristics of the referred to the Certificates type of meters, should be included in the offer.

Similar kind/ type of meters are those of the same product line, where the hardware remains the same and only the software's version is diversified and characteristics regarding optional capabilities are specified.

B.2) Communication devices

For the procurement of the offered communication devices to Electric Utilities or Network Operators, Acceptance Certificates issued within the last six (6) years have to be submitted including the following data:

- The trade name of the Company which is the owner of the project.
- The quantity and type of communication devices involved in the respective procurement.
- The name(s) of the person(s) responsible for the communication devices acceptance and operation from the Company that is the owner of the project.

Notice Of Request for Tenders For The Project: **"Pilot Telemetering and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"**

- Phone number(s), fax number(s) and email of the aforementioned persons.

The aforementioned Acceptance Certificates should evidence sales of similar kind/type of offered communication devices for at least:

- 20,000 units of GSM/GPRS/3G modems
and
- 20,000 units of PLC modems

It is clarified, that in case of offer of a type of communication device from the manufacturer (PLC or GSM/GPRS/3G), certifications are required for this particular communication device type.

The technical characteristics of the referred to the Certificates type of communication devices, should be included in the offer.

Similar kind/ type of communication devices are those of the same product line, where without altering the hardware only the software's version is diversified and characteristics involving optional capabilities are specified.

If any of the above communication devices are integrated into the corresponding meters, then the references in the preceding paragraph about meter sales are valid.

C) Experience For The Offered System (AMI & MDM Systems)

The minimum experience is considered as the execution of projects relating to the supply and installation of at least two (2) AMI applications, of similar type as the offered, with capacity (cumulative) of at least 250,000 metering points and up to two (2) MDM applications with capacity (cumulative) of at least 250,000 metering points. Alternatively, the minimum experience required, as cited above, involves the execution of projects involving up to two (2) applications of a common type (AMI +MDM) similar to the offered, with capacity (cumulative) of at least 250,000 metering points. The above projects must have been commissioned during the last six years.

The minimum experience required, as cited above, shall be evidenced upon submission of Acceptance Certificates from the owners of the respective applications and projects.

For that reason, the Tenderers shall state in the Acceptance Certificates submitted with their tender at least the following details:

- The trade name of the Company which is the owner of the project.
- Detailed characteristics of the project.
- The name(s) of the person(s) responsible for the project's acceptance and operation from the Company that is the owner of the project.

Notice Of Request for Tenders For The Project: **"Pilot Telemetering and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"**

- Phone number(s), fax number(s) and email of the aforementioned persons.

D) Experience In Works For The Installation Of Meters and Communications Devices

The Tenderer shall have the appropriate experience and staff for the meters' installation having installed at least 5,000 electricity meters in the last ten years. In case the Tenderer does not have the above experience, they must indicate as a respective Sub-contractor a specialized company that will possess the required experience and staff for the fulfillment of the above requirements. Alternative to the experience of 5000 meters installed, the Tenderer of the subcontractor shall be registered at least to the 3rd rank in the Register of Contractors' Enterprises (MEEP), in the Electromechanical category.

The minimum experience required, as cited above, shall be evidenced upon submission of Acceptance Certificates from the owners of the respective applications and projects.

For that reason, the Tenderers shall state in the Acceptance Certificates submitted with their tender at least the following details:

- The trade name of the Company which is the owner of the project.
- Detailed characteristics of the project.
- The name(s) of the person(s) responsible for the project's acceptance and operation from the Company that is the owner of the project.
- Phone number(s), fax number(s) and email of the aforementioned persons.

The Tenderer or the suggested Sub-contractor that will assume the meters' installation should have at the time of bid:

- Quality Management System according to EN ISO9001:2008 or equivalent (see also Directive 2004/17/EC).
- Submit the organizational structure that also presents the operation mode and the manpower that will be engaged for the system's and metering equipment's support.

E) Experience in the operation of the AMI and /or MDM systems

The Tenderer shall have experience in AMI and/or MDM system operations of a capacity of more than 30,000 meters for a minimum of six months.

The minimum experience required, as cited above, shall be evidenced upon submission of Acceptance Certificates for each project including the following details:

Notice Of Request for Tenders For The Project: **"Pilot Telemetering and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"**

- The trade name of the Company which is the owner of the project.
- Detailed characteristics of the project.
- The name(s) of the person(s) responsible for the project's acceptance and operation from the Company that is the owner of the project.
- Phone number(s), fax number(s) and email of the aforementioned persons.

