

Smart Meter Operation Management System

RFP Invitation Outline

December, 2012

Tokyo Electric Power Company, Incorporated

1 Details

Tokyo Electric Power Company, Inc. on the occasion of deciding upon Smart Meter specifications, implemented an RFC (Request for Comment) concerning measurement specifications and basic communication function specifications from March to April of this year. Over 400 opinions were received from enterprises both inside and outside of the country.

As well, the opinions collected from the RFC were presented in “Basic Thoughts on the Smart Meter Based upon RFC (*1)” on July 12th. This presented three viewpoints (first, the realization of comprehensive cost cutting; second, security for external connectivity; and third, security for possible technical expansion), and based upon this, after October of this year, promised to implement “Disclosure of Detailed Specifications for MDMS, etc. System Development and Public Invitation for System Developers.”

In accordance with the above-mentioned, we would like to make this outline for the collection of RFP (Request for Proposal) concerning MDMS (Meter Data Management System), etc (hereinafter “Smart Meter Operation Management System”) open to the public.

(*1) http://www.tepco.co.jp/en/corpinfo/procure/invited/pdf/2_concept-e.pdf

Table 1. TEPCO Smart Meter Specifications

	Specifications
Basic Thoughts	External connectivity (compliance with international standards), possibility for technical expansion, & cost cutting are the 3 principles
Meter	Both separated & combined units
Transmission (WAN)	The system will be determined based on RFP of communication system for Smart Meters, including the utilization of infrastructures from other companies
Transmission (A route)	The system will be determined based on RFP of communication system for Smart Meters, including 3 systems (1:N wireless, wireless multi-hop, PLC)
Transmission (B route)	Requirements will be incorporated into RFP of communication system for Smart Meters based on smart houses, building standards, and the consideration of investigative commissions for enterprise promotion.
Transmission protocol	IP Standards (Consideration for future expandability)
Data format	Adoption of international standards (IEC)
New Services	Requirements regarding expandability aimed at new services will be incorporated into RFP of communication system for Smart Meters, and this RFP.
Support for electric power system reformation	Taking electric power system reformation into account, consideration will be given to staying on equal footing with new forms of electric power

2 Purport

As the specifications and supply locations regarding the Smart Meter operation management system our company is planning to implement will be advertised for and selected through RFP format, this outline establishes necessary items, including the procedures, etc. to be undertaken by participants in this RFP (hereinafter “participants”).

3 Public Invitation Contents

3.1 Object of RFP

The object of the RFP is the Smart Meter operation management system in its entirety, made up of meter data management, smart meter equipment management, and network management. (See Diagram 1, Domain 3)

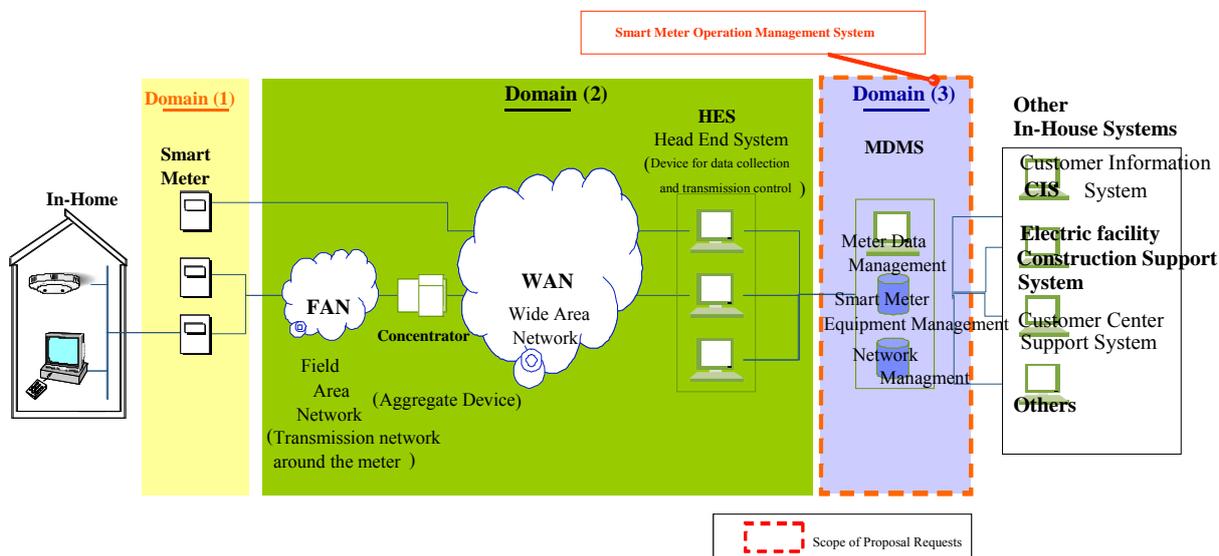


Diagram 1. Scope of Proposal Requests

3.2 Basic Policy with Regards to the Public Invitation

Regarding the public invitation for this project, the basic policy will consist of the following points.

- (1) Security of function and quality based on having participants responsibly making suggestions and constructing the entire Smart Meter operation management system.
- (2) The realization of thorough reductions in price on a continuous basis through the adoption of open and standardized specifications.

3.3 Basic System Requirements

Regarding the Smart Meter operation management system, for the Smart Meters, which will reach a maximum of 27 million devices in total, it is necessary to implement meter data collection, settings, and checks accurately and reliably. Also, as this will involve the privacy of customers concerning matters such as the amount of electric power consumed, it is necessary to devise stable security measures regarding the threat of illicit access from external sources, information leakage, falsification, etc. while also securing external connectivity.

Further, for the purpose of meter data usage by customers and other enterprises who wish to offer energy-related services in the future, as well as cost control, the guarantee of a thorough cost cutting plan through open and standardized specifications and flexible system expandability is requested.

The basic requirements for a Smart Meter operation management system, taking these matters into account, are detailed below.

- The ability to implement Smart Meter data collection, settings, and checks in an accurate and reliable way.
- The application of measures for reliable before-and-after security to protect against the threats of illicit access, the falsification of data values, and the leakage of data.
- The possibility of connectivity from various enterprises based on the adoption of internationally standard specifications and technology.
- Foresight regarding services likely to be adopted in the future, and flexible compliance for add-on

- functions.
- The ability to monitor the operation status of the entire system, with the prerequisite of continual operation that makes operation possible 24 hours a day, 365 days a year.
- Simple recovery after disasters or damage.
- Regarding system construction, maintenance, and operations, the realization of total cost reduction.

3.4 System Functions

System functions will be presented separately at a RFP briefing held in January of 2013.

3.5 Schedule until the Beginning of Development

The schedule until the beginning of development is as shown below. (See Diagram 2)

FY	2012		2013			
Period	3Q	4Q	1Q	2Q	3Q	4Q
System Construction		▲ 2012.12 Proposal Company Public Invitation		▲ 2013.1 RFP Presentation/Briefing		
			▲ 2013.3 Proposal Deadline			
			▲ 2013.4 Supplier Decided			
			▲ 2013.5 ~ Basic Considerations			

Diagram 2. Schedule until the Beginning of Development

3.6 Eligibility

3.6.1 Technical Requirements

As a prime contractor, entry qualifications shall be considered the ability to give total solution suggestions and perform construction on the Smart Meter operation management system in its entirety. It is necessary for participants to fulfill all of the conditions listed below.

- As a prime contractor, the ability to plan and undertake large-scale projects proportionate to **Item 3.3** [determined by previous achievements (examples: electricity, gas, waterworks, telecommunications, etc. fee calculations for companies that handle large amounts of data process, management systems, etc.)].
- Fulfillment of one of the below requirements, from (1) to (3).
 - (1) Having acquired CMM1 Level 3 certification, effective to date
 - (2) Having acquired ISO9001 certification, effective to date
 - (3) A record of large-scale MDMS construction, either domestically or abroad.
- Having acquired ISO27001/ISMS certification or having established an equivalent security management system.
- Establishing a structure for delivering a prompt response in Japanese to inquiries from our company's employees, etc. in case of failure or defect, and the structure has a sufficient technical level in order to support our company's employees or the like.

3.6.2 Other Requirements

In addition to the technical requirements listed above, participants must also fulfill the condition listed below.

- The preservation of sufficient financial status and health in order to undertake the project

3.7 Other Major Conditions

3.7.1 Intellectual Property Rights, etc.

The treatment of and conditions regarding intellectual property rights will be presented in the future in the RFP process.

3.7.2 Elimination of Antisocial Forces

Should a participant be subject to antisocial forces (a crime syndicate, member of a crime syndicate, a company or group affiliated with a crime syndicate or an involved party, or other antisocial force; the same shall apply hereinafter), or should involvement with antisocial forces come to light, all of the participant's qualifications concerning RFP, stretching back to the time of RFP proposal, shall be lost.

4 Selection Method

Following selection based on qualification inspection, written proposals and presentation content, and the evaluation of written estimates, a contractual agreement will be made, and finally, a supplier will be chosen. The selection shall be conducted fairly and rigorously based on evaluation criteria previously set by our company.

5 Public Invitation Procedures

5.1 Flow of RFP

The flow from public invitation to contracting is as follows. (See Diagram 3)

Participants will, in accordance with the contents of the RFP provided by our company, cooperate with necessary corporations and create written proposals. Further, it is unnecessary to specify a cooperating corporation at the time of application to the public advertisement.

Also, information from our company that is necessary for the creation of written proposals will be provided collectively with RFPs at the RFP briefing. Consultations or discussions regarding the provided information will be conducted through a "Q & A" process.



Diagram 3. RFP Flow

5.2 Application for Public Invitation

For applications, we ask for the creation and submission of the following necessary documentation.