Note that Tenderers that will not prove their experience in the above mentioned requirements of paragraphs A, B, C, D and E, as per above, shall be excluded from further participation in the tender procedure.

Reference Letters that will include the required items will be acceptable equivalently to the Acceptance Certificates.

The aforementioned Acceptance Certificates will be at the disposal of all participants.

Tenderers should, under the penalty of rejection, submit all the above items at the date of submission of tenders.

Technical Deviations from the Technical Specifications of the Tender are not allowed, but as it is mentioned in Issue B "Tendering Terms And Guidelines", the participants may offer technical solutions, which according to them satisfy in an equivalent manner the technical terms and requirements of the Tender.

Article 5. Tests for the supplied equipment for the Technical Evaluation of Tenders.

In addition to the evaluation of the Technical Offers that will be submitted by the Tenderers, the following will also take place:

1. Supply equipment testing

In order for HEDNO to certify the compatibility and successful operation of the offered Telemetering System and the communication devices with offered the L.V. meters, the tests described below shall be carried out during the technical evaluation of the tenders:

- The tenderers shall install in their own computer the software of the AMI-MDM System (trial version).
- They shall perform metering data extraction using the proposed communication devices PLC/ GPRS, from the supplied meter types and concentrators.
- The trial installation for PLC communication shall include an actual low voltage line. For equipment demonstration purposes, the tenderer shall

Notice Of Request for Tenders For The Project: **"Pilot Telemetering and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"**

install a concentrator at the output point of a predefined medium to low voltage step-down transformer. Two smart meters of each offered type shall be installed at HEDNO's facilities, powered by the above transformer.

- The same trial will be performed for GPRS communication.
- They shall perform data extraction from meters with the appropriate data extraction software for on-site data collection via portable computer (laptop) or, respectively via portable concentrator (HHU) and transfer and import of the data collected via the AMI / MDM trial system.
- They shall perform commands of bidirectional data transfers, between each kind/ type of meter and the AMI/ MDM trial system.
- They shall perform a complete upgrade of the meter firmware using the proposed communication devices and software systems from the offered meter types and concentrators.
- They shall perform a data transfer test between any meter kind/type and the offered display device (In Home Display).
- The interoperability and the interchangeability between meter types shall be demonstrated by the execution of commands and metering data transmission to and from the concentrator from the different offered meter types and is summarized to the following, at least:
 - Data collection from all registers
 - Data collection from load curves of active and reactive energy
 - ON/OFF operation of the load switch

The above tests shall be performed at HEDNO's facilities and shall be considered successful if within three (3) days from the beginning of the testings, the full communication between the above devices is achieved in a consistent way.

In case of failure to fulfill any of the above requirements, the Tenderer, following written notice, is allowed for one month to attempt to lift of the reasons for the failure. During that period, the Tender may submit up to two (2) times samples (hardware or/and software) as well as complementary supporting documentation in order to attempt to lift the reasons of failure. In case of failures during those repeated tests, the offer shall be definitively determined as technically unacceptable.

2. Evaluation of the offered Systems AMI - MDM

In order to confirm the satisfactory operation of the offered Systems (AMI-MDM) it is possible, at the Company's discretion, for the three members of HEDNOS's Technical Evaluation Committee to perform a visit as described below:

Notice Of Request for Tenders For The Project: **"Pilot Telemetering and Management System for the Electric Power Supply Demand by Residential and Small Commercial Consumers and Implementation of Smart Grids"**

The Tenderer shall indicate, in consultation with the Evaluation Committee, the place and the time for a three-day visit, to be carried out by the Three-Member Committee to an Electric Utility/ies or Network Operators, where the offered AMI - MDM Systems are already installed and in commercial operation, in order to assess their satisfactory operation.

The cost of the three members of the Technical Evaluation Committee's Visit is to be borne by the Tenderer (accommodation, and air tickets costs).

Article 6. Receipt of issues of the Notice of the Request for Tenders

A summary Notice is published in the Official Gazette of the EU and the Issues of the Notice of the Request for Tenders, as mentioned in the "Tendering Terms and Guidelines" Issue, are posted on the Corporation's website www.deddie.gr