Necessary Documents:	(1) Application form (attachment 1) (2) Up to date company outline and settling of accounts statement (3) Eligibility (technical requirements) application form (attachment 2) (4) Work result certificate (attachment 3) (5) Written pledge (attachment 4) *Only for those who passed the eligibility review in Item 5.3
Submission Method:	Postal mail *If unable to meet the submission deadline in this way, please submit copies of the documents (in PDF format) by electronic mail by the deadline, and send the originals separately by postal mail promptly.
Submission Location:	<u>Location to mail documents:</u> <u>General Materials Procurement Group</u> <u>Transmission & Distribution Procurement Center, Materials & Procurement Dept.</u> Tokyo Electric Power Company, Incorporated 16th Floor, Toho Hibiya Building (HIBIYA Chanter), 1-2-2, Yuraku-cho, Chiyoda-ku, Tokyo, 100-8560 <u>E-mail address</u> tepcosmartsys@tepcoco.jp
Submission Deadline:	(1)-(4) : Must be received by Tuesday, December 25 th , 2012, JST 24:00 Japan Time * The above deadline is a general guideline, but regarding (3) or (4), in the event that consultations, etc. with contract partners results in an inability to meet the deadline, fill out all of the items (with the exception of those listed below) and submit it as a preliminary version by the above deadline. (3)...Party responsible for the contract (Title, name, contact information) (4)...Certifier signature column In addition, please submit all documents with all of the items filled out by January 24th (Thursday), 2013 JST 24:00 Japan Time. (5): Must be received by Wednesday, January 16 th , 2013, JST 24:00 Japan Time

5.3 Implementation of eligibility review

Based on the necessary documents in **Item 5.2**, our company will implement eligibility review in a fair and rigorous way to determine whether the eligibility conditions in **Item 3.6** have or have not been fulfilled. As a result, those selected to participate in the RFP briefing will be invited by Wednesday, January 9th, 2013. Also, in the event that participation in the briefing has been denied as a result of the eligibility review, a notification stating so will be sent.

5.4 RFP briefing implementation

The RFP briefing will be held on the date listed below. Regarding the time and place, information will be sent alongside the briefing opening invitation.

Eligibility:	Passing the eligibility review in Item 5.3
Day Held:	January 17 th , 2013 (Thursday) (planned)
Briefing Content:	RFP will be presented, and desired items regarding specifications for the smart meter operation management system will be explained.
Number of Participants:	Up to two members from each company may participate in the briefing.

5.5 Schedule following the RFP briefing

Selections and adjustments will be made based on the schedule of **Item 3.5** and the flow of **Item 5.1**, and suppliers will be selected. The details of the schedule will be presented at the RFP briefing.

Additionally, should the necessary documents from **Item 5.2**, including (3) Application form for eligibility (technical requirements), and (4) the work result certificate, not be able to be submitted by the specified deadline or the delayed deadline, or upon verifying relevant documents, our company decides that eligibility for **Item 3.6** is not fulfilled, there may be instances in which companies are denied participation in the process following the briefing, even if they were able to attend the briefing. Please understand in advance. In either of these cases, our company will communicate this point should it arise.

5.6 Handling of documents provided by our company

At the time of the RFP briefing, RFPs will be provided on paper, and partially as electronic data, from our company. (5), the written pledge, a necessary document from **Item 5.2**, is a document we have participants submit with the purpose of protecting confidential information from our company, including RFP.

In addition, should any questions arise regarding the documents provided by our company, we will answer them at any time during the RFP period. Also, there may be instances where, based on questions, etc., we make additions to the documents we provide.

5.7 Handling of documents provided by your company

Documents provided to our company in the public invitation process (application forms, submitted forms, cost estimates, presentation materials, etc.) will not be used for purposes other than reviews, but there are instances in which we present them to involved parties when we recognize doing so as necessary. As well, said documents that have been provided to our company cannot be returned for any reason.

5.8 Additional Items

Costs incurred in the public invitation process will all be borne by the participants.

- Costs incurred in the creation or submission of application documents
- Costs incurred in participating in the RFP briefing
- Costs incurred in the creation or submission of proposals, the implementation of presentations, etc.

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Following receiving an invitation to the RFP briefing, in instances in which you wish to refuse participation in the briefing or the submission of a proposal, please contact us with an option written form.

The content of project involved in this public invitation, the conditions of the contract, etc. are not limited to that which is written in this outline. Also, when our company deems it necessary, we may change the schedule of **Item 3.5**, the flow of **Item 5.1**, the conditions written in this outline, etc. We ask for your understanding involving this matter.

[Enclosed Documents]

- Application form (attachment 1)
- Eligibility (technical requirements) application form (attachment 2)
- Work result certificate (attachment 3)
- Written pledge (attachment 4)

[Contact for inquiries on RFP]

Inquiries should be made by e-mail in principle.

E-mail address: tepcosmartsys@tepcoco.jp

* Please note that for inquiries made on weekends and holidays, we will respond to them after the following business day